FRANCONIA-SPRINGFIELD AREA AND ENGINEER PROVING GROUND

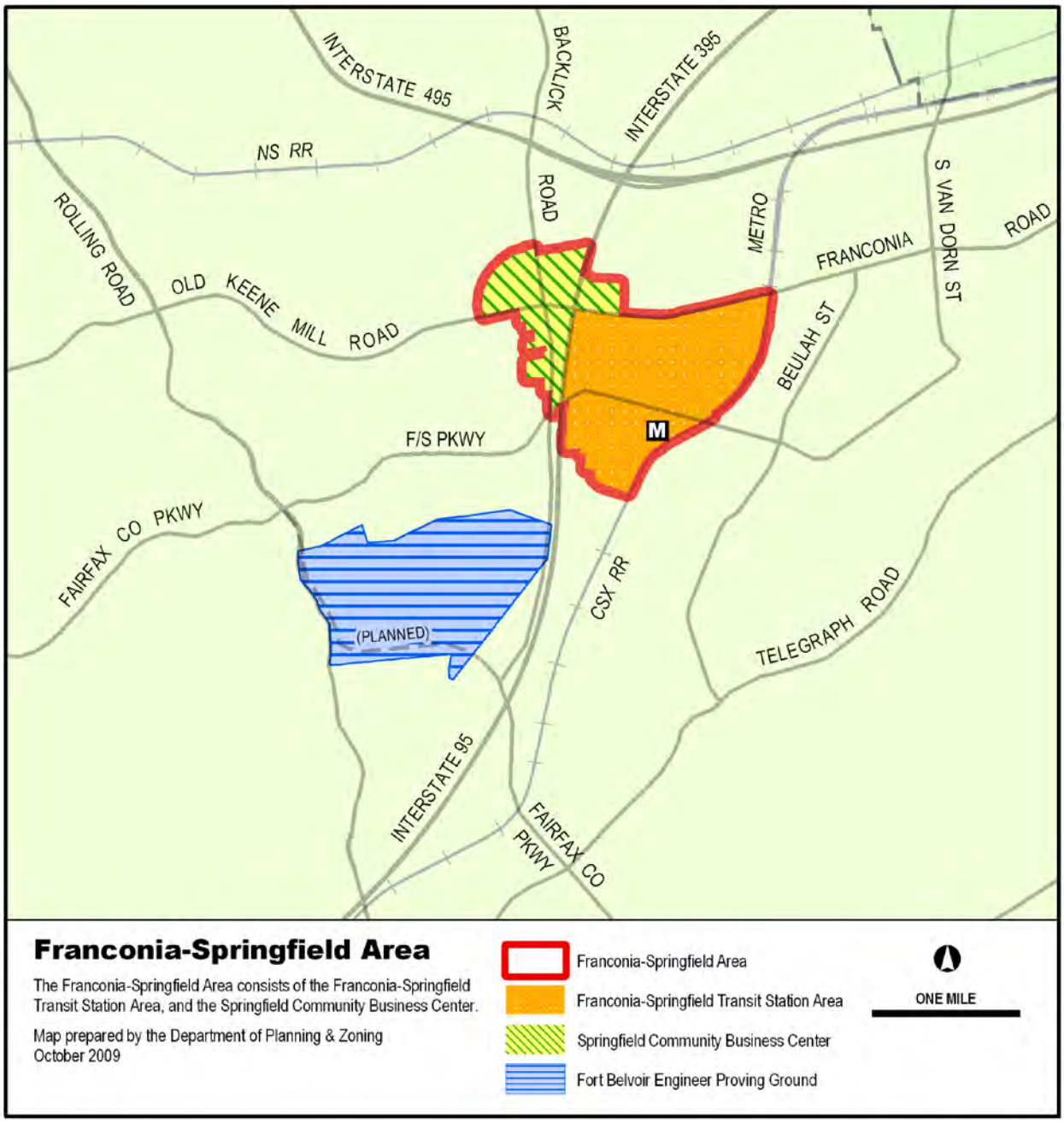
OVERVIEW

The Franconia-Springfield Area is located in the central portion of the Springfield Planning District, generally extending along I-95 from Commerce Street to the I-95/Newington interchange to the south, and from the Garfield Elementary School to the CSX Railroad tracks to the east. The area contains two established employment and retail centers, the Springfield Community Business Center and the Franconia-Springfield Transit Station Area (See Figure 1), which also comprise several established neighborhoods and residential areas. The retail centers serve to provide essential and luxury needs and services and job locations to the neighborhoods within and surrounding the area, and to the region.

The majority of the Springfield Community Business Center is located west of I-95, north and south of Old Keene Mill Road. A small portion of the CBC is located east of the Interstate and north of Franconia Road. The CBC offers a variety of community-serving retail goods and services. The CBC contains some housing and has potential for additional mixed-use development. The Community Business Center is envisioned to function as the community-serving urban village of the Franconia-Springfield Area.

The Franconia-Springfield Transit Station Area is located east of I-95 and south of Franconia Road, north of the Loisdale Estates neighborhood, and west of railroad tracks. The Transit Station Area includes several places of interest. The Joe Alexander Transportation Center features Metrorail and Virginia Railway Express service, commuter parking and local and regional bus services. The Transit Station Area also includes Springfield Mall, a regional shopping center, and the General Services Administration (GSA) Parr Warehouse. The redevelopment of the mall into a mixed-use town center represents a major step in the revitalization of the area.

The Engineer Proving Ground site is an approximately 805-acre military reservation located between I-95 and Rolling Road, south of Hooes Road, less than a mile south of the Franconia-Springfield Area. The 2005 Base Realignment and Closure (BRAC) actions will bring up to 18,000 new jobs to northern Virginia. These actions should facilitate the redevelopment and revitalization of the Franconia-Springfield Area as associated support services and employee and contractor needs may be accommodated in the nearby Franconia-Springfield Area and the amenities and public transportation options offered. The former military research and training facility is planned for a mixed-use development comprised of office, research and development, conference center/hotel, neighborhood retail and residential uses. The implementation of this plan would require special federal legislation.



FRANCONIA-SPRINGFIELD AREA AND ENGINEER PROVING GROUND **FIGURE 1**

FRANCONIA-SPRINGFIELD AREA

CHARACTER AND LOCATION

Franconia-Springfield Transit Station Area

The Franconia-Springfield Transit Station Area is located in the southeast quadrant of the intersection of Interstate 95 and Franconia Road, between I-95 and the CSX Railroad tracks. The Transit Station Area includes the Joe Alexander Transportation Center; the Springfield Mall; retail, office, and hotel uses west of Loisdale Road; retail uses along the east side of Frontier Drive; the GSA Parr Warehouse; and the Springfield Center Industrial Park. It also includes the Springfield Crossing, Springfield Station, Springfield Forest, Greenwood townhouses, and New Charleston residential communities. Most of the housing in the area is comprised of single-family detached units with a few multi-family units located north and south of the Franconia-Springfield Parkway.

The Joe Alexander Transportation Center is located at a site south of the Franconia-Springfield Parkway adjacent to the CSX Railroad right-of-way. The Transportation Center includes a Metro Station, a Virginia Railway Express commuter rail station, a Greyhound bus station, approximately 5,000 parking spaces, and local bus transfer facilities.

The stream valleys of the upper tributaries of the Long Branch of Accotink Creek cover most of the central and eastern portion of the Springfield Planning District. The headwaters of the Long Branch of Accotink Creek form the basis of an Environmental Quality Corridor in this area. Vegetation and wildlife habitats along the stream enhance the open space system. Portions of the area are located in the Coastal Plain geologic province within an aquifer recharge zone and may contain slippage-prone swelling clay soils.

Oak Grove, a plantation house built around 1820, was located in this planning sector. The Oak Grove site is a significant heritage resource listed in the Fairfax County Inventory of Historic Sites. A list and map of heritage resources are included in the Springfield Planning District Overview section, Figures 4 and 5. Due to this historic site, large, undeveloped areas along the CSX Railroad have a high potential for significant heritage resources.

Springfield Community Business Center

The Springfield CBC is located in the northwest, northeast, and southwest quadrants of the intersection of I-95 and Route 644 (Old Keene Mill Road), north and west of the Transit Station Area. The CBC functions as a neighborhood- and community-serving retail and services center and to some extent, as a regional employment center. A limited amount of apartments are located along the northwestern edge of the CBC. These apartments function as a transition between the commercial uses and the neighboring, low-density, residential communities.

The Community Business Center is characterized by a number of shopping centers interspersed throughout the area, each center with a corresponding surface parking lot. Freestanding structures such as banks, restaurants and office buildings occur in disparate locations along the internal road network of the area. Architectural styles are diverse and there are few amenities such as plazas or visual focal points. Several streets in the northern portion of the CBC were improved with continuous sidewalks, pedestrian amenities, crosswalks, and

landscaping through the implementation of the Springfield Streetscape Concept Plan (March 2000). However, these improvements have not been universally applied across the entire area.

The area south of Old Keene Mill Road is segmented both by Amherst Avenue and Backlick Road and is characterized by strip commercial uses along both roadways. Access to some areas is difficult. The predominant development is auto-oriented, with uses such as auto dealerships, service stations, and auto repair and accessories shops present. Older retail plazas line Backlick Road. The linear development pattern and numerous curb cuts contribute to traffic congestion and discourage pedestrian use of the area. In general, the portion of the Community Business Center south of Old Keene Mill Road consists of many freestanding uses that lack a unifying architectural theme or identity.

PLANNING HISTORY

The county initiated a revitalization study of the planned land use and transportation recommendations in the Springfield area with an Urban Land Institute Advisory Services Panel in early 2006. The report, entitled "Springfield, Virginia: Strategies for Revitalization" was published in May 2006. This report, in conjunction with the 2005 Base Realignment and Closure Act (BRAC), which was assumed to bring 18,000 new Department of Defense jobs to Fort Belvoir Main Post and the Engineer Proving Ground, triggered a follow-up effort by the county, called the Springfield Connectivity Study.

The Springfield Connectivity Study examined the Springfield area, including the Springfield Commercial Revitalization District and the Franconia-Springfield Transit Station Area. The Study evaluated opportunities for redevelopment and revitalization within Springfield and generated recommendations that proposed land use changes, urban design and placemaking concepts, context-sensitive street design, and other transportations facility and service improvements that would encourage redevelopment in the Springfield area and address the potential BRAC impacts. The final report, entitled The Springfield Connectivity Study Transportation and Land Use Evaluation (Part 1) and Framework Plans and Street Typologies (Part 2), was published in August 2008. The following recommendations for the Franconia-Springfield Area are informed by the Connectivity Study report, as well as other proposed BRAC-related Plan amendments that were submitted in the 2008 BRAC Area Plans Review process. Detailed guidance can be found in Connectivity Study final report. The report was the basis for the Urban Design and Streetscape Guidance, appended to this plan, but the original report also should guide the review of development proposals.

CONCEPT FOR FUTURE DEVELOPMENT

The Concept for Future Development identifies both the Springfield Community Business Center and the Franconia-Springfield Transit Station Area as mixed-use centers. Mixed-use centers, depending on their scale and offerings, serve as community and/or regional focal points. Recommendations for the Springfield CBC are intended to enhance the community-serving commercial aspects of Springfield with an urban village component, while the Transit Station Area focuses on the regional aspects of the Springfield Mall/Town Center. Both areas encourage multi-modal usage, with the Transit Station Area also including a transit-oriented development component with the Joe Alexander Transportation Center. Recommendations for both areas reflect the growing need to integrate housing and employment in proximity to one another.

VISION FOR THE FRANCONIA-SPRINGFIELD AREA

The vision for redevelopment in the Franconia-Springfield Area is to transform the area into a mixed use, easily accessible, and inter-connected place. Residents, employees, and visitors will have their essential needs and services proximate to one another and easily accessible by multiple means of transportation, particularly by walking and biking. Redevelopment also will serve the needs of the surrounding neighborhoods and, to a certain extent, the region. The vision has been developed to foster revitalization and reinvestment of the area and is expressed through the following guiding principles:

- Provide opportunities for high density, mixed-use redevelopment, which would allow residents, employees, and visitors to work, shop, exercise, and live in relative proximity to each other;

- Enhance multi-modal linkages throughout the area and to the Joe Alexander Transportation Center and other transportation nodes;

- Maintain easy access to regional transportation systems;

- Develop a unique identity that reflects the character of the area through design consistency;

- Create a usable wayfinding system, which would efficiently move people through the area;

- Enhance the safety and security of the area through innovative, environmental design features, such as improved lighting, safe pathways, and additional windows facing the street;

- Identify and minimize pedestrian and vehicular conflicts by separating the pedestrians from vehicular traffic, improving traffic circulation, and developing the pedestrian realm;

- Encourage even traffic flows through enhancements to the public transit system, incentives for carpooling, and implementation of a coordinated program of transportation demand management strategies;

- Encourage revitalization through enhancing the economic competitiveness of local businesses;

- Preserve and protect stable, low density residential neighborhoods that surround the Franconia-Springfield Area through screening, buffering, and tapering of development at the transitional boundaries;

- Utilize innovative design and engineering techniques to preserve, enhance, and restore the existing natural resources in the area;

- Identify, preserve and promote awareness of heritage resources through research, survey and community involvement; and

- Complement revitalization efforts made by the local community.

CONNECTIVITY

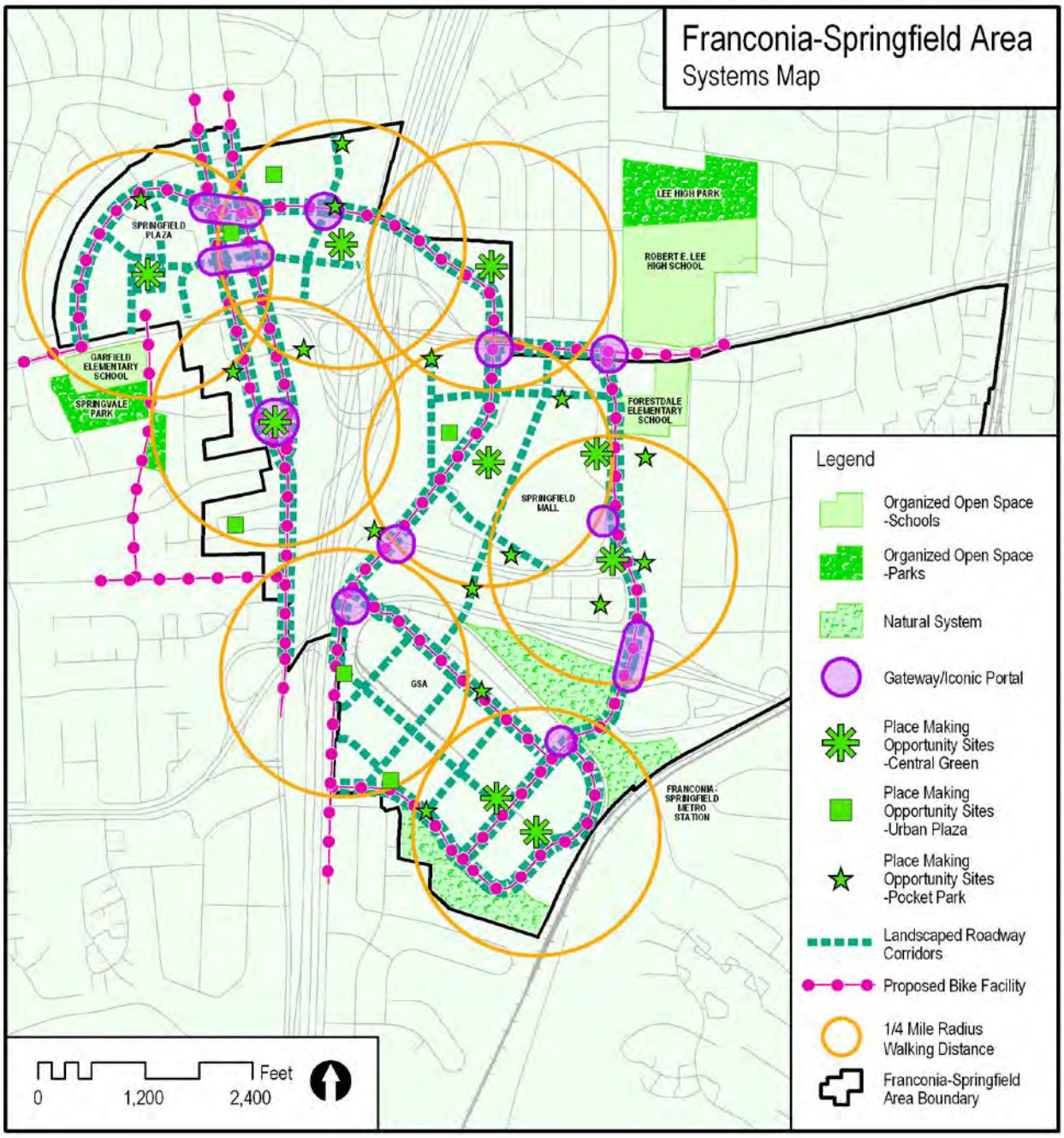
Currently connectivity between and within the CBC and the TSA is severely restricted due to major regional roadways that divide the area into quadrants. These quadrants are adversely affected by auto-oriented uses, discontinuity among land uses, design variations, and poor signage. A major strategy involved in the achievement of the vision for the Franconia-Springfield Area entails improving the connectivity, or linkage, among the four quadrants in the area. Connectivity should come in the form of enhanced physical connections, such as roadway and trail improvements; enhancements to networks such as open spaces; and uniform thematic elements, such as design consistency and placemaking characteristics. These connective elements should unite the four quadrants into a recognizable place.

Existing east-west vehicular connections between the CBC and the TSA occur at the Commerce Street Bridge, Route 644 (Old Keene Mill/ Franconia Roads), and the Franconia-Springfield Parkway. Out of the three roadways, the Commerce Street Bridge is considered the only connection that accommodates pedestrians. A pedestrian bridge is located on the southern end of the CBC that is planned to be demolished with future transportation improvements. The reconstruction of this bridge or another pedestrian connection over the Interstate at this location should be considered. Veterans Bridge (Amherst Avenue overpass) links the portion of the CBC north of Old Keene Mill Road to the commercial uses, located on the south side, through vehicular and pedestrian connections. Connectivity between the Springfield Mall area and the General Services Administration (GSA) warehouse in the TSA is limited to Loisdale Road and a private shuttle road that connects the GSA to the Transportation Center. The shuttle road is accessible only to private shuttle buses, pedestrians, and bicycles. Loisdale Road has a trail on the west side and a sidewalk on the east side of the road.

The Franconia-Springfield Area is served by several bus transit routes that connect the Transportation Center/Metrorail station, the TSA, and/ or the CBC to other areas in Springfield. The buses operate primarily on weekday service. An internal bus route, operated by the Transportation Association of Greater Springfield (TAGS), provides transit service between portions of the TSA and the Transportation Center. Additional service and extended networks would encourage public transit usage and provide further transit connectivity internal to the CBC and the TSA.

The majority of the roadways in the Franconia-Springfield Area have minimal pedestrian and bicycle facilities. Many of the roadways that connect the area link to interstate or regional roadways and experience major through and regional movements. These roadways are fed by auto-oriented land use patterns with large, surface parking lots and minimal landscaping. Existing trails, streetscapes, and crossings are not uniformly constructed in the area and often lack sufficient space, amenities, or adequate paving. This lack of uniformity and consistency inhibits safe, accessible, and enjoyable pedestrian and bicycle usage. The regional traffic network and land uses further discourage the development of the pedestrian and bicycle realm and increase the danger to non-motorized movement.

The vision for redevelopment in the Franconia-Springfield Area is to transform the area into an inter-connected, multi-modal place, which will promote alternative means of transportation, such as walking and biking. Pedestrians and bicyclists are to be accommodated through safe pathways, continuous corridors, uniform signage, usable urban parks, civic plazas, attractive architecture, bicycle facilities and other amenities, as shown on Figure 2. Figure 2 is based on the Systems Map in the *Springfield Connectivity Study Framework Plans* report, August 2008, and depicts a framework for this type of environment in the Franconia-Springfield



*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

FRANCONIA-SPRINGFIELD AREA SYSTEMS MAP **FIGURE 2**

Area. At the area-wide level, the connectivity and integration among systems is visible as the systems are distributed evenly throughout the area and address the need for the entire area. Figure 2 illustrates the existing and proposed open spaces and primary pedestrian and bicycle connections within and to the Franconia-Springfield Area. The map also shows the recommendations for other placemaking opportunities that will create, contribute to, and reinforce the uniqueness and identity of the Franconia-Springfield Area. The design guidance on the following pages describes each of these characteristics in greater detail.

The Systems Map depicts the locations of a number of placemaking elements that are distributed throughout the Franconia-Springfield Area. These elements are proposed to improve connectivity in the area by supporting the creation of a unified theme and appearance for the area. Gateway features are one example of the placemaking elements. Gateway features should ornament and announce primary entry points or key intersections in the area. The features should help to establish the theme or identity of the area through the consistent use of design, patterning, and materials and should communicate expectations for the area. The features should reflect the character of the community. Gateway features may vary in scale, depending on the context. They may include a prominent building with unique architecture or design, signage, or landscaping features.

The network of open spaces, urban parks, and civic plazas are also represented on the Systems Map and will support connectivity and placemaking goals. These spaces should be provided at a variety of different scales, functions, and forms. The spaces should work to enhance the sense of community by acting as focal points or gathering spaces and should provide opportunities for programmed or casual social interaction and recreation. All of these places should be publicly accessible. These open spaces should be distributed throughout the area so that they are easy to access, visible, and act as places of respite as people move through the area. These spaces should form a network of walkable green or open spaces throughout the area. Similar to the gateways, they can help to establish or reinforce the identity of the area through the materials used, water features, landscaping, public art, benches or other street furniture. The Urban Parks section in this plan describes in more detail the forms, functions, designs, and locations of these places.

The Systems Map also conceptually portrays landscaped roadway corridors, bicycle trails, and roadway elements that will improve connectivity. The landscaped corridors are linear, continuous spaces that emphasize the presence of the pedestrian and the bicyclist in the streetscape and street cross-section. The corridors are ornamented with plantings, which could be low-cut grass or shrubs to taller, tree-lined streets. This landscaping should serve to beautify the street and to separate and protect the pedestrian from motorists. These corridors also function as places for active recreation, such as jogging, walking, or cycling. Specific roadway improvements that will be discussed in more detail in the following pages are conceptually depicted as well. These elements include the addition of local street grids, improved access to the Joe Alexander Transportation Center south to the GSA area, and an additional, north-south crossing over Old Keene Mill Road.

The recommendations of the Systems Map are supported by the framework plans, street typologies, and intersection improvements that are described in the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan. The framework plans illustrate conceptual development plans for specific areas within the Franconia-Springfield Area: the CBC, the Springfield Mall area, and the GSA area. The plans depict land use and transportation improvements that support the vision for redevelopment in the area-wide and land unit recommendations. The street typologies and intersection improvement plans illustrate a

hierarchy of streets and identify the corresponding streets in the Franconia-Springfield Area. The typologies depict the means to achieve pedestrian, bicycle, transit, and vehicular connectivity through streetscape cross-sections.

REVITALIZATION

The Springfield Commercial Revitalization District (CRD) encompasses the majority of the Springfield CBC. The county established the CRD in 1988 to improve the economic vitality and attractiveness within and around this area, to improve pedestrian and vehicular circulation throughout the area, and to maintain the community-serving function of the commercial area.

Designation as a CRD entails placing an additional zoning overlay district over the area in furtherance of the County's commitment to revitalization. The overlay district establishes a unique set of regulations, which provide flexibility in the development or redevelopment of properties located within the CRD. In addition, it provides for facilitated review of development proposals and amendments to the Comprehensive Plan. The Board of Supervisors views CRDs as desirable areas for consideration of public/private partnerships to generate and support investment activity.

The expansion of the CRD to include portions of the Franconia-Springfield TSA should be considered. The application of the CRD in this area should encourage coordinated redevelopment. This redevelopment should focus on utilizing the reduced parking and expedited review incentives.

IMPLEMENTATION

Transforming the Franconia-Springfield Area into a connected, multi-modal, mixed-use place, as the vision entails, will necessitate infrastructure and service improvements. An innovative implementation plan will be needed in order to bring the recommendations into reality. The implementation strategy will need to consider traditional and new policies and partnerships.

The participants will need to contribute to and cooperate with one another in order to effectively implement the vision. These participants will include the present and future community, business and land owners, county staff, political leaders, and financial interests. This effort will involve detailed planning and zoning activities, developing funding strategies and partnerships, and establishing systems to manage and operate infrastructure and services. Development projects will be proposed as opportunities are recognized, and the specific, supporting infrastructure and services are identified. This redevelopment should be coordinated with, and phased to, the provision of new infrastructure and services. Partnerships and cooperation between and within public and private sectors will need to be made.

The implementation of public infrastructure improvements will require creative and innovative funding and management tools to adequately address the needs of the area, in addition to the traditional means of federal, state, and county funding and contributions from the development community. Options for consideration include public-private partnerships, business improvement districts, community development authorities with self-taxing authority, service districts, area-wide roadway and transit improvement funds, and tax increment financing. One or more or other approaches that may be identified should be adopted to work in partnership

with the county to develop, manage, and operate many of the services. The magnitude of the transportation infrastructure need necessitates specific strategies for funding consideration. A road club is envisioned to address a portion of this need. Additional guidance for the road club and other transportation funding sources is found in the Transportation section of this plan.

County and state policy and regulations also will need to be reviewed and possibly updated in order for the vision to be implemented. For example, recommendations expressed in the transportation section, such as those that involve the pedestrian realm and street cross-sections may not correspond to traditional suburban standards. VDOT should become a full partner in creating the kind of pedestrian environment the Plan envisions. Street cross-sections and traffic mitigation measures proposed on streets in the Franconia-Springfield Area should apply to all streets, including private development streets and those controlled by VDOT.

AREA-WIDE RECOMMENDATIONS

Land Use

A mixture of uses should be provided in the Franconia-Springfield Area such that a vibrant, unique, and social place is created that extends activity beyond the normal working hours. The success of the retail centers in the CBC and TSA should continue to be encouraged with complementary uses and services, responding to the needs of the local residents, employees, and regional users, and by a coordinated, conceptual design plan. In order to promote their competitiveness, the activity in each of these places should focus on a central node. The mixture of uses should be located in these areas, with the inclusion of more intense residential, office, hotel, and ground-floor retail uses.

On the west side of the Interstate and north of Old Keene Mill Road, the core area of Land Unit A should expand into a greater community-serving urban village, which attends to the needs of the nearby neighborhoods. Land Unit I, which contains the Springfield Mall on the east side of the Interstate, should redevelop as a mixed-use town center, attracting regional and local populations. The mixture of uses should be publicly accessible and diverse. In these areas, the mixture of uses should allow residents, employees and other users to walk to work, run errands without using a personal vehicle, and find places of recreation nearby, if not on-site.

Redevelopment within the urban village and the town center should act as a catalyst for additional and complementary redevelopment in their respective areas. Additional, future redevelopment should enhance the development centers through consolidated, urban mixed-use projects, supported by a grid of streets and urban parks. In the Springfield Plaza and GSA area (Land Units B and O), these supporting features are illustrated in the final report of the Connectivity Study and in the following recommendations, on such figures as Figure 2. Future redevelopment proposals should consider this type of redevelopment and should implement these transportation and placemaking improvements. It is recognized that interim uses, which are not in conformance with this long-term vision may be able to foster near-term revitalization efforts. In this case, proposed development should result in public benefits, such as improvements in circulation or access, parking, landscaping, site design or building design, which outweigh any adverse effects of the land use change.

In order to encourage continuity among land uses and discourage automobile usage, small, single-use free-standing structures and uses should be avoided, unless it can be demonstrated that their design and placement would enhance the area or provide an appropriate transition among

adjacent areas. In this case, the architecture should be of similar character and/ or scale as the nearby uses. Similarly, drive-through uses should be minimized in the area and, specifically, avoided near the town center in the long-term development plans.

Urban Design and Streetscape Guidelines

The urban design guidelines support the vision for the Franconia-Springfield Area by providing the means to improve the image, appearance, and function as an important place and destination. The purpose of the urban design guidelines is to create a distinct identity and strengthen the perception of the Franconia-Springfield Area as a cohesive place. As such, the guidelines should establish a unified design theme, which enhances connectivity and orients the area to the pedestrian, bicycle, and transit riders. Part of this theme should include a program of public art, signage, and/or other wayfinding elements, which will make the area more attractive and inviting, and easily direct and orient residents, employees, and visitors through the area.

The following urban design guidelines should be used in the development review process:

Buildings

Buildings should be designed at a scale that encourages pedestrian and street activity. The buildings should create an enjoyable, attractive, and safe environment to walk, bike, and ride public transit. In order to accomplish these goals, buildings should encourage an active streetscape with such features as multiple entrance points, display windows, animated facades, arcades, and awnings to support the pedestrian realm. Architectural design features such as façade variations of window or building details should be encouraged. Loading areas and rear-façades should be treated in such a way that does not detract from the street experience.

Ground-floor retail uses should be encouraged to activate the street and distinguished through building features that complement the surrounding style. If retail uses cannot be integrated into the first-floor facades, these façades should be at least decorated with store-front windows, awnings, and/or vegetated walls. Faux windows or storefronts should be used only when necessary, and long expanses of blank walls or facades should be avoided on main pedestrian, bicycle, or vehicular thoroughfares.

Buildings should be oriented to and aligned with the street or the plaza on which the building is located in order to frame the street and visually reinforce the building line on the street. Buildings should have minimal setbacks from the sidewalk and/or property line, taking into consideration the need to accommodate entranceways, browsing zones for window shopping, arcades, sidewalk cafés, or other urban design amenities. Build-to lines, which define how far the building can extend towards the property line, may be considered. It is desirable that surface parking should not be located in front of buildings, unless the parking is on-street, teaser, or loading spaces.

Building heights should vary to provide visual interest, allow in greater amounts of sunlight, and preclude a canyon-like appearance from the sidewalk. To the extent possible, taller buildings should step-back their frontage for similar reasons, particularly above the third floor. However, the buildings along the residential edges of the Franconia-Springfield Area should taper towards the edges of the area to provide a transition to the adjacent communities.

Buildings should be designed to accommodate telecommunications antennas and equipment cabinets in a way that is compatible with the building's architecture and conceals the antennas and equipment from surrounding properties and roadways by flush mounting or screening antennas and concealing related equipment behind screen walls or building features.

Gateways

As identified on the Systems Map (Figure 2), the Franconia-Springfield Area should be marked by significant features, or gateways, located at the entrance points or major approach intersections into the area. These features should serve as landmarks to announce to the pedestrian, rider, and driver that they have arrived at an important place, destination, and center for their area. The gateways should introduce these users to the unique identity of the area and reflect the design theme. In this way, the gateway should serve to communicate the first impression for the area and what can be found in the area. This impression should represent the character of the area and what the community would like to portray. The gateway features should include prominent architectural features, public art, buildings, architectural features, signage, or plazas.

Signature buildings with unique architectural design should be used as gateway features. These buildings can be taller than the surrounding buildings and stand out as a noticeable landmark. The buildings should be located at the entrances to the area, such as the intersection of Loisdale Road and Franconia Road or at Commerce Street Bridge in Land Unit A of the CBC.

Public Art

The identity of the Franconia-Springfield Area should be established through the presentation and distribution of public art throughout the area. Artwork should create an inviting and attractive place for residents, employees, and visitors to inhabit. Redevelopment projects and public spaces should include works of public art in their design. These pieces of art should be selected based on factors, including, but not limited to, aesthetic, historic, cultural, or functional value. An opportunity for community input should be sought in the selection process.

Parking

The vision of the Franconia-Springfield Area speaks to the transformation of an auto-oriented, mostly surface-parked, minimally landscaped area into a dynamic, multi-modal place. Parking is critical to this transformation. Parking should be consolidated into structures and integrated into the streetscape. On-street and underground parking should be given preference over other forms of parking, such as surface parking lots or structured parking garages. On-street parking lots could be used as teaser parking for ground-floor, retail shops. Surface parking lots should be avoided or located in the rear of the buildings when necessary. In this case, space for trees and other landscaping features should be accommodated. The redesign and consolidation of existing, private, surface parking lots should be encouraged.

Creative approaches to reduce the amount of parking provided should be considered. Shared parking agreements are recommended for uses that have different operating hours or peak hours when parking is needed. Establishing shared parking rates should be considered. Accompanied by a parking analysis, reductions to parking standard minimums should be encouraged for mixed-use projects. These reductions should take advantage of the synergy among land uses, enhanced transit services through the circulator, and other transit demand

management programs. Loading or delivery areas should be treated in such a way that does not detract from the pleasant street experience and should avoid impeding vehicular movement.

As a critical element to the creation of animated and active streetscapes, structured parking should not be visible from major pedestrian, bicycle, or vehicular thoroughfares. These structures should be accessible from side streets or exterior passageways between buildings. However, if site constraints prevent this design and the structure must be visible from such a roadway, then the design of the structure should be integrated into the streetscape. In this case, the façade treatment of the structures should contribute to the visual appeal of the streetscape. Façades should be attractive and inviting from both pedestrian and vehicular perspectives and should incorporate architectural elements to provide visual interest.

It is desirable to have on-street, parallel parking contiguous to a paved refuge strip on the curb. The refuge strip should allow passengers to exit parked cars without having to step into landscaped areas. Trees should be spaced appropriately to allow car doors to swing open without obstruction. However, it is recognized that conflicts may arise with the design of the streetscape and the functionality of the parking, and flexibility in design should be considered in order to achieve a complete street.

Wayfinding and Signage

A unified, comprehensive signage system should be established to contribute to the distinctive theme and identity of the Franconia-Springfield Area. The signs should share a consistent or similar appearance or nomenclature, regardless of their function, location, or message. Such similarities could include color, shape, typography, or logo. The system should use a hierarchy of signage types, as expressed in more detail in the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan, to invite people into the area and allow them to easily move through it. This hierarchy should include gateway signs, municipal facility signs, banners, directional or trailblazing signs, or pedestrian kiosks. Visual clutter should be avoided. Building-mounted signs should be encouraged, and pole mounted business signs should be prohibited.

Streetscape

Another element involved in the transformation of the Franconia-Springfield Area into a multi-modal place is the expansion of the pedestrian and bicyclist realm along the roadway through the development of the streetscape. The existing, auto-oriented roadways should be enhanced or reconstructed to include features that create a high quality, attractive, functional and safe environment for the pedestrian, bicyclist, transit rider, or other non-motorized vehicle user. The streetscape design should contribute to the creation of the identity or theme for the area. As detailed in the Franconia-Springfield Area Urban Design and Streetscape Guidance appendix, the streetscape guidance and corresponding intersection plans embody a complete streets policy intended to ensure that the right-of-way is designed and operated to enable safe travel by all users and all modes. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities should be able to safely move along and across a complete street. Design elements should address safe pedestrian crossings and enhanced pedestrian movement, with the goal of reducing pedestrian and vehicular conflicts and improving accessibility.

The streetscape design and intersection plans should be applied to the reconstruction and addition of all roadways in the Franconia-Springfield Area with any redevelopment. The design should be employed continuously and contain uniform or similar elements to make a cohesive

circulation network. Curb cuts should be minimized through consolidation of street access and provision of interparcel access. The scale of the streetscape should vary based on the type of street and the context of the adjacent planned or existing uses. The Urban Design and Streetscape Guidance establishes a typology of streets for this reason and identifies specific streets in the area for each type. In general, areas with higher pedestrian activity, such as major retail streets, should have wider streetscapes to accommodate increased street activity.

Each typology shows a cross-section of the streets, which divides the streetscape into three pedestrian zones, in addition to the roadway elements of on-street parking, bike lanes, and travel lanes, and medians. The three pedestrian zones primarily should serve to safely separate pedestrian activity from the roadway. The first zone, the building zone, should be located between the sidewalk and the building facade. The character of the building zone should be determined by the use of the adjacent building and could be used for outdoor cafés, seating, or browsing store windows. The next zone, the sidewalk, should be reserved for pedestrian movement and should not contain any street furniture. The use of texture, pattern, and color of materials, such as brick or brick-paving materials, should be encouraged. Finally, the landscape amenity panel should be located next to the curb and includes streetlights, tree grates, planting beds, planters, paving, bus shelters, bicycle racks, public art, and benches. The dimensions of these zones and roadways elements should be followed during any redevelopment.

The pedestrian crossings at intersections should be highly-visible, well-delineated, safe, and accessible to all users. The design could include bulb-outs, reduced turning lanes and travel lanes, painted or paved crosswalks, refuge medians, pedestrian signals, and pedestrian detectors, particularly important at major intersections. Signal modification to accommodate pedestrian movement may be an option as well. Details of these elements are expressed in the appendix.

