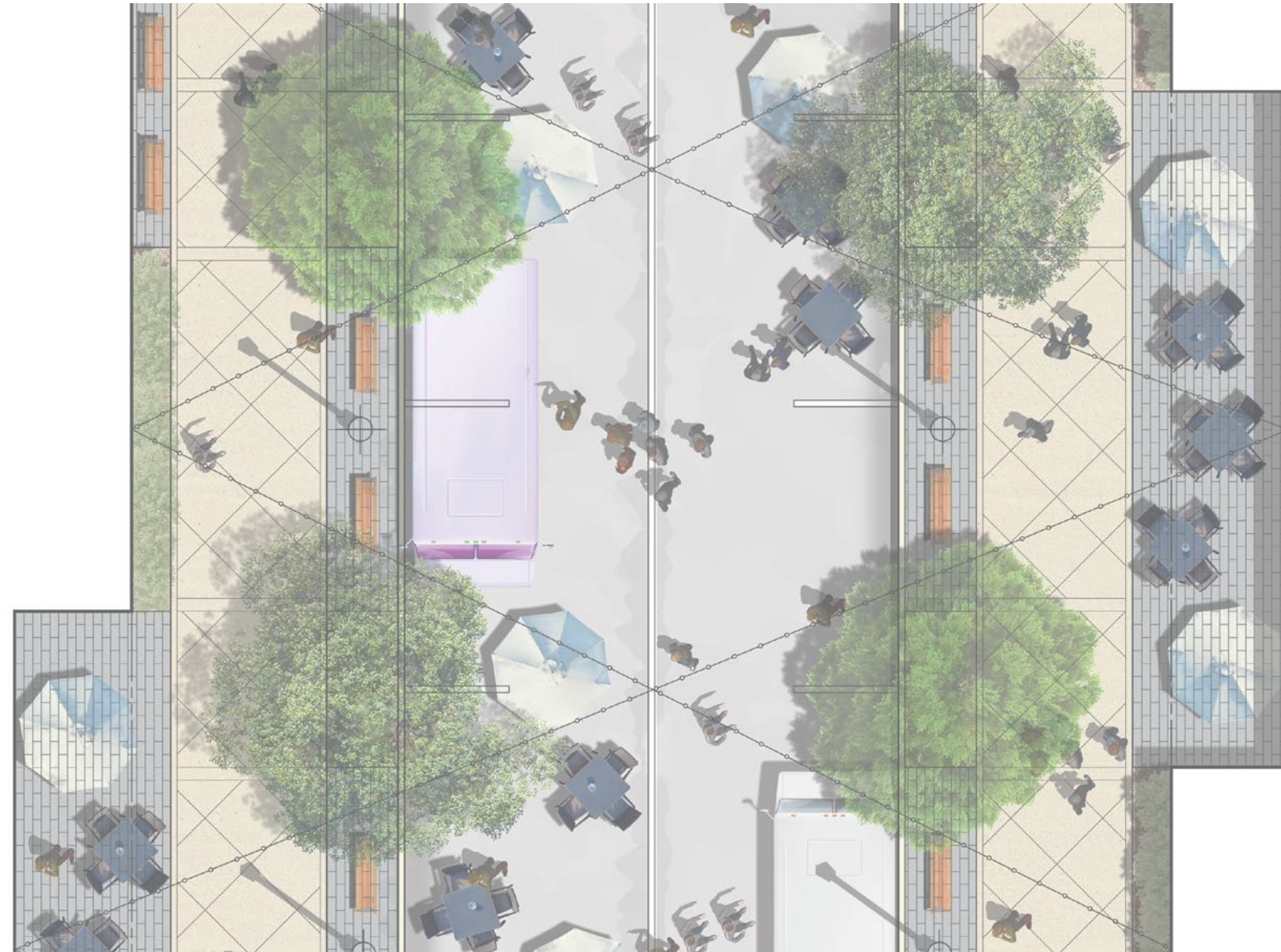


Diamond District
Public Realm | Design Standards

*City of Richmond, Virginia
July 19, 2024
Vanasse Hangen Brustlin, Inc.*





ACKNOWLEDGEMENTS

As we present these design standards, we wish to extend our deepest gratitude to all those who have contributed to its completion. We thank The City of Richmond for their time and effort in the development of this report.



Credit: Chad | Adobe Stock

TABLE OF CONTENTS

1 Executive Summary	6	4.4 Utilities	33	7.3 Seating	58
2 Introduction	8	4.5 Intersections & Crosswalks	34	7.4 Lighting	60
2.1 Background	9	4.6 Curbside Management	36	7.5 Signage & Wayfinding	62
2.2 Scope & Application Of Design Standards	9	4.7 Public Gathering Space Considerations	37	7.6 Micromobility Amenities: Bicycles, E-bikes, Scooters, etc.	64
2.3 Other Applicable Documents	9	4.8 Public Transit Considerations	38	7.7 Waste Receptacles	65
2.3 Site Location	10	4.9 Bicycle Considerations & Circulation	39	7.8 Bollards & Planters	66
2.4 Existing Neighborhood Context	11	4.10 Branding Considerations	40	7.9 Screening & Fencing	67
2.5 Existing Site Conditions & Surroundings	12	4.11 Smart City Elements	41	7.10 Public Art	68
2.6 Vision For The Diamond District Public Realm	17	5 Paving & Surface Materials	42	7.11 Essential Transit Infrastructure	69
3 Street Network & Streetscape Standards	18	5.1 Chapter Introduction	43	8 Appendix A - Existing Site Images	70
3.1 Chapter Introduction	18	5.2 The Sidewalk Zone	44	9 Appendix B - Case Studies	74
3.2 Proposed Street Network	19	5.3 Public Gathering Spaces	46	9.1 Introduction	75
3.3 N. Arthur Ashe Boulevard	20	5.4 Buffered Bike Lanes & Shared Use Paths	47	9.2 Church Hill	76
3.4 Hermitage Road	22	5.5 The Street Zone	47	9.3 Downtown	80
3.5 Robin Hood Road	23	6 Landscape	48	9.4 The Sauer Center	82
3.6 Festival Street	24	6.1 Chapter Introduction	49	9.5 The Sauer Center	84
3.7 Linear Park Perimeter Streets	26	6.2 Street Trees	50	9.6 Scott's Addition	86
3.8 Neighborhood Residential Streets	27	6.3 Other Trees & Plants	52	9.7 Westhampton	88
3.9 Service Road	28	6.4 Planting & Installation Details	54	9.8 Carytown & Vcu Main Campus	90
3.10 Mews	29	6.5 Turf Grass Lawn Areas	55	9.9 Rocketts Landing	92
4 Public Realm Elements	30	6.6 Maintenance	55	9.10 Manchester	94
4.1 Chapter Introduction	31	7 Site Furnishings & Amenities	56	9.11 Richmond Case Studies Summary Of Findings	96
4.2 Sustainability Strategies	32	7.1 Introduction	57		
4.3 Stormwater Management	32	7.2 General Design Standards	57		

1 | EXECUTIVE SUMMARY

The Diamond District Public Realm Design Standards is a vital tool for the redevelopment of the Diamond District. The Standards ensure that a cohesive design language is used throughout the public realm of the Diamond District; one that celebrates the District as its own unique destination. The development of the Design Standards was a collaborative effort between the City of Richmond's Project Management Team (PMT) made up of representatives from various City departments, design consultants, members of the Diamond District development team, and the public. The process of creating these Standards began with an extensive site walk with stakeholders to assess the existing site conditions and discuss a vision for the public realm. A review of the City of Richmond's existing streetscapes was undertaken to better understand those elements that make streets successful. Public engagement during the development of the Standards included in person and online public input sessions. The public was given an opportunity to provide feedback and vote on various public realm design options including options for landscape, hardscape, streetscapes, and site furnishings. Throughout the process, the PMT reviewed and provided input on drafts of the Standards as they were being developed.

The result of this collaborative effort is a set of standards that:

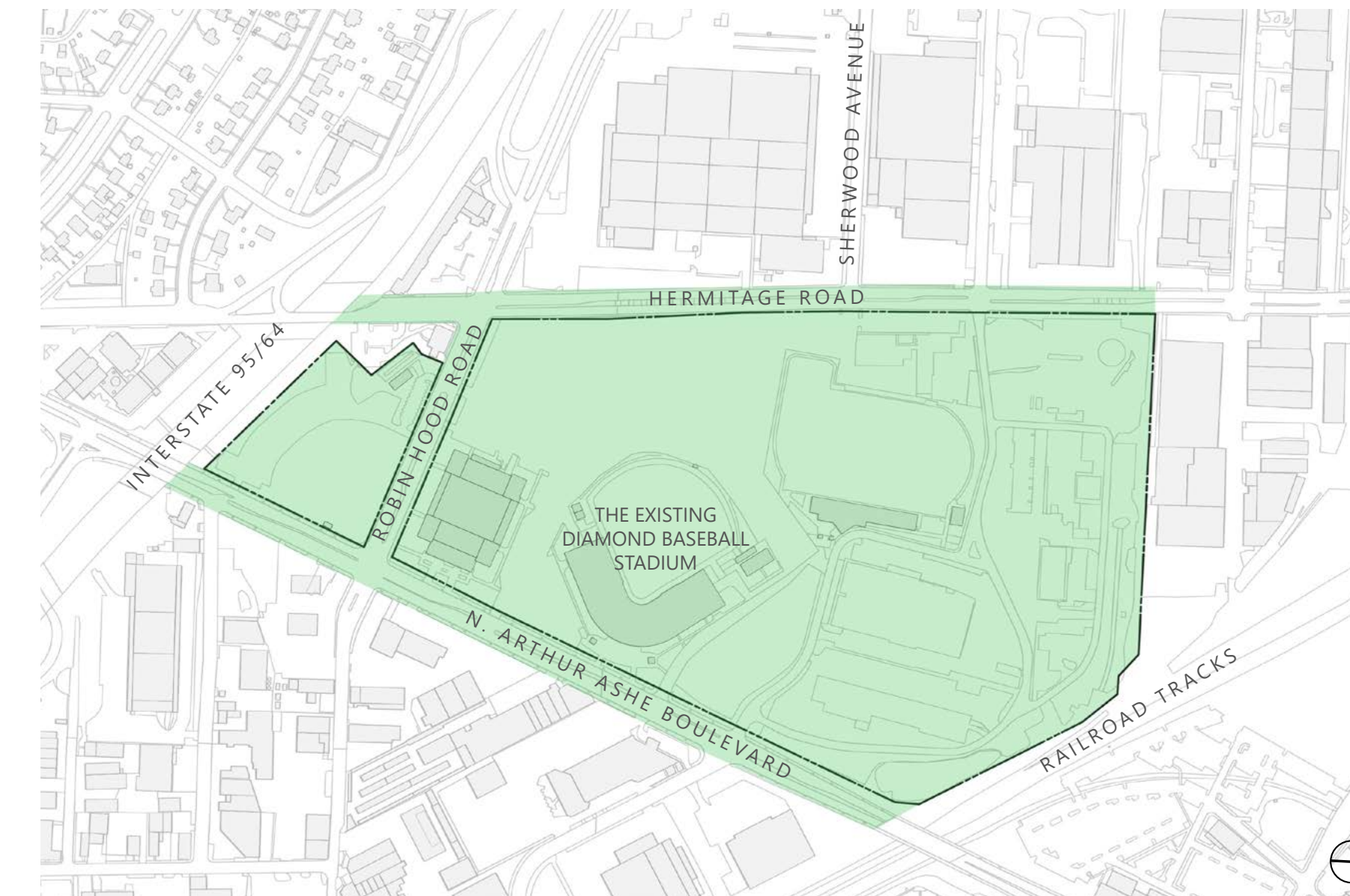
- Create a hierarchy of streets for the Diamond District
- Place a focus on providing safe multi-modal circulation routes to and through the Diamond District
- Emphasize the incorporation of sustainable design practices
- Propose a design language that is both unique to the Diamond District yet rooted in the City of Richmond
- Promote a vibrant street life and encourages a healthy lifestyle

The chapters of the Diamond District Public Realm Design Standards address: the background of this unique development, the street network and streetscape including the proposed street hierarchy, public realm elements, paving and surface materials, landscape, and site furnishings. The appendix includes an overview of existing site conditions and case study findings.

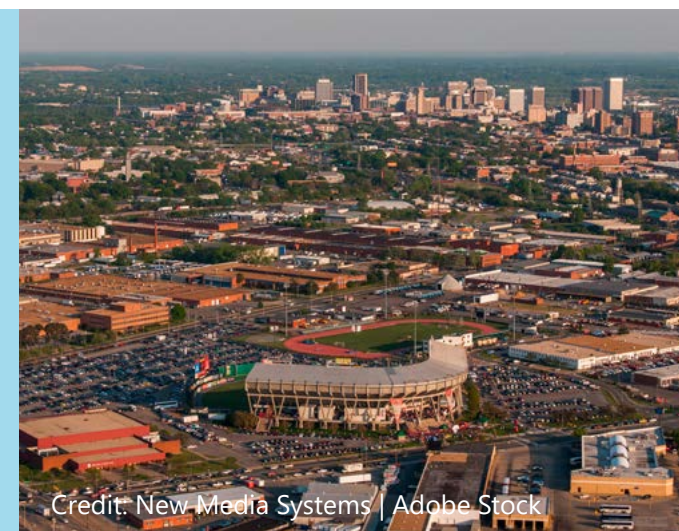
The Diamond District Public Realm Design Standards apply to all spaces that fall within the public right-of-way of the Diamond District as well as publicly owned open space within the Diamond District. The boundaries of the Diamond District are show on the Diamond District Project Boundary Map on the following page. The Standards to not apply to development on private property, including the baseball stadium, although they should be used to inform design decisions on private property.

Diamond District Project Boundary Map

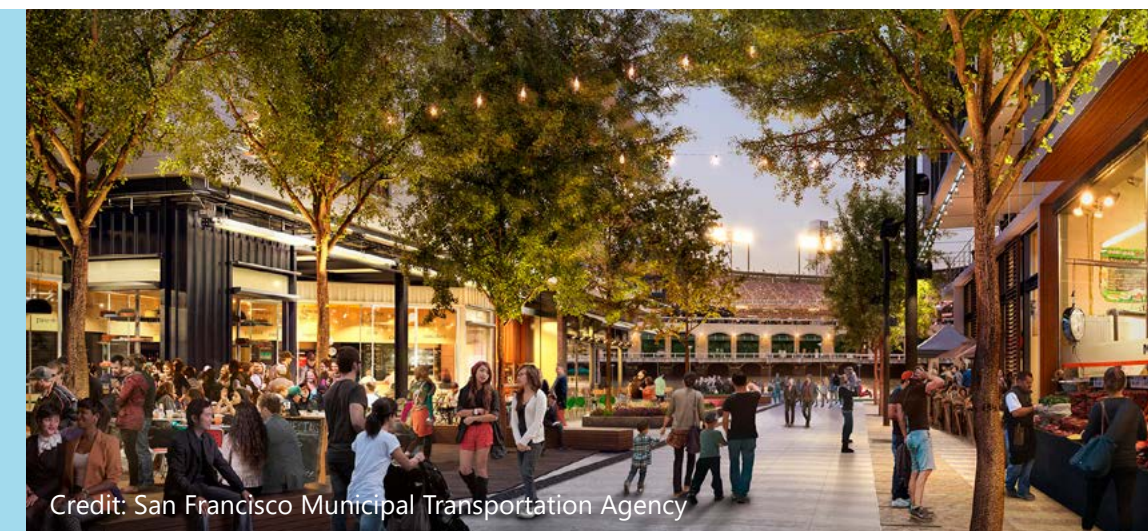
The Diamond District Public Realm Design Standards shall apply to the public right-of-way and publicly owned open spaces that fall within the Diamond District Project Boundary



Credit: Crescent Heights



Credit: New Media Systems | Adobe Stock



Credit: San Francisco Municipal Transportation Agency



Credit: Richard Macdonald | Richmond Magazine



Credit: CallisonRTKL

2 | INTRODUCTION



Credit: New Media Systems | Adobe Stock

2.1 BACKGROUND

The neighborhoods surrounding the Diamond District site have seen a substantial increase in investment over the past several years—with more investment in the works. In late 2021, the City of Richmond issued a Request for Information (RFI) to redevelop the Diamond District itself. This 66.7 acre underdeveloped, publicly owned property was to be redeveloped into a mixed-use, mixed income urban destination anchored by a regional baseball stadium. An emphasis was placed on creating a place where visitors could arrive safely on foot, bike, car, or transit. The new development was to include a signature linear park that would connect visitors and residents to a series of smaller parks and greenways nearby. Any proposal for this site was to be guided by the vision described in the Greater Scott's Addition Small Area Plan found in the City's comprehensive plan, Richmond 300: A Guide for Growth.

In September of 2022, the City of Richmond chose RVA Diamond Partners to be their development partner in redeveloping the Diamond District. The plan submitted by Diamond District Partners LLC is a mixed-income, mixed use community that features:

- A state-of-the-art baseball stadium that anchors the development
- A signature linear park meandering through the site with several distinct areas and programming planned for all Richmonders to enjoy throughout the year
- Trails, playgrounds, dog parks, and multiple outdoor gathering spaces
- Much needed pedestrian, bike, and vehicular connectivity throughout the site and into the surrounding neighborhoods
- A hotel
- Class A office space
- Retail
- Mixed income, multi-family residential housing

The City and RVA Development Partners desire to create vibrant, attractive, and safe streets and public spaces that will effectively connect people to the surrounding land uses and be frequented by residents and visitors to the Diamond District year round. It became apparent that it was necessary to develop these Diamond District Public Realm Design Standards to meet this goal and ensure that a cohesive design language is used throughout the Diamond District; one that identifies the Diamond District as its own unique destination while adding value to the surrounding neighborhoods and city.

2.2 SCOPE & APPLICATION OF DESIGN STANDARDS

The Diamond District Public Realm Design Standards are design requirements for spaces that fall within the public right-of-way and as well as publicly owned open spaces within the Diamond District. They should also be used to inform design decisions on private property. These standards shall be used by all stakeholders when deciding on elements when making design decisions for the public realm. The Design Standards present a vision for the public realm along with design options that allow for some flexibility and creativity. Designers should adhere as closely as possible to the recommendations made in the Design Standards. There may be instances when site constraints may require flexibility in applying the Design Standard. In those instances, every attempt should be made to meet the intent of those Design Standards.

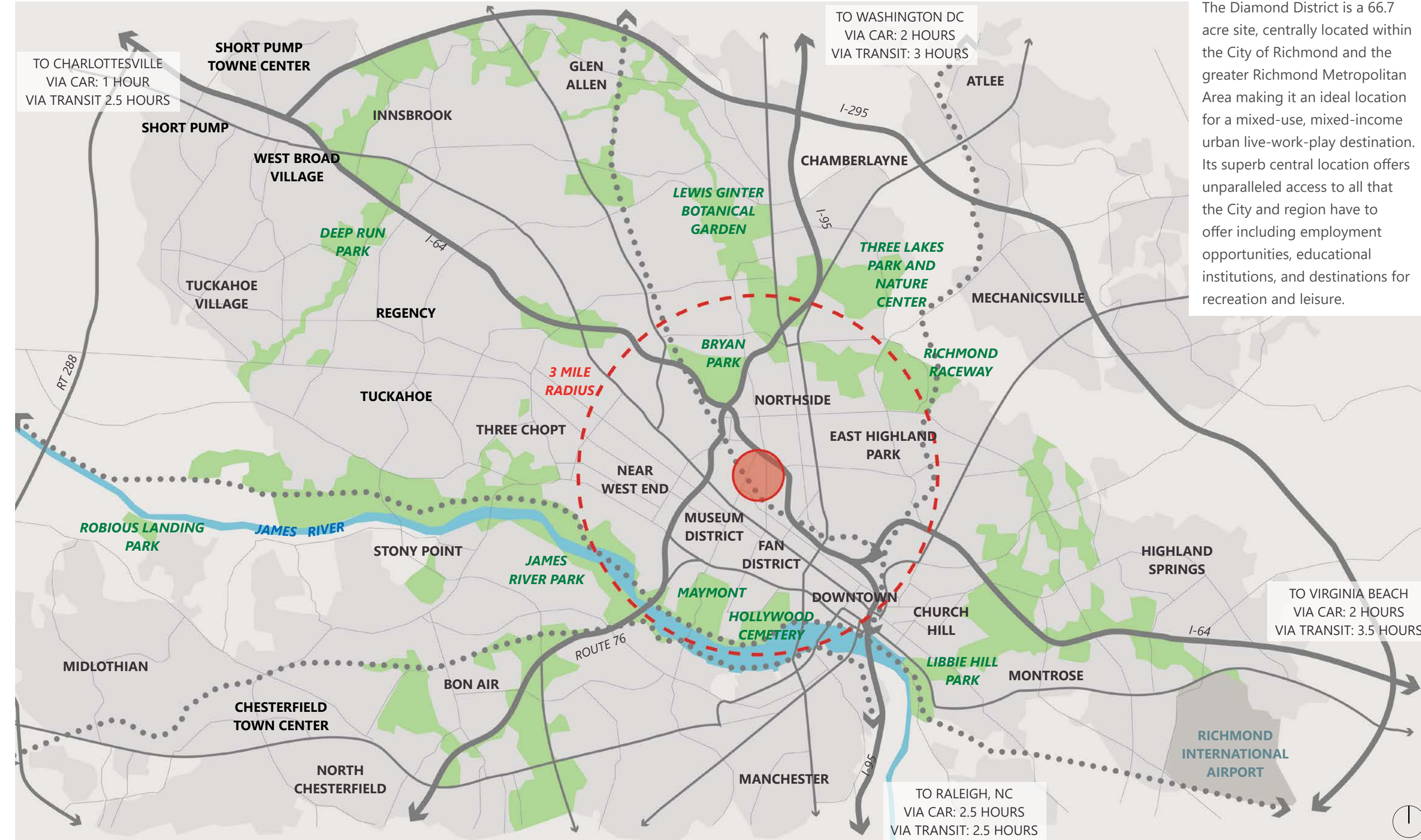
2.3 OTHER APPLICABLE DOCUMENTS

The following City of Richmond documents provided guidance in developing the Public Realm Design Standards and should be used in conjunction with these standards:

- The City of Richmond Zoning Ordinance
- Richmond 300: A Guide for Growth
- Better Streets Manual
- Diamond District Transportation Study
- Richmond Sustainable Design Standards
- Urban Design Guidelines
- Sidewalk Design Guidelines
- City of Richmond Vision Zero
- Richmond Bicycle Master Plan
- Revealing Richmond: A Public Art Master Plan for the City of Richmond, Virginia
- Richmond Connects
- RVA Green 2050
- Fall Line Vision Plan

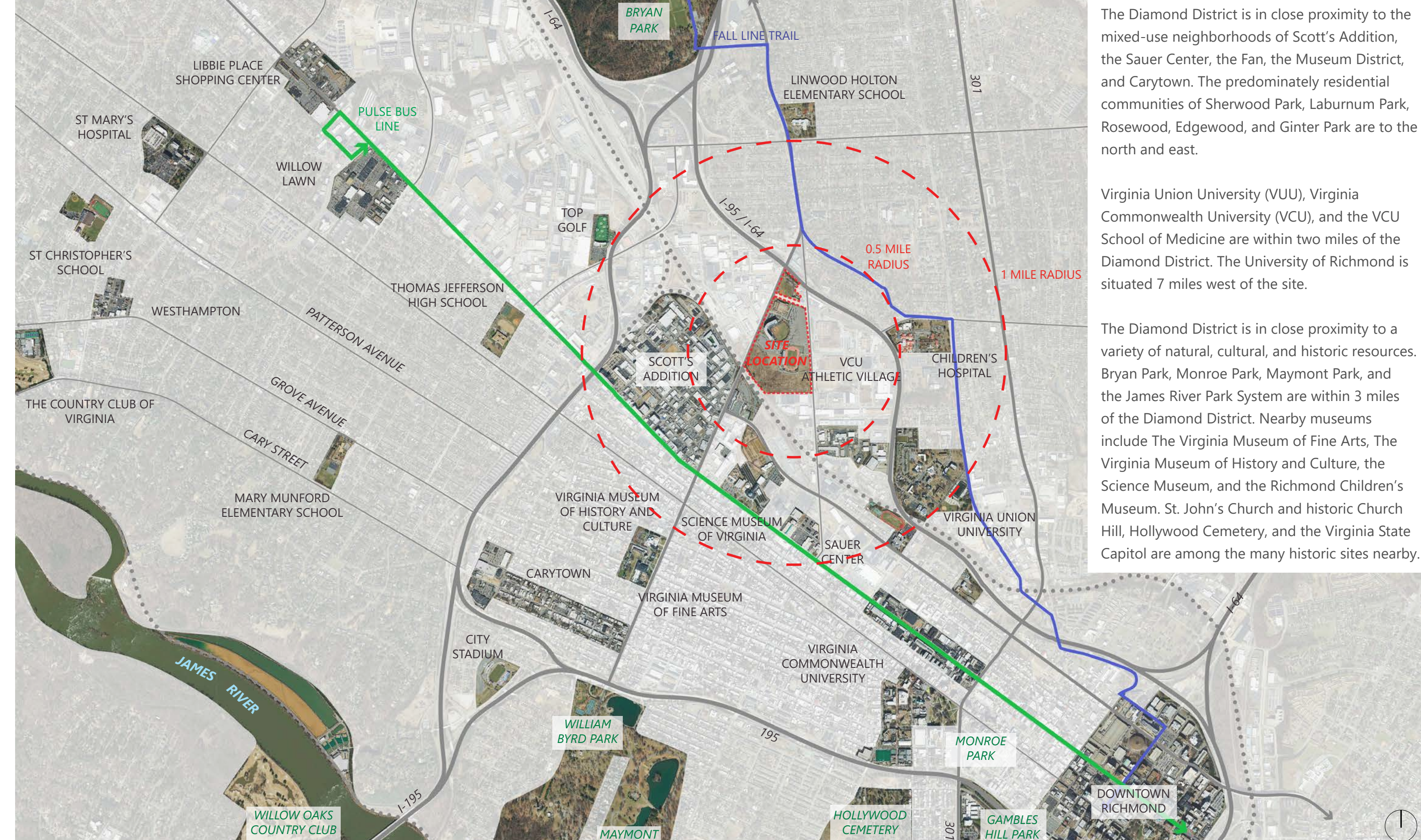
This is not an exhaustive list of all documents and regulations applicable to the Diamond District. The Diamond District Public Realm Design Standards are not a substitute for complying with codes and ordinances associated with the development review process.

2.3 SITE LOCATION



The Diamond District is a 66.7 acre site, centrally located within the City of Richmond and the greater Richmond Metropolitan Area making it an ideal location for a mixed-use, mixed-income urban live-work-play destination. Its superb central location offers unparalleled access to all that the City and region have to offer including employment opportunities, educational institutions, and destinations for recreation and leisure.

2.4 EXISTING NEIGHBORHOOD CONTEXT

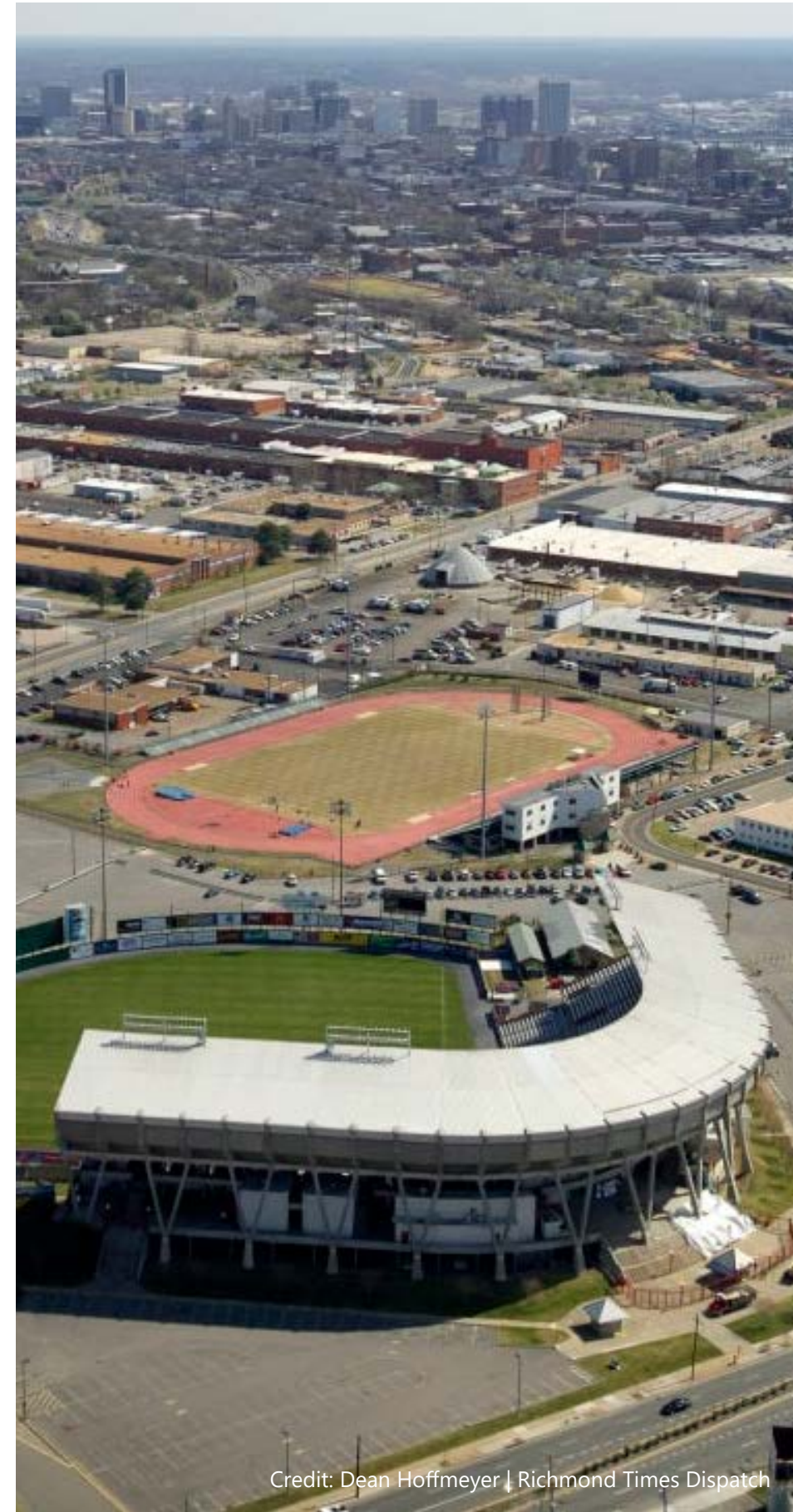


The Diamond District is in close proximity to the mixed-use neighborhoods of Scott's Addition, the Sauer Center, the Fan, the Museum District, and Carytown. The predominately residential communities of Sherwood Park, Laburnum Park, Rosewood, Edgewood, and Ginter Park are to the north and east.

Virginia Union University (VUU), Virginia Commonwealth University (VCU), and the VCU School of Medicine are within two miles of the Diamond District. The University of Richmond is situated 7 miles west of the site.

The Diamond District is in close proximity to a variety of natural, cultural, and historic resources. Bryan Park, Monro Park, Maymont Park, and the James River Park System are within 3 miles of the Diamond District. Nearby museums include The Virginia Museum of Fine Arts, The Virginia Museum of History and Culture, the Science Museum, and the Richmond Children's Museum. St. John's Church and historic Church Hill, Hollywood Cemetery, and the Virginia State Capitol are among the many historic sites nearby.

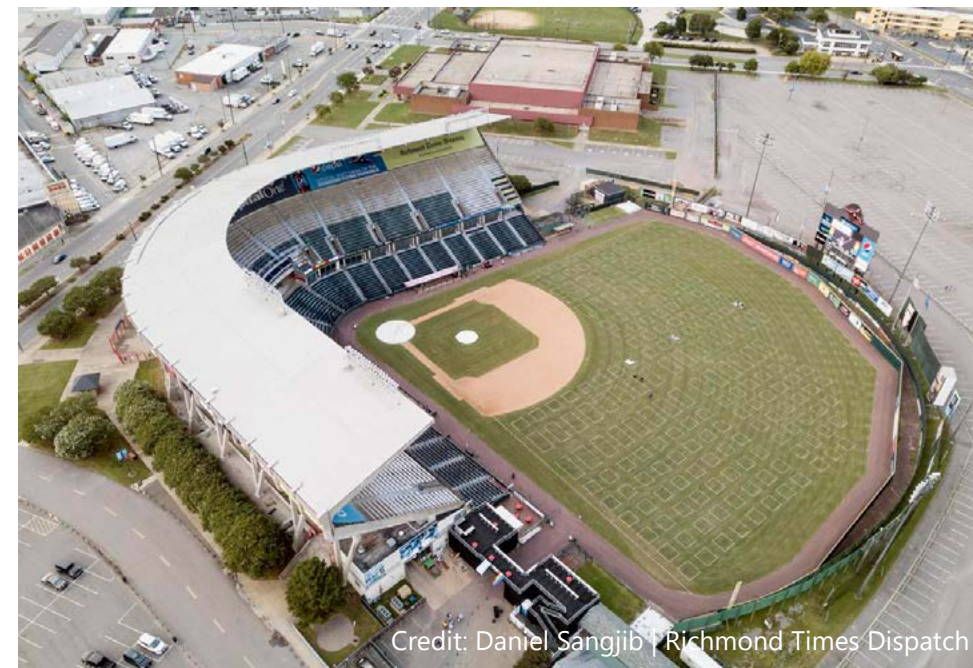
2.5 EXISTING SITE CONDITIONS & SURROUNDINGS



Credit: Dean Hoffmeyer | Richmond Times Dispatch



Credit: Crixell Matthews | VPM News



Credit: Daniel Sangjib | Richmond Times Dispatch



Credit: VHB

The Diamond District site is comprised of 7 publicly owned parcels of land for a total of 66.7 acres as well as N. Arthur Ashe Boulevard, Hermitage Road, and Robin Hood Road where these streets are adjacent to the parcels. The underdeveloped site is currently home to a Diamond baseball stadium, the Arthur Ashe Jr. Athletic Center, Sports Backers Stadium, a recreational baseball field, and Parker Field Annex Recycling Center. A large amount of the site is either vacant or asphalt surface parking lots. The City of Richmond plans to relocate city functions, demolish the current baseball stadium and other buildings, and remediate the Diamond District site to prepare for the proposed development.



DIAMOND DISTRICT PARCELS

RECENT & FUTURE DEVELOPMENT

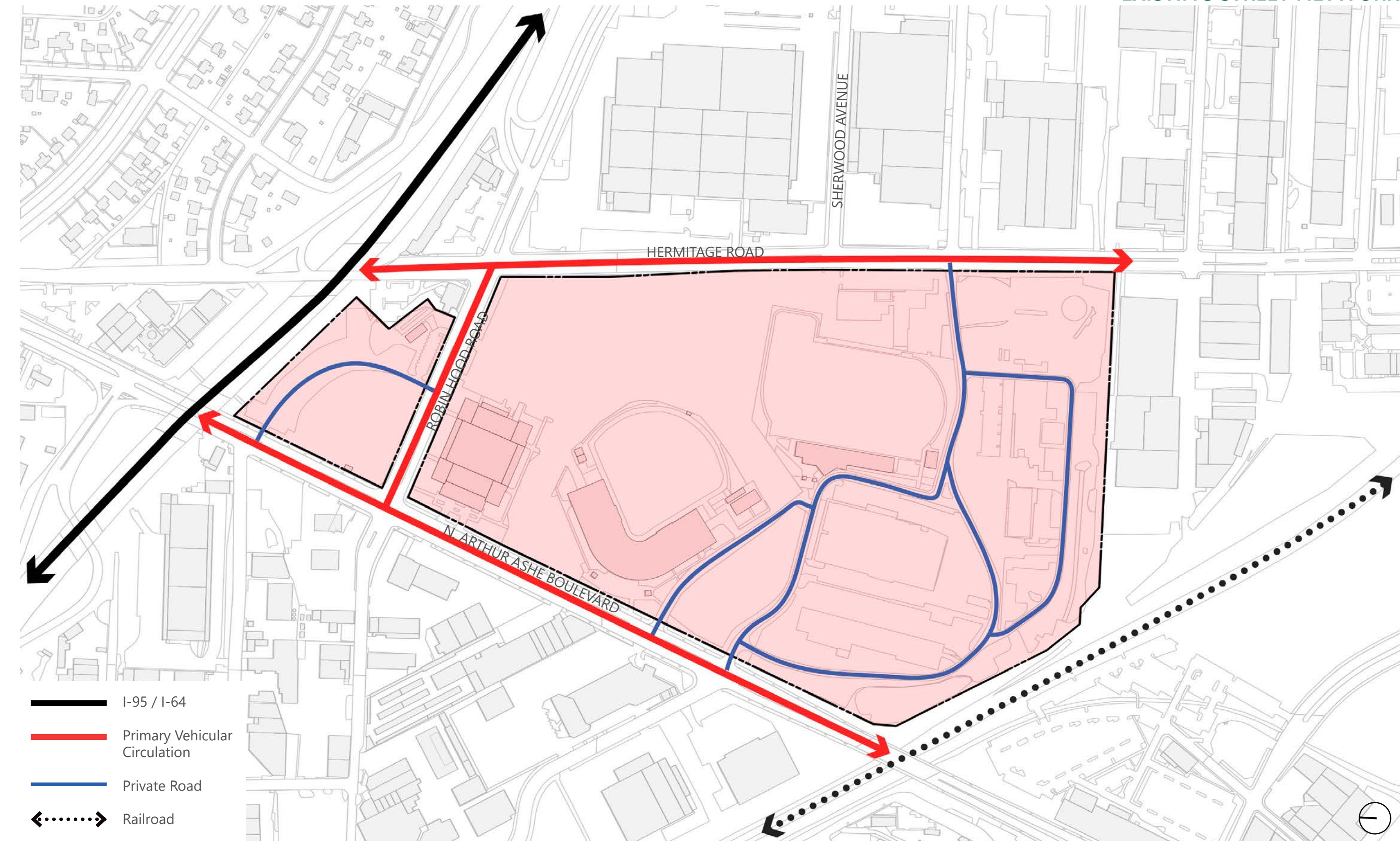
- 1 Scott's Walk; 16,000 SF of retail and restaurant
- 2 1801 Ellen Road; 2 story emergency center, 15,000 SF
- 3 2902 N Arthur Ashe Boulevard; NOVEL Scott's Addition. 272 apartments
- 4 1117-1209 N Arthur Ashe Boulevard; The Ace 295 apartment building with 13,000 SF of commercial space
- 5 2700 W Leigh Street; 375 Unit, 5 story apartment building
- 6 2300 Hermitage Road - Duplex Station on Hermitage. 3 story, 142 apartment building with 24,000 SF of office
- 7 1613 Ownby Lane; The Porter 5 story, 314 unit apartment building
- 8 The Cooperage Apartments; 150+ apartment units
- 9 VCU Athletic Village
- 10 The Park RVA
- 11 1415 - 1601 Rhoadmiller Street 4 story, 180 unit condo building
- 12 Stylecraft Homes; The Outpost at Brewers Row
- 13 Tommy's Car Wash
- 14 375 Unit Multi-Family Development

 DIAMOND DISTRICT PARCELS



 DIAMOND DISTRICT PARCELS

EXISTING STREET NETWORK



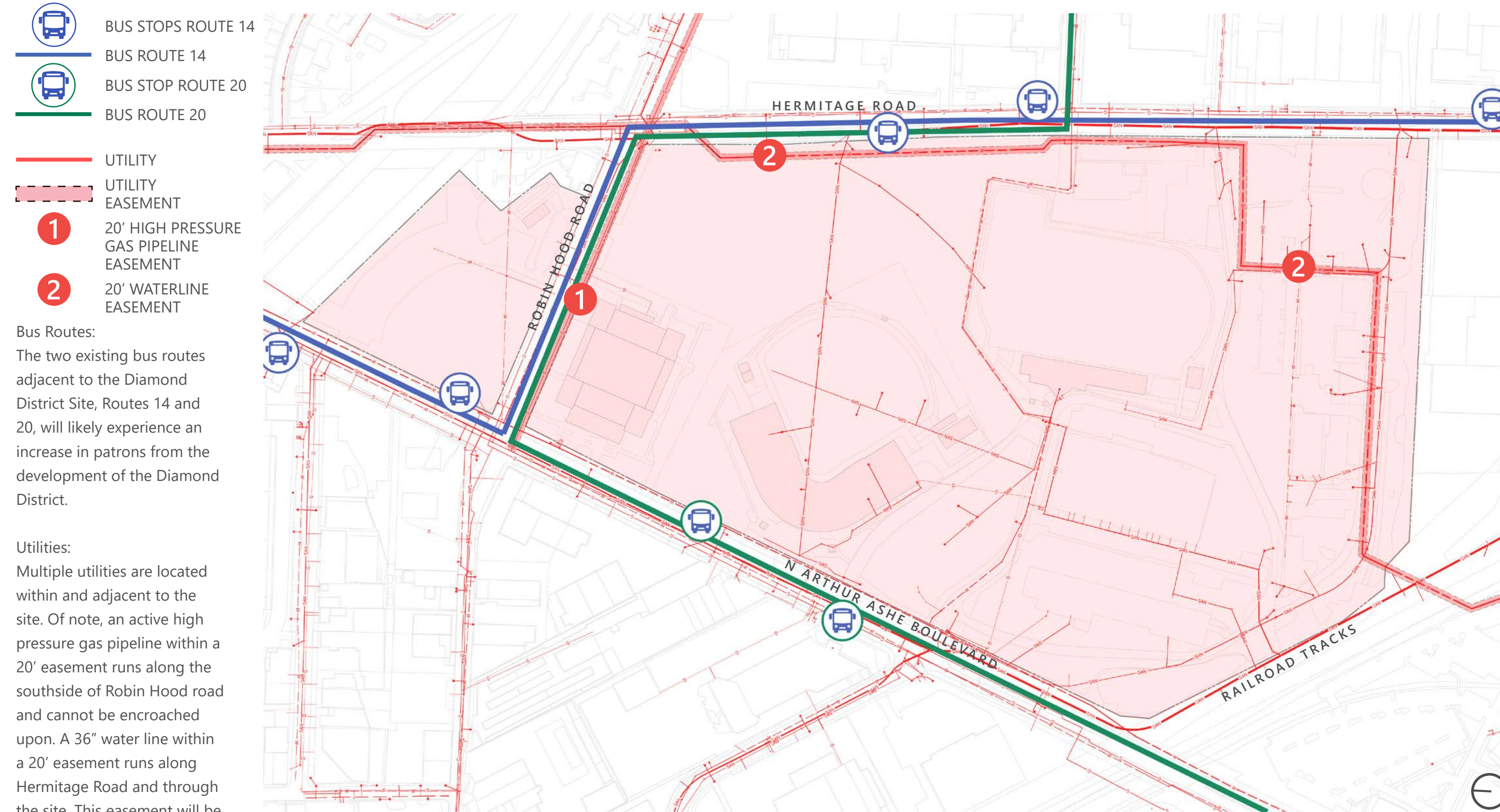
 I-95 / I-64

 Primary Vehicular Circulation

 Private Road

 Railroad

EXISTING SITE UTILITIES AND BUS ROUTES



2.6 VISION FOR THE DIAMOND DISTRICT PUBLIC REALM

DIAMOND DISTRICT CONCEPTUAL SITE PLAN SITE PLAN IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE.



The Diamond District will be a vibrant, authentic Richmond neighborhood and one-of-a-kind ballpark experience that celebrates creative placemaking, sport, art, culture, and culinary excellence. The District will have a strong sense of place with a balance of well designed buildings interspersed with open space, walkable tree lined blocks, and sustainable features. Having a well designed public realm, including a thoughtfully planned system of streets and public spaces and a cohesive design language, is vital to creating a vibrant, thriving neighborhood imbued with a sense of place. The public realm should not only be safe and functional, but also a beautiful place to be in and move through; a place that attracts businesses, residents, and visitors to the Diamond District. It is envisioned that the Diamond District public realm will:

- Have an active street life with spaces, amenities, and land uses that encourage a variety of active and passive activities along the street year round including dining, shopping, strolling, exercising, and socializing.
- Consist of a well designed multi-model circulation network that safely and efficiently moves pedestrians, bicyclists, and vehicular traffic. This system should effectively connect users to the baseball stadium, businesses, residential buildings, and open spaces within the Diamond District and to the surrounding neighborhoods beyond.
- Be accessible, safe, and comfortable for a wide variety of age groups, abilities, and users.
- Meet the various and differing needs of full time residents, business owners, employees, and visitors.
- Include landscaping, hardscape, and site furnishings that define and beautify the streets and gathering spaces.
- Advance the City of Richmond's stated goal to be the greenest city on the East Coast by incorporating sustainable design practices that improve the environment and health of the community.
- Consist of a design language that is both unique to the Diamond District yet rooted in the City of Richmond.
- Enhance the surrounding architecture and thoughtfully respond to the scale, character and nature of surrounding land uses.
- Encourage a healthy lifestyle.

3 | STREET NETWORK & STREETScape STANDARDS

3.1 CHAPTER INTRODUCTION

The City of Richmond's Complete Streets Initiative as expressed in the City's Better Streets Manual strives to ensure the creation of a comprehensive, integrated, connected, multimodal transportation network that balances the accessibility, mobility, health, and safety needs of all users, including persons with disabilities, seniors, children, and families. Streets are an essential component of livable, attractive neighborhoods. A well planned network of streets within the Diamond District will safely accommodate the varying needs of pedestrians, bicyclists, drivers, and transit users, while providing connectivity and access to adjacent land uses, open spaces, and amenities. Special attention should be given to designing streets that are not only used for travel, but streets which are beautiful spaces that encourage a variety of activity on the street. Thoughtfully designed streetscapes can help define the character of this place, add economic value, and enhance the quality of life and health for residents, businesses, and visitors.

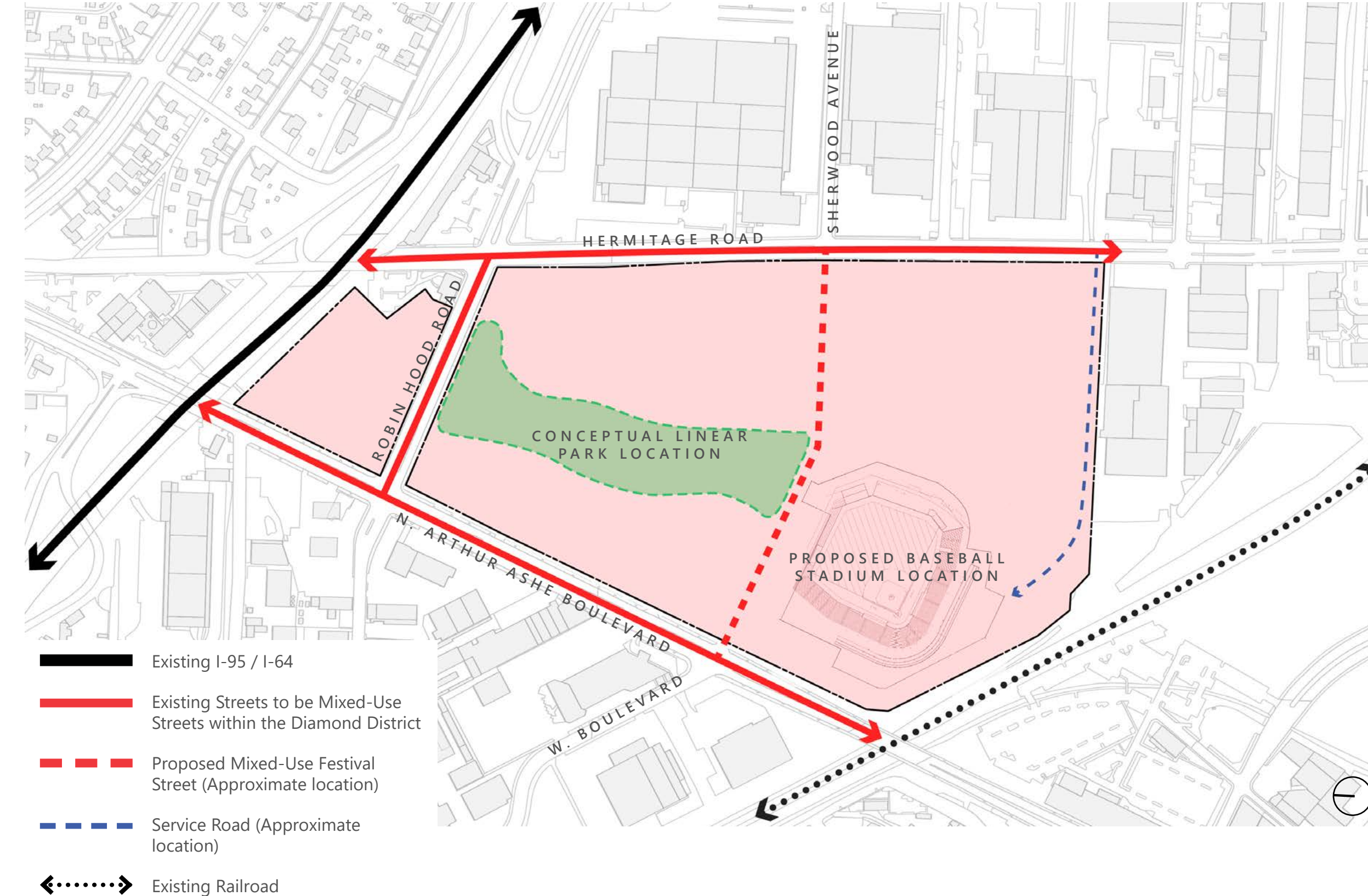


Credit: River Team Realty

3.2 PROPOSED STREET NETWORK

CONCEPTUAL STREET NETWORK

Site plan is conceptual in nature and subject to change. Future roads internal to the Diamond District are not shown.



The street network for the Diamond District shall establish a hierarchy of streets. N. Arthur Ashe Boulevard, Hermitage Road, Robin Hood Road shall function as Mixed-Use Streets* as described in the Better Streets Manual. A proposed Festival Street will extend through the site and provide access to the ballpark. The Festival Street will also be a Mixed-Use Street typology. A network of internal Neighborhood Residential Streets* and Linear Park Streets* will create walkable neighborhood blocks that support local pedestrian, bicycle, and vehicular circulation. A service road along the south of the site will provide access to the baseball stadium for deliveries. A public pedestrian mews that weaves between multi-family residential buildings on the east side of the site shall provide a secondary north south pedestrian and bicycle route through the Diamond District in addition to the linear park.

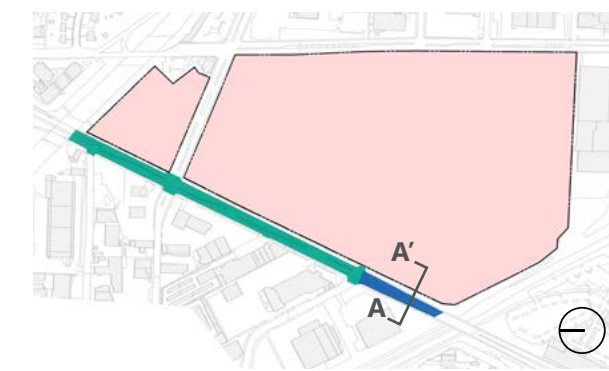
*For further information on street typologies referenced in these Design Standards, see the Better Streets Manual.

3.3 N. ARTHUR ASHE BOULEVARD

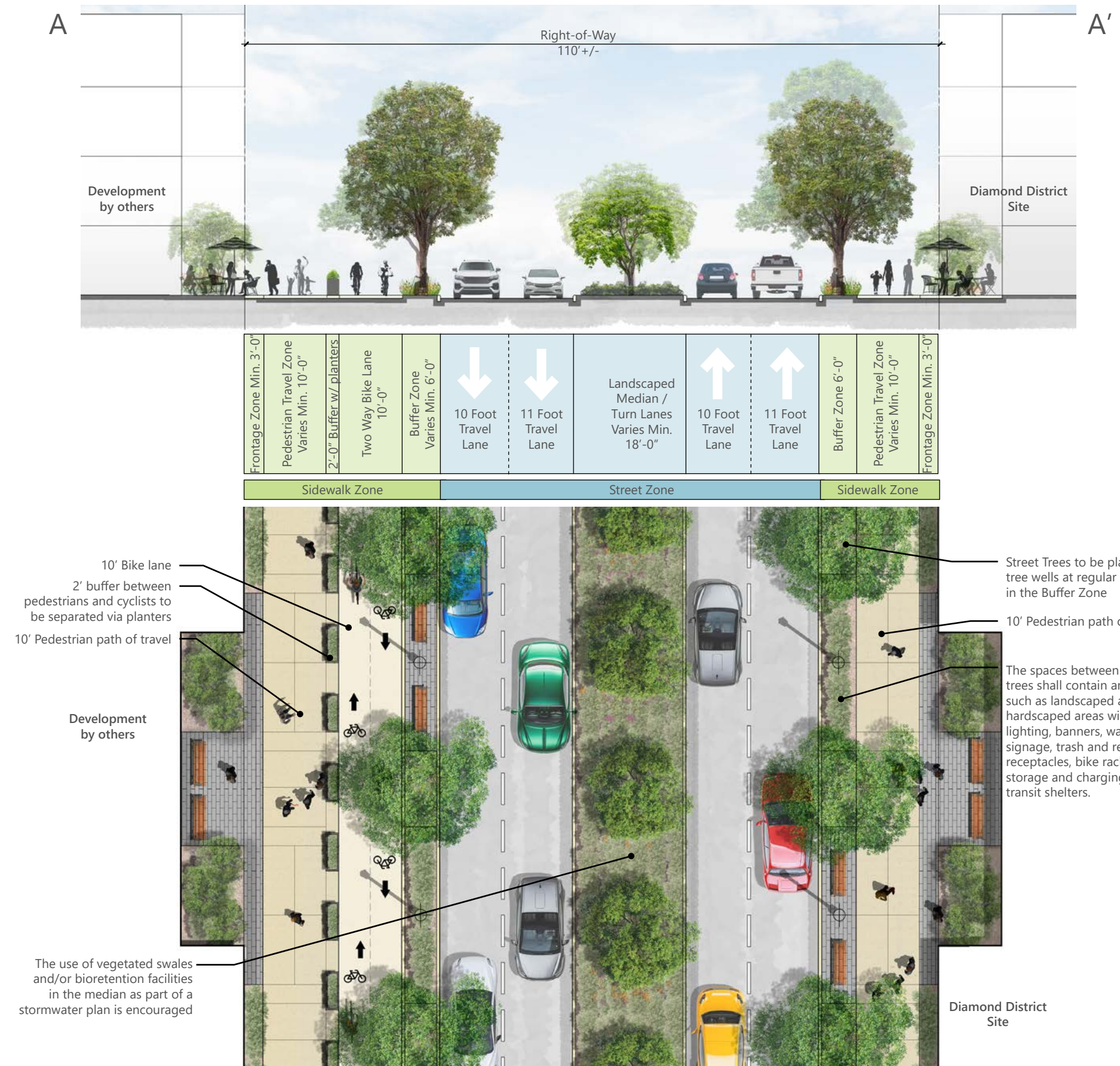
Over the last decade, redevelopment and new development close to the street has changed the character of N. Arthur Ashe Boulevard adjacent to the Diamond District, slowly transforming it into a true mixed use boulevard. Within the Diamond District, the new baseball stadium, as well as multi-family residential, a hotel, retail, and office land uses will be situated along this street. N. Arthur Ashe Boulevard, along with Hermitage Road, is one of the primary vehicular circulation routes to and around the Diamond District, connecting the District to other city neighborhoods. N. Arthur Ashe Boulevard provides access to and from Interstate 95 North / 64 West just north of the Diamond District. The Richmond 300 Plan calls for N. Arthur Ashe Boulevard to become a "Great Street" featuring buildings that address the street, underground utilities, street trees, lighting, enhanced transit, and other amenities. The Richmond 300 Plan calls for it to be a high frequency transit route with multiple stops. Additionally, plans are underway to replace the bridge over the railroad tracks just south of the Diamond District. A shared use path is proposed for west side of the new bridge. The pedestrian travel zone and bike lanes in Conceptual Section & Plan A shall tie into the shared use path.

- Better Streets Manual Street Typology: Mixed-Use Street
- Existing Right-of-Way Width: Varies, but is predominately 110'-0"
- Proposed Right-of-Way Width: Existing to remain

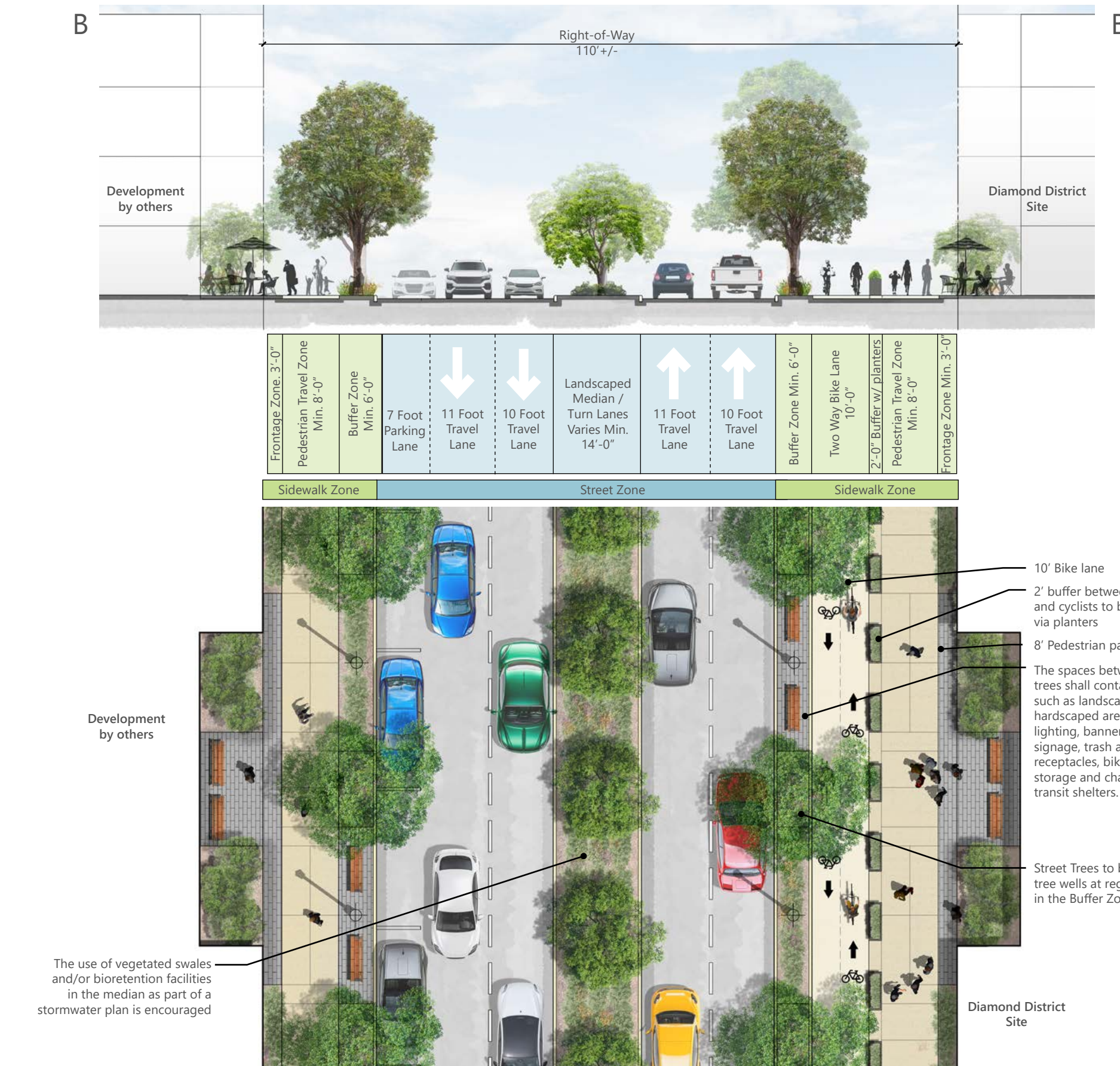
Street Location Map



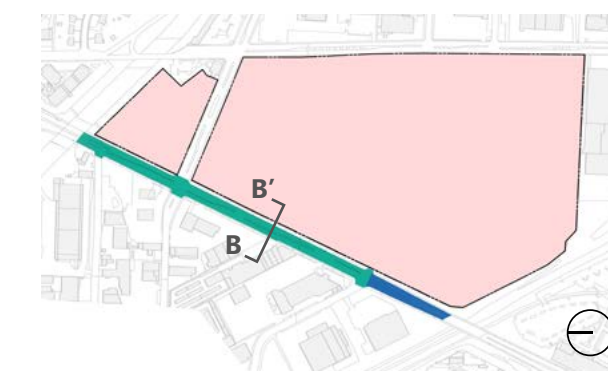
Conceptual Section & Plan A - N. Arthur Ashe Boulevard between the N. Arthur Ashe bridge and the Festival Street



Conceptual Section & Plan B - N. Arthur Ashe Boulevard between the Festival Street & Interstate 95



Street Location Map

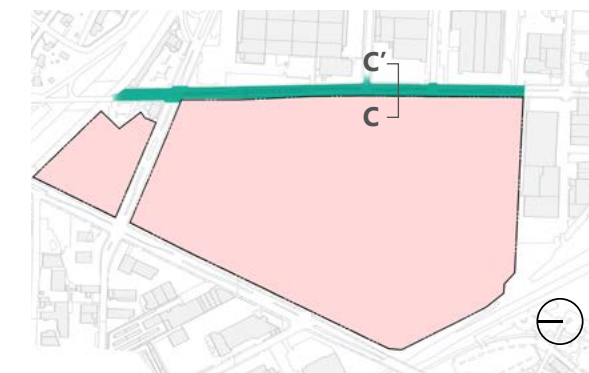


3.4 HERMITAGE ROAD

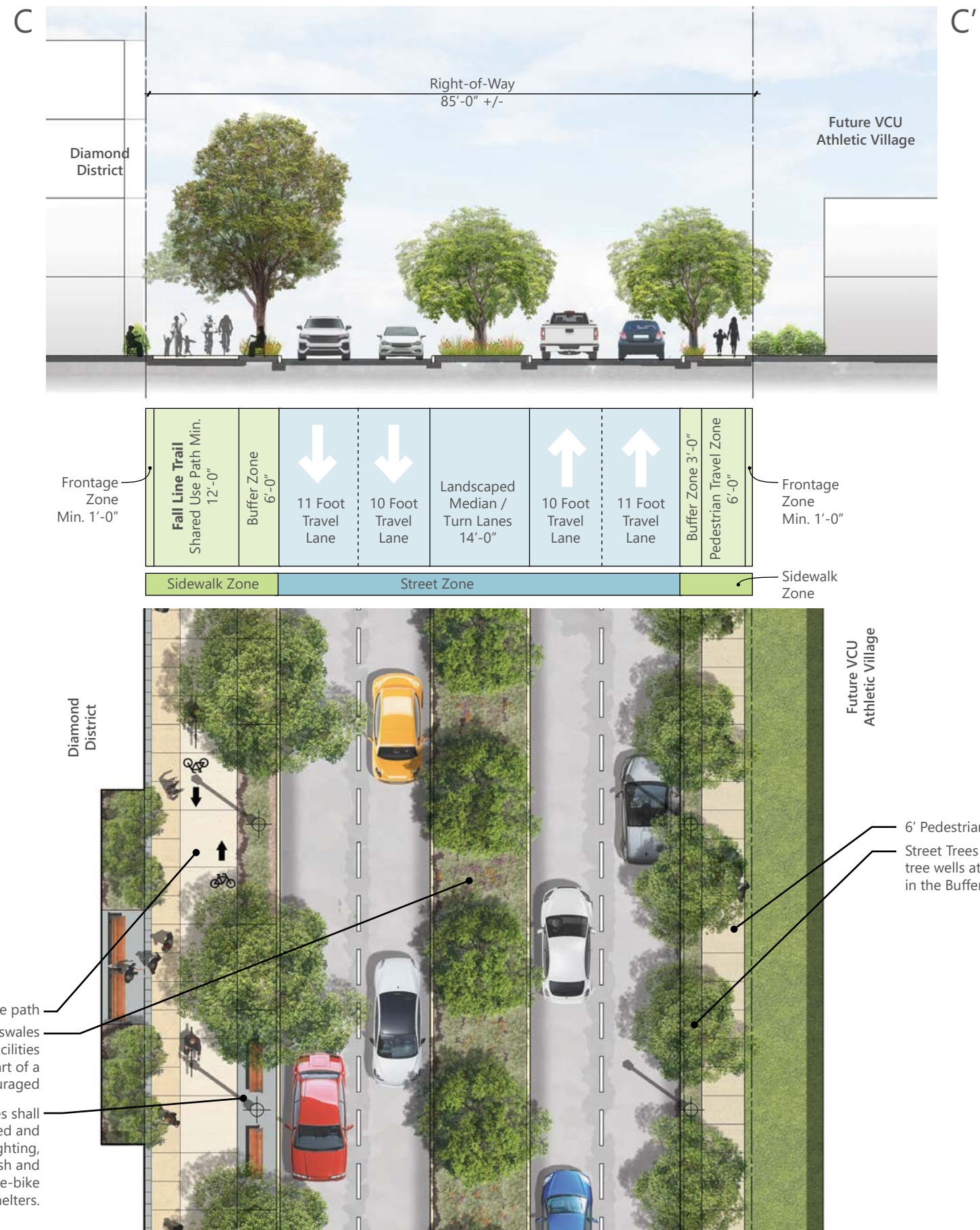
Hermitage Road, along with N. Arthur Ashe Boulevard, is one of the primary transportation circulation routes to and around the Diamond District. Hermitage Road near the Diamond District can be accessed from Interstate 95 South / 64 East. The Sauer Center commercial redevelopment at the intersection of Hermitage Road and W. Broad Street has started to transform and enliven the character of Hermitage Road south of the Diamond District. The proposed VCU Athletic Village as well as multi-family residential development within the Diamond District along Hermitage Road promises more transformation. The Richmond 300 Plan calls for Hermitage Road to be both a major mixed-use street and a "Great Street" featuring buildings that address the street, underground utilities, street trees, lighting, enhanced transit, and other amenities. The Richmond 300 also calls for it to be a high frequency transit route