

MWCOG and the  
City of Falls Church

# East End Transportation Study

June 2022



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# EXECUTIVE SUMMARY

This East End Transportation Study is a companion to the Small Area Plan (SAP) being developed by the City of Falls Church and its residents, business owners, and other stakeholders. That evolving plan will support the continued economic vitality of its East End, which along with adjoining Fairfax County and Arlington County areas comprise the regional hub known as Seven Corners. Even beyond the Washington region, people know the iconic Eden Center as an important concentration of Vietnamese culture (especially food) dating back to the late 1970s. The land use vision emerging through the SAP process complements the Eden Center with more walkable, transit-friendly, and mixed-use development. Key to understanding how the area can evolve and thrive is ensuring the transportation and land use complement and support each other, creating a place that residents and businesses love and value.

This Study examines the existing transportation conditions in and around the East End, including neighboring Fairfax and Arlington Counties. The East End's sparse internal street network is bounded by a confusing tangle of roads and intersections hostile to drivers, walkers, bikers, and bus riders. Several ongoing planning efforts are underway to address some of these conditions, with street and intersection improvements, new biking facilities, and new high-capacity transit service.

To serve continuing Eden Center activity and the new residents, businesses, and visitors in the East End, this Study proposes a more connected network of local streets. Each street is designed to serve travelers (including deliveries) safely while providing easy access to existing and new development. Intersections are smaller and more navigable, including those with the surrounding major streets. Safe biking facilities reach within a block of all development and connect to existing and planned facilities outside the East End. This new network meets the needs of travelers including those who choose to drive because the compact, mixed-use, walkable development proposed results in only a small increase in driving trips than the current vehicle-focused uses create.

**To serve continuing Eden Center activity and the new residents, businesses, and visitors in the East End, this Study proposes a more connected network of local streets.**

The City's goals include having no more than 50% of commute trips made by people driving alone. Achieving these goals will require more than can be accomplished with new streets. New development in the East End, and throughout Falls Church and surrounding areas, must be accompanied by ambitious demand management policies and programs, further improvements to local and regional biking facilities, and crucially, the active management of parking supply. With the proposed mobility network and these other improvements, the East End will be positioned for long-term success.

# 1 INTRODUCTION

The City of Falls Church is developing a plan to support the continued economic vitality of its East End, which along with adjoining Fairfax County and Arlington County areas comprise the regional hub known as Seven Corners. Even beyond the Washington region, people know the iconic Eden Center as an important hub of Vietnamese culture (especially food) dating back to the late 1970s.

However, many people know Seven Corners best from experiencing the frustration of traveling to and through the area. The complex intersection of Arlington Boulevard (U.S. Route 50), Leesburg Pike / Broad Street (Virginia Route 7), Wilson Boulevard, Hillwood Avenue, and Sleepy Hollow Road is inherently confusing, and a major planning effort (separate from this one) is underway to untangle the knot.

The City of Falls Church recognizes that new development requires close integration with transportation planning and investments. In particular, the compact, mixed-use, walkable-scale places that the City has seen come to fruition over the past 15 years require a focus on providing safe, convenient ways for people to get to and around the East End without a personal vehicle. The City, with support from the Metropolitan Washington Council of Governments (MWCOCG), has created this study to explore the kinds of changes needed to support its emerging East End Small Area Plan.

## GOALS OF THE STUDY

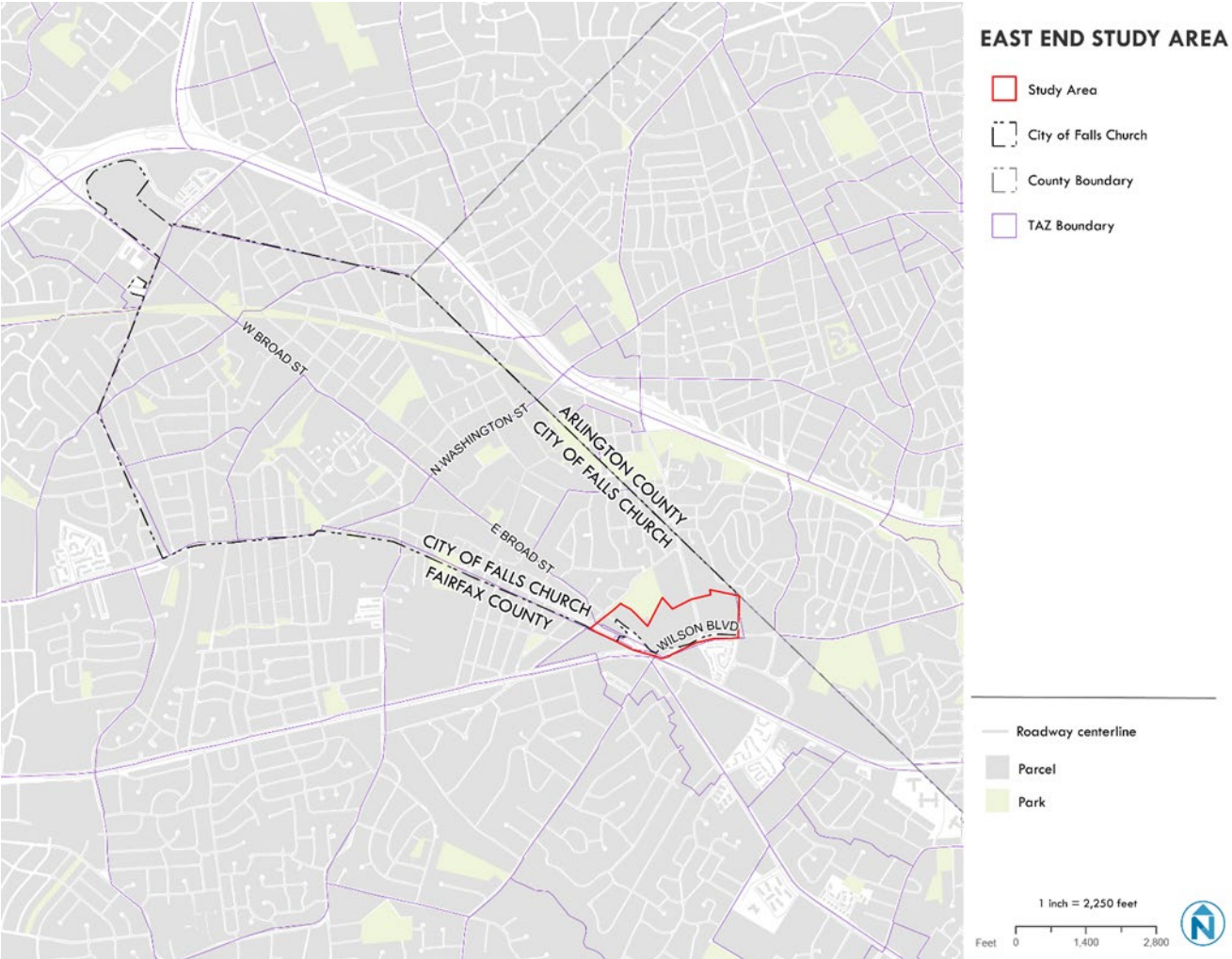
The East End holds promise that will soon be delivered through transportation investments and, eventually, more walkable, transit-friendly, and mixed-use development. Key to understanding how the area can evolve and thrive is ensuring the transportation and land use complement and support each other, creating a place that residents, visitors, workers, and businesses love and value.

## THE EAST END STUDY AREA

**The East End study area as defined in the City's ongoing Small Area Plan is bounded by Wilson Boulevard to the south and the City's eastern border of East Broad Street and Hillwood Avenue to the east; the Oakwood Cemetery and Falls Green Apartments serve as northern boundaries to the study area, and Roosevelt Boulevard runs through the study area. The area is shown within the context of surrounding jurisdictions in**

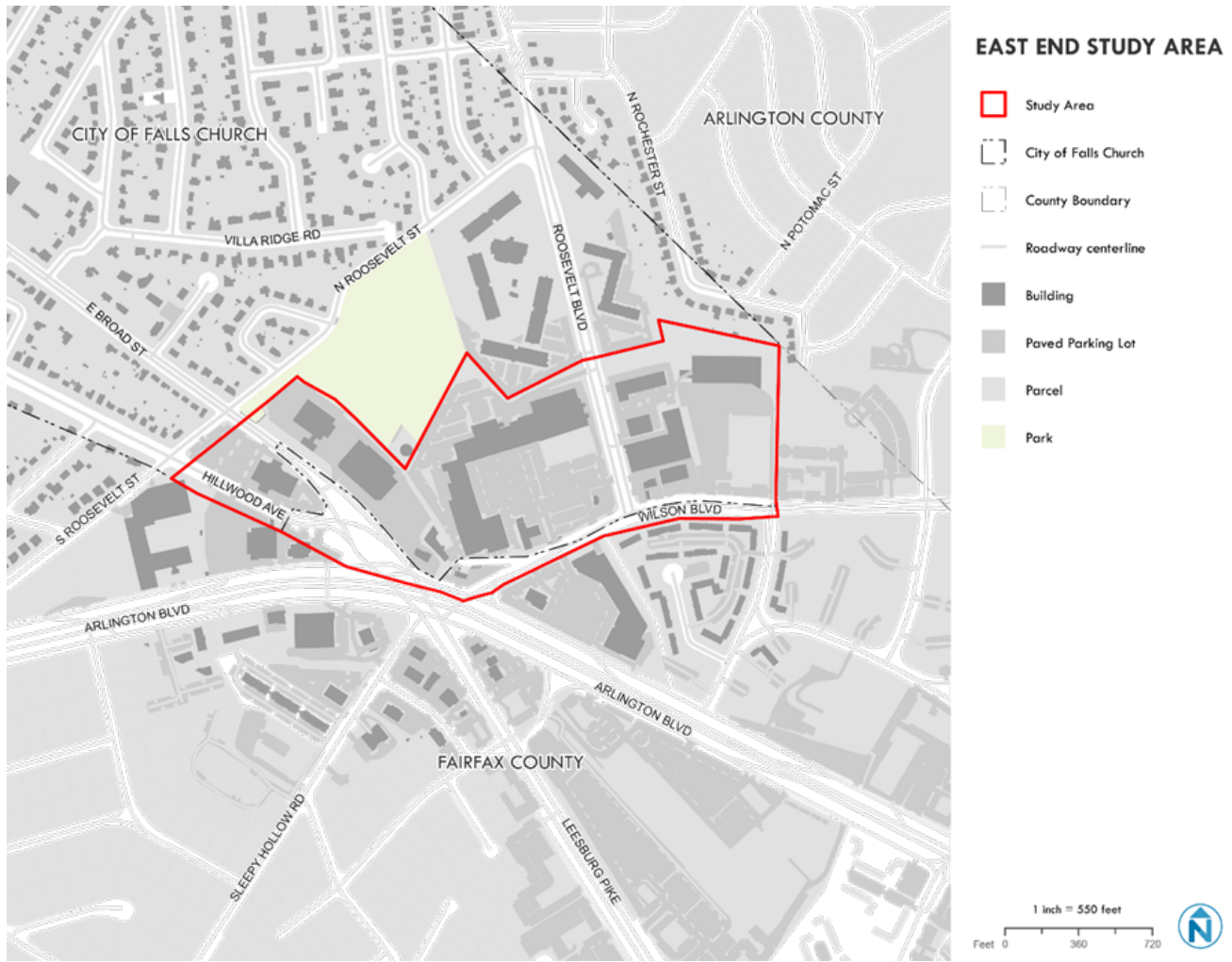
Figure 1 and in detail in Figure 2. The East End serves as a major gateway into the City of Falls Church at the eastern edge of the city near the complex intersections of Seven Corners. Roosevelt Boulevard provides direct access from the East End to the East Falls Church Metro Station, less than one mile to the north. In addition to the iconic Eden Center, the East End also hosts other commercial uses including vehicle-focused retail and service, other restaurants and grocery stores, and mini-storage and other light industrial uses.

Figure 1 East End Study Area Context



**The East End serves as a major gateway into the City of Falls Church at the eastern edge of the city near the complex intersections of Seven Corners.**

Figure 2 East End Study Area



## MOBILITY AND ACCESSIBILITY

Transportation is a key component of everyday life. It is about more than mere movement. Transportation gives us access to our most basic needs. The places it connects us to and how safe, predictable, and reliable it is profoundly affects our personal health and success. Transportation costs are also the second largest household expense after housing. For these reasons, sustainable, connected, and integrated transportation is fundamental to sustained success and livability of the city.

## TRANSPORTATION IMPACTS

While transportation is the way we move about a city and access our day-to-day needs, it also has a significant impact on the shape of our communities. City streets are public spaces, and the way we design our streets directly affects how people use them. Streets designed with the sole purpose of moving vehicles – with wide travel lanes and no sidewalks – will only attract more cars and the land uses that serve those needs. On the other hand, streets designed to serve *people* – with bike facilities, high quality sidewalks, and

other pedestrian accommodations – will attract more people and the land uses that support active, livable communities. It is important to consider the type of community we want to build when designing our transportation system. Our transportation system should both inform and respond to the surrounding context as well as provide safe accommodations for all potential users.

## **ALIGNMENT WITH CITY GOALS AND POLICIES**

The City of Falls Church understands the importance of integrated transportation and land use planning and has prioritized transportation improvements in the Comprehensive Plan. One of the primary goals of the plan is to enhance safe and convenient mobility whether travelers choose to walk, roll, ride transit, share a ride, or drive themselves. While automobiles are a significant component within the overall transportation system, as the population and travel demand in the city and region grow it will be even more important to address some of those needs through a more balanced transportation system with more walking, bicycling, and transit use. The City has committed to providing more amenities for its residents and shortening travel distances for daily needs to encourage the use of walking and bicycling for more trips. As the City states in Chapter 7 of the Comprehensive Plan: “Increases in nearby development will increase the potential for residents to walk and cycle to their destinations.”<sup>1</sup>

**One of the primary goals of the plan is to enhance safe and convenient mobility whether travelers choose to walk, roll, ride transit, share a ride, or drive themselves.**

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<sup>1</sup> City of Falls Church, Chapter 8: Transportation: Mobility for all Modes (page 2).

# 2 PLANNING CONTEXT

## EAST END SMALL AREA PLAN

The City of Falls Church's Comprehensive Plan, adopted in April 2017, identifies several Planning Opportunity Areas (POAs) within Falls Church. Generally, the POAs follow Washington Street and Broad Street and encompass the commercial areas of the city. The Comprehensive Plan describes POAs as zones in which property is currently underutilized. Continued revitalization and redevelopment of the City's POAs could help improve quality of life for Falls Church residents and employees and further the realization of the Comprehensive Plan's overall vision. Since 2011, the City has worked to develop small area plans for each of the identified POAs. The City has adopted five small area plans to date: North Washington Street (2012), South Washington Street (2013), Downtown (2014), West Broad Street (2016), and the West End (2020). The East End Small Area Plan, currently underway, will help set forth a strategy for redevelopment, revitalization, and better utilization of land within the area.

The East End Small Area Plan (Draft) presents the following vision for the East End POA: *"The East End is a cultural hub focused on the Eden Center. Transportation investments put people first by prioritizing connectivity and accessibility. Green spaces provide opportunities for community members to gather, recreate, or relax. Nearby housing affordability is preserved while new commercial and residential development occurs within the Planning Opportunity Area."*

### Goals of the East End Small Area Plan<sup>2</sup>:

1. Strengthen the Eden Center and cultural identity. Celebrate Vietnamese-American culture through programming and public art investments in Eden Center.
  - a. Key concepts: The Eden Center and Vietnamese culture; creating a space for the celebration of culture; paying homage to Vietnam through public art; and Saigon Boulevard.
2. Enhance multi-modal mobility and accessibility throughout the East End.
  - a. Key concepts: Connectivity to Fairfax County, Arlington County, and Alexandria; multi-modal needs and barriers; pedestrian and bike improvements; street grid; great streets; Fairfax County ring road.
3. Activate public spaces to create community connections. Strengthen the sense of community on the East End by providing spaces for the public to enjoy and gather. Incorporate green space for connection to nature.
  - a. Key concepts: Eden Center public gathering space; spaces for children; pocket parks and green spaces; East End farmer's market.

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<sup>2</sup> City of Falls Church, 2022. "Eastern Gateway/7 Corners Planning Opportunity Area 5 Chapter 1. Introduction and Background – Draft."

4. Preserve and provide housing opportunities in and around the East End. As the Planning Opportunity Area develops, preserve the quality and affordability of existing nearby housing. Provide design transitions between existing housing and new development. Create housing that is affordable to a variety of household sizes and a range of incomes.
  - a. Key concepts: Senior housing; family-sized housing; condominiums; preservation of housing.
5. Support economic revitalization throughout the East End. Invest in the East End to create and maintain consistent economic activity and return the area to regional prominence.
  - a. Key Concepts: Economic activity and return to regional prominence; ongoing investment in existing properties; infill and redevelopment; investments in the public realm.

The Small Area Plan divides the study area into three nodes: the western node, the 24-Hour Fitness and Koons redevelopment; the central node, the Eden Center; and the eastern node, or East of Roosevelt. The western node, the 24-Hour Fitness and Koons redevelopment, envisions a new town center-style development on the current 24-Hour Fitness site. The central node, the Eden Center site, envisions expansion of the current shopping center and new infill development along Wilson Boulevard and Roosevelt Avenue. The eastern node, East of Roosevelt, envisions a consolidation of properties and limited redevelopment of retail parcels for active streets and adaptive reuse.

## FALLS CHURCH COMPREHENSIVE PLAN

Falls Church has two chapters in the current Comprehensive Plan that include land use goals: Chapter Four: Land Use and Economic Development and Chapter Seven: Mobility for All Modes. These chapters are both relevant to the goals of this study.

### Land Use and Economic Development<sup>3</sup>

Chapter Four focuses on existing and future land uses in the City of Falls Church. Land use has remained fairly stable in Falls Church over the last ten years. Distinctive commercial corridors exist along Washington Street (Route 29) and Broad Street (Route 7), with the remainder of the City developed with a mix of residential uses and low-intensity office and professional enterprises, which provide transition into the more concentrated commercial areas. Because land within Falls Church is high-value, the City recognizes the need to incentivize and support more efficient land use patterns.

Falls Church is bisected by two commercial corridors: the Broad Street/Route 7 corridor and the Washington Street/Route 29 corridor. The Broad Street Corridor is anchored at the southeast end by the Eden Center and the Koons Ford auto dealership on Wilson Boulevard and at the northwest end by the Falls Plaza and West Falls Centers. The Washington Street corridor runs from the Fairfax County line to the Arlington County line.

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<sup>3</sup> City of Falls Church (2014). Comprehensive Plan Chapter 4 Land Use and Economic Development. <https://www.fallschurchva.gov/DocumentCenter/View/699/Chapter-4?bidId=>

## Mobility For All Modes<sup>4</sup>

Both the City of Falls Church and the larger Washington Metropolitan region are growing. The City of Falls Church notes that transportation exclusively via private vehicles is not sufficient to address the City's and region's population growth. The City recognizes the need to increase the ability for residents, employees, and visitors of the City to walk and bike to local destinations and access regional activity centers through transit and other sustainable transportation. The City's 2014 mode-share was 86% car trips and 14% non-car trips, with a target 2030 mode-share of 79% car trips and 21% non-car trips.

Falls Church's vision for transportation is to *"provide for the safe movement of people and goods within and through the City via a transportation network that connects to the regional transportation network, offers choices in travel modes, supports economic activity, is sensitive to the environment, and provides equitable access for all City residents, workers, and visitors."*<sup>5</sup>

### The mobility goals of the Comprehensive Plan include:

1. Maintain or increase transportation safety.
2. Provide travelers with multiple options of travel modes, including pedestrian, bicycle, transit, and automobile.
3. Support economic activity by increasing access to City businesses and by increasing access to regional activity centers.
4. Mitigate environmental damage from transportation and play a role in achieving environmental goals.
5. Preserve the character of different neighborhoods throughout the City.
6. Provide equitable access in transportation options by considering the needs of all travelers, including those with disabilities or limited mobility, those with limited or no English proficiency, and those unable or unwilling to drive.
7. Maintain the City's infrastructure in a state of good repair.

With increased development and expected increase in walking and bicycling, the City's pedestrian infrastructure will need to be upgraded and expanded: mainly, sidewalk gaps should be closed to further connect the network near commercial areas and transit hubs, and crosswalks must be upgraded to better prioritize pedestrian safety and convenience. Bicycle facilities should be enhanced to better connect

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<sup>4</sup> City of Falls Church (2014). Comprehensive Plan Chapter 7 Mobility for All Modes.

