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ADOPTED BY THE TOWN COUNCIL
TOWN OF HERNDON, VIRGINIA

HERNDON METRO STATION AREA STUDY
CHAPTER 6 – TRANSIT-ORIENTED CORE PLAN

PREPARED FOR
Town of Herndon, Virginia

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INTRODUCTION

The HTOC Plan emerged from the analysis of several alternatives. The process was guided by public input and Town Council and Planning Commission direction including the Commission's directive to further analyze the land use mix and possible land use intensity by undertaking a financial and fiscal impact analysis. After considerable study, roadway capacity was used to establish a target density, which was then tested for financial viability. The resulting plan factored in the capacity of the existing and proposed roadway, transit improvements, the land use mix developed through guidance from the public, current and previous Town Councils, the Planning Commission, and data from the study of successful TODs, and a revised financial impact analysis. The HTOC represents a significantly reduced development area of approximately 38 acres consisting of nine properties concentrated around the Herndon Metro Station North Entrance Pavilion.

The HTOC Plan represents a conceptual vision for future TOD at the new Metro Station in Herndon. The Plan depicts the broad goals for the 38-acre HTOC (also referred to herein as "the Core"). It functions as a resource to set general parameters for urban design, including: maximum floor area ratios; building heights; setbacks; public spaces; pedestrian and vehicular access; and parking. It is anticipated that the Town of Herndon will update its zoning standards using these parameters. The resulting code language in combination with the HTOC will guide the Town and developers when implementing the conceptual vision on a project-by-project basis. Future code language will provide provisions for graduated floor area ratios based upon proximity to the Herndon Metro Station Pavilion and incentives.

Table 6-1 | Herndon Transit-Oriented Core Plan–Land Use Mix Assumption for the Study Purposes

Land Use	By 2035
Retail	3%
Office	50%
Residential	41%
Hotel	6%

Table 6-2 | Summary of Potential Development for the Herndon Transit- Oriented Core Plan

Land Use	Displaced 2010 Floor Area*	Additional New Floor Area by 2035	Total Area (Square Feet)	Assumed "Conversion Rate"	Total Employees
Office	805,281	2,644,200	3,449,481	1 per 250 sq.ft.	13,797
Retail	0	206,969	206,969	1 per 500 sq.ft.	414
Hotel (Square Feet)	75,280	338,658***	413,938	1 per 625 sq.ft.	662
				Total Employees	14,833
				Approx. Net New Employees**	13,425
Land Use			**Units (1,200 SF/Unit)**	**Assumed "Conversion Rate"**	**Total Residents**
Residential			2,357	2 per Household	4,714

Note: The items included in this table are approximate and are based on assumed conversion rates, land areas, and FARs. They are meant for planning purposes only.
* Displaced floor area refers to buildings (existing in 2010) that will be demolished and replaced as part of redevelopment. Trips and employees existing in 2010 for that floor area are included in the totals for 2035.
** Employees associated with the additional new floor area emerging between 2010 and 2035. Does not include employment in floor area in 2010.
*** The additional new floor area for hotel varies slightly due to the difference created by using the 625 sq.ft. conversion ratio for the existing hotle square footage.

HERNDON TRANSIT-ORIENTED CORE - FRAMEWORK DIAGRAM

The Framework Diagram for the HTOC Plan is illustrated in Figure 6.1. The Framework Diagram identifies the area that has become the focus of the Plan. Targeted FARs ranging from 3.8 to 4.3 have been applied to the Core. It is anticipated that the highest density (FAR 4.3) would be closest to the Metro Station or on sites associated with high infrastructure costs (i.e., new roads). Lower densities would be further away from the Metro Station and closer to the edge of the Core. It should be noted that parking garages are not counted towards the calculation of FAR.

The gross building floor area of land uses as a share of total floor area in the HTOC assumed for study purposes is presented in Table 6-1. Table 6-2 identifies the

Figure 6.1 | Herndon Transit-Oriented Core Plan—Floor Area Ratio Framework Diagram

Source(s): City of Herndon GIS, ESRI

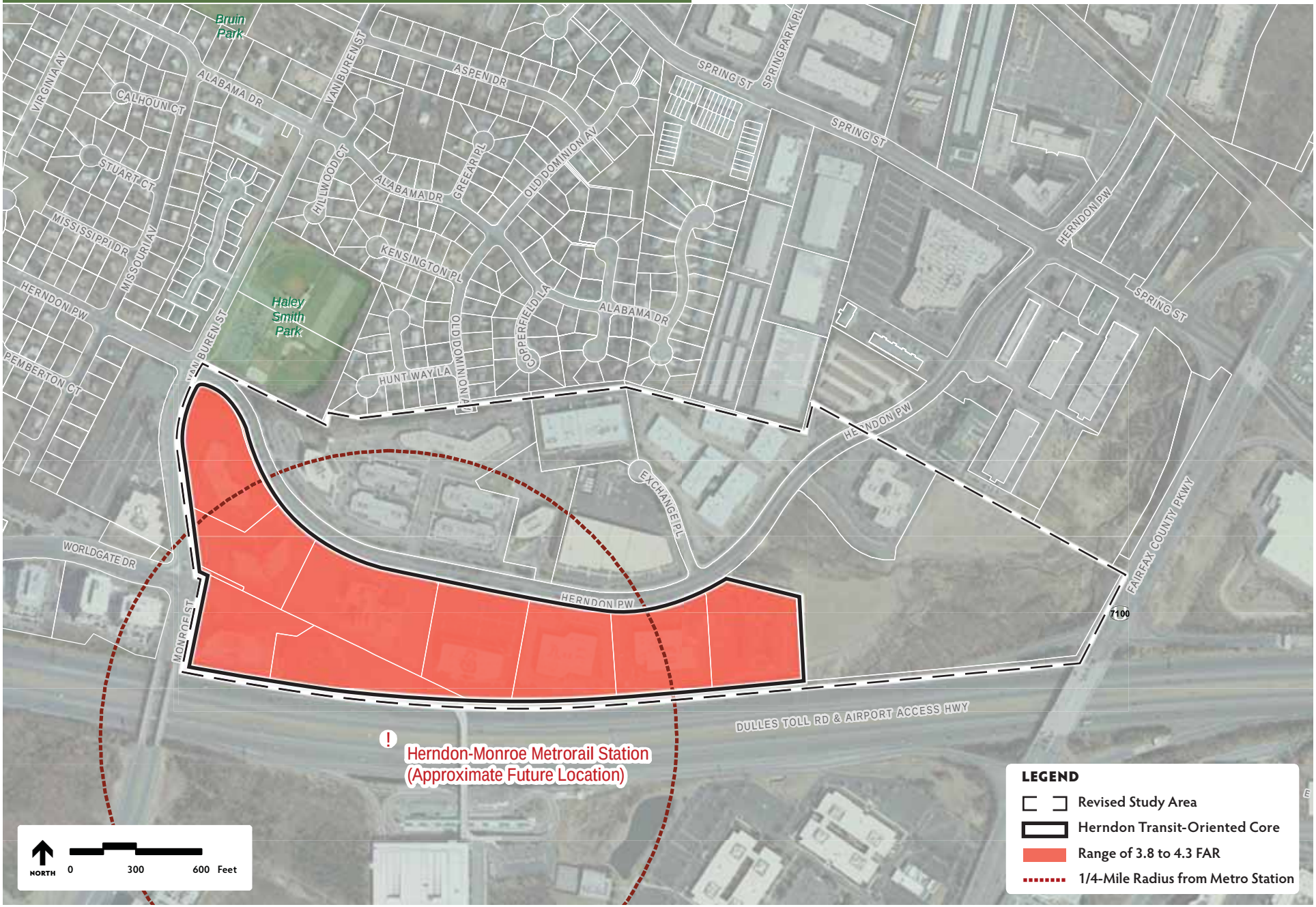


Figure 6.2 | Herndon Transit-Oriented Core Plan

assumed gross building floor area as a share of the total floor area in the HTOC. This land use mix and potential development program were assumed for analysis purposes.

HERNDON TRANSIT-ORIENTED CORE PLAN

The HTOC is depicted in the Illustrative Plan, shown in Figure 6.2, is described further in the sections below. The graphic shows the HTOC (with a FAR range of 3.8 to 4.3) in greater detail with buildings, parking structures, public spaces, and streetscape amenities illustrated. Based on the target FAR range, in 2035, the average FAR will be 4.17 resulting in potentially 4.1 million square feet of commercial floor area (retail/office/hotel) and 2,357 dwelling units. The frontage along the south side of the Herndon Parkway is urbanized with a street wall and bicycle and pedestrian improvements.

The HTOC Plan, as illustrated in Figure 6.2, is to be used as a guide when considering future development and redevelopment. It is intended to set a standard for quality development and does not prescribe specific building shapes and locations. The Town welcomes inventive solutions by developers and encourages the use of new urbanist principles (especially avoidance of suburban-type office buildings and superblocks) and an appealing street level environment oriented to pedestrian activity.

CONCEPTUAL DESIGN APPROACH

For redevelopment closest to the new Metro Station, the HTOC Plan envisions a mixed use TOD. The TOD will give Herndon a new neighborhood and economic engine providing employment, housing, shopping, dining and community activities. Future HTOC residents will be able to live in an active and lively neighborhood with a short walk to the Metro Station. Herndon residents will benefit from new neighborhood retail and services as well as public space amenities. Workers will have the flexibility of commuting by train or living near their place of employment.

The HTOC Plan follows principles of Smart Growth and best practices for TOD planning by:

- Providing a mix of uses that reinforce each other, shops, services, employment, recreation and residences, framing public spaces.
- Promoting a walkable community where people have choices, and the opportunities to live, work, shop, and play without having to use a vehicle.
- Supporting transportation alternatives, including walking, biking, and mass transit.
- Incorporating higher-density housing that supports transit use, adds vitality to employment and commercial areas, and meets a need in the market.
- Creating a variety of daytime and evening activities.
- Integrating a comprehensive parking strategy that includes the sharing of peak and off-peak parking demand.