Variation from the streetscape guidance should be permitted if infill or expansion of buildings or other existing features constrain a site's design. Where flexibility is granted, the streetscape should include acceptable sidewalk widths and an acceptable amount of street trees and landscaping planted within an environment that will sustain growth. When street trees and other plantings are to be located in proximity to roadways or within medians, safety and sight distance should be taken into consideration upon reviewing a development proposal's streetscape design. Modifications to the streetscape guidance are appropriate to account for these issues when viable alternatives in streetscape design are provided to ensure continuity in the streetscape pattern.

Streetscape improvements may be provided on a combination of publicly owned right-of-way and private property. When the public right-of-way is utilized to provide streetscape improvements, commitments should be made by the property owner to maintain the streetscape area or by a local business organization. In addition, when the sidewalk is not entirely within the right-of-way, a public access easement will need to be provided for the portion of the sidewalk located on private property, if additional right-of-way can not be acquired.

Below are general guidelines for all streetscapes, which are followed by design guidelines for each individual streetscape type (Major and Minor Arterials, Collectors, and Local Streets).

General Streetscape Elements

Underground Utilities and Stormwater Infrastructure: Utilities and stormwater infrastructure should be placed underground and should be coordinated with future roadway improvements and sidewalks to foster a pedestrian environment and other Plan

objectives. They should be located under sidewalks, parking lanes, or the building zone; they should not be located under street trees. New development should provide underground utility conduits or provide commitments to facilitate future improvements on adjacent properties. Utility boxes for phone, cable, electricity, natural gas, information systems and/or other services should be located to the rear or side of the development, along service alleys, within buildings, or placed in sub-grade vaults.

Street Lighting: Street lighting should maintain the overall character and quality of the area, providing adequate lighting levels that ensure public safety without creating glare or light spillage. Light fixtures should be full cutoff and use energy-saving technology. Street lights should be located so as to not conflict with street trees at their projected maturity.

Street Furniture, Bicycle facilities, and Other Elements: Street furniture selections, such as benches, water fountains, bus shelters, and bike racks, should be consistent within the area. This may include the compatible model, size, and finish. Bicycle features should be covered, preferably, and located in a safe and visible place.

Street Planting: Street trees and other landscaping in the planting strips should be planted in an environment that promotes healthy root growth. Vegetation within the planting strips could include ornamental shrubs, ground cover, flowering plants, and grasses. These plantings should occur in areas that are clear of vehicles parked on the street, and they should incorporate hardscaped pedestrian access points. Consideration should be given to the use of a broad palette of native and drought tolerant species.

Median Landscape Strip: Where medians are provided, they should be planted with attractive landscaping. Consideration should be given to the use of low impact development techniques, native plants, and plants that are drought tolerant, low in maintenance, and resistant to disease, pollution and heat.

Transportation

With its proximity to Shirley Highway (I-95/I-395) and the Capital Beltway (I-95/ I-495), the Franconia-Springfield Area is provided extensive access to the regional highway network. Access to the interstate system is afforded by interchanges at Old Keene Mill Road/Franconia Road and at Franconia-Springfield Parkway and I-95. Arterial highway movement through the area in a north-south direction is provided by Amherst Avenue and Backlick Road to the west of I-95, and Loisdale Road to the east. East-west arterial movement through the area is afforded by Franconia Road/Old Keene Mill Road and the Franconia-Springfield Parkway. The recent completion of the Springfield interchange improvement project north of the area has improved regional access to the Franconia-Springfield Area and reduced traffic congestion at this important transportation crossroads.

Many public transportation services and facilities serve the Franconia-Springfield Area, including the Franconia-Springfield Metro station, the Virginia Railway Express (VRE) commuter rail station, over 5,000 commuter parking spaces, Greyhound interstate bus service, Metrobus regional service, and County bus services including the Fairfax County Connector and Prince William County services, brought together at the Joe Alexander Transportation Center located south of the Franconia-Springfield Parkway at Frontier Drive. In addition to regional and county transit services, the Transportation Association of Greater Springfield (TAGS) provides local circulator bus service weekdays between the Transportation Center and the Springfield regional shopping mall/future town center. Planned high occupancy toll (HOT) lanes on I-95, I-

395 and I-495 will provide further transit connectivity and service to the Franconia-Springfield Area, while also providing needed additional roadway capacity on these facilities.

The Franconia-Springfield Area is home to one of the largest and longest-lasting carpool staging ("slugging") operations in the nation, currently serving over 500 commuters who park in various lots in the CBC and form carpools at Old Keene Mill Road near the I-95 ramps, to take advantage of the I-95/I-395 high occupancy vehicle lanes for commuting trips to the Pentagon and Washington D.C. core employment destinations.

Future Conditions

Transportation and land use evaluation undertaken in the Springfield Connectivity Study, published in the final report, August 2008, supplemented with analysis of BRAC Plan amendment proposals in 2009, provided the basis for the recommended land use plan for the area. Forecasts of future conditions based on the planned land use show substantial increased daily and peak hour traffic within the Franconia-Springfield Area as the area builds out. There will be diminished traffic levels-of-service at intersections within the area, and increased traffic on many of the arterial streets that pass through the area and provide access to the Franconia-Springfield Area. While the Franconia-Springfield Area will be affected by continued growth in the surrounding communities and throughout Northern Virginia, increased land activity within the activity center will be the largest contributor to adding more traffic and congestion to the local area roadway system.

A number of conditions in the recommended plan for the area will help to alleviate the impacts of future development. The land use plan encourages an optimal land use mix, designed to increase transit and walking trips and reduce peak hour automobile reliance. By improving the ratio of jobs-to-housing in the area, the plan is designed to reduce travel times for many residents and workers while animating the future streets of the Franconia-Springfield Area with more pedestrian activity. These objectives are supported by streetscape and context-sensitive design guidance so that future streets in the area can function as more than vehicular thoroughfares. A complete streets philosophy is embodied in the streetscape guidance, intended to ensure that the right-of-way is designed and operated to enable safe travel by all users and all transportation modes. This design guidance is supported by recommendations to develop a more multi-modal transportation network serving the Franconia-Springfield Area, with emphasis on transit, pedestrian, and bicycle mobility and connectivity.

Multi-modal Connectivity

The transportation plan for the Franconia-Springfield Area has been developed to achieve a number of connectivity and mobility objectives designed to ease travel in and around the Franconia-Springfield Area, with the goal of improving access and helping revitalize the area. In undertaking a multi-modal assessment, it was recognized that there may be tradeoffs necessary in order to meet all mobility needs and achieve optimum convenience and safety. For example, where vehicular traffic flows smoothly with minimal delay or congestion, as indicated by a high vehicular level-of-service (LOS), there may be a corresponding low pedestrian LOS. Thus the balancing of vehicular traffic flow and pedestrian safety at an intersection might require acceptance of a lower vehicle LOS standard for traffic mitigation. Similarly, where access to transit and traffic flow conflict, balancing mobility needs may require more favorable treatment of transit users in the design of road and intersection improvements at the expense of maximum vehicle throughput.

Transit, pedestrian, and bicycle connectivity are major elements of the recommended transportation guidance for developing the Franconia-Springfield Area. Access to the area through these means should be maximized to support the recommended land use concept and achieve the optimal densities and mix of uses. Transit, pedestrian and bicycle connectivity should be improved in order to achieve the objectives of reducing reliance on the automobile and creating more transit-oriented, walkable, and bicycle-friendly communities.

The transportation recommendations for the Franconia-Springfield Area consist of Policy Recommendations, Streets and Circulation Improvements, and Public Transportation Improvements. These are described below:

Policy Recommendations

The following transportation policy recommendations have been developed to set the framework and guide future development in the Franconia-Springfield Area:

Complete streets – A complete streets policy is embodied in the Franconia-Springfield Area's streetscape guidance, intended to ensure that the right-of-way is designed and operated to enable safe travel by all users and all transportation modes. The streetscape guidance addresses pedestrian, bicycling, bus and motorized vehicular traffic. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities should be able to safely move along and across a complete street. Design elements address safe pedestrian crossings and enhanced pedestrian movement, with the goal of reducing pedestrian and vehicular conflicts and improving accessibility. This approach is recommended to be applied to the redesign and improvement of arterial roadways in the area. The Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan should be used for guidance in the development of these improved street sections and intersections.

Level-of-service E – In order to achieve the multi-modal connectivity goals set forth, while maintaining a balance between vehicular and pedestrian/non-motorized movement in the area, a level-of-service (LOS) E standard is recommended to be applied in assessing transportation system adequacy. A LOS E standard allows more congestion with greater amounts of delay than the general countywide standard of LOS D. Applicants for new development should demonstrate that their proposals meet the LOS E standard when proposing mitigation needed for critical road segments and intersections impacted by the site development. This standard is established in recognition that other improvements will also be made with the goal of creating a more multi-modal transportation system serving the area, including transit, pedestrian and bicycling connectivity improvements. In exchange for establishing a lower vehicle LOS policy for traffic mitigation, commitments should be made by applicants to help bring about the evolution of the Franconia-Springfield Area into a more transit-oriented and walkable activity center.

At locations where conditions are worse than LOS E and cannot be mitigated, remedies should be considered and provided to offset impacts, under the "non degradation" and "offsetting impacts" policies described in the Policy Plan. Where LOS E cannot be attained, mitigation of problem intersections or locations should follow this sequence:

- First, determine whether additional capacity and/or increased operational efficiency is possible;

- Failing that, decrease future site-generated traffic by: reducing the intensity of development, phasing development to minimize adverse impacts, changing the mix of land uses (e.g., replacing office or retail with residential use), increasing transit use through provision of new or improved services, and/or optimizing the application of Transportation Demand Management (TDM) measures that support the use of more transit, walking, and bicycling;

- Failing that, provide appropriate contributions to an area-wide transportation fund established for eventual mitigation of problem locations.

These remedies should be designed to help reduce area traffic, improve future accessibility, and/or add capacity to the transportation system serving the Franconia-Springfield Area. Applying the LOS guidance described above, intersections in and around the area should be improved to the extent possible. Modifications to geometry, lane configuration, timing and operation of signals, and pedestrian accommodations should be provided at these intersections, in order to improve access and safety and minimize traffic congestion.

Public transportation/mode split performance – The land use concept recommended for the Franconia-Springfield Area is based on the assumption that at least 10 percent of trips generated by development will be arriving and departing by public transportation. Implementation of this policy would substantially reduce future peak hour traffic, and is based on achieving the public transportation recommendations described below. In the areas closest to Metrorail station (within a ½ mile walking distance of the station platform), transit mode shares in excess of 10 percent would be expected. It is recommended to adopt the 10 percent minimum transit mode share as a policy for redevelopment in areas beyond the ½ mile walking distance of the Metrorail station. Under this policy, development proposals would be expected to achieve at least a 10 percent transit mode split at their developments. This minimum would be accomplished by contributing to the development of bus circulator service and implementing enforceable TDM programs.

Funding of Transportation Improvements – Transportation improvements needed to support development and redevelopment in the Franconia-Springfield Area at an acceptable level of service will require substantial increased capital investment. Capital costs for improving arterial roadways and enhancing transit services are estimated to exceed $350 million (in 2010 dollars). This estimate does not include the costs of providing local street improvements, which would be expected to be built as part of development, nor the operating and maintenance costs for recommended public transportation facilities or services. The estimates will be revised when project planning studies are undertaken.

A combination of public and private sector funding sources will be necessary to cover the costs of recommended transportation improvements in the Franconia-Springfield Area. Identifying one or more stable and ongoing funding sources for these improvements is critical to their implementation due to the magnitude of the proposed improvements. These new sources of funding are needed to supplement traditional federal, state, and county sources. New public and private sector funding initiatives need to be studied and preferred approaches identified and adopted as soon as possible in order to address the area's growing deficiencies in transportation funding.

The private sector will need to contribute a substantial and equitable share to transportation improvements and/or funds required to meet the transportation needs of the area, similar to other county activity centers in Tysons and the Fairfax Center Area. An area-wide roadway fund is envisioned to provide a structure to accumulate private transportation contributions as

redevelopment occurs. The road fund will be based on an analysis of the total roadway improvement need and an estimation of the cost. The fund will establish a voluntary contribution rate that is based on a shared responsibility between public funding sources and private contributions. This rate may need to be adjusted as future planning studies are undertaken. Private sector funds will at a minimum contribute to the anticipated costs of projects that have been identified as having the highest priority. The future levels of public sector participation will be determined by the availability of federal and state funds, the county's own fiscal and budgetary policies, and competing needs and priorities for transportation improvements established on a countywide basis.

Other funding sources will be needed to supplement the road fund and to expedite implementation. Particularly important are sources that provide for a dedicated source of funding to offset the costs of on-going projects, such as the bus circulator operation. A pro-rata projects reimbursement approach, a service district, and other funding mechanisms with self-taxing authority also could be utilized to fund the circulator and to facilitate other transportation improvements. These or other options will be necessary to satisfactorily address the funding of transportation capital improvements for the Franconia-Springfield Area. Further detailed examination of these options is essential as preferred approaches are selected.

Streets and Circulation Improvements

The recommended streets and circulation plan for the Franconia-Springfield Area shown in Figure 3 addresses needs for three basic types of travel: 1) through traffic (regional or “external” traffic passing through the Franconia-Springfield Area); 2) local traffic and circulation (traffic with one or both ends of the trip occurring in the Franconia-Springfield Area); and 3) property access (provided by local streets). The street and circulation improvements accommodate these three basic forms of travel. Completion of these improvements will allow the Franconia-Springfield Area to maintain LOS E or better traffic conditions into the future as development in the area builds out.

The following streets and circulation recommendations have been developed to guide the future development of the Franconia-Springfield Area:

New street typologies with context-sensitive design – A typology of streets and proposed street cross-sections is recommended in the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan, based on the context of the surrounding and planned land use. These proposed roadway cross sections should be used to undertake improvements and facilitate safe and active streetscapes. The streetscape guidance addresses pedestrian, bicycling, bus, and automobile traffic. Design elements address safe pedestrian crossings and enhanced pedestrian movement, with the goal of reducing pedestrian and vehicular conflicts and improving accessibility. This approach is recommended to be applied in the redesign and improvement of arterial roads in the Franconia-Springfield Area, including development frontage roads. The Urban Design and Streetscape Guidance should be used for guidance in the development of these improved street sections.

Major street improvements – The transportation recommendations for the Franconia-Springfield Area include a number of major street improvements that would add capacity and enhance accessibility to the area. These recommendations include:

- *Franconia-Springfield Parkway 8 lanes between the Fairfax County Parkway and Frontier Drive* - The Franconia-Springfield Parkway is a limited access expressway

carrying high volumes of traffic between the Fairfax County Parkway, I-95, and the Franconia-Springfield Area. The Parkway serves as a major access to the Springfield Town Center, and the primary access to the Joe Alexander Transportation Center/Franconia-Springfield Metro Station. The Transportation Plan recommends widening the facility to 8 lanes to include High Occupancy Vehicle (HOV) lanes providing peak period service between the Joe Alexander Transportation Center, I-95 HOV/High Occupancy Toll (HOT) lanes, and Fairfax County Parkway.

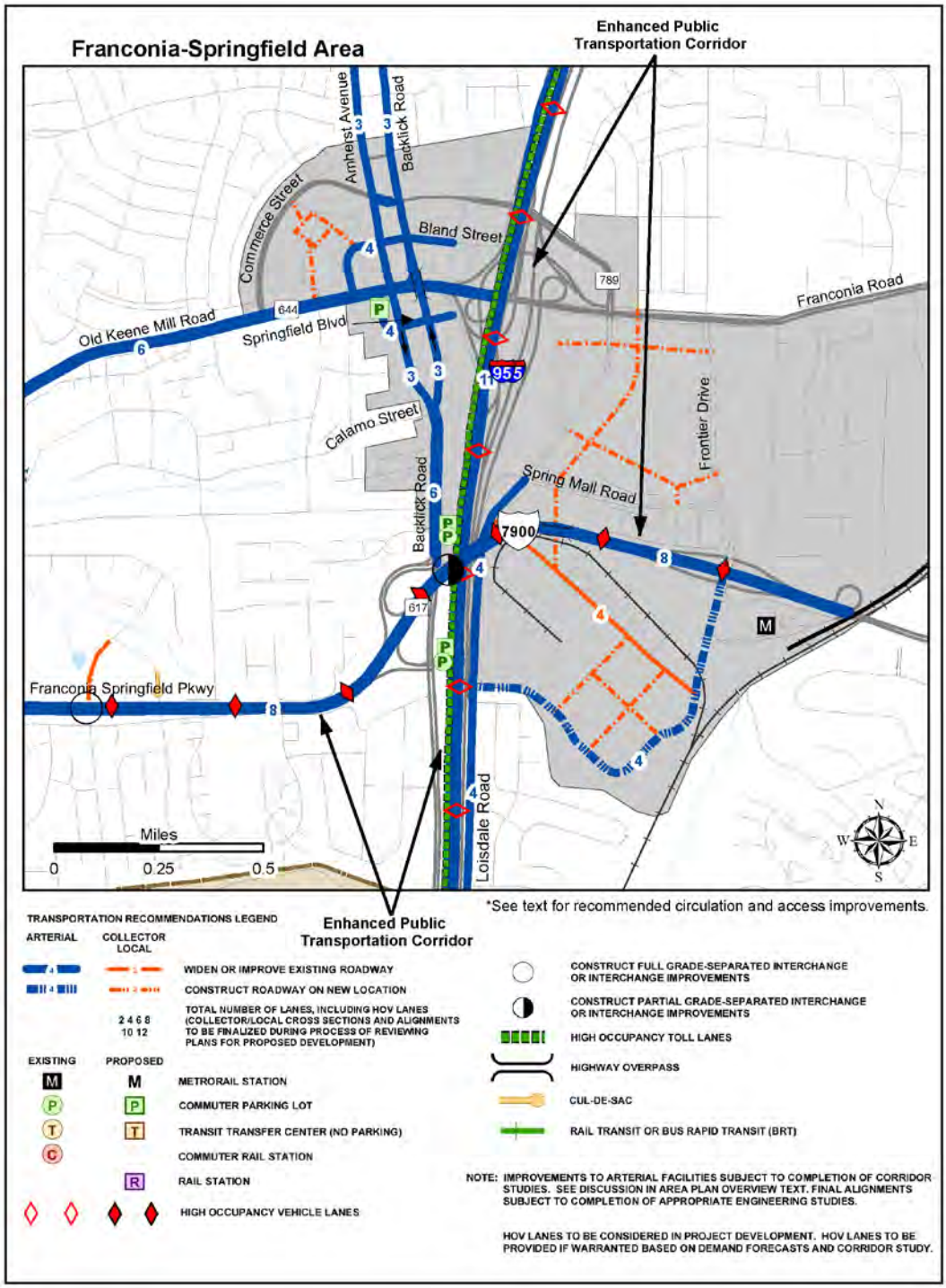
- *Backlick Road Bridge and one-way paired streets* – In combination with the recommended enhancement of street connectivity in the CBC core, a new bridge should be built over Old Keene Mill Road at Backlick Road, and Amherst Avenue and Backlick Road should be converted through the core area to one-way paired streets. From the Calamo Street intersection to north of the area, Amherst Avenue/ Backlick Road would serve as a one-way couplet with 3 full travel lanes in each direction. The one-way couplet would add needed capacity to support redevelopment in the core without having to widen existing streets. It eliminates the forced turns at Cumberland Avenue, reduces intersection conflicts, and simplifies signal timing by eliminating left turns at critical CBC intersections, decongesting these intersections. The one-way streets design also provides an opportunity to add new bike lanes running north and south through the area, and wider sidewalks with improved pedestrian crossings of streets in the redeveloping high density, mixed-use center.

- *Backlick Road 6 lanes from Calamo Street to the Franconia-Springfield Parkway ramps* - Backlick Road should be reconstructed in the future to a 6-lane divided arterial cross-section to include wider sidewalks, enhanced median treatment, streetscaping, and safe pedestrian crossings. Site access along the Backlick Road corridor should be consolidated with improved access management as commercial uses along the roadway are upgraded, or replaced through redevelopment.

- *Bland Street 4 lane improvement* - Bland Street serves as an entryway to the core area for traffic coming from I-95 and points east, while also serving as a connecting road to Amherst Avenue for traffic heading north or south. It will need to be improved to a 4 lane facility in combination with intersection improvements needed at Amherst Avenue and Backlick Road. East of Backlick Road, Bland Street should be designed to function as a main street, with on-street parking, serving the future high-density, mixed-use, core area.

- *Springfield Boulevard 4 lane improvement* – Springfield Boulevard will require additional capacity and access improvements to serve the 1,000+ space commuter parking garage and multi-modal center planned together with associated development at Old Keene Mill Road. Springfield Boulevard will provide the primary ingress and egress for traffic generated by the commuter facility. Improved lane geometry and signage will be needed to facilitate traffic movements at the intersections with Old Keene Mill Road, Amherst Avenue, and Backlick Road.

- *Loisdale Road* – Loisdale Road between its intersection with Franconia Road and Spring Mall Road is recommended for improvement to accommodate the new accesses and streetscape improvements associated with the Springfield Town Center redevelopment. South of the town center, Loisdale Road between Spring Mall Road and Springfield Center Drive is recommended to be improved to a 4 lane section to



*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

TRANSPORTATION RECOMMENDATIONS **FIGURE 3**

accommodate growth in traffic on this link as the GSA warehouse area and Springfield Industrial Park undergo redevelopment.

- *Frontier Drive Extended* – Frontier Drive, south of its current intersection with the Franconia-Springfield Parkway should be extended to interconnect with the GSA warehouse area roadway network and provide a terminus at Loisdale Road. Frontier Drive extended is recommended as a major transportation network enhancement in the Franconia-Springfield Area. The extension should function as a 4-lane divided arterial facility, and include median treatments, sidewalks, pedestrian crossings and bike lanes, in concert with the "complete streets" policy recommended for street improvements in the area. The new roadway should provide improved access and a new entrance to the Joe Alexander Transportation Center and Metro station from the south, as well as access to the redeveloping GSA warehouse/ Springfield Industrial Park area from the Franconia-Springfield Parkway. Equally important, it should allow for a more direct pedestrian access from the Transportation Center to the Industrial Park area, facilitating transit-oriented development. As part of the design, improvements will also be required to maintain efficient traffic operations at the Transportation Center.

Collector and local street improvements – An interconnected network of local streets should be provided in the Franconia-Springfield Area in order to improve vehicular access to individual development sites and facilitate circulation within developments and throughout the activity center. New local street connections help to distribute traffic from arterial to local streets, reducing congestion; improve the walkability of the area, reducing the need for automobile trips; support mixed-use development and higher densities, by making such development more accessible; and enhance transit access, by providing more convenient and direct pathways for circulator and shuttle services. Local street grids are recommended to be implemented in the redevelopment of the Springfield Mall (future town center), in the GSA warehouse/Transportation Center area, and at the Springfield Plaza area in the western portion of the CBC, north of Old Keene Mill Road, as these areas undergo redevelopment. The recommended framework plans, street typologies, cross-sections and intersection plans, described in the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan, should be used during the implementation of these local street networks.

Pedestrian and bicycle circulation - As the Franconia-Springfield Area undergoes redevelopment, improvements will be needed to make the area safer and more friendly for pedestrian and bicyclist travel. These improvements are supported by the Urban Design and Streetscape Guidance. Specific pedestrian and bicycle connectivity improvement recommendations include the following:

- *Develop a pedestrian circulation system* - A pedestrian circulation system emphasizing improved pedestrian safety and circulation through the area should be designed into the streetscape. The pedestrian circulation system should interconnect interior sections of developments with destinations and places at the edges or surrounding the property where people congregate. Logical pathways should be provided through developments that connect to external crossing points. Pedestrian movement and safety should be facilitated in future developments in association with implementation of a wayfinding signage plan. On the edges of properties, wide sidewalks should be provided to allow for safe and more active pedestrian movement. Pedestrian crossings should be incorporated into the redesign of streets around the property, accommodating full pedestrian movements whenever possible. Each major development should adopt a

pedestrian circulation plan to integrate pedestrian circulation on the site with areas exterior to the development.

- *Improve the pedestrian and bicycle connection between the Joe Alexander Transportation Center and Springfield Mall (future town center)* - This improvement is recommended in order to strengthen the transit connection between the planned Springfield Mall (future town center) and Joe Alexander Transportation Center by facilitating walk and bike trips from the Metro station, Virginia Railway Express (VRE) commuter rail station, and Metrobus, Fairfax Connector and other transit services congregated at the center. By improving pedestrian and bicycle connectivity and access to/from the station, automobile travel to the area can be reduced. Redesign of intersections and ramp crossings, wider sidewalks, bike lanes, enhanced lighting, and aesthetic treatments are recommended to improve pedestrian safety and enhance the pedestrian/bike experience. These design and access improvements will strengthen the orientation to Metro and extend the influence of transit into the redeveloping town center area.

- *Improve the pedestrian and bicycle connection across I-95* – Commerce Street currently serves as the only local area street providing pedestrian and bicycle connectivity across I-95. It is the major link between the east and west sides of the Franconia-Springfield Area. The street is currently designed to facilitate through movement and access to the Interstate, including ramps to I-95 and I-495. In order to improve pedestrian and bicyclist safety on this link and facilitate circulation across I-95, Commerce Street should be upgraded to add bicycle lanes in each direction, physical barriers or separators and/or other design treatments to protect pedestrians from adjacent street traffic, improved signage, and safe pedestrian crosswalks at intersections. The intersection of Commerce Street/Franconia Road/Loisdale Road should be enhanced with features to improve pedestrian safety and facilitate bicycle movement through this complicated intersection and critical gateway area.

- *Integrate safe pedestrian crossings into the design and redesign of streets and intersections* – Safe pedestrian crossings should be integrated into the redesign of streets throughout the area. As illustrated in the Urban Design and Streetscape Guidance, appended to this plan, streets should be designed with wide sidewalks, center medians of sufficient width to allow pedestrians to take refuge when crossing multi-lane arterial roadways, and landscaping and utility panels between the street and sidewalk that provide a safety buffer from traffic. Safe pedestrian movement should be complemented through development of an integrated system of walkways, crossings, signal modifications, signage, and design features integrated into the streetscape. Pedestrian enhancements at crossings may include delineated crosswalks, retiming of traffic signals, installation of countdown signals, sidewalk extensions (bulb-outs), crossings on all legs of intersections, and other design features that are integrated into the street section with the goal of reducing conflicts between pedestrians and vehicles, and improving safety.

- *Provide mid-block pedestrian crossings where appropriate* – At locations where pedestrian crossings are expected to be heavy, or the street face or block is very long, a grade-separated pedestrian bridge or signalized at-grade mid-block crossing should be provided in order to ensure pedestrian safety. Such crossings should be provided at major development entrances or access to transit and commuter facilities, such as the future town center, transit centers, and park-and-ride facilities. Mid-block crossings

should be designed in conjunction with and integrated into adjacent development whenever possible, and be signed, lighted and marked to clearly identify the pedestrian orientation of the facility.

- *Create a system of bicycle lanes and facilities* – In conjunction with the "complete streets" guidance, an integrated system of bicycle lanes should be provided on the minor arterial streets of the Franconia-Springfield Area, allowing the major destinations in the area to be accessed and interconnected with the County and regional bikeway system, as shown in Figure 4. Minor arterial roadways serving the area such as Commerce Street, Loisdale Road, Backlick Road, Amherst Avenue, and Frontier Drive should be retrofitted to provide on-road bike lanes as these road sections are rebuilt. These bicycle facilities would interconnect with facilities planned or already operating outside the activity center. Supporting features such as storage lockers, racks, and bicycle sharing facilities should be provided at key destinations in the area such as the Joe Alexander Transportation Center and Springfield commuter parking facility and multi-modal center at Old Keene Mill Road.

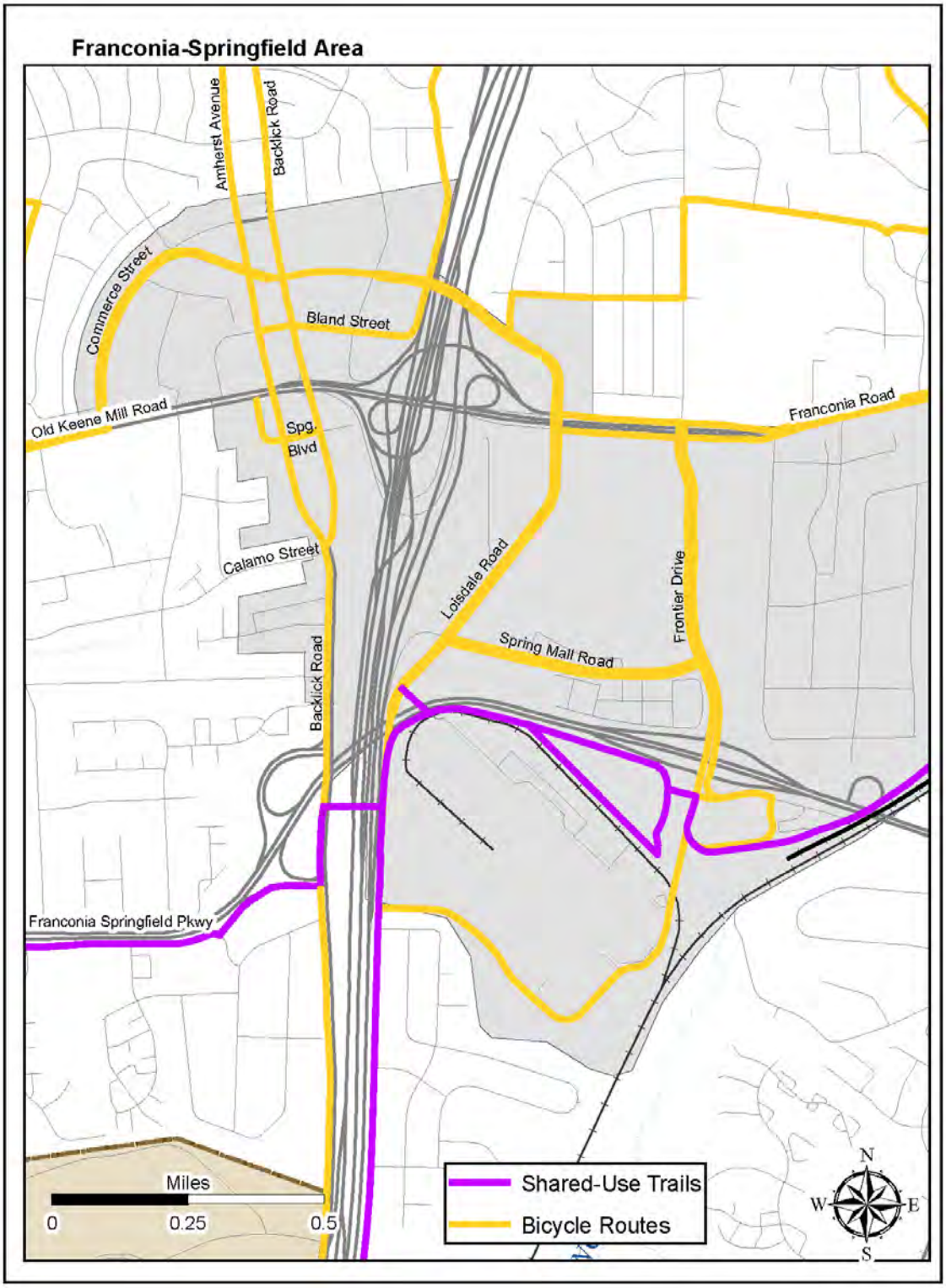
Public Transportation Improvements

The land use plan and development concept for the Franconia-Springfield Area recognizes that street and circulation improvements alone would be insufficient to support the planned development potential, and that a multi-modal approach should be applied in assessing the adequacy of the transportation system. The development concept is predicated upon achievement of at least a 10 percent mode share for public transportation usage in areas away from the Joe Alexander Transportation Center, and an even greater mode share at the transit-oriented developments to be located closer to the station (within approximately a ½ mile walk). Public transportation is defined in the Policy Plan as consisting of transit and high occupancy vehicle use.

The following public transportation improvement recommendations have been developed to guide future development and improve the connectivity of the Franconia-Springfield Area:

Improved access to the Joe Alexander Transportation Center - Improving access to the Joe Alexander Transportation Center, which includes the Franconia-Springfield Metrorail station, a VRE commuter rail station, and bus transit services, is critical to improving transportation connectivity and reducing automobile traffic within, to, and from the Franconia-Springfield Area. The Joe Alexander Transportation Center serves as a hub for County, regional, interstate, and local transit services. The current access is highly vehicle-oriented and hostile to pedestrians. New pedestrian, bike infrastructure, and street connections are recommended to improve access to the station.

Recommendations to improve access include: 1) improving the existing pedestrian connection through the Frontier Drive/ Franconia-Springfield Parkway underpass with wider sidewalks, enhanced lighting, safer crosswalks, and supporting design features; 2) adding bicycle lanes to both existing Frontier Drive and the future Frontier Drive extension, thus providing safe access for future bicycle commuters to the station from both the north and south directions; 3) providing a direct pedestrian connection between the station and the GSA warehouse area as an important element of the Frontier Drive extension improvement; and 4) providing pedestrian crosswalks at all intersections located within a ½ mile walk of the station.



RECOMMENDED BICYCLE NETWORK **FIGURE 4**

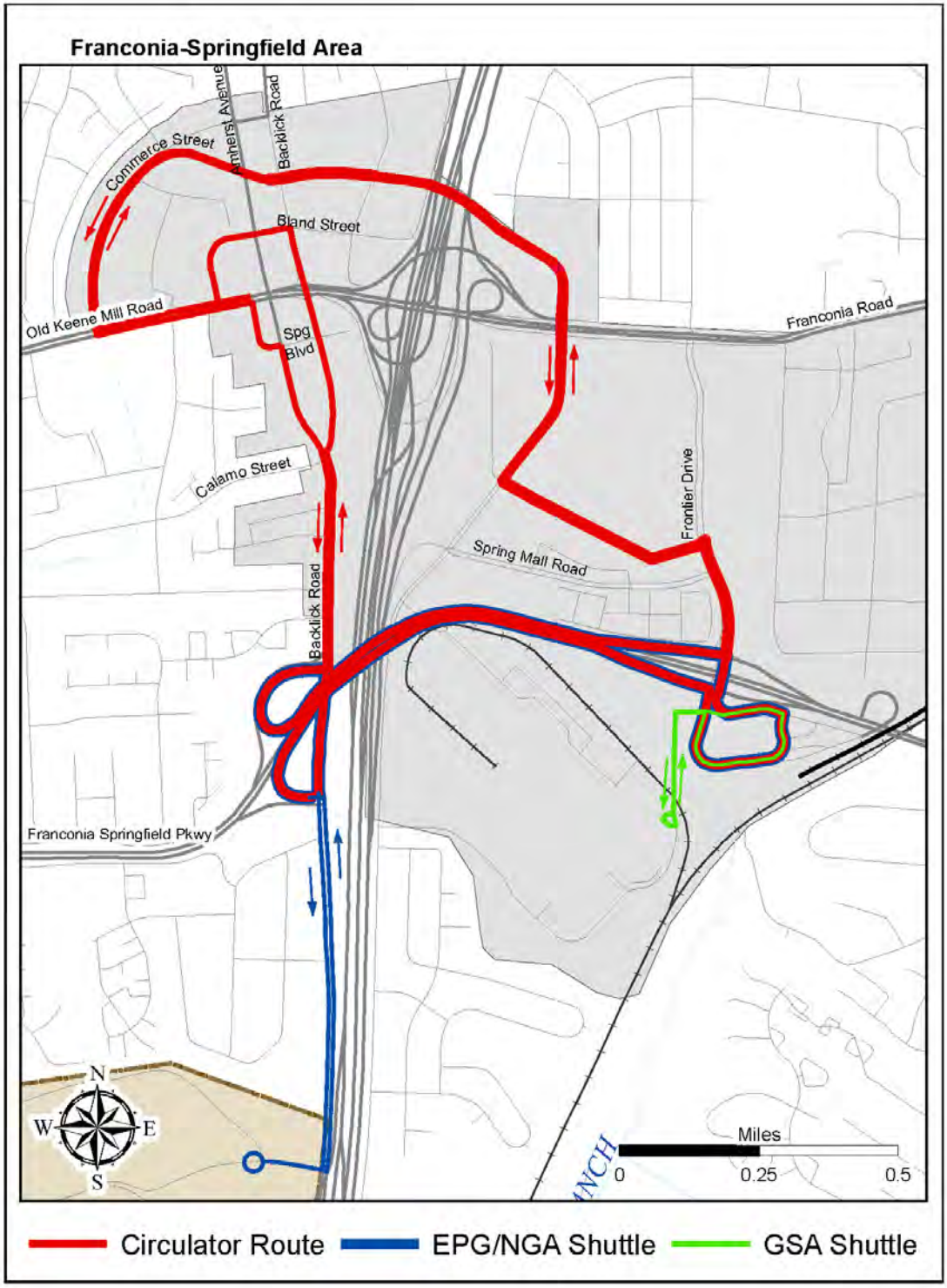
Enhanced bus circulator – Although the Franconia-Springfield Area is currently served by several bus routes and the Metrorail and VRE commuter rail stations, the opportunity exists to enhance transit connectivity through improved service frequency and coverage. Building on the existing Transportation Association of Greater Springfield (TAGS) service, which currently provides weekday circulator service and coverage to areas near the station, three new bus routes are recommended with the goal of greatly enhancing connectivity and service throughout the area. The three routes include a circulator bus running seven days a week all day throughout the area on short headways, in both directions, and two shuttle bus routes providing point-to-point service between the Joe Alexander Transportation Center and GSA, and the Transportation Center and the EPG, running only on weekdays during the peak hours of travel. The routes for these proposed transit services are shown in Figure 5.