[https://www.fallschurchva.gov/DocumentCenter/View/2145/Chapter\\_7\\_Transportation\\_Mobility\\_for\\_all\\_Modes?bidId=](https://www.fallschurchva.gov/DocumentCenter/View/2145/Chapter_7_Transportation_Mobility_for_all_Modes?bidId=)

<sup>5</sup> City of Falls Church (2014). Comprehensive Plan Chapter 7 Mobility for All Modes.

[https://www.fallschurchva.gov/DocumentCenter/View/2145/Chapter\\_7\\_Transportation\\_Mobility\\_for\\_all\\_Modes?bidId=](https://www.fallschurchva.gov/DocumentCenter/View/2145/Chapter_7_Transportation_Mobility_for_all_Modes?bidId=)

existing infrastructure (such as the W&OD Trail and bike lanes in Arlington and Fairfax County) with commercial areas, city amenities, and transit. For transit, two Metro stations, West Falls Church and East Falls Church, serve the City. Although the stations are located physically outside of the City limits, they are both within a one-half mile distance from the City boundary. Existing bus services run along Broad Street, Washington Street, and Roosevelt Boulevard. As a result, all commercial buildings are within 1/8 mile of bus service. For automobile usage, cut-through traffic is a key concern of City residents. However, residents also want to be able to access convenient parking. The plan states that the City may need to maintain and possibly increase accessibility for automobile traffic in commercial areas, but manage traffic volume and speed in residential areas.

## PREVIOUS LAND-USE PLANS AND STUDIES

### **Creating an Eastern Gateway in Falls Church – Urban Land Institute Technical Assistance Panel, 2018<sup>6</sup>**

The Urban Land Institute (ULI) hosted a Technical Assistance Panel (TAP) program for the East End area in November 2018. During an intensive, two-day effort, a group of professionals provided guidance on land use and real estate strategies for the area, which was previously named Eastern Gateway/Seven Corners POA and at the time included the apartment buildings north of the Eden Center on Roosevelt Blvd. The TAP panelists identified several key recommendations, which included improvement of the transportation network to support multiple modes, enhancement of urban design features to create a gateway to the City, and identification of redevelopment opportunities and land use reconfiguration (see Figure 3).

**The City of Falls Church recognizes the need to increase the ability for residents, employees, and visitors of the City to walk and bike to local destinations and access regional activity centers through transit and other sustainable transportation.**

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<sup>6</sup> Urban Land Institute (2018). Technical Assistance Panel Report: Creating an Eastern Gateway in Falls Church. <https://www.fallschurchva.gov/DocumentCenter/View/11148/Falls-Church-TAP-Final-2019>

Figure 3 The ULI TAP program’s study area, the Eastern Gateway/Seven Corners POA<sup>7</sup>



TAP panelists recommended a short-term, medium-term, and long-term approach to redevelopment. The short-term scenario suggested creating a small area plan, strengthening the identity of the Eastern Gateway through branding, and annexing three parcels along Wilson Boulevard that are currently part of Fairfax County. Panelists emphasized that the City will have to reach out to the Vietnamese community, who are already very active in a small section of the City but often not recognized as a part of the City of Falls Church.

The medium-term scenario focused on transportation recommendations and the redevelopment of parcels along Wilson Boulevard. Transportation recommendations included creating a grid of streets, a BRT connection, dedicated full-width bike lanes, incorporation of neighborhood traffic calming features, completion of missing sidewalk portions, loading and pick-up/drop-off sites for Uber and Lyft, TDM policies, and first/last mile connections to the East Falls Church Metro Station, including a shuttle service.

The long-term scenario recommended redevelopment of commercial parcels along Wilson Boulevard, possible redevelopment of the Eden Center, as well as creation of a public square or community center.

<sup>7</sup> Urban Land Institute (2018). Technical Assistance Panel Report: Creating an Eastern Gateway in Falls Church. <https://www.fallschurchva.gov/DocumentCenter/View/11148/Falls-Church-TAP-Final-2019>

## **2050 Falls Church Eastern Gateway Concept Plan – Virginia Tech, 2010<sup>8</sup>**

In this plan from Virginia Tech, the Eastern Gateway is envisioned as a *“vibrant, mixed-use, multimodal economic asset to the city. Its tree-lined streets will welcome pedestrians and bicyclists and create a 24-hour-a-day community.”*<sup>9</sup> The proposed plan focused on transitioning away from old and vacant strip malls to increased office land uses, specifically Class A office, and loft-style residential uses.

The plan redesigned the Eden Center as a vibrant retail center that offers active street life due to a mix and balance of uses that allows for 24-hour activity. Within the plan, the Eden Center would remain an important center of Vietnamese commercial activity, but the proposed additional uses and an enhanced street scene with outdoor spaces could better support current uses. Office buildings with ground level retail could be built to attract activity during the day. The re-envisioned Roosevelt-Wilson Boulevard area would have residential activity on the northern end of the area, with an increase in density and commercial uses closer to Wilson Boulevard. Roosevelt Boulevard would have a concentration of mixed-use residential activity with ground-level retail, and Wilson Boulevard would have concentrated, mid- to high-density office development. The plan proposed significant changes to the Koons-Syms area (Koons Ford and 24-Hour Fitness node in the current Small Area Plan). The Syms site would contain high-density, mixed-use office and commercial development and low-density residential neighborhoods to the west. To accommodate the City’s requests for more commercial and office development and incorporate functional public space, the Koons sites would be largely redeveloped for mixed-use with an emphasis on office/commercial development. Fort Taylor Park would be expanded by 10,774 square feet, and the site would be anchored at the opposite end by a hotel.

## **Seven Corners Community Business Center Comprehensive Plan Amendment – Fairfax County, 2015**

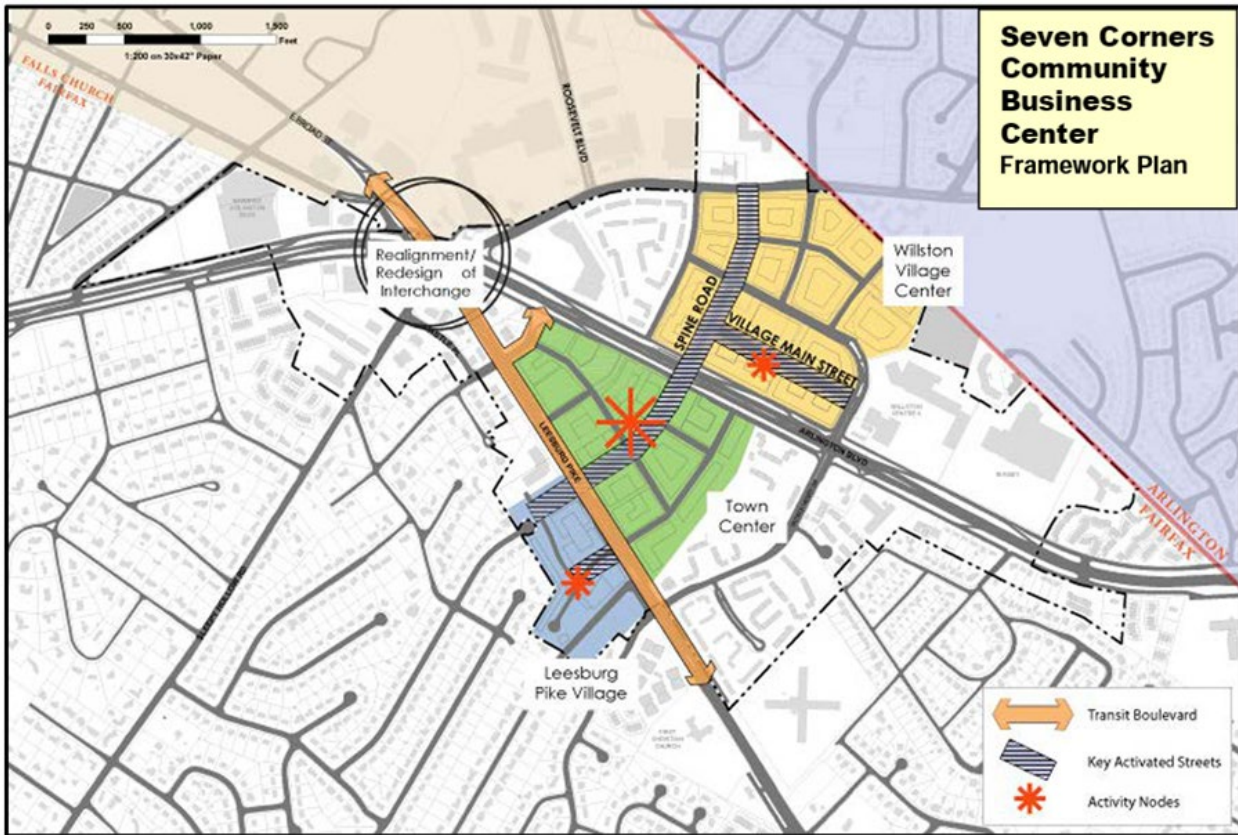
The Seven Corners Community Business Center (CBC) Special Study originated from two community workshops held in 2012 to discuss the future of Seven Corners and possible revitalization efforts. Following these workshops, Fairfax County created the Seven Corners Land Use and Transportation Task Force. The Comprehensive Plan Amendment, approved in 2015, proposed redevelopment of the housing community along Patrick Henry and both the Seven Corners Center and the Willston I Shopping Center and proposed creating two neighborhood villages at Leesburg Pike and the Willston I Center and a town center on the current Seven Corners Center site. The Framework Plan from the Seven Corners CDC Special Study is shown in Figure 4.

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<sup>8</sup> Virginia Tech UAP 5124 Planning Studio (2010). 2050 Falls Church Eastern Gateway Concept Plan. <http://www.fallschurchva.gov/DocumentCenter/View/703/Eastern-Gateway?bidId=>

<sup>9</sup> Virginia Tech UAP 5124 Planning Studio (2010). 2050 Falls Church Eastern Gateway Concept Plan. <http://www.fallschurchva.gov/DocumentCenter/View/703/Eastern-Gateway?bidId=>. Page 6.

Figure 4 Proposed Redevelopment for the Seven Corners CBC<sup>10</sup>



## ONGOING TRANSPORTATION PLANNING EFFORTS

### Envision Route 7 – Northern Virginia Transportation Commission<sup>11</sup>

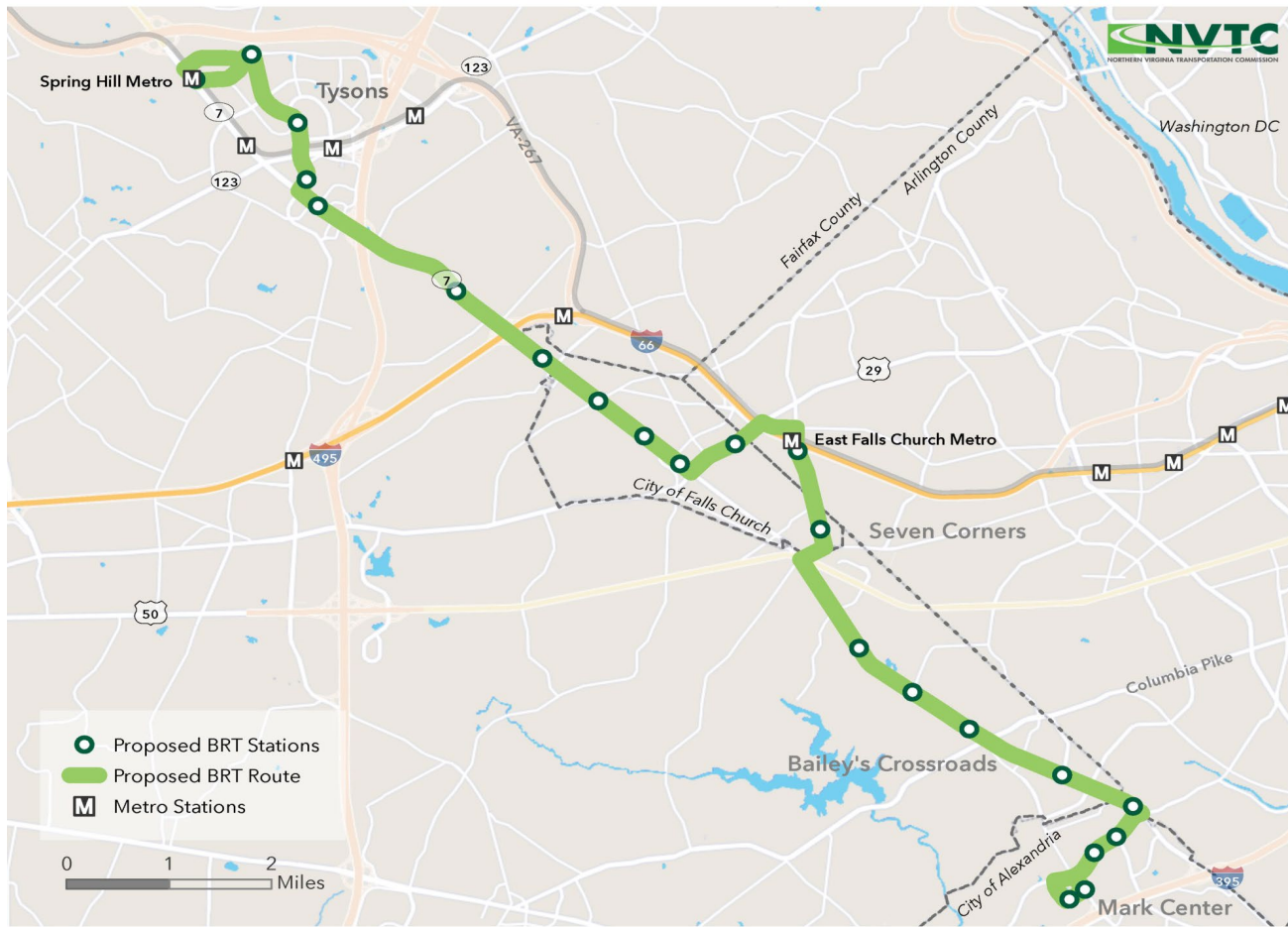
The Northern Virginia Transportation Commission (NVTC) is leading the planning process for Envision Route 7, a proposed bus rapid transit (BRT) system to connect the Mark Center in the City of Alexandria to Tysons in Fairfax. The BRT system would run through Seven Corners and Falls Church along Route 7. According to the NVTC webpage on Envision Route 7, "the Route 7 BRT project is part of a larger, regional network of BRT services planned in Northern Virginia that includes the Metroway BRT in the City of Alexandria and Arlington County, the West End Transitway in the City of Alexandria, and the Embark Richmond Highway BRT in Fairfax County."<sup>12</sup> The proposed routing of the Route 7 BRT is depicted in Figure 5.

<sup>10</sup> Image from [https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/documents/complanamend/sevencornerscbcstudy/staff%20report%20\(2013-i-b2\).pdf](https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/documents/complanamend/sevencornerscbcstudy/staff%20report%20(2013-i-b2).pdf)

<sup>11</sup> Northern Virginia Transportation Commission (2021). Envision Route 7. <https://novatransit.org/programs/route7/>

<sup>12</sup> Northern Virginia Transportation Commission (2021). Envision Route 7. <https://novatransit.org/programs/route7/>

Figure 5 Proposed BRT Corridor Alignment<sup>13</sup>



## Seven Corners Phasing Study – Fairfax County<sup>14</sup>

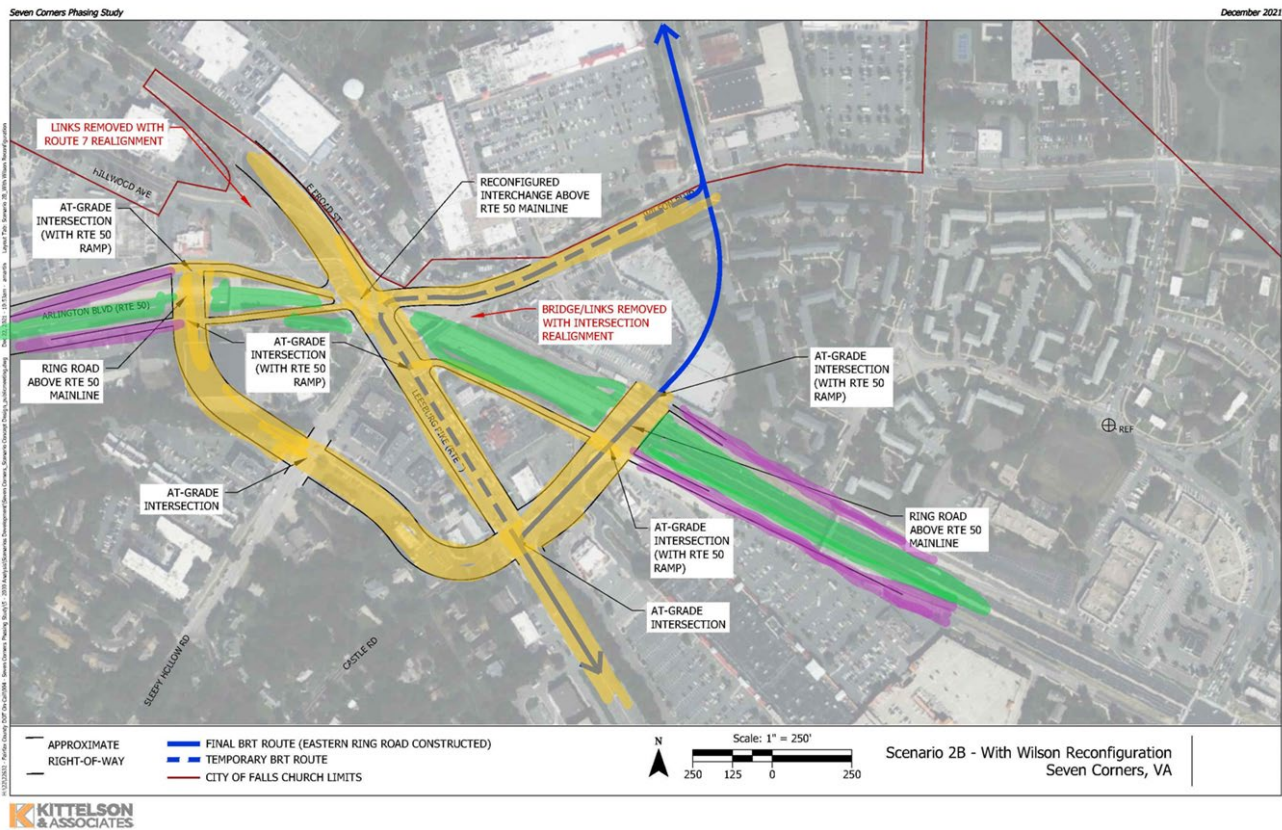
Fairfax County, which borders the City of Falls Church, is currently undertaking a phasing study to evaluate transportation improvements at the Seven Corners Business Center and the Seven Corners Intersection. The study is exploring various improvements to the area, including a “Ring Road around the west side of the interchange from Route 50 in the southeast to Broad Street in the north; Removal of the Hillwood Avenue connection to the interchange area; a Ring Road terminating into Broad Street at a right angle and Hillwood Avenue terminating into the Ring Road at a right angle; [and] New ramps connecting Route 50 to the Ring Road on east and west side of interchange.”<sup>15</sup> One draft scenario of the transportation improvements are depicted in Figure 6.

<sup>13</sup> Image from <https://novatransit.org/programs/route7/>

<sup>14</sup> Fairfax County, 2022. Seven Corners Phasing Study. Available at: <https://www.fairfaxcounty.gov/transportation/study/seven-corners>

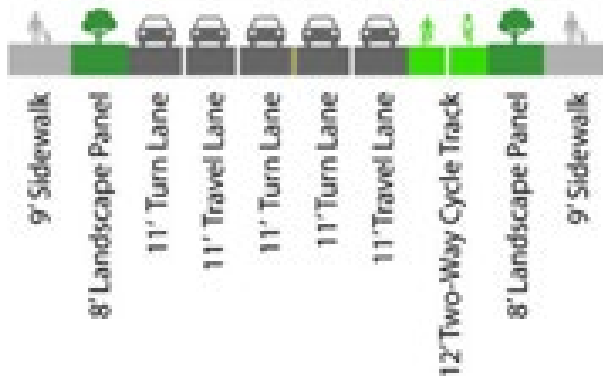
<sup>15</sup> Fairfax County, 2022. Seven Corners Phasing Study. Available at: <https://www.fairfaxcounty.gov/transportation/study/seven-corners>

Figure 6 Fairfax County Phasing Study Ring Road Draft<sup>16</sup>



The 'ring road' is proposed to include an external two-way bicycle pathway, which could greatly improve bicycle connectivity around the study area (Figure 7). Outreach information for the study also highlighted Fairfax County's pedestrian, trail, and bicycle priorities for 2030. These include improvements to neighborhood access and connections to the ring road (Figure 8).

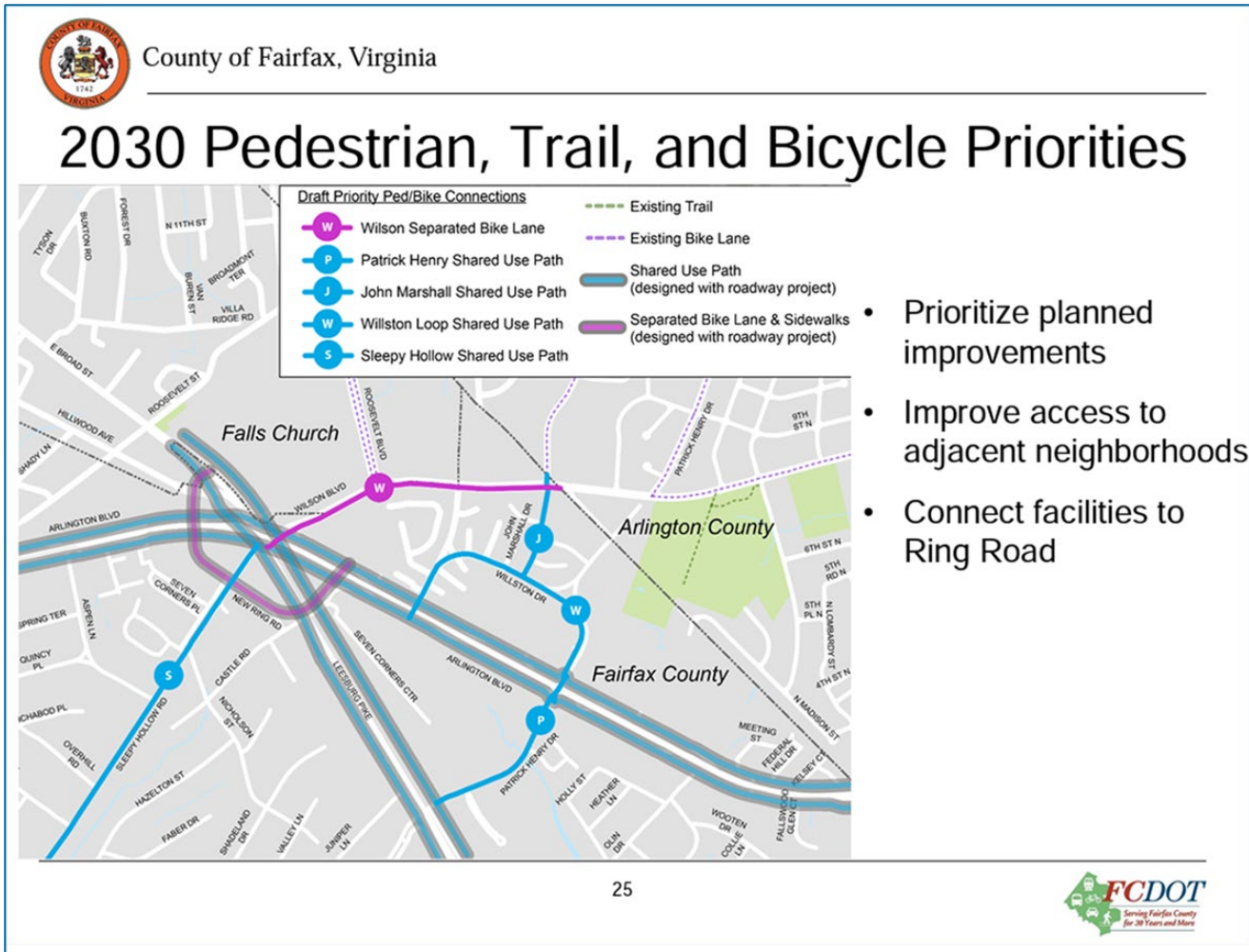
Figure 7 Potential Cross-Section of Proposed Ring Road<sup>17</sup>



<sup>16</sup> Image provided by the City of Falls Church

<sup>17</sup> Image provided by the City of Falls Church

Figure 8 Fairfax County Ring Road Outreach<sup>18</sup>



<sup>18</sup> Fairfax County, 2021. Seven Corners Phasing Study Presentation. Available at: [https://www.fairfaxcounty.gov/transportation/sites/transportation/files/Assets/Documents/PDF/Transportation%20Projects%20Studies%20and%20Plans/Seven%20Corners%20Study/SevenCornersPresentation\\_November2021.pdf](https://www.fairfaxcounty.gov/transportation/sites/transportation/files/Assets/Documents/PDF/Transportation%20Projects%20Studies%20and%20Plans/Seven%20Corners%20Study/SevenCornersPresentation_November2021.pdf)

# 3 EXISTING TRANSPORTATION CONDITIONS

The study area is made up of largely one-story commercial buildings with large surface area parking lots. The largest land uses are the 15.6-acre Eden Center and the 9.6-acre Koons Ford complex along Wilson Boulevard and Route 7. The Eden Center is the largest Vietnamese commercial center on the east coast of the United States. It is home to 120 Vietnamese shops and restaurants.<sup>19</sup> The study area shares boundaries with Fairfax County and Arlington County and is located just north of Fairfax County's Seven Corners Shopping Center and WMATA's Seven Corners Transit Center. Adjacent land uses in both counties consist of offices, shopping complexes, and apartment buildings, while within the City of Falls Church, the area is buffered by single-family residential neighborhoods and somewhat isolated from the other commercial areas of the City.

Along Route 7 and Wilson Boulevard other retail uses are present, while Roosevelt Boulevard has a concentration of apartment and condominium buildings. Immediately to the north and west of the study area are single-family neighborhoods. The City's Fort Taylor Park and the Oakwood Cemetery are also immediately adjacent to the East End.

## STREET NETWORK

The existing network of streets, roads, and highways is relatively disconnected, leading to the concentration of traffic on the small number of existing facilities. Whether walking, rolling, riding transit, or in a private vehicle, travelers find themselves competing for safe space and priority on Wilson Boulevard, Roosevelt Boulevard, and East Broad Street, without many useful choices. With limited public right-of-way, the result is space allocated to vehicles on roadways with multiple through lanes and dedicated turn lanes: Wilson Boulevard is a five lane road with two vehicle lanes in both direction and a center two-way left turn lane; East Broad Street is a four lane roadway, divided in some sections, with two vehicle lanes for each direction; Roosevelt Boulevard is a four lane roadway with two vehicle lanes, narrow painted bike lanes and a center landscaped median; and Hillwood Avenue is a four lane roadway with bicycle "sharrows." Those choosing to ride bikes or scooters find no protected facilities – Roosevelt Boulevard is the only roadway in the study area with bike infrastructure of any kind. Sidewalks exist in most places but do not meet current design standards for width and separation from moving traffic. At overly wide intersections, people walking face long waits and long crossing distances. The goals of the small area plan are to improve conditions for walkers, bikers, and other micromobility users to ensure safe and convenient transportation by all users.

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<sup>19</sup> City of Falls Church, 2022. "Eastern Gateway/7 Corners Planning Opportunity Area 5 Chapter 1. Introduction and Background – Draft."

# Posted Vehicle Speed Limits

The posted speed limits show similar patterns to the traffic volumes, with higher speed limits on Arlington Boulevard and Leesburg Pike, and lower speed limits on surrounding residential streets (Figure 9). The speed limits at the complex intersection of Leesburg Pike, Wilson Boulevard, East Broad Street, and Sleepy Hollow Road vary across each roadway (Figure 10). The varying speed limits may encourage higher speeds on the more local roads in the area, which could lead to greater crashes.

**Figure 9 Area Speed Limits**

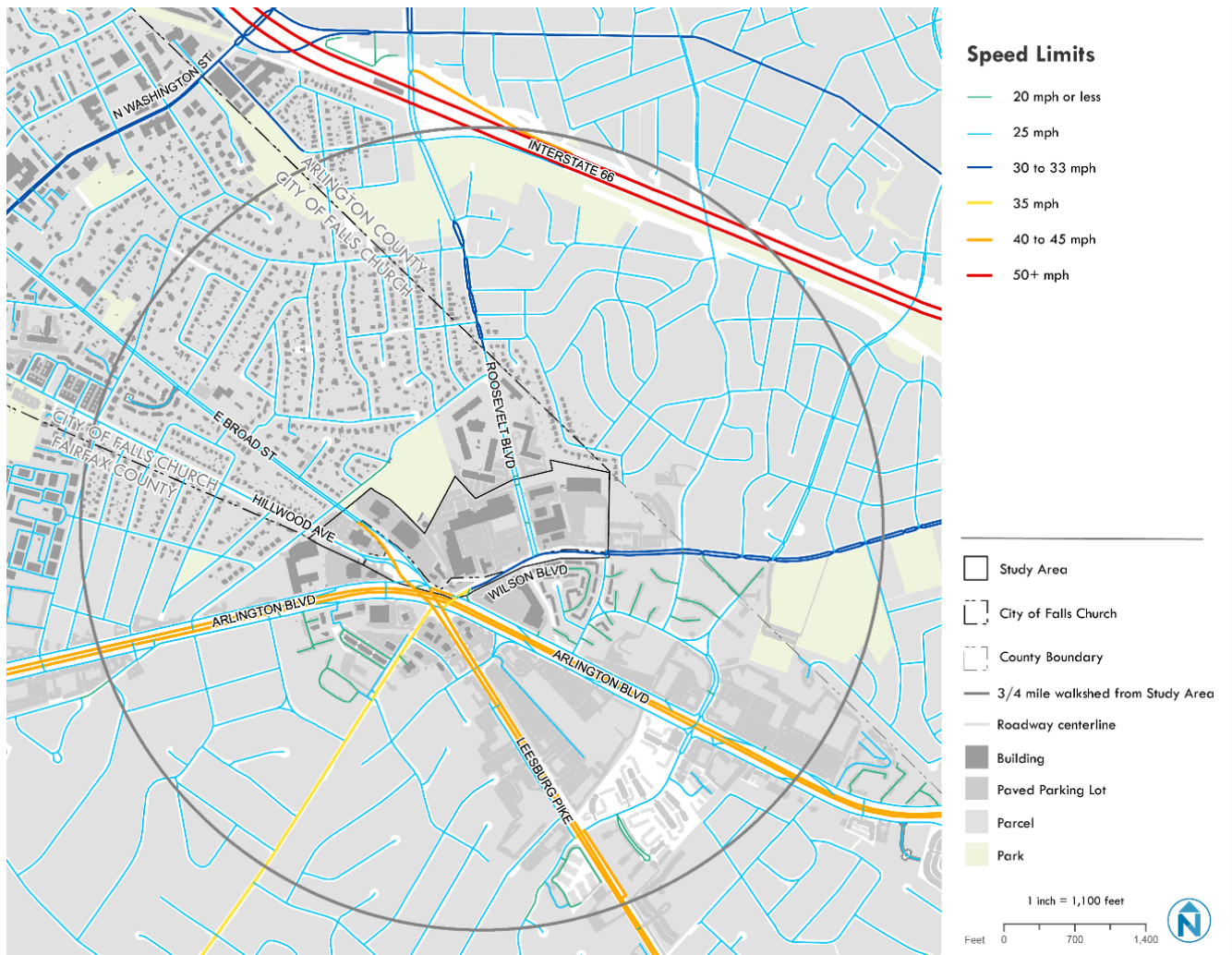
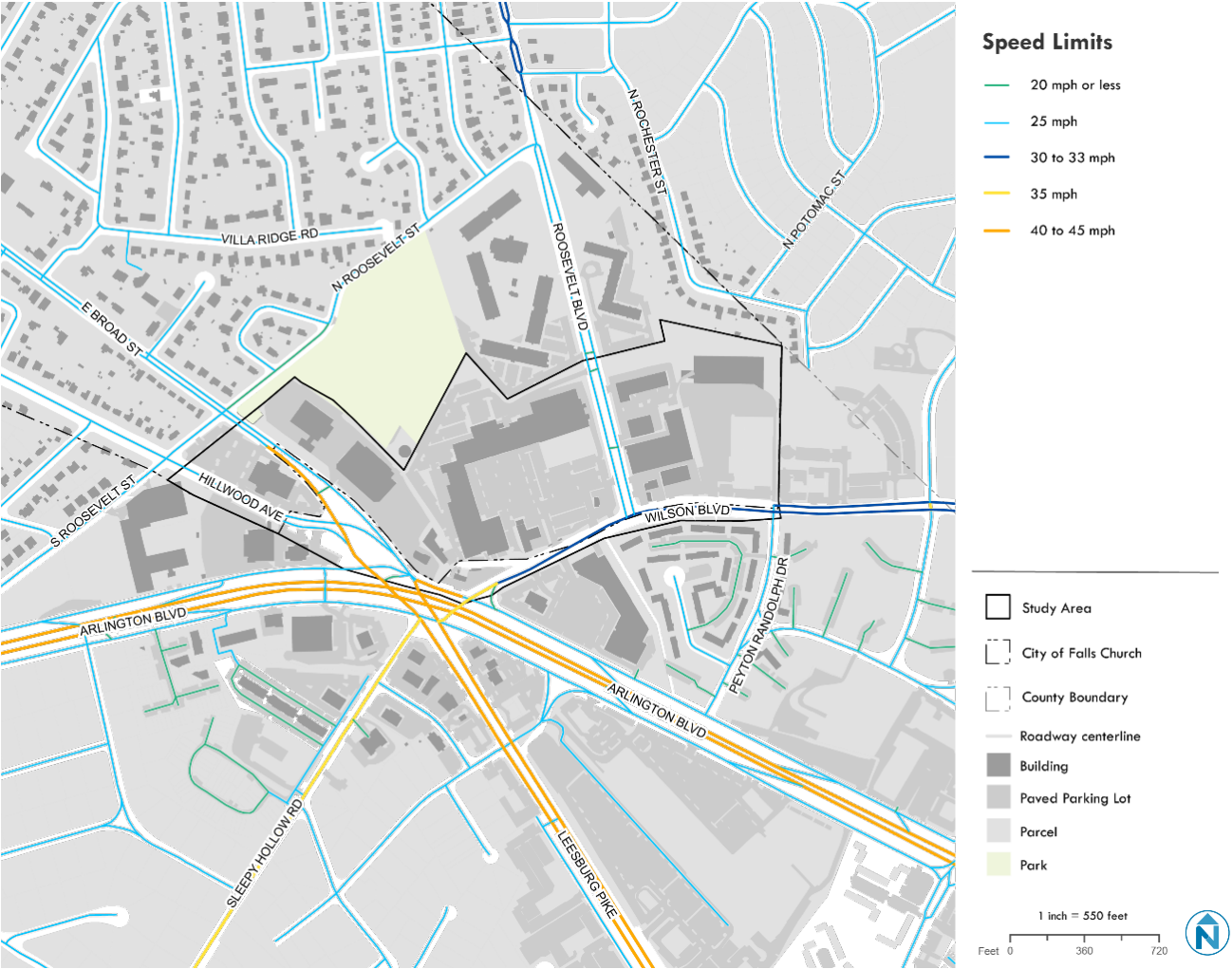


Figure 10 Speed Limits

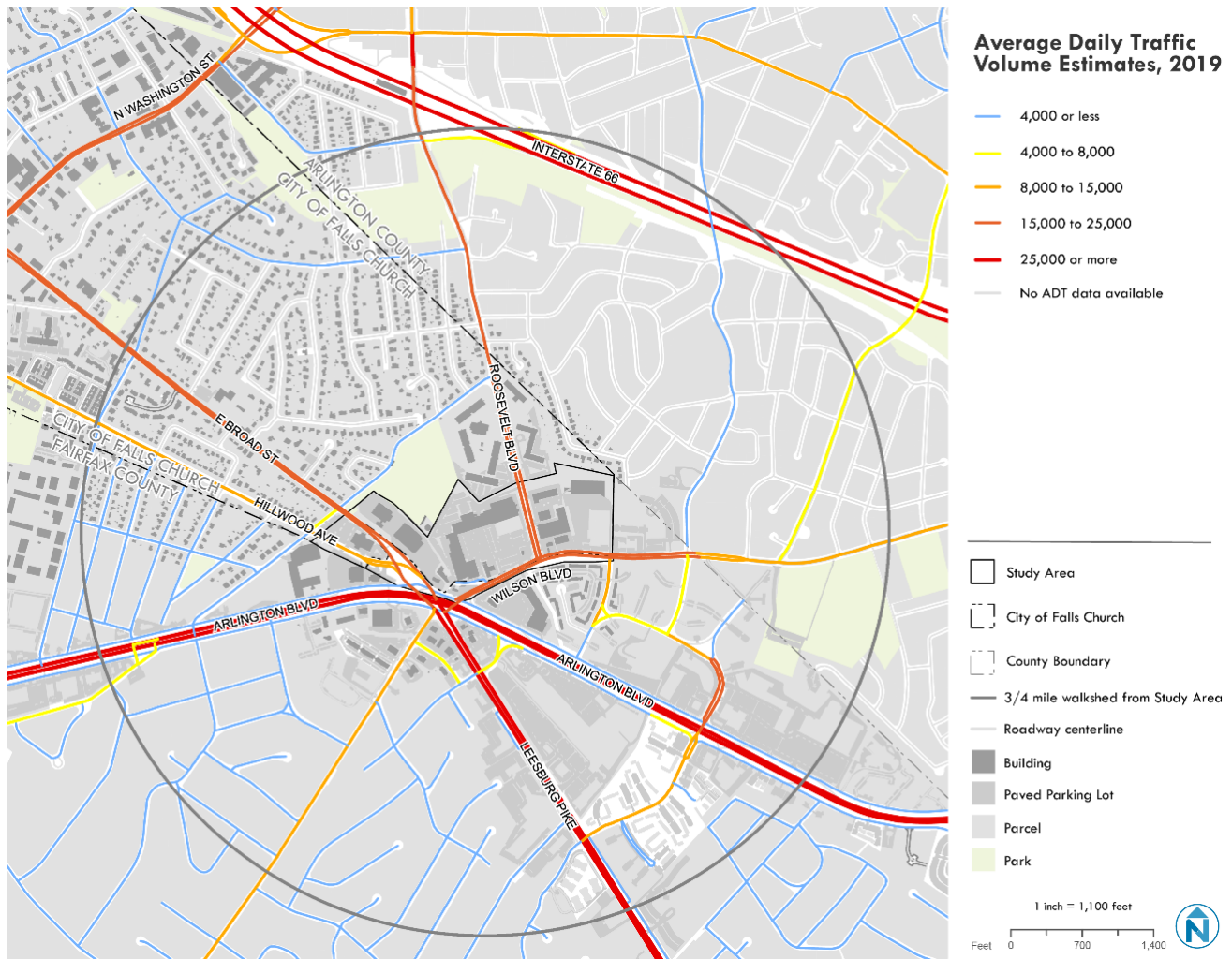


**The speed limits at the complex intersection of Leesburg Pike, Wilson Boulevard, East Broad Street, and Sleepy Hollow Road vary across each roadway.**

# Estimated Vehicle Traffic Volumes

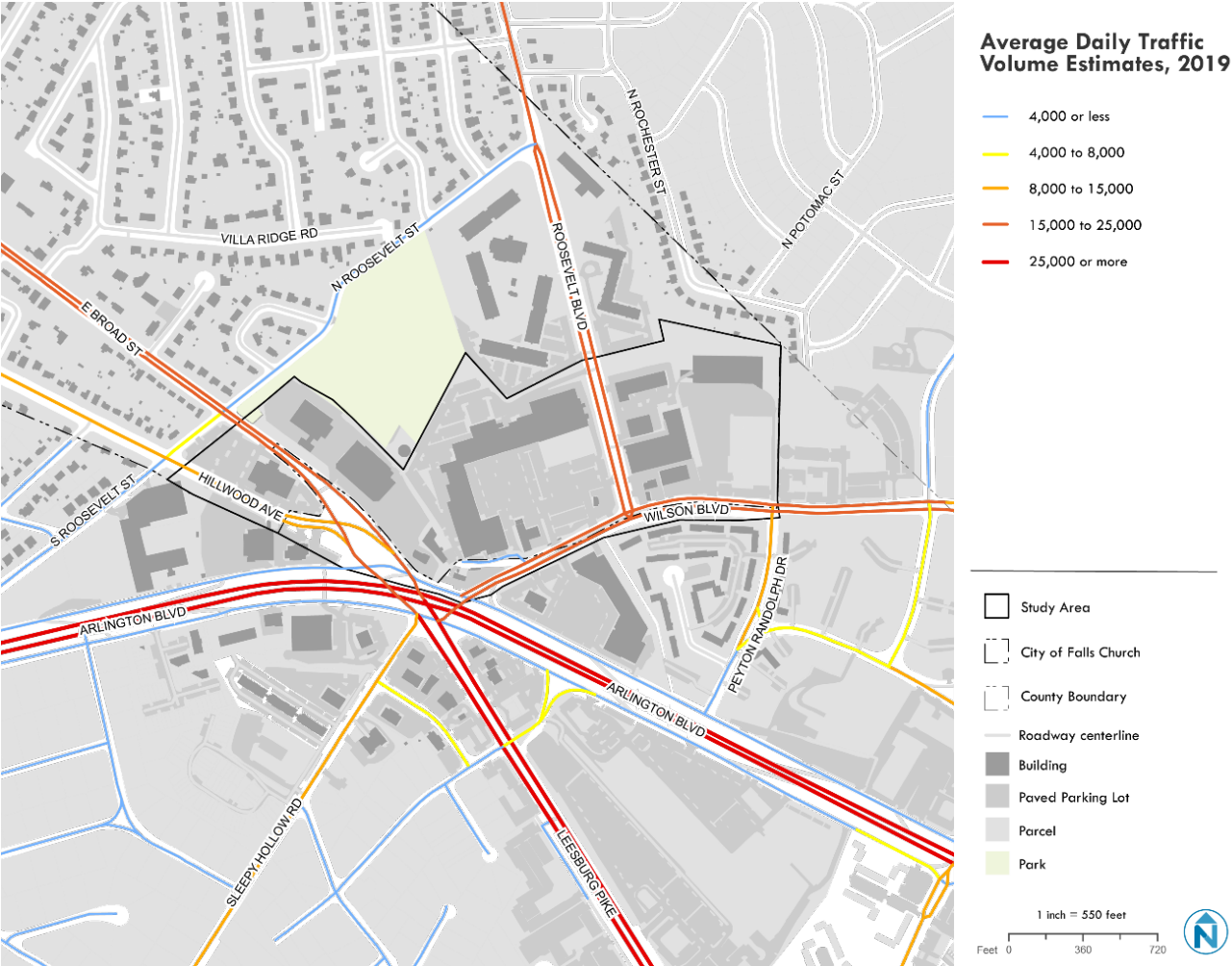
The study area is bordered by and adjacent to multiple high traffic roads, shown in Figure 11 and Figure 12.<sup>20</sup> Arlington Boulevard and Leesburg Pike each see average daily traffic volumes of about 25,000 cars. East Broad Street and Roosevelt Boulevard also serve relatively high volumes of traffic, between 15,000 and 25,000 vehicles daily. Sections of Wilson Boulevard also saw more than 15,000 vehicles per day in 2019. Emerging travel patterns post-COVID may shift these volumes temporarily or permanently. No data was available to determine volumes of people walking or bicycling.

**Figure 11 Vehicle Traffic Volume Context**



<sup>20</sup> Annual Average Daily Traffic Volume Estimates, Virginia Department of Transportation Traffic Engineering Division, 2019.

**Figure 12 Vehicle Traffic Volume Study Area**

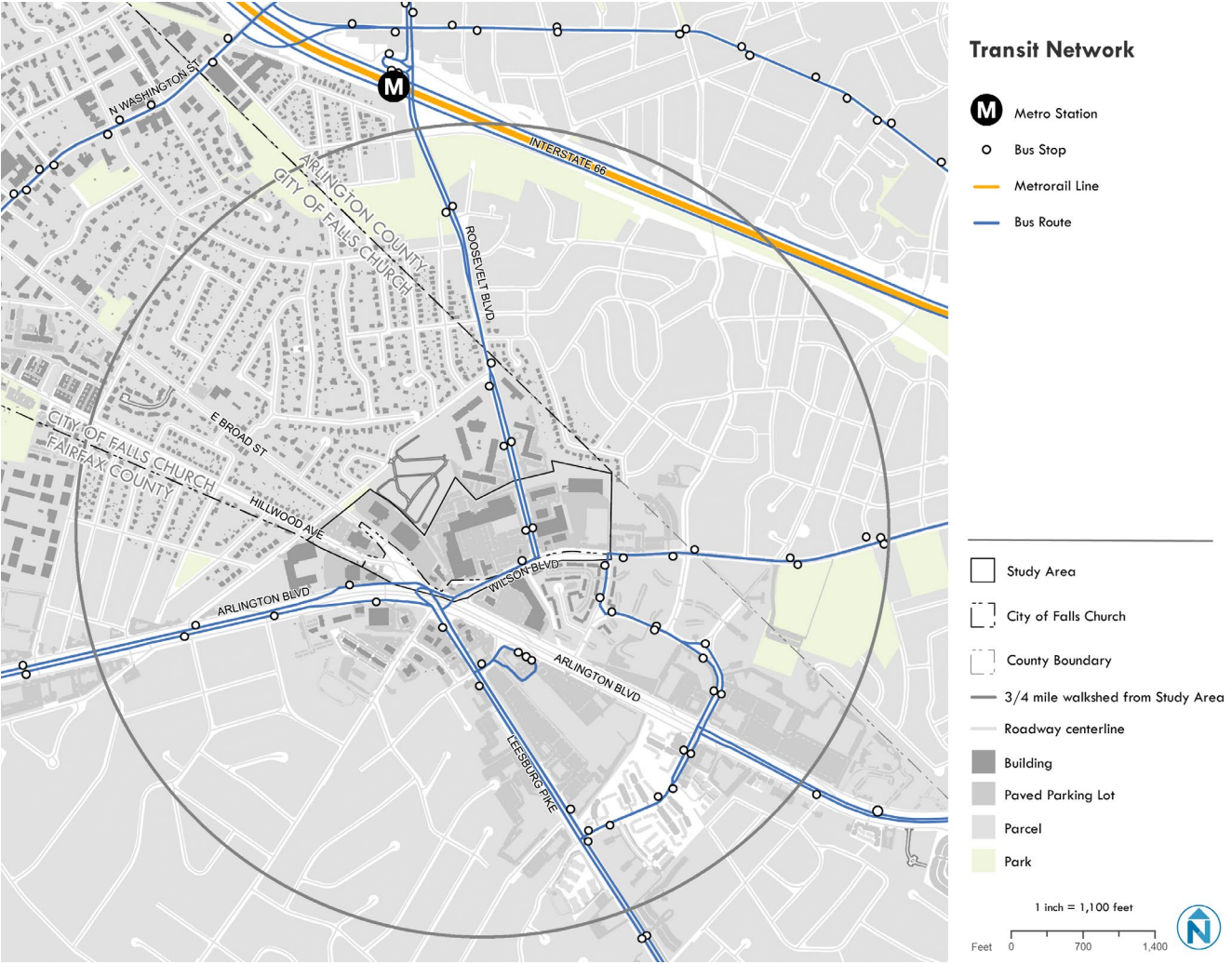


**East Broad Street and Roosevelt Boulevard serve relatively high volumes of traffic, between 15,000 and 25,000 vehicles daily.**

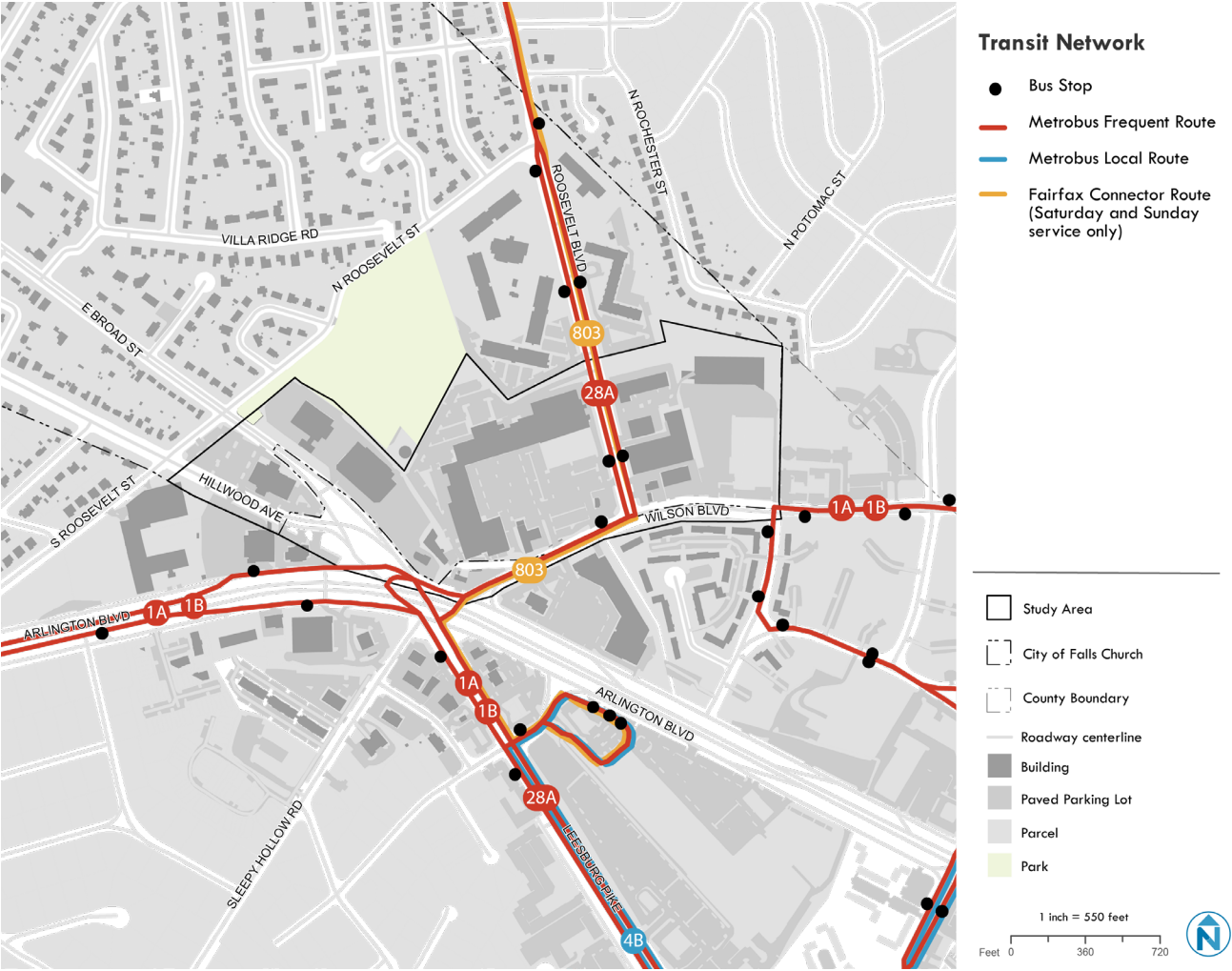
# TRANSIT NETWORK

The study area is served by the Washington Metropolitan Area Transit Authority (WMATA) Metrobus and Metrorail and a Fairfax Connector route. The closest Metrorail station is just outside of a ¾ mile walkshed of the Eden Center (Figure 13). Multiple bus stops (WMATA Metrobus 1A, 1B, 4B, and 28A) are located on streets within and around the study area, some of which provide direct connections to the East Falls Church Metrorail station (Figure 14). The Fairfax Connector Route 803 also provides a direct connection between the Eden Center and the East Falls Church Metrorail station on weekends only.

**Figure 13 Existing Transit Network Context**



**Figure 14 Study Area Existing Transit Network Study Area**



**Multiple bus stops are located on streets within and around the study area, some of which provide direct connections to the East Falls Church Metrorail station.**

# WALKING NETWORK

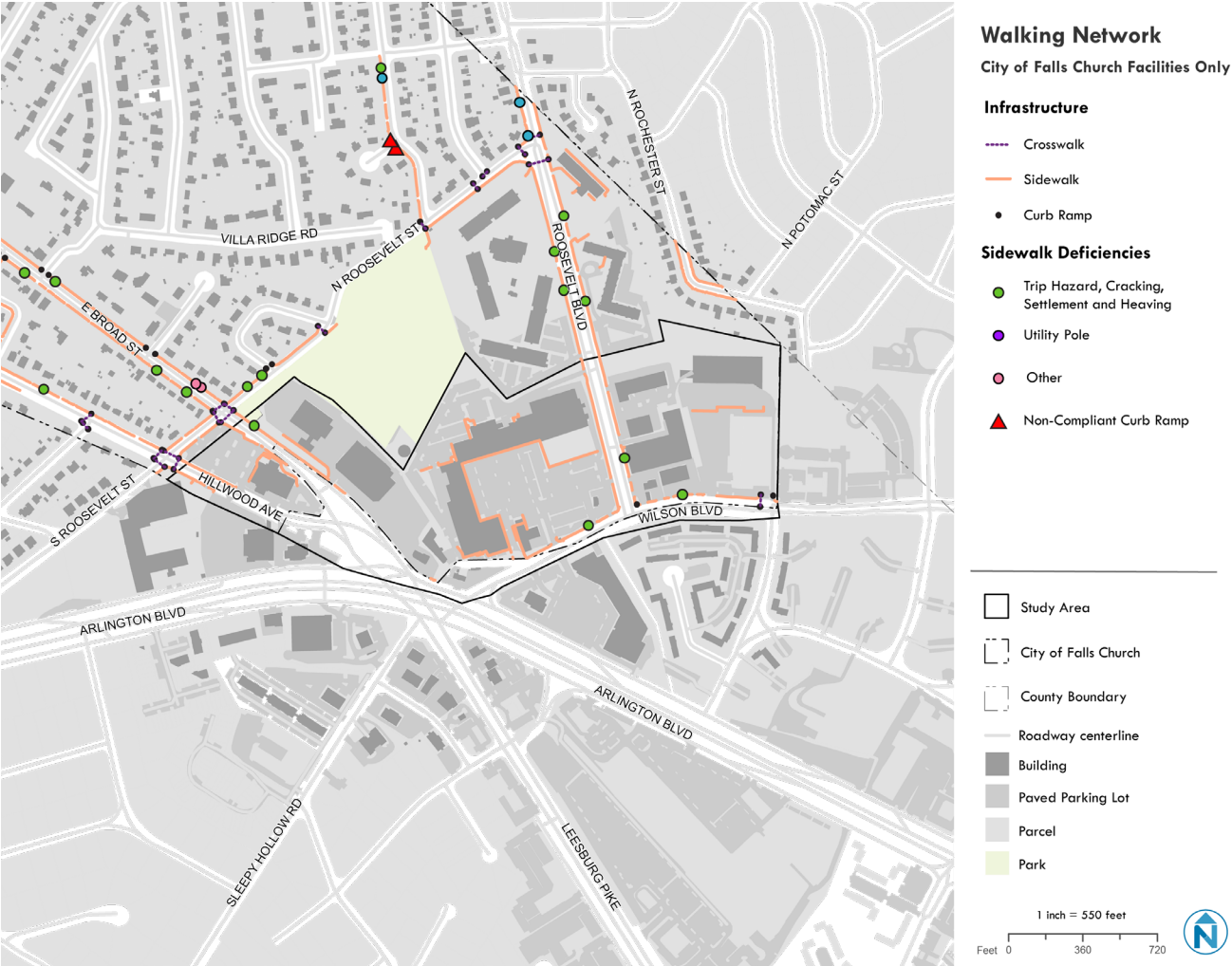
Data for walking infrastructure, including sidewalks, crosswalks, curb ramps, and sidewalk deficiencies was available for the City of Falls Church. Within ¾ miles of the Eden Center in Falls Church, the smaller residential streets generally do not have sidewalks, but most of the larger streets do (Figure 15).

**Figure 15 Area Walking Network Context**



Figure 16 shows a closer view of the network surrounding the study area, including curb ramps and sidewalk deficiencies. Wilson Boulevard, East Broad Street, and Roosevelt Boulevard have sidewalks, but many have hazards, including cracking, settlement, and heaving within and immediately adjacent to the study area. The intersection of Roosevelt Boulevard and Wilson Boulevard also lacks a north-south crosswalk and full curb ramp facilities, which impedes access to the Eden Center and could encourage unsafe pedestrian behavior.

**Figure 16 Walking Network and Sidewalk Deficiencies Study Area**

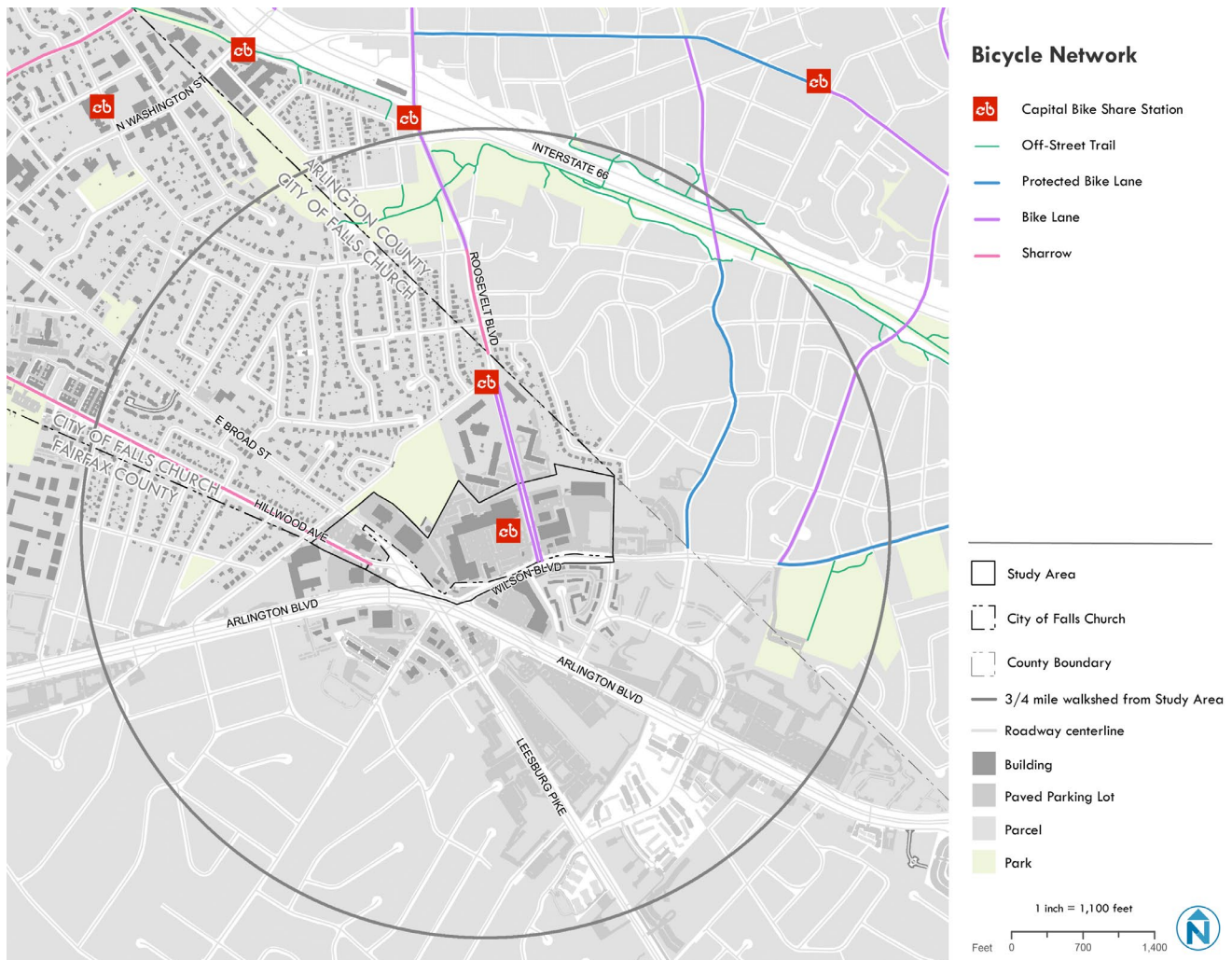


# BICYCLE NETWORK

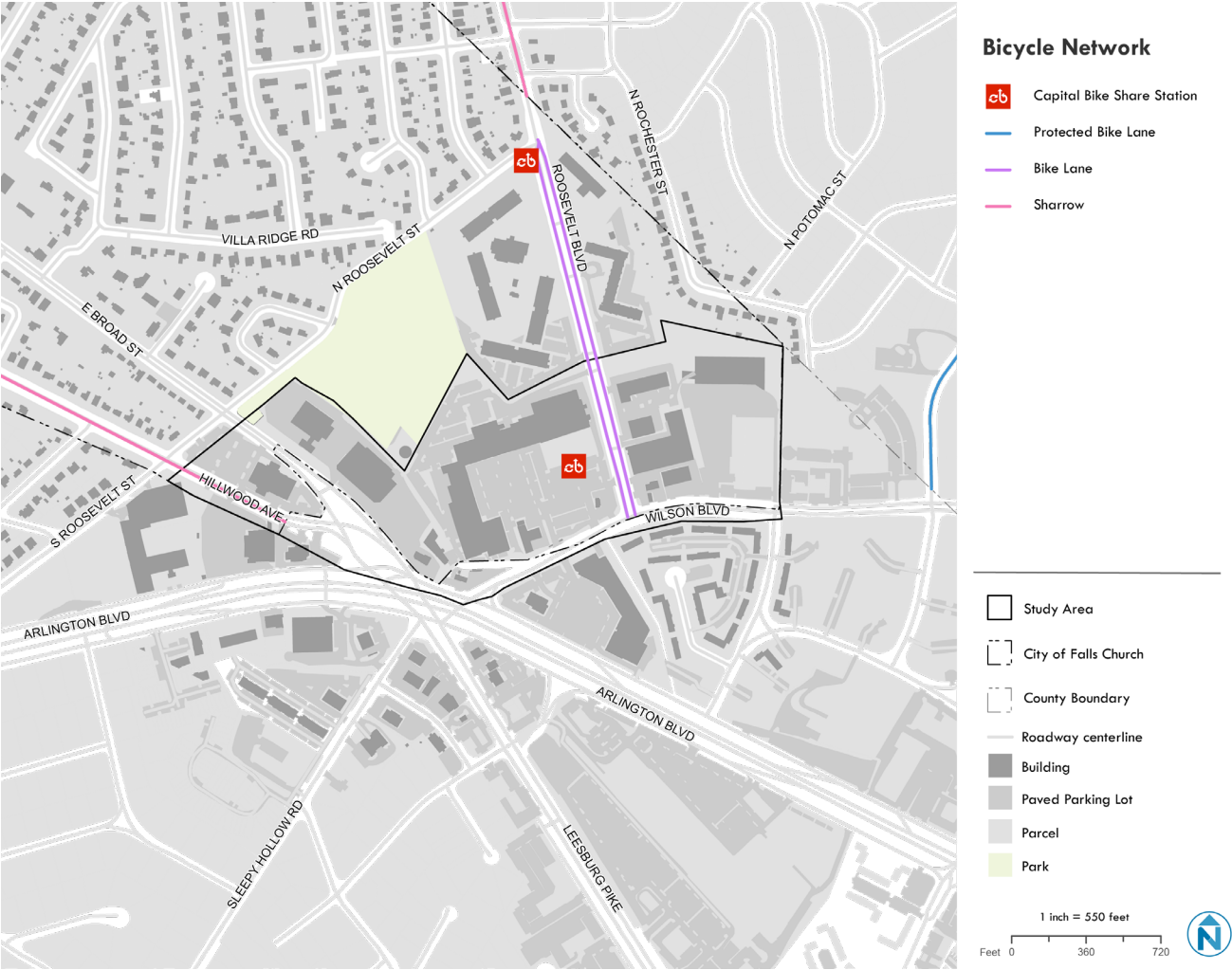
The City of Falls Church, Fairfax County, and Arlington County all have bicycle networks with various levels of physical infrastructure. Figure 17 and Figure 18 show the pathways and streets bicycle infrastructure, including on-street painted "sharrows," painted bike lanes, protected bike lanes, and off-street trails. Within Falls Church, Roosevelt Boulevard has a traditional bike lane, which abuts the Eden Center, but north of the Falls Church/Arlington County boundary, Roosevelt Boulevard only contains "sharrows."

One Capital Bikeshare station is located within the Eden Center parking lot, and another is located within walking distance of the study area, sited on the corner of Roosevelt Boulevard and N Roosevelt Street.

**Figure 17 Area Bicycle Network Context**



**Figure 18 Study Area Bicycle Network Study Area**



**Within Falls Church, Roosevelt Boulevard has a traditional bike lane, which abuts the Eden Center, but north of the Falls Church/Arlington County boundary, Roosevelt Boulevard only contains “sharrows.”**

# SAFETY

## Vehicle Crashes: Fatalities and Serious Injuries

Between 2013 and 2021, multiple vehicle crash fatalities and many serious injuries have occurred on streets surrounding the study area (Figure 19 & Figure 20). The only fatality within the study area occurred on Wilson Boulevard.

Figure 19 Area Vehicle Crashes, 2013 to 2021, Context

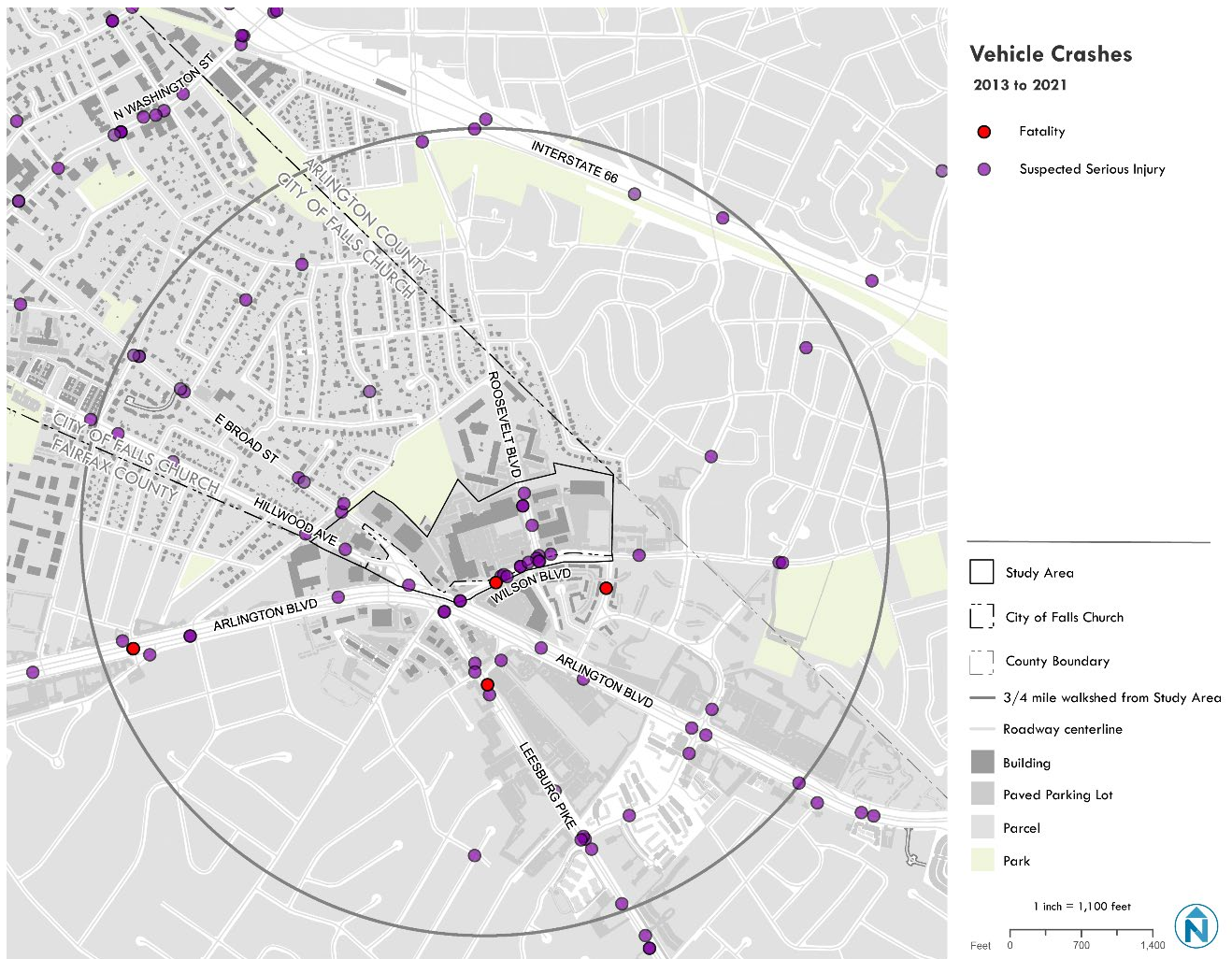
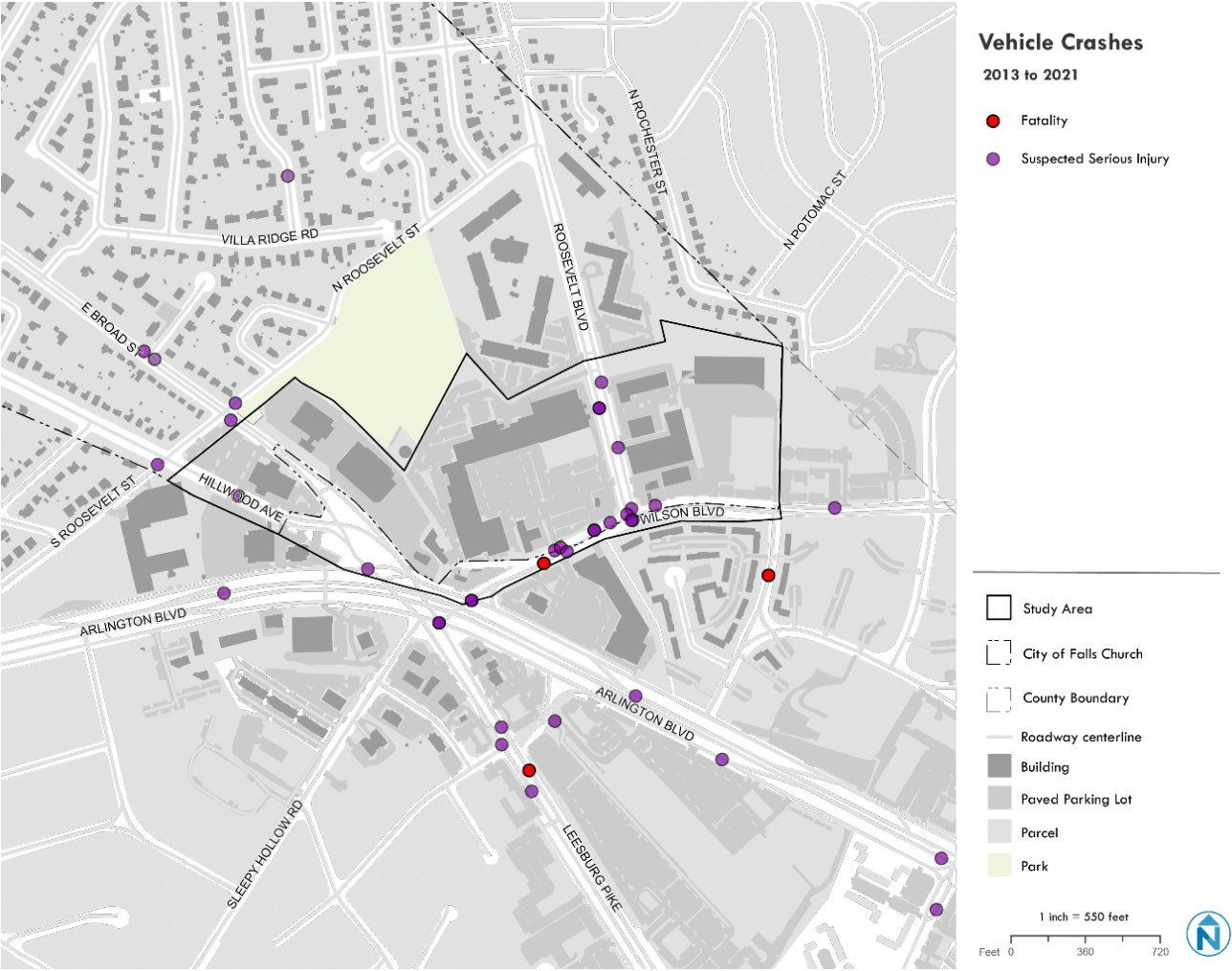


Figure 20 Vehicle Crashes, 2013 to 2021, Study Area

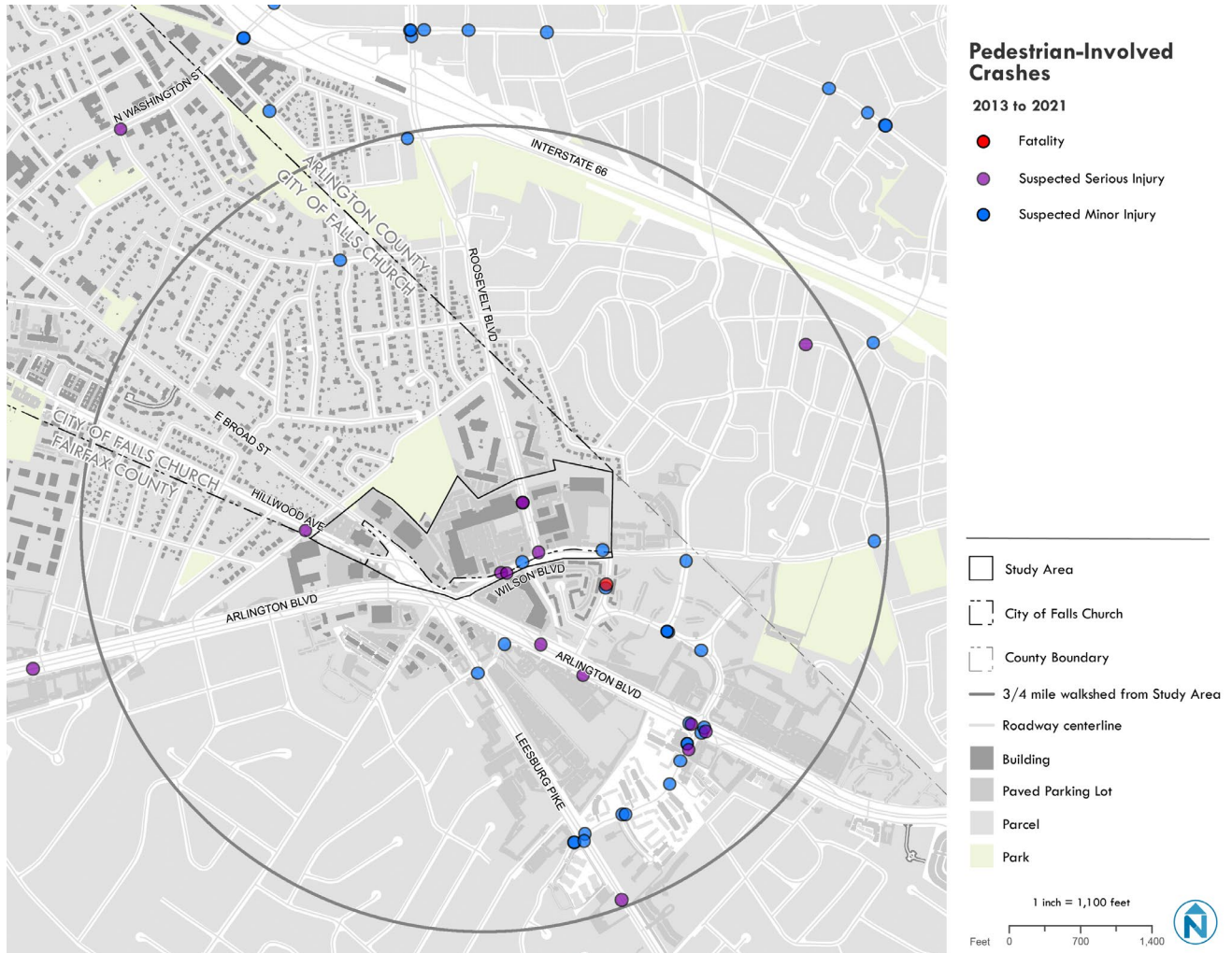


**Multiple vehicle crash fatalities and many serious injuries have occurred on streets surrounding the study area. The only fatality within the study area occurred on Wilson Boulevard.**

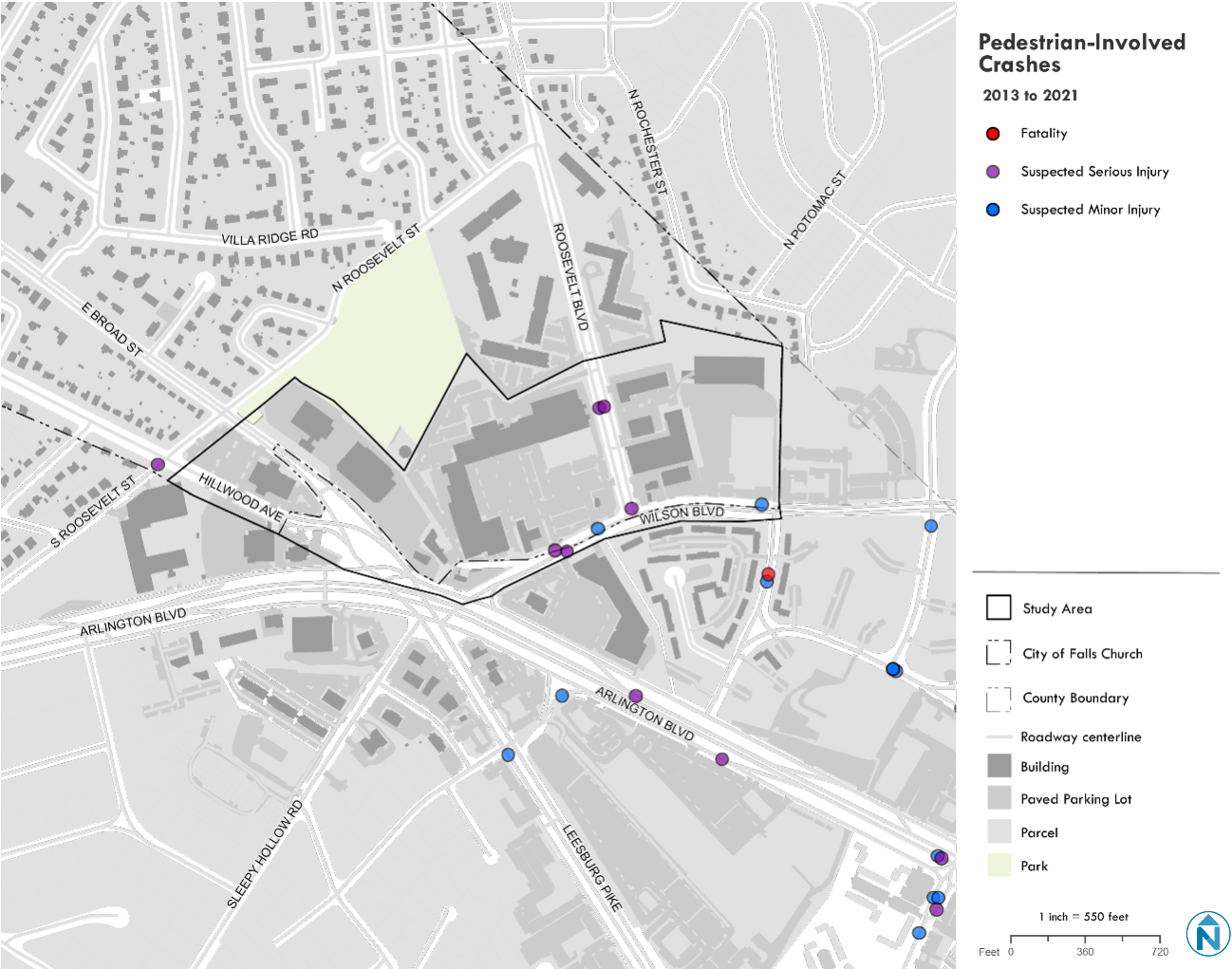
# Pedestrian-Involved Crashes

Most of the pedestrian-involved crashes surrounding the study area are outside the City of Falls Church (Figure 21). Most relevant to this study are the crashes that resulted in pedestrian injuries on Wilson Boulevard and Roosevelt Boulevard, as they are located where crosswalks and curb ramps are lacking (Figure 22).

**Figure 21 Area Pedestrian-Involved Crashes, 2013 to 2021, Context**



**Figure 22 Pedestrian-Involved Crashes, 2013 to 2021, Study Area**



**Crashes resulting in pedestrian injuries occurred on Wilson Boulevard and Roosevelt Boulevard where crosswalks and curb ramps are lacking.**

# 4 FUTURE TRANSPORTATION CONDITIONS

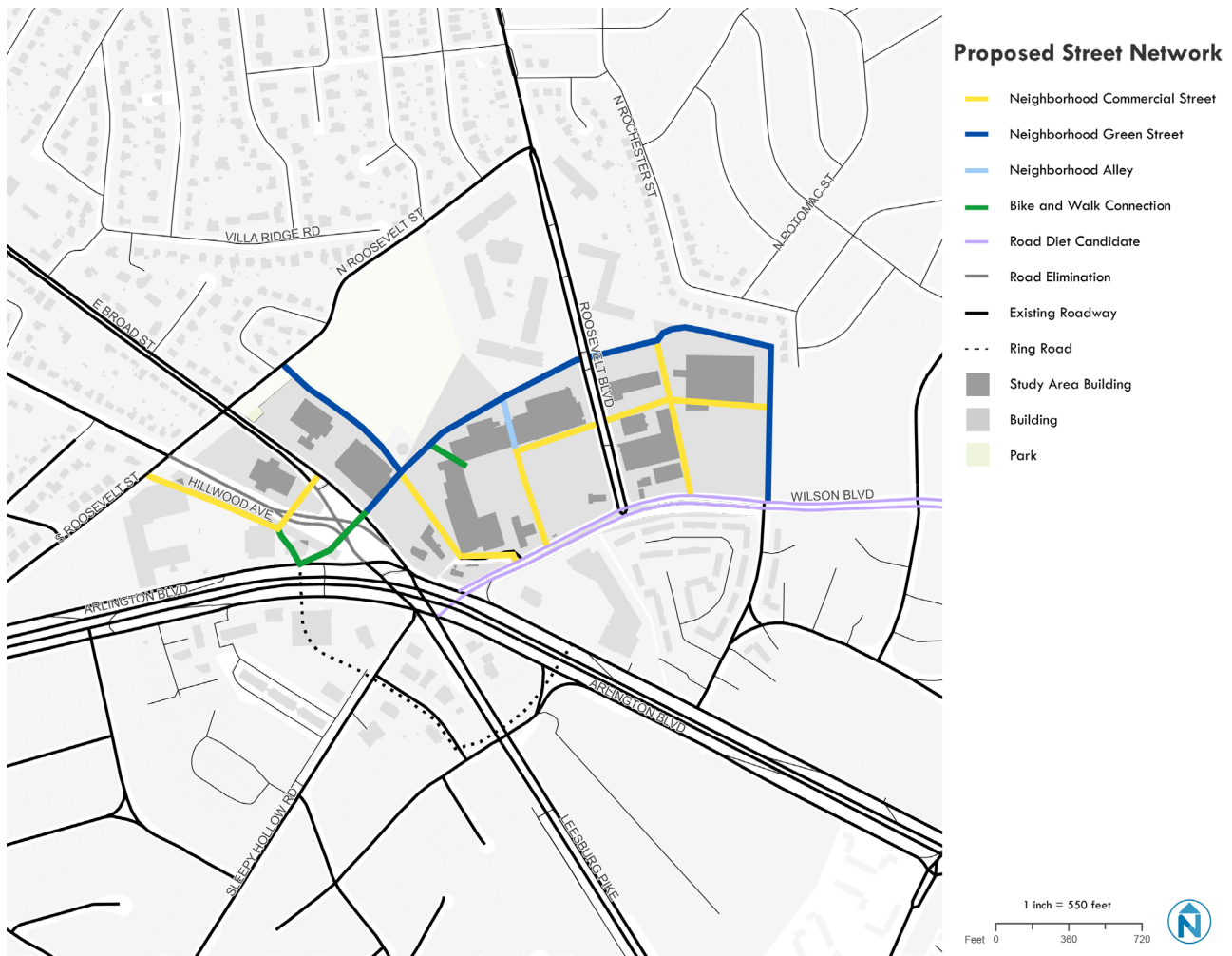
## PROPOSED MOBILITY NETWORK

The draft East End SAP proposed significant new compact, mixed-use, walkable development. An appropriate transportation system to support that development includes changes to existing streets, the creation of new streets, extension of walking and biking networks, addition of new transit service, and a focus on safety for all travelers and other users of the public right-of-way. The proposed mobility network for the East End study area was developed with four key principles in mind.

1. Create a network of low-speed streets. Streets where people will walk or bike must be designed to support low vehicle speeds for the safety of all. Resulting strategies include:
  - Introduce a street grid to ensure more roadway connections, creating more direct paths for walking, biking, and other access;
  - Provide circulation via slow streets to mitigate potential for vehicle “cut through” traffic;
  - Develop new streets with no more than one travel lane in each direction.
2. Civilize existing main streets. Wilson, Roosevelt, and Broad all struggle to serve travelers safely and equitably. Design changes to these streets are a necessary complement to the new street connections described above. Resulting strategies include:
  - Civilize high volume streets with road diets where possible
  - Create protected bike and walk facilities
  - Add street trees, transit amenities, and other streetscape elements
3. Ensure multimodal and complete streets. As a result of the above principles and strategies, each street should serve the full range of users safely. Strategies include:
  - Provide protected bike facilities within a block of every destination for safe access;
  - Create protected intersections at high-conflict points such as the intersection of Roosevelt and Wilson.
4. Plan for service access. Development requires “back of house” functions like loading and trash removal, but these should be kept off priority streets. Resulting strategies include:
  - Provide service (garage, delivery) access for all new parcels and building locations.
  - Prioritize keeping service access separate from strongest walkable retail frontages;
  - Ensure curbs are designed and managed to support high-value, high-turnover uses like transit access, short-term deliveries, and pickups and drop-offs.

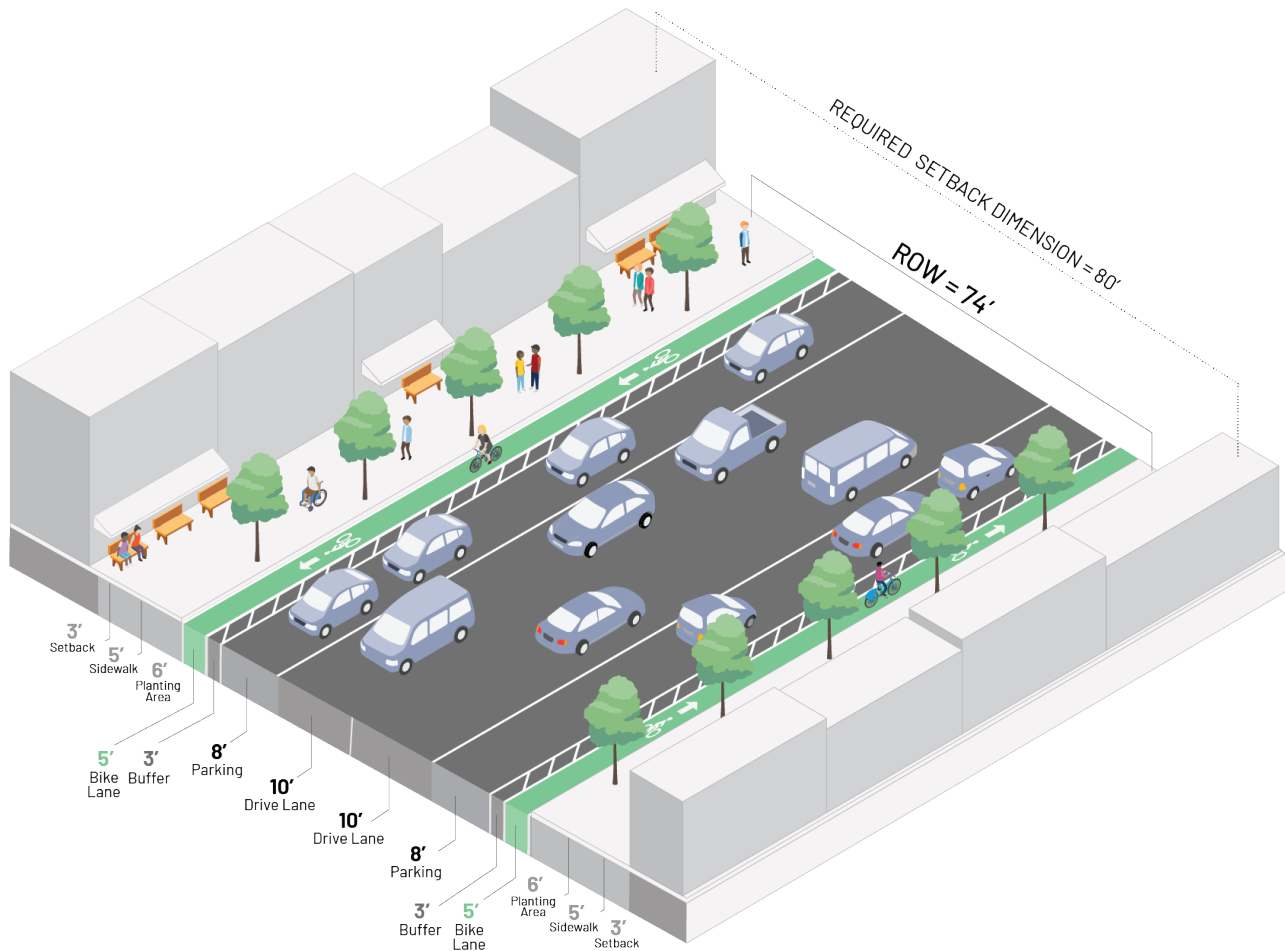
Figure 23 illustrates the proposed mobility network. It is comprised of two major street types as well as path connections exclusively for walkers and bicyclists. It also includes one alleyway to enhance the network in later East End redevelopment phases.

**Figure 23 Proposed Study Area Mobility Network**



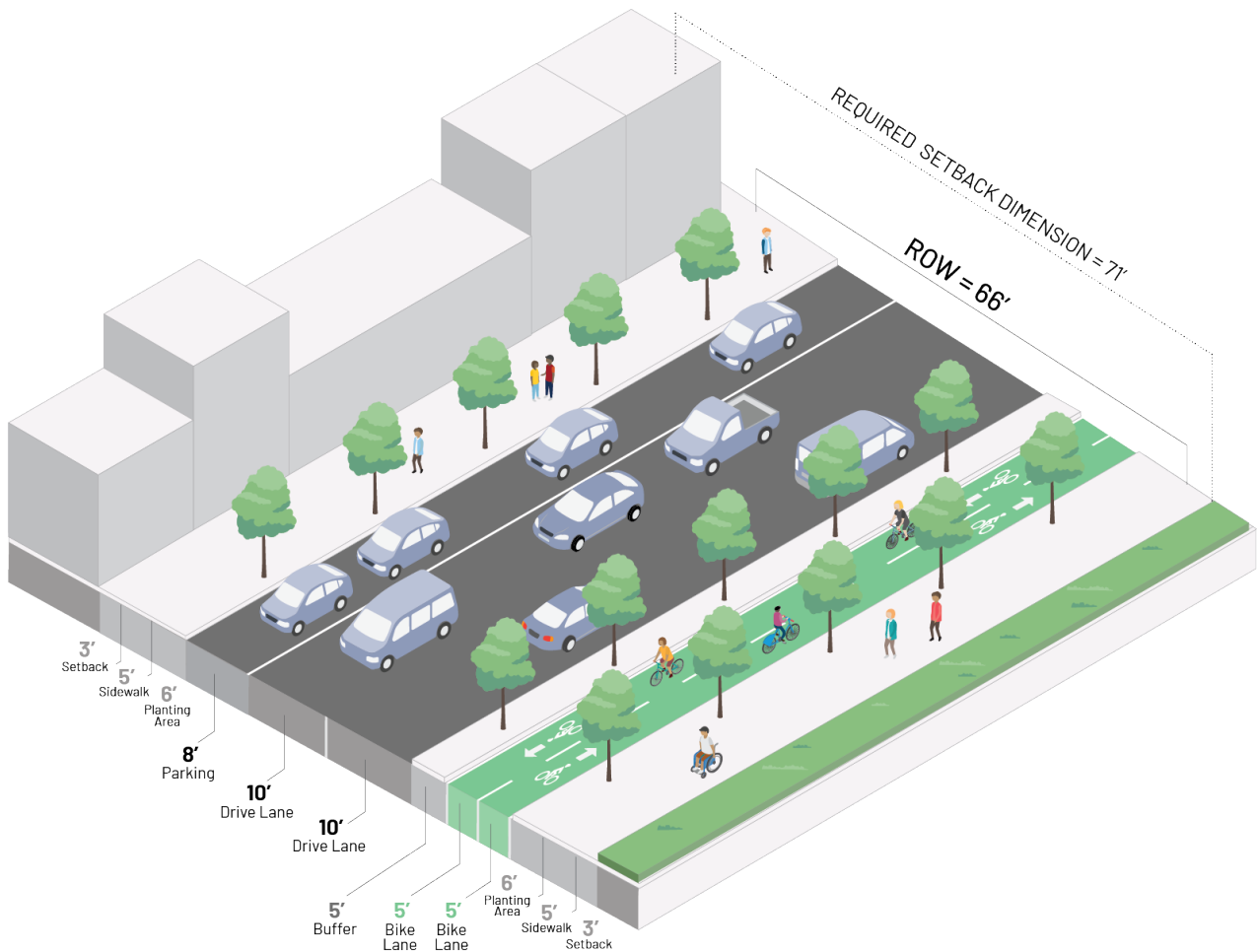
The neighborhood main street type (shown in Figure 24) includes one vehicle travel lane in each direction with supporting curbside parking/drop-off lanes on each side. A 5' bike lane at grade with the street and buffered from moving traffic by the parking lane is proposed on each side of the roadway. A 6' planting area is proposed with at least 5' of sidewalk within the right of way (ROW) for a total ROW dimension of 74'. This neighborhood main street type is proposed in locations where the East End plan's land use suggests street-fronting retail and other active uses mixed with residential and/or office on upper floors. The curbside lanes will need to be managed dynamically to serve both short-term parking and loading/unloading needs. Loading zones should be accommodated both for passengers and micro freight delivery activities, while on-street parking should be managed via time limits and possibly priced. See Section 5 – Recommendations to Support City Mode Share Goals for more information on curb management strategies.

**Figure 24 Proposed Neighborhood Main Street**



The **neighborhood green street** is proposed as the street type for roads that form the northern perimeter of the study area, where the roadway may serve some "back-of-house" functions for new parcels and buildings (with garage or alley access and loading or service needs) as well as existing Eden Center uses. The neighborhood green street (Figure 25) is proposed to have one lane of vehicle traffic in each direction with a curbside parking and loading lane only on the side of the street where the new development occurs. On the opposite side, a sidewalk-level two-way bicycle facility is recommended, to be buffered from the roadway and sidewalk by 5-6' planting areas. The two-way bicycle facility located on the opposite side of active loading or parking would help to eliminate conflicts with trucks and other vehicles. Additionally, the neighborhood green street would have limited intersections, thereby limiting the potential conflict points for bicyclists and vehicles. As on the neighborhood main streets, curbside lanes should accommodate passenger pickup and drop-off, delivery, and short-term parking needs. It is assumed that larger freight and delivery functions would operate internal to the building footprint and not within these newly designated public rights-of-way. Internal loading operations (likely necessary for tenant turnover or larger deliveries for businesses) could occur either within a parking garage or internal courtyard access for the building.

**Figure 25 Proposed Neighborhood Green Street**

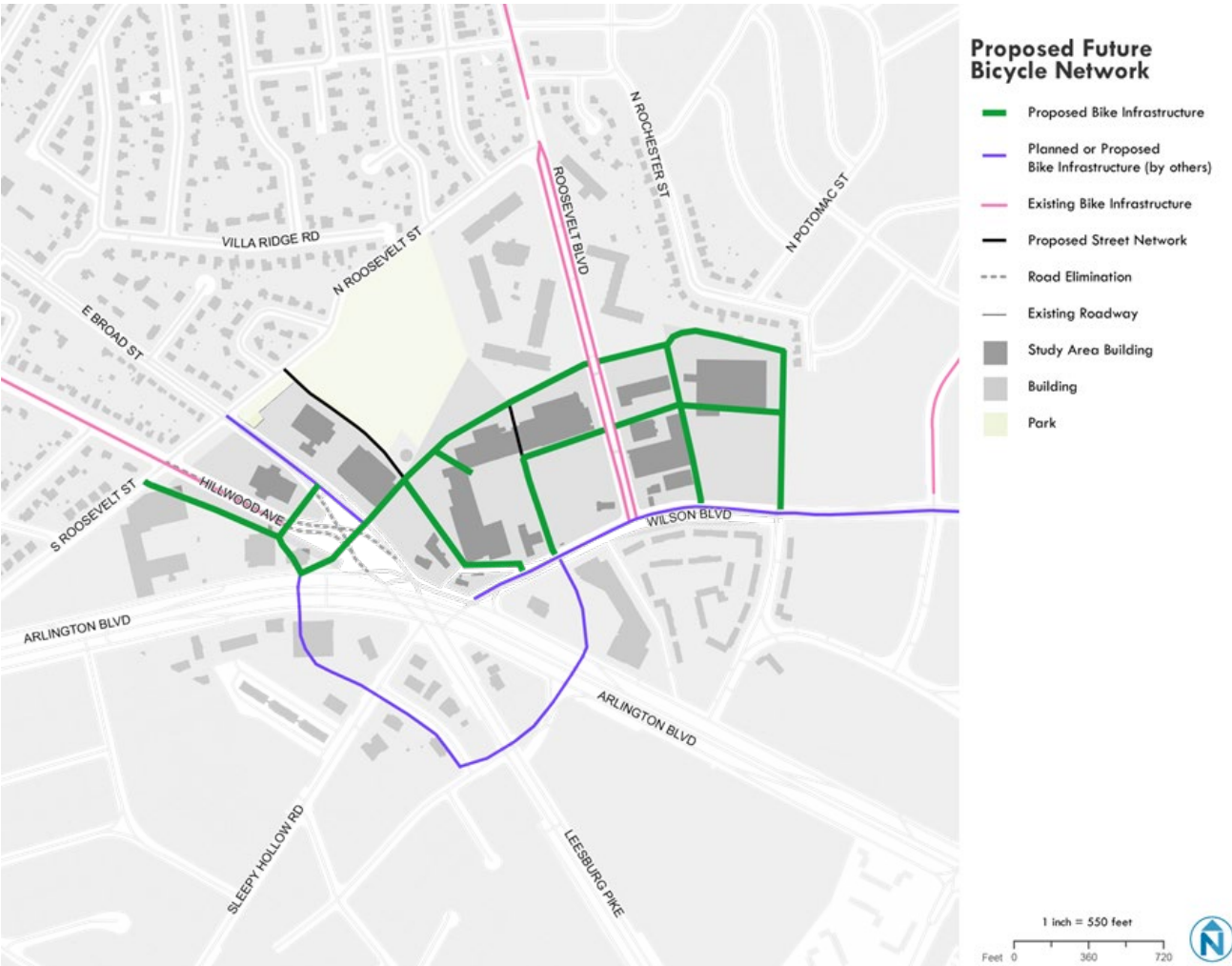


The **neighborhood alley**, a third street type, is a narrow, two-lane roadway with low volumes and very low speeds. The alley location identified within the study area could be developed in later redevelopment phases. In the future, if any portion of the Eden Center development was redeveloped or reconstructed, an alley could be created between the two east-west roadways north and south of the shopping center, adding greater connectivity to the grid which could decrease congestion commonly found at shopping centers with limited entrances and exits.

Direct and connected **walking and biking paths** are essential for encouraging safe and convenient travel that helps encourage people to use these modes to, from, and within the East End. The new sidewalks and two-way bike lane to be constructed as part of the VDOT ring road project will contribute to safer and greater access for bicyclists and pedestrians around the south side of the Seven Corners intersection. The proposed mobility network includes a couple paved multi-use paths. One of these paths is proposed to connect from the study area to the VDOT ring road bike lanes, which are planned to terminate at Arlington Boulevard. Another non-vehicular connection is proposed from that point at Arlington Boulevard to Hillwood Avenue.

Figure 26 identifies existing bicycle infrastructure, any planned and proposed infrastructure from previous studies or proposals, and all streets and paths proposed to contain bicycle facilities within the East End mobility network. With the proposed mobility network and other planned and proposed bicycle projects in place, the future bicycle network for the study area and its immediate context will be more complete, connected, and safe. Bicyclists would be able to travel through the East End study area and from one side of the Seven Corners intersection to another on a safe and protected network of streets and dedicated pathways.

**Figure 26 Proposed Future Bicycle Network**



# TRANSPORTATION IMPACTS OF PROPOSED DEVELOPMENT

## Refining the Draft Land-Use Scenario

The draft Small Area Plan describes proposed future land uses and densities across the East End study area. Parts of the study area are designated as residential with ground floor retail, others as office, and still others as light industrial or general commercial. Analyzing potential transportation impacts requires more specific definitions of uses and of where those uses might occur. A realistic estimate of future development takes into account that some of the land will be used for public right-of-way including streets, and for require building setbacks and other controls.

The land use scenario from the draft East End Small Area Plan informed the land use(s) on each parcel, and the parcel areas were defined by the proposed street network described above. The area of each block or parcel was multiplied by the density ("floor area ratio") in the draft Small Area Plan to obtain the developable gross square footage of each block or parcel. The plan's development use mix was then used to estimate future square footage by use. These estimates of future development were then used as inputs to the Mixed-Use Trip Generation analysis.

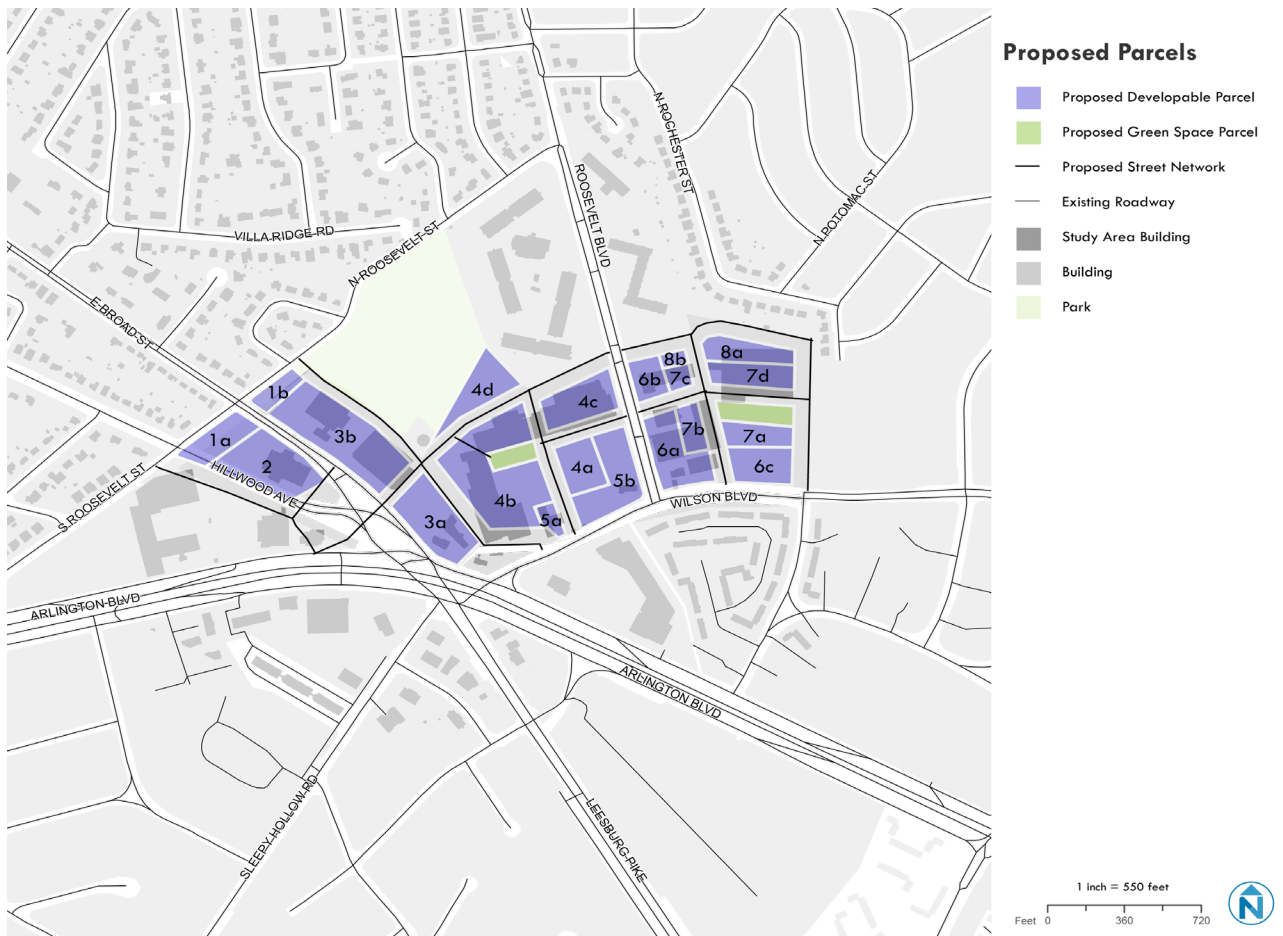
### Methodology Detail

For each of the proposed street centerlines, a street ROW was assigned based on street type, and an additional 3-foot setback was added for each side of the street's ROW for the City's setback requirements. The remaining land area within each block formed the buildable area. Each block and parcel had a specific land use type as defined in the East End Small Area Plan's proposed land use scenario. Figure 27 shows the division of proposed parcels in the Study Area.

*Street ROWs were defined as followed:*

- Neighborhood Commercial Street: 74 feet
- Neighborhood Green Street, local: 66 feet
- Neighborhood Alley: 66 feet

**Figure 27 Proposed Study Area Parcel Blocks**



## Mixed-Use Trip Generation Methodology

Conventional trip generation analysis and modeling is performed using Institute of Transportation Engineers (ITE) Trip Generation rates. However, ITE rates do not paint an accurate picture of demand generated for driving to and parking within mixed-used developments. The Mixed-Use Development Model (MXD) is an alternative trip generation model developed by the U.S. EPA which is approved by Virginia DOT “for use when a local government conducts a single traffic impact analysis for all parcels within a small area plan adopted as part of their comprehensive plan.”<sup>21</sup> MXD produces reliable estimates of trip generation that are highly sensitive to the context of specific developments, rather than sensitive to ITE land use inputs. MXD’s method specifically accounts for the degree to which a development can be considered “smart growth.” “Smart growth” factors include transit frequency, level of service, walkability, density of development, and the mix of uses.

<sup>21</sup> Virginia Department of Transportation (2018). *Updated Administrative Guidelines for the Traffic Impact Analysis Regulations* p. 43. Available at: [https://www.virginiadot.org/projects/resources/TIA\\_Administrative\\_Guidelines.pdf](https://www.virginiadot.org/projects/resources/TIA_Administrative_Guidelines.pdf)

## Transportation Analysis Scenarios

Three scenarios were defined and analyzed using the MXD method:

- The Base (2019) scenario captures trips based on the land use and transportation system currently at and around the East End study area.
- The Future No-Build (2045) scenario assumes the East End is not redeveloped based on the Small Area Plan. This scenario captures trips based on MWCOG’s estimated 2045 demographic and employment data, future transit improvements including the Route 7 BRT, and the same development mix as is the 2019 Base scenario.
- The Future Build (2045) scenario assumes that the East End is redeveloped as a walkable, mixed-use site. This scenario captures trips based on MWCOG’s estimated 2045 employment data, future transit improvements including the Route 7 BRT, and a development mix as indicated in the draft East End Small Area Plan and refined as described above.

## Model Inputs

The MXD model relies on three types of local data: general site information, land use inputs, and vehicle miles traveled (VMT) inputs. General site information includes geographic features of the development site, information about the surrounding area’s land use, and site demographics. Land use inputs include the number of dwelling units on the site and other non-residential land use square footage numbers (see Table 1, Land Use Square Footage Inputs). VMT inputs include the average trip length within both the region and the traffic analysis zone.

**Table 1 Land Use Square Footage Inputs**

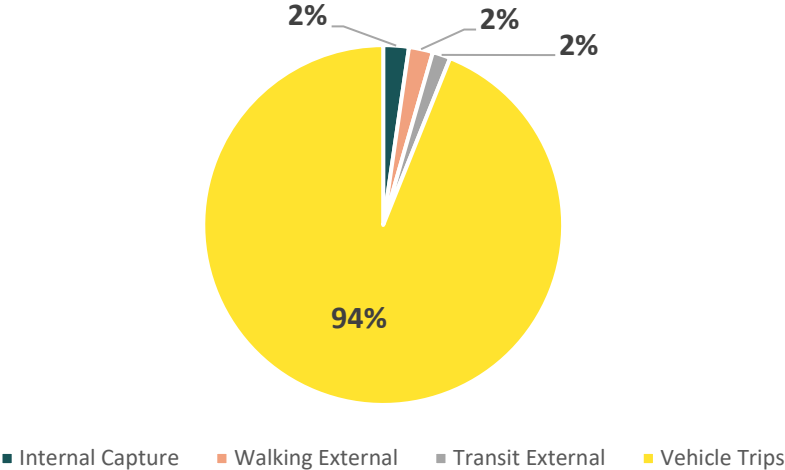
Scenario	Housing Units (#)	General Retail (SF)	Supermarket (SF)	Restaurant (SF)	Office, Non-Medical (SF)	Light Industrial (SF)
Base Year and Future No-Build	0 -	210,800 36%	130,800 22%	36,250 6%	0 -	204,100 35%
Future Build	1,003 39%	296,700 12%	52,100 2%	166,500 6%	536,000 21%	505,200 20%

## Model Results

As applied, the MXD method should produce a conservative estimate of trip generation that is sensitive to the local context of the development. Inputs have been calculated to err on the side of overestimating vehicle traffic. For example, future “employment within a 30-minute transit trip” only considers the closest Metrorail and Route 7 BRT stations and stops, where realistically more destinations could be reached within that time. Other assumptions have been similarly conservative. Also, the MXD model’s structure is not sensitive to the specific design of walking infrastructure, the presence or design of biking infrastructure, parking supply and/or management, or transportation demand management strategies.

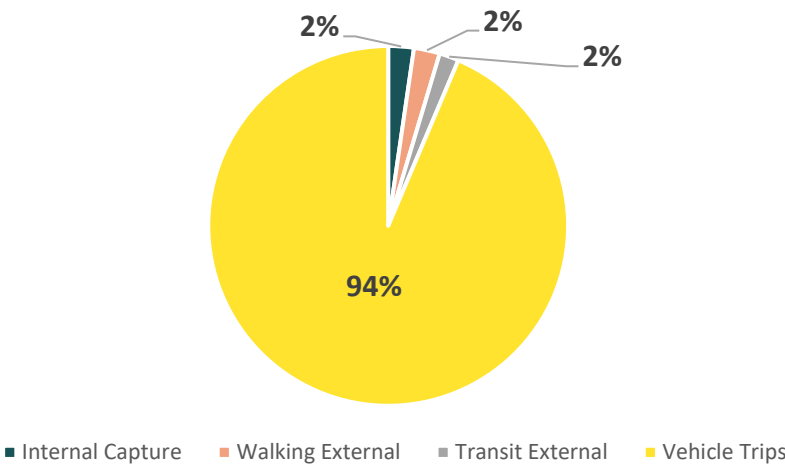
The Base scenario results in some 38,300 total trips per day including 36,000 vehicle trips generated to/from the site. Vehicle trips comprised 94% of total trips. Two percent (2%) of trips occur within the study area between or among different uses, a characteristic of mixed-use development called "internal capture." Another 2% were walking trips that either started or ended outside of the study area, and 2% were transit trips. Figure 28 shows shares of total trips for each travel mode for the Base scenario.

**Figure 28 Base Scenario Trip Generation Results**



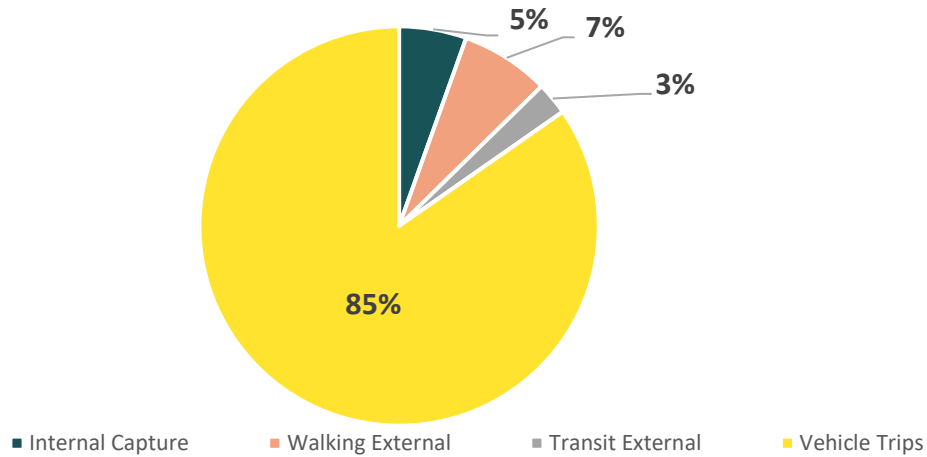
The Future No-Build scenario estimates a very similar 38,300 total trips including 35,800 total vehicle trips (Figure 29). Since the East End development did not change in this scenario, the small decrease in vehicle trips can be explained by the addition of the new Route 7 BRT route. Still, vehicle trips were 94% of trips at the site, with 2% internal capture, 2% walking, and 2% transit trips. In the aggregate, the Future No-Build scenario produces 61.5 vehicle trips per thousand square feet of non-residential development.

**Figure 29 Future, No Build Scenario Trip Generation Results**



In the Future Build scenario, the model predicts 54,800 total trips including 46,400 vehicle trips (Figure 30). The vehicle trip share decreases to 85% of total trips. Five percent (5%) of trips are captured internally, 7% are walking, and 3% are on transit. This scenario results in 26.4 vehicle trips per 1,000 square feet (SF) of non-residential development, and 5.2 vehicle trips per housing unit.

**Figure 30 Future, Build Scenario Trip Generation Results**



## Discussion

While the MXD method should produce more accurate estimates for the East End than conventional analysis, it still has limitations. For instance, bicycle trips are not captured in the analysis. Fairfax County and Arlington County both have bicycle infrastructure that stops at the border of the City of Falls Church, and the City of Falls Church itself has some limited bicycle infrastructure throughout the City. Given the existing and proposed future bicycle infrastructure, some of the trips that the MXD model recognizes as vehicle trips may actually be made by bicycle.

A key result of this analysis is that an additional 2 million square feet of development is estimated to produce only about 10,000 additional vehicle trips per day. The Base and Future No-Build scenarios each include approximately 582,000 square feet of development, while the Future Build scenario has approximately 2.5 million square feet of development. The Future Build scenario also includes 1000 housing units where the current East End study area has none. This result may seem counterintuitive, but in fact experience with such compact, mixed-use, walkable, transit-served neighborhoods shows that they do create proportionally much less driving than do conventional auto-dependent, single-use areas like the current East End.

Underlying this finding is that the estimated trip rate (expressed per 1,000 SF of development, and per housing unit) differs significantly between the Future No-Build and Future Build scenarios. The mix of uses present in the Future Build scenario generates far fewer trips per unit of development: there are fewer auto-oriented uses, such as big-box stores, gas stations, and car dealerships and more uses with lower

rates of trip generation, like office, retail, and restaurant. The significant change in uses and additional mix of uses is the main reason why parking rates are much lower in the Future Build scenario.

The City of Falls Church has set a performance target to achieve a commute mode share of 50% non-SOV by 2050. This cannot be directly compared to the results above, which go beyond commute trips to include trips for all purposes. That said, the driving mode share in the Future Build scenario is still much higher (85%) than the 2050 goal (50%), likely due to the lack of other, nearby high-capacity transit. To make additional progress toward its important mode share goals, the City of Falls Church should include additional measures to reduce SOV trips to and within the East End study area. Specific recommendations

are described in the following section, **Recommendations**.

# 5 RECOMMENDATIONS TO SUPPORT CITY MODE SHARE GOALS

The City of Falls Church has a commute mode share goal of 50% non-single occupancy vehicles (SOV) by 2050. According to findings from the MXD trip generation model, even with proposed redevelopment aimed towards medium-density, mixed-use land uses, a proposed internal connected street network, and planned transit improvements like the Route 7 BRT, the East End study area will not be able to have a great enough reduction in vehicle trips to meet the 50% non-SOV target, as discussed in the Mixed-Use Trip Generation Analysis section. However, there are several additional things that can be addressed in the East End to help bridge the gap. Recommendations include:

1. Implement and require a robust Transportation Demand Management program for the area
2. Revise parking requirements by code and encourage aggressive parking supply constraints and management policies
3. Implement dynamic curb management techniques
4. Encourage alternative modes of travel

## TRANSPORTATION DEMAND MANAGEMENT

The City's Comprehensive Plan establishes a vision of providing a transportation network that offers choices in travel modes. The Plan also includes a strategy of meeting increased travel demand within, from, and through the City via non-automobile modes. To that end, the City expects redevelopment activity to use Transportation Demand Management (TDM) and Parking Management techniques that provide a range of transportation options and reduce the reliance on single-occupancy vehicles.

The City's Comprehensive Plan identifies TDM as a means to reduce the region's single-occupancy vehicle (SOV) driving. Although TDM is a strategy that the City as a whole can employ as they continue to update more progressive codes and policies that promote density and reduce parking supply requirements and build out the bicycle and walking connections, TDM strategies can also be deployed by developments. It is recommended that all developments within the East End study area implement a TDM program and that the City facilitate a comprehensive TDM program for the area. This additional layer of reporting, monitoring, and support by the City will help to reduce SOV use and shift mode share to the City's ambitious but achievable goal.

### Building Management TDM Programs

As per the City of Falls Church's report on Transit-Oriented Design Within and Beyond the Quarter-Mile, a full TDM Program is recommended for mixed-use developments in excess of 40,000 square feet in area. According to Sec. 48-970 of the code, "The TDM must be submitted at the time the site plan or special exception application is filed and may include a variety of measures including, but not limited to, dedicated carpool and vanpool spaces, bike share stations and/or contributions toward bike share stations, shuttle service

from Metro, transit subsidies, transit information kiosk, and the like.”<sup>22</sup> Because the East End is more vehicle-dominated than other parts of the City, the City may consider requiring a TDM plan for any redevelopment, regardless of size within the East End study area. TDM plans are also required whenever a developer desires to build with a reduced number of parking spaces, which is recommended for developments within the East End study area as a strategy to promote transit use and active transportation modes.

Key components of a TDM plan that would be run via a property owner or building management company include:

- Provision of carshare vehicles within the development and information about the program to businesses and residents
- Provision of priority parking spaces for those carpooling to/from work
- Requiring parking fees for use of parking
- Provision of benefits or subsidies towards the use of public transportation or active transportation
- Provision of indoor bicycle parking, lockers, and showers for those opting to use more active modes of transportation<sup>23</sup>

## PARKING SUPPLY AND MANAGEMENT

### Parking Management & Rates

A mixed-use development in the City of Falls Church is required to submit a TDM plan, including a parking management plan, for any development over 40,000 square feet. Because the East End is more vehicle-dominated than other parts of the City, the City may consider requiring a parking management plan for all new development in the East End, regardless of size. Parking management plans allow the opportunity for developers to propose reduced number of parking spaces if 1) a TDM plan is submitted and executed, and 2) if the developer presents the intent to utilize shared parking approach for their site.

*The project team assessed the potential need for parking spaces without an appropriate TDM plan or parking management plan in place. The Institute of Transportation Engineers (ITE) published recommendations for parking required for certain uses in certain contexts. These rates tend to be conservative and more applicable to exurban, single-use development, but are useful as a conservative (overbuilt) estimate of parking requirements. As depicted in Table 2, with current uses, ITE rates estimate that 1,289 spaces are needed. With the proposed development plan, 5,003 spaces may be required*

<sup>22</sup> City of Falls Church Code of Ordinances, Sec. 48-970. - Reduction in required parking.

[https://library.municode.com/va/falls\\_church/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_CH48ZO\\_ARTVSURE\\_DIV2OREPA\\_RE\\_SDIIIADRE\\_S48-970REREPA](https://library.municode.com/va/falls_church/codes/code_of_ordinances?nodeId=PTIICOOR_CH48ZO_ARTVSURE_DIV2OREPA_RE_SDIIIADRE_S48-970REREPA)

<sup>23</sup> Mobility Lab, What is Transportation Demand Management Actually, Collaborating with employers.

<https://mobilitylab.org/2018/07/27/what-is-transportation-demand-management-actually>.

*assuming conventional automobile use and demand and without aggressive TDM and parking management plans.*

**Table 2 Conventional ITE Parking Rates by Category**

ITE Parking Rates by Category	Base/Future, No Build		Future Build	
	Units (ksf)	Parking	Units (ksf)	Parking
Use Category				
General Retail (shopping center, multi-use urban for future build, general urban/suburban for base)	185.8	377	297	759
Supermarket [General urban/suburban]	130.8	367	52.1	147
Health Club	25	126	0	0
Restaurant (non-fast food) [High-turnover (sit down) restaurant, general urban/suburban]	36.25	342	167	1576
Gas station	6.5	53	0	0
Office	4 jobs	5	536	1187
Warehousing/self-storage	52.3	19	0	0
Multi-family (dense multi-use urban, more than half a mile to train station, mid-rise)	0	0	1003 DU	1028
Light industrial	0	0	505.2	306
<b>Total</b>	-	<b>1,289</b>	-	<b>5,003</b>

Without a parking management plan, site residents, employees, and visitors may travel via automobile unchecked, putting an unnecessary burden on the surrounding roadway network and parking facilities. Therefore, reduced parking rates, parking maximums, and shared parking strategies should be explored for the East End study area.

## **Parking Management Goals**

The City of Falls Church should create parking goals for the East End study area as a way to provide overarching expectations for how parking should function within and around the site after redevelopment takes place. Arlington County, Virginia developed a set of parking management goals when they developed a form-based code for Columbia Pike. The goals listed below could be used as a guide for parking goals for the City of Falls Church.

### **Arlington County Columbia Pike Form-Based Code Parking Goals:<sup>24</sup>**

- Enable people to park once at a convenient location and to access a variety of commercial enterprises in pedestrian-friendly environments by encouraging SHARED PARKING.
- Reduce diffused, inefficient, single-purpose RESERVED PARKING.
- Avoid adverse parking impacts on neighborhoods adjacent to redevelopment areas.
- Maximize on-street parking.
- Increase visibility and accessibility of parking.
- Provide flexibility for redevelopment of small sites and for the preservation of historic buildings.
- Promote early prototype projects using flexible and creative incentives.

## **Reduced Parking Rates**

The City of Falls Church has five mixed-use developments either built or in planning that are similar to the proposed land use mix of the East End study area. These developments and their parking numbers are listed in Figure 30. All of these projects have reduced parking utilizing a TDM plan. In the projects that have already been built and leased up – and where data is currently available – (301 W Broad, Lincoln at Tinner Hill, and Northgate), each development ended up registering less vehicles per unit than their reduced parking ratio. This highlights that the amount of parking as required in the City code may not be necessary due to already shifting modes, and building more parking than needed could result in excess construction costs and elevated tenant rental prices. Statistics like this have led the recently proposed Founders II project to propose a parking reduction of 22%.<sup>25</sup>

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<sup>24</sup> Arlington County, 2016. Columbia Pike Form-Based Code. Available at: <https://arlingtonva.s3.dualstack.us-east-1.amazonaws.com/wp-content/uploads/sites/31/2016/12/2016-FBC-Reprint-for-web.pdf>

<sup>25</sup> City of Falls Church, 2022. Special Exception and Rezoning Applications for the Founders Row II Mixed Use Development Project. Available at: [https://fallschurch-va.granicus.com/MetaViewer.php?view\\_id=2&clip\\_id=1910&meta\\_id=111696](https://fallschurch-va.granicus.com/MetaViewer.php?view_id=2&clip_id=1910&meta_id=111696)

Figure 31 City of Falls Church Residential Parking Comparison<sup>26</sup>

Project****	Number of Residential Units	Parking Required By Code	Parking Approved with TDM Plan	Approved Parking Ratio	Number of Registered Vehicles	Registered Vehicles per Unit
301 W Broad*	288	467	346	1.20	266	0.92
Lincoln at Tinner Hill*	224	331	235 (+136 shared)	1.04**	183	0.82
Northgate*	105	158	158 shared	N/A***	98	0.93
Founders Row	394	658	516	1.31	N/A	N/A
Broad & Washington	339	531	338	1.00	N/A	N/A
Founders II (Proposed)	280	472				

To achieve mode share goals, Falls Church will need to “right-size” parking in the zoning code, beyond what can be done using voluntary TDM parking reductions. Rather than requiring developers to submit a request for a parking reduction, the City of Falls Church could create a “Mixed-Use Development” or “Planned Development” District with lower parking minimums to allow for a parking reduction over the entire East End district. Fairfax County has done something similar with their Planned Districts<sup>27</sup> as well as Arlington County with their Columbia Pike Form-Based Code. Although the East End study area (in its entirety) is significantly larger than each of these six development projects, it is important to note that not all redevelopment in the East End may be built simultaneously. Therefore, it will be important to have an overarching “District-wide” parking plan and goals in place prior to any redevelopment so that the same strategies can be utilized as projects come on board.

### Parking Maximums

The City of Falls Church does not currently have parking maximums. If the City feels that the parking minimums in the East End are satisfactory but want to prevent developers from building excess parking with new development, parking maximums could be established. Parking maximums should be applied district-wide in the East End, rather than for individual sites.

Arlington County’s Columbia Pike Form-Based Code provides the following parking maximums:

A maximum of one space per 1,000 square feet of non-residential GFA (excluding hotel uses), two spaces per residential dwelling unit, and a maximum of 0.7 space per hotel guest room may be made available for reserved parking.

<sup>26</sup> City of Falls Church, 2022. Special Exception and Rezoning Applications for the Founders Row II Mixed Use Development Project. Available at: [https://fallschurch-va.granicus.com/MetaViewer.php?view\\_id=2&clip\\_id=1910&meta\\_id=111696](https://fallschurch-va.granicus.com/MetaViewer.php?view_id=2&clip_id=1910&meta_id=111696)

<sup>27</sup> Fairfax County, 2021. Section 2105, Planned Districts. Available at: <https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx?secid=235#secid-235>

Reserved parking above the maximum may be provided upon payment to the County. The County Manager shall establish the amount of payment annually based on the approximate cost to build structured parking.<sup>28</sup>

The City of Alexandria utilizes parking maximums for certain land uses, which are listed out in Table 3.<sup>29</sup> These maximums could serve as a starting point for parking maximums in the East End, as the three core land uses are all types that could be present on the East End site in the land use scenario presented in the East End Small Area Plan.

**Table 3 City of Alexandria Parking Maximums by Land Use**

Land Use Type	Parking Maximum Within Enhanced Transit Area	Parking Maximum Outside of Enhanced Transit Area
Hotels	0.4 spaces per guest room	0.7 spaces per guest room
Commercial uses like light assembly, services, crafts, retail, and shopping	3 spaces per 1000 square feet of floor area	4 spaces per 1000 square feet of floor area
Office uses	1.5 spaces per 1000 square feet of floor area	2.25 spaces per 1000 square feet of floor area

### Shared and/or Consolidated Parking

Shared parking is allowed under the City of Falls Church existing code, with certain required provisions as outlined in Section 48-971.<sup>30</sup> While our team recommends this direct application of shared parking, which allows for combining and sharing parking assets among various uses within a building or a site or among several buildings, the code requires that “the distance between the shared parking facility and the entrance to the establishments being served shall not exceed 500 feet,”<sup>31</sup> which may limit the application of a fully shared parking approach throughout the study area. Our team recommends additional approaches to shared parking. Due to the unique uses at the Eden Center, the site serves as a regional destination, attracting many visitors. Portions of the existing parking lots within the East End study area are proposed to be redeveloped within the plan, making space for mixed-use, medium-density buildings. Although each

<sup>28</sup> Arlington County, 2016. Columbia Pike Form-Based Code. Available at: <https://arlingtonva.s3.dualstack.us-east-1.amazonaws.com/wp-content/uploads/sites/31/2016/12/2016-FBC-Reprint-for-web.pdf>

<sup>29</sup> City of Alexandria, 2022. General Parking Requirements. Available at: [https://library.municode.com/va/alexandria/codes/zoning?nodeId=ARTVIIIIOREPALO\\_S8-200GEPARE](https://library.municode.com/va/alexandria/codes/zoning?nodeId=ARTVIIIIOREPALO_S8-200GEPARE)

<sup>30</sup> City of Falls Church Code of Ordinances. Sec. 48-971. - Shared parking requirements. [https://library.municode.com/va/falls\\_church/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_CH48ZO\\_ARTVSURE\\_DIV2OREPARE\\_SDIIADRE\\_S48-971SHPARE](https://library.municode.com/va/falls_church/codes/code_of_ordinances?nodeId=PTIICOOR_CH48ZO_ARTVSURE_DIV2OREPARE_SDIIADRE_S48-971SHPARE)

<sup>31</sup> City of Falls Church Code of Ordinances. Sec. 48-971. - Shared parking requirements.

building may include some underground parking garage floors, these buildings may not be able to accommodate parking spaces for Eden Center visitors. Therefore, the site behind the Eden Center, which measures almost 90,000 SF (Figure 32), is a possible candidate for a standalone parking structure which could serve to support parking for much of the Eden Center's uses and perhaps other development parcels on the site. The shared parking requirement that the parking asset must be 500 feet from the establishment may limit the full use of this parking structure, and so if this is to be constructed, the team recommends providing an exclusion to this specific criteria.

**Figure 32 Satellite Imagery of the Eden Center and Potential Location for Future Structured Parking**



## Special Vehicle Parking

### Electric Vehicle Parking

In addition to prioritizing parking spaces for building employees or occupants that carpool (as mentioned above in 'Building Management TDM Programs'), other potential strategies for parking management include prioritizing parking for electric vehicles (EVs). Some jurisdictions that have created electric vehicle (EV) charging and parking requirements allow for a reduction in parking spaces if EV parking spaces are provided. Although EV use does not decrease the pressure on our limited roadway system, they do help reduce point-pollution sources and in that way they are more friendly to more walkable and urban environments. Falls Church could allow parking reductions if EV spaces are provided.

Code language from Montgomery County, Maryland, and Washington, DC, that implemented such EV provisions is listed below.

**Figure 33 Montgomery County, MD Electric Vehicle Parking Requirements**

**59-E-2.24. Space for Charging Electric Vehicles**

(a) All parking facilities constructed after May 12, 2014, containing more than 100 additional parking spaces, must provide one space within their parking requirement ready to be converted to a station for charging electric vehicles and one additional charging station ready space for each 100 automobile parking spaces in the facility.

(b) A charging station ready space must be:

- (1) located in a preferential, highly visible area within the parking facility;
- (2) a minimum width of 9 feet;
- (3) designed so that the space and pathways for the future installation of at least a 120-volt charging station and associated infrastructure are provided;
- (4) constructed such that all conduits leading to the electrical room, including electrical service conduit, service size, and the electrical room are appropriately sized to accommodate future electrical equipment necessary for the number of electric vehicle charging station ready parking spaces required.<sup>32</sup>

**Figure 34 Washington, DC Electric Vehicle Parking Requirements<sup>33</sup>**

(a) For any site for which the parking requirement of Subtitle C 701.5 is twenty (20) parking spaces for greater, any excess parking spaces greater than two times (2 X) the minimum parking required for that use shall require the following transportation demand management measures:

- (3) One (1) on-site or publicly accessible electric car charge station for every twenty (20) excess parking spaces.

While not in the Northern Virginia region, several other cities have regulations that include electric vehicle charging stations as part of minimum parking requirements. Kansas City, Missouri, states that “Electric vehicle charging stations may be counted toward satisfying minimum off-street parking space

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<sup>32</sup> Montgomery County, 2014. Montgomery County Zoning Ordinance, Available at: [https://codelibrary.amlegal.com/codes/montgomerycounty/19d765ec-b313-4289-b6b6-4faf5d4c0cb2/montgomeryco\\_md\\_zone/0-0-0-55136](https://codelibrary.amlegal.com/codes/montgomerycounty/19d765ec-b313-4289-b6b6-4faf5d4c0cb2/montgomeryco_md_zone/0-0-0-55136)

<sup>33</sup>

requirements.”<sup>34</sup> Indianapolis, Indiana’s code allows “For each electric vehicle charging station provided, the minimum number of required off-street parking spaces may be reduced by two. Each charging station counts toward the minimum number of required parking spaces.”<sup>35</sup>

## Carshare

Figure 35: Zipcar Carsharing<sup>36</sup>



As mentioned above in 'Building Management TDM Programs', specific developments should incorporate carshare programs into their buildings and parking facilities, so that building residents and/or employers have easy and reliable access to a vehicle when it is needed. In addition to this, the City of Falls Church can further support the shift away from individual car ownership by dedicating on-street parking spaces within the East End study area for carshare parking programs. This could provide additional transportation options to the employees and residents around the East End Area.

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<sup>34</sup> The Great Plains Institute, 2019. *Summary of Best Practices in Electric Vehicle Ordinances*. Available at: [https://www.betterenergy.org/wp-content/uploads/2019/06/GPI\\_EV\\_Ordinance\\_Summary\\_web.pdf](https://www.betterenergy.org/wp-content/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf)

<sup>35</sup> The Great Plains Institute, 2019. *Summary of Best Practices in Electric Vehicle Ordinances*. Available at: [https://www.betterenergy.org/wp-content/uploads/2019/06/GPI\\_EV\\_Ordinance\\_Summary\\_web.pdf](https://www.betterenergy.org/wp-content/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf)

<sup>36</sup> Image Source: Zipcar. <https://www.zipcar.com/en-gb/flex/electric>

## **CURB MANAGEMENT**

In a denser, mixed-use environment, curb management is crucial to best support pick-ups and drop-offs of passengers and short-term freight deliveries while also maintaining vehicle traffic flows and the safety of bicyclists and pedestrians. The two main road typologies proposed for the East End study area (Neighborhood Main Street and Neighborhood Green Street) includes curbside/parking lanes that should be managed dynamically to serve both short-term parking and loading/unloading needs.

### **Loading Zones**

- Portions of the curbside/parking lane should be designated specifically for short-term (5-15 minute) loading. These loading zones should be located closest to intersections, where passengers or freight vehicle operators can most conveniently access crosswalks and curb ramps when necessary.
- Longer-term loading zones should be focused on the Neighborhood Green Street, where most of the building's parking garage and loading access areas should be oriented.

### **On-Street Parking**

- Other portions of the curbside lane should be dedicated to short-term parking only. Parking here should be limited to paid parking with two-hour maximums to deter employees or residents that park for longer time spans from utilizing these spaces.

## **SUPPORT FOR ACTIVE MODES OF TRAVEL**

### **Pedestrian and Bicycle Improvements**

The proposed mobility network for the East End study area ensures priority and safety for the pedestrian or bicyclist. Protected bike lanes, wide sidewalks, and safe and frequent intersections all help make a place more walkable and accessible. However, in order to ensure that residents, workers, and visitors of the East End site are able to access the area by walking or biking, surrounding networks must be built out and enhanced as well.

### **Pedestrian Connections**

Today, the East End is cut off from the rest of the City by the Seven Corners intersection and East Broad Street. More pedestrian connections should be created between the East End and the City. Sidewalks along East Broad Street should be widened to increase pedestrian comfort and safety. A street tree buffer should be added along East Broad Street as well to align with the strategies presented in the East End Small Area Plan Transportation Chapter. All pedestrian improvements should be designed using the standards laid out in the City's Streetscape Standards to add visual connections between the sidewalks in the East End and the sidewalks elsewhere in the City.

## **Bicycle Connections**

As Falls Church continues to develop bicycle infrastructure in the East End, a clear bicycle connection should be created between the East End, the East Falls Church Metro Station, and the W&OD Bike Trail. This connection should include protected or buffered bike lanes to separate bicyclists from vehicles on the road and increase bicyclist safety and comfort. Roosevelt Boulevard is a potential candidate for future bicycle facility improvements. Roosevelt Boulevard (shown in Figure 17) currently has a mix of traditional bike lanes and “sharrows” from Wilson Boulevard to the East Falls Church Metro Station; although this provides some link between the East End and the Metro Station, it does not provide a low stress connection appropriate for all ages of cyclists. Upgrading bicycle facilities like the one on Roosevelt Boulevard to be more continuous and protected may help increase the share of the population that feels comfortable bicycling in and around Falls Church.

Arlington County has bike lanes on Wilson Boulevard that extend to the County border. These bike lanes do not extend into the City or into Fairfax County. The City of Falls Church should partner with Arlington County and Fairfax County to extend bike lanes along Wilson Boulevard to the East End. This would create a new bicycle connection between Arlington County and the City of Falls Church.

## **Road Diet**

A road diet along Wilson Boulevard would allow space for the addition of protected bike lanes on Wilson Boulevard from Arlington County and through Fairfax County and the City of Falls Church. Road diets (which occur when the number of vehicle lanes on a roadway are reduced) result in lower traffic speeds, which could help to reduce traffic crashes on Wilson Boulevard as well as improve pedestrian conditions and safety along Wilson Boulevard in the East End. Nelson\Nygaard supports the concept of a road diet on Wilson Boulevard and recommends the City to explore this as a road improvement project.

# Bikeshare and Public Micromobility Programs

## Bikeshare

Figure 36 Capital Bikeshare<sup>37</sup>



As the region’s bike network continues to grow, there may be opportunities for additional Capital Bikeshare services within or in the vicinity of the East End study area. At the time of this report, a Capital Bikeshare station is installed within the Eden Center parking lot. However, when the time comes for that parking lot to be redeveloped into a multi-story building with a parking garage, that station may be expanded to house more Capital Bikeshare docks or relocated for optimal orientation to pedestrian traffic through the site. While an additional Capital Bikeshare station may not make sense within the study area itself, the immediate vicinity around the study area could benefit from additional micro-mobility options. For instance, a bike share station could be located at the Seven Corners transit center or near the northeastern termination of the future VDOT Ring Road.

<sup>37</sup> Image Source: City of Falls Church. <http://www.fallschurchva.gov/1835/Capital-Bikeshare-Expansion>

## Micromobility

Figure 37 E-scooters in Washington, DC<sup>38</sup>

Micromobility is a newer travel mode that is broadly defined as any small, low-speed, transportation device, including bicycles, scooters, electric-assist bicycles, electric scooters (e-scooters), and other small, lightweight, wheeled devices like mopeds.<sup>39</sup> In total, since 2010, people in the US have taken 342 million trips on shared bikes and scooters.<sup>40</sup> Micromobility modes provide more options for short trips – the average scooter or bike trip is 11-12 minutes and 1-1.5 miles.<sup>41</sup> Micromobility could provide additional connections



between the East End and the East Falls Church Metro Station, other parts of the City of Falls Church, or other destination points in Arlington and Fairfax County.

The City of Falls Church's City Council voted to adopt a pilot program regulating e-scooters in November 2019 after the state of Virginia passed a law allowing e-scooters to operate without a regulation in 2020 if localities do not establish a regulation program. Given lack of applications, there is currently no scooter vendor operating in the City of Falls Church.

However, e-scooters currently operate in Arlington County. As micromobility options continue to grow, the viability of a service in the City may increase, and the City of Falls Church should continue to be receptive to allowing e-scooter deployment in the East End. E-scooters could be geofenced, allowing riders to only operate them in designated and appropriate areas like the East End, or other mixed-use, destination areas. E-scooters and other micromobility devices could be used as a transportation mode between the East Falls Church Metro Station and the East End (approximately 1 mile, or about a 15-minute walk). This could increase connections from the study area to the East Falls Church Metro Station. An initial e-scooter pilot

<sup>38</sup> Image Source: <https://dc.curbed.com/2019/9/25/20867974/guide-electric-scooters-bikes-mopeds-dc-sharing>

<sup>39</sup> FHWA, 2021. *Micromobility: A Travel Mode Innovation*. Available at: <https://highways.dot.gov/public-roads/spring-2021/02>

<sup>40</sup> NACTO, 2019. *Shared Micromobility in the U.S.: 2019*. Available at: <https://nacto.org/shared-micromobility-2019/>

<sup>41</sup> NACTO, 2019. *Shared Micromobility in the U.S.: 2019*. Available at: <https://nacto.org/shared-micromobility-2019/>

program should monitor travel between the East End and the East Falls Church Metro Station given the importance of this area's connection to high-capacity transit.