A three-dimensional massing diagram, presented as Figure 6.3, was also created to illustrate the HTOC Plan. The diagram is based on the urban design concepts and the basic density assumptions in the Plan focusing on the Core with a 3.8 to 4.3 FAR range. The model shows how the buildings of the HTOC could be accommodated within 12 to 15 stories throughout the Core (based on the assumption that lot coverage could be as high as 70 percent, or more). The buildings will utilize setbacks on upper floors and cornice lines on lower floors to promote superior pedestrian scale, and increase light at the sidewalk level. The buildings will form the edges of public spaces designed for the public's use and enjoyment.

NORTH OF HERNDON PARKWAY

The HTOC involves only nine properties, all of which are south of the Herndon Parkway. For properties north of the Herndon Parkway and east of the Core refer to the section titled 'Long-Term Vision' at the end of this chapter. The Long-Term Vision envisions a time beyond 2035 when transit use and the full benefits of TOD have been realized and significant regional transportation infrastructure improvements have been made to facilities within and adjacent to the town.

Beyond 2035, when such improvements occur and additional capacity makes redevelopment north of the Herndon Parkway desirable, it is crucial that any redevelopment is harmonious with the HTOC development south of the Herndon Parkway. Additional guidance concerning the form and substance of development beyond 2035 is found at the end of this chapter.

PUBLIC SPACES

Public spaces allowing for flexible programming and variety in design are the key to creating an active community. A series of public places should be connected throughout the Core to provide choices for traversing the TOD and to encourage residents, commuters, shoppers, and office workers to explore and experience the entire center. Elements such as park benches, street trees, courtyards, fountains and unique landscape fea-

Figure 6.3 | Herndon Transit-Oriented Core Plan— Conceptual Massing

Looking east along Worldgate Drive

Looking north along Herndon Metro Promenade

tures should be dispersed throughout the Core, serving retail, service, employment, community facilities and residential uses. The public space elements must be of superb design and high-quality materials that blend visual appeal with function. The quality and design of these public spaces, such as incorporating unique artistic elements, will help give the Herndon Metro Station Area a highly recognizable sense of place. It is envisioned that these special places will be linked through a common design vocabulary of textured paving materials, ornamental landscaping, and street furniture.

There are two major public spaces within the HTOC each with their own focus, the Herndon Parkway and the Herndon Metro Promenade.

Herndon Parkway

The Herndon Parkway is a boulevard with a landscaped median forming a loop through the town. In the HTOC, the Herndon Parkway lies along the northern edge of the Core, between Van Buren Street and Fairbrook Drive. The HTOC envisions the south side of the parkway lined by a rich mix of street life, restaurants, retail, entertainment, office and residences, providing an appealing edge and entry to the Herndon Metro Station Area. The streetscape along the south side of the Herndon Parkway will feature a cycle track as well as a conventional sidewalk. Both facilities will connect to the regional trails, creating a pleasant walking loop for visitors and residents of the Core. Wide sidewalks will allow ample room for planting areas with potential for café space and appropriate outdoor display areas. As redevelopment occurs, design should include focal points and opportunities for people to stop, shop, and dine. Figures 6.4 and 6.5 show perspectives of Herndon Parkway as envisioned in the HTOC.

The Herndon Metro Promenade

The signature open space within the HTOC will be the Herndon Metro Promenade. Crucial to the success of the Herndon Metro Station Area, the Herndon Metro Promenade must make arrival in Herndon a unique experience among Metro stations.

The Herndon Metro Promenade is located in front of the Metro Station's North Entrance Pavilion and extends north to Herndon Parkway for Metrorail passengers visiting or departing from Herndon (Figure 6.2). It will also serve as a hub for the TOD community. This community space will feature a mix of plaza spaces and planted areas with sculptural elements and seating areas. The surface of the Herndon Metro Promenade will feature appealing, high quality, durable pavers that are ADA compliant. This public space, augmenting other town venues, could be used for community events. Pedestrian traffic to and from the North Entrance Pavilion will be served by uses that enable them to stop and eat or get take-out food, purchase a newspaper, drop-off dry cleaning or exercise at the fitness center.

Linear parks lead to the Herndon Metro Promenade along the southern edge of the Core. These connect with a larger trail system in Herndon and the region. A wide path traverses this area, which will also provide emergency vehicle access.

LAND USE

Herndon Parkway, Worldgate Drive Extension, and the Herndon Metro Promenade feature mixed-use buildings with ground-floor commercial and office or residential on the upper floors. These buildings could be 15 stories tall or less (including the parking decks) assuming a 70 percent or more lot coverage. Taller buildings could occur with less lot coverage, but should not exceed 20 stories, inclusive of embedded parking decks. As stated previously, the buildings will utilize setbacks on upper floors and provide cornice lines on lower levels, promoting superior pedestrian scale and bringing more light to the streets and public spaces. Retail commercial will feature specialty/convenience retail and entertainment uses including restaurants, primarily on the ground floor space fronting Herndon Parkway, Worldgate Drive Extension, and the Promenade

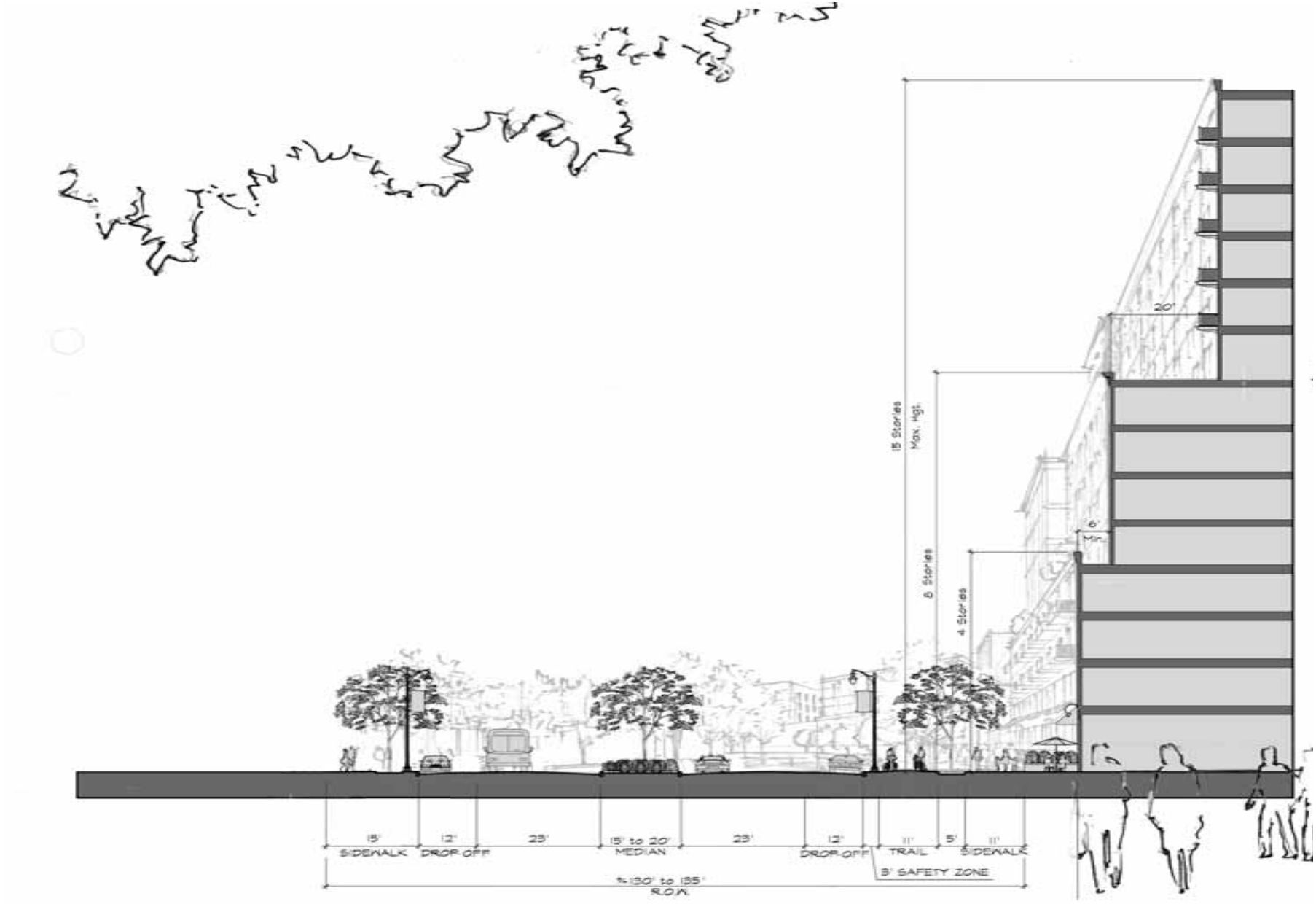
Some of the mixed-use buildings should include rental apartments and/or owner occupied condominiums. These housing units could be a mix of one-, two-, and three-bedroom units. Higher density housing in communities adjacent to transit options can be attractive to the growing number of households interested in living in a vibrant mixed-use community. Furthermore, the inclusion of multifamily residential optimizes the benefits of TOD.

The office component of the HTOC includes highest quality Class A space located primarily on the middle and upper floors of mixed-use buildings. The office buildings have convenient access to both the Metro station and the Dulles Toll Road. A portion of the structured parking under and behind the buildings will be shared with other adjacent uses.

There should be at least one high-end, full-service hotel with banquet and conference facilities. The hotel buildings should be designed and programmed to encourage the use of the nearby retail and recreational facilities within the Core. This will ensure that the hotel component is functionally integrated into the community and help activate the streetscape during non-office hours.

Figure 6.4 | Herndon Transit-Oriented Core Plan—Perspective

Figure 6.5 | Herndon Transit-Oriented Core Plan—Perspective/Cross-Section



PARKING

Implementation of the plan should include a strategy for sharing peak and off-peak parking capacity among the different uses, consistent with the sharing provisions in the Town of Herndon Zoning Code. The combination of parking decks and on-street spaces offer both short-term and long-term parking opportunities. Because of the urban style of development and the high visibility of all sides of buildings, parking decks will be wrapped entirely by building floor area or decorative façade treatments. Based on public feedback (specifically property owners), this is particularly important for views along the Dulles Toll Road. Additionally, TDM techniques directly related to reductions in parking could be allowed and encouraged by the Town.

TRANSPORTATION

Realizing that the local street system serving the HTOC was extremely constrained, the Town requested a transportation analysis that would evaluate the capacity of the most constrained portions and identify the amount of development that could be served by the street system. The Town directed that street improvements be: (a) within the type of street features currently used by town (excluding grade-separated interchanges, displaced left turn lanes, triple left turn lanes, or flyovers); and (b) of a cost reasonable for funding in the foreseeable future when development is anticipated to occur. The fiscal and financial models reflect that anticipated development at the levels projected has the ability to fund recommended street improvements described below.

As described in Chapter 5, *Alternative Plans*, the roadway improvements necessary to support redevelopment across the larger station area, particularly Area Plan 2, were not consistent with these requirements.

In order to determine the maximum level of development in the Core that could be supported at acceptable intersection levels of service, an iterative transportation analysis was performed. A roadway network similar to Area Plan 1, but excluding the new connector road from Spring Street, was assumed. Applying the land use mix presented in Table 6-1, traffic forecasts associated with varying levels of development were computed. Similar to the analysis for Area Plans 1 and 2, these forecasts were tested at the key intersections using Synchro. This sensitivity analysis indicated that approximately seven million square feet of total land area could be accommodated in the Core. Given the 880,561 square feet of existing uses that would be replaced, approximately six million square feet of additional development could be accommodated in the Core, while maintaining acceptable overall intersection operations.

An appropriate FAR range consistent with this level of development was then determined. The resulting densities and land uses, consistent with Table 6-2, were then carried forward for further analysis.

As with the existing conditions analysis presented in Chapter 3, *Existing Conditions*, operational analysis of ten key intersections in and around the Herndon Metro Station Area was performed using VISSIM, including:

- Herndon Parkway/Van Buren Street
- Van Buren Street/Worldgate Drive
- Van Buren Street/Alabama Drive
- Herndon Parkway/Commercial Access
- Herndon Parkway/Exchange Place
- Herndon Parkway/Fairbrook Drive
- Spring Street/Fairfax County Parkway Ramps
- Spring Street/Herndon Parkway
- Elden Street/Monroe Street
- Elden Street/Van Buren Street

Forecasts of future traffic conditions were analyzed for 2035 (full build-out) and are presented in Figure 6.6. Future traffic volumes include existing traffic counts, regional traffic growth, other approved development traffic and traffic generated by the implementation of the HTOC Plan.

Regional annual traffic growth rates for the various roads within the Herndon Metro Station Area were computed based on the existing traffic conditions (2010) and future (2030) traffic conditions for those roads included in the MWCOG Round 7.2 long-range travel-demand forecasting model. These growth rates were applied to the existing traffic counts taken in 2010 and presented in Chapter 3, *Existing Conditions*. Adjustments were then made to the through traffic volumes along the major roadways. These adjustments generally represent between one and nine percent of the volume on the particular traffic movement and were necessary to maintain a balance in traffic volume between intersections after the application of different growth rates on the various road segments. Vehicle trip assignments at the study intersections associated with the approved,

but incomplete development of the Fairbrook Business Park were determined based on previous traffic studies. The aggregate of the existing, growth, and other development traffic represents future conditions without redevelopment in the TOD area.

The total numbers of vehicle trips that would be generated by each land use within the Core were determined based on data published by the ITE in the Trip Generation manual, 8th Edition. The ITE trip rates do not account for transit availability or trips between adjacent land uses prevalent in high-density, mixed-use TOD. Fairfax County guidelines for transit reduction (25 percent) were used as a basis. In addition, estimates of the proportions of trips using transit were based on the 2005 Development-Related Ridership Survey sponsored by the WMATA. The transit mode shares for each land use are listed below:

- 25 percent for office uses
- 25 percent for hotel uses
- 25–35 percent for residential uses (depending on unit type)

Internal trips are those made between proximate uses that do not add vehicle trips to the road network, such as walking trips, bicycle trips, shuttle/circulator trips, or auto trips between adjacent parking facilities. While these interactions are expected within mixed-use developments, internal trip capture was conservatively excluded from this analysis. Table 6-3 summarizes the numbers of trips associated with the redevelopment levels assumed by 2035. For clarity, existing land use (2010), future land use (2035), and redevelopment totals (change from 2010 to 2035) are provided in Table 6-3.

The vehicle trips for the analysis year were distributed across the road network according to the following trip percentages, based on current traffic trends and volumes in the area and workflow routes from the TPP data for the TAZs within the Refined Study Area, and accounting for the refined redevelopment area and associated roadway improvements:

- 20 percent from the east on Spring Street (including Fairfax County Parkway)
- 35 percent from the west on and Worldgate Drive
- 15 percent from the west on Herndon Parkway
- 10 percent from the north on Herndon Parkway
- 10 percent from the north on Van Buren Street and Monroe Street
- 10 percent from the south on Van Buren Street

In addition, trips generated by existing land uses and the approved Fairbrook development were redistributed to take advantage of the added roadway capacity provided by the Worldgate Drive Extension. The regional origins and destinations of these trips remain consistent with the Census information presented above.

The resulting traffic assignments were added to the existing, regional growth, and other development traffic volumes to yield the future traffic forecasts for 2035 conditions (Figure 6.6). Average Daily Traffic (ADT) volumes were estimated for the major roadways assuming that the PM peak hour represents 10 percent of the daily volume (Figure 6.6). Future traffic conditions at the ten study intersections were analyzed using the detailed VISSIM network and the future traffic forecasts.

In order to accommodate the 2035 traffic forecasts, several roadway improvements would be required:

- The addition of a northbound right turn lane on Van Buren Street at Herndon Parkway.
- The extension of Worldgate Drive from Van Buren Street to Herndon Parkway as a four-lane road with turn lanes ("Worldgate Drive Extension").
- The reconfiguration of the median and channelizing island on Worldgate Drive at Van Buren Street to add a second eastbound through lane.
- The one-lane widening and median modification along westbound Herndon Parkway at the Worldgate Drive Extension to accommodate a second left turn lane
- The one-lane widening of Spring Street eastbound between the Fairfax County Parkway Ramps and Herndon Parkway, continuing approximately 650 feet west of Herndon Parkway.
- The one-lane widening for approximately 400 feet westbound on Spring Street from the Fairfax County Parkway Ramps to the point where the existing right-turn lane begins.
- The reconfiguration of the Fairfax County Parkway off-ramp at Spring Street to accommodate an exclusive southbound left turn lane.
- The addition of two northbound lanes on Herndon Parkway at Spring Street.
- The addition of a second left turn lane on southbound Herndon Parkway at Spring Street.
- The addition of traffic signals at Worldgate Extension and Exchange Place along Herndon Parkway.
- The reconfiguration of the existing traffic signals at the Herndon Parkway/Van Buren Street, Worldgate Drive/Van Buren Street, Herndon Parkway/Spring Street, and Spring Street/Fairfax County Parkway Ramps intersections to accommodate the above lane use changes.

Figure 6.6 | 2035 Traffic Counts and Lane Configurations

Source(s): City of Herndon GIS, ESRI

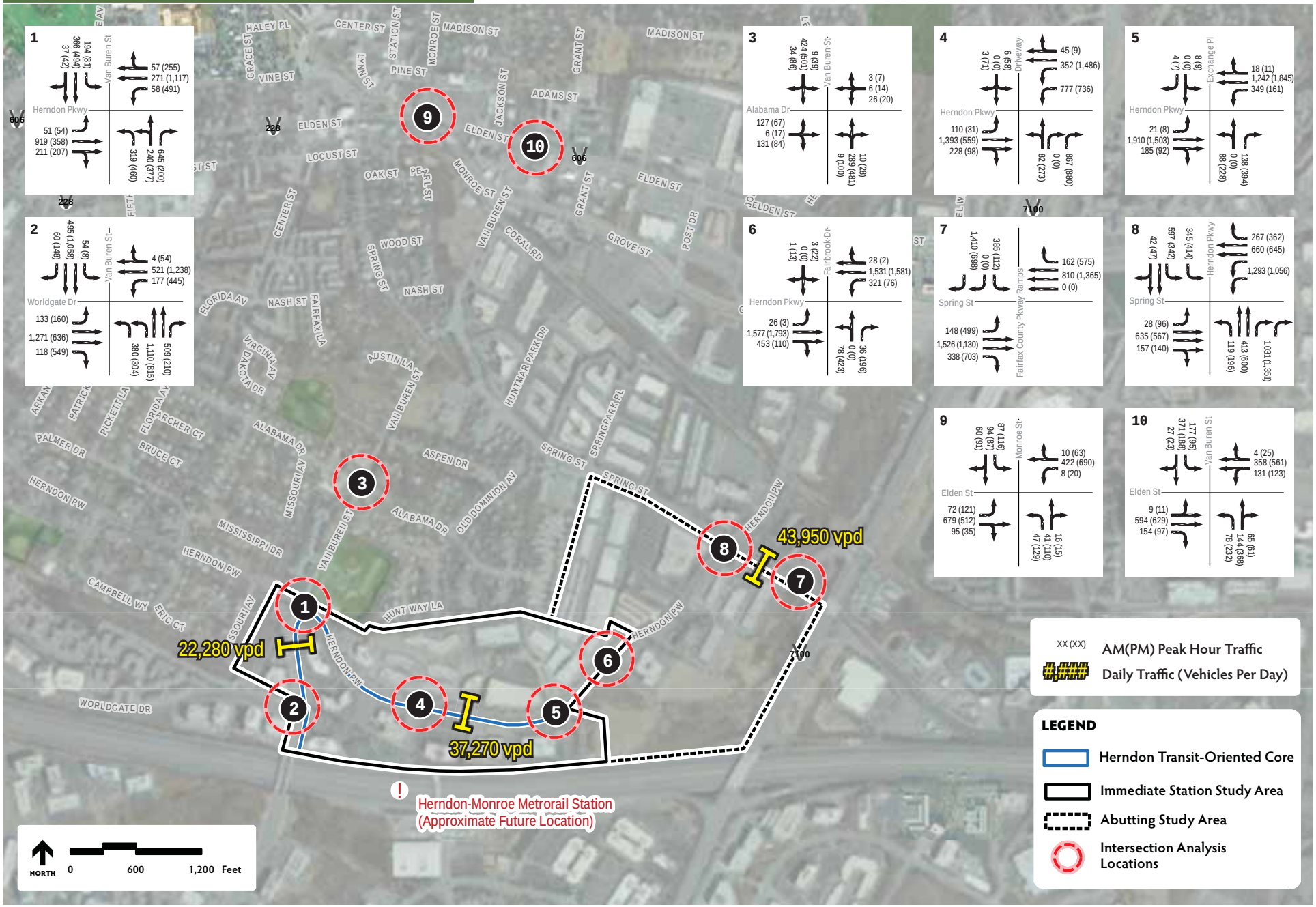


Figure 6.7 | Herndon Transit-Oriented Core Plan—Transportation Improvements (West)

Source(s): City of Herndon GIS, ESRI

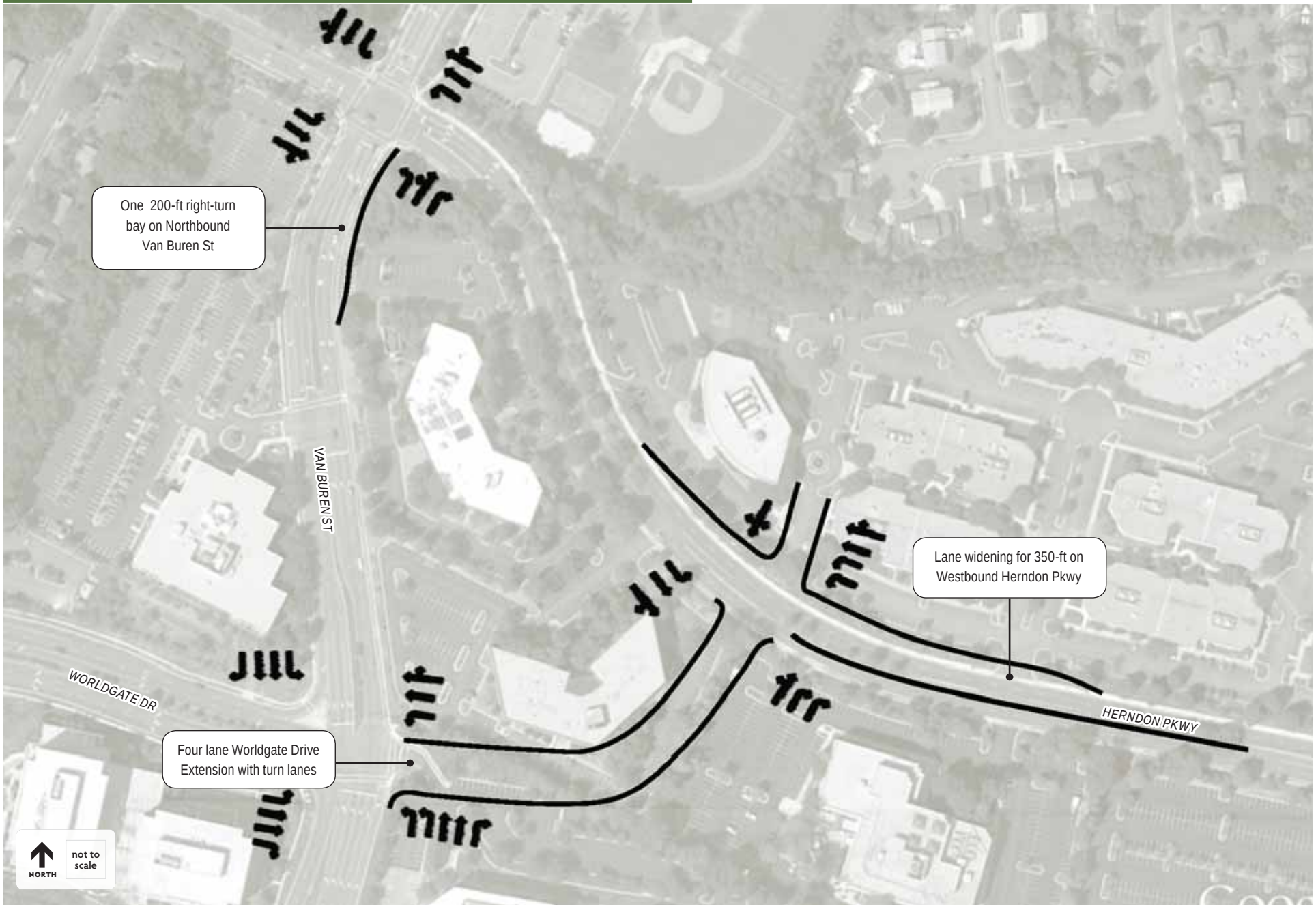


Figure 6.8 | Herndon Transit-Oriented Core Plan—Transportation Improvements (East)

Source(s): City of Herndon GIS, ESRI

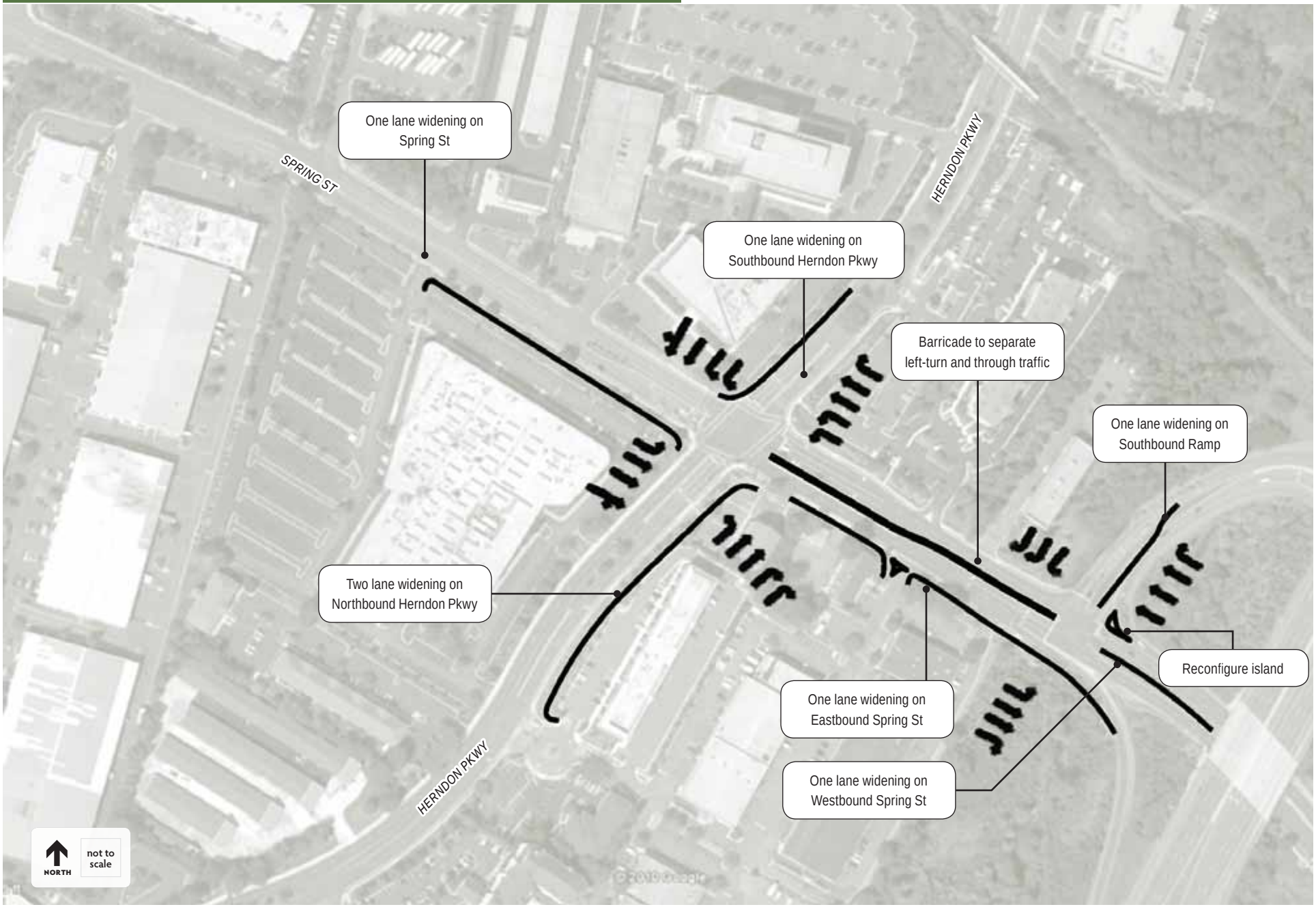


Table 6-3 | Herndon Transit-Oriented Core Plan Trip Generation Summary 2035

Part A Land Use Type	Land Use Code	Unit Type	2010* Units	New Units 2035	AM Distribution Total	Trips added as part of Redevelopment In	Out	PM Distribution Total	In	Out
Townhomes	230	Dwelling Units	0	0	0	0	0	0	0	0
Mid-Rise Apartments	223	Dwelling Units	0	707	277	86	191	328	190	138
High-Rise Apartments	232	Dwelling Units	0	1,650	507	96	411	576	357	219
Hotel	310	Rooms	146	516	313	191	122	304	161	143
Office	710	1000Sq. GFA	805	2,644	2,576	2,267	309	3,040	517	2,523
SITE GENERATED TRIPS					3,673	2,640	1,033	4,249	1,226	3,023

Part B Transit Reductions	Land Use Code	Unit Type	Units	AM Distribution Reductions	In	Out	PM Distribution Reductions	In	Out
Townhomes	230	Dwelling Units	0	0	0	0	0	0	0
Mid-Rise Apartments	223	Dwelling Units	707	69	21	48	82	48	34
High-Rise Apartments	232	Dwelling Units	1,650	178	34	144	202	125	77
Hotel	310	Rooms	516	78	48	30	76	40	36
Office	710	1000Sq. GFA	2,644	644	567	77	760	129	631
Total Transit Reductions				969	670	299	1,120	342	778
Residential Subtotal				537	127	410	621	375	246
Office Reductions				2,167	1,843	323	2,508	509	2,000
TOTAL SITE GENERATED TRIPS (PART A MINUS PART B)				2,704	1,970	734	3,129	884	2,246

Existing Land Uses*	Land Use Code	Unit Type	Units
Hotel	310	Rooms	146
Office	710	1000Sq. GFA	805

Total 2035 Land Uses (Existing + New)	Land Use Code	Unit Type	Units
Townhomes	230	Dwelling Units	0
Mid-Rise Apartments	223	Dwelling Units	707
High-Rise Apartments	232	Dwelling Units	1,650
Hotel	310	Rooms	662
Office	710	1000Sq. GFA	3,449

Refer to Figure 6.7 and 6.8 for the proposed transportation improvements for 2035.

The levels of service and vehicular delays at the critical intersections with these improvements are summarized in Table 6-4. Each of the study intersections would operate at LOS D or better during both the AM and PM peak hours with the HTOC plan, with the exception of the Van Buren Street/Alabama Drive intersection. During the PM peak hour, this intersection would experience significant delays, assuming the current intersection configuration and all-way stop sign control remain in place. The Town has identified this segment of Van Buren Street for the potential application of measures to improve pedestrian and bicycle accommodations and reduce the priority of automobiles. The feasibility and appropriateness of modifications to Van Buren Street will be studied under a separate effort.

TRANSPORTATION ANALYSIS FINDINGS

The results of the analysis indicate that the traffic generated by the HTOC could be accommodated with intersection-focused road improvements of moderate scope. Mobility for drivers is projected to be maintained without significant impacts to pedestrian, bicycle, or bus operations. Furthermore, this plan establishes access to the Herndon Metro Station Area with the highest priority going to pedestrians, bicyclists, and transit users.

NEIGHBORHOOD TRAFFIC AND PARKING

The street and block network has been designed to limit vehicular interaction between the Herndon Metro Station Area and the nearby residential communities. No new street connections are planned with the single-family neighborhoods to the north, and the majority of traffic is focused on major corridors into and out of the Herndon Metro Station Area. However, if cut-through traffic or speeding issues develop in residential areas in the future, traffic calming measures could be considered for implementation. Examples of effective traffic calming methods to address specific issues include:

Cut-through Traffic

- Partial street closures
- Full street closures
- Diversions

Speeding

- Speed humps/raised crosswalks/raised intersections
- Roundabouts/neighborhood traffic circles
- Neck downs/chokers/chicanes

It is not anticipated that these measures would be required, but they could be evaluated for implementation if the need arises.

Table 6-4 | Herndon Transit-Oriented Core Plan Level of Service Summary – 2035

Intersection	AM PEAK		PM PEAK	
	Delay	LOS	Delay	LOS
Van Buren St & Worldgate Dr	54.7	D	42.8	D
Van Buren St & Herndon Pkwy	44.7	D	52.4	D
Van Buren St & Alabama Dr	28.3	D	165.7	F
Herndon Pkwy & Spring St	51.8	D	48.1	D
Spring St & Ramp to Fairfax County Pkwy	51.9	D	23.8	C
Elden St & Monroe St	20.8	C	27.1	C
Elden St & Van Buren St	32.3	C	34.0	C
Herndon Pkwy & Worldgate Extension/Driveway	32.5	C	29.4	C
Herndon Pkwy & Exchange Place/Courtyard Hotel	20.4	C	27.2	C
Herndon Pkwy & Van Buren Office Park/Fairbrook Drive	10.4	B	22.9	C

Given the proximity of existing residential communities to the Herndon Metro Promenade, the potential exists for Metro riders to park in the adjacent neighborhoods. To preclude this, a Residential Permit Parking Zone may be designated by the Town Council. Such a zone could allow registered residents and short-term visitors to park, while prohibiting commuter parking.

INFRASTRUCTURE

The infrastructure and capital improvements that are associated with the HTOC are outlined in Chapter 7, *Capital Improvements Guide*.

PRINCIPLES AND GUIDELINES FOR THE HERNDON TRANSIT-ORIENTED CORE PLAN

As presented in Chapter 1, *Goals and Objectives*, during the course of the planning process, the Planning Commission established a Vision Statement, guiding principles, and goals and objectives for development in the Herndon Metro Station Area.

The Town also developed principles and guidelines to address specifically open space, public and semi-public space, and private development features.

PROVISIONS FOR PASSENGER DROP-OFF AND PICK-UP AT THE NORTH ENTRANCE PAVILION OF THE METRO STATION

At the onset of Metrorail service, a transit center providing bus, taxi, and private vehicle drop-off along the Herndon Parkway will be in place. Access to the Metro Station via the North Entrance Pavilion will be provided by a sidewalk with lighting.

During redevelopment, the Town will work with applicants in a cooperative design process using a list of design criteria and objectives. The intent of this process is to ensure that developers can incorporate an enhanced transit center and a new Passenger Drop-Off/Pick-Up facility into their redevelopment site plans. Criteria for the facility include, but are not limited to:

- A drop-off area of a size, style, and design that serves as an alternative to long-term parking at the Herndon-Monroe Park and Ride facility.
- The presence of a pedestrian-oriented public open space upon exiting the North Entrance Pavilion instead of just the immediate presence of a plain sidewalk leading to roadway pavement and vehicular activity.
- A minimum size of the proposed open space should be determined. The open space should be adjacent to the North Entrance Pavilion landing.
- The open space should be highly visible from both Herndon Parkway and the North Entrance Pavilion, and should not be enclosed on all sides.

Essential components of the passenger drop-off/pickup facility, regardless of configuration or location, may include:

- Drop-off lane (for the activity of driving up, drop-ping off, driving away; no standing): while a length of 180 feet is a standard recommended by the consultant, the Planning Commission believes a lane longer than 180 feet would be preferable.
- Standing spaces (for drivers in vehicles to await passengers disembarking from the Metro Station): 10-14 spaces. These spaces should be accommodated with redevelopment near the Metro Station. The spaces do not need to be contiguous. For example, half of the spaces could be north of Herndon Parkway and half could be south of Herndon Parkway. As another example, the spaces could be shared among several properties close to the Metro Station. The principal point is that drivers picking up or dropping off passengers should not have to drive directly up to the North Entrance Pavilion, and do not need to be immediately adjacent to the station to wait.
- Two bus bays minimum.
- Off-site cell phone waiting area.

DEVELOPMENT / PRIVATE REALM GUIDELINES

As stated previously, the HTOC is conceptual and is meant to be used as a tool to understand the potential level of development intensity and to set broad goals that will be considered in greater detail when the Town advances new zoning for the Core. This section identifies goals that pertain to future redevelopment and considerations for site layout, block structure, parking, building massing, defining the public realm, and sustainability. The public realm generally includes elements such as squares, parks, the public right-of-way of streets, and other public spaces.

- **Defining the Public Realm (Building Form and Use)** – The HTOC identifies opportunities to create a unique public realm through wide sidewalks, a rich streetscape, and public gathering spaces such as the Herndon Metro Promenade. These features are important, as they will provide places for residents, employees, and visitors to walk and navigate to and throughout the Core. These areas could potentially be used for events and programmed activities. The public realm and other outdoor spaces will be defined by the buildings and structures that surround them. The placement of buildings and land uses (i.e., setbacks and ground floor uses) should be considered to determine how they contribute to creating these spaces. Potential ways to utilize building placement to shape the public realm and outdoor spaces include:
  - *Set-to Lines* - Building walls can be used to define the shape and form of the public realm. This could include variations in the proximity of building walls to the public right-of-way to help create transitions between the streetscape and the building.
  - *Ground Floor Uses* – Active interior ground floor uses should complement the adjacent public realm, especially along the length of the proposed Herndon Metro Promenade. In addition, building entrances should be placed in locations that relate to and support the public realm.
  - *Awnings and Colonnades* – The use of awning and/or colonnades are two ways of transitioning between the building envelope and the adjacent public realm. The design of colonnades should emphasize light and visibility of the abutting ground floor facades.
  - *Areas for outdoor activities* – Buildings should be placed to create additional space for outdoor activities such as seating for cafes and sidewalk display areas.
- **Including "Focal Points"**– The HTOC identifies opportunities to include urban plazas and streetscape improvements that create "focal points" at forecourts to buildings or at "gateway" locations in the Core. Potential examples of focal points include the following:
  - *Forecourts to building entrances* – Forecourts that include landscaped designed features and hardscape plazas that celebrate entry into buildings.
  - *Streetscape amenities* – Amenities such as artwork and sculptures, special landscape features and planting, water fountains, signage, and pavilions.
  - *Specialty lighting* – Lighting can be used to accent the architectural features of a building or elements within the streetscape and public realm.

The use and placement of focal points should be carefully considered so that there is consistency throughout the streetscape and public realm environment.

- **Block size** – The HTOC (Figure 6.2) identifies opportunities to define a "block structure" (i.e. size and location of blocks and streets) in the Study Area and includes suggestions for new streets, pedestrian connections, and trails. While the ultimate block structure could vary from what is depicted, the Plan identifies key elements that will contribute towards creating a consistent block structure. One of the goals for the planning study is to encourage and promote walkability. Block size and pedestrian connections will play an important part in achieving this goal. The following is a list of elements that contribute towards defining block structure:
  - *New Streets and Access Driveways* – The placement and use of new streets, access driveways, and parking will contribute to the block structure.
  - *Pedestrian Connections* – The use of pedestrian connections, trails, and the inclusion of the Metro Promenade will provide linkages to and between block and buildings.
  - *Building Massing* – The mass and scale of buildings should be articulated to mitigate the appearance of buildings so that each block does not appear too large to contribute to a sense of pedestrian scale.
- **Building Massing** – The HTOC identifies opportunities to articulate building massing in a way that contributes to creating a sense of scale at the street-level and for the overall development. By including upper-level setback requirements, the facades that front streets will create a "street wall" that helps to reduce the scale of the overall building height. This is particularly important given that buildings are likely to be up to fifteen-stories tall. The perspective sketch and cross-section illustrate the upper-level setbacks at the four- and eight-story levels (Figures 6.4 and 6.5). In addition to the upper-level setbacks, building massing could be further articulated along the horizontal length of building façades by including additional setbacks from the street wall.
- **Building Façades** – Quality of façade treatments
  - Facades should include high quality and durable materials.
  - Facades should include open glazing on the ground floor for activity, marketing, and security.
  - Facades should include the appropriate use of signal, awnings, canopies, belt courses, and water tables to scale buildings to the public realm.

- **Parking garages and entrances** – The HTOC identifies opportunities to locate parking garages and their entrances in ways that support the public realm. While parking is an important element of future redevelopment, it should be placed in locations that minimize conflicts with the public realm. The following is a list that should be considered in locating parking and access driveways:
  - *Internal locations* – Parking should be located in the middle of the development block to help mask the views of the parking structure.
  - *Façade treatments* –Parking structures that are not located internal to the block should include decorative façade treatments to mask views of the parking structure, with the goal that the façade treatments are harmonious with the associated adjacent buildings.
  - *Building floor area* – Lower levels of parking structures should include leasable building floor area at the perimeter of the parking structure where it abuts the public realm or streetscape.
  - *Locating Parking Entrances* – Where possible, parking entrances should not be located directly on major streets. Entrances to parking structures should be placed on secondary streets or off of access driveways.
- **Sustainability** – In support of 2030 Comprehensive Plan policies to "enable Herndon to be a leader in environmental stewardship in the region", the Town should consider revised zoning and designs standards for future redevelopment to include sustainable design, conservation of natural resources, such as water and energy, reduction of waste, and improvement of the human environment and health.
  - Such revised zoning and design standards can build on established redevelopment criteria for the Regional Corridor Mixed Use designation in the 2030 Comprehensive Plan, which calls for use of environmentally sound practices including: green roofs; natural (especially wooded) open space corridors/ areas as transition zones, visual amenities and buffers; use of natural site amenities (e.g., quality trees, streams, etc.) through sensitive building placement, street and parking lot design/construction.
  - Efforts to minimize the amount of impervious surface and provision of stormwater management facilities which can be retained as open space amenities. Use of bioretention and best management practices for stormwater retention wherever possible.

Additional sustainable design guidelines could potentially include the use of rain gardens and rooftop gardens within development projects for improving stormwater quality in place of conventional stormwater management techniques. Building energy performance criteria or energy reduction goals for new buildings could be included as part of the development guidelines. Sustainable design features within the public realm could potentially include items, such as energy efficient lighting (i.e., LED lighting) or other environmentally-friendly lighting technology, recycled materials, and utilization of Low Impact Design (LID) stormwater management techniques.

A number of guidance documents could be utilized in developing potential sustainable guidelines. Such guidance documents include:

Green Globes® building design and construction guidance and assessment program; and the U.S. Green Building Council's Leadership in Environmental and Energy Design (LEED®) high-performance building rating systems, such as LEED for Neighborhood Development.

GUIDING PRINCIPLES FOR OPEN SPACE AND PUBLIC AND SEMI-PUBLIC SPACE

The HTOC Plan will create a new and exciting entrance and economic engine for Herndon as a whole. It will also serve as a unique neighborhood for its residential and business inhabitants. The HTOC will be served by attractive and functional public and private exterior and interior spaces to ensure a balanced environment, provide adequate open space for the health and recreational needs of its residents, workforce and visitors, protect existing recreational resources in the town from over-use, and create attractive and inviting surroundings. These spaces will afford connectivity, relaxation, exercise, minor entertainment venues, civic pusuits and social engagement.

The design of an individual open space shall be governed by its intended purpose. Shared qualities should include: superior materials incorporating visual appeal and durability; an appropriate balance of landscape and hardscape; state-of-the-art landscape practices; a dependence on native trees augmented by native and non-native shrubs, annuals and perennials; and unique features providing aesthetic appeal and a memorable sense of place, including but not limited to water features, statuary, mosaics, plaques, lighting, streetscape furnishings and accessory structures. General green space for both respite and active play will be provided in conjunction with, and available to, residential uses throughout the TOD. Coordination among multiple developers may be necessary to create a consolidated open space area for recreational purposes.

The inventory of public and private spaces (exterior and interior) necessary to achieve the desired environment consists of the following:

- Commercial and Residential Open Space
- Interior Recreation Facilities
- Interior Community Facilities
- Primary Streetscape (Herndon Parkway)
- Secondary Streetscape
- Multimodal Trails
- Herndon Metro Promenade

HERNDON METRO PROMENADE

As stated above, the signature open space within the HTOC will be the Herndon Metro Promenade. Crucial to the success of the Plan, the Herndon Metro Promenade must make arrival in Herndon a unique experience among Metro stations. The Herndon Metro Promenade must be designed successfully in order to:

- Serve as the focal point of the TOD, but not supplant the role of the Herndon Downtown as the town's central entertainment venue.
- Connect the Metro Station portal visually and physically with the larger transit-oriented neighborhood and the Herndon Parkway bus and vehicle transit center.
- Create an appropriate sense of enclosure and comfortable pedestrian scale through the arrangement and design of abutting buildings.
- Provide a comfortable, safe, and practical walking environment that incorporates areas of respite, sun and shade, visible shopping and dining opportunities and a sense of eyes on the street.
- Serve the primary activities of transit user connectivity, walking, observing, café seating, shopping and relaxing.
- Provide a prominent feature visible from Herndon Parkway approach to relay the sense of arrival.
- Present a prominent feature visible at Herndon Station portal to relay the sense of arrival and provide an introduction to Herndon.
- Provide attractive and adequate lighting for evening activity.
- Provide areas for street entertainment.

In addition, the Herndon Metro Promenade shall be governed by the following design strategies:

Length

The length of the Herndon Metro Promenade will extend from the Herndon Parkway transit center to the North Entrance Pavilion of the Metro Station. The Promenade will be divided by a series of coordinated features to diminish the sense of distance and increase the appeal of the physical surroundings. The division of space should include such features as: seasonal planting beds and planters, trees, awnings, street furniture, fountain(s) and art such as: sculptures, plaques, mosaics and stone etchings. Additional open spaces on axis to the Herndon Metro Promenade may be incorporated. Such additional open spaces should differ from the Herndon Metro Promenade to create variety and an appropriate succession of spaces. Public open space abutting the Herndon Metro Promenade should provide supplementary pedestrian connections to the larger TOD.

Width

The width of the Herndon Metro Promenade should be a minimum 70 feet and a maximum of 90 feet exclusive of café seating areas. To achieve a comfortable sense of enclosure the upper stories of abutting buildings should step back and provide lower cornice lines.

Walls

The Herndon Metro Promenade will be framed by the walls of the abutting buildings. Features along the edges of the Herndon Metro Promenade should consist of shops, cafes, significant building entrances and other active building facades. Architectural elements such as appropriate canopies, banners, projecting signs, decorative storefronts and windows, and architectural art such as reliefs should be incorporated. Vertical and horizontal building step-backs and architectural features will be employed to provide an appropriate sense of scale, massing, and enclosure.

COMMERCIAL AND RESIDENTIAL OPEN SPACE

It is the intent that all new construction and redevelopment within the TOD achieve the highest quality in design, materials, convenience and livability. Open space should be distributed throughout the TOD for the enjoyment of various user groups. Whether providing residential condominiums or apartments, offices, retail and dining establishments, or a mix of several uses, it is obligatory that development within the HTOC provide adequate open space for use by the residents, employees and visitors.

The design and layout of structures in the TOD must relate to each other and the spaces they create in a harmonious manner. The creation of gracious and inviting plazas and landscape areas for numerous and varied purposes, each providing linkages to sidewalks, trails, and other open areas is necessary to the success of the TOD. In addition to passive use and trail linkages, development must provide active recreational opportunities for residents and employees.

GENERAL OPEN SPACE PRINCIPLES APPLYING TO ALL PROPERTY WITHIN THE TOD

- Open spaces should use decorative enhancements such as architectural elements, lighting, site furnishings, pavement, substantial landscaping, trellises, screen walls, planters and other features to create a unique sense of place.
- Trees should be limited to native species and selected on the basis of aesthetic attributes, wildlife benefits and drought tolerance.
- The majority of shrubs should be native and selected on the basis of aesthetic attributes, wildlife benefits, and drought tolerance.
- A mix of native and non-native annuals and perennials should be employed.
- In-ground irrigation systems in conjunction with rainwater harvesting systems should be provided for landscaped and turf open spaces.
- Open space should be laid out with solar orientation in mind and with the intent to provide a mix of sun and dappled shade to ensure comfort and optimum usability during various seasons.
- Open spaces may be located at-grade, on platforms/podiums, or on rooftops.
- Each building and site should be arranged to create attractive, functional, well-integrated open space that corresponds with on-site as well as the abutting development and right-of-way.
- Paths or sidewalks and site furniture, such as benches, chairs, or seating walls and trees or architectural devices to provide dappled shade should be provided along the periphery of open spaces, such as lawns, patios, play areas and pools.
- Bicycle racks should be provided near entrances and adjacent to open spaces in close proximity to trails and sidewalks.
- Development should provide construction of abutting sidewalks, trails, and other right-of-way improvements per town design specifications and policies.

PRINCIPLES FOR OPEN SPACE ASSOCIATED WITH MIXED-USE WITH RESIDENTIAL USES

- A mix of active and passive open spaces should be provided on site.
- Basic open spaces and activities to be provided on site include appropriately designed tot lots for climbing, sliding and imaginative play, dog walking areas with bag dispensers and receptacles, sitting areas, active rooftops, and swimming pools.
- Additional open spaces appropriate for residential uses include gardening plots and basketball courts or half courts, and smaller multi-purpose lawn areas for various informal games such as Frisbee, bocce, and catch and for general relaxation.
- Multifamily structures designed with ground floor retail space abutting public sidewalks or plazas should provide an additional ten feet of semi-public space along portions of the abutting facade to allow for café space.
- Features to promote entertainment opportunities by and for residents such as outdoor kitchens located near patio and pool areas and conversation groupings are desired.

PRINCIPLES FOR OPEN SPACE ASSOCIATED WITH MIXED-USE AND SINGLE-USE BUILDINGS

The following principles are applicable to buildings incorporating one or more of the following: office; hotel; retail; educational uses; and other non-residential uses.

- Passive open space providing areas for "brown bag" eating, walking, and respite should be provided.
- Site furniture, including small tables and chairs, benches, trash receptacles and recycling receptacles, the design of which should be coordinated and reflect the architectural style of the building and other surrounding features should be provided.

PRINCIPLES FOR INTERIOR RECREATION FACILITIES

The Town anticipates that future development and redevelopment within the Core will meet and exceed the general Dulles Corridor real estate market standard for interior amenities. To create a desirable environment and provide added convenience and value, interior recreational amenities will be provided within future structures. The incorporation of these recreational amenities, in close proximity to those living, working or visiting within the Core will not only serve those in the TOD, but will reduce excessive demand upon existing town facilities and decrease reliance on motor vehicles. Examples of appropriate residential interior recreational space include:

- Fully equipped fitness center
- Pub room
- Media club room
- Interior sports facilities
- Conference room with electronic audio-visual equipment

Examples of appropriate interior recreational space for development containing office uses include:

- Fully equipped fitness center with showers accessible to employees and which is operated under private, commercial or, if provided as a public use, Town management.
- Examples of appropriate interior recreational space for hotels include:
- State-of-the-art conference and banquet facilities
- Fully equipped fitness center with indoor pool and spa

INTERIOR COMMUNITY FACILITIES

The increase in multifamily units will place additional demands on existing Town of Herndon and Fairfax County facilities. To assist in defraying the cost of this increase in demand and for the convenience of TOD residents, development within the Core that contains multifamily units should dedicate interior floor area for community purposes. Such space should be located and designed to afford opportunities for Fairfax County Public Schools, County Senior Services, Town of Herndon Community Policing and Town of Herndon Parks and Recreation programs. Types of community space or facilities may include: community rooms; a branch library; exercise facility; community business/job center; game room; and meeting rooms.

HERNDON PARKWAY STREETSCAPE (HERNDON PARKWAY)

The Parkway along the TOD will serve as the primary pedestrian, bicycle, bus and private vehicle pathway. To many, the parkway will serve as the principle visual image of the TOD neighborhood and will be an important multimodal transportation link, a venue for commerce, and an active public space. It is anticipated that the Herndon Station transit center will be located along the Parkway and connected to the Metro Station pavilion by the Herndon Metro Promenade.

Directly or through linkages with other trails, sidewalks and plazas, all open spaces, including sidewalks and trails in and around the Core should link with the Herndon Parkway. To ensure functionality and provide adequate room for all users, create an attractive inviting open space and guarantee a successful commercial corridor, the Herndon Parkway abutting the Core shall be governed by the following design strategies:

- The Herndon Parkway will consist of a median of varying size providing landscaping and safe havens for pedestrians and bicycles.
- The Herndon Parkway will provide high visibility paver crosswalks and pedestrian countdown signals at all signalized intersections.
- The Herndon Parkway will provide two ten and a half to twelve foot wide lanes for both east-bound and west-bound motor vehicles with turn lane as appropriate.
- The Herndon Parkway streetscape shall be designed to provide safe access for those with disabilities.
- Along the south side of the Herndon Parkway the following amenities shall be provided:
  - A three-foot wide safety edge between the parking lane and an eleven-foot two-way cycle track.
  - A five-foot wide planting area, incorporating state-of-the-art landscape practices, for street trees and smaller plants for seasonal color.
  - An eleven-foot wide pedestrian sidewalk.
  - Additional space outside the right-of-way along portions of the abutting facades to allow for café space.
  - A parking lane protected by bump-outs.
- Adjacent to the Metro Station Promenade, the Herndon Station transit center will incorporate the following into the streetscape design along both sides of the Herndon Parkway:
  - A filled crosswalk square denoted by pavers and pedestrian countdown signals.
  - A twelve foot wide pick-up/drop-off lane segmented into auto, bus and taxi zones.
  - Appropriately placed bus shelters of an attractive, unique, functional and durable design.
  - An expanded sidewalk designed to readily accommodate the concentrated multimodal traffic, and provide safe access for those with disabilities and provide separation between functions.
- Along the south side, adjacent to the Herndon Metro Promenade, a gateway feature visible in both directions when approaching the transit center, which should include a structure, sculpture or fountain of appropriate design.

SECONDARY STREETSCAPE

Directly or through linkages with other trails, sidewalks and plazas, secondary streets should provide easy access for all forms of transportation. To ensure functionality and provide adequate room for all users, create an attractive inviting open space, and guarantee successful commercial and residential corridors, secondary streets within the Core shall be governed by the following design strategies:

- Secondary streets will provide high visibility paver crosswalks and pedestrian countdown signals at all signalized intersections.

- Lane width and number shall be determined by appropriate engineering measures.
- Where on-street parking is provided a parking lane protected by bump-outs will be standard.
- To ensure adequate and safe multimodal passage, eight-foot sidewalks apart from landscaping and the curbside safety zone will be provided.
- Landscaping along secondary streets shall rely upon tree grates and state-of-the-art landscape construction techniques to ensure optimum tree health. Tree pits should not be less than five feet wide.
- The streetscapes shall be designed to provide safe access for those with disabilities.

MULTIMODAL TRAILS

The Town is planning to extend two existing regional pedestrian/bike trails in order to connect to the North Entrance Pavilion of the Metro Station. These trails include the Folly Lick/Spring Branch Trail and the Sugarland Run Trail (described further below). Both of these multimodal trails will be part of the Fairfax County's regional trail network.

The two multimodal regional trails will connect pedestrians and bicyclists to areas within the Core. Multimodal trails differ from the TOD streetscapes in their relationship to the street. Multimodal trails may or may not be adjacent to roadways. In addition, multimodal trails may use alternative surface treatments such as color asphalt or textured asphalt paving. Multimodal trails within and leading to the HTOC shall be governed by the following design strategies:

- Multimodal trails shall link to the streetscape network within the TOD.
- The facilities shall be designed to accommodate bicyclists and pedestrians and those with disabilities.
- Directional signage shall be provided indicating directions and distances to the pedestrian entrance facility of the Metro Station.
- Multimodal trails shall be a minimum of eight feet in width.

Folly Lick Trail

This trail begins below Sugarland Road with a connection to the Sugarland Run Trail north of town in Fairfax County. The trail continues along Folly Lick stream to Herndon Parkway. The Town has plans to further extend this trail through the center of town in a north-south direction, using a short section of the Washington and Old Dominion (W&OD) Trail as well as a combination of existing and proposed asphalt trails and sidewalks, to eventually connect with the North Entrance Pavilion.

Sugarland Run Stream Valley Trail

This bike/pedestrian trail is part of the countywide trail system and runs from Sugarland Road to the town limits and continues through Runnymede Park to the W&OD Trail. The Town plans to extend the Sugarland Run Trail from the W&OD Trail to the Spring Street/Herndon Parkway intersection and to continue along or near the stream bed to eventually connect with the future North Entrance Pavilion of the Metro Station. This trail may require raised boardwalks in select areas to accommodate steep slopes, wetlands, streams or other environmental conditions.

LONG-TERM VISION

At this writing, development and redevelopment beyond that envisioned by the HTOC cannot be accommodated due to physical constraints on the street system in and around the southeastern portion of the town. Once Metrorail service opens and redevelopment of the HTOC proceeds, a need may be identified by future Town leaders to expand Herndon's transit-oriented neighborhood into adjacent areas of existing commercial development. This area is described here as the "Potential Transit Related Growth Area" (TRG) and it encompasses approximately 130 acres along Herndon Parkway between Van Buren Street and Spring Street, incorporating land north of the Herndon Parkway and parcels east of the HTOC. While not envisioned to be as intensely developed as the Core, these locations could experience some additional development intensity and mixing of uses into a larger, more walkable district. The portion of the TRG north of the Herndon Parkway lies adjacent to single-family residential neighborhoods existing in 2011. Those parcels in the TRG east of the HTOC are bounded by the Dulles Toll Road, Fairfax County Parkway and Herndon Parkway. The TRG is separate from the HTOC. Both the Core and TRG are designated "Regional Corridor Mixed Use" as defined at this time by the 2030 Proposed Land Use Map in the *2030 Comprehensive Plan*. Refer to Figure 6.9. It is anticipated that the area designated "Regional Corridor Mixed Use" will be redefined following the approval of the HTOC Plan to incorporate only the Core.

1. Proffer amendments and zoning map amendments under current zoning provisions that apply to TRG properties in 2011 are permitted.

POTENTIAL TRANSIT-RELATED GROWTH AREA

Properties in the TRG are developed in 2011 with commercial uses zoned O&LI or PD-B. The area has been stable since the mid-1980's when most of the existing buildings were constructed. The permitted density for most properties is 0.7 FAR and average existing FAR in the area is less. The Regional Corridor Mixed Use properties have served as a principal source of revenue for the town helping fund many town services and defraying the tax burden on town residents. Allowing growth within the TRG could bring many benefits to the town. However, financial studies conducted in 2011 for the HTOC showed no likelihood of redevelopment before 2035 under densities of 2.5 FAR or less. Furthermore, the need to protect stable residential neighborhoods abutting the TRG to the north in addition to roadway capacity limitations creates additional constraints. Redevelopment in the TRG cannot be enabled under new planning and zoning provisions until the town has addressed specific demands generated by the redevelopment, in cooperation with VDOT and Fairfax County. In the future, any development that is proposed in the TRG must mitigate adverse impacts to the abutting residential neighborhoods. These constraints as well as additional concerns are discussed below in more detail.

PUBLIC SECTOR REQUIREMENTS FOR THE POTENTIAL TRANSIT RELATED GROWTH AREA

Comprehensive Plan Amendment

Before enacting any new zoning provisions or associated zoning map amendments[1] for development or redevelopment in the TRG, this plan foresees a need for a studied comprehensive planning approach to the future of the area. These highly visible properties with excellent proximity to the Dulles Toll Road, the Fairfax County Parkway and Dulles International Airport warrant excellent urban design and state-of-the-art planning principles. The Town will want to consider regional scale transportation improvements, the proper mix of uses, the proper scale of future development, the impact on the character of the town, and stakeholder views. The conclusions of that study should be incorporated into the town's comprehensive plan to guide future development. This plan recommends that the comprehensive plan amendment be considered after the opening of the Metro station at Herndon. Some concepts encountered in the study of the HTOC apply to the TRG and help the HTOC and TRG together create an appealing location for economic development in Herndon.

Urban Design

Figure 6.10 shows how the TRG and Core can relate well to each other and create a sense of place along Herndon Parkway. The features shown will help give identity to the area by concentrating a rich mix of street life, restaurants, retail, entertainment, office and residences along it. On the south side, Herndon Parkway in the HTOC Plan features a cycle track within the streetscape. On the north side (left side of drawing), Herndon Parkway provides a streetscape adequate in width to accommodate bicyclists and pedestrians. The streetscape connects to the regional trails and creates a pleasant walking loop for visitors to the restaurants, entertainment, and retail establishments.

If redevelopment occurs, design should include focal points and opportunities for people to stop, shop, and dine. Like the HTOC, primary streets in the TRG should feature mixed-use buildings with ground floor commercial and upper floor office or apartments. Suitable building heights should be determined during the comprehensive planning study, and structured parking is envisioned, either free-standing or embedded in the occupied portion of the building.

Along the north side of the Herndon Parkway density may be arranged on larger development sites such that the density is concentrated along Herndon Parkway. The development should be in an urban form with building facades abutting the sidewalk, instead of spreading floor area evenly across the lot area. The future buildings, on the north side of Herndon Parkway, would complete the street wall enclosing the space at a scale that is similar to the lower tiers of the buildings in the Core to the south. The future plan should envision taller buildings along the north side of Herndon Parkway with building height stepping down as the distance narrows between new buildings and existing residential neighborhoods. There should be a distinct transitional area abutting existing residential areas with more significant landscaping and reduced building heights. Where new residential uses occur in this transitional area, their mass and appearance should be harmonious with nearby existing residential uses.

Physical Constraints

Land in the TRG is constrained by a Dominion Virginia transmission line that crosses the area east-west. Consideration of the relocation or burial of the transmission line as a public-private effort should be part of the future comprehensive plan amendment preparation. As stated previously the plan area north of Herndon Parkway borders existing neighborhoods of single-family homes representing a very real and important constraint. It is crucial that any redevelopment is harmonious with those neighborhoods.

Access

In addition to superior transit service, sidewalks and regional trails, the TRG may be well served by internal

Figure 6.9 | Long-Term Vision - Transit-Related Growth Area

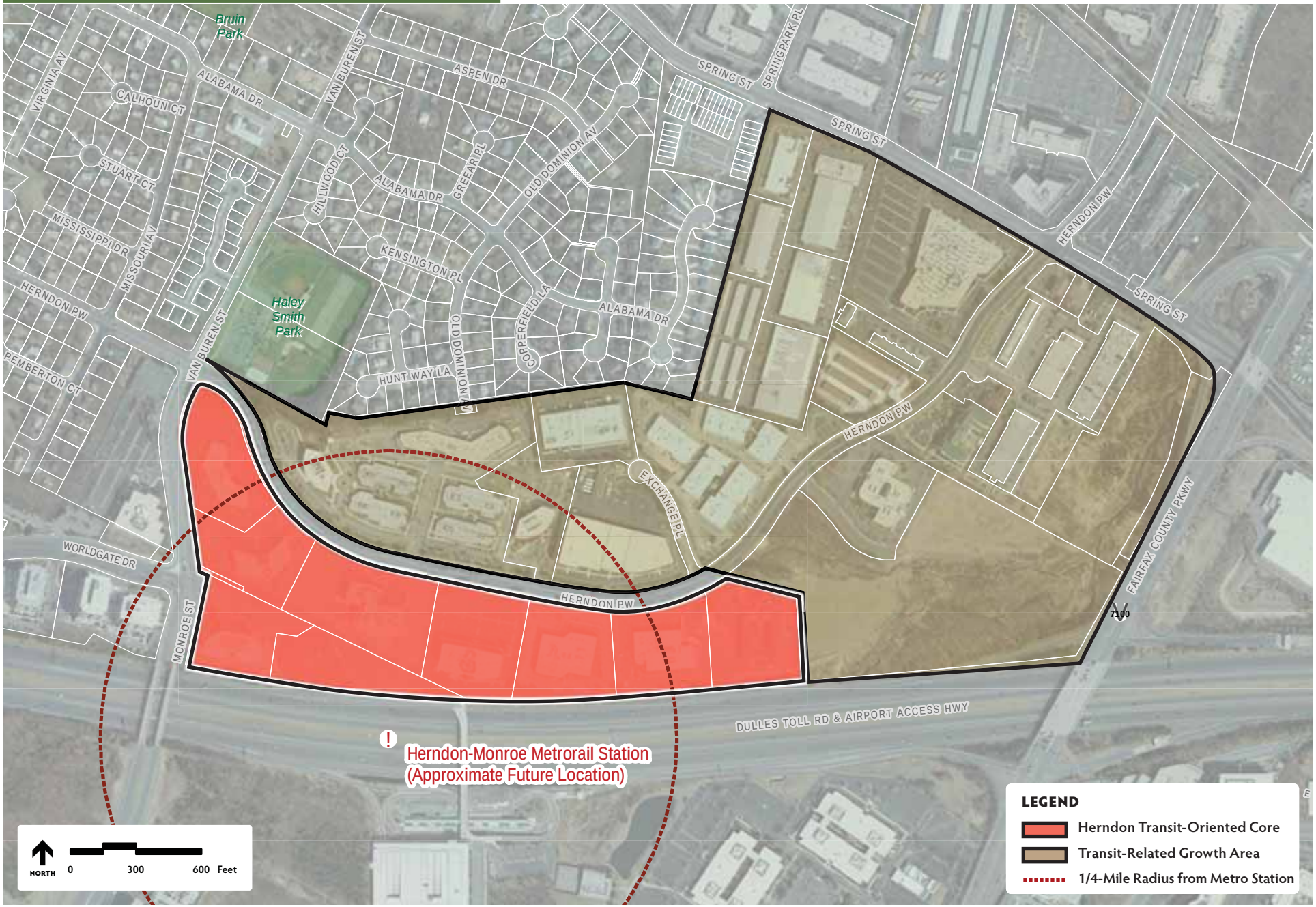


Figure 6.10 | Potential HTOC (right) and Transit Related Growth Area (left) Development Along Herndon Parkway

streets to organize vehicular traffic and contribute to a reasonable flow of vehicles on Herndon Parkway. Access points along the Herndon Parkway should be limited to Exchange Place, Fairbrook Drive, and a further extension of Worldgate Drive north of Herndon Parkway (Figure 6.9). Single-site driveway access to Herndon Parkway should be prohibited unless it serves multiple buildings over acres of development. Site access and internal circulation should be studied more fully during the comprehensive planning amendment preparation.

TRANSPORTATION SYSTEM

As part of any future comprehensive plan amendment for the TRG, the local transportation system should be re-examined thoroughly. Build out of the Core means that some intersections will be operating near their maximum capacity. Before additional growth is enabled by the Town, the Town must establish a strategy to increase transportation access to the Core and TRG so that capacity improvements occur as growth proceeds.

Herndon Parkway at Spring Street

This intersection serves two four-lane streets and has movements in that operate poorly (based on the existing traffic conditions analysis). Development beyond that envisioned in the HTOC could exceed the maximum capacity of the intersection. A text book traffic engineering analysis could call for a grade separated interchange or other similar onerous improvements. While such improvements may not be appropriate for Herndon, the fact that they may be warranted indicates a need for the town to explore more sophisticated transportation solutions. This intersection poses the single most significant physical constraint on development in the TRG.

Spring Street at Fairfax County Parkway

This interchange of a four-lane street with a six lane regional arterial suffers from an inefficient design that impacts both the Fairfax County Parkway itself and Spring Street. Because it is part of a configuration of two side-by-side interchanges on Fairfax County Parkway, at Spring Street and the Dulles Toll Road, solutions to improve the interchange pose challenges worthy of any major metropolitan area. The Town must press for resolution of operational issues at the interchange with cooperation from regional partners including Fairfax County, the Virginia Department of Transportation, the Northern Virginia Transportation Authority, and the MWCOG's Transportation Planning Board. Regardless of whether or not additional density is planned for the TRG, this transportation challenge must be solved and will involve time and intergovernmental coordination. The Town should: (i) determine the appropriate level of improvement for the desired character of Herndon; and (ii) establish a work program at its earliest convenience to engender regional cooperation for the desired enhancement of this interchange.

Alternative Access

Part of the transportation study should explore the benefits and any potential negative impacts of direct access to the Dulles Toll Road or the Fairfax County Parkway from the TRG. Since funding for such an improvement likely would not become available for decades, the Town should determine whether such access is desired and program funding accordingly.

Western Portal, Van Buren at Worldgate, and Van Buren at Herndon Parkway

Due to the close proximity of stable residential neighborhoods to the western portal of the TRG, transportation improvements beyond those planned for the development of the Core should be kept to a minimum.