The Franconia-Springfield Area circulator bus service is planned to interconnect the Transportation Center and Franconia-Springfield Metro station with the Springfield Mall (future town center), CBC, and other parts of the Franconia-Springfield commercial area. The bus circulator would extend the influence of the Metro system to a larger area, while also providing connectivity across I-95 and between various nodes of activity within the commercial center. In order to provide a high quality of service that can effectively attract new transit riders, the circulator is recommended to run in two directions on shorter frequencies, such as 12 minutes or better, for most of the day, seven days a week. By running in two directions, the headways (or service frequencies) in the areas farthest from the Transportation Center would be effectively reduced by half. This would provide a high level of service comparable to Metrorail operations during peak travel hours. The provision of greatly expanded coverage throughout the area, combined with shorter headways and longer hours of service, will allow the circulator to improve connectivity for employees, shoppers, visitors and residents, while also serving as a branding and marketing vehicle for a revitalized Franconia-Springfield Area.

The circulator service is proposed to be supported by construction of bus shelters throughout the commercial area, with appropriate signage, scheduling information, and other passenger amenities. The circulator is recommended to be funded through a combination of public expenditures for operations and equipment, and private contributions, raised through the development process. As the circulator develops a secure funding base, it is recommended that the service should be administered and operated through a community-based development corporation, transportation association, service district, or similar authority.

Transit shuttles -As shown in Figure 5, shuttle services are recommended to be provided between the Transportation Center and GSA warehouse area, and between the Transportation Center and future BRAC-related employment at the EPG. These shuttles are proposed to also operate on shorter headways, such as 12 minute frequencies or better, but only on weekdays during the peak periods of travel. This schedule would allow the shuttles to meet the need to provide commuters to these destinations a competitive transit option to the automobile. The proposed shuttles would be privately operated. Once established, service hours and coverage could be enhanced and more funding secured in the future as additional employment occurs in these areas.

Commuter parking facility and multi-modal center – Park-and-ride activity and organized carpooling, or "slugging", occurs in the Springfield CBC to take advantage of the HOV facility on I-95/I-395 for commuting trips to the Pentagon and Washington DC core employment destinations. The Springfield CBC has been home to a successful slugging operation for more than 30 years. Over 500 commuters currently park in the CBC at four different locations on private lots and congregate at the south side of Old Keene Mill Road near the I-95 entrance



RECOMMENDED TRANSIT SERVICES **FIGURE 5**

ramps to stage carpools going to various employment destinations in the I-95/I-395 corridor.

As the Springfield CBC undergoes revitalization, the long-term availability of these commuter parking spaces will become uncertain. A commuter parking facility of 1000+ spaces combined with a multi-modal transportation center is recommended to be constructed at the south side of Old Keene Mill Road (Land Unit E), where sluggers are currently forming their carpools. The facility is proposed to accommodate community-serving and retail uses that can take advantage of the available parking on evenings and weekends. As the HOT lanes improvements are completed to serve the Shirley Highway (I-95/I-395) and Capital Beltway (I-495) corridors, demand for park-and-ride service in the CBC is expected to grow substantially. More detail on this commuter facility is provided in the Land Unit E guidance of this area.

Transportation demand management – Transportation demand management (TDM) programs have been found to be an effective tool for reducing automobile reliance and encouraging use of public transportation and non-motorized transportation modes. While a TDM program is not a solution to transportation problems in and of itself, if effectively administered and enforced it can be a complement to the provision of more capital-intensive improvements and services. TDM programs are most effective when applied at the employer level, where there is management supervision and control, and employee travel behavior can best be monitored. TDM measures may consist of employee services, programs, facilities, agreements, and/or subsidies, all designed to bring about trip reductions (see Figure 6).

TDM programs are recommended to be established as a function of all future development in the Franconia-Springfield Area. The TDM program should encourage the use of transit, HOV, and non-motorized transportation, and employ a variety of measures to reduce automobile trips. The TDM program should achieve specified trip reduction targets identified for phases of the development. It should be maintained and funded by the business owner and/or homeowner's association. The TDM program should be designed to work in conjunction with and complement the transit, pedestrian and bicycle connectivity improvements identified in the plan. TDM measures employed should facilitate and complement these physical improvements and street design features. The TDM program adopted should identify a full complement of measures that could be implemented, including alternative transportation services, employee support facilities and/or programs, and pricing measures, and should include enforcement, evaluation, and penalty provisions in the event trip reduction thresholds are not achieved.

Commensurate with the trip reduction levels identified during implementation, the TDM program should achieve a minimum level of at least 20 percent trip reduction in non-transit-oriented development (TOD) areas of the Franconia-Springfield Area, attributable to support for and provision of transit service (at least 10% of the mode share), and an expectation that additional TDM program elements will achieve greater results. In designated TOD areas (approximately within a ½ mile or 5-10 minute walk to the station platform), established trip reduction thresholds should be substantially higher, to be negotiated on a case-by-case basis. Trip reduction levels should be identified in the traffic study and realized through the TDM program with a detailed monitoring process. These reductions are predicated upon the provision of attractive, safe, and convenient pedestrian and bicycle connections by the development,

FIGURE 6: Examples of Transportation Demand Management (TDM) Measures

Individual Employer TDM Measures

Alternative Transportation Services
- Shuttle Bus (es)
- Company Vanpools
- Telecommuting

Support Facilities/Programs
- On-Site Transportation Coordinator
- Employer Ridematching Services
- Preferred High Occupancy Vehicles (HOV) Parking Locations
- Flexible Work Hours
- Guaranteed Ride Home Programs

Pricing Programs
- Parking Management/Pricing Programs
- Subsidies for use of HOV Modes

Implementation
- CEO Commitment
- Proffers/Negotiated Agreements
- Participation in Transportation Management Association (TMA)

Area-wide TDM Measures

Alternative Transportation Options/Services
- Expand Transit Services (peak, off peak and midday hours)
- Carpools, Vanpools
- Shuttle Bus (es)

Support Facilities/Programs
- Transit Center
- Park & Ride lots
- HOV Lanes
- Parking Location
- Multi Employer Ridematching Services
- Guaranteed Ride Home Program

Pricing Programs
- Road/Congestion Pricing Programs
- Parking Management/Pricing Programs
- Transportation Allowances

Implementation
- Employer Trip Reduction: Reduction Ordinance
- Parking Management Ordinance
- Site Design Controls
- Proffers/Negotiated Agreements
- TMA Coordination

enhanced bus circulator service as described and recommended in the plan, and street improvements that further these objectives.

Urban Parks and Open Spaces

On-Site – The Franconia-Springfield Area has been developed with automobile-oriented commercial uses having little to no park space. As the area redevelops, the addition of urban park amenities and park spaces would be appropriate. Use of the urban parkland standard (1.5 acre per 1,000 residents plus 1 acre per 10,000 employees) and the Fairfax County Park Authority Urban Park Framework document that describes urban park design and park types should be used as guidance to integrating future urban parks within any development that occurs. The addition of urban parks would also support connectivity and placemaking goals. Urban parks sites should be publicly accessible, within walkable distances of most residential and mixed-use areas, and reasonably distributed throughout the Franconia-Springfield Area.

To accommodate a wide range of users and activities, the following types of urban parks should be developed, in accordance with the draft Fairfax County Urban Parks Framework, as modified by the Fairfax County Park Authority:

- *Common Green* – The common green park spaces serve a civic function by providing publicly-accessible opportunities for passive and active recreation. A central lawn is the main focus of this type of park, although the design and function of these parks offer multiple spaces or "rooms" to serve complementary uses or activities. Additional facilities such as programmable spaces, off-leash dog areas, community garden plots, landscaping, water features, shade structures, gathering areas, amphitheaters, hardscape areas, bocce courts, urban picnic tables, board game tables, tot lots and playgrounds, small skate parks, fitness courses and paved trails, and sport courts are components of the common green. The Transit Station Area and the Community Business Center in the Franconia-Springfield Area, each should contain at least one common green space. These spaces should serve as focal points for the areas and should be at least one acre in size. The common green spaces could be publicly, privately, or jointly owned, developed, and operated.

- *Urban/Civic Plaza* – The urban or civic plaza describes public gathering spaces set aside for civic purposes and commercial supporting activities. Civic plazas are usually located at the intersection of important streets or other significant locations and also may have multiple "rooms," similar to the common green. The plazas serve as unique placemaking features that include flexible, programmable spaces. Size may depend on the context, function, and area, but should be at least one acre. The design should feature primarily hardscape elements, but may also include trees or other landscaping, seating, public art, or water features. Plazas such as these could support open air markets, concerts, festivals, outdoor exercise classes, or special events. Public/private partnerships are encouraged to fund the construction of these spaces.

- *Pocket Park* – Usually less than one acre in size, these urban parks are characterized as well-distributed, small-scale open spaces incorporated into developments and designed for casual use by people working and living in the immediate area. Pocket parks may consist of hardscape elements or lawn and landscaped areas, seating, and visual amenities. These places should likely be integrated throughout the Transit Station Area and Community Business Center into development projects to provide publicly accessible

outdoor spaces for casual, social activities, such as gathering areas, outdoor cafes, fountains, or other focal points of interest.

As is shown on the Franconia-Springfield Area Systems Map (Figure 2), the asterisks represent the types of urban parks at different placemaking "scales" and suggested locations where they should be located to best promote connectivity and sense of place. The largest asterisk represents a significantly scaled major open space, such as the common green. The medium-sized asterisk represents urban/civic plazas. The smallest asterisks represent pocket parks. These parks are the small, infill-type spaces to be incorporated into mixed use developments. In addition to those areas indicated on the Systems Map, development should be creative in its application of recreation spaces and identify non-traditional locations, such as rooftops or interior public spaces to address public leisure and recreation needs. Indoor program space within private buildings is also desirable. This may include space for exercise and fitness classes or educational workshops.

Off-Site – Redevelopment in the Franconia-Springfield Area also would create additional need for active recreation such as field sports and other athletic activities. These active recreation facilities would require larger sites that cannot reasonably be accommodated within the Franconia-Springfield Area. These recreation impacts should be mitigated through enhancements at existing parks and schools outside of the Franconia-Springfield Area, but within the service area of proposed redevelopment. These sites provide an opportunity for larger-scale recreational facilities to serve the area residents.

As redevelopment occurs, these most proximate parks can be improved to include enhanced recreation facilities, including adding full cut off lights or converting existing fields to synthetic turf. Parks in the service area where facility capacity enhancements might occur include Lee District, Franconia, Hooes Road and Manchester Lakes. Additionally, several existing park sites are located at the edges of the area, including Lee High Park, Springfield Forest Park, Springvale Park, and Loisdale Park. These parks are close enough that pedestrian and bicycle linkages to the Franconia-Springfield Area should be constructed.

Several larger parks, which can be accessed by vehicles, will also serve new residents of the area. These parks include Lake Accotink, the Cross County Trail in the Accotink Stream Valley, and Huntley Meadows. Park enhancements to accommodate the future development could include trail improvements and amenities, and upgrading of courts, playgrounds, picnic facilities, RECenters, family recreation areas and nature centers.

Organized open space available to the public for active and passive recreation also exists at surrounding public school sites. These include Garfield Elementary School, Forestdale Elementary School, Springfield Estates Elementary School, Francis Scott Key Middle School, and Robert E. Lee High School. Additionally, existing natural systems can be found in the Franconia-Springfield Area. These open spaces are existing, unorganized spaces and natural ecosystems whether by design or naturally occurring. They are green spaces, but are not public and do not support recreation activities and are planned to remain as such. They function as storm water management areas, wetland, or green buffer. They include the Washington Metropolitan Area Transit Authority (WMATA) Storm Water Management Area, the area south of Springfield Center Drive, and Hampton Creek.

A strong pedestrian link should be provided to the Cross County Trail within the Accotink Stream Valley Park to the west of the CBC. This linkage will provide the residents a connection

to the major 40-mile north-south trail system in the County, to Lake Accotink Park and other park resources along this trail.

Heritage Resources

Any development or ground disturbance in the Franconia-Springfield Area on private and public land should be preceded by a heritage resource study and alternatives should be explored for the avoidance, preservation or recovery of significant heritage resources that are found. In those areas where significant heritage resources have been recorded, an effort should be made to preserve them. If preservation is not feasible, then, in accordance with countywide objectives and policies as cited in the Heritage Resources section of the Policy Plan, the threatened resource should be thoroughly recorded and in the case of archaeological resources, the artifacts recovered.

Sustainability

As the Franconia-Springfield Area evolves into a multi-modal, mixed-use place, long-term sustainability will be a key consideration in evaluating redevelopment. By employing sustainability in planning and design, the Franconia-Springfield Area should promote increased quality of life for the public and improve the quality of natural resources. The Policy Plan's Environment section provides guidance for green building practices and standards applicable to Community Business Centers and Transit Station Areas. Redevelopment in the Franconia-Springfield Area should include sustainable practices in accordance with the Environment section of the Policy Plan guidance, such as the achievement of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification or equivalent third-party certification. Considerations for sustainable practices may include:

- *Low Impact Development Stormwater Techniques* - Innovative stormwater management techniques should be utilized, which may include retention and detention, infiltration measures, or other means to reduce the impacts of stormwater run-off. These techniques should exceed the requirements for the baseline level in the areas of stormwater management and should complement other green and sustainable features within this redevelopment.

- *Site Design and Construction* - New and renovated buildings should be designed to minimize impacts to the environment, incorporating solar orientation for heating and cooling, on-site renewable energy production, low energy lighting fixtures, green roofs, and the use of recycled materials during construction. Wastewater should be reused on site where possible.

- *Habitat and Wetlands* - Portions of a site that include significant native habitat or wetlands should be protected, native species should be restored in open spaces, and invasive species should be removed. Trees should be planted throughout the area, and water use for irrigation purposes should be minimized.

- *Pedestrian and Transit-Oriented Design* - Building layout and streetscape facilities should provide enhanced pedestrian accessibility to minimize automobile dependence in the Franconia-Springfield Area, supporting the connectivity goals described in the Urban Design and Streetscape Guidelines appendix.

Noise

Given the proximity to Interstate 95, Franconia-Springfield Parkway and other roadways, significant noise impacts are likely in some parts of the Franconia-Springfield Area. Current Comprehensive Plan policies recommend against new residential development and other noise-sensitive uses in areas where current and future noise levels exceed 75 decibel (dBA) day-night loudness (DNL). However, residential development and other noise-sensitive uses may be planned and located in these areas due to the compact, urban nature of the Franconia-Springfield Area plan. Such noise sensitive uses in these locations may be considered only with the completion of a noise study during the review of the development, noise mitigation measures, and, potentially, the provision of disclosure statements and a post-development noise study. The noise study during development review should clearly define the noise levels impacting the proposed uses as a measure of dBA DNL. The noise study should include noise contours with current noise levels and future noise levels based on a minimum 20-year traffic volume projection for the roadway and other transportation noise sources.

For those studies that indicate noise levels in excess of 75 dBA DNL on proposed noise sensitive uses, mitigation measures should be provided with the goal of achieving 45 dBA DNL for interior space and 65 dBA DNL for outdoor recreation areas. Attenuation may include siting and orientation of the noise sensitive use, as well as the use of building materials and noise barriers. Disclosure statements should be provided to potentially affected residents and users within the impacted uses or units, which clearly identify the mitigated and unmitigated noise levels for interior space and the noise levels for any affected balconies. Post-development noise studies should be conducted to help staff evaluate the effectiveness of interior noise mitigation measures.

Affordable Housing & Universal Design

Any redevelopment in the Franconia-Springfield Area should conform to County policies on affordable housing which includes conformance to the Affordable Dwelling Unit Ordinance (ADU) and the Board of Supervisors Workforce Housing Policy (WDU). Per County policy, any residential use should provide at a minimum 12% of new units as affordable housing. The residential use should accommodate a variety of households such as families, senior housing and residential studio units. The units, at a minimum, should meet American with Disabilities Act (ADA) requirements and accommodate universal design.

Schools

The impact of development on schools should be mitigated. The redevelopment should work with the community and Fairfax County Public Schools to identify the appropriate commitments to address projected impacts.

LAND UNIT RECOMMENDATIONS

The Franconia-Springfield Area is divided into Land Units A through R, which make up the Springfield Community Business Center (CBC) and the Franconia-Springfield Transit Station Area (TSA). Figure 7 illustrates the land unit boundaries. Land Units A through G are part of the Springfield Community Business Center, generally located on the west side of the Interstate. As mentioned previously, the majority of the area consists of community-serving, auto-oriented strip shopping centers with associated surface parking, in addition to a number of hotels. The area should continue to primarily serve the neighboring communities in their retail and employment needs. At the same time, the Plan envisions the area to be expanded to a more walkable, bike-friendly, mixed-use center for the community. The core area in Land Unit A is envisioned as the central node, or urban village for the community with higher densities located near access points to the Interstate and Old Keene Mill Road.

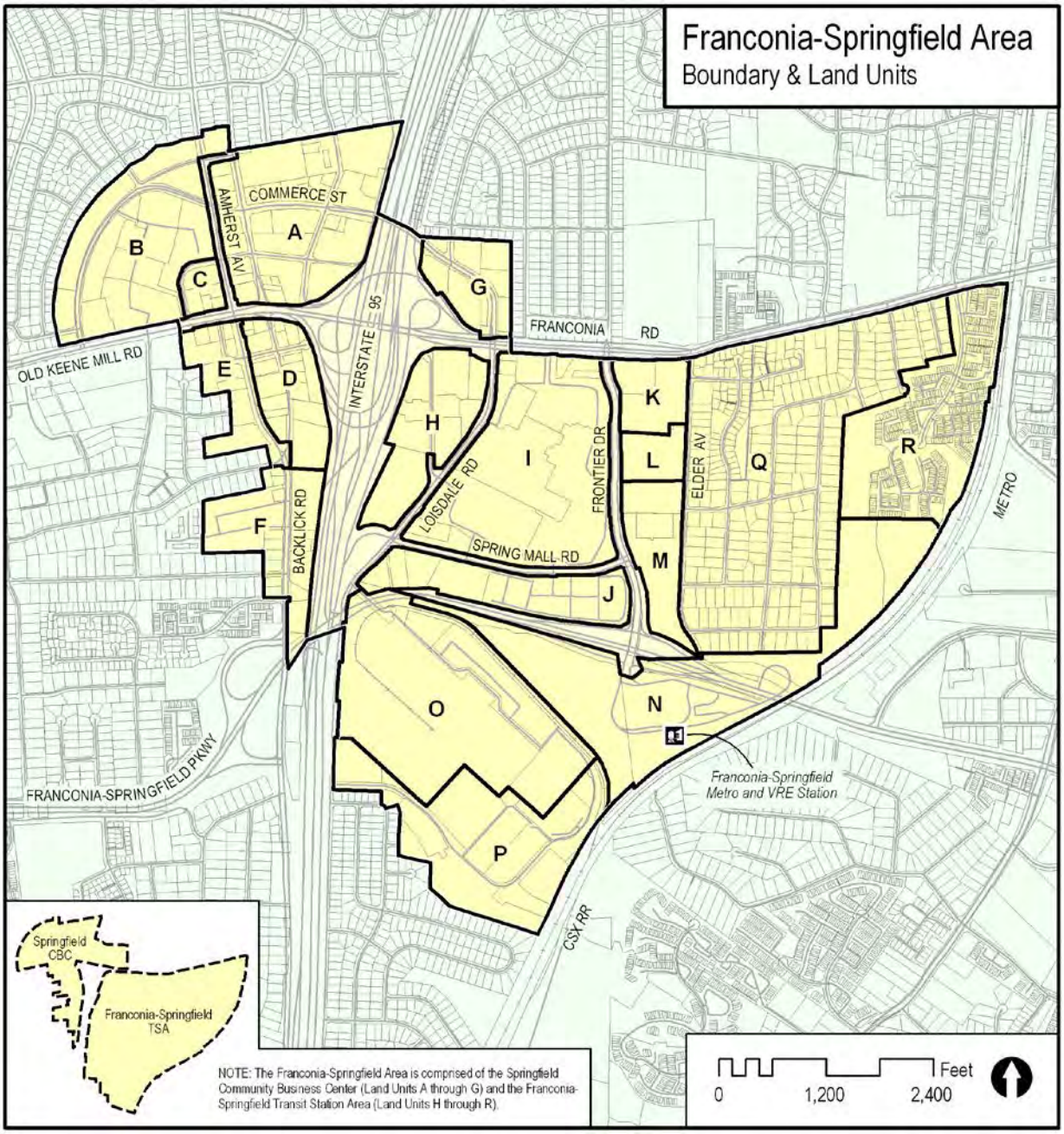
Land Units H through R are part of the Franconia-Springfield TSA. This area also consists of auto-oriented, commercial uses. The TSA should serve the local community, while also providing a regional destination with the redevelopment of the Springfield Mall into a town center in Land Unit I. This area should attract users from a larger area by taking advantage of the higher density, transit-oriented opportunities near the Joe Alexander Transportation Center.

Redevelopment in these areas should utilize the guidance established in the Overview section of this Plan, particularly when implementing the optional levels of development. The guidance is based upon the *Springfield Connectivity Framework Plans and Street Typologies* report, August 2008, and supported by the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to this plan. When parcel consolidation is specified, it is intended that such consolidations will provide for projects that function in a well-designed, efficient manner and provide for the development of unconsolidated parcels in conformance with the Area Plan guidance.

Land Unit A

Land Unit A is approximately 54 acres in size, and is bounded by Amherst Avenue, I-95, and Old Keene Mill Road. It is located in the northeastern portion of the Springfield Community Business Center (CBC). The Comprehensive Plan recommendations encourage the creation of an urban, pedestrian-oriented area comprised of a mix of medium to high intensity office, retail, hotel, civic, arts, and residential uses. At the baseline, Land Unit A is planned for a mix of uses to include hotel, retail, and office uses at an intensity of 0.40 FAR.

Land Unit A is planned to become the central node of activity or urban village within the CBC. The land unit should be characterized by multi-story and high-rise buildings with a mix of residential, office, hotel, and civic uses developed with a common design or architectural theme. These buildings should include street-level retail use to serve the greater community and local residents and employees. The redevelopment is envisioned to include up to approximately 445,000 square feet of hotel use, 1,300,000 square feet of office use, and 300,000 square feet of supporting retail use. Approximately 1,900 multi-family dwelling units are planned for this area. Redevelopment also should provide or contribute to a site for a public space for public use to house cultural, performing and visual arts, community and/or governmental use. The land unit is planned for mixed-use redevelopment up to an intensity of 1.6 FAR overall. Any redevelopment should follow the guidance established within the Overview section of this Plan, in addition to the following text.



FRANCONIA-SPRINGFIELD AREA LAND UNIT MAP **FIGURE 7**

The areas surrounding Commerce Street, extending south to Old Keene Mill Road should become the core or main street area of redevelopment in Land Unit A. Figure 8 shows the location of the core area within Land Unit A, which is approximately 36 acres. Intensities may be concentrated in this area, such that they exceed the overall intensity for Land Unit A. The concentration of intensity should facilitate the tapering or step down of development towards the adjacent, residential neighborhoods. Lower building heights in these areas would maintain a transition to these neighborhoods, to the extent possible.

Commerce Street in this area should serve as a major pedestrian, bicyclist, and transit corridor, which should function as an entryway into the CBC from the TSA. Like all areas in the CBC, the main street should incorporate the streetscape design features recommended in the Franconia-Springfield Area Urban Design and Streetscape Guidance, appended to these recommendations. An integral aspect of the main street approach in the core area is the inclusion of street-level retail use in the buildings within the core area. This retail use should help to create an urban, people-oriented place that provides convenient retail services and encourages pedestrian movement.

As described in the Overview section, building facades and entrances should be oriented to the streets with parking located toward the rear of buildings, toward to center of the block, or below ground. Rooflines, massing, and facades should vary for visual interest. The land unit should have wide sidewalks with retail shopping and restaurants, fronting on the lower floors of the office, hotel, and residential buildings. Streetscape design should include corner plaza entry features at the intersections of Commerce Street/Augusta Drive (Commerce Street Bridge), Commerce Street between Amherst Avenue and Backlick Road, Commerce Street/Brandon Avenue, Backlick Road/Bland Street, near the existing Concord shopping center, and Bland Street/Brandon Avenue**.** Many of these plazas should contain gateway features that mark the entrances into the area and should be designed with a variety of sizes, functions, and designs, as described in the Urban Design and Streetscape Guidance appendix. Plazas at these locations will create an aesthetically pleasing streetscape environment and encourage pedestrian activity. Other impacts on parks and recreation should be mitigated through Policy Plan objectives, particularly Objective 6 of the Parks and Recreation Section.

Additional guidance concerning urban design, architecture, landscaping, pedestrian circulation, and pedestrian amenities for the land unit is provided in the Urban Design and Streetscape section of the Area-wide recommendations. In particular, the design of buildings, their location, orientation, access, and related parking and telecommunications antennas and equipment should closely follow the guidance prescribed in this text. Transportation demand management tools and green building practices should be utilized, including, but not limited to, the installation of rooftop vegetation and/or rain gardens to offset the effects of impervious surfaces.

Redevelopment projects in the core area should demonstrate logical and substantial consolidation, multi-modal access, and a cohesive development plan. Land consolidation is necessary to physically unify freestanding buildings and to create the ability for parking to be located in the rear of buildings or in the center of blocks. Where development intensity greater than 0.40 FAR is proposed, consolidation of at least 2 contiguous acres is encouraged, except as otherwise specifically recommended. When a consolidation is less than two acres, development should provide for vehicular and pedestrian access with abutting properties, and a functional and coordinated development plan to demonstrate that any unconsolidated parcels are able to develop in conformance with the Plan option. Office use up to 125,000 sq.ft. with a maximum building height of 160-feet, including parking levels, may be appropriate on Tax Map parcel 80-4((1))

SPRINGFIELD COMMUNITY BUSINESS CENTER
LAND UNIT A CORE AREA

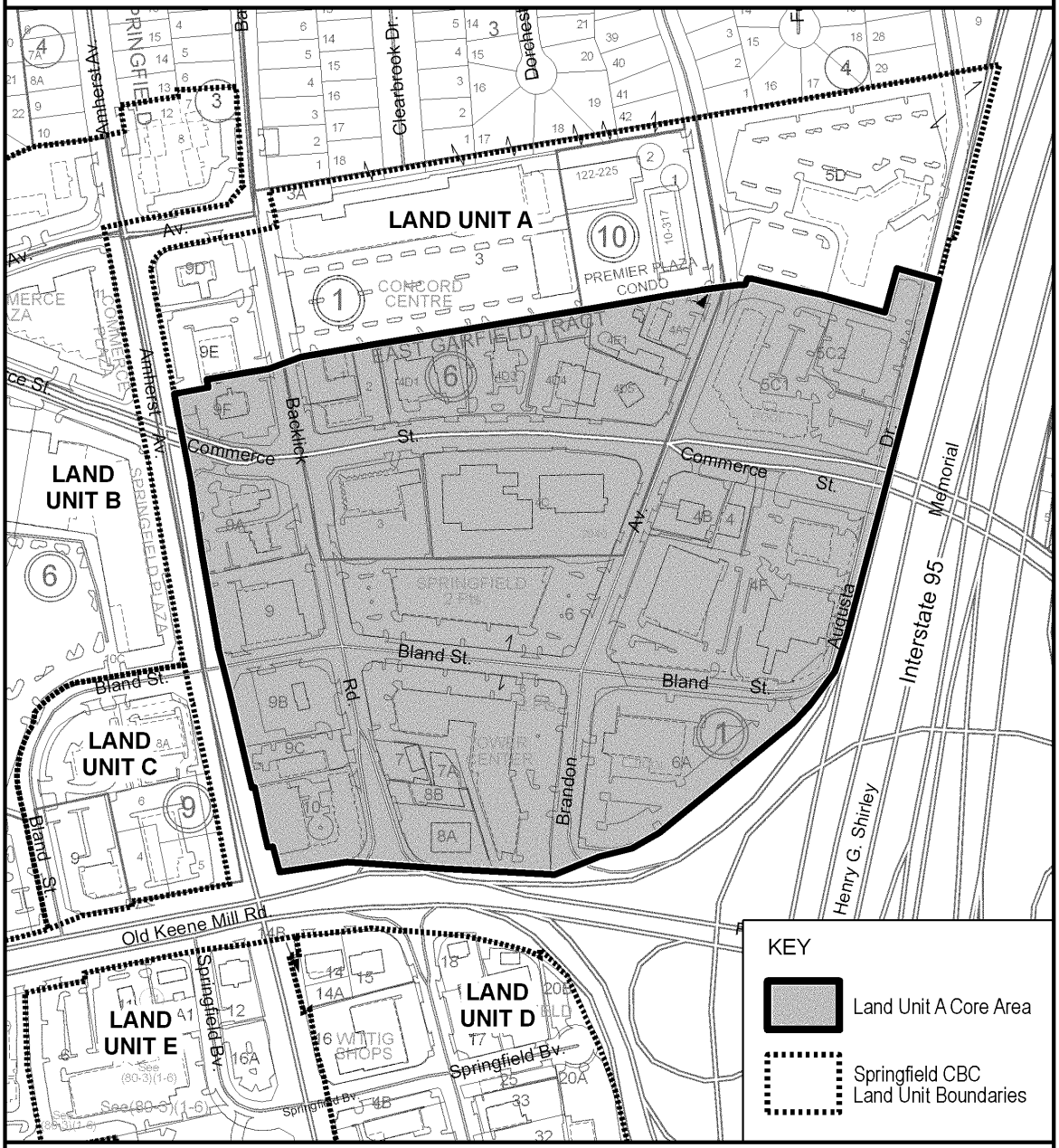


FIGURE 8

5C2, recognizing its location as a "gateway" feature for the Franconia-Springfield Area. Ancillary retail uses, if possible on the ground-floor, and an urban park or other recreational facilities should be provided to serve the employees with this development. Vehicular and pedestrian access to Brandon Avenue and Augusta Drive should be maintained and enhanced.

Redevelopment along the northern boundary of Land unit A should utilize design and screening techniques to reduce the impact on the adjacent neighborhood. Year round screening, enhanced with evergreen trees and supplemental shrubbery, should be provided at a minimum through a 50-foot vegetated buffer located along the northern boundary of Land Unit A in 80-4((1))3 and 5D and in 80-4((10)) all parcels. New buildings should be located approximately 80 feet from the residential neighborhood, although appropriately landscaped on-street parking, streets, or other non-structural elements may be located within the area outside the 50-foot vegetated buffer. Redevelopment along this northern edge should be compatible in scale with the adjacent residential neighborhood, and lighting should be designed so that it is not intrusive to the neighborhood. Building heights should taper to a maximum of 40-feet along the edge to reduce the impact on the neighborhood, and design techniques, such as stair-stepping the façade may be utilized.

Freestanding single-use retail or office uses may be appropriate along Old Keene Mill Road and close to I-95. As part of the redevelopment option in the core area, hotel use up to 110,000 square feet may be appropriate on the northwest corner of Old Keene Mill Road and Backlick Road, Tax Map 80-4((1))10. The site should be considered for this intensity only if enhanced streetscape amenities that create a focal point and gateway to the CBC are provided in addition to meeting the development criteria for Land Unit A.

Land Unit B

Land Unit B is located west of Amherst Avenue and extends along the northern boundary of the Springfield Community Business Center (CBC) and contains a variety of uses including the Springfield Plaza and Commerce Plaza shopping centers, multifamily residences, the Richard Byrd Library, and an office building. Streetscape design improvements as shown in the Urban Design and Streetscape Guidance, appended to this plan should be incorporated into the area to upgrade existing development and create a harmonious visual appearance. Buildings should be well landscaped, oriented to a public street, and screened from stable residential areas. Lighting should be designed so that it is not intrusive to the surrounding residential areas. Additional guidance concerning urban design, architecture, landscaping, pedestrian circulation, and pedestrian amenities for the land unit is provided in the Urban Design and Streetscape section of the Area-wide recommendations.

The area located to the west and north of Commerce Street is planned for multifamily residential use at a density up to 30 dwelling units per acre with the exception of the Richard Byrd Library, which is planned for public facilities uses and Tax Map 80-3((1))3D, which is planned for office use up to .35 FAR. Elderly housing at a density up to 30 dwelling units per acre is encouraged for the area between Dinwiddie Street, Commerce Street, and Amherst Avenue. The vacation of Cumberland Avenue as a part of this option should be explored in order to create a larger development site. Any northern or westward expansion of non-residential uses along Backlick Road and beyond Commerce Street is discouraged.

As an option Tax Map parcels 80-3((1))3 and 7 and 80-4((4))(3)7, 8, and 12, may develop as residential use up to a density of 45 du/ac and a maximum of 10,000 square feet of community serving retail use, utilizing the guidance described in the Urban Design and Streetscape

appendix. This redevelopment should adhere to the guidance in the Overview section of the Franconia-Springfield Area regarding building design, orientation, on and off-site parks and recreational facilities, parking, multi-modal connectivity, and telecommunications facilities. In particular, redevelopment should provide an effective transition to the areas outside of the CBC through buffering, limiting building height to 65-feet, orienting buildings to Commerce Street and Cumberland Avenue, and other design considerations, such as 'stair-stepping.' There should be no direct access to neighborhood streets outside of the Springfield CBC.

The Springfield Plaza and Commerce Plaza shopping centers comprise the rest of the land unit. They are major features of this area and are planned for community-serving retail uses up to .50 FAR. Expansion of the area with additional retail and office uses is encouraged. With this expansion, emphasis should be placed on creating a pedestrian-oriented streetscape along the eastern boundary to include public amenity features such as gathering spaces with shaded areas, improved parking area landscaping, pedestrian connections to the rest of the CBC, and a coordinated entry drive at Bland Street. The long-term vision for redevelopment of this land unit should include options for consolidated, mixed-use development that incorporate a network of local streets or grid of streets, overlaid onto this land unit to improve multi-modal access and the inclusion of a central, focal point or plaza that acts as a gathering space for shoppers or nearby residents or workers.

Land Unit C

Land Unit C is located west of Amherst Avenue, north of Old Keene Mill Road and south and east of Bland Street. The land unit is planned for office use with support retail up to 0.50 FAR with substantial parcel consolidation. High-quality architecture, landscape design, and pedestrian amenities should be provided. Shared parking is encouraged and should be shielded from view within the site.

As an option, Tax Map Parcels 80-4((9))4, 5 and 6 may be appropriate for hotel use up to 110,000 square feet. Access should be provided from Bland Street and an inter-parcel access should be provided to the parcel to the west (Tax Map Parcel 80-3((1)) 9). Redevelopment should be considered for this intensity only if enhanced streetscape amenities that create a focal point and gateway to the CBC are provided. In addition, redevelopment is encouraged to meet the development criteria in the Overview section of this plan, recognizing that a hotel use may not have display windows or ground-floor retail use. The effects of impervious surface should be offset through mitigation measures, which may include the installation of rooftop vegetation and/or rain gardens. Particular attention should be paid to mitigating the need for urban parks and recreational facilities and shielding telecommunication facilities as stated in the Overview section as well as the Policy Plan guidance. Redevelopment also should accommodate, to the extent possible, and contribute to a pedestrian bridge that would facilitate the safe crossing of Old Keene Mill Road for transit users. Redevelopment should contribute to transportation improvements (i.e., road fund) and provide a shuttle service to the Joe Alexander Transportation Center and other nearby locations. Redevelopment also should participate in the future circulator system's management and operation, as described in the Overview section.

Land Unit D

Land Unit D is generally located south of Old Keene Mill Road and north of the Backlick Center, between Amherst Avenue and Interstate 95. Auto-serving retail and service establishments, ethnic restaurants, and other retail uses characterize this area. As with the northern portion of the CBC, the Comprehensive Plan encourages the creation of an urban,

pedestrian oriented area with a mix of medium to high intensity office, hotel, retail, residential, and ground floor retail uses.

The land unit is an area where medium- to high-density redevelopment with consolidation of parcels is encouraged to alleviate some restrictions to development of narrow parcels. The area between Old Keene Mill Road and Springfield Boulevard is planned for retail uses up to 0.70 FAR. With substantial consolidation, the area is planned for an option of office and retail uses up to 1.5 FAR. The area south of Springfield Boulevard and east of Backlick Road is planned for retail uses up to 0.70 FAR. With substantial consolidation, the area is planned for an option of high-rise office, hotel and/or residential uses with ground floor retail uses up to 1.5 FAR.

The area south of Springfield Boulevard and west of Backlick Road is planned for mid-rise office use with ground floor retail uses up to 0.70 FAR. To the extent possible, a public park/plaza or gateway feature should be provided at the southern end of Parcel 90-2 ((1)) 11F. Streetscape improvements, including sidewalks, landscaping and pedestrian amenities should be made along Backlick Road and Amherst Avenue. As an alternative, uses such as automobile sales and services may be considered for this area at an intensity up to 0.70 FAR. With substantial and logical consolidation, development up to 1.0 FAR may be considered as an option for redevelopment.

In any of the redevelopment scenarios, sidewalk connections, landscaping, and streetscape improvements are recommended. Redevelopment under the optional levels should meet the guidance expressed in the Overview section. In this case, redevelopment should incorporate designs, which reduce the building height and bulk, parking form and location, and the utilization of TDM strategies to improve the pedestrian and bicyclist environment. Uses located on the ground floor should have direct public access and display windows oriented towards the street. Pedestrian connections should be provided between buildings and uses.

Land Unit E

Land Unit E is located south of Old Keene Mill Road between the Springvale community, Amherst Avenue, and north of the junction of Amherst Avenue with Backlick Road.

Tax Map 90-2 ((1)) 11D and 11E are planned to continue as automobile sales and service use up to .50 FAR. The remainder of the sub-unit is planned for low intensity retail and office uses up to .50 FAR with a height limitation of 50 feet. Any development should be screened from the Springvale community and meet the recommendations for optional redevelopment in Land Unit D.

Parcels in the vicinity of Springfield Boulevard and Amherst Avenue south of Old Keene Mill Road may be appropriate for use as a structured, commuter parking facility of 1,000+ spaces. The commuter parking facility should be designed as a multi-modal transportation center and supplemented with additional features to serve both carpools and transit users in an orderly fashion. These features should include bus bays, information kiosks, bicycle storage facilities, and improved pedestrian access. The facility should be designed and developed to include additional public and private space to accommodate community-serving retail uses along the Old Keene Mill Road frontage and Parks and Recreation facilities on the rooftop and, potentially, in the structure. These uses should complement the commuter function by taking advantage of the available parking on evenings and weekends. It is expected that as the HOT lanes improvements

are completed to serve the Shirley Highway (I-95/I-395) and Capital Beltway (I-495) corridors, park-and-ride demand in the CBC will grow substantially.

Land Unit F

This land unit is located north of the Franconia-Springfield Parkway, between I-95 and the residential areas west of Backlick Road. Land Unit F is located south of the junction of Amherst Avenue with Backlick Road. Retail, low-rise office, and residential uses are planned for this land unit. Community-serving retail uses with intensities up to .35 FAR are planned in order to retain existing businesses and provide space for the start-up of new businesses. Office uses shown on the Plan map should be retained and existing office uses located along Backlick Road should be retained at existing FARs. However, non-residential development along the Franconia-Springfield Parkway is discouraged.

That portion of Parcel 90-2 ((1)) 23 that is opposite the Grand View townhouse development located on Villa Park Road is currently the site of a state-owned commuter facility and is planned for transitional low-rise office use. Such office development should consolidate parcels to provide for existing and proposed roadway improvements, and provide effective noise attenuation measures as needed. Appropriate landscape treatment should be provided where necessary to protect adjoining residential or institutional uses.

The Brookfield Plaza shopping center site, located west of Backlick Road off Spring Garden Drive, is planned for community-serving retail use up to .35 FAR. As an option, residential use at 16-20 dwelling units per acre may be appropriate with complete parcel consolidation of Tax Map 90-2((1))17, 17A, ((2))1 and 2. Redevelopment under this option should create a distinct edge to commercial development and be compatible with surrounding residential uses. The adjacent residential neighborhoods should be effectively screened from the redevelopment. Building heights of structures should not exceed 40 feet. Access should be limited to Backlick Road, and curb cuts should be minimized.

Land Unit G

Land Unit G includes the commercially developed area along Commerce Street, east of I-95, north of Franconia Road and serves as an important linkage between the CBC and the TSA. This area is planned for community-serving retail use up to .35 FAR. Commercial development along Commerce Street and Franconia Road should be limited to existing commercially-zoned locations to prevent commercial encroachment into adjacent residential neighborhoods. Buffering and screening and other measures should be provided from any new development to adjacent residential uses to create appropriate transitions and mitigate adverse impacts. Lighting on commercial sites should be designed to be non-intrusive to nearby residential areas.

Land Unit H

Land Unit H, about 29 acres, contains retail stores, offices, and hotels. This land unit is planned for a mix of office and hotel uses at an intensity up to .50 FAR. Accessory uses such as banks and restaurants may also be appropriate provided they are not located in free standing structures. Landscaping and plantings along sidewalks and streets are encouraged to foster pedestrian activity. Safe pedestrian connections to the Springfield Mall (future town center) and to the Transportation Center should be incorporated into the pedestrian circulation plan and network for this land unit. A signalized, mid-block crossing is planned to connect the northern portion of this area to the Town Center's central plaza. Development in this land unit should

follow the guidance set forth in the overview section of this Plan, particularly focusing on the high frequency bus service to the Joe Alexander Transportation Center and, eventually, the Springfield CBC.

As an option, multi-family residential use at a density of up to 45 dwelling units per acre may be appropriate for Tax Map parcel 90-2((1))46 provided that the following conditions are satisfied:

- The entire land unit is developed as residential use through a unified development plan which highlights pedestrian and vehicular access;
- High quality architecture and site design is provided, including landscaping and lighting;
- Structures are mid- or high-rise, not garden type apartments in order that they may be compatible with existing and planned development in the immediate area;
- Structures are located to provide an appropriate set back from I-95 to mitigate noise. Additional noise mitigation measures may also be necessary;
- Parking is provided either underground and/or in structures to maximize land area for open space and recreational amenities;
- Recreation facilities are provided to meet the active recreation needs of residents. These facilities should be an integral part of the residential complex or building; and
- Effective landscaping is provided on the periphery of the site in order to buffer this residential development from existing and planned non-residential use adjacent to the land unit and in the immediate area.

Land Unit I

The land unit is approximately 80 acres in size and contains the Springfield Mall and other retail uses. The Springfield Mall is planned for retail uses up to .50 FAR to recognize its regional-serving function. The area along the perimeter of the mall property is planned for community-serving retail uses up to .35 FAR. Drive-through facilities are discouraged in this land unit. Pedestrian and bicycle access to and from the Joe Alexander Transportation Center should be provided. Development in this land unit should be linked with the Transportation Center through the provision of high frequency transit service, such as a circulator bus system.

As an option, Land Unit B may be appropriate for redevelopment as a town center that integrates retail, residential, office, and hotel uses. Redevelopment as a town center should transform the character of the area from a suburban, auto-oriented, regional mall into a mixed-use, walkable, and distinct place. The town center redevelopment should act as a catalyst for revitalization of the Springfield area and support the regional goal of concentrating growth in activity centers. The option for the town center does not limit the ability of the existing mall footprint to remain, to be altered, or to be expanded, as long as the character of the town center, described in the following Plan text is achieved.

With consolidation of at least 78.5-acres, the town center is planned for an intensity of up to 1.71 FAR. Any remaining, unconsolidated parcels would be planned at the base level for

retail use up to 0.35 FAR. If the entire land unit is consolidated, then the town center is planned for an intensity of up to 1.82 FAR. In either scenario, redevelopment should focus on improved connectivity between the internal activities of the mall building and the rest of the town center and, on a larger scale, the town center to the surrounding land units and greater Springfield area. In particular, the town center should enhance multi-modal connections to the Transportation Center and other nearby uses, and take advantage of internal synergy among the land uses to discourage reliance on the automobile. The following paragraphs outline the conditions for the town center redevelopment option.

Land Uses: Land uses should be distributed across the site to create the mixed-use town center, based on the two consolidation options, as follows:

Development Potential for Town Center Options

	Option 1 (78.5 acres)	Option 2 (80 acres)
	Intensity Up to 1.71 FAR	Intensity Up to 1.82 FAR
	Non-Residential Use	
Land Use	Square Feet	
Retail	1,900,000 - 2,100,000	1,900,000 - 2,100,000
Office	700,000 - 1,100,000	1,200,000 - 1,500,000
Hotel	180,000 - 360,000	180,000 – 360,000
	Residential Use	
	Square Feet	
Residential	2,300,000 - 2,900,000	2,400,000 - 3,000,000
	Dwelling Units	
	2,100 - 2,800	2,200 - 2,800

Residential Use- The residential units should be distributed in buildings across the site in a manner that is well-integrated into the town center. The residential uses also should have convenient access to open space, recreational space, community-serving retail uses, and other services. Affordable and workforce housing should be provided through compliance with the Affordable Dwelling Unit Ordinance and other County policies.

Retail Use- To the extent possible, the new retail uses that are in addition to the mall building should be located in places that would encourage public usage, activate the town center, and reduce vehicular traffic. Such new retail uses should be distributed throughout the site in the ground floors of the residential, office, and hotel buildings; at prominent entrance points to the town center; and along the edges of plazas. The inclusion of a child care center and a grocery store is highly desirable (convenience retail or a quick service food store will not satisfy this condition). These retail uses should have direct public access and display windows oriented toward pedestrian walkways, and, where appropriate, to vehicular drives and/or streets. These locations should include local-serving uses, such as cafés, restaurants, bookstores, boutiques, pharmacies, dry cleaners, health clubs, and professional storefront offices.

Office and Hotel Uses- The office and hotel uses should be distributed throughout the town center so that the access and impact on traffic is well-distributed among the internal and peripheral roadways. Additional residential use can be substituted for some of the office and hotel uses within the ranges for the town center options. If this substitution is made, the balance of land use components should maintain the desired ability to provide the live-work-shop community. Active and passive recreation opportunities should be provided for use by the employees within the town center.

Main Street Concept- Any expansion of the mall building should include a re-alignment and reorientation of the building to an internal street network. The mall's reorientation should form the basis of an outdoor, "main street" for the town center along the Loisdale Road-side of the mall building. The main street should incorporate ground-floor retail and restaurant uses with entrances from the main street and dynamic streetscape elements, such as store-front windows, awnings, and outdoor seating areas. The design should activate the length of the street, create diverse and vibrant street life, and encourage activity beyond the typical work day. Residential, office, and hotel uses should be integrated into the main street, above the retail uses, to provide the opportunity for residents, employees, or visitors to live, work, shop, play, and exercise on the site. An indoor community space would be desirable along this main street.

Urban Design- The town center redevelopment should incorporate high quality site design, architecture, landscaping, and lighting. These design elements should create an urban environment that balances the public realm with private space, and functionality with visual appeal. To achieve these goals, the design of the site should be oriented outward along the periphery to create a functional relationship with the surrounding land units. Within the site, the buildings should align and relate to the internal streets and open space areas. The guidance established in the Overview and Area-wide section of this plan should be adhered to, particularly relating to building height, placement, and orientation; gateway and other placemaking features; building and parking structure façade treatments; and free-standing and drive-through uses. In regards to building height, the heights should be limited by a 14° line of sight as measured from the front property line of Springfield Forest residential structures, to help foster an effective transition to the Springfield Forest subdivision to the east of Elder Avenue.

Design Theme- A unified design theme that builds on the urban design and architectural detail should be implemented in the Franconia-Springfield Area. As the redevelopment of the Springfield Mall in the town center is considered one of the primary redevelopments in the area, the town center should develop a design theme that could be expanded for use as a "brand" throughout the TSA and/or the CBC. The theme should enhance the connectivity throughout the site and should strengthen the perception of the town center as a cohesive and coherent redevelopment. Attractive and functional streetscapes or other pedestrian systems, complementary architectural and urban design features, public art, brick-patterning, street furniture, signage and wayfinding elements, and other physical landmarks or focal points should be used to establish this design theme.

On-site Urban Parks and Recreation- Multiple, publicly accessible urban plazas and park spaces at various scales and functions should be included in the town center at each phase of redevelopment. The plazas should form a network of on-site public spaces and should be supplemented by existing and improved off-site recreation facilities. The on-site urban parks should provide active and passive recreational opportunities to serve the residents, employees, and visitors of the town center. These spaces should be distinguished from streetscape and retail amenities, contribute to the quality of life for users and residents through their function, use, accessibility, facilities, amenities, or other elements.

The urban park spaces should be distributed throughout the site and, depending upon function, may be at ground-level or at rooftop locations. Any public recreation space should have clearly denoted public access points. A broad range of leisure facilities and amenities could include a trail network, off-leash dog parks, plazas, courtyards, outdoor seating areas, playgrounds, gardens, sports courts, fitness stations, or other active recreational amenities as well as flexible spaces that will accommodate large events such as farmer's markets, community festivals and

performances. These diverse spaces, functions, and amenities should be provided to the extent possible at each phase of the development.

The location of urban plazas around the perimeter of the town center should function to welcome users, provide transparency, and act as gateway features into the town center. Particularly important to the design is the location of an urban plaza at the southeast corner of the site. This location is critical to the enhancement of the link between the town center and the Joe Alexander Transportation Center as this corner of the site is expected to experience high-volumes of pedestrian and bicycle traffic moving between the mall, town center, and the transit facility. At the initial phase, some level of improvements should be made to this area, which should be enhanced as the development builds out.

The network of public spaces and plazas should focus on one large, signature, central public plaza. This central plaza should function as an important civic gathering place for residents, employees, and shoppers of the town center. The provision of a range of auxiliary and connecting leisure amenities will support casual and programmed activities and help enliven the area. The central plaza should provide a link between at least one external roadway and the main street. The form and size of the plaza should encourage and facilitate a variety of outdoor activities and uses. The design should include flexible, programmable open space, outdoor seating, landscaped space, and unique place-making features, such as water, public art, or other interactive elements. The plaza should relate to the surrounding buildings with buildings aligned to the space and entrances opening onto it. The design of the plaza should promote safe usage by the pedestrian by limited vehicular access. A transit stop and drop-off area, located at the end of this plaza along Loisdale Road, should be provided to encourage pedestrian access to this site and promote activity. This central plaza should be provided at the initial phases of development.

Off-site Parks and Recreation- The on-site urban park spaces and amenities should be supplemented by off-site facility development, such as improvements to existing local parks, and/ or other contributions. These off-site improvements should offset the recreational needs generated by the town center development. The improvements could include new or expanded athletic fields, sports courts, playgrounds, picnic areas, trails, open spaces, dog parks, skate parks, and other supporting amenities. A network of pedestrian trails or sidewalk connections should enable pedestrian connections from the town center to nearby parks.

Transportation – It is essential that the impacts of the town center development allowed under this option be offset through a combination of additional roadway capacity, intersection traffic mitigation, circulation and access improvements, transit, pedestrian and bicycle connectivity enhancements, and implementation of an effective transportation demand management (TDM) program. These improvements should be provided in accord with the guidance set forth below:

> *Trip Generation* – Trip reduction levels should be identified in the traffic impact study and realized through a TDM program with a detailed monitoring process. These reductions are predicated upon provision of attractive, safe, and convenient pedestrian and bicycle connections between the town center and Transportation Center, enhanced bus transit circulator service between the town center, Transportation Center, adjacent commercial areas and residential neighborhoods, and street improvements that further these objectives.
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> *Traffic Level of Service* - To avoid degradation of traffic levels of service (LOS), land use and transportation should be kept in balance throughout the phasing of the development. This redevelopment should apply the Franconia-Springfield Area LOS E standard. This standard is described in the Level of Service section of this plan. The standard is

established in recognition that offsetting improvements are made to the town center to create a more multi-modal transportation system serving the area, including transit, pedestrian and bicycling connectivity improvements.

Traffic Mitigation – Applying the LOS guidance, intersections in and around the town center should be improved to the extent possible. Modifications to intersection geometry, lane configurations, timing and operation of signals, and pedestrian and bicycle accommodations should be provided at these intersections to improve access to the town center and minimize congestion.

Improvements to mitigate the impacts of traffic on regional transportation facilities providing access to/from the Franconia-Springfield Area should also be evaluated and addressed and contributions should be made to address the impact, as described in the Roadway and Circulation Improvements section.

A list of major road improvements for the Franconia-Springfield Area is expressed in the Overview section of this plan. The following additional regional facilities should serve specifically as gateways to the town center, and are critical components of the transportation system serving Land Unit I:

- *Frontier Drive/Franconia-Springfield Parkway Interchange* – This interchange will serve as a primary entrance to the town center for traffic arriving from the east, west and south. Adequate traffic operations should be maintained at the Parkway ramp junctures with Frontier Drive. Improvements to be considered should include improved intersection geometry, signal modifications to balance vehicular and pedestrian flows, pedestrian safety and connectivity enhancements, and extension of Parkway deceleration and acceleration lanes to handle projected increases in traffic volumes. Enhancement of pedestrian and transit connectivity to the Transportation Center should be addressed in the early phases of town center development.

- *Northbound I-95 Exit Ramp* – This ramp exit will serve as a major entrance to the town center for traffic coming from the south exiting northbound I-95. The ramp is also expected to carry increased traffic destined to the GSA Warehouse area as that area undergoes redevelopment. Adequate traffic operations should be maintained and it should be ensured that traffic entering the town center from the northbound I-95 exit ramp does not queue to the mainline lanes of I-95 under future conditions.

- *Loisdale Road/Commerce Street/Franconia Road Intersection* – This intersection will serve as a major entrance to the town center for traffic arriving from the north and west, and traffic destined to the town center from the Capital Beltway. The intersection serves as the primary access to I-95/I-395 north and south and the connecting Capital Beltway ramps. Improvement of the intersection should be provided as required to maintain adequate roadway operations and ensure the adequate flow of traffic to and from I-95/395/495 interstate facilities. Improvement of this intersection should include consideration of enhanced capacity as well as improved directional signage to the interstate ramps.

Circulation and Access – In order to improve vehicular access and circulation within and through the town center, and to facilitate pedestrian movement within and through the town center, an interconnected network of local streets should be provided that includes wide sidewalks on both sides of most streets, delineated pedestrian pathways, and pedestrian crossings. A pedestrian circulation system should be developed on the property that interconnects the interior portions of the town center (the enclosed mall) with major destinations and places on and surrounding the property with safe pedestrian crossings.

The Urban Design and Streetscape Guidance appendix and the text found in the Local Streets and Circulation section should be utilized for guidance in the redevelopment of the Springfield Mall to create an improved vehicular and pedestrian circulation system for the town center.

Transit, Pedestrian, and Bicycle Connectivity – Transit, pedestrian, and bicycle connectivity improvements are major elements of the transportation guidance supporting this Plan option. To support the increased density and mix of uses at the optional level of development, access to the area should be maximized by all means available. Transit, pedestrian, and bicycle connectivity to the town center should be improved in order to achieve the objectives of increasing transit usage, including reverse ridership on the Metro, and creating a walkable and bike-able town center.

As described in more detail on the Overview section, transit, pedestrian, and bicycle connectivity improvements should be provided as part of the redevelopment process to improve the pedestrian and bicycle connection between the Joe Alexander Transportation Center and town center; to expand bus circulator service between the town center, Joe Alexander Transportation Center, and CBC; to integrate safe pedestrian crossings into the design of intersections and streets; and to provide a mid-block pedestrian crossing between the town center and Land Unit H. These improvements are detailed in the Overview section and should be adhered to during redevelopment in and around Land Unit I.

A typology of streets and proposed designs for streets in the Franconia-Springfield Area are developed in the Urban Design and Streetscape Guidance appendix to this plan, based on the context of the surrounding and planned land use. These proposed roadway cross sections establish guidance that can be used to undertake improvements to the town center roadways and facilitate safe and active streetscapes and should be followed during redevelopment.

Transportation Demand Management – A transportation demand management (TDM) program should be established that encourages the use of transit and non-motorized transportation, and utilizes a variety of measures to reduce automobile trips. The TDM program should achieve specified trip reduction targets identified for phases of the development. It should ultimately be maintained and funded by residents and business owners once the town center development is complete. The TDM program should be designed to work in conjunction with and complement the transit, pedestrian and bicycle connectivity improvements, as described in the TDM section of the Area-wide section of this plan.

Commensurate with the trip reduction levels identified in the traffic impact study, the TDM program should achieve a minimum level of 30 percent reduction in residential peak hour trips and a minimum level of 20 percent reduction in office peak hour trips at site build out, with lower levels of trip reduction expected in the interim phases of development, to be

determined at the time of rezoning. The TDM program should be provided by the applicant, and implemented during the early phases of the town center development.

Phasing- Although phasing of the ultimate development should be flexible, the "main street" character should be established in the initial phase of development. This phase should include vertically-integrated land uses with ground-floor retail and other activity generating uses located continuously along the street, as described previously. The design should create a dynamic streetscape and promote pedestrian safety and activity. This initial phase should begin to substantially improve the multi-modal connections and the pedestrian experience from the main street to the Transportation Center. Establishing this main street and the improved connectivity in the early phases of redevelopment should establish the identity of the place as a walkable, pedestrian-scaled, mixed-use area.

In particular, the pathway from the mall through and around the Macy's garage to the Transportation Center should be enhanced during the initial phase. Improvements could include dedicated, well-lit, secure, and attractive walkways through the garage and an urban plaza on the southeast corner with water features, outdoor seating, improved paving, and/or other gateway features. Each phase of the redevelopment also should provide for convenience retail uses, support services, urban plazas, other recreation amenities, and associated transportation improvements, at each phase of development.

Noise- Transportation noise generated from the roads surrounding the existing mall may have an effect on the town center. A noise study should be completed to determine the actual extent of noise impacts on the proposed residential and other noise sensitive uses on this land area for existing and future predicted conditions. Residential uses should not be located in areas with excessive noise, as defined in the Policy Plan. Any noise study for this land area should take into account both exterior noise and measures which might be employed to reduce interior noise levels. Building height, location, orientation, and shielding also could be used to mitigate the potential for noise impacts on the redevelopment.

Land Unit J

This land unit is located south of Spring Mall Road and west of Frontier Drive and includes the Springfield Station apartments, which are developed at a density of 45 dwelling units per acre. The approximately 28-acre land unit is bordered on the south by the Franconia-Springfield Parkway.

All of Land Unit J is planned for multi-family residential use at a density of 35 dwelling units per acre. A mix of garden apartments and mid- or high-rise structures is encouraged. Residential use in this area will serve to expand housing opportunities in proximity to a major transportation center. Limited retail uses to serve the residents of the development may be appropriate, provided that the retail uses are not contained in free-standing structures.

Land Unit J includes an area currently used as an automobile dealership (Tax Map 90-2((1))53, 54, 55, 57D). Expansion of this use beyond these parcels within the land unit is not recommended, and consolidation of these parcels with the remainder of Land Unit J for residential or mixed-use development is encouraged to achieve the unified development of this land unit.

Two options for development have been identified for this land unit: residential use at a density of 45 dwelling units to the acre, or mixed-use development comprised of residential and

retail use at an intensity of up to 1.0 FAR. Mixed-use development must be predominantly mid- or high-rise residential in character with no more than one-third of the total gross square footage devoted to retail use. The retail and residential uses must be integrated and physically linked to one another to create a cohesive project, as opposed to a development that represents a mixture of disparate uses on the site.

Under either option, the following conditions must be met in addition the conditions established in the Overview section:

- Structures are mid- or high-rise, rather than garden style units, in order that they may be compatible with existing and planned development in the immediate area. Structures should be located to provide an appropriate setback from the Franconia-Springfield Parkway to mitigate noise. Other noise mitigation measures should be provided as necessary;

- At least one-third of the required parking is provided either underground, in structures or designed as a combination of the two. This will help maximize land area for open space and recreational amenities;

- Effective landscaping is provided on the periphery of the site to adequately buffer this residential development from existing and planned non-residential use in the immediate area;

- Safe pedestrian access and connections are provided to the Springfield Mall and to the Transportation Center. The pedestrian circulation plan and network for this land unit should be part of the overall circulation plan for the Transit Station Area;

- A high quality living environment with active recreation and other site amenities is provided to meet the active recreation needs of residents; and,

- Pedestrian access to and from the Transportation Center should be provided as a part of any development of this land unit. Development in this land unit should be linked with the Joe Alexander Transportation Center through the provision of high frequency transit service, such as a bus circulator system.

Land Unit K

Tax Map 90-2 ((1)) 85B and 90B comprise the approximately 13-acre Land Unit K. Tax Map 90-2 ((1)) 85B is planned for institutional use up to .30 FAR and is developed with an assisted living/medical care facility for the elderly. The assisted living facility is located on the site of the former Oak Grove Plantation House. Tax Map 90-2 ((1)) 90B is planned for public facilities and is the site of the Forestdale Elementary School. Any future uses should be well-buffered from Franconia Road and Frontier Drive.

Land Unit L

Land Unit L, about 8.5 acres in size, is located south of Forestdale Elementary School between Frontier Drive and Elder Avenue. The land unit is comprised of Tax Map 90-2 ((1)) 86A and 96A. Parcel 90-2((1))96A is a cemetery, known as the Broders Family Cemetery. It is on land that was once part of the Oak Grove Plantation. Parcel 90-2 ((1)) 86A is planned for low-intensity retail use up to .30 FAR. This use should be one-story in character, with buildings

and access oriented to Frontier Drive. A minimum 50-foot vegetated buffer and a brick wall should be provided along Elder Avenue to assist in creating a transition to the existing residential communities in this area. The buffer should be enhanced with evergreen trees to provide year round screening. No sidewalk or curb and gutter should be provided along Elder Avenue.

The primary access to development in Land Unit L should be oriented to Frontier Drive opposite the entrance to future Springfield Town Center.

Land Unit M

Land Unit M, approximately 20 acres, is located immediately north of the Franconia-Springfield Parkway and situated between Elder Avenue and Frontier Drive. This land unit is planned for office and retail use up to 0.30 FAR and is developed at 0.28 FAR. To achieve an effective transition to the Springfield Forest subdivision, the retail uses should be low-rise in character with a maximum height of 35 feet, with buildings and access oriented to Frontier Drive. In addition to a maximum height of 35 feet, all buildings and structures shall be limited in height by a 14° line of sight as measured from the front property line of Springfield Forest residences adjacent to this land unit and east of Elder Avenue.

Retail and office uses should be developed under the following conditions:

1. A minimum of 50 foot vegetative buffer incorporating existing vegetation should be provided along Elder Avenue together with a seven-foot brick wall on the western side of the buffer to assist in creating a transition to the existing residential communities in the area. The buffer should be enhanced with evergreen trees and supplemental shrubbery to provide year round screening.

2. The only access, vehicular or pedestrian, to this land unit should be from Frontier Drive with the primary vehicular access point at the intersection of Spring Mall Road.

3. The entire land unit should be developed under a single development plan which will reflect high quality architecture and site design.

4. All site lighting should be located, directed, and designed to reduce glare and slippage onto the adjacent residential property.

As an option, multi-family residential use at a density of up to 20 dwelling units per acre may be appropriate. The entire land unit should be developed under a single development plan which reflects high quality architecture and site design. Structure type should be limited to garden or mid-rise dwelling units. To help foster an effective transition to the Springfield Forest subdivision, height of the buildings should be limited by a 14° line of sight as measured from the front property line of Springfield Forest residential structures east of Elder Avenue. This transition should also include a vegetated buffer, incorporating existing vegetation, of at least 100 feet in width along Elder Avenue.

It is important that good pedestrian access be provided to the Joe Alexander Transportation Center and to the office and retail uses in the area. Vehicular access to this land unit should be limited to Frontier Drive with the primary access point at the intersection of Spring Mall Road. Development in this land unit should be linked with the Joe Alexander Transportation Center through the provision of high frequency transit service, such as a circulator bus system.

Land Unit N

Land Unit N consists of property owned by the Washington Metropolitan Area Transit Authority (WMATA) and is planned for public facilities. A Transportation Center containing approximately 5,000 parking spaces and bus transfer facilities have been constructed in this land unit along with the Franconia-Springfield Metrorail Station. This entire land unit contains significant wetlands, marine clays, and Environmental Quality Corridor (EQC) land, which pose development constraints and stormwater management and wetlands mitigation issues. Pedestrian access has been provided to connect the Transportation Center to surrounding development.

Should the redevelopment of Land Unit O be appropriate for a cultural facility, a shared parking arrangement utilizing the parking garage at the Joe Alexander Transportation Center should be considered.

South of the Parkway immediately west of the proposed Joe Alexander Transportation Center, Parcel 90-2 ((1)) 60 is planned for public facilities. A fifty-foot buffer with earth berms with planting and fencing is recommended for the northern edge of the property to buffer planned residential uses for the property immediately to the north.

The Joe Alexander Transportation Center facilities have been designed so that pedestrian and bicycle access from the Springfield Forest subdivision to the Metrorail station platform is provided over a safe corridor.

Land Unit O

Land Unit O is located south of the Franconia-Springfield Parkway, south and west of the Long Branch Stream Valley, and west of the CSX Railroad right-of-way. The land unit is about 93 acres in size, and contains residential and hotel uses as well as the federally owned GSA-Parr Warehouse. A railroad spur and the Long Branch of Accotink Creek separate this land unit from the Joe Alexander Transportation Center (Land Unit N). Land Unit O is planned for industrial use up to .50 FAR to recognize existing uses and to minimize traffic generation in an area with limited transportation capacity. If in the future, the GSA-Parr Warehouse site is declared surplus or otherwise proposed for private redevelopment, redevelopment plans should be supported only if they are consistent with the County's goals and the Comprehensive Plan.

Land Unit O has extreme traffic/transportation constraints. To accommodate development under the current Plan, Loisdale Road should be improved to a 4-lane section between Springfield Center Drive and Metropolitan Center Drive. Any redevelopment of Land Unit O will be constrained by the need to mitigate/minimize both daily and peak hour trips.

The following options address Land Unit O as separate development areas. However, any development or redevelopment in these areas should be planned and designed with reference to a coordinated and integrated plan for all of Land Unit O.

Options for Northern Portion of Land Unit O

The following land uses and intensities are recommended for the northern portion of Land Unit O at the optional level:

- Parcels 90-2 ((1)) 56 and 59B are planned for up to 377 residential units and a 115,000 square feet hotel to reflect approved development;

- Parcels 90-2 ((1)) 58A pt., 58B and 59A pt. constitute an area of approximately 10 acres located southwest of the Metro property. This area is planned for up to 475,000 square feet of office use. As an alternative, a combination of up to 360,000 square feet of office use and up to 160,000 square feet of hotel use may be appropriate. The office/hotel uses may include support retail use to serve residents and workers at the site.

In addition to the addressing the recommendations provided in the transportation section, development of Land Unit O should provide a pedestrian and vehicular connection to the Joe Alexander Transportation Center. The vehicular connection should, at a minimum, accommodate shuttle bus service to the Transportation Center.

Options for GSA-Parr Warehouse Area

The GSA-Parr Warehouse is a federally owned facility that encompasses approximately 1.34 million square feet of warehouse space on approximately 70 acres. Like all of Land Unit D, the site is constrained by poor access and roadway capacity. Because the GSA-Parr Warehouse is a publicly owned property, there is an opportunity for the federal government and the County to work together to facilitate the implementation of the County's Comprehensive Plan.

The Plan envisions a mix of uses that may include biotech, office and/or an entertainment/ conference center/hotel complex. These uses would complement the Northern Virginia Community College/INOVA medical center located in Land Unit P, and the approved residential and hotel uses to the north. A major benefit is the reduction in transportation impact that is expected by these types of uses.

As a first option, the GSA-Parr Warehouse area is planned for mixed-use development as follows:

- Up to 1,090,000 square feet of light industrial/research and development use;
- Up to 160,000 square feet for a conference center;
- Up to 40,000 square feet of office and support retail use. Support retail is defined as those goods and services that serve residents and workers at the site.

Additional office use may be substituted for light industrial/research and development use at a ratio of 1 square foot of office use per 1.35 square feet industrial use, to a maximum of 100,000 square of additional office use.

As a second option, an entertainment/conference center/hotel complex may be appropriate as follows:

- An entertainment center (such as performing arts facility and/or cultural center) with a capacity of up to 6500 patrons;
- Up to 160,000 square feet for a conference center;
- Up to 40,000 square feet of office and support retail uses. Support retail is defined as those goods and services that serve residents and workers at the site;

- Up to 565,000 square feet of hotel use;
- A detailed design plan is provided that demonstrates architectural excellence; and,
- Open space and pedestrian amenities are provided for visitors and employees and designed as an integral part of each type of development.

Land Unit P

Land Unit P is located south of the GSA-Parr Warehouse and north of the Loisdale Estates subdivision. It is about 57 acres in size and contains the site of the Northern Virginia Community College and Springfield Center Industrial Park.

Land Unit P is planned for light industrial use up to .35 FAR. As an option, biotech/research and development uses up to .50 FAR may be appropriate to complement the VNCC/INOVA medical center. For parcels 90-2((1))57E, 57F, 57G, and 57H, office use up to .50 FAR may also be considered. Any development under this option must demonstrate that it will generate less peak hour traffic than the planned baseline use to minimize traffic generation in an area with limited transportation capacity. Development should provide a landscaped buffer of at least 75 feet in width along the Loisdale Estates subdivision boundary.

As an option, parcels 90-2((1))58D and 90-4((1))11B are planned for office use up to 2.0 FAR, with support retail use. Redevelopment should include, at a minimum, the following elements:

- Accommodation of the extension of Frontier Drive to Springfield Center Drive and contributions to offsite improvements to Loisdale Road;
- Provision of a grid street system that accommodates walking within the site and to the Joe Alexander Transportation Center;
- Implementation of an effective transportation demand management (TDM) program to reduce auto travel to the area;
- Provision of shuttle service to the Joe Alexander Transportation Center and/or other destinations in the nearby area until such time that a circulator, described in the Area-wide guidance, is operational. At such time, redevelopment should participate in the circulator's management and operation. Options for development are feasible only if the private sector contributes a proportional share of transportation improvements (road fund) and/or funding to meet the transportation needs of the area;
- Provision of structured parking;
- Provision of high-quality architecture and pedestrian focused site design, which should include street oriented building forms, a maximum building height of 150 feet, and mitigation of visual impacts of structured parking;
- Buildings should be designed to accommodate telecommunications antennas and equipment cabinets in a way that is compatible with the building's architecture and conceals the antennas and equipment from surrounding properties and roadways by

flush mounting or screening antennas and concealing related equipment behind screen walls or building features;

- Provision of integrated pedestrian and bicycle systems with features such as covered and secure bicycle storage facilities, walkways, trails and sidewalks, amenities such as street trees, benches, bus shelters, and adequate lighting;

- Provision of environmental elements into the design, including buildings designed to meet the criteria for LEED Silver green building certification;

- Provision of on-site recreational amenities for employees;

- Mitigation of the impacts on parks and recreation per policies contained in Objective 6 of the Parks and Recreation section of the Policy Plan; and

- Adherence to the adopted Transit Oriented Development Guidelines contained in Appendix 11 of the Land Use section of the Policy Plan.

Transportation

In order to mitigate transportation issues the following conditions should be addressed for any development proposed for Land Units O and P:

- Improve Loisdale Road to a 4 lane section between Metropolitan Center Drive and Springfield Center Drive;

- Provide two points of access to Loisdale Road and an interconnected 4 lane divided section to serve the site;

- Phase buildout of the site conditioned on the provision of additional access via a road connection to/from the Joe Alexander Transportation Center or Franconia-Springfield Parkway. Incorporate pedestrian access into the roadway connection;

- Coordinate and/ or integrate site access to the extent possible with the facilities provided at the Joe Alexander Transportation Center;

- Mitigate through an aggressive transportation demand management system emphasizing transit alternatives to vehicular use that achieves at a minimum, 15% usage of public transportation for commuting trips to and from the site; and

- Establish a Transportation Management Association (TMA) to implement such measures.

Land Unit Q

Land Unit Q contains the Springfield Forest Subdivision and is planned for single-family residential use as shown on the Plan Map. Infill development within this land unit should be of a compatible use, type, and density and be in accordance with the Plan Map. The woods surrounding the Springfield Forest, New Charleston, and Greenwood subdivisions protect the neighborhood from the visual intrusion of Springfield Mall (future town center), the Metrorail station and the Franconia-Springfield Parkway, and this buffer is an important amenity to retain.

Land Unit R

Land Unit R consists of the Springfield Forest Park and the Greenwood townhouse development. They are situated on the west side of the CSX Railroad, east of Springfield Forest, and south of Franconia Road. The residential portion is planned and developed at 5-8 dwelling units per acre. A 100 foot buffer should be maintained. A shuttle bus and shuttle service should connect the residences in Land Unit R and the Joe Alexander Transportation Center.

APPENDIX

Franconia-Springfield Area Urban Design & Streetscape Guidance

The following urban design and streetscape guidance is based upon the recommendations of the *Springfield Connectivity Study Transportation and Land Use Evaluation* (Part 1) and *Framework Plans and Street Typologies* (Part 2) report, published in August 2008. The guidance illustrates the conceptual-level framework plans for redevelopment, the streetscape cross-sections, the intersection improvements plans, and the wayfinding and signage recommendations.

Framework Plans

The proposed Framework Plans as shown on Figures 9-11 illustrate conceptual redevelopment plans for the Springfield Mall area, the General Services Administration Parr warehouse area, and the Springfield CBC area. The plans depict improvements to the urban realm that support improved connectivity relative to future redevelopment and development in each of the quadrants. The plans show the urban design concepts for the future vision and approved redevelopment proposals.

The Framework Plans include recommendations for the creation of "pedestrian priority corridors" (streets that provide safe, convenient and attractive pedestrian access through the study area), as well "address streets," (primary corridors on which major uses are fronted and encourage more activity than thru-movement), key pedestrian and vehicular intersections, gateways, and existing and planned pedestrian connections. Major pedestrian flows are shown with arrows. "Animated streets" are those on which pedestrian-oriented uses, such as ground-floor retail and cafés, are located. Plazas and focal points of placemaking also are identified, and the development pattern in core areas has been generalized to show building mass, and openings between buildings at the conceptual level.

A hierarchy of streets is identified for the Franconia-Springfield Area to support the Framework Plans. The streets are classified as major and minor arterials, collectors, and local streets. The only major arterial in the area is the Franconia-Springfield Parkway and is not planned to change. The minor arterials, collectors, and local streets are planned to accommodate a complete streets policy as described in the Area-wide text. The streetscape cross-sections and intersections plans follow the Framework Plans.

APPENDIX

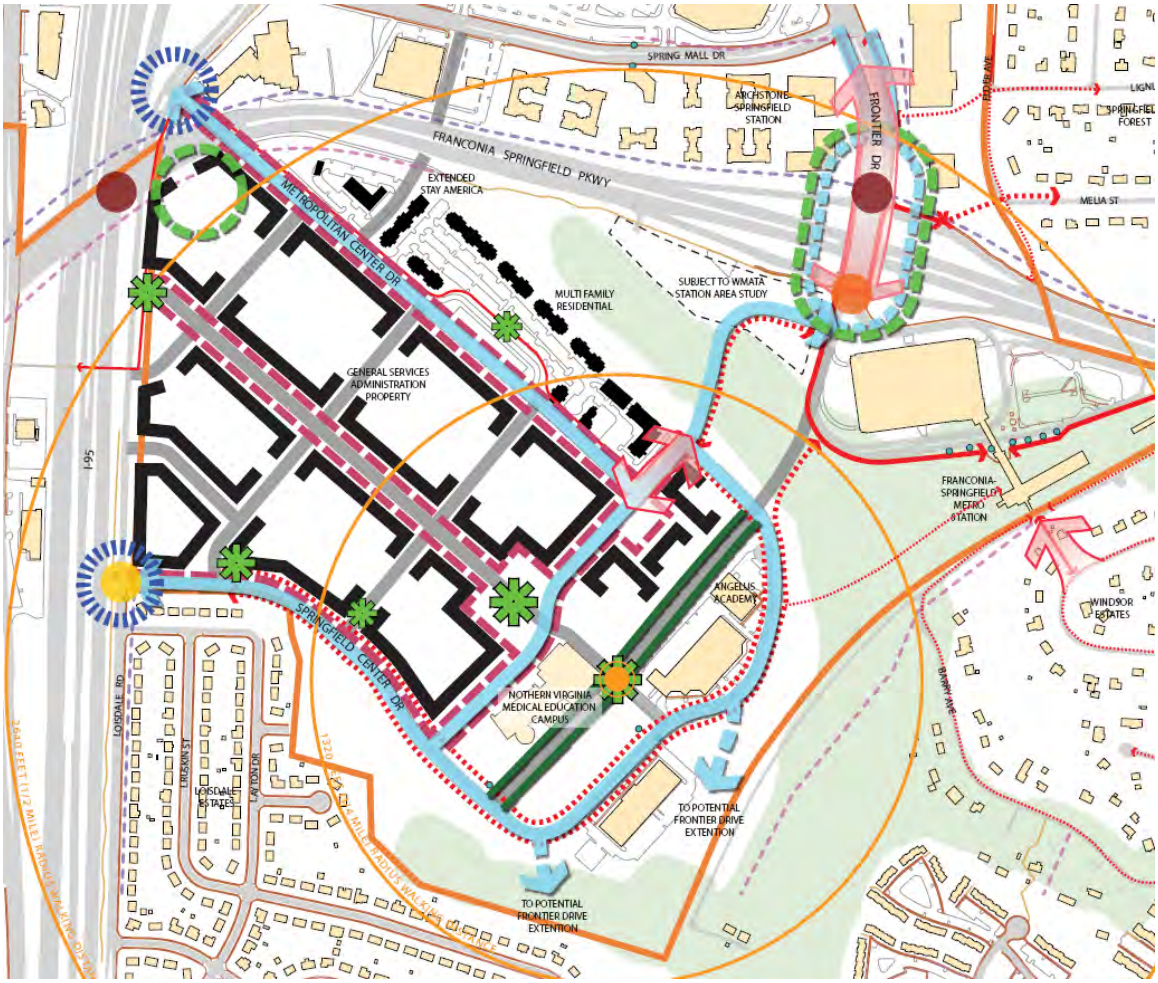
LEGEND

- 1/4 MILE CENTER POINT
- HEAVY VOLUME TRAFFIC INTERSECTION
- MODERATE VOLUME TRAFFIC INTERSECTION
- LOWER VOLUME TRAFFIC INTERSECTION
- GATEWAYS
- PRIORITY PEDESTRIAN CORRIDOR *(Streets that provide safe, convenient and attractive pedestrian access)*
- ADDRESS STREETS *(Primary corridors with fronted major uses that encourage more activity than thru-movement)*
- ANIMATED STREETS *(Streets that have pedestrian-oriented uses, such as ground-floor retail and cafés)*
- PEDESTRIAN INTERSECTION *(Intersections that provide safe and convenient pedestrian access)*
- VEHICULAR INTERSECTION *(Intersections that are more vehicular oriented)*
- FOCAL POINT OF PLACE MAKING
- EXISTING PEDESTRIAN CONNECTION
- POTENTIAL PEDESTRIAN CONNECTION
- MAJOR PEDESTRIAN FLOW
- PROPOSED NEW ROADS
- EXISTING ROADS
- SIDEWALK
- EXISTING TRAIL
- PLANNED MINOR PAVED TRAIL
- PLANNED MAJOR PAVED TRAIL
- BUS STOPS
- COMMUTER FACILITIES

*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

SPRINGFIELD MALL FRAMEWORK PLAN **FIGURE 9**

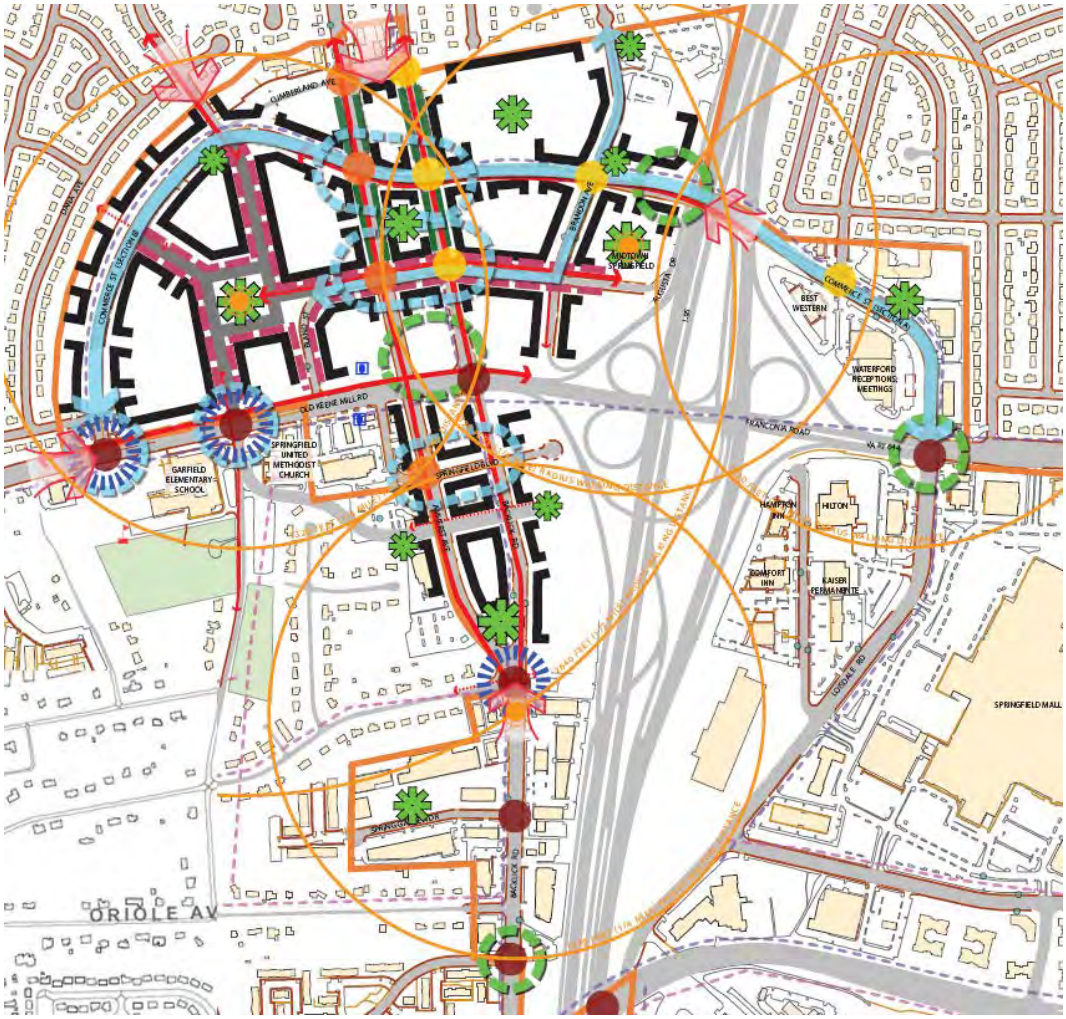
APPENDIX



*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

GENERAL SERVICES ADMINISTRATION PARR WAREHOUSE AREA FRAMEWORK PLAN **FIGURE 10**

APPENDIX



*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

SPRINGFIELD COMMUNITY BUSINESS CENTER FRAMEWORK PLAN **FIGURE 11**

APPENDIX

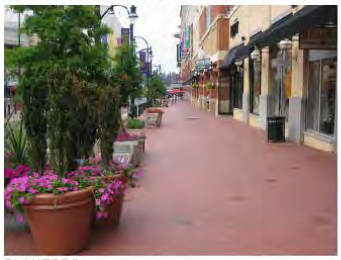
General Streetscape and Intersection Guidance

The following guidelines should create uniform application of streetscape and intersection amenities and reinforce the hierarchy of streets and places. The images in the following pages illustrate examples of treatment for different street elements.

STREETSCAPE ELEMENTS

STREET TREES WITH PLANTING BEDS

TREE GRATES



PLANTERS

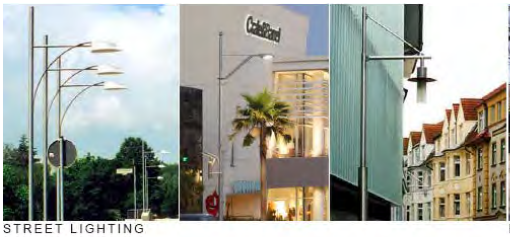
MEDIAN

PARKING LOT

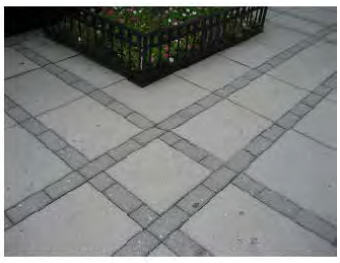
The design of new street elements should complement the existing features, in order to create a consistent theme and sense of the place. Size and scale form significant parts of the visual aspect of a street. Simple, well designed structures add character to a street. Signage, public information displays, and other wayfinding elements, such as banners, street maps, street signs, directional signs, etc., should be designed to coordinate with the guidelines.

Street trees, planter boxes, and planting strips should form barriers between vehicle and pedestrian traffic and provide shade to pedestrians. Street trees should be planted in the landscape and amenity zones on all streets where possible. Continuous planting strips will provide maximum soil area for roots to spread and water and air to penetrate. Species that are adaptable with urban street constrains should be used. Planting beds with perennials or groundcovers can be used where the sidewalk is wide. Tree grates should be used where there is heavy pedestrian traffic. Planters can be used at curb extensions. Street medians should be planted with trees and lawn or groundcovers. Surface parking lots should be avoided or located in the rear of buildings when necessary. In this case, surface parking lots should be landscaped and provide shade for parked cars.

APPENDIX



STREET LIGHTING BUS SHELTER



PAVING

The style of street furnishings should be consistently applied to reflect the character of the Franconia-Springfield Area. Furnishings should be low-maintenance, vandal-resistant, and easily replaceable. Street elements like benches, trash receptacle, newspapers stands, light fixtures, etc., can add amenity to the user, but over-use can clutter a street. Benches, trash receptacles and bike racks could be best placed at curb extension areas, amenity zones along sidewalks or other areas where there is sufficient room for them without interfering with pedestrian traffic. These items should not conflict with the opening of doors for parallel parked cars.

Street lights should provide light, but not detract from the architecture and lights of the adjacent businesses. Pedestrian-scale lights should be used in more intimate applications on smaller streets, open spaces, etc. Bus shelters should complement the style of the other amenities and street furniture. Shelters should be located adjacent to paved sidewalks in locations that will not impede pedestrian circulation. Seating and signs with bus route maps and schedules should be provided. The paving should use materials and patterns, consistent with the style of other furnishings. Different materials and patterns may be used to define different zones and uses.

INTERSECTION DESIGN ELEMENTS

Intersections are the location of vehicular and pedestrian interaction. Crosswalks serve as visual and physical connecting elements that reinforce the pedestrian system. Some intersections may be prioritized for vehicular movement and others to maximize pedestrian safety and connectivity. State of the art signalization, adequately marked crosswalks, and pedestrian refuges are just a few facilities to be considered. Variations of paving types can also aid in differentiating between pedestrian, bike, bus and other vehicles.

Specific design elements to consider when designing an intersection are listed below. The importance of one element over another element varies depending on the types of streets intersecting with one another and the modal priority of the intersection.

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Design/Operations Element	Purpose / Benefit	Design Considerations
Crosswalks: The crosswalk generally refers to the most direct pedestrian pathway across a given leg of an intersection, whether marked or unmarked.	• Crosswalks clearly define the pedestrian space, enhancing safety and comfort for all users. • Crosswalks are an important part of the pedestrian network – they form a continuation of the pedestrian's travel path and enhance pedestrian connectivity. • Crosswalks support the overall transportation system because other users, such as motorists, bicyclists and transit users will be pedestrians at some point during their trip and may need to cross the street.	• Can be installed at intersections or designated mid-block crossing locations. • The crosswalk location should be highly visible, so the pedestrian can see and be seen by traffic while crossing. • Signalized intersections will typically have crosswalks on all approaches. • Installation at unsignalized intersections and mid-block locations may be affected by a number of factors, including: street classification, width of street, traffic speed and volume, use of traffic control devices such as stop signs, and surrounding land uses. • Pedestrian crossing distance should be minimized; on some streets this may require the use of other street design elements (see Curb Extension, Pedestrian Refuge).
Median: A raised barrier that separates traffic flows. Generally used to control access and reduce vehicular turning movements.	• Separates opposing traffic flows, reducing or eliminating vehicular conflicts. • Can be used for access management, by restricting turning movements into driveways or side streets. • If properly designed, can provide a pedestrian and bicycle refuge on wider streets. • If properly designed, can provide a landscaped element to the streetscape.	• Design and installation of a median will vary according to street type and right-of-way width. • Generally, if a median is used, it should be wide enough for landscaping and pedestrian refuge. • In the absence of other design elements such as landscaping, street trees, and onstreet parking, a median may encourage higher traffic speeds. This unintended consequence should be carefully considered when designing streets in residential areas or where there are likely to be many pedestrians. • Spacing between median openings depends on the street type and land use context. In general, spacing should be longer in areas with higher speeds, fewer driveways, and larger setbacks. Spacing should be more frequent in areas where smaller block lengths and more access is desired.

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Design/Operations Element	Purpose / Benefit	Design Considerations
Pedestrian Refuge: A protected area between traffic lanes that separates a pedestrian crossing into segments and allows pedestrians to wait safely for gaps in traffic (also called a "median refuge," ""refuge island" or "pedestrian refuge island").	• Reduces pedestrian/ vehicular conflict. • Shortens the distance a pedestrian must cross at one time. • Allows the pedestrian to consider traffic coming from only one direction at a time, potentially reducing confusion and increasing crossing opportunities. • Can reduce the time a pedestrian must wait to cross by increasing the number of gaps in traffic, since the pedestrian need only cross traffic coming from one direction.	• Typically, would be provided on wider, multi-lane roads, to reduce the effective crossing width. • Should be signed and illuminated to identify purpose. • Should be a minimum of 6' wide to provide sufficient space for refuge. Wider is preferable, particularly on higher-speed streets or in areas where there may be many pedestrians crossing at one time. • Might be used at signalized or unsignalized crosswalks, intersections, and midblock crossings. • Landscaping on pedestrian refuges should not impede visibility of pedestrians or drivers. • The crosswalk should pass through the refuge at grade, for accessibility by all travelers. • Should typically include some sort of vertical element, such as landscaping or signs, so that drivers can clearly see and avoid running into the refuge. • A key trade-off when providing pedestrian refuge islands is the additional width required. The design team should carefully consider whether the pedestrian and the adjacent land uses are better served by a narrower crossing or by the addition of the refuge. For intersections that area already very wide, with multiple turning movements, the addition of pedestrian refuges may be the only way to improve the pedestrian crossing environment.

APPENDIX

Design/Operations Element	Purpose / Benefit	Design Considerations
Curb Extension: A feature that extends from the sidewalk into the pavement at an intersection or at a mid-block crossing (also sometimes called a "curb bulb," "neckdown" or "bulbout"). A curb extension can be hardscape, landscaped, or a mix of both.	• Reduces street width both physically and visually, thereby shortening pedestrian crossing distance at crosswalks and potentially helping to reduce traffic speeds. • Provides increased visibility for pedestrians and motorists. • Moves parked vehicles away from street corners, improving visibility.	• Should be used whenever possible in pedestrian- oriented areas. • Should also be used for transit stops, where full-time, on-street parking exists. • Should only be used where there is a permanent parking lane. • Should not encroach into the bike lane. • Street furniture or plants on the curb extension should not impede motorist or pedestrian sightlines. • Should be designed to accommodate both large an small vehicles; tight curb radii can accommodate low speed turning movements by large vehicles if the intersection is designed properly.

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Design/Operations Element	Purpose / Benefit	Design Considerations
Curb Radius: The curved section of the curb connecting the curb lines of two streets. The curb radius measurement is taken from the back of the curb.	• Defines the space for (and helps direct) vehicle turning movements at intersections. • The curb radius dimension can affect ease and speeds of vehicular turning movements.	• Radii should be minimized, to allow the necessary dimension for traffic, while minimizing impacts on pedestrians, cyclists, and the adjacent land uses. • Smaller curb radii narrow the overall dimensions of the intersection, shortening pedestrian crossing distance and reducing right-of-way requirements. • A smaller curb radius provides a more visible pedestrian waiting space at the intersection. • Smaller radii help reduce the turning speed of vehicles. • A smaller radius allows for more flexibility in placement of curb ramps. With a larger radius, the ramp(s) may need to be located in the radius or will be too far from the corner for good visibility. • Larger radii may be required on streets that carry a high percentage of truck traffic because they allow easier turning movements for large vehicles. • The presence of a bike lane or parking lane creates an “effective radius” that allows a smaller curb radius than might otherwise be required for some motor vehicles, because they provide extra maneuvering space for the turning vehicles.

APPENDIX

Design/Operations Element	Purpose / Benefit	Design Considerations
Corner Island: A raised triangular or semi-triangular island used to direct traffic in a particular direction, described herein to separate a right turn lane from the through lanes at an intersection. Also referred to as a "Channelization Island."	• Helps to separate the turning traffic from the through traffic, potentially enhancing flow. • If properly designed, a corner island can be used for pedestrian refuge at large intersections.	• Consider the use of well- designed corner islands to "break-up" the distance and conflicting turning movements that must be traversed by pedestrians at wide intersections. • The safest design for pedestrians is when the corner island is designed to bring the turn lane into the receiving lane at an angle, rather than as a sweeping curve. Otherwise, the turning driver is likely to be looking over his/her left shoulder at oncoming traffic, rather than at pedestrians trying to cross the turn lane. • The use of corner islands (and their design) should be based upon the intersection volume and the surrounding land use and design characteristics. The potential "pedestrian refuge" benefit should also be weighed against the additional right-of-way requirements and overall dimensions of the intersection.
Leading Pedestrian Interval: Used at signalized intersections, the Leading Pedestrian Interval (LPI) is a signal phase that provides a pedestrian crossing signal a few seconds before the green signal for vehicles.	• Allows pedestrians to enter the crosswalk ahead of turning vehicles, thereby establishing their right-of-way. • Improves visibility of pedestrians by providing them with a "head start" before vehicles are allowed to move. • Reduces potential conflicts with turning vehicles.	• LPI should typically have an equivalent audible signal for vision-impaired pedestrians. • They are often included where there are large numbers of pedestrians crossing the street, for example, but are also important where there are fewer pedestrians. This is because is because it is sometimes easier for large groups of pedestrians to "take" their right-of-way, than for a lone pedestrian to do so. Lone pedestrians area also less visible to motorists.

APPENDIX

Design/Operations Element	Purpose / Benefit	Design Considerations
Street Lighting: Refers to the illumination of a street's travel lanes. Other portions of the street right-of-way may also be illuminated by the street lighting and/or by pedestrian-scale lighting, which specifically illuminates the sidewalk or other pedestrian areas.	• Street lighting enhances safety for all travelers, by illuminating hazards, curves, and other travelers in the street. • Lighting can also improve safety and security around buildings and in parking areas. This may be best accomplished by a mix of street and pedestrian-scale lighting, depending on the context.	• The optimal type and number of streetlights depends on street classification, configuration, and adjacent land uses. • Street lighting that reduces glare or unnecessary uplighting should be considered to ease localized light pollution. Cobraheads should be avoided. • Consider whether pedestrian-scale lighting can be used to illuminate or define a curve or other feature and, therefore, to reduce the need for streetlights in some spots. • Areas of high pedestrian activity or primary pedestrian routes should have pedestrian-scale lighting, which is specifically intended to illuminate the sidewalk, as opposed to the travelway. For proper illumination and to avoid glare, pedestrian-scale lighting should typically be no more than 12' in height. Even in parking areas, which may need street lighting, pedestrian scale lighting can better define and enhance the pedestrian "space."

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Design/Operations Element	Purpose / Benefit	Design Considerations
Bicycle Lane: The portion of the street specifically designated for the use of bicyclists by pavement markings or other means of delineation on the street.	• Provides a clearly marked area of the street for bicycle travel and separates cyclists from motor vehicles. • Help reduce conflicts between motor vehicles and bicycles. • Provides an additional buffer between pedestrians and motor vehicles. • Gives motorists more confidence about passing cyclists, because they know where the cyclists' "space" is, and they know that the cyclist knows where his/her space is, as well. The uncertainty about passing in the absence of bike lanes can create unnecessary back ups or dangerous passing conditions.	• Right-of-way width, traffic speed and volume, signalization, turn lanes and parking. • A marked bicycle lane should be a minimum of four feet wide (not including gutter), with 5' generally preferred. • Wider lanes are preferred next to on-street parking (to avoid opening car doors) and on steep hills (to allow room for weaving caused by pedaling uphill). • If there is a right turn lane at an intersection, the bicycle lane should be placed to the left of the right turn lane, to clearly separate the bicycle's through movement from the motor vehicles' turning movements.
Bike Box: A marked, designated area at a signalized intersection that places bicyclists at the front of the traffic queue when the signal is red.	• Puts bicyclists at the head of the queue, allowing them to enter and clear an intersection before motor vehicles. • Bicyclists are more visible to motorists at the front of the queue. • Provides a storage area for bikes at an intersection where there is heavy bicycle traffic and left turn movements. • Stores vehicles further back from the crosswalk, providing a better crossing environment for pedestrians.	• Should only be used at signalized intersections where there is no right turn on red. • May require additional signage to inform motorists and cyclists how to correctly use the bike box. • Must be accessed via a bike lane, which allows cyclists to safely move ahead of motor vehicles in the intersection.

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Design/Operations Element	Purpose / Benefit	Design Considerations
Bicycle Detector: A device at a signalized intersection used to detect bicycle for traffic actuated signals.	• Activates the traffic signal in the absence of motor vehicle traffic, thereby keeping the cyclist form having to wait for another vehicle to "trip" the signal or, after a prolonged wait, to run the signal.	• Detectors should be located in the bicyclists' expected path, whether the intersection includes bike lanes, a bike box, or a wide outside lane. • Bicycle detectors are most important on the less traveled leg of a signalized intersection, because the wait for another vehicle to "trip" the light will be longer. However, a strong case can be made for using detectors on all legs, as the time of day can make a difference even on the more traveled legs. • Markings on the roadway surface can be used to indicate the optimum location for bicycle detection.
Sight Distance: The length of roadway that is visible to the driver traveling on a street or approaching (or waiting to enter) an intersection. More generally, sight distance refers to the ability of motorists to see one another as they approach an intersection or enter a street.	• Increased sight distance improves safety for motorists, by providing visibility and increasing the amount of time to respond to other vehicles on or entering the street. • Increased sight distance for motorists entering the street allows the motorist to feel more comfortable and better judge "gaps" in the stream of approaching vehicles. • Adequate sight distance improves safety for pedestrians and cyclists by making them more visible to drivers and by allowing them to see approaching vehicles, as well.	• Sight distance regulations for motor vehicles may conflict with pedestrian friendly objectives such as the desire to have buildings close to the street, especially on Main Streets. • Sight distance des not need to be as great for motorists approaching a stop sign as it does for motorists approaching an uncontrolled intersection. • Motorists tend to feel more comfortable traveling at higher speeds when sight distances are very long. Increased safety related to provision of sight distance might, in some circumstances, actually increase speeds. This needs to be considered when designing for streets in different contexts, particularly where there are many pedestrians.

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Design/Operations Element	Purpose / Benefit	Design Considerations
Wide Outside Lane: An extra wide traffic lane that provides enough space for motor vehicles and bicycles to use the same lane (also called a shared lane). Typically used where there is not enough space for a separate, marked bicycle lane.	• Provides some increase in safety and comfort for both cyclists and motorists, in the absence of a bicycle lane (which is the preferred treatment for bicycle safety).	• Should be wide enough to allow a motor vehicle to pass a cyclist without crossing into the next lane (minimum 14' width). • Extra width is required if the wide-outside-lane is to be used with on-street parking (to reduce the risk to cyclists from opening car doors). • Wide outside lanes can also make motorists feel more comfortable speeding, so they should be used carefully. Marked bicycle lanes are the preferred option.

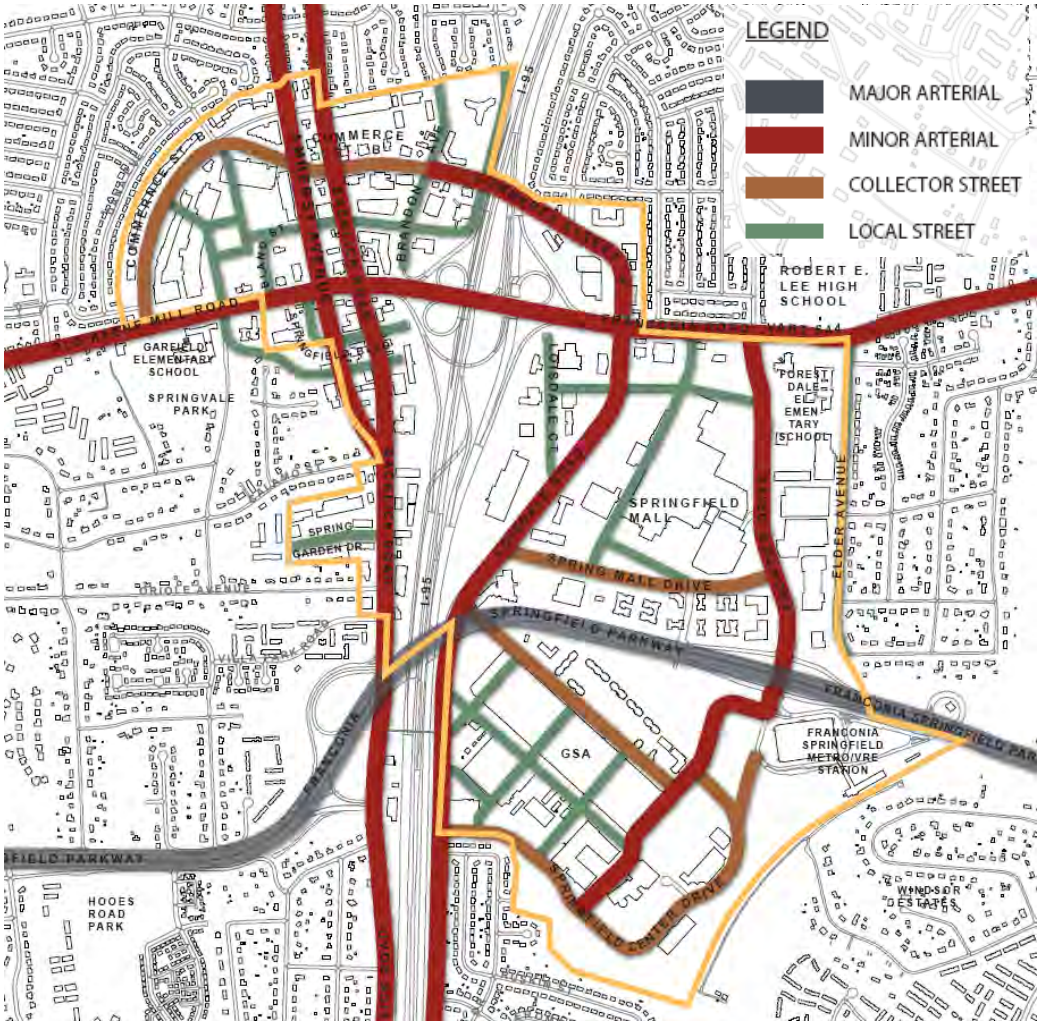
APPENDIX

Streetscape Cross-Sections and Intersection Improvement Plans

A typology of streets was developed to create a pattern of context sensitive road designs for the Franconia-Springfield Area, based on the need of the surrounding land use as shown on Figure 12. The roadway cross sections establish guidance to improve roads and facilitate active streetscapes. Each street type has particular characteristics in terms of traffic capacity, lane width, sidewalks, setbacks, building zone, landscape buffers and other elements.
Four different street types are identified:

- Major Arterial
- Minor Arterial
- Collector Street
- Local Street

Figure 12: Roadway Classification Map



*Specific road alignments and Placemaking Opportunity Sites in this conceptual illustration will be determined during rezoning and are not intended to affect by-right development.

APPENDIX

MAJOR ARTERIAL STREETS

Major arterial streets primarily carry traffic passing through the area. The primary function of these roadways is traffic carrying capacity, with provision of access to adjacent land a secondary function. The Franconia-Springfield Parkway is the only major arterial street in the Franconia-Springfield Area. Streetscape guidance is not provided for major arterial facilities.

MINOR ARTERIAL STREETS

Minor arterial streets act as local distributors and through streets, and carry significant volumes of vehicular traffic, as well as bicycle and pedestrian traffic. Minor arterials should have special purpose lighting that would serve to enhance the vehicular and pedestrian experience. Since minor arterials have high traffic volumes, safety measures such as traffic medians should be employed to serve as a pedestrian refuge. Minor arterials serve as front doors to retail and offices. Their status in Franconia-Springfield's road hierarchy should be reflected in the design of detail and use of materials. The minor arterial streets that identified in the Franconia-Springfield Area include Old Keene Mill Road, Amherst Avenue, Backlick Road, Loisdale Road, Commerce Street (east of Brandon Avenue), and Frontier Drive. Figures 13-16 illustrate the typical cross-sections and intersection design for minor arterial streets.

Figure 13: Typical Minor Arterial Cross-Section

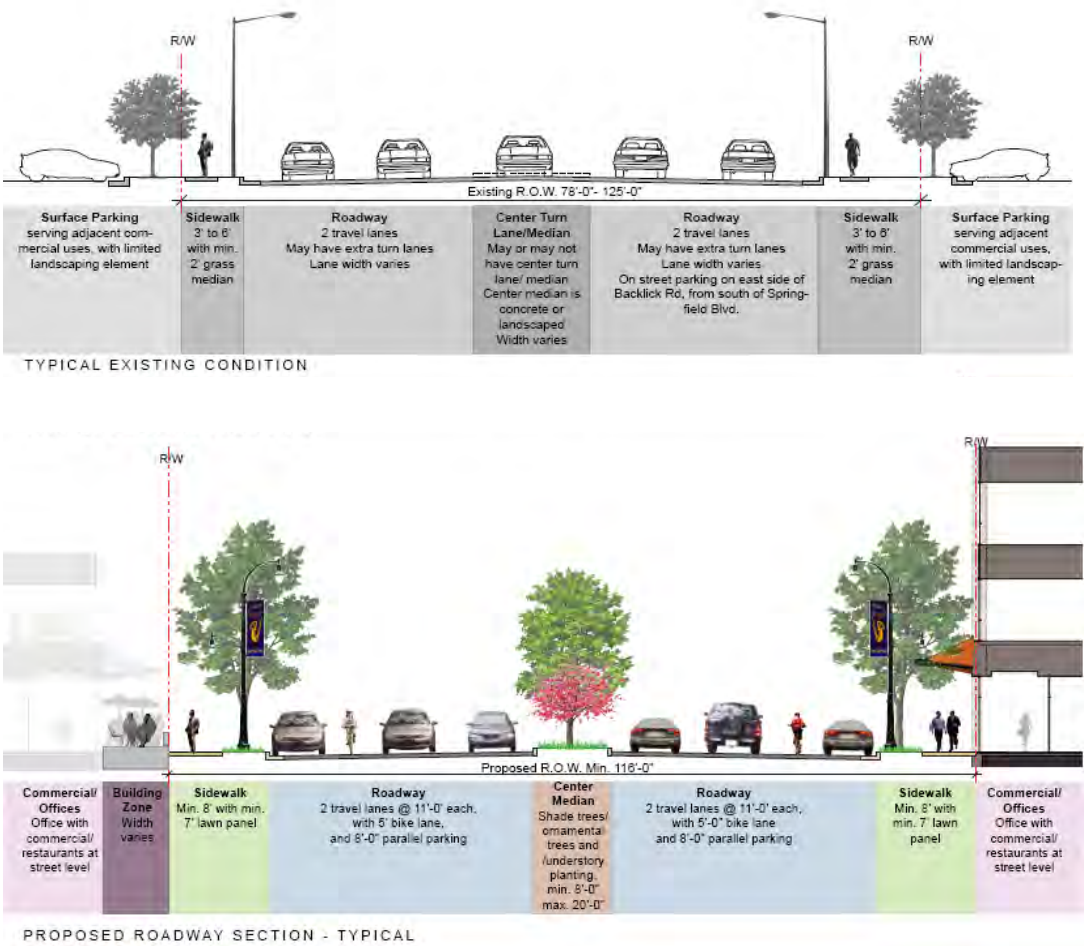


Figure 14: Minor Arterial half-section with on-street parking:

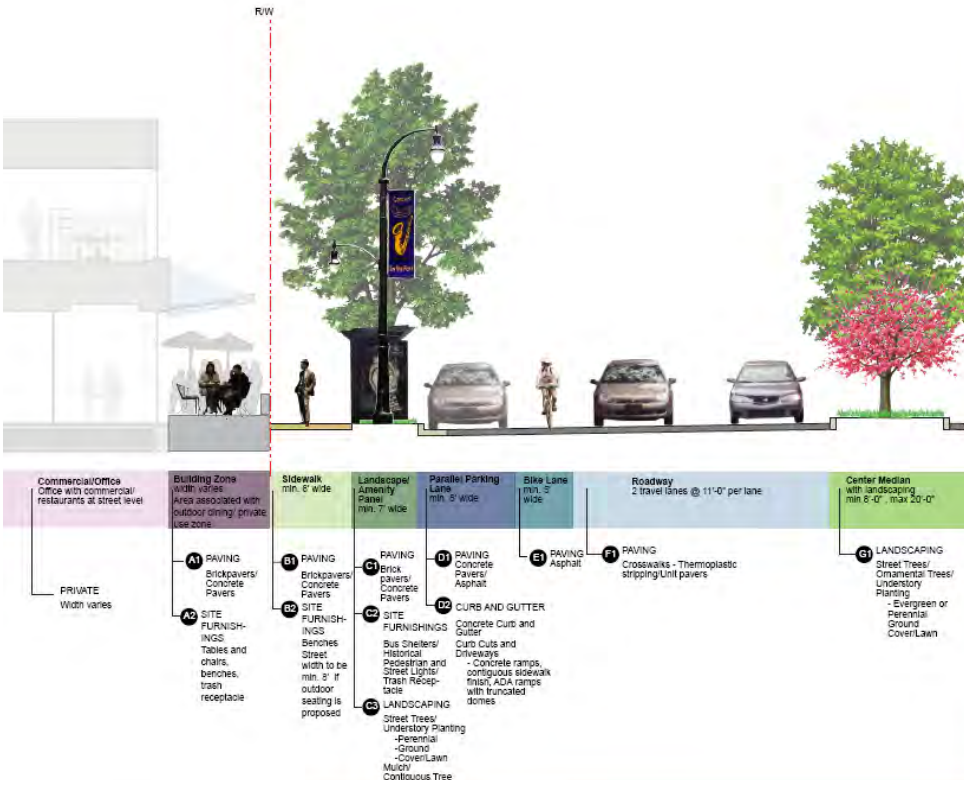


Figure 15: Minor Arterial half-section without on-street parking:

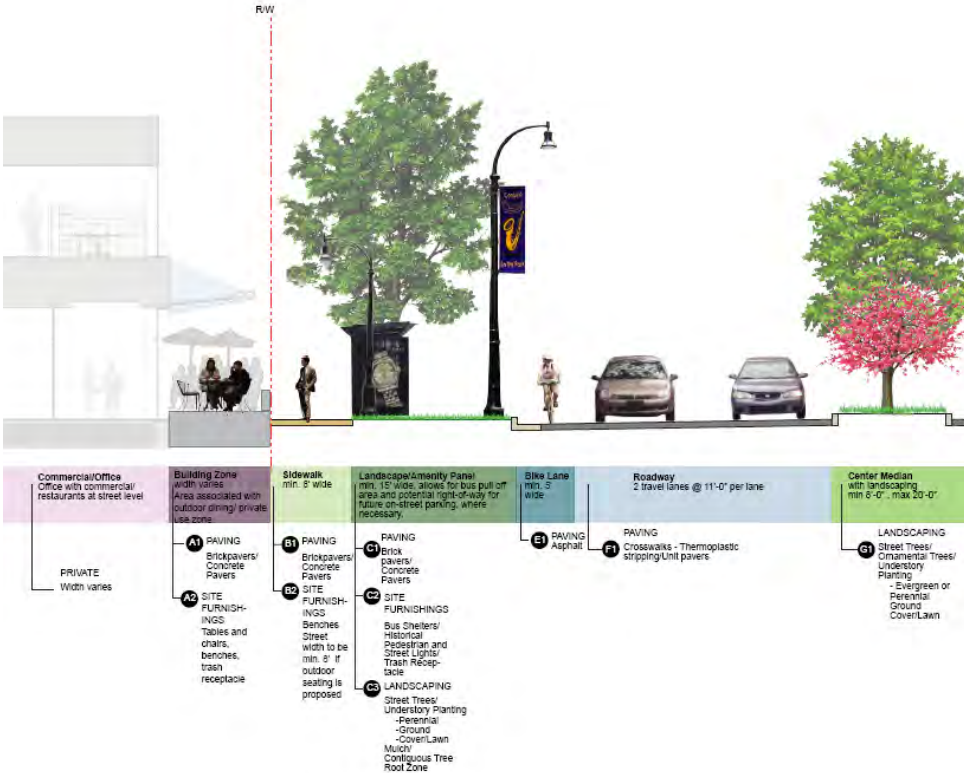
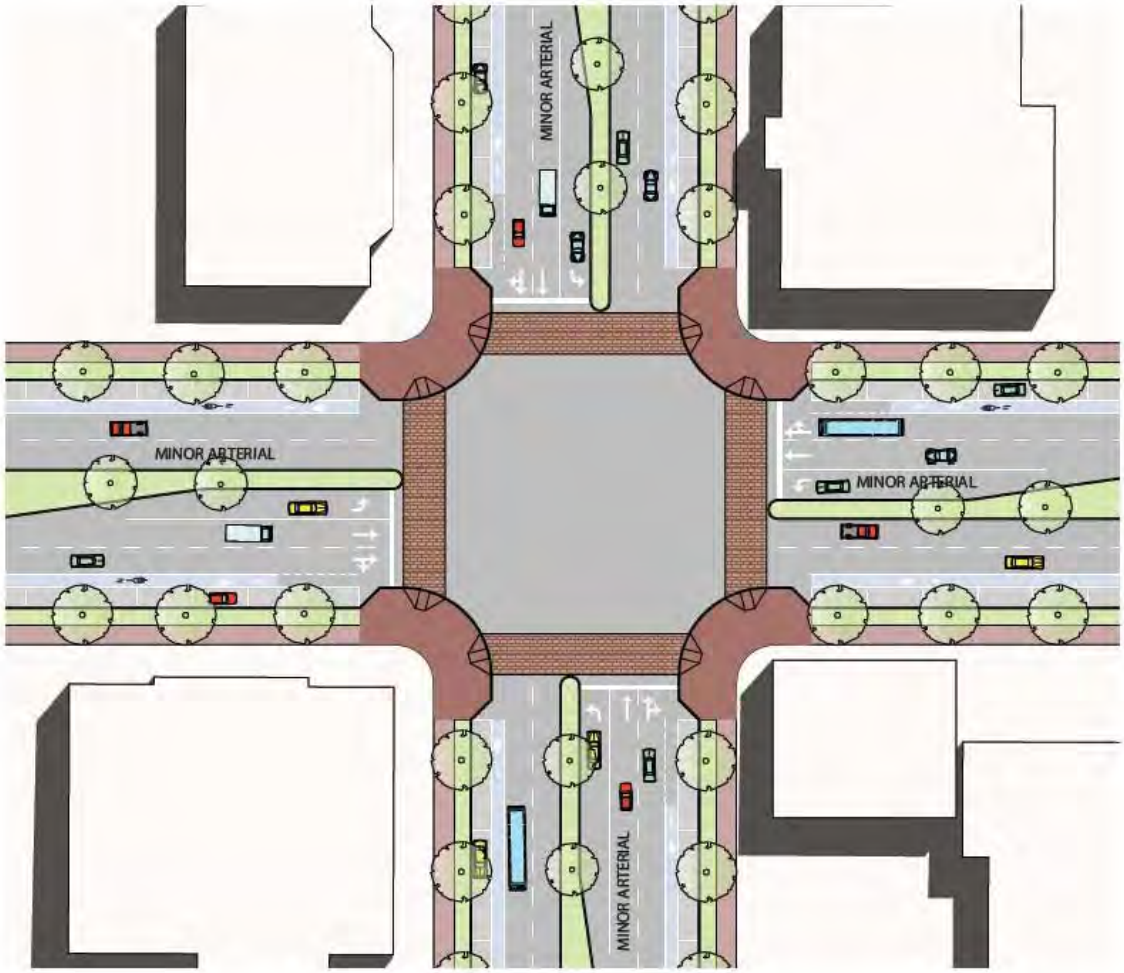


Figure 16: Typical Intersection Improvement Plan- Minor Arterial to Minor Arterial



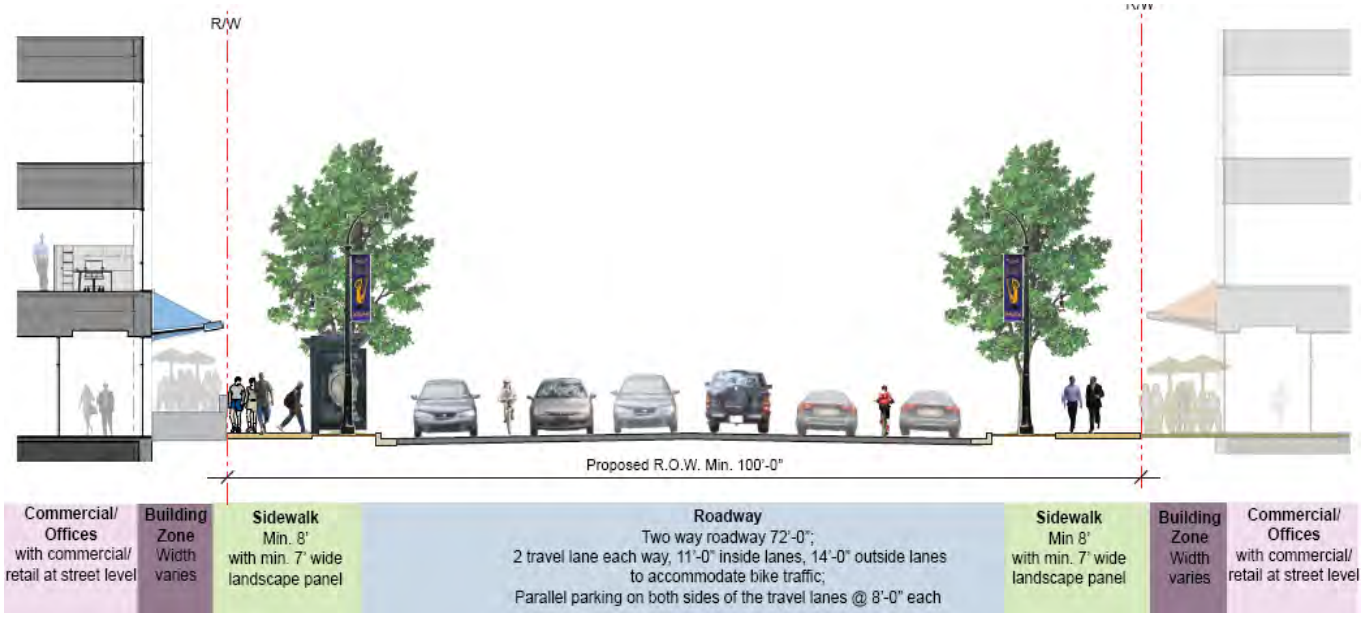
Design Elements	Minor Arterial
Median	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	In median
Turn Lanes	Left turn lane; Right turn lane combined with through lanes.
Through Lanes	2 to 3 lanes in each direction
Bike Facility	5' wide bike lanes
Parking	8' wide parking lanes
Curb Extensions	Yes, same width as parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.
Landscaping	Continuous landscaped strip

APPENDIX

COLLECTOR STREETS

Collector streets carry less vehicular traffic than minor arterials and act as local distributors from/to residential and commercial areas. They have to balance the scale between pedestrian and vehicular priority. The character of the collector streets can vary using different types of street trees, paving, lighting, and street furniture. Traffic calming measures may be employed in a collector street. Parallel parking is usually provided. Figure 17-19 illustrate typical cross-sections and intersection design for collector streets.

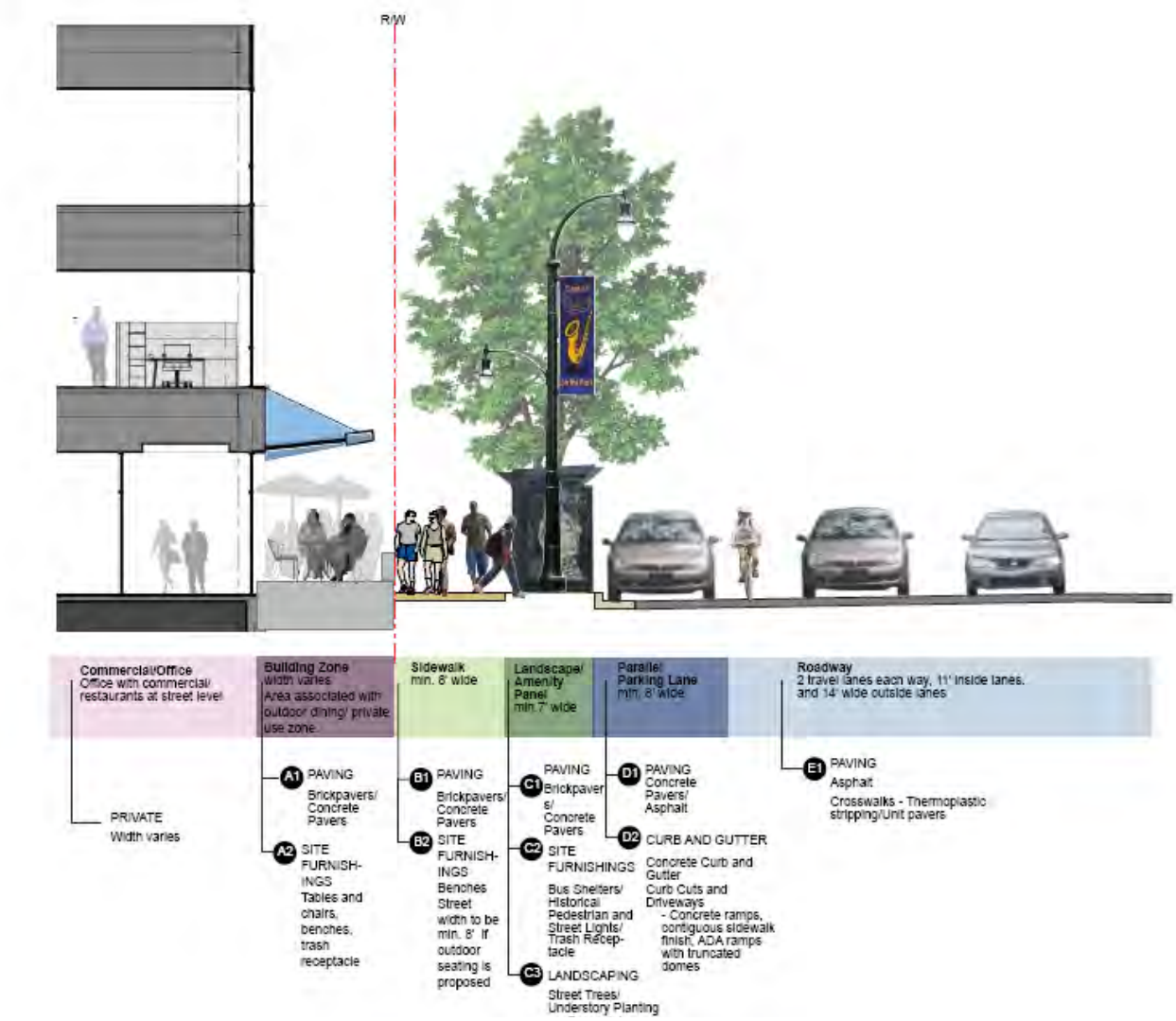
Figure 17: Typical Collector Street Cross-Section



APPENDIX

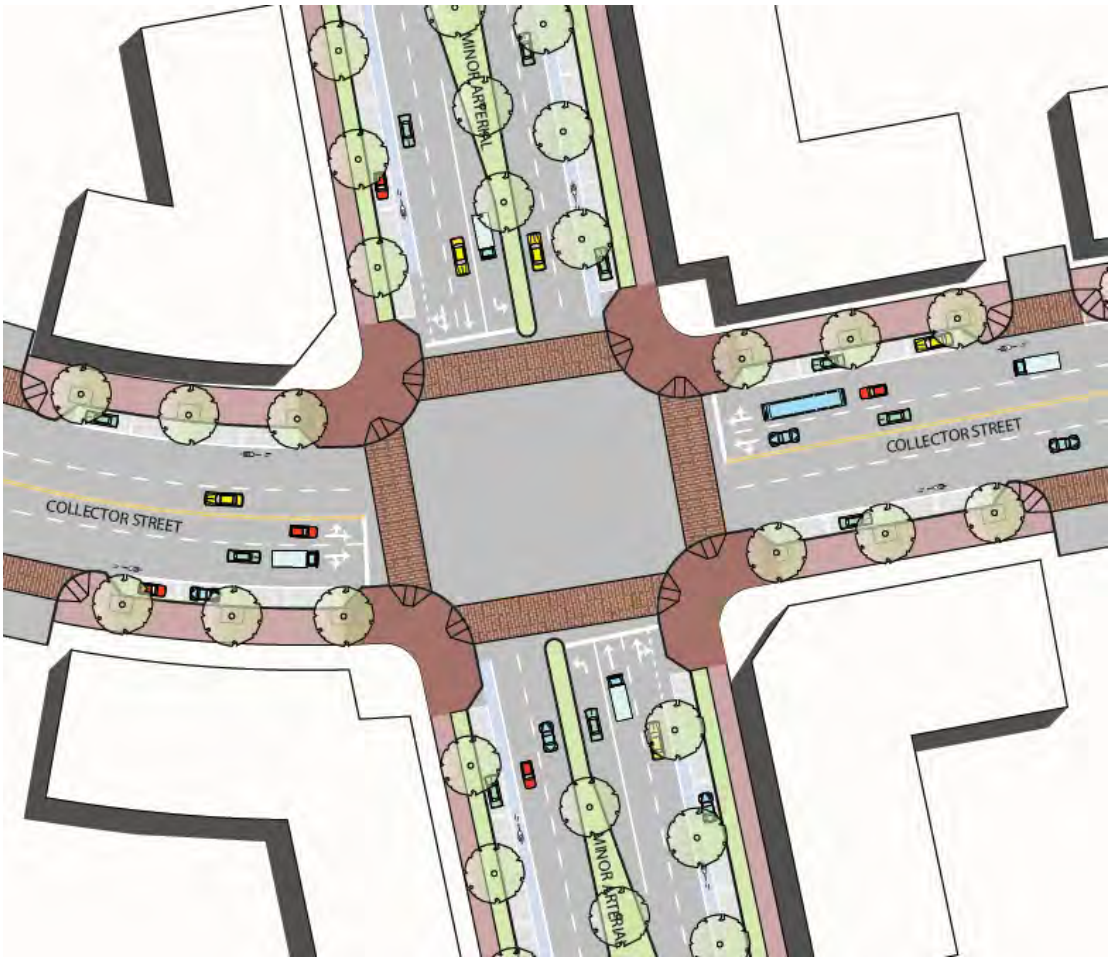
The collector streets that are identified in the Franconia-Springfield Area include Commerce Street from Old Keene Mill Road to Brandon Avenue, Spring Mall Road, Metropolitan Center Drive, and Springfield Center Drive.

Figure 18: Collector Street Half-section



APPENDIX

Figure 19: Typical Intersection Improvement Plan- Collector Street to Minor Arterial



Design Elements	Collector Street	Minor Arterial
Median	None	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	None	In median
Turn Lanes	Left and right turn lanes combined with through lanes.	Left turn lane; Right turn lane combined with through lanes, and cut out from median.
Through Lanes	2 lanes in each direction	2 to 3 lanes in each direction
Bike Facility	14' wide outside lanes to accommodate bike.	5' wide bike lanes
Parking	8' wide parking lanes	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	
Curb Extensions	Yes, same width as parking lane	Yes, same width as parking lane
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on streets with more pedestrian traffic, use continuous landscape strip on streets with less pedestrian traffic.	Continuous landscaped strip

APPENDIX

LOCAL STREETS

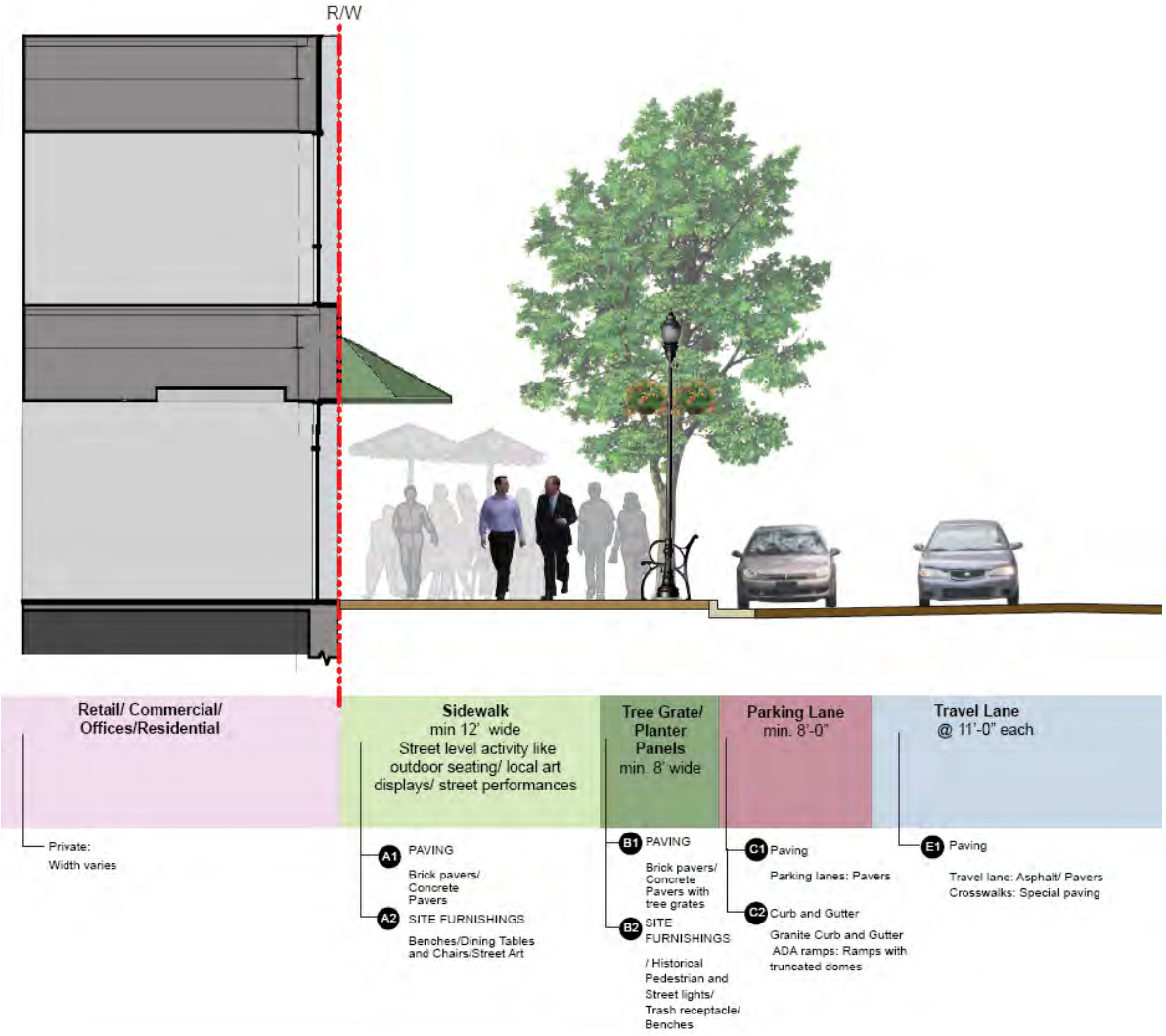
Local Street Type 1 (Local commercial street):

A local commercial street is a typical retail/ destination street with both pedestrian and vehicular traffic. The sidewalks should be wide enough to accommodate pedestrian volumes and the overflow of activity from the surrounding retail. Pedestrian circulation takes precedence over vehicle traffic. Cafe tables, chairs and other street furniture, street art are an integral part of this landscape. Figures 20-26 illustrate typical cross-sections and intersection design for local streets.

Figure 20: Typical Local Street Type 1 Cross-Section

APPENDIX

Figure 21: Local Street Type 1 Half-section



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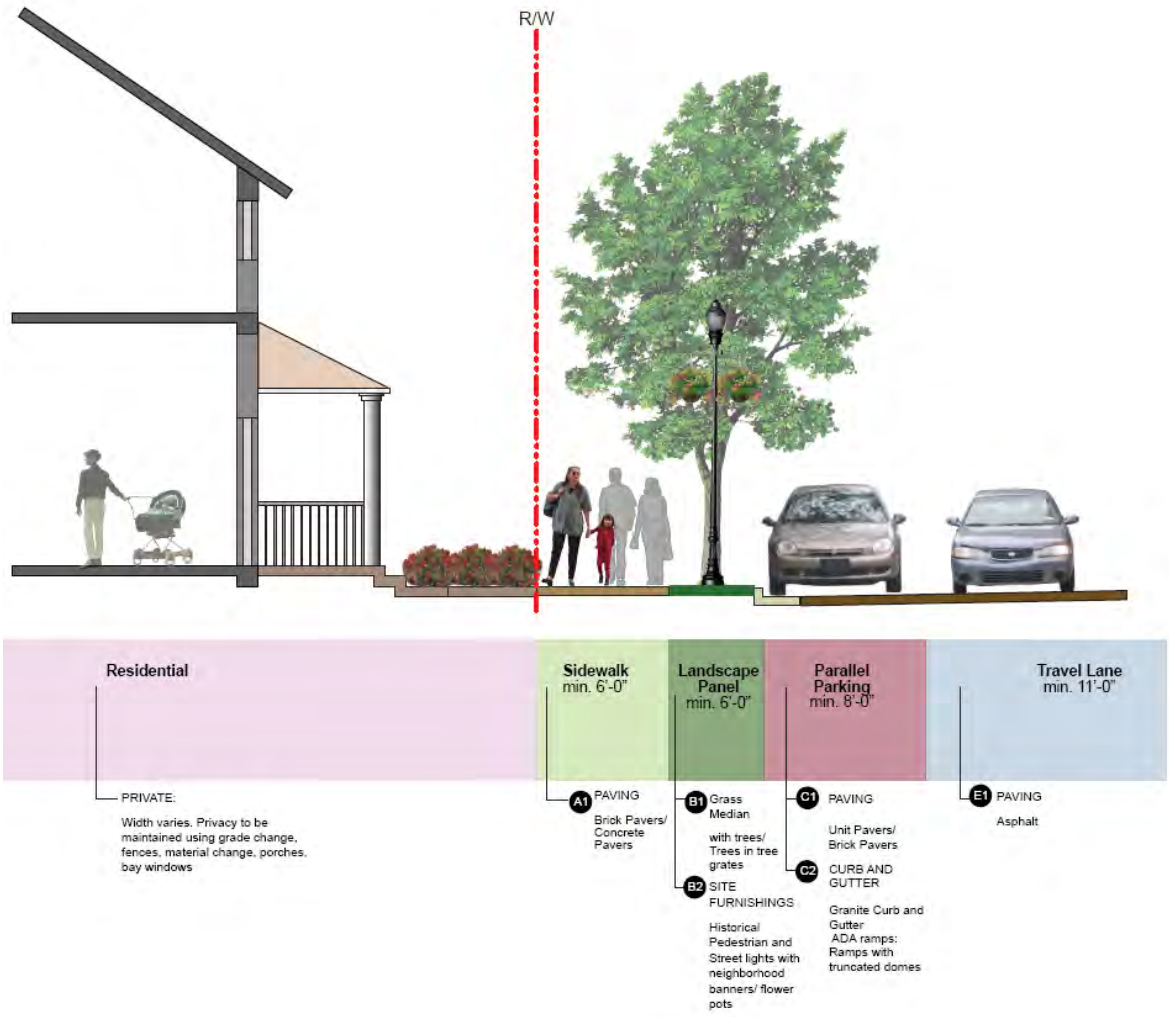
Local Street Type 2 (Local residential street):

A local residential street is a residential street that carries mostly local traffic. Traffic calming measures can be achieved by providing on-street parking and narrow travel lanes. A strong local character and a sense of place help maintain a considerable amount of social equity in the area served by this type of street.

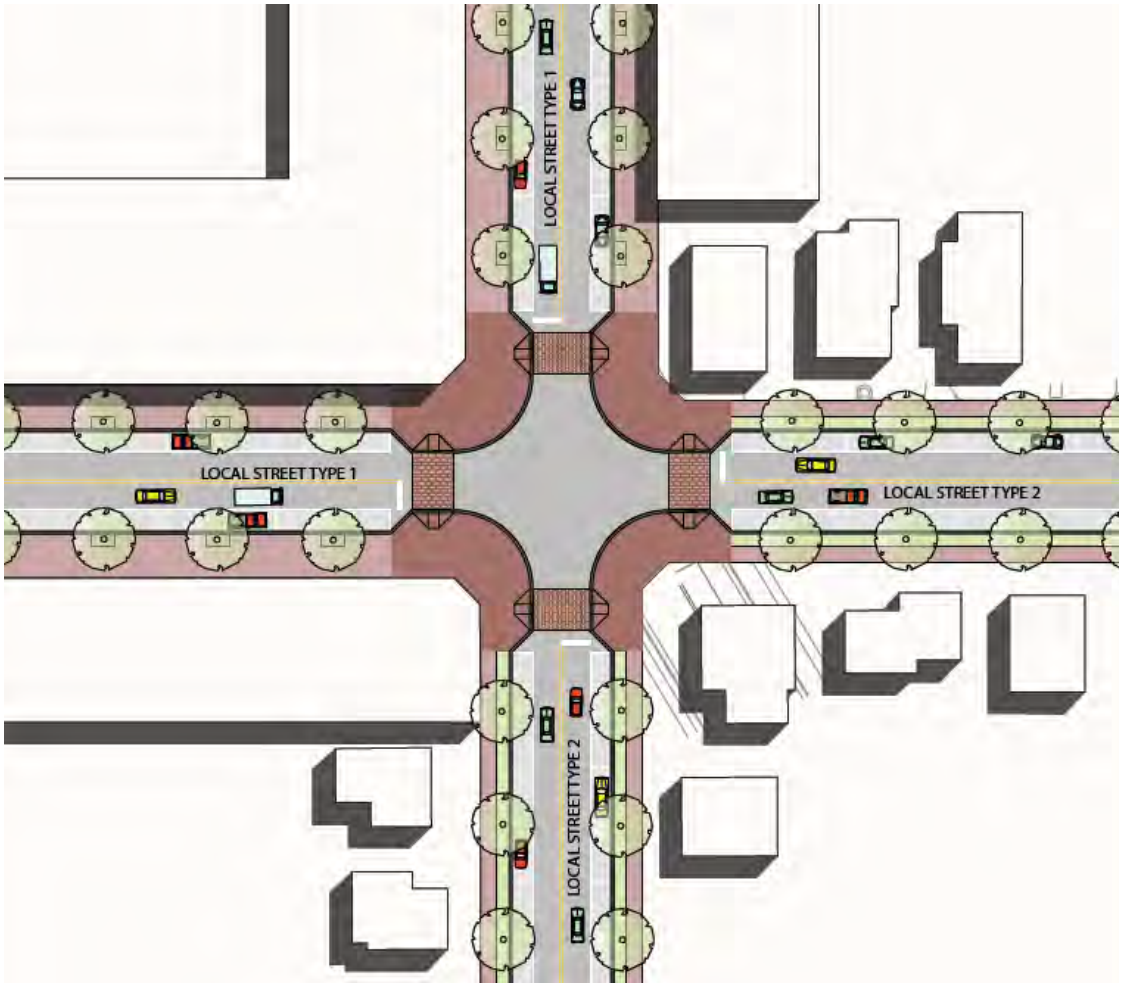
Figure 22: Typical Local Street Type 2 Cross-Section

Figure 23: Local Street Type 2 Half-section



APPENDIX

Figure 24: Typical Intersection Improvement Plan- Local Street to Local Street



Design Elements	Local Street
Median	None
Pedestrian Refuges	None
Turn Lanes	None
Through Lanes	1 lane in each direction
Bike Facility	None
Parking	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.
Curb Extensions	It should have the same width as parking lane.
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.
Landscaping	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.

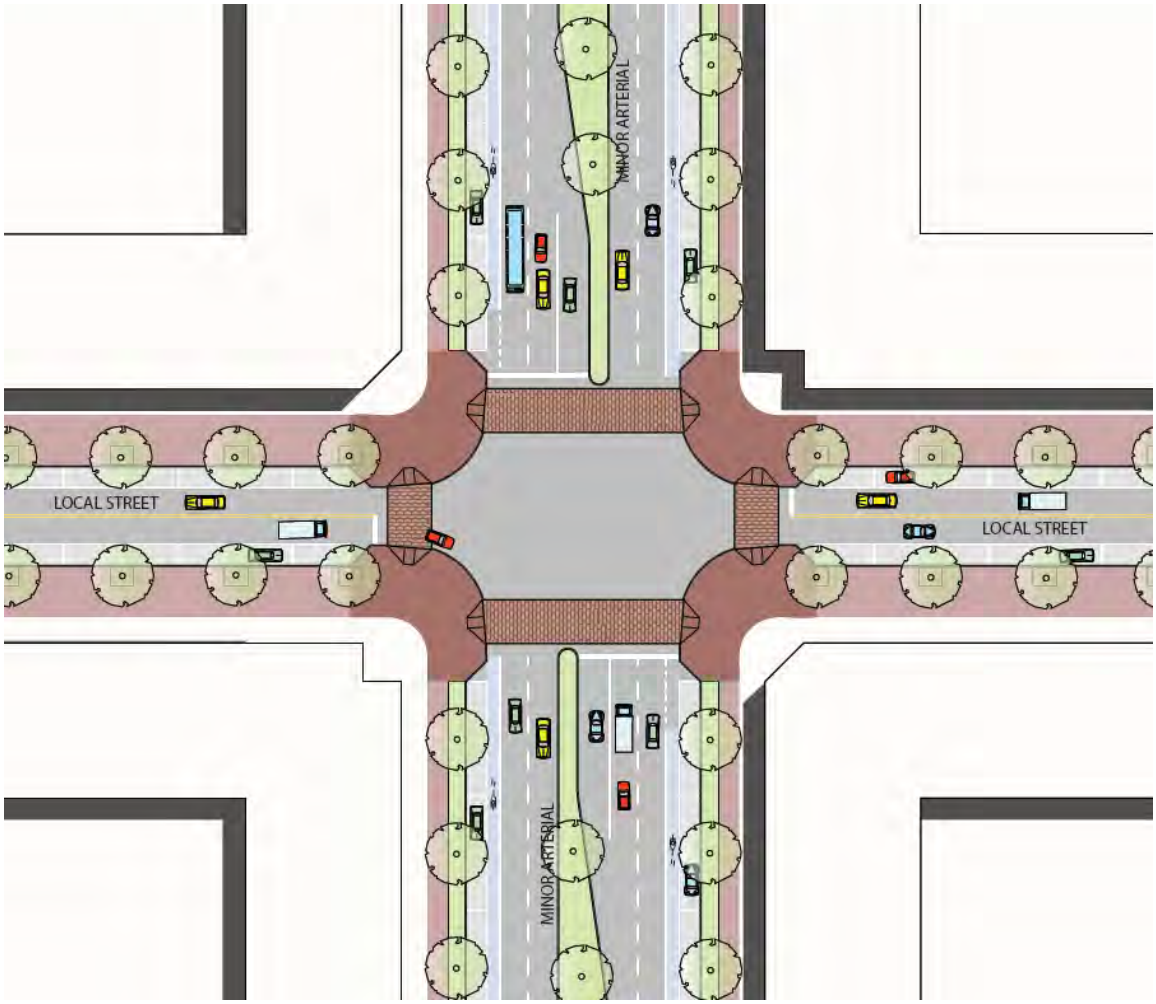
APPENDIX

Figure 25: Typical Intersection Improvement Plan- Local Street to Collector Street

Design Elements	Collector Street	Local Street
Median	None	None
Pedestrian Refuges	None	None
Turn Lanes	Left and right turn lanes combined with through lanes.	None
Through Lanes	2 lanes in each direction	1 lane in each direction
Bike Facility	14' wide outside lanes to accommodate bike.	None
Parking	8' wide parking lanes	None
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	
Curb Extensions	Same width as parking lane	
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on streets with more pedestrian traffic, use continuous landscape strip on streets with less pedestrian traffic.	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.

APPENDIX

Figure 26: Typical Intersection Improvement Plan- Local Street to Minor Arterial



Design Elements	Local Street	Minor Arterial
Median	None	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	None	In median
Turn Lanes	None	Left turn lane; Right turn lane combined with through lanes.
Through Lanes	1 lane in each direction	2 to 3 lanes in each direction
Bike Facility	None	5' foot wide bike lanes
Parking	8' wide parking lanes	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	
Curb Extensions	Yes, same width as parking lane	
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.	Continuous landscaped strips.

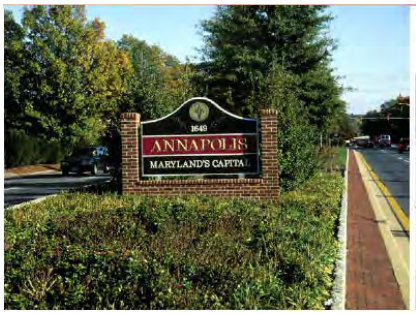
APPENDIX

Wayfinding and Signage

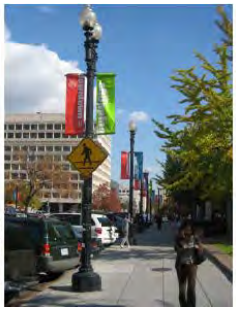
The wayfinding and signage guidance illustrates a series of signs that are designed with uniform elements, consistent in appearance and nomenclature, regardless of their function, location or message. The signage will create a "visitor friendly" environment and provides directional information. "Visitor friendly" means that the signs are close to visitor attractions and venues, highly visible with easy vehicular access, well-lighted and safe, and use consistent graphics. Elements in the signage that should be consistently applied include color, shape, typography, logo, and assembly.

The following examples provide a visual depiction of a typology of signs:

Gateway Signs
These are "Identity" signs signifying the community entrance points. They are located at key entry and key decision points, have a monumental scale, and contribute to the theme and "brand" for Springfield.



Identity Banners and Banner-Like Signs
Banners displaying a site-specific logotype and thematic icons, such as the future Springfield Town Center, identify "visitor friendly" areas to motorists and pedestrians. Repetitions of banners, singularly or in pairs create a sense of entry and welcome.



APPENDIX

Directional and Trailblazer Signs
Trailblazer signs function in concert with district signs and point in key directions to lead visitors down the main visitor corridors.

Pedestrian Kiosks
Information kiosks provide orientation information about nearby attractions and amenities such as restaurants, theaters, shops and assist visitors to connect via public transportation. The additional visibility and connectivity is especially important for transit schedules, routes and stops that can be displayed. To inspire confidence of visitors, the information display must be accurate, well maintained and current.

Parking Signs
Parking signs should be visible and accessible and should be displayed on and to public and private parking lots and structures. Parking signs include: identity signs for structured parking, identity banners or banner-type signs for lightposts in surface parking lots, identity graphics on pay stations, and "disk" parking directional panels, either on posts with trailblazer signs or dedicated posts.

FORT BELVOIR ENGINEER PROVING GROUND (EPG)

BACKGROUND

The development is organized into three distinct phases, as detailed in the "Engineer Proving Ground Land Unit Recommendations" section. The proposal for EPG is termed one of "conditional density" because development will be monitored by the County at pre-established points in the development process to ensure that any development impacts associated with the project have been successfully mitigated before additional development would be approved and/or initiated. Project monitoring should be established in relation to the three development phases with the review and approval of final development plans for the land units occurring as part of each phase.

Certain commitments with respect to the provision of infrastructure and public facilities that are designed to offset impacts and provide a public benefit to Fairfax County and the surrounding community are described herein and include such items as:

- Dedication of the entire Accotink Stream Environmental Quality Corridor, and other environmentally sensitive lands as may identified through appropriate environmental review to the Fairfax County Park Authority;

- Dedication of all land planned for public parks west of the Accotink Stream Environmental Quality Corridor to the Fairfax County Park Authority;

- Provision of Transportation Demand Management programs and strategies that will ultimately result in 15 percent of the employees at the EPG arriving by means other than the single occupant vehicle; and

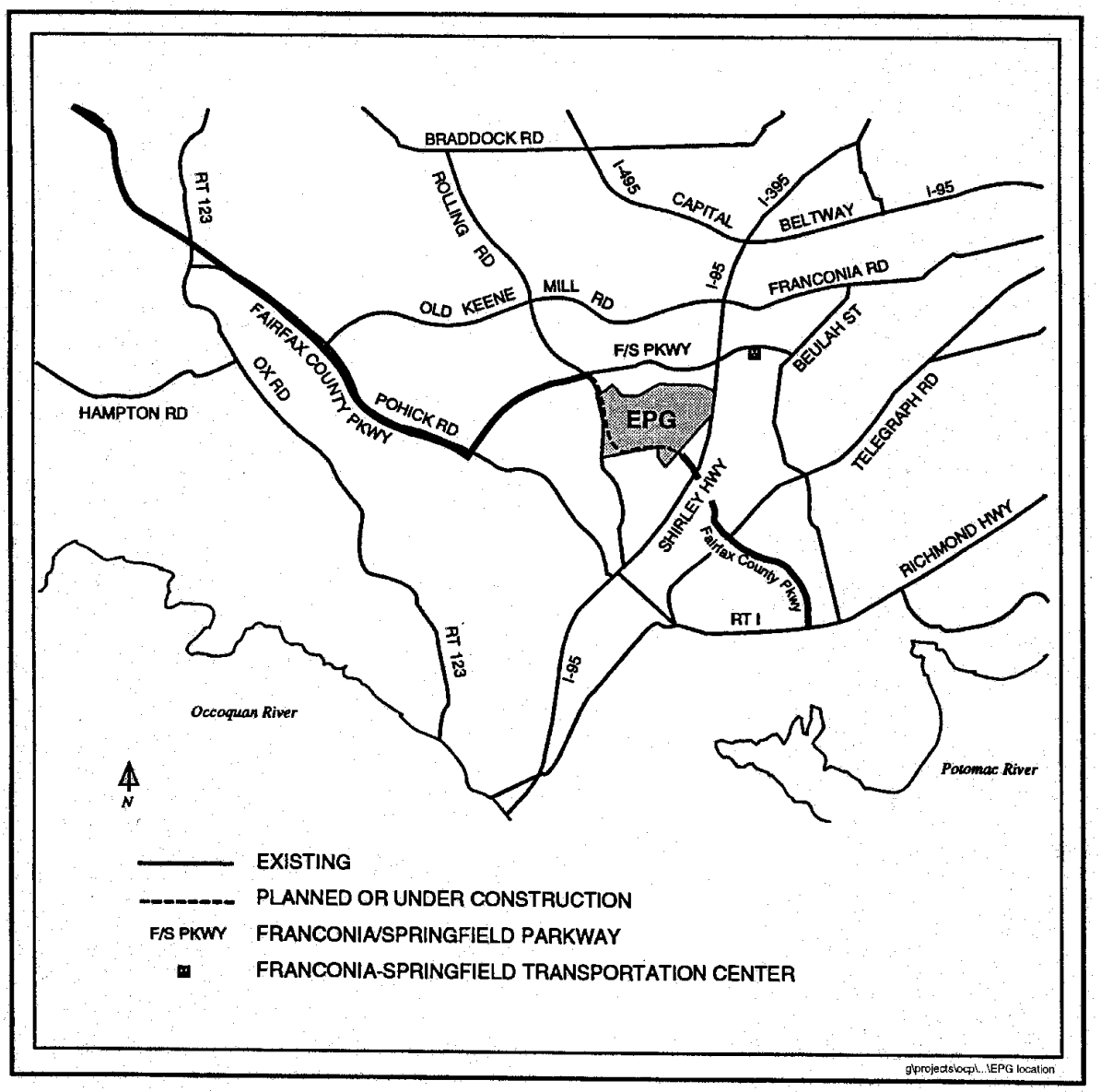
- Dedication of sites within EPG for public facilities, including transit, school and fire and rescue station sites, and right-of-way for the Fairfax County Parkway.

These and other commitments for infrastructure to mitigate impacts and provide public benefit have been incorporated into the Area-wide and land unit recommendations sections of the Plan.

CHARACTER

The Fort Belvoir Engineer Proving Ground (EPG) is an approximately 805-acre site located between Rolling Road and Interstate 95, south of the Springfield Community Business Center. It is located approximately 10 miles northwest of Fort Belvoir Main Post. (See Figure 27) Since the EPG was formerly used by the Army Corps of Engineers as a research and testing site, the site is largely vacant with only a few, relatively small, existing structures.

The EPG is on high ground, generally between 200 and 300 feet above sea level. The Accotink Creek stream valley bisects the EPG from north to south, dividing it into two nearly equal parts. Broad level terraces are present on each half of the site. The majority of steep



ENGINEER PROVING GROUND LOCATION **FIGURE 27**

slopes are found along both sides of Accotink Creek. Other steep slopes are formed by secondary streams and swales that feed into Accotink Creek.

The EPG is bordered by low-density residential uses to the north and west and industrial development to the south and east. The residential development in the immediate area is predominantly single family detached in nature. Typical residential densities range from 3-4 dwelling units per acre. The industrial development to the south and east of the EPG is mostly warehousing and distribution.

The EPG is located west of I-95 (Shirley Highway) and south of the Franconia-Springfield Parkway, but does not have direct access from either of these facilities. Principal access to the existing military reservation is from Backlick Road. The planned Fairfax County Parkway will traverse the site along its western and southern boundaries, and provide future direct access into the property from a planned interchange of Rolling Road with the Fairfax County Parkway.

MAJOR OBJECTIVES

The following are the major planning objectives under the mixed-use development concept for the Engineer Proving Ground:

- Provide an opportunity for employment and housing, while ensuring that development is adequately supported by transportation and public facilities improvements to offset any potentially negative impacts.

- Provide sites for a school and a fire and rescue facility to serve the EPG and the surrounding community.

- Satisfy the demonstrated recreation needs deficiency in this portion of the County by acquiring parkland at the EPG site and developing a complex of active recreation uses.

- Create development that incorporates high-quality architecture and landscape design and clusters development within nodes to encourage transit use and enhance open space.

- Provide transitions to residential neighborhoods to the north and west, and within the development from mixed-use nodes to surrounding lower density areas by tapering building heights, and incorporating effective buffering and screening.

- Provide an opportunity for the Springfield Community Business Center to expand its market potential by providing goods and services to the residents and employees of EPG.

- Create a user-friendly pedestrian and non-motorized vehicle network of sidewalks and trails which provide ready access to employment, housing, parks and transit facilities.

- Achieve and maintain acceptable levels of roadway performance through a variety of mechanisms including roadway and/or transit improvements, and implementation of

an aggressive Transportation Demand Program to reduce single occupancy vehicle usage.

- Preserve the Accotink Stream Valley Environmental Quality Corridor and other natural features, such as environmentally sensitive land and heritage resources, and provide a trail system linking the Stream Valley to the countywide and regional trails network.

- Develop a regional stormwater management plan in coordination with Fairfax County, to alleviate the adverse effects of development on stream water quality and quantity.

ENGINEER PROVING GROUND AREA-WIDE RECOMMENDATIONS

LAND USE

In addition to the following recommendations, please refer to the recommendations provided in the Springfield District section of the Plan.

Baseline Recommendation

The Engineer Proving Ground is planned for public facilities, government and institutional, and public park uses until such time as the mixed-use option described below is exercised, either through an agreement between the County and the Army or a rezoning of the property. Any development or redevelopment plans by the Federal government under this baseline recommendation should be coordinated with Fairfax County and appropriate officials of the Commonwealth of Virginia and should be consistent with adopted County goals and the Fairfax County Comprehensive Plan.

Mixed-Use Development Option at the EPG

As an option, this approximately 805-acre site may be considered for mixed-use development under the following general conditions:

- Development is limited to an overall intensity of .17 FAR (calculated over the 805 acres of the site) to reflect a total of no more than 4.5 million gross square feet of non-residential development and 1,500 multifamily and 85 patio-style single family dwelling units conditioned upon achievement of performance standards specified in the Comprehensive Plan;

- Non-residential development will reflect the following mix of uses:

  - Office use, including research and development (in millions of square feet of gross floor area) 3.60 MSF
  - Convenience and accessory retail use 0.30 MSF
  - Hotel/conference center uses 0.60 MSF

- Development is organized into three distinct phases, as detailed in the "Engineer Proving Ground Land Unit Recommendations" section.

- Residential use is inclusive of any "bonus" units allowed under the provisions of the County's Affordable Dwelling Unit Ordinance; and

- Development approval of each phase is contingent upon the provision of infrastructure, subject to monitoring and mitigation of any adverse impacts to the maximum extent possible, and adequate development plan detail to ensure conformance with the Comprehensive Plan. Transportation improvements shall be maintained at a minimum of Level of Service "D". Other infrastructure adequacy

shall be determined by the guidance contained in the Comprehensive Plan Policy volume and the standards contained in the Fairfax County Public Facilities Manual.

Development Concept

The Plan calls for the creation of a large active and passive public park to include the Accotink EQC and most of the land west of the EQC. To implement this recommendation, the entire Accotink Stream Valley Environmental Quality Corridor and all land west of the Accotink Stream Valley Environmental Quality Corridor that is not identified for other uses is planned to be dedicated to Fairfax County Park Authority. The park will provide a sylvan retreat and active recreation activities. Specific recommendations are located in the "Parks and Recreation" section.

The eastern portion of the site is planned to be developed with three high intensity, mixed-use nodes that will be surrounded by areas of lesser intensity (Figure 28. The recommendations for the land units describe the desired character of each area in terms of structure type, building heights, and design guidelines. For the purpose of understanding the recommendations for the eastern portion of the EPG, "low-rise" generally means buildings up to 4 stories in height, "mid-rise" generally means buildings 5-8 stories in height, and "high-rise" generally means buildings over 8 stories in height.

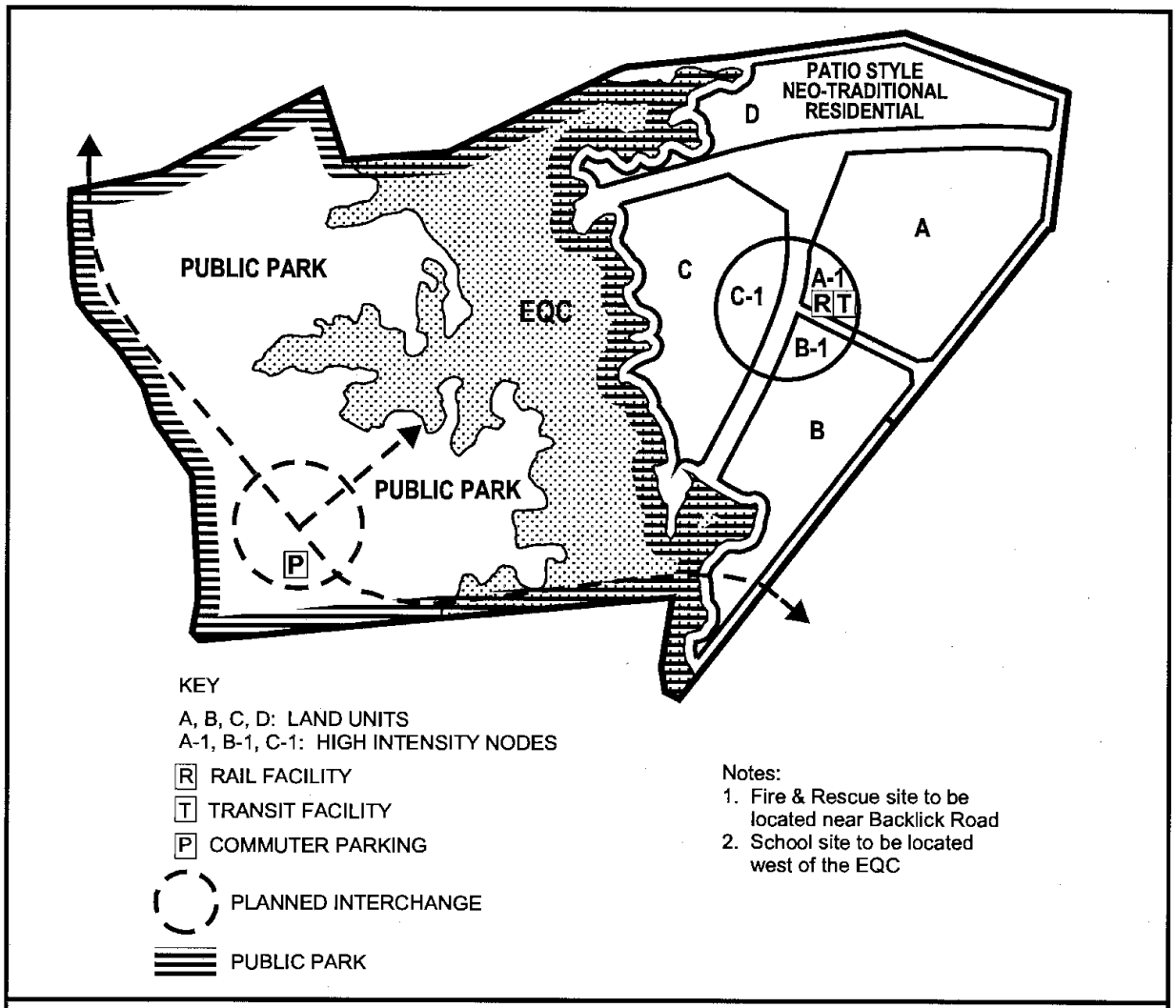
Each high intensity node is planned for a complementary mix of uses such as office, hotel, retail and residential uses up to a maximum 2.0 FAR. Development in the nodes is restricted primarily to mid- and high-rise buildings to create pedestrian oriented urban character. Where recommended, high-density residential use will be developed as an integral element.

Complementary land uses are planned for the site area located outside the nodes. Development in these non-nodal areas should be in low to mid-rise buildings and arranged to provide a transition between the high intensity nodes and open space/recreational areas and the residential communities located to the north and west of the EPG. Open space and active recreation facilities are important features to be incorporated in these areas. The Plan also recommends the dedication of land for a fire and rescue services station within the eastern portion of the site.

An area on the northern boundary of the EPG is specifically planned for patio-style single-family development. These residential units will provide a transition to the adjacent existing residential neighborhoods outside of the site. To enhance the transition to existing residential neighborhoods, a vegetated buffer at least 100 feet in width, supplemented with additional landscaping as needed, is to be provided along the northern and western boundaries of the EPG.

A well conceived pedestrian and non-motorized circulation network should be incorporated into the development of each high intensity node as a way to link uses within the node and to integrate these uses with amenities such as parks and urban plazas. The pedestrian and non-motorized circulation network should also link residential areas, employment centers and community facilities with planned transit facilities.

Within all mixed-use areas, both node and non-node, neighborhood retail uses may be appropriate. Usable open space and urban parks/plazas should be incorporated into the design scheme for development in all areas. Urban parks should be pedestrian oriented and provide space for lunchtime and after work events.



ENGINEER PROVING GROUND
DEVELOPMENT CONCEPT

FIGURE 28

Project Monitoring and Phasing

The EPG development should be phased in such a way that public facilities and effective mitigation measures will be in place for completed or substantially completed phases, before proceeding to future development phases. Since the development will take place incrementally, the County is afforded the opportunity to monitor the EPG development and to link each phase of development to the satisfactory achievement of specified performance standards and/or development conditions. The ability to link future development to the provision of public facilities, particularly those related to transportation and schools, and the satisfactory fulfillment of certain specified conditions is a critical element of the Plan for the EPG.

Some specific transportation improvements are recommended with each phase and land unit. However, additional improvements may be required based on the findings of traffic study that is required at initial rezoning and with each final development plan. These improvements may be in addition to the transportation improvements currently cited in the adopted County Transportation Plan, or public facilities recommendations.

If it is determined by the County at the time of FDP review that adverse impacts have not or cannot be successfully mitigated, the amount of development within the respective land unit may be reduced to a level that can be adequately supported by public facility and roadway infrastructure. The total level of development within the land unit may be restored upon demonstrating that adequate infrastructure capacity is available.

The development phases are tied to specific land units. The amount and type of development for each phase and land unit is detailed in the "Engineer Proving Ground Land Unit Recommendations" section of the Plan. To facilitate overall project monitoring and phasing, the land units are to be developed in sequential order. Development of one land unit must be substantially complete before proceeding to the next land unit. For example, Phase I non-residential building construction should be at least 80 percent completed (as determined by the total square footage for which occupancy permits have been granted as a proportion of the total gross square footage approved for the land unit) and major infrastructure needed to serve the land unit should be 100 percent completed and operational prior to the approval of the Final Development Plan for Phase II. However, if at the end of Phase I, the need for additional infrastructure is identified through project monitoring, the additional improvements should be provided as part of Phase II development. Should subsequent development be delayed or halted, the developer will be responsible for providing the necessary improvements. These completion standards would apply to all subsequent development phases through project completion.

A Planned Development Commercial District, (PDC) zone would be appropriate to implement the mixed-use development concept. To ensure high quality site design and integration of uses, a Conceptual Development Plan (CDP) for the entire site should be developed. The CDP should meet all submission requirements detailed in the Zoning Ordinance and allow for the evaluation of the character and intensity of the development, and the ability of existing and proposed transportation, education and other public facilities to support the development. Final Development Plans (FDP) for each land unit and phase identified in the Plan should be submitted for approval at the beginning of each development phase and evaluated on the basis of conformance with the approved CDP and ability to meet the performance standards and conditions associated with each phase and other applicable standards. These FDPs should meet all submission requirements detailed in the Zoning Ordinance and provide a level of detail sufficient to evaluate the elements as excerpted below:

- Topography at five foot intervals, with delineation of environmental quality corridors, wetlands, hydric soils and stormwater management areas;
- Location and acreage of land unit(s);
- Location and description of all land uses, parking type and configuration, pedestrian and non-motorized circulation, and orientation and integration of land uses;
- Open space and landscaping treatment;
- Location and size of proposed active recreation areas to be provided with residential development;
- Location of public facilities sites, including a school and fire and rescue sites;
- Location of transit shuttle station(s) and depiction of how development will be oriented to encourage transit use; and
- Depiction of traffic circulation systems.

Project monitoring will consist of periodic project review and evaluation. This review will be conducted by County staff and will occur prior to each development phase at the time when Final Development Plans are submitted for approval. Each FDP will provide information on the design and physical layout of the uses proposed for the particular land unit and development phase under consideration. A detailed transportation study, which documents current traffic conditions, performance of intersections, roadway segments, and interchanges in the area, the degree to which non-Single Occupancy Vehicle (non-SOV) usage has occurred, and other relevant factors must be prepared by the developer and submitted with the FDP. This detailed transportation study is a critical element in determining the degree to which demand generated by EPG development will be (or has been) accommodated. In addition, FDP approval is linked to the satisfactory fulfillment of certain conditions specified in the Area-wide and Land Unit recommendations.

Urban Design Objectives

The urban design objectives are intended to achieve the goal of protecting the built environment adjacent to the EPG site and the natural environment, while promoting high-quality urban design for the future development that occurs at EPG. All development for the EPG should be responsive to the following design objectives which apply throughout the EPG site.

1. Provide high-quality development that is functionally integrated, orderly and attractive.
2. Create a positive and easily recognizable identity for the Engineer Proving Ground as a whole, and for the three individual development nodes. Establish a sense of place and assist in orienting people to find their way to the area's workplaces, stores, and other facilities.

3. Design development to ensure pedestrian access among buildings, thus reducing reliance on the auto; provide open space for active and passive recreation, and visual relief; allow opportunities for shared parking; and generally promote the efficient use of land.

4. Create vehicular and pedestrian/non-motorized vehicle circulation systems that minimize conflicts between these different modes of travel, and that are clearly identified for easy use.

5. Protect adjacent residential neighborhoods from the impacts of new development by establishing vegetated buffers and complementary landscaping features, as well as maintaining high standards for architectural quality and minimize noise, glare and traffic and parking intrusions.

6. Protect and enhance environmental and heritage resources, integrating these features into development to the greatest extent possible.

7. Create an internal roadway system that functions well, is visually appealing, and provides effective circulation and linkages to the various uses developed on the site.

8. Promote a positive image for the Engineer Proving Ground in keeping with the high architectural, design and lighting standards associated with major mixed-use centers in the County.

9. Create a comprehensive sign system that establishes a distinctive identity and prevents visual clutter.

Three high intensity mixed use nodes (A-1, B-1 and C-1) planned for urban intensities up to 2.0 FAR are primary features of the EPG. The high intensity mixed use nodes are described in detail in the Land Unit Recommendations section. Given the intensity of these nodes and their central role in the overall development concept for EPG, it is important that uses within these nodes be integrated and complementary and contribute to creating a high-quality mixed-use environment. Therefore, in addition to satisfying the design objectives for the EPG, development plans for each of these nodes should be responsive to the following design guidelines:

- Create an urban development pattern by bringing buildings close to each other and to the road.

- Create a street-level mix of support service and retail uses that is visually attractive, and which will focus services for pedestrian convenience. The concept should encourage pedestrian activities and contribute to the vitality of the area.

- Create a comprehensive and well-marked system of safe and attractive sidewalks/trails that link adjoining buildings, plazas, shops, urban parks and recreation facilities.

- Develop the area adjacent to any future transit facility to take maximum advantage of the pedestrian access directly from the station to the workplace. The area adjacent to the transit facility should be attractive and inviting, with clear signage to make

movement easy and convenient between the station, the workplace and retail and service facilities.

- Integrate retail and service establishments within office and high-rise residential buildings, or on the routes commonly taken by transit users, in order to capture those shopping trips on the way to and from the office.

- Incorporate urban parks/plazas within convenient walking distance of office buildings in order to provide open space as a readily accessible amenity.

- Encourage shared parking between uses with different parking needs such as hotels and offices, to use valuable land more efficiently and to reduce the amount of impervious surface.

- Build public spaces such as pavilions, plazas, amphitheaters and terraces for seasonal celebrations, fairs and other community events, thus adding important vitality and evening activity.

- Incorporate parking into structures, either above- or underground where feasible, and limit surface parking to no more than 35 percent of the parking required for the site.

- Integrate parking decks and structures into the overall landscape to create a pleasing visual image. Perimeter plantings and spandrel planters on the decks/structures are encouraged to lend a softening effect to facades and add visual variety.

Environmental Analysis/Clean-up

Because the Engineer Proving Ground was previously used for research and testing by the military, the Army will be responsible for any environmental analysis and/or clean-up of any toxic or hazardous waste or other environmental hazard existing on the land prior to conveyance to the County.

The exact acreage and legal description of real property to be conveyed shall be determined by surveys satisfactory to the Secretary of the Army and Fairfax County. Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Water Drinking Act (SDWA) and any and all other pertinent environmental statutes and regulations, the Secretary shall retain liability for the environmental hazards on the site as of the date of transfer. At least ninety (90) days prior to any land disturbing activities, the Army should provide written notice to the County of proposed activities and the Army shall conduct or permit to be conducted a cultural resource survey and a natural resources survey. Sensitive cultural areas shall be identified and protected in accordance with the recommendations of the County Archaeologist. Natural resource areas shall be surveyed, identified, and protected in accordance with the recommendations of the Park Authority.

Dedication of Public Lands

Before or with conveyance of the EPG site to the County, the Plan recommends the dedication of land as described in the following paragraphs. Access to dedicated lands other than by trails of like means may not be available until either development occurs or the County provides access. The development levels associated with each phase have been incorporated into

the land unit recommendations; density associated with the lands to be dedicated is part of the development program. Since dedication to the County is recognized by the intensities planned and specified for each land unit, the potential or need for density credit is negated. It is important that dedication of these assets occurs prior to rezoning to maximize their benefit to the County and its citizens.

The dedication of the following lands is required:

1. All right-of-way for transportation facilities needed for full development, including dedication for the Fairfax County Parkway, recognizing that additional right-of-way may be identified during the monitoring and evaluation process required for subsequent phases of development and that such rights-of-way will be dedicated as needed;

2. The Accotink Stream Valley Environmental Quality Corridor to the Fairfax County Park Authority;

3. Approximately 20 acres of useable land west of the Accotink Stream Valley Environmental Quality Corridor for a school site;

4. Up to 8 acres southeast of the Rolling Road and the Fairfax County Parkway interchange for a commuter parking lot;

5. The remaining portion of the land west of the Accotink Stream Valley Environmental Quality Corridor to the Fairfax County Park Authority for park purposes.

6. Approximately 5 acres for a fire and rescue station in the eastern portion of the site near Backlick Road; and

7. A transit facility site of at least 5 acres within the high-intensity core area constituted by subunits A-1, B-1 and C-1.

Transitions and Buffers to Residential Areas

To foster compatibility between EPG development and existing residential communities located to the north, the following recommendations apply to all development on the site:

1. Building heights are tapered down from higher to lower intensity land uses. Building height will be determined by a plan on topographic base indicating a 14° line of sight from points at 200 foot intervals along the northern boundary, as may be further limited by a maximum building height of three stories for patio homes planned to be located along the northern boundary;

2. Buffering and screening is established to satisfactorily transition from the new development to existing development in surrounding areas. A vegetated buffer not less than 100 feet in width, supplemented with additional landscaping as needed, should be provided along the northern boundary;

3. Residential areas adjacent to park facilities are buffered from activity noise and facility lighting through landscape treatment such as vegetated buffers, screening and/or berming.

Type and Configuration of Retail Uses

Retail development at EPG is limited to no more than 300,000 square feet of gross floor area, however some retail be may be developed as office use. Most, if not all, retail use should be located within office, hotel and/or residential structures as a means of promoting mixed-use projects. Given the 1,585 dwelling units planned for the site, there may be a need for a community shopping center to serve residents and employees of the area. To ensure that the center is oriented to the EPG residential and employment communities, the size of the shopping center is limited to a maximum of 50,000 square feet, with no individual use in the center larger than 1/3 of the total gross floor area. Uses requiring special permit or special exception approval will be reviewed on a case-by-case basis and should be permitted only when the use is of a size and scale that will not adversely affect the character of the area.

TRANSPORTATION

Baseline Plan Requirements

The adopted County Transportation Plan identified the following roadway and public transportation improvements in the vicinity of the EPG (See Figure 29)

- Construct the Franconia-Springfield Parkway to an 8 lane section, including HOV lanes and interchanges at Rolling Road, Neuman Street, and I-95

- Construct the Fairfax County Parkway to a 6 lane section, including interchanges with the Franconia-Springfield Parkway, Rolling Road, and I-95 (Newington Interchange);

- Widen Fullerton Road to 4 lanes between Backlick Road and the Fairfax County Parkway;

- Widen I-95 (Shirley Highway) to 11 lanes, including HOT lanes, HOT designation, and the extension of the existing HOV lanes south to Prince William County;

- Dedicate a site of at least 5 acres for a Transit Facility within the high-intensity core area of the EPG site; and

- Transportation issues associated with the possible extension of the Metro rapid rail transit line from the Joe Alexander Transportation Center (Franconia-Springfield Metro Station) to the Engineering Proving Ground (EPG) should be studied. The area subject to the Metro rail extension should be designated as an "Enhanced Public Transportation Corridor." The extension of the Metro rail should be such that there is no impact upon the existing Loisdale residential subdivision.

These baseline Transportation Plan requirements were developed independent of a detailed analysis and identification of the transportation impacts associated with development on the site of the Engineer Proving Ground.

Optional Plan Requirements

The land use concept is predicated on the implementation of transportation demand programs (TDM) designed to substantially affect the commuting behavior of those who work at the EPG. The goal of the TDM programs is to achieve an overall mode split of 15 percent or greater for non-single occupant vehicle (SOV) trips - i.e., 15 percent or greater person trips to/from the employment center shall be by transit, carpool, and walking/bicycle. This reflects future expectations of non-SOV usage in mixed-use employment centers.

To ensure the transportation impacts of the proposed mixed-use development at EPG are satisfactorily addressed, the Plan is based on the satisfactory fulfillment of the following elements:

- Preparation by the developer of an overall transportation study as part of the initial rezoning application, to include alignment and phasing of an internal circulation system and submission of detailed transportation studies prior to each phase of development. The initial transportation study should evaluate existing transportation conditions and analyze the impacts of the traffic associated with the overall development. The recommendations of this study will be taken into consideration by the County in determining the timing of construction of improvements and may include acceleration of implementation in advance of that indicated in the land unit recommendations of the Plan. Detailed studies of development proposed for each subsequent phase should be provided with each FDP and should evaluate existing transportation conditions and analyze the impacts of the traffic associated with the respective phase. The transportation studies will be approved by the County and VDOT prior to the approval of the initial rezoning and Final Development Plans for each development phase;

- Provision of assurances that the transportation facilities and services assumed to be operational in the Study will in fact be provided prior to the initial occupancy of each phase;

- Implementation of a transportation monitoring and evaluation program that will be conducted at the conclusion of each development phase. The monitoring and evaluation program will include, at a minimum, an assessment of the performance of:

  - Site entrances and signalized intersections along Backlick Road between the Franconia-Springfield Parkway and the Fairfax County Parkway;

  - All interchanges and intersections on the Fairfax County Parkway and Backlick Road from the Franconia-Springfield Parkway south to I-95 (Newington interchange);

- Implementation of an aggressive transportation demand management program;

- Correction of any problem observed during each monitoring/evaluation phase, or commitment that the problem will be corrected during the subsequent development phase prior to approval of Final Development Plans. Additional access may need to be studied to accommodate the ultimate level of development. Should subsequent development be delayed or halted, the developer will be responsible for providing the necessary transportation improvements. A problem is defined by Level of Service E

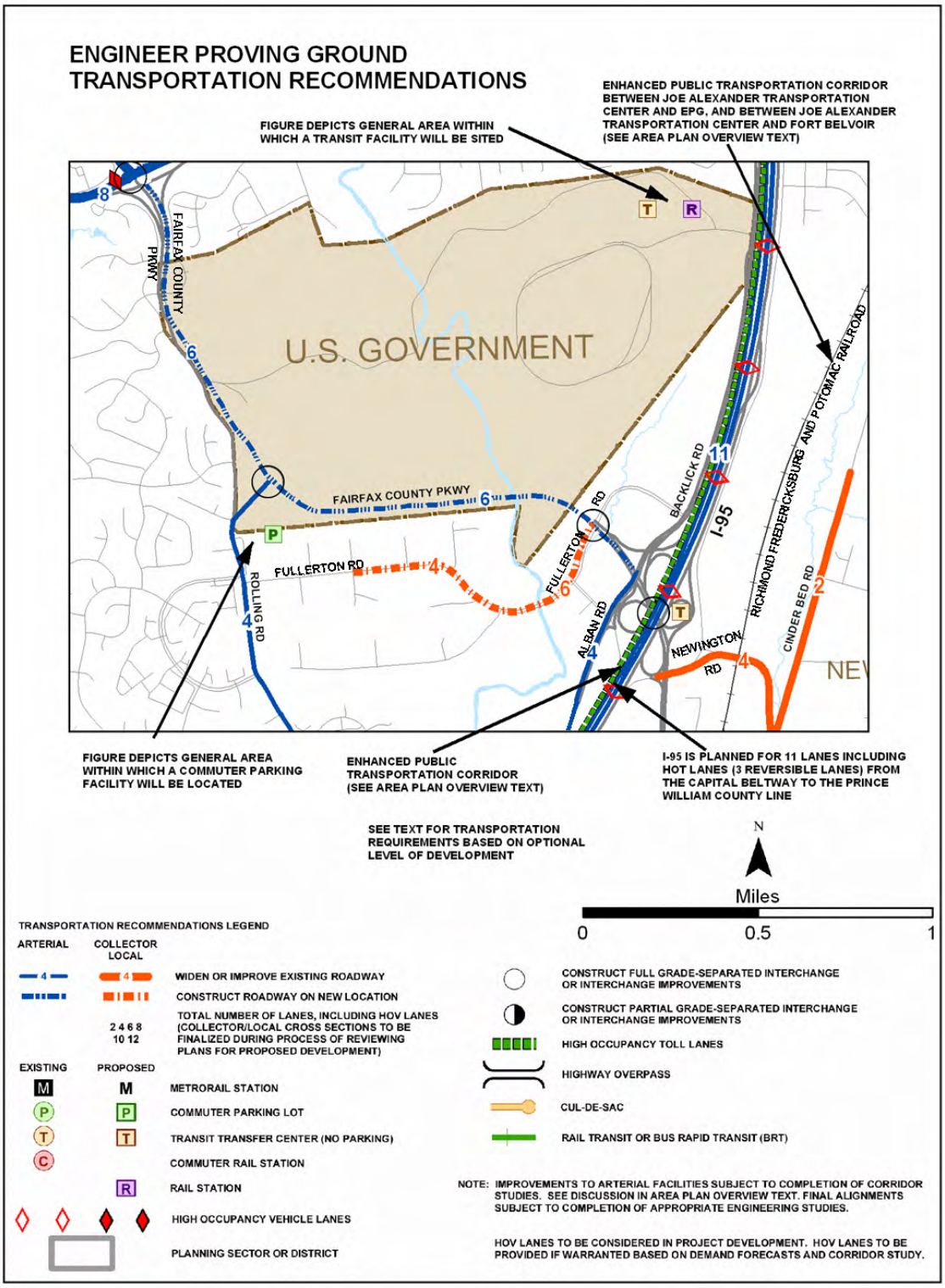

ENGINEER PROVING GROUND
TRANSPORTATION RECOMMENDATIONS
FIGURE DEPICTS GENERAL AREA WITHIN WHICH A TRANSIT FACILITY WILL BE SITED
ENHANCED PUBLIC TRANSPORTATION CORRIDOR BETWEEN JOE ALEXANDER TRANSPORTATION CENTER AND EPG, AND BETWEEN JOE ALEXANDER TRANSPORTATION CENTER AND FORT BELVOIR (SEE AREA PLAN OVERVIEW TEXT)
U.S. GOVERNMENT
FAIRFAX COUNTY PKWY
FULLERTON RD
ROLLING RD
BACKLICK RD
ALBAN RD
NEWINGTON RD
I-95
RICHMOND FREDERICKSBURG AND POTOMAC RAILROAD
CINDER BED RD
FIGURE DEPICTS GENERAL AREA WITHIN WHICH A COMMUTER PARKING FACILITY WILL BE LOCATED
ENHANCED PUBLIC TRANSPORTATION CORRIDOR (SEE AREA PLAN OVERVIEW TEXT)
I-95 IS PLANNED FOR 11 LANES INCLUDING HOT LANES (3 REVERSIBLE LANES) FROM THE CAPITAL BELTWAY TO THE PRINCE WILLIAM COUNTY LINE
SEE TEXT FOR TRANSPORTATION REQUIREMENTS BASED ON OPTIONAL LEVEL OF DEVELOPMENT
N
Miles
0
0.5
1
TRANSPORTATION RECOMMENDATIONS LEGEND
ARTERIAL
COLLECTOR LOCAL
WIDEN OR IMPROVE EXISTING ROADWAY
CONSTRUCT ROADWAY ON NEW LOCATION
2 4 6 8
10 12
TOTAL NUMBER OF LANES, INCLUDING HOV LANES (COLLECTOR/LOCAL CROSS SECTIONS TO BE FINALIZED DURING PROCESS OF REVIEWING PLANS FOR PROPOSED DEVELOPMENT)
EXISTING
PROPOSED
METRORAIL STATION
COMMUTER PARKING LOT
TRANSIT TRANSFER CENTER (NO PARKING)
COMMUTER RAIL STATION
RAIL STATION
HIGH OCCUPANCY VEHICLE LANES
PLANNING SECTOR OR DISTRICT
CONSTRUCT FULL GRADE-SEPARATED INTERCHANGE OR INTERCHANGE IMPROVEMENTS
CONSTRUCT PARTIAL GRADE-SEPARATED INTERCHANGE OR INTERCHANGE IMPROVEMENTS
HIGH OCCUPANCY TOLL LANES
HIGHWAY OVERPASS
CUL-DE-SAC
RAIL TRANSIT OR BUS RAPID TRANSIT (BRT)
NOTE: IMPROVEMENTS TO ARTERIAL FACILITIES SUBJECT TO COMPLETION OF CORRIDOR STUDIES. SEE DISCUSSION IN AREA PLAN OVERVIEW TEXT. FINAL ALIGNMENTS SUBJECT TO COMPLETION OF APPROPRIATE ENGINEERING STUDIES.
HOV LANES TO BE CONSIDERED IN PROJECT DEVELOPMENT. HOV LANES TO BE PROVIDED IF WARRANTED BASED ON DEMAND FORECASTS AND CORRIDOR STUDY.

FIGURE 29

or worse performance, and/or other operational problems such as intersection/ entrance blockages by traffic queues, safety problems, etc.; and

- Completion of all necessary engineering, environmental, and other studies relating to modification of access to the interstate system.

ENVIRONMENT

The principal environmental feature of the Engineer Proving Ground is the Accotink Stream Valley Environmental Quality Corridor. The EQC traverses the site from north to south and includes some wetlands located outside the stream valley. These areas should be preserved and protected from development. Protection and support should include the development of Biodiversity Conservation Area practices, monitoring of water quality, stabilization of stream valley erosion, reduction of watershed siltation, removal of invasive species, and mitigation of site contaminants. Protection and enhancement of the watershed should include interpretation and public education about such efforts and their results. The EQC should be made publicly accessible through dedication.

A 15 percent or greater non-SOV mode split is the target for the full buildout of the project. Achieving the specified non-SOV targets and reducing single occupant vehicle usage to EPG will contribute to the County's efforts to improve air quality in the region.

EDUCATION

Analysis of the development potential of EPG and the vicinity indicates that a school site will be needed. In accordance with Policy Plan guidance that the provision of public facilities should be balanced with growth and development, approximately 20 acres of developable land on the western portion of the site should be dedicated to Fairfax County Public Schools. The site should be located in an area that maximizes the potential for students to walk to school and provides safe and convenient access to pedestrian and road networks.

PUBLIC FACILITIES

The level and type of development proposed will generate the need for public facilities sites or improvements including 5-acre site for a fire and rescue station to serve the EPG and the surrounding area. This facility should be located near Backlick Road.

In order to accommodate the EPG development, off-site sewer lines may need to be enlarged. As the EPG develops, the County will monitor the capacity of the lines. If the County judges that the sewer lines need to be enlarged, funding the replacement of the lines (in a manner consistent with standard County policies) will be the responsibility of the developer. Additionally, in conjunction with the development of a regional stormwater management plan, stormwater management sites should be identified at the EPG site.

PARKS AND RECREATION

The following recommendations are intended to ensure that adequate parks and recreation services will be available to offset the need created by the development and help address unmet

demand in surrounding communities. The location and type of park and recreational uses should be identified through the Parks Master Planning process so that adequate park and recreation services will be available for residents, employees of and visitors to the Engineer Proving Ground and the surrounding area. The approximately 225-acre Accotink Steam Valley EQC is planned as a "Stream Valley/Greenway Park." Most of the approximately 245 acres west of the EQC will be considered a "Countywide" park and will be planned in subunits that will have different classifications. Other units, as shown on Figure 30 are planned as "Multiple Resource" and "Special Purpose" Parks. If parks are developed within the mixed-use area, it is anticipated that these would function as "Neighborhood Urban" parks. The following recommendations should be considered for the Park Master Planning process:

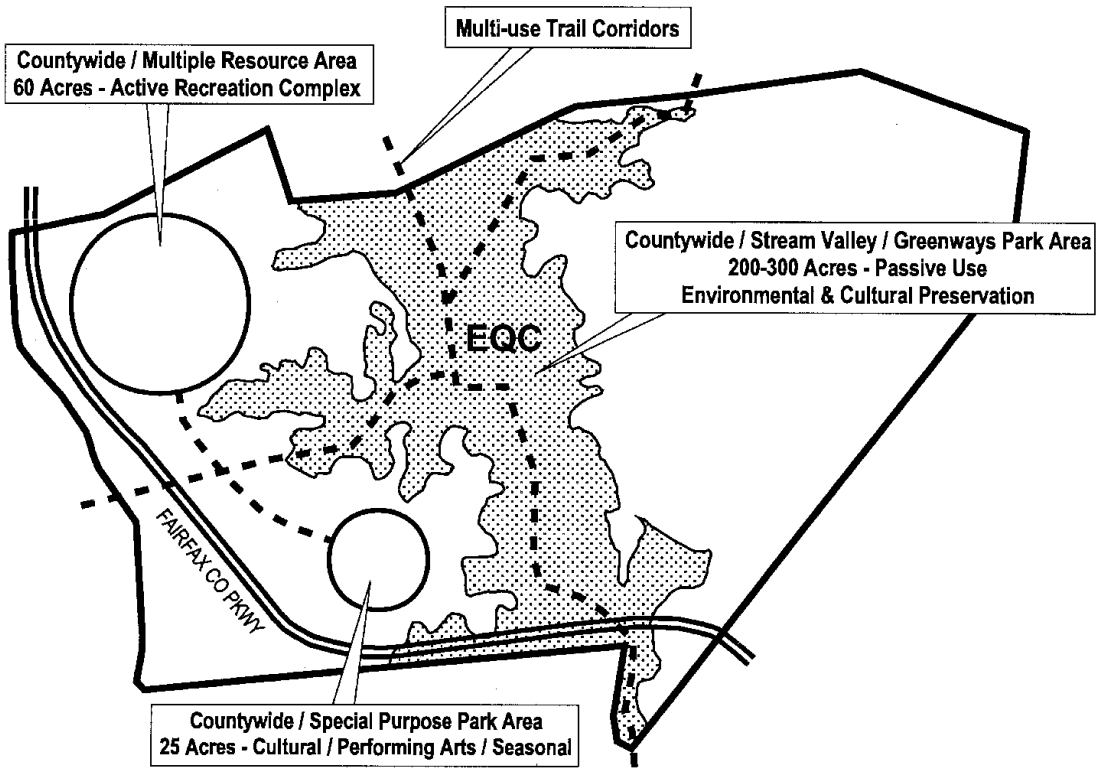
- A 60-acre portion of the park site to be developed as a complex of lighted active recreation fields for use as a sports complex to support community and regional sports interests.

- A 25-acre portion of the park to be developed as a multi-use activity center that should include indoor/outdoor facilities for cultural and seasonal events including performing arts entertainment. Such a facility could be an urban park with improvements such as an amphitheater, a market area, restrooms, concessions and similar support improvements.

Additional Parks and Recreation recommendations for the Engineer Proving Ground are provided on Figure 30 in the Belvoir Community Planning Sector (S5).

TRAILS

Trails planned for the Engineer Proving Ground are delineated on Figure 31 in the Belvoir Community Planning Sector (S5) as part of the Countywide Trails Plan. It is anticipated that pedestrian and bicycle travel will be important modes of transportation at the EPG. A comprehensive network of trails and sidewalks, is essential to providing access to employment, residences, and community uses at EPG. An extensive network of trails and pathways for non-motorized transportation should be developed to connect all public features. The network should also connect to adjacent parkland at the EPG perimeter including such as the Accotink Stream Valley and Hooes Road parks. The trail system should also provide connections to planned or existing trails serving area neighborhoods, the Joseph Alexander Transportation Center, the Springfield Business District on Backlick Road and the Springfield Mall. These connections will be extension provide connections to existing and planned regional trails such as the Franconia-Springfield Parkway trail, the Fairfax County Parkway trail, the Cross County trail via the Accotink Stream Valley, the Lorton/Laurel Hill trails, the Potomac Heritage National Scenic Trail and the Route #1 National Bicycle Trail.



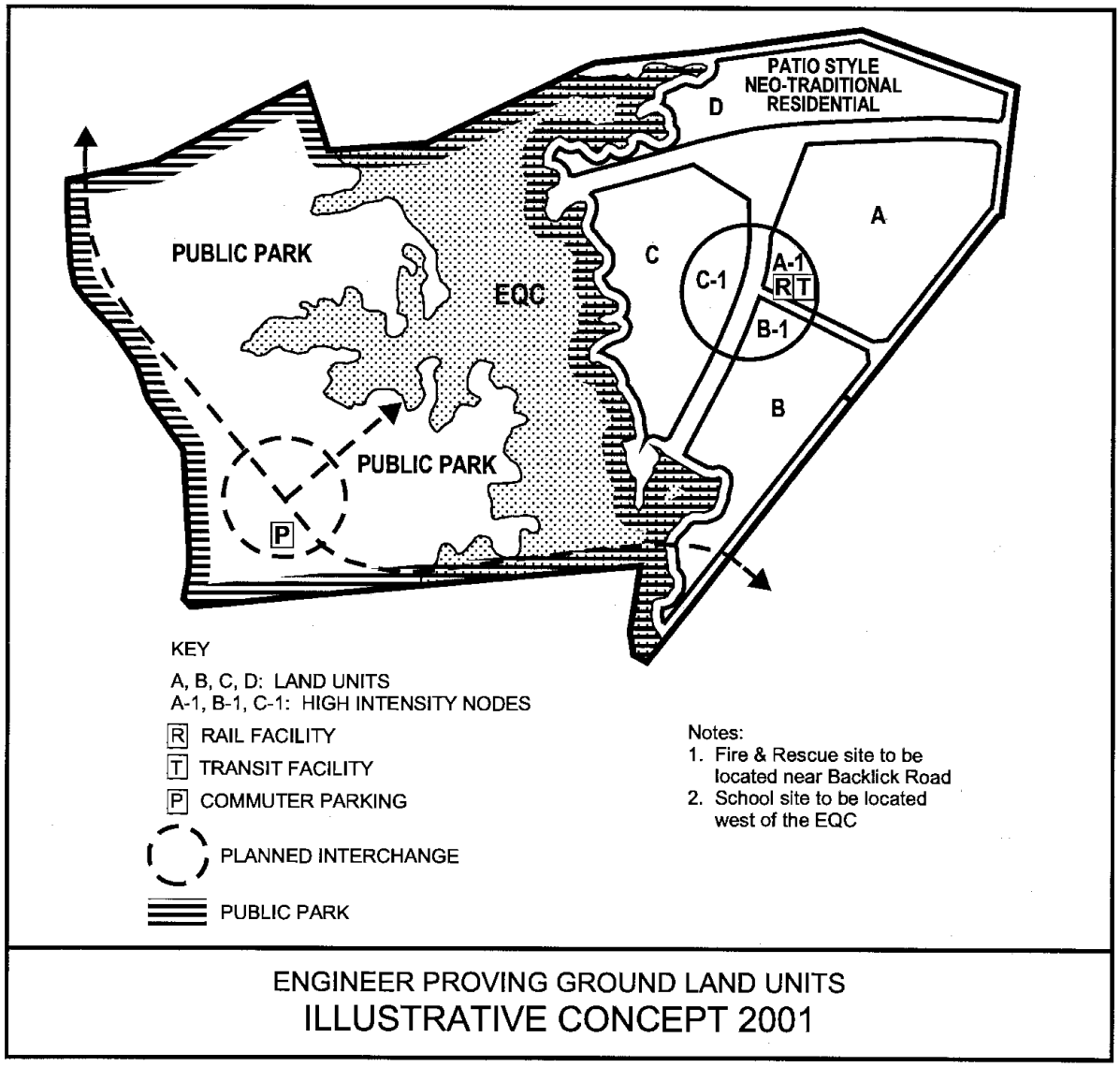
ENGINEER PROVING GROUND
PARKS

ENGINEER PROVING GROUND **FIGURE 30**
PARKS

ENGINEER PROVING GROUND LAND UNIT RECOMMENDATIONS

The recommendations, which follow, provide additional site-specific guidance for development of the Engineer Proving Ground

For the purpose of organizing land use and other site-specific recommendations, the Engineer Proving Ground has been divided into four land units, lettered as shown below on Figure 31. Individual land unit maps included with the text for each land unit show the approximate boundaries of each development phase and a generalized depiction of each land use.



ENGINEER PROVING GROUND LAND UNITS
ILLUSTRATIVE CONCEPT 2001

FIGURE 31

PHASE I
Land Unit A

CHARACTER

Land Unit A is located in the northeast portion of the EPG site and contains approximately 69 acres. Under the option for mixed-use development, this land unit is planned to contain a high-density mixed-use node of approximately 10 acres developed with mid- and high-rise office buildings at an intensity up to 2.0 FAR. The node is planned to be surrounded by low-rise non-residential uses. See Figure 32.

DEVELOPMENT PROGRAM

Land Unit A represents the first phase of development. It consists of a maximum of approximately 1.3 million square feet square feet of non-residential gross floor area as follows:

Office use	1,200,000 square feet
Support retail use	100,000 square feet

Given the magnitude of development planned in the land unit, it is essential that development occur according to an overall plan that demonstrates functional and attractive integration of all land uses and circulation systems, as detailed in the recommendations for urban design. Accordingly, the development plan for this land unit must address the entire land unit. Final Development Plans lacking sufficient detail or addressing only a portion of the land unit will be deemed to be inconsistent with this recommendation.

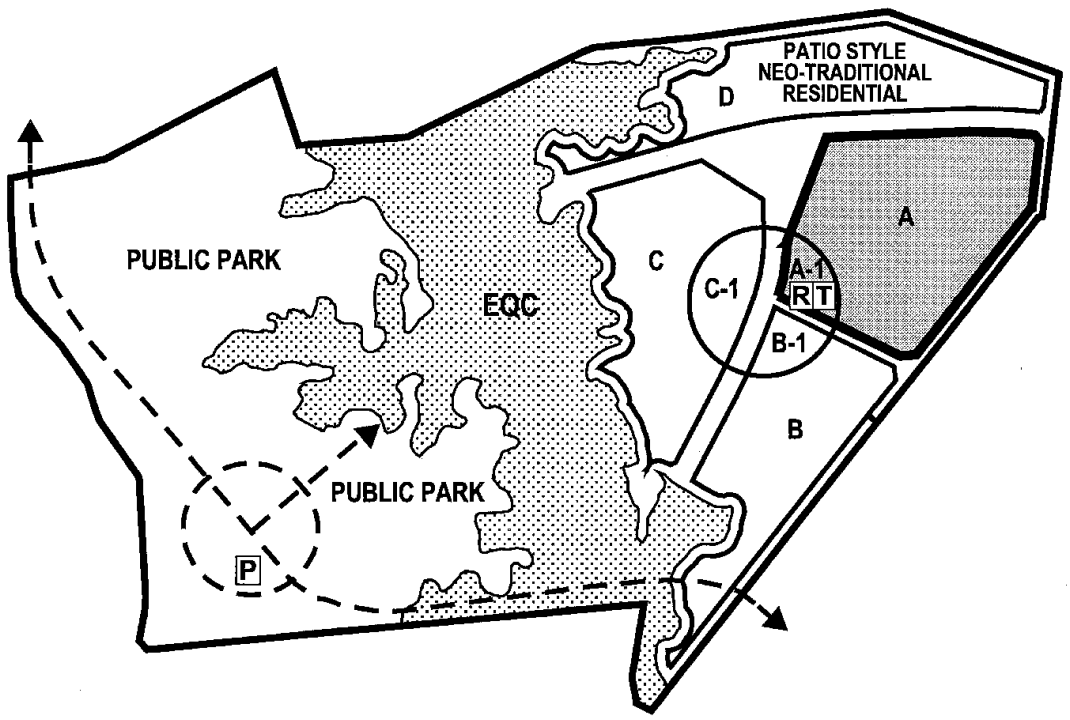
RECOMMENDATIONS

Development proposals and development plans for this land unit will be evaluated based on their conformance with both the Area-wide Recommendations and the Land Unit Recommendations outlined below.

Development outside the node is planned as low-rise non-residential uses. The low-rise, non-residential uses include office and support retail uses in campus style settings. Buffering, screening and other landscape features must be provided to mitigate visual and noise impacts where residential and non-residential uses are to be adjacent to each other. Land uses outside the node are intended to create a distinct visual break from the urban environment created in the node.

Transportation

The transportation facilities and/or services needed to serve Land Unit A of the project, as determined pursuant to the results of the transportation study which is submitted in conjunction with the initial zoning application, shall be provided prior to the initial occupancy of the land unit (See Area-wide Recommendations). In addition to the aggressive TDM program described under Area-wide Recommendations, high frequency transit shuttle service should be provided to and from the Joe Alexander Transportation Center to help achieve a non-SOV mode split target



KEY
A, B, C, D: LAND UNITS
A-1, B-1, C-1: HIGH INTENSITY NODES
R RAIL FACILITY
T TRANSIT FACILITY
P COMMUTER PARKING
PLANNED INTERCHANGE

Notes:
1. Fire & Rescue site to be located near Backlick Road
2. School site to be located west of the EQC

ENGINEER PROVING GROUND
LAND UNIT A - PHASE I

FIGURE 32

of 10 percent or higher during peak periods - i.e., 10 percent or greater person trips to/from the employment center shall be by transit, carpool, and walking/bicycle. The shuttle service may be enhanced in future phases to serve additional development on the site

Trails

Detailed trails and circulation plans should ensure that development occurs in a manner that promotes transit access and use, and fosters linkages between the various planned land uses and the adopted Countywide trail system.

PHASE II
Land Unit B

CHARACTER

Land Unit B is located in the southwest portion of the EPG site and contains approximately 47 acres. Under the option for mixed-use development, this land unit is planned to contain a high-density mixed-use node of approximately 10 acres developed with mid- and high-rise office buildings at an intensity up to 2.0 FAR. The mid- and high-rise buildings within the node are envisioned to be surrounded by low-rise non-residential uses. See Figure 33.

DEVELOPMENT PROGRAM

Land Unit B represents the second phase of development. It consists of a maximum of 1.2 million square feet of non-residential gross floor area as follows:

Office/research and development flex use	1,100,000	square feet
Support retail use	100,000	square feet

Given the magnitude of development planned in the land unit, it is essential that development occur according to an overall plan that demonstrates functional and attractive integration of all land uses and circulation systems, as detailed in the recommendations for urban design. Accordingly, the development plan for this land unit must address the entire land unit. Final Development Plans lacking sufficient detail or addressing only a portion of the land unit will be deemed to be inconsistent with this recommendation.

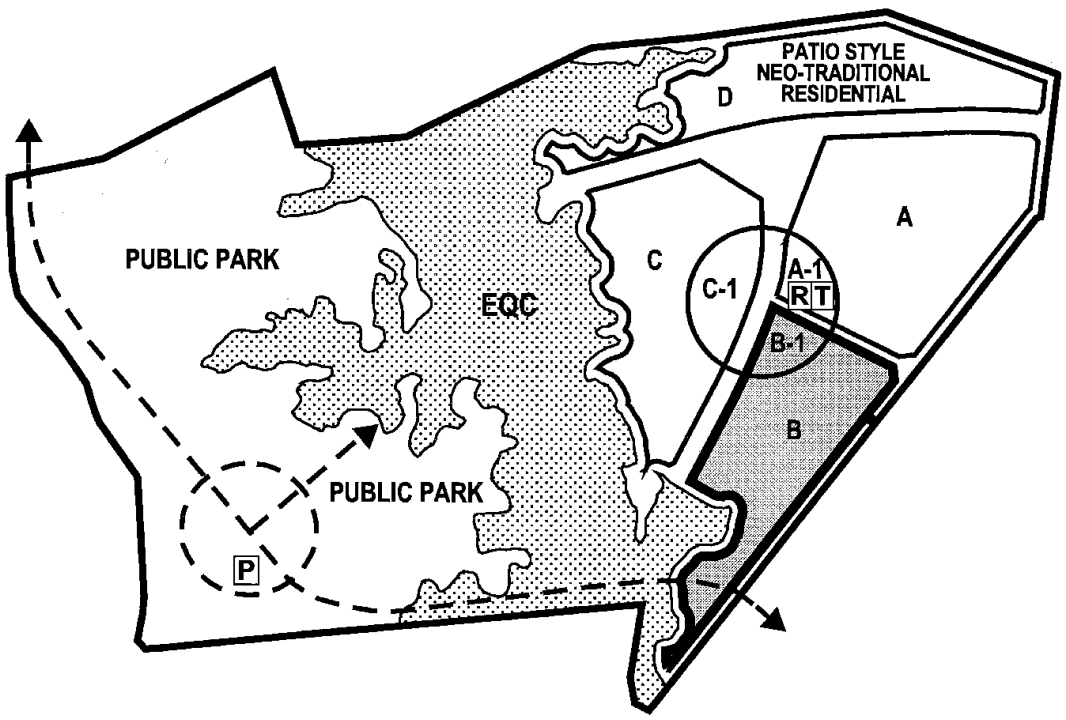
RECOMMENDATIONS

Development proposals and development plans for this land unit will be evaluated based on their conformance with both the Area-wide Recommendations and the Land Unit Recommendations outlined below.

Land Use

Land Unit B is planned for a complementary mix of office, research and development and supporting retail uses located in a high density node of approximately 10 acres tapering down to lower density land uses, located as generally shown in Figure 33.

Development in the high-density nodes is envisioned to be a functionally integrated, well-designed mixture of mid- to high-rise office, research and development uses and supporting retail uses. The node is planned at an intensity up to 2.0 FAR maximum to create a pedestrian-oriented, urban housing and employment center that can be easily served by transit. Building intensity and heights should be tapered down from the node toward the edges to provide a transition to surrounding lower density areas.



KEY
A, B, C, D: LAND UNITS
A-1, B-1, C-1: HIGH INTENSITY NODES
R RAIL FACILITY
T TRANSIT FACILITY
P COMMUTER PARKING
PLANNED INTERCHANGE

Notes:
1. Fire & Rescue site to be located near Backlick Road
2. School site to be located west of the EQC

ENGINEER PROVING GROUND
LAND UNIT B - PHASE II

FIGURE 33

Development adjacent to the node is planned to include low-rise non-residential uses. The low-rise, non-residential uses include office and research and development uses in campus style settings. Land uses outside the node are intended to create a distinct visual break from the urban environments created in the node.

Transportation

The transportation facilities and/or services needed to serve Land Unit B, as determined pursuant to the results of the transportation study which is submitted in conjunction with the Final Development Plan for Land Unit B, shall be provided prior to the initial occupancy of the land unit (See Area-wide Recommendations). In addition to the aggressive TDM program described under Area-wide Recommendations, high frequency transit shuttle service should be provided to and from the Joe Alexander Transportation Center to help achieve a non-SOV mode split target of 15 percent or higher during peak periods - i.e., 15 percent or greater person trips to/from the employment center shall be by transit, carpool, and walking/bicycle.

Trails

Detailed trails and circulation plans should ensure that development occurs in a manner that promotes transit access and use, and fosters linkages between the various planned land uses and the adopted Countywide trail system.

PHASE IIIa
Land Unit C

CHARACTER

Land Unit C is located in the southeast portion of the EPG site and contains approximately 58 acres. Under the option for mixed-use development, this land unit is planned to contain a high-density mixed-use node of approximately 20 acres developed with mid- and high-rise residential and non-residential uses at an intensity up to 2.0 FAR surrounded by low-rise non-residential outside the node. See Figure 34.

DEVELOPMENT PROGRAM

Land Unit C represents the third phase of development. It consists of a maximum of 1500 dwelling units and a maximum of 1.9 million square feet of non-residential gross floor area. The composition of the non-residential component is as follows:

Office use	1,200,000	square feet
Support retail	100,000	square feet
Hotel/conference uses	600,000	square feet

Given the magnitude of development planned in the land unit, it is essential that development occur according to an overall plan that demonstrates functional and attractive integration of all land uses and circulation systems, as detailed in the recommendations for urban design. Accordingly, the development plan for this land unit must address the entire land unit. Final Development Plans lacking sufficient detail or addressing only a portion of the land unit will be deemed to be inconsistent with this recommendation.

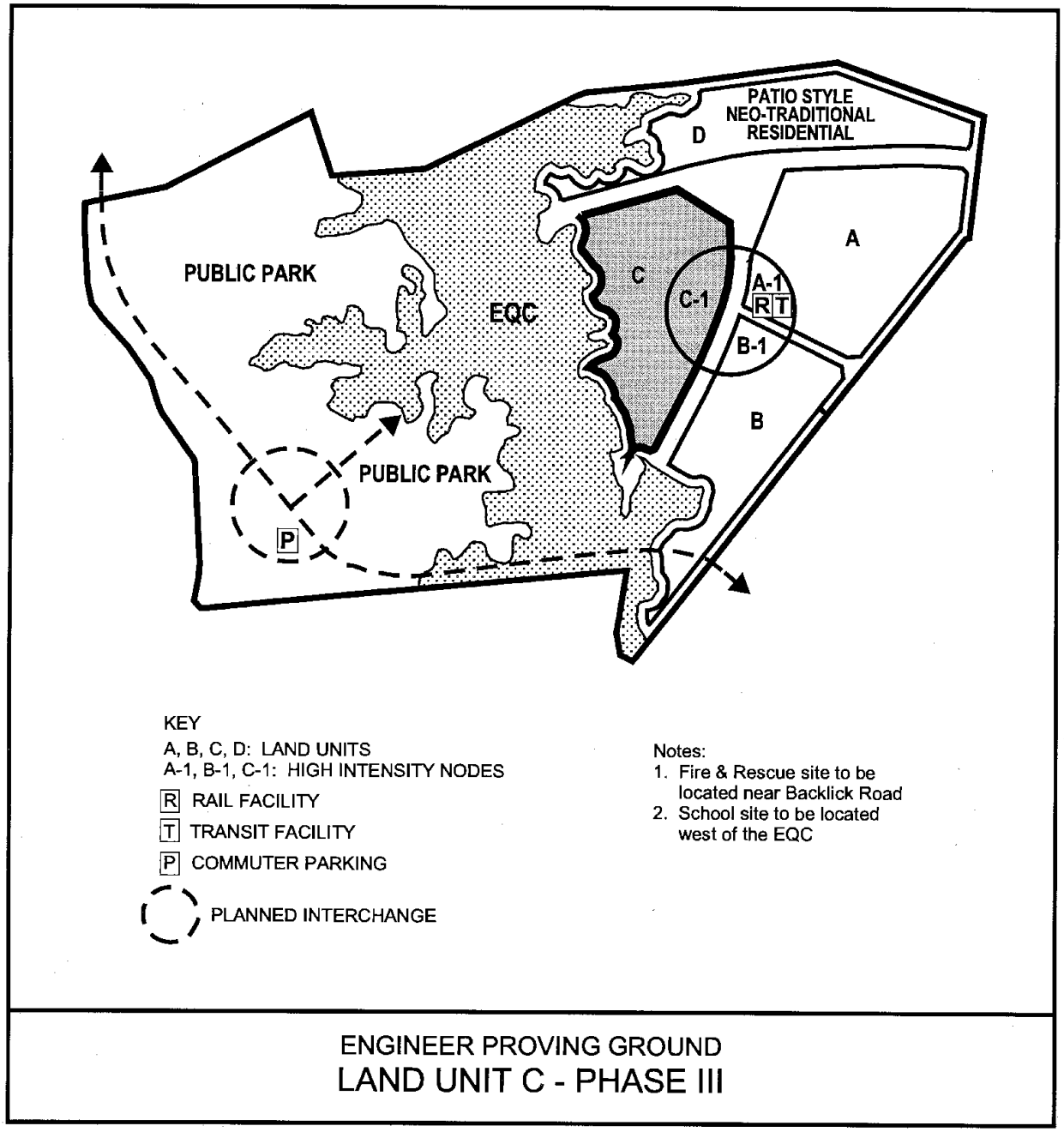
RECOMMENDATIONS

Development proposals and development plans for this land unit will be evaluated based on their conformance with both the Area-wide Recommendations and the Land Unit Recommendations outlined below.

Land Use

Land Unit C is planned for a complementary mix of office, hotel, residential and supporting retail uses located in a high density node tapering down to lower density land uses, located as generally shown in Figure 34.

Development in the high density node is envisioned to include a functionally integrated, well-designed mixture of mid- to high-rise office and hotel/conference uses, mid- to high-rise residential uses, and supporting convenience retail uses. The node is planned at an intensity up to 2.0 FAR maximum to create a pedestrian-oriented, urban housing and employment center that can be easily served by transit. Building intensity and heights should be tapered down from the



ENGINEER PROVING GROUND
LAND UNIT C - PHASE III

FIGURE 34

node toward the edges to provide a transition to surrounding lower density areas.

Development adjacent to the node is planned to include garden-style residences and low-rise non-residential uses. The low-rise, non-residential uses include office and hotel/conference uses in campus style settings. Buffering, screening and other landscape features must be provided to mitigate visual and noise impacts where residential and non-residential uses are to be built adjacent to each other. Land uses outside the node are intended to create a visual break from the urban environments created in the node.

Transportation

The transportation facilities and/or services needed to serve Land Unit C of the project, as determined pursuant to the results of the transportation study which is submitted in conjunction with the Final Development Plan for Land Unit C, shall be provided prior to the initial occupancy of the land unit (See Area-wide Recommendations). In addition to the aggressive TDM program described under Area-wide Recommendations, high frequency transit shuttle service should be provided to and from the Joe Alexander Transportation Center to help achieve a non-SOV mode split target of 15 percent or higher during peak periods - i.e., 15 percent or greater person trips to/from the employment center shall be by transit, carpool, and walking/bicycle.

Trails

Detailed trails and circulation plans should ensure that development occurs in a manner that promotes transit access and use, and fosters linkages between the various planned land uses and the adopted Countywide trail system.

PHASE IIIb
Land Unit D

CHARACTER

Land Unit D is located in the northeast portion of the EPG site and contains approximately 46 acres. Under the option for mixed-use development, this land unit is planned for 85 patio style homes. Approximately 9 acres of the Accotink Stream Valley Environmental Quality Corridor are located in this land unit. See Figure 35.

DEVELOPMENT PROGRAM

Land Unit D represents the final phase of development. It consists of a maximum of 85 patio style homes. Patio homes are envisioned as single family detached units located such that one or more of the building walls rests directly on or near a lot line. Given the need to form a transition between higher density development to the south and existing residential use to the north, it is essential that development occur according to an overall plan that demonstrates functional and attractive integration of all land uses and circulation systems, as detailed in the recommendations for urban design and "Transitions and Buffers to Residential Areas." Accordingly, the development plan for this land unit must address the entire land unit. Final Development Plans lacking sufficient detail or addressing only a portion of the land unit will be deemed to be inconsistent with this recommendation.

RECOMMENDATIONS

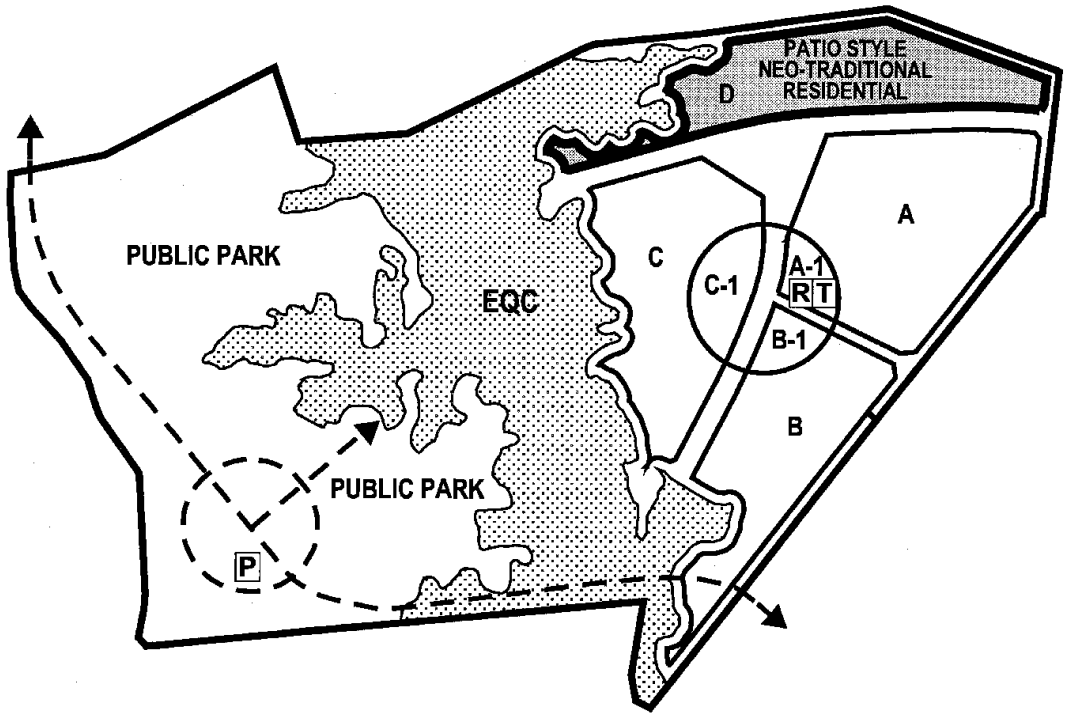
Development proposals and development plans for this land unit will be evaluated based on their conformance with both the Area-wide Recommendations and the Land Unit Recommendations contained outlined below.

Land Use

To ensure effective transition to existing residential uses, a vegetated buffer of at least 100 feet in width is to be provided along the entire northern edge of the property. This buffer should incorporate existing vegetation and be supplemented with additional landscaping as appropriate to buffer the higher density residential areas from the existing single family detached houses.

Trails

Detailed trails and circulation plans should ensure that development occurs in a manner that promotes transit access and use, and fosters linkages between the various planned land uses and the adopted Countywide trail system.



KEY
A, B, C, D: LAND UNITS
A-1, B-1, C-1: HIGH INTENSITY NODES
R RAIL FACILITY
T TRANSIT FACILITY
P COMMUTER PARKING
PLANNED INTERCHANGE

Notes:
1. Fire & Rescue site to be located near Backlick Road
2. School site to be located west of the EQC

ENGINEER PROVING GROUND
LAND UNIT D - PHASE III

FIGURE 35