

Master Plan Special Study

Reston, Virginia

A Complete Community along the Metro Silver Line

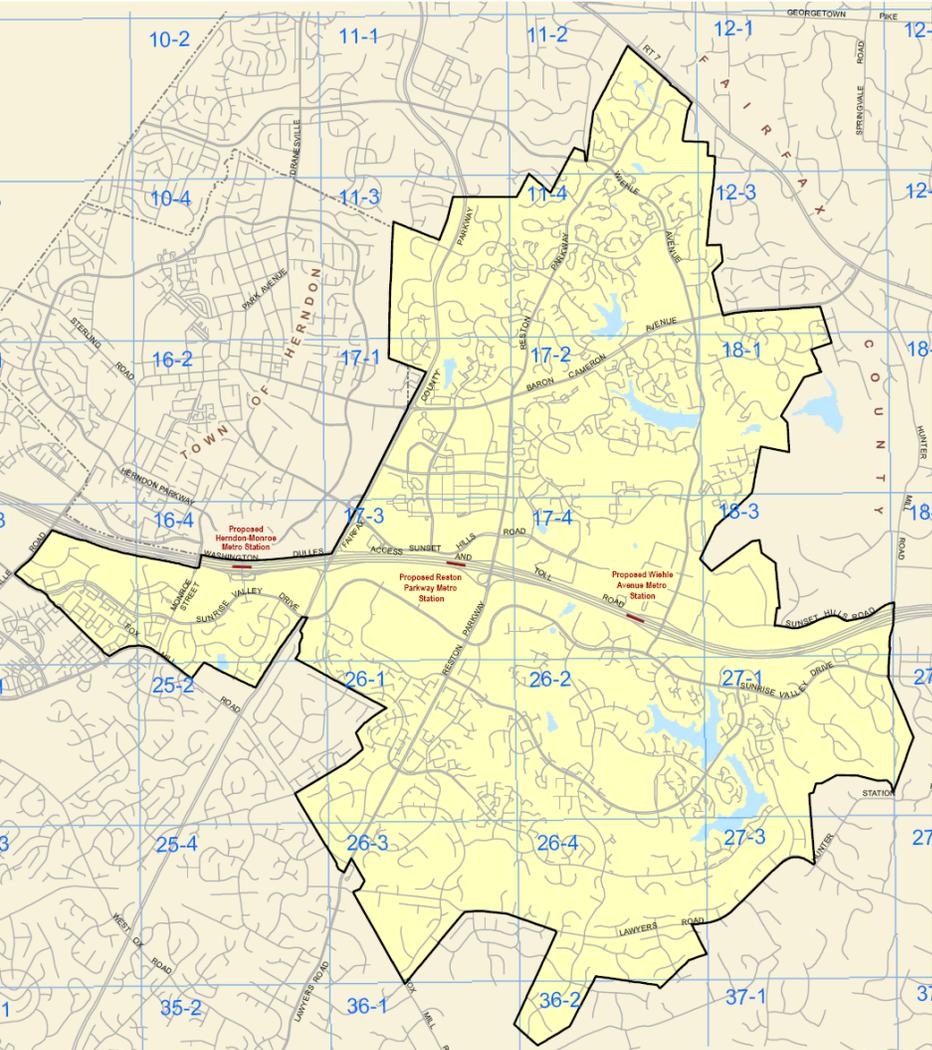
Report of the Vision Committee

January 12, 2010



Outline

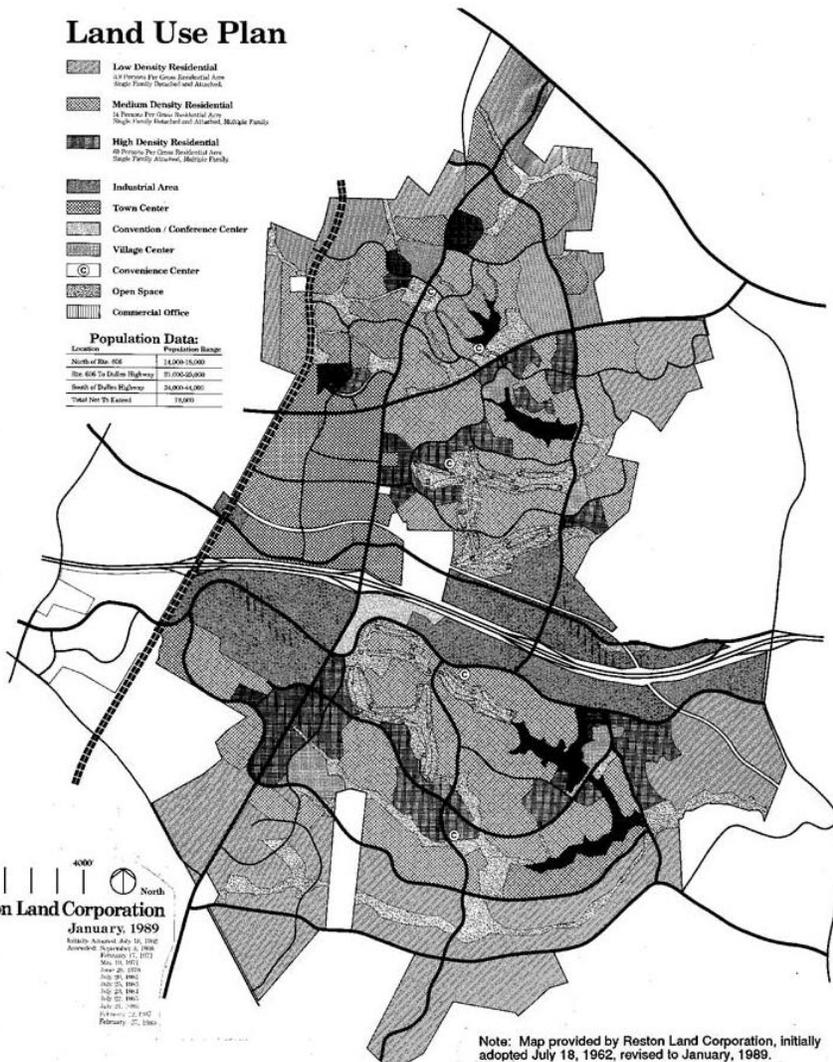
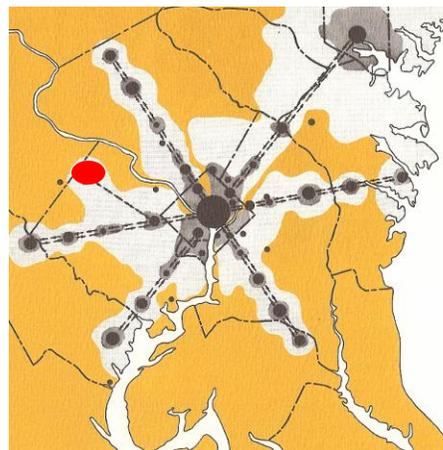
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Vision

Reston will be a complete town designed for the 21st century with a balance of jobs and housing connected to the Washington Metropolitan Region including the Dulles International Airport by the Metro Silver Line. Housing will be provided for all incomes. Cultural, educational, recreational and the natural features will continue to be a focus of the community.

The center of Reston will be a dynamic, linear transit oriented neighborhood linked together by three Metro stations that provide connectivity from east to west and north to south. This community will include a broad mix of regional retail in the Town Center, and local retail in the other Metro station areas and the village centers. Employment opportunities will include a mix of international and national corporations, professional associations, centers for advanced technology, research and development companies, as well as and local services. Institutional uses will include a major hospital center, a government center, and public and private universities.



Planning Principles

Planning for future residential and commercial development will consider Reston as a comprehensive unit. Development projects will be evaluated in terms of their ability to meet the planning principles and the particular vision and recommendations for each area, as well as the specific impacts of individual projects on the surrounding neighborhoods. The following principles provide guidance for development of Reston in the 21st century.

- 1. Achieve excellence in planning, urban design, and architecture**
Development and redevelopment should be of the highest caliber in terms of town planning, architectural design, compatibility, and livability. Redeveloped areas should be designed as integral parts of the larger Reston community instead of stand-alone developments. High standards for green neighborhood and building practices for all public and private development should be required. Integrate public art into development.

- 2. Plan for environmental sustainability and green technology**
As an essential and unique feature of community building, protect the integrity of natural resources by conservation, and restoration. Incorporate the preservation of environmentally sensitive areas as a central planning principle to reduce the impact of development on the environment. Public and private natural, open space areas including woodlands, meadows, lakes, ponds, streams, wildlife habitat, drainage and catchment areas, and other environmentally sensitive areas should be enhanced and preserved. Natural, open space areas should provide corridors for movement of wildlife. Planning and design practices for public and private development should provide for best storm water management practices, eliminate invasive plants, preserve mature trees, reduce imperviousness, provide significant tree canopy, and encourage energy conservation.

- 3. Balance land use with infrastructure**
Phase and fund the expansion and modification of all modes of transportation and other infrastructure such as schools and public facilities in concert with development. Convenient interconnectivity must be assured within the transit corridor, between it and the rest of Reston, and across major roads, including the Dulles Toll Road. Public and non-motorized transportation should be encouraged. Infrastructure should be completed concurrently with development. There should be an appropriate balance of jobs and housing in Reston as a whole.

4. Concentrate development near transit

Locate the highest densities for residential and commercial development in the Metro rail station areas. The densities should step down from the Town Center area, to the Reston East/Wiehle Avenue and Reston West/Herndon-station areas, and finally to the village centers. Incorporate transit oriented development strategies to reduce dependence on the automobile. Support the opportunity for future air rights development to provide additional crossings of the Dulles Toll Road, to enhance access to the rail stations, and to link north and south Reston.



5. Maintain the Reston Town Center as an active central place

The Town Center includes the Reston Parkway Station Area (Town Center South and the Urban Core Areas) and the North Town Center area. Continue to develop the Reston Town Center as an integrated and vibrant urban center for Reston and the region. Encourage mixed-use development. Concentrate the highest densities, transportation facilities and a mix of uses in the Town Center.



6. Transform the rail-transit corridor

Transform the rail-transit corridor from the existing single use, industrial and office corridor into a linear neighborhood within Reston. Link the three Metro station areas by Sunrise Valley Drive and Sunset Hills Drive, a grid of streets, circulator buses, shuttle buses, sidewalks, bikeways, and trails. The linear transit corridor should include mixed-use centers at each Metro station area. Each of the transit station areas should have distinct roles and complement each other to fulfill the needs of the community. The corridor should include a mix of retail, advanced education, institutional, housing for all, employment options, and cultural and recreation opportunities. Active and passive open space should be incorporated into the corridor.



7. Augment and Enhance the Village Centers

The village centers serve as important building blocks of the Reston community and a focus of each neighborhood. They should include a mix of retail, housing and a limited amount of employment. Redevelopment should be pedestrian-oriented and provide adequate transition to the surrounding neighborhoods. Pedestrian and bicycle trails and convenient public transportation options, such as regular shuttle buses, should link the village centers to the transit stations.

8. Maintain the character of the existing residential neighborhoods

Maintain the existing residential neighborhoods, which include a variety of housing types and serve all income levels. Provide adequate transitions between new development and the adjacent existing neighborhoods to maintain the essential character of the neighborhoods. Provide traffic calming measures, residential parking permit programs and street lighting as appropriate to preserve the traditional character and safety of residential neighborhoods.

9. Provide housing for all ages and incomes

Continue to accommodate people of all ages, physical abilities, economic circumstances, and families of all sizes and stages of family life. This includes affordable and physically accessible housing.

10. Connect the Reston community and emphasize transit-oriented development

Enhance the public realm by providing a range of high quality transportation facilities including roads, bridges, sidewalks, bikeways, and trails that link activity centers and nodes, as well as open spaces, parks, schools and recreational facilities. Encourage the connections to the new Metrorail stations and strengthen the local feeder/circulator bus system. Augment and enhance the pedestrian sidewalks, trails and bikeways. Provide additional non-motorized transportation options and use transportation management to reduce the reliance on the single use automobile.



11. Provide high quality, active public open space

Expand and enhance the quality of active open space through development and redevelopment. Active public open space in the transit corridor should include areas such as public plazas, outdoor recreational facilities, bikeways and trails. Public open space does not include streets, parking areas or driveways. The Town Center, transit station areas and the village centers should include a variety of active public spaces such as plazas for entertainment, and spaces for small playgrounds. Provide access to a range of recreation spaces in the high-density areas and the village centers. Recreation areas outside the transit corridor, such as fields for active recreation and golf courses should be preserved and enhanced.

12. Emphasize transit oriented development

Enhance the design character of the public streets, open spaces and buildings. Buildings should provide an active front on streets and avoid the use of parking structures and surface parking lots in the front of buildings facing streets. The public realm should be designed to encourage pedestrian travel and safety. Incorporate the transit oriented development principles adopted by Fairfax County.

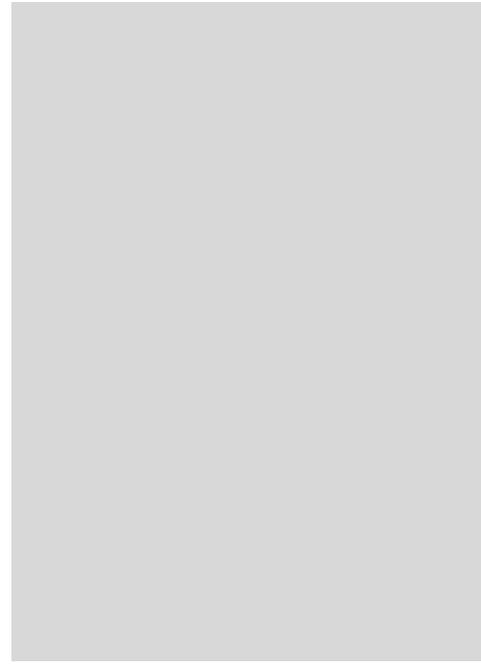
13. Address economic needs

Provide sufficient incentives to encourage property owners to pursue appropriate redevelopment opportunities, including making proffers that benefit the community in order to create the transit and pedestrian-oriented, mixed-use environment desired for the Town Center, the Metrorail station areas, and the village centers. Timely development by State and County authorities and the private sector of needed infrastructure is critical both to promoting development and to protecting residents from adverse impacts from that development.

14. Public participation

The cumulative impact of development and redevelopment should be continually assessed and evaluated by the community and Fairfax County. Community participation will be a hallmark of the review of projects.





Environment



Environment

Vision

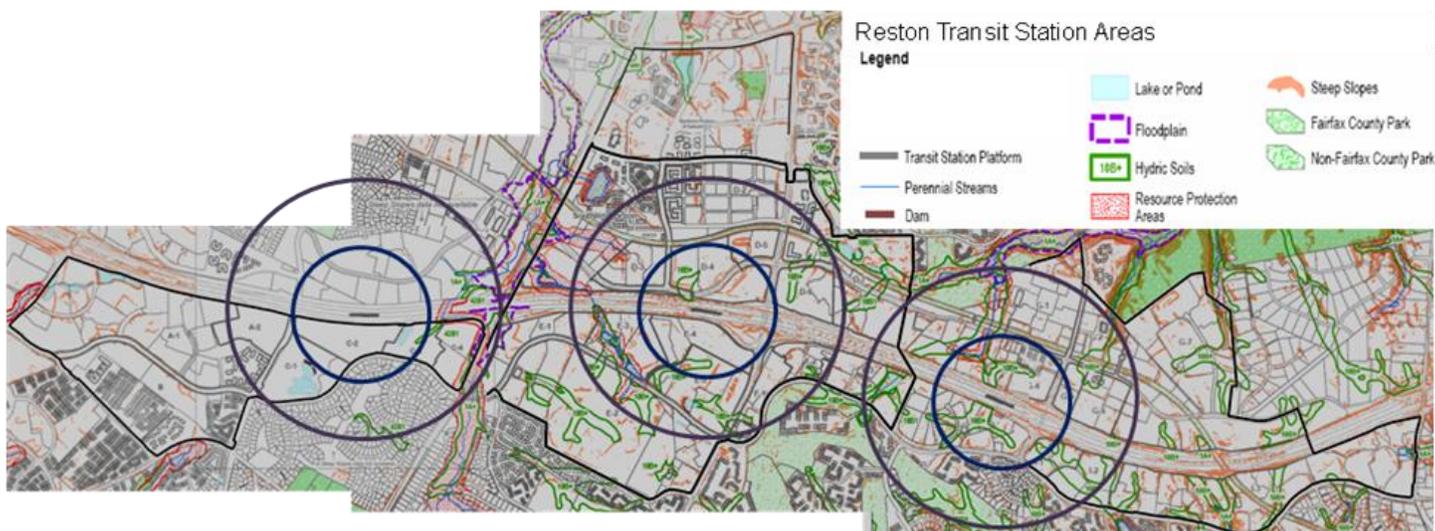
Reston in the 21st century will integrate access to nature with developed areas, protect environmentally sensitive areas, and establish high standards of green technology for all buildings and neighborhoods including the linear Transit Corridor.

Goals and Priorities

The planning goal is to bring conservation of the natural environment into the compact neighborhoods around the Transit Corridor. An urban green infrastructure of interconnected spaces will be an integral part of the planning and design. The goals and objectives identified in this section will ensure that Reston continues to develop and redevelop as a sustainable community, creating a healthy and environmentally responsible place. The general goals include the following:

- Protect** - Streams and buffer areas
 - Wetlands in the Reston West/Herndon Station area
 - 100 year flood planes
- Restore** - Replace forest
 - Increase tree canopy (from 38 percent to 45percent)
 - Daylight streams
- Enhance** - Streams and ponds
 - Pervious surfaces
 - Green buildings and neighborhoods

The plan foresees using an evolving approach, with a short-term goal of carbon neutrality with a long term goal of reducing carbon. Best management practices should be taken during redevelopment, to: improve air quality, conserve energy, use integrated approaches to water management that include water conservation and reuse and systems that mimic natural processes, and use permeable pavement. Restoring and enhancing the natural environment will remain a central planning principle.



Summary



Reston is located in the Piedmont Region with diverse natural areas including forests, meadows, lakes, wetlands, and streams. It is also located in the middle of the Eastern Flyway. Reston natural areas provide important habitat to both resident birds and critical stopovers for migrating birds to rest and refuel for the rest of their journey. The Audubon Society refers to these as “Urban Oasis” for Neo-Tropical Migratory Birds. The natural areas are one of Reston’s most treasured assets. While these natural areas are diverse, they are also highly fragmented by development and require active management to keep them healthy and resilient.

Multiple owners manage Reston’s natural resource areas including: Reston Association (RA), Fairfax County, individual property owners and homeowner associations. The RA plays a key coordination role among the multiple owners by providing education, volunteer opportunities and outreach to the community. Reston’s natural areas should be inclusive public spaces that foster responsibility and stewardship.

Regeneration in natural areas should be encouraged and include planting of native species, invasive plant control, deer management, and stream restoration. Climate change and fragmentation of natural resource are putting many native species and plants at risk of decline and extermination. Reston’s natural areas can help to conserve vulnerable native plants species that are unable to adapt to the impacts of climate change because of forest fragmentation.

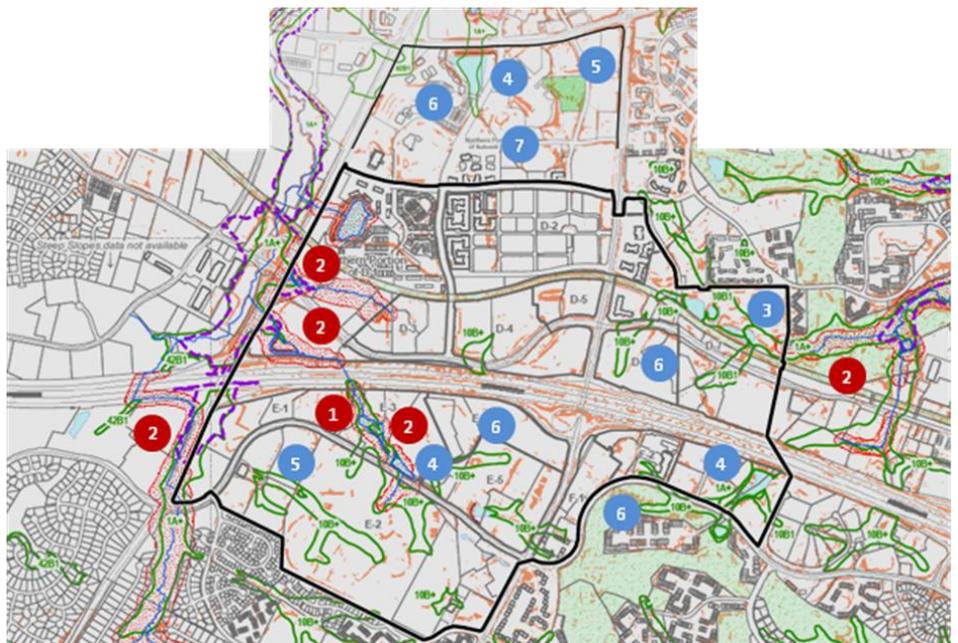
Recommendations: Town Center Area

Protect Resource Management Areas including:

1. Wetlands
2. Stream buffer areas (100 feet on each side)

Restore and Enhance:

3. Intermittent streams
4. Ponds
5. Forests and trees
6. Hydric soils
7. Steep slopes



Resource Management Areas

Wetlands

Wetland Studies reconnaissance found 46 acres of wetlands in Reston including the Town Center, wetland/stormwater ponds near the Wiehle Station, and Plaza America. These small urban wetlands filter water and provide important habitat for plants and animals including stopovers to rest and refuel for migratory birds. The most significant wetland lies within a quarter mile of the future Reston West/Herndon Station area. Sunrise Valley Nature Park Sunrise Valley Nature Park (SVNP) is a 15.75 acre, privately owned wetland as an off-site mitigation for parcels in the Town Center. The site consists of approximately 3.3 acres of created wetlands, a restored farm pond, natural wetlands and natural upland buffers. The site supports a rich food web providing sustenance for inhabitants, including 122 bird species, some permanent residents, and migratory species. At least 50 percent of these wetlands are shallow marshes containing plant and animal species not found in this part of the County. This wetland is protected by a conservation covenant managed by the Army Corps of Engineers

Streams

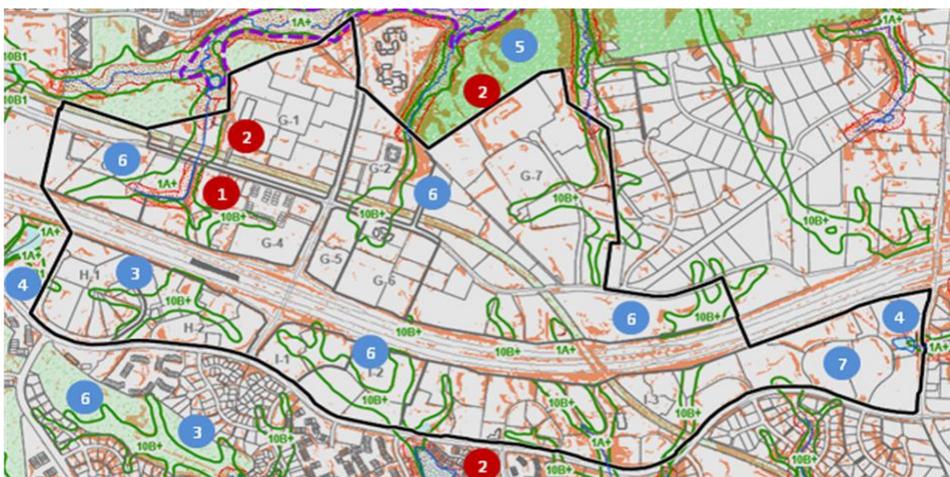
Many of Reston's stream valleys and lakes are managed by RA as part of their water resources program. The RA Board of Directors approved a ten year action plan for a Watershed Master Plan to restore The Glade, Snakeden Branch and tributaries to Colvin Run in northern areas of Reston. It is currently the largest urban stream restoration project in the Country. RA also has an active stream monitoring program that uses the Virginia Save Our Streams (VA SOS) that is nationally recognized as a reliable indicator of water quality.

Lakes and Ponds

Four constructed lakes, (Lakes Anne, Thoreau, Audubon and Newport), cover 125 acres and provide visual amenities, recreation opportunities and function as stormwater management facilities. These lakes are actively managed for sediment, algae, and shoreline stabilization. In addition, Lake Fairfax, owned by the Fairfax County Park Authority, is adjacent to Reston and also provides stormwater management and recreation.



Recommendations: Reston East Station Area



Protect Resource Management Areas including:

1. Wetlands
2. Stream buffer areas (100 feet on each side)

Restore and Enhance:

3. Intermittent streams
4. Ponds
5. Forests and trees
6. Hydric soils
7. Steep slopes

Storm Water Management

Reston is located in the headwaters area of the Difficult Run and Sugarland Run and the lower Horse pen Creek watersheds. Difficult Run, Sugarland Run and their forested floodplains have been negatively impacted by years of unchecked stormwater runoff, consumption of understory plants by deer, and the encroachment of invasive plant species. Land use within Sugarland Run and Difficult Run watersheds is primarily residential in nature with commercial and industrial centers straddling the Dulles Toll Road.

Fairfax County has completed Watershed Management Plans for both watersheds with a strategy for preserving healthy ecosystems, streams and natural environment within the watersheds. The plans were developed in response to rapid growth in development and the need for both updated stormwater and overall watershed management.

Tree Canopy

Much of the tree cover in Reston is located in the steam valley corridors managed by Reston Association with additional stands of trees in individual cluster association open space and other private lands. Smaller and younger trees are scattered throughout Reston as part of parking lot design and office campus open space areas. Trees are an essential element including cleaning the air and water, controlling storm water, reducing carbon, conserving energy, and providing wildlife habitat. In 2009, tree canopy covered about 38 percent (2741.2 acres) of the total land area in Reston. New development should be designed with a goal of 45 percent. Trees along streets and in parking lots provide essential services in the most polluted urban sites. Research at UC Davis showed that trees in Davis, CA parking lots reduced the surface temperatures of asphalt by as much as 36°F, cabin temperatures of vehicles by over 47°F, and fuel-tank temperatures by nearly 7°. Street trees provide shade and create a sense of safety and protection from street traffic and noise fro pedestrians. Closely spaced street trees along all public and private streets should be encouraged.



Recommendations: Reston West/Herndon Station Area

Protect Resource Management Areas including:

1. Wetlands
2. Stream buffer areas (100 feet on each side)

Restore and Enhance:

3. Intermittent streams
4. Ponds
5. Forests and trees
6. Hydric soils
7. Steep slopes



Meadows

There are 55 meadows spread throughout Reston. Grasses make up 60-70 percent of the mix in meadows. Meadows provide a place for sun-loving species to survive and a place to increase bio-diversity. Meadows provide habitat for a variety of wildlife including butterflies, praying mantis, bluebirds, and indigo buntings.

Parks and Recreation

Parks and recreation are one of the essential components of Reston's urban design. The vision for Reston calls for a comprehensive system of parks and pathways that connects all the districts within Reston. The network will integrate large and small urban parks with existing environmentally sensitive areas to promote health, culture, equality and ecology. Constructed spaces such as hardscape plazas and community centers also satisfy the human needs to socialize. Location of parks and open space should serve the overall needs of the residents, visitors and employees in Reston. Park land must be accessible to the public, but ownership can be public, private or through public-private partnerships.

Safe pedestrian and bicycle-friendly pathways serve as linear parks throughout all neighborhoods help connect Reston. These pathways will link to transit stations, pedestrian ways, bike trails, shopping and entertainment areas, offices and residential areas. The system of parks should build on existing parks and the creation of new urban parks. It will include large gathering places that support community events, such as a central, signature park, community parks, smaller pocket parks and plazas.

The plan envisions that many Reston developments will include urban parks as amenities. Creative approaches to providing for sports needs in Reston will be necessary, including redesign of nearby school and park fields to increase, integrating appropriate facilities within development areas, on rooftops, in utility corridors, removing parking or adding hours rather than acres, unique programming areas, recreation facilities and program space provided within commercial buildings, redevelopment at nearby existing parks, and forging new park-provider partnerships. With any of these creative approaches, visual and physical accessibility to the public is essential.

Through innovative design features such as lighting and synthetic turf and scheduling that provides for longer and more efficient use, field capacity can be expanded and the number of needed fields can be reduced. Overlay fields that accommodate multiple sports can reduce the amount of land needed. Adopted Countywide field standards are based on a majority of youth participants. It is anticipated that in Reston will need to meet the needs of both youth and adult field users. Corporate softball, flag football, kickball, soccer and adult baseball are anticipated needs. Other field sports, such as cricket, are an emerging need and will have to be accommodated.

Key Elements

Natural Resources

- Develop agreements or public/private partnerships among the owners of Reston's natural resources to coordinate work to maintain the health and resilience of Reston's natural areas.
- Look for opportunities during redevelopment to restore natural areas (including forested areas, streams and meadows) on disturbed sites adjacent to urban areas
- Use Reston's natural areas to conserve vulnerable native plants species and species that are unable to move their range to adapt to the impacts of climate change because of forest fragmentation and that will provide food for resident and migratory birds.
- Expand the invasive species eradication program
- Expand planting program of native trees, seedlings, shrubs and wildflowers to ensure regeneration and resilience of its natural areas
- Continue youth Environmental education on-site programs, including field trips for school groups, preschool programs, youth group programs, nature birthday parties, campfire programs, adult interpretive walks, adult classes, guest speakers, special events, fundraisers and festivals

Tree Canopy

- Follow the guidelines established in the Tree Action Plan: a 20-Year Strategic Plan to Conserve and Manage Fairfax County's Urban Forest. A reasonable goal for most urban plantings is to place a 5 percent limit on any one species within the municipal tree population
- Use i-Tree Baseline data to calculate the environmental services received from trees e.g. carbon sequestration to make effective resource management decisions during redevelopment.

Stormwater Management and Design

- Encourage an approach that mimics natural processes and integrates water, transportation, natural areas parks and recreation.
- Design should first minimize impervious cover, followed by the application of stormwater reuse, retention, detention, extended filtration and, where soils and infrastructure allow, infiltration to improve downstream waters.
- Incorporate stormwater management strategies in parks and other open space areas within or adjacent to the Transit Corridor
- Stormwater management and water quality controls for redevelopment should be designed to return water into the ground where soils are suitable or reuse it to the extent practicable. Reduction of stormwater runoff volume is the single most important objective. Reduction could occur through techniques that use landscaping measures that reuse harvested rainwater in a variety of ways, and through approaches that infiltrate water into the ground to replenish aquifers.
- Continue active management of Reston lakes and ponds for invasive species, sedimentation, algae growth.
- Manage urban wetlands and buffers for their ability to purify water and habitat including stopovers to rest and refuel for migratory birds.
- Manage urban wetlands for their recreational and interpretive amenities, boardwalks, benches and interpretive signage so that they provide people to nature interactions.
- Develop a public/private partnership to preserve the Sunrise Valley Nature Preserve and make it the centerpiece of conservation

development so that the wetland is preserved and maintained in perpetuity as a community natural recreation and educational park.

The following are recommended for applications for which a significant increase in density or intensity is proposed for redevelopment:

- Stormwater quantity and quality control measures should be provided that are substantially more extensive than minimum requirements, with the goal of reducing the total runoff volume and significantly delaying its entry into the stream system. The emphasis should be on Low Impact Development (LID) techniques that evapotranspire water, filter water through vegetation and/or soil, return water into the ground or reuse it.
- LID techniques of stormwater management should also be incorporated into new and redesigned streets where allowed and practicable.
- Equivalent approaches may incorporate coordinated stormwater management on multiple development sites and off-site controls.
- Restoration and stabilization of degraded streams on development sites should be pursued where feasible; restoration and stabilization techniques that incorporate ecologically beneficial, vegetated approaches are preferred. Off-site efforts to restore and stabilize streams should also be encouraged.
- Development or redevelopment in Reston should “first do no harm” or continue the stream restoration and stabilization in The Glade and Snakeden Branch, Colvin Run Tributaries, Buttermilk Creek, and other watersheds should be encouraged as part of a comprehensive strategy to restore the water quality and ecological health of Reston’ streams

Sources: *This section is a compilation of draft materials from the three Reston Master Plan Special Study Task Force station area subcommittees, the Environmental Stewardship Section of the recently adopted plan amendment for the Tyson’s Corner Urban Center (2007-23) Tyson’s Corner Urban Center S05-CW-1CP), contributions from Reston 2020 Environmental Working Group, Reconnecting America and the Center for Transit Oriented Development, EPA Smart Growth, and EPA Urban Water Initiative, US DOT Transportation Enhancements Program, Water Environmental Research Foundation, Fairfax County Tree Action Plan and Fairfax County Watershed Policy Plan, The Audubon Society Urban Oasis Program, U.S. Forest Service i-Tree Tools, UC Davis Western Center for Urban Forestry, U.S. Green Building Council, Natural Resources Defense Council, American Society of Landscape Architecture, American Institute of Architecture.*

Transportation

Transportation

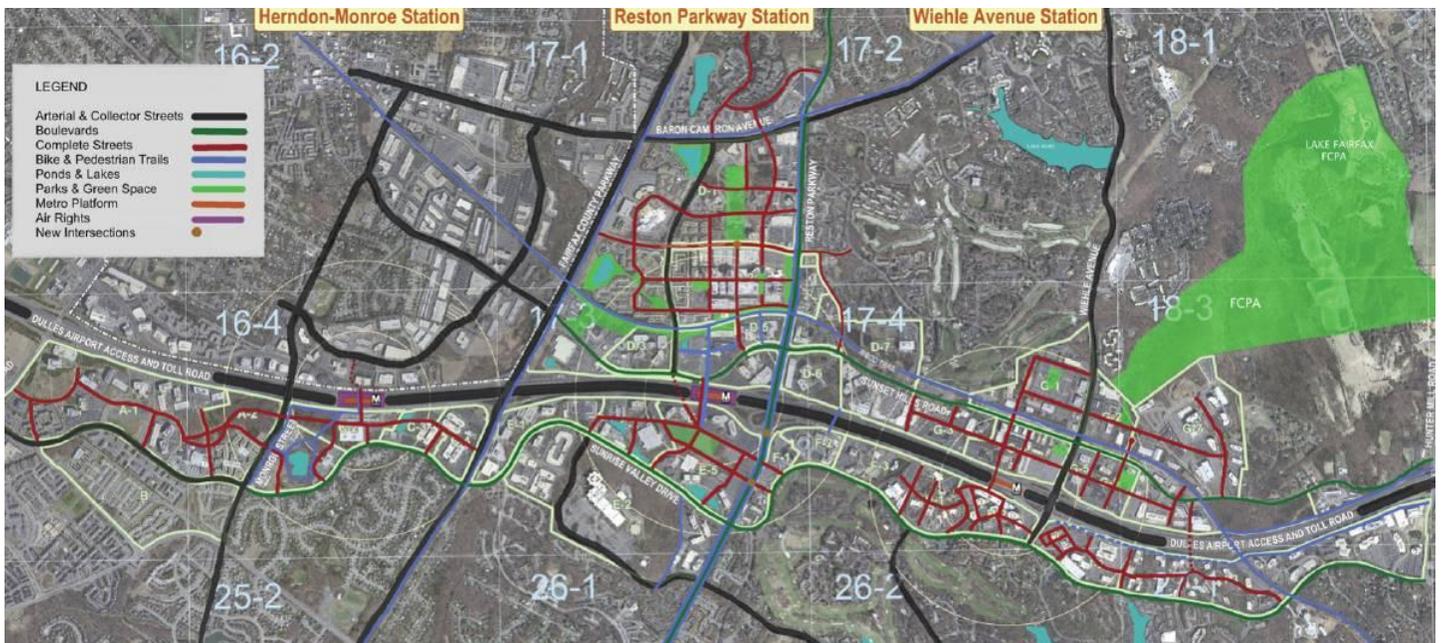
Vision

Transportation in Reston, and particularly in the Metro station areas, should be first and foremost a key part of the infrastructure that supports the quality of life as articulated in Robert Simon's goals. This is in contrast to a common view that transportation is a utilitarian means to provide and support mobility.

Goals and Priorities

The transportation system includes the following:

- Improving the operational characteristics of at least three intersections:
 - Wiehle and Sunset Hills Boulevard
 - Reston Parkway and Sunset Hills Boulevard
 - Monroe Street and Sunrise valley drive
- Providing three travel lanes from Baron Cameron to Sun Rise Valley Drive
- Providing four additional crossings of the Dulles Toll Road:
 - Extension of Soapstone Drive
 - Connection of Plaza America for pedestrians
 - Extension of Admiral Haley Drive for traffic or pedestrians
 - Expansion at the Reston West/Herndon Station
- Establishing a grid of streets at each station area
- Expand the bus circulating network
- Expand the bike system to provide:
 - Bikeway along Sunrise valley Drive as a greenway
 - Bikeways for all crossings of the Dulles Toll Road
- Establish a goal of at least 25 percent for non-auto drivers
- Establish a mandatory transportation management system
- Create a real time response system using traffic signals during peak periods
- Reduce the width of New Dominion Parkway in the Town Center
- Reduce the parking standards and establish shared parking opportunities



Transportation

Transportation should be addressed from three functional perspectives:

- Arterial through-traffic including traffic with a rail station destination
- Traffic having business, retail, or other commercial Reston destinations
- Other intra-Reston local access movements.

Planning emphasis should be focused on the transportation modes most appropriate for each of these functional uses. Periodic monitoring should be performed (major review every decade) to assess how well all goals and targets are being achieved.

The planning priority for space in the congested station areas for each of these uses should be (1) rail, (2) pedestrian, (3) bicycle, (4) bus, and lastly (5) private auto and other vehicles.

Planning for through arterial traffic that has no origin or destination in Reston should have the lowest priority. Planning for all movements in the station areas should be focused on public transit systems (i.e. rail and bus).

Planning for movements in the station areas for business, retail, or other commercial destinations should have the following priorities: pedestrian, bicycle, bus, and private auto.

Planning for other intra-Reston local access should focus primarily on residents to easily move to and between village centers, town center, other destinations in the station areas, and other parts of Reston.

Existing Dulles Toll Road crossings should be enhanced to provide for smoother vehicle flow as well as expanded bicycle and pedestrian capacity. New additional Dulles Toll Road crossings should be designed to facilitate local intra-Reston movement -- there should be an emphasis on pedestrian, bicycle, and bus DTR crossings.

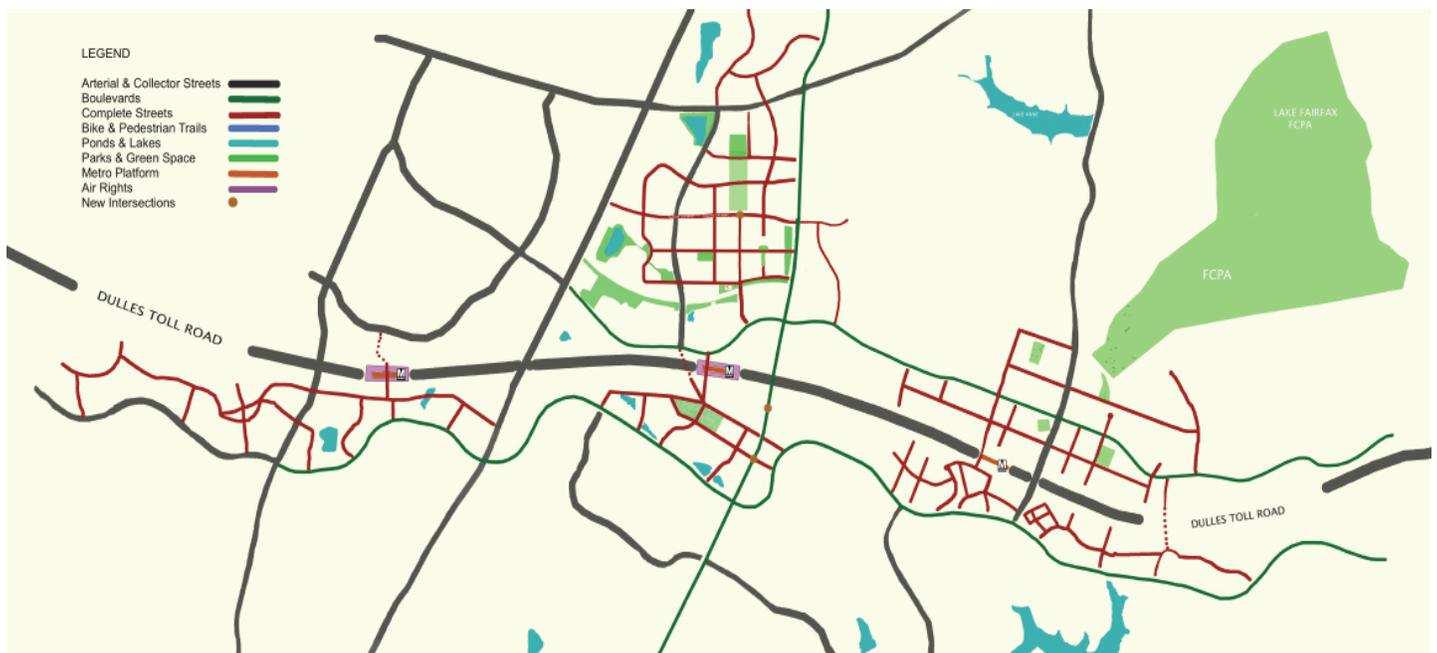
Ease of ***wayfinding*** should be an important part of station area planning for all types of movements including graphics in the rail station and bus transfer facilities, as well as directional signing near all major intersections to village centers, town centers, and other important places.

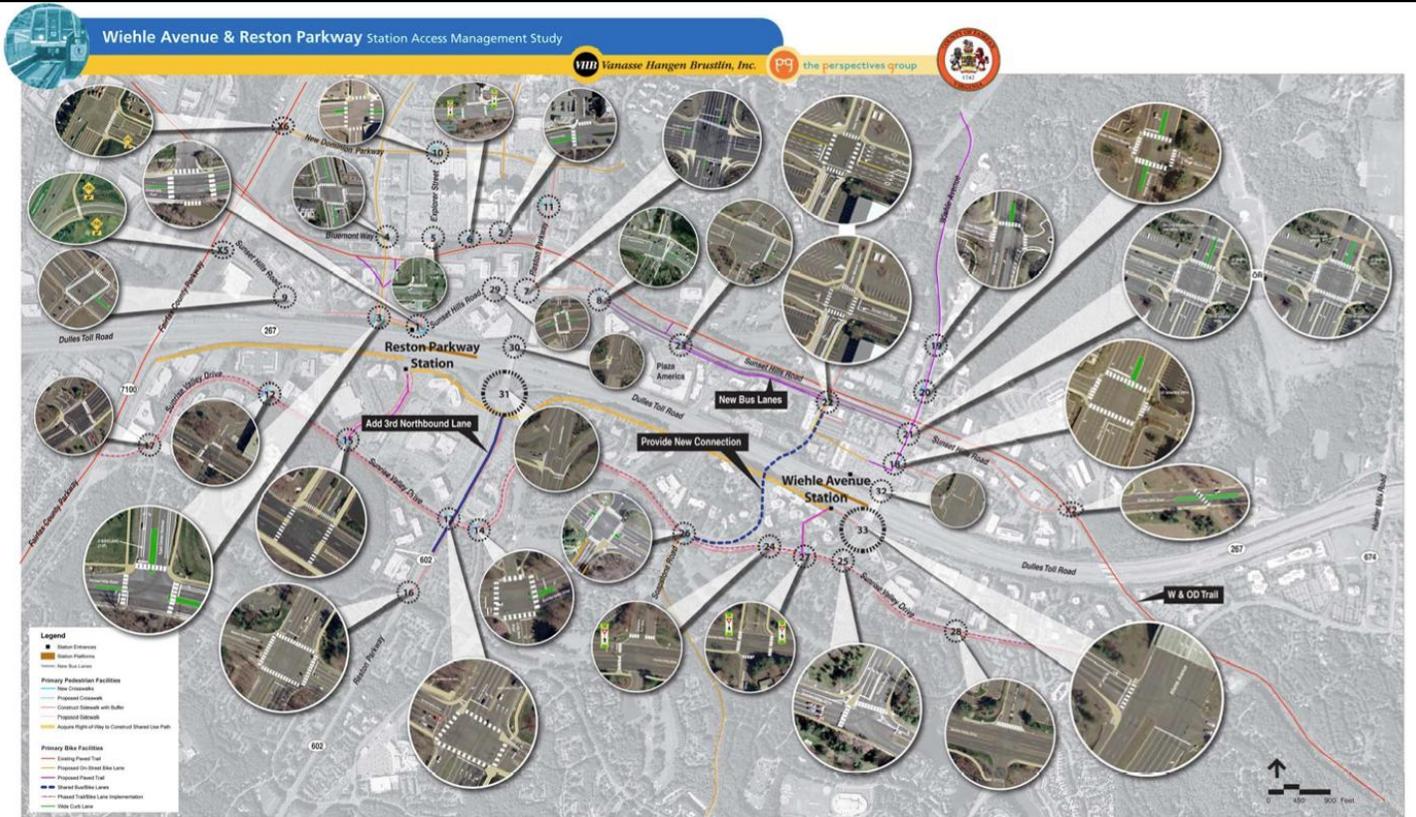
Key Elements

- The map on the following page is a composite of the three Metro station areas showing the recommendations of the three station area sub-committees, RMAG, and selected other recommendations prepared for the Task Force. The map shows a grid of local streets, off-road bike routes, new crossings of the Dulles Toll Road including possible locations for air rights development. The recommendation is for the County to evaluate the impact of possible future development in the station areas using the map. Its ability to effectively perform this evaluation taking into account the recommendations illustrated in the map on the following page, as well as in evaluating the impact of other recommendations coming from the three station area sub-committees and the Task Force, such as targets for balance of residential and commercial uses in each station area, depends on the analytical methods used. This recommendation is outlined in the last bullet in this section, and elaborated on in the last bullet in this report.

- Key features of the transportation map include:
 - The map reflects recommendations from the three sub-committees with modifications to improve network connectivity. The focus of the composite map is on consistency and completeness of the network within and between the station areas.
 - The routes along both sides of the Dulles highway are shown to emphasize the critical roles they can play in both station access as well as to (a) illustrate their important role in providing general inter-parcel access, and (b) illustrate the unique benefit they will provide for bikers by minimizing conflicts with cross traffic.
 - The air rights locations around the Phase 2 Metro rail stations are recommended, but they may be the most difficult to implement (see the section on Air-Rights under “Specific Transportation Recommendations.”)
- Short-term priorities should emphasize the key improvements that need to be completed before Metrorail service begins at the Wiehle Avenue Station in 2013, including all pedestrian and bicycle improvements, and the extension of Soapstone Drive.

Illustration of the Transportation System





- In order to facilitate all recommended crossings of the Dulles highway, specific locations for footings of these structures should be made by Fairfax County to the Airports Authority as early as possible, but no later than the Fall of 2010.
- In order to make possible air rights development at any time in the future, Fairfax County should make recommendations to the Airports Authority for the specific locations desired at both the Town Center and Herndon-Monroe station areas, as early as possible, but no later than the Fall of 2010.
- The alignment of Soapstone Drive extension should be as shown in the RMAG report, as shown in Exhibit 2. *
- The RMPSS Task Force should recommend that the Comprehensive Plan include a target for each of the Reston station areas of all new development of a ratio of 4:1 for residential to commercial gross square feet in order to minimize, and ideally reduce, motor vehicle traffic on the arterials and collectors serving these areas. Periodic monitoring should be performed to assess how well this target is being achieved.
- Fairfax County should perform a legal analysis as soon as possible of the extent of the binding commitment of the Record of Decision (ROD) to approximately double the number of parking spaces at the Herndon-Monroe station, recognizing that that ROD was formalized prior to the Federal Transit Administration's decision to separate the Dulles rail project into two phases and later to enter into a Full Funding Grant agreement for only the first phase extension of Metrorail to Wiehle Avenue. Phase 2 of Dulles rail has received only very limited Federal funding for support of borrowing costs as part of the Stimulus funding.

- Parking at both Wiehle Avenue and the Reston West/Herndon Station should be transitioned from highly subsidized rail-access parking to parking required to support affordable housing and other components of TOD as soon as practicable after the beginning of operations in these stations. The primary means of achieving this goal is through substantially increasing daily parking fees, perhaps as high as the 2020 report recommends for Wiehle Avenue station – a minimum of \$12 per day. Eventually all of the subsidized rail parking should be eliminated as TOD progresses as planned, perhaps by completely eliminating subsidies for rail access parking (which would result in charging close to \$20 per day at the Wiehle Avenue station).

Specific Transportation Recommendations:

Priorities:

The first priority in terms of timing is completion of recommendations in the station area by the start of rail operations in 2013. The most important of these, and the most difficult to achieve, is the Soapstone extension across the Dulles highway to the station area. This improvement will provide greater traffic relief than any other improvement beyond those immediate station access improvements required to be built, such as new turning lanes and other improvements around the Wiehle Avenue-Sunset Hills Road intersection.

- Other top priorities include:
 - Additional improvements to the W&OD crossing of Wiehle Avenue that have been developed as a step toward implementation of the Reston on Foot recommendation for this location.
 - Bike lanes and sidewalks along Sunrise Valley Drive, and Wiehle Avenue.
- The second priority in terms of timing should be to complete all recommended station access improvements in the Town Center and Herndon-Monroe station areas by the time rail operations start in 2016 or 2017. Among the most important of these are:
 - Air rights foundations in both station areas.
 - Conversion of the existing bus-only ramp over the Dulles highway for west-bound traffic into a multi-purpose, two-way route into Herndon, through the cooperation of the Town of Herndon and two property owners on either side of where a new touch-down ramp will be needed.
 - The two recommended access points to the Reston West/Herndon Station from Monroe Street and Fairfax County Parkway.
 - Construction of footings for the recommended pedestrian-bicycle crossings of the Dulles highway on the east side of Reston Parkway.
- Priorities for space in the congested station areas should be as recommended in the RMAG report: (1) pedestrians, (2) bicyclists, (3) buses, and lastly (4) private autos and other vehicles.
- Resolution of the legal issue of the binding nature of the ROD's commitment to approximately double the amount of heavily subsidized parking at Herndon-Monroe should be completed as soon as possible, but no later than this fall.
- A plan for the transition of parking for subsidized rail parking at Wiehle Avenue and Herndon-Monroe stations to parking to support new affordable housing and other TOD uses should be developed and adopted as soon as feasible. The first steps in implementing these two transitions should be prepared in detail immediately after adoption of the transition plan. Consideration should be given to pricing parking at the stations by the hour rather than by the day, so that more short-term or off-peak users will be attracted, compared to all-day peak-period users.



Table of Street Classifications

Functional Classification	Number of Lanes	Design Character
Primary Arterials		
1. Dulles Toll Road	8	Highway
2. Fairfax County Parkway	6	Parkway
Major Arterials Type A		
1. Reston Parkway	6	Parkway
Major Arterials Type B		
1. Monroe Street	4	Urban Street
2. Sunset Hills Road	4	Boulevard
3. Sunrise Valley Drive	4	Boulevard
4. Wiehle Avenue	4	Urban Street
Other Streets		
1. New Dominion Parkway	4	Urban Street
2. Town Center Drive	4	Urban Street
3. Bowman Towne Drive	4	Urban Street
4. Fountain Drive	4	Urban Street
5. Soapstone Drive	4	Urban Street
6. Main Streets:		
▪ Market Street	2 w/parking on one side	Business Street
▪ Other Main Streets:		
- Reston East Station Areas	2 w/parking on both sides	Business Street
- Reston West/Herndon	2 w/parking on both sides	Business Street
- Town center South	2 w/parking on both sides	Business Street
7. Business Streets Type A	2 w/parking on both sides	Business Street
8. Business Streets Type B	2 w/parking on one side	Business Street



Connectivity

Air Rights

- The Task Force should investigate and resolve specific locations for the foundations for future air rights development at both the Town Center and Herndon-Monroe stations. This should include approximate lengths of these future air rights developments as well as the locations. This should be completed by early this fall to provide timely guidance to Fairfax County in formally requesting that the Airports Authority implement the construction of these foundations as part of construction of Phase 2 of Dulles rail. Among the considerations lengths of air rights platforms desired to accommodate a development project, or group of projects, that will form a well-integrated and pedestrian scale TOD unit, (b) recognition of the greater complexity and cost of development directly over the stations vs. the greater access value at those locations, and (c) the opportunities that each location option (above and around, or east or west of the stations) provides for north-south connectivity.
- Reston is now on the verge of having sufficient community support to get a public commitment design and build these foundations should be constructed now.
- Sufficient engineering design work should be done now to convince both the community, potentially interested developers, and concerned officials that there is a practical, safe, and economically feasible way to build future air rights development above the highway and rail system without great interference with highway and rail operations.

Special incentives may be needed in some of the station areas to attract what is being called “First Movers” by the Wiehle Avenue subcommittee. One example that has been discussed in a completely different context in the Town Center subcommittee is the desire by Boston Properties and the other subcommittee members is making new crossings (complete streets?) of the W&OD (probably grade separated) at both Explorer Street and Library Street (now only a pedestrian-bicycle bridge). Another example might be a westward extension of what Comstock is calling “Reston Station Boulevard,” and another is a new point of access from Fairfax County Parkway to the west across the Sprint property.

- A critical part is achieving continuous east-west connectivity on the south side of the Dulles highway from Centreville Road to Monroe Street (with an eventual grade-separated crossing) to the Herndon-Monroe station to Fairfax County Parkway, and on the north side of the Dulles highway from Oracle through Plaza America to the Wiehle Avenue station and Wiehle Avenue. These continuous connections are intended to provide rather slow speed access to and from all properties to the nearest stations, rather than to provide for movements of much more than a half mile which might encourage higher speeds. Design standards need to be developed to achieve “complete streets” of this character. *
- A final product of the RMPSS Task Force this fall should be a carefully prepared list of all the grade-separated crossings recommended to be planned for in each station area. This is important to assist the County and all interested stakeholders and community organizations in guiding plans on a parcel-by-parcel basis to facilitate eventual construction of these crossings. In many cases such early planning can lead to the achievement of these crossings at more moderate cost than stand-alone grade separations, and of critical importance in providing access to new TOD, such as is now in planning for an elevated crossing of Sunset Hills Road from the Town Center station to the Boston Properties site.



Operational Improvements at Selected Intersections

Intersection	Transportation Improvement
Wiehle Avenue and Sunset Hills Road	<ul style="list-style-type: none"> ▪ Complete a grid of streets in all four quadrants to provide for bypass opportunities ▪ Create a main Street connecting Wiehle Avenue to Plaza America to divert local traffic from Sunset Hills Road ▪ Extend Soapstone Drive across the Dulles Toll Road
Reston Parkway and Sunset Hills Road	<ul style="list-style-type: none"> ▪ Extend Admiral Halley Drive across the Dulles Toll Road ▪ Extend the streets in the Town center across the W&OD Bikeway to Sunset Hills Road to improve the grid of streets
Sunrise Valley Drive and Monroe Street	<ul style="list-style-type: none"> ▪ Create a Main Street connecting Monroe Street to the Reston West/Herndon Metro station area to direct traffic away from Sunrise Valley Drive ▪ Complete a grid of street that will reduce the need for traffic to use Sunrise Valley Drive ▪ Create a green parkway along Sunrise valley Drive with a continuous bikeway
Sunrise Valley Drive and Reston Parkway	<ul style="list-style-type: none"> ▪ Create a Main Street connecting Reston parkway to the Town center Metro Station area to direct traffic away from Sunrise Valley Drive ▪ Complete a grid of street that will reduce the need for traffic to use the intersection ▪ Create a green parkway along Sunrise valley Drive with a continuous bikeway

Pedestrian and Bicycle Improvements

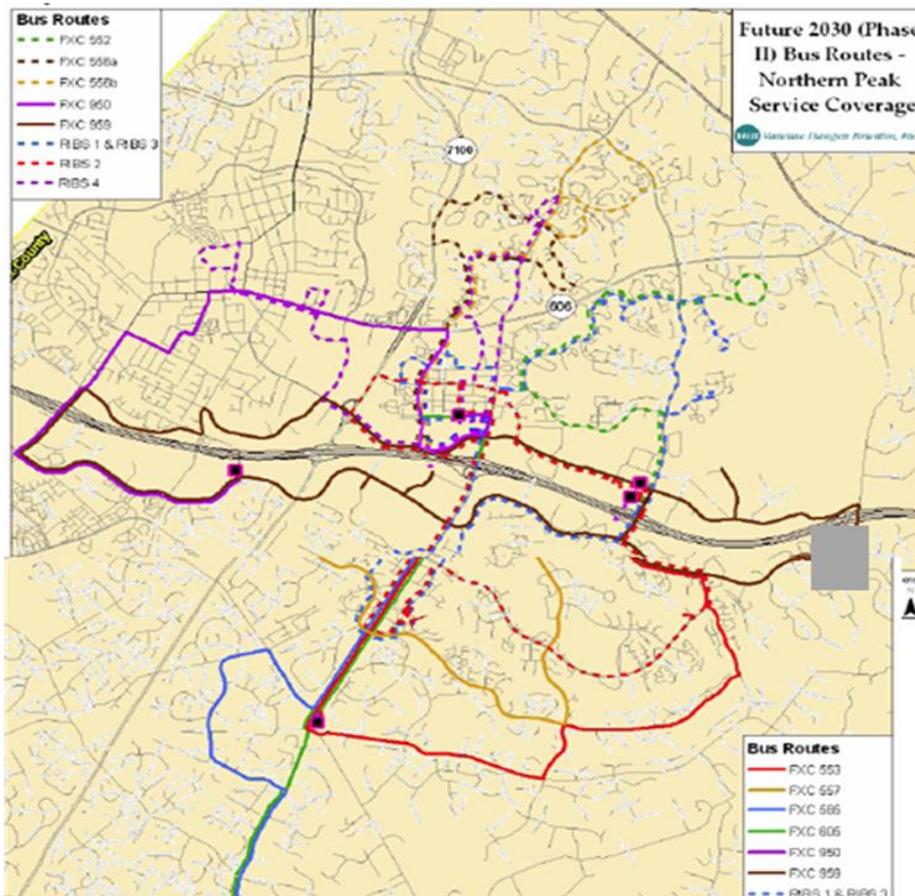
- More detailed analysis and design work should be performed by Fairfax County for high priority pedestrian and bicycle improvements in the RMAG and Reston on Foot reports, particularly for those projects where space is at a premium and costs of widening are high, such as along Wiehle Avenue, Sunset Hills Road, and Sunrise Valley Drive. *
- The analysis and design work recommended above should include careful attention to the issues of (a) joint use of space by pedestrians and bicyclists in high volume areas, (b) joint use of space by bicycles and motor vehicles, and (c) on-road bike lanes. *
- Much more attention should be paid by Fairfax County to the benefits and costs of “real” traffic calming such as is commonly done in Europe, Canada, and in a few parts of the U.S. A critical part of this, which should be done by the County, is the use of highly specialized design features such as the use of rougher re-surfacing calibrated to slow vehicles down to specific speed ranges, either at critical intersections or for continuous sectors of streets. Europeans consider this so important for safety and enjoyment of streets that they are willing to invest in costly solutions such as cobblestone surfaces.
- We recommend that a demonstration of the application of stamped concrete resurfacing be performed for New Dominion Parkway at all intersections between Reston Parkway and Fairfax County Parkway (excluding those two major intersections). The traffic calming measures for this section of New Dominion that have been recommended so far – a road diet and the addition of a traffic signal at Explorer Street -- will not slow traffic down to a safe and comfortable speed for pedestrians (about 25 mph), but stamped concrete surfaces can easily be designed to do so. Consideration might also be given to continuing such re-surfacing at slightly higher design speeds for one or more blocks of New Dominion between intersections.

Bus Service

- The RMAG consultant developed and presented to the community in 2008 detailed recommendations for restructuring of bus services in the Reston-Herndon area to provide feeder services for the two primary Reston stations – Wiehle and Town Center. These recommendations were developed in close coordination with Fairfax County DOT staff and were revised as appropriate after community review. These services were designed to connect with every other train in the peak period.
- Based to a great extent on refinement of the RMAG recommendations, the County's 2009 Transit Development Plan (TDP) includes recommendations for changes in routes and schedules throughout the County including routes serving the Reston - Herndon area. A table in Chapter 12 of that TDP final report lists each route change recommendation and provides estimates of the change in annual operating costs on a route-by-route basis. Another table in that chapter places 1st priority on restructuring of these services for the introduction of Silver Line. The total increase in ridership for the Reston services is forecast to be 133,672, and the total for Herndon is forecast to be 146,812. The summary evaluation of these recommended changes is that the cost is estimated to be -\$7.09 for the Reston system (i.e., a savings of over \$7 per new rider due mostly to eliminating bus services that will be replaced by rail). The cost is estimated to be \$2.66 per new rider for changes in the Herndon system.



RMAG and the County have done an excellent job of developing and evaluating these recommendations for restructuring of services to best provide feeder service on the most cost-effective basis. However, we believe it is desirable for each Task Force member who is directly impacted or has a serious interest in these recommended changes to review these recommendations in more detail. To facilitate this, we recommend that the Task Force ask the County to hold a meeting soon to allow people to ask questions about the entire process and report on the status of implementing these recommendations. This would also provide an opportunity for members of the 2020 transportation group to discuss their recommendations, which involve much more extensive increases in service and presumably much greater increases in operating costs. The 2020 recommendations are probably less cost-effective changes because they are not designed to directly connect with train schedules as the County recommendations do. The RMAG report recommendations include the addition of bus-only lanes on the Soapstone Drive extension to the Wiehle Avenue station and along Sunset Hills Road between Wiehle Avenue and Old Reston Avenue. Fairfax County should evaluate these recommendations in light of the fact that bus operations on these lanes would be limited to a small number of buses using these lanes, and would only be doing so for a brief period every 14 minutes (meeting every other train, assuming 7 minute headways) in the peak period and less frequently at other times. Alternatives such as prohibiting all other vehicles from using the “bus-only” lanes, using overhead lane control signals operating in accord with real-time operations of the buses.

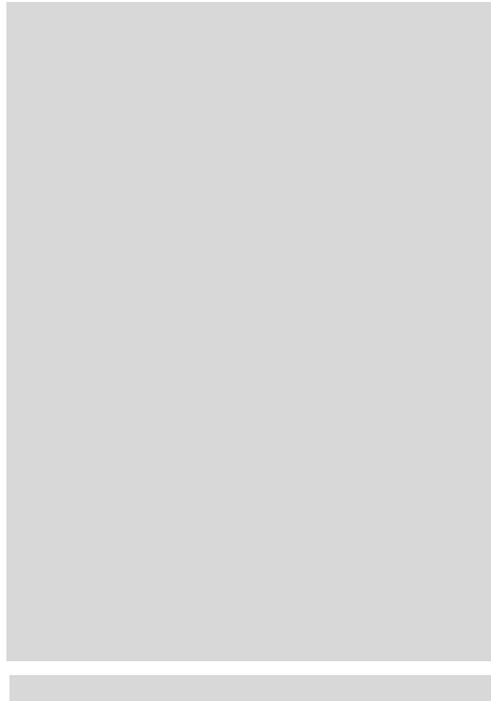


Traffic Signal Optimization: *

- Several years ago VDOT spent several million dollars developing and installing a system for “optimizing” all traffic signals in Fairfax County. Most of the expenditures involved (a) installing thousands of sensors in pavements to measure traffic flows in each lane on signal approaches, (b) hard-wire these sensors to a central computer control system, and (c) having a consultant develop fixed-timing signal controls that would “optimize” traffic flows on all sections of signalized routes for a set of several time periods during the week: weekday peak and off-peak periods, and Saturdays, Sundays, and holidays.
- The shortcomings of this effort are: (a) such an “optimization” system is based only on minimizing average delay times, which vary widely from day-to-day, for long sections of signalized routes; (b) the system of signal timing in general remains fixed for years until another consultant is hired to update the “optimized” signal controls for each section of signalized route. (this probably does not occur at all during periods of scarce funding such as we have now experienced for several years); and (c) perhaps most importantly, this type of fixed optimization does not respond to real-time variations in traffic flow (except to a limited extent for turn-lane signals).
- Since software for real-time traffic signal controls has been evolving over several years going back to before the period during which VDOT developed this Countywide signal control system, and since most of that investment has been greatly under-utilized over the last several years, we recommend that Fairfax County join with VDOT in evaluating this problem and investigate options for utilizing this investment more cost-effectively by using the best of available proven software designed for real-time changes in traffic flow

Evaluation

- As recommended in the last bullet above under “Principal Recommendations” Fairfax County should enter into an agreement with Cambridge Systematics, the firm that performed state-of-the-art transportation analysis for the development of the Tysons Plan, as soon as possible to train County DOT staff in the use and application in Reston of the post-processing TOD planning model used in the Tysons Plan development process. Fairfax County staff currently plans to perform an evaluation of possible future development in the Reston station areas under the current Comprehensive Plan language. This evaluation work should include an application of Cambridge Systematics’ post-processing model under the guidance of that firm’s staff. Then a similar process should be used in evaluating the recommendations of the RMPSS Task Force, followed by an interactive application of that model in an effort to refine and enhance the Task Force’s recommendations.
- Fairfax County should consider entering into an agreement with a firm such as Cambridge Systematics, the firm that performed state-of-the-art transportation analysis for the development of the Tysons Plan, as soon as possible to train County DOT staff in the use and application in Reston of the post-processing TOD planning model used in the Tysons Plan development process.



Urban Design

Urban Design

Vision

Development and redevelopment should be of the highest caliber in terms of town planning, architectural design, compatibility, and livability. Redeveloped areas should be designed as integral parts of the larger Reston community instead of stand-alone developments. High standards for green neighborhood and building practices for all public and private development should be required. Public art should be integrated into development.

Goals and Priorities

The public realm should be the focus of design excellence in Reston including the following:

- **Streets** - Form the first impression and area shaped by the buildings
- **Open Spaces** - Create the background for social life of the Reston community
- **Public Art and Placemaking** - Provide opportunities for creating places specific to the needs of Reston
- **Buildings** - Provide shape to the streets and open spaces



Design of Streets

Boulevard - Reston Parkway

Street Character

Streets represent one of the important spatial elements that define the public realm. Streets are shaped by the buildings. They provide the sidewalk space important to establishing a pedestrian oriented environment. The streets include sidewalks, landscaping, lighting and amenities, and most importantly they provide connections.

Street Ownership

Primary Arterials are owned and maintained by the State of Virginia. Main Streets and the local streets will be owned and maintained by the private sector.

Streetscape

Street trees, pedestrian oriented street lights, and street furniture should be provided along business streets and local streets. Sidewalks along business streets and local streets should be at least 15 feet wide with at least 20 feet wide for street cafes.

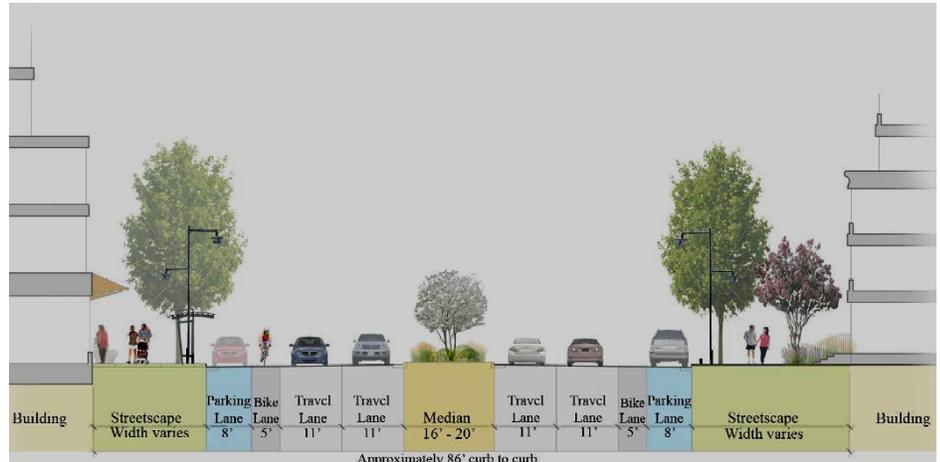
Utilities

Utilities should be accommodated underneath the sidewalk paving or street paving and within the right of way.

Intersections

Improving the pedestrian access to the future Metro stations is a primary goal. Intersection improvements should include:

- Pedestrian priority timing for traffic signals
- Clearly marked crosswalks
- Wide medians at the crossing of major streets such as Sunrise valley Drive, Sunset Hills Boulevard and Reston Parkway.

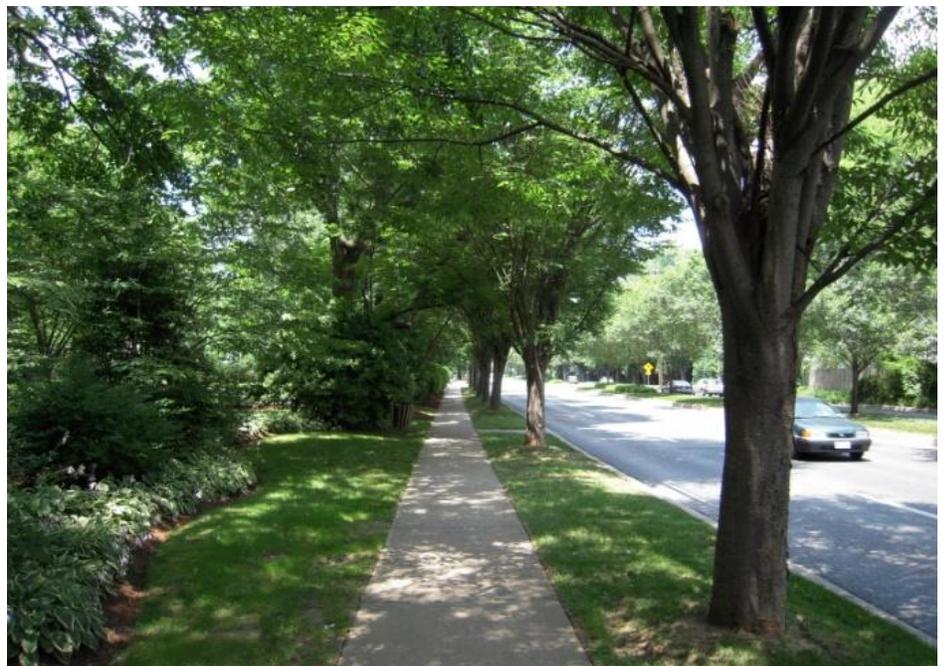


Standards

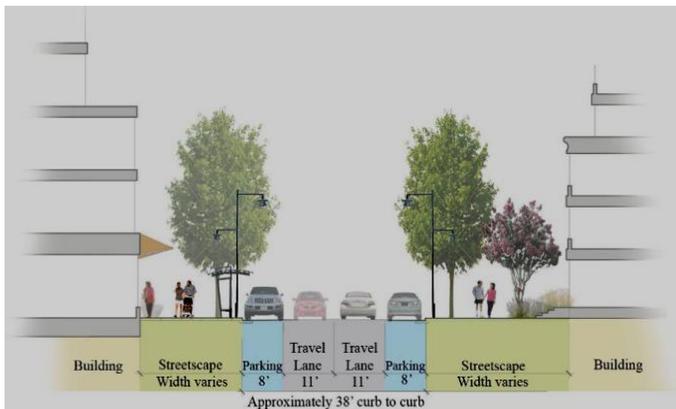
Lanes: 6 lanes divided from Baron Cameron to Sunrise Valley Drive
4 lanes divided from Sunrise Valley Drive to Lawyers Road

Design Guidelines

Sidewalk: 5 - 8 feet
Trees: 45 feet on center maximum
Building Setback: Varies
Street Wall: NA
Parking: NA
Median: 16 feet minimum



Business Street



Highway Functional Classification	Urban design Classification	Reston Examples
Major Arterial A	Parkway	Fairfax County Parkway
Major Arterial B	Green Urban Boulevard	Sunrise Valley Drive
Main Street	Business Street	Market Street
Local Street	Business Street	Town Center

Standards

Lanes: 2 lanes w/ street parking

Design Guidelines

- Sidewalk: 15 feet minimum
- Trees: 30 feet on center maximum
- Building Setback: 15 feet minimum
- Street Wall: Yes
- Parking: Both sides or one side
- Median: NA

Examples of Business Streets

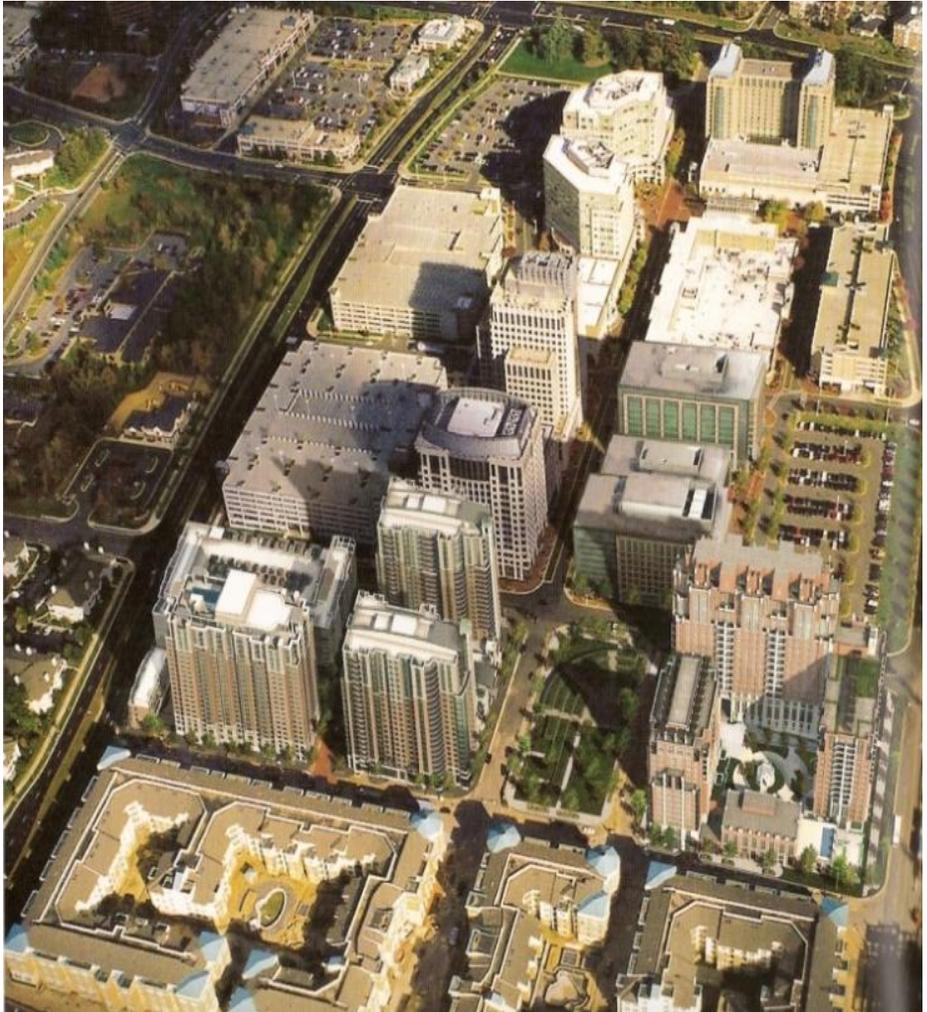


Design of Open Space

Character of Open Space

- Open spaces should function to preserve, augment and enhance the natural environment through such methods as increasing imperviousness, and expanding tree canopy.
- Public open spaces should be carefully designed to offer high quality open spaces on small sites.
- Open space requirements of separate sites should be allowed to combine to create larger spaces off-site.

High quality open spaces provide opportunities for spontaneous interaction and through programmed activities. A variety of large and small open spaces should be available throughout the Reston community.



Examples of Open Space in the Reston Town Center

- **Environmentally sensitive areas** - Resource Protection Area along Reston Parkway including major trees and grass areas
- **Active recreation areas** - Includes the nearby W&OD bikeway and trail, and the skating rink
- **Designated public open spaces** – These areas were planned at the beginning of the Town Center before the design of specific buildings was completed. They include the major urban park and the plaza area.
- **Other public open spaces** - These open spaces evolved at the same time as the buildings were designed. They were not designated from the beginning. These urban open spaces include small urban parks, gardens, plazas, wide sidewalks, pathways, through block connections, and other small civic spaces.

Design of Open Space

The following definition and method of calculation was proposed by the Vision Sub-committee at the October 6, 2010 meeting.

Definition of Public Open Space: Space for public enjoyment either publicly or privately owned, such as:

- **Environmentally sensitive areas** - Resource Protection Areas including wetlands, streams and stream buffers, and priority forest areas
- **Active recreation areas** - active play fields and large indoor recreation areas
- **Designated public open spaces** - areas such as gardens, plazas, walkways, pathways, trails, urban parks, through block connections, civic spaces, and town squares
- **Other public open spaces** - small urban parks and civic spaces

Public open spaces must not include streets, parking and driveways or areas for vehicles, and roof top areas not readily accessible to the public. Active recreation areas, designated open spaces, and undesignated public space all should be encouraged to include public art. Public open space must be easily and readily accessible to the public and be identified by a sign placed in public view.

Calculation of Public Open Space:

- 20 percent minimum of the net lot not including areas for public or private streets and the minimum adjacent area for sidewalks. Flexibility should be used in applying this minimum, recognizing that smaller open spaces are more appropriate and are generally used and enjoyed in higher density areas of TODs. Also some portions of the 20 percent minimum may be more readily located in parkland areas in the immediate proximity of TODs.
- The minimum public open space requirement for each parcel can also be located off-site and combined with other properties within the transit station area to create larger public spaces (e.g. 5-7 acre civic green in the Town Center)
- Required public open space can be substituted for other public space such as a public performance space, a children's science museum, an interior recreation center, a memorial sculpture garden and other interior public spaces if easily and readily accessible to the public. Such substitutions need not be based on acreage, recognizing that they are often enjoyed more intensively than most other types of open space.



Environmentally sensitive



Active recreation



Designated public open spaces



Other public open spaces

Public Art and Placemaking

Public art is part of the Reston tradition. The Master Plan adopted by the Initiative for Public Art in Reston (IPAR) seeks to continue this tradition by commissioning a new generation of world-class public art that will:

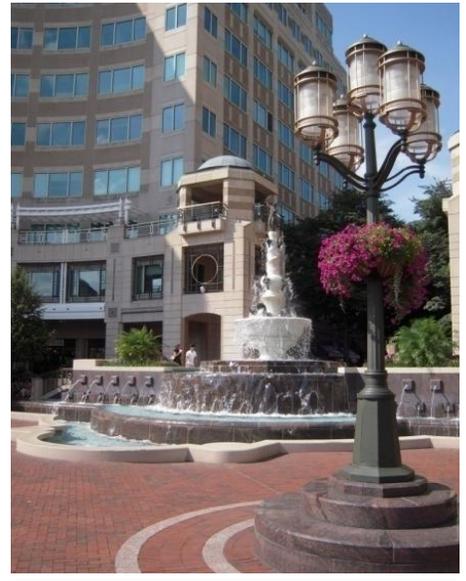
- Inspire a vigorous commitment to public art that builds on Reston's tradition of supporting community arts and culture
- Engage the public by stimulating new partnerships that will create a new generation of world-class public art in Reston
- Build on Reston's commitment to excellence in planning and design of public spaces
- Raise the expectation that public art will be an integral component of Reston's long term ethic of building a quality environment

Both the public sector and the private sector through the proffer system will be expected to participate in integrating public art into a broad variety of projects.

Priority Areas

- Community infrastructure
- Environmental projects
- Gateways
- Reston Town Center
- Temporary exhibits of artworks
- Metro stations and station areas
- North County Government Center
- Village centers
- Private development

Source: A Public Art Master Plan for Reston, IPAR, Adopted December 2008



Design of Buildings

Mix of Building Types

The Reston Transit Corridor has a variety of building types including one - two story retail buildings, institutional buildings including a hospital and medical office buildings, offices for international companies, headquarters for national associations, low-rise research and technology companies, self storage facilities and small spaces for services industries. A mix of low-rise and high-rise housing is also provided in the Transit corridor.

Building Form

The challenge for this range of building types is to create a single urban environment. Building design should enhance and support pedestrian activity. Design features should include:

- Build-to lines that require buildings to define streets
- Active retail store fronts on key streets to support and reinforce pedestrian activity
- Attention to sun access and orientation at the ground level
- Parking garages located below grade, lined with retail or located in the center of blocks

Design Excellence

- Innovative use of high quality construction materials
- Glass at the ground levels
- Outstanding design of public buildings and infrastructure



Building Design



Key elements of high quality building design will include a variety of strategies including building height, street orientation, retail locations and design, and location of parking garages.

Building Height

The tallest buildings should be within ¼ mile of the Metro stations. Building towers should be located to minimize their impact on the street's pedestrian environment and the adjacent open space. Building roof lines should be distinctive on towers.

Street Orientation

Buildings should be oriented to streets. Setbacks from streets should be 15 feet minimum and form an urban street wall.

Retail Locations and Design

Recognizing that every building will not be able to include retail at the ground level, buildings located on important sidewalks that provide access to the Metro stations should include retail. Retail frontages should maximize building transparency and avoid blank walls.

Parking Structures

Parking should minimize the impact on the pedestrian environment. Parking structures should be located behind buildings or retail facades. Underground parking is encouraged. Entrances should be located on side streets. Surface parking should be located on the interior of blocks or the side of buildings to avoid locating parking between the building and the street.



Sustainable Building Design

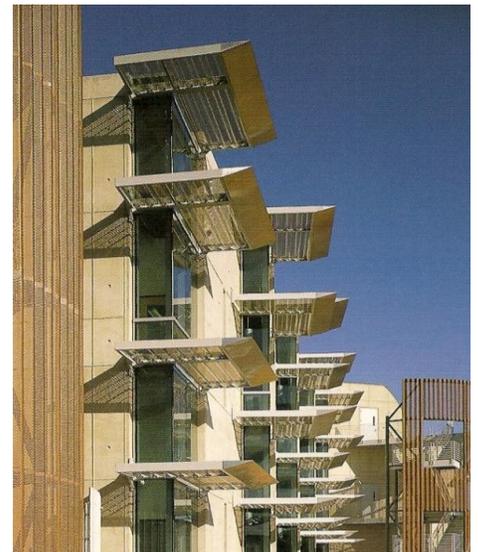
Buildings should be of the highest caliber in terms of town planning, design, compatibility, energy efficiency and livability. Key features include:

- Use of site and building design and orientation for passive solar heating and daylighting
- Maximize the potential for renewable energy systems
- Incorporate passive cooling through proper shading and ventilation
- Reduce water consumption
- Recycle building materials and locally produced materials
- Incorporate renewable energy systems such as wind power, solar power, and geothermal heating and cooling systems
- Use light reflecting roof surfaces or green roof systems

Examples

The examples of sustainable building design shown below include:

- Green roof over a parking structure
- Use of solar panels in building design
- Use of outside screen to direct sunlight deep into interior building spaces



Acknowledgements

Vision Sub-committee:

- John Bowman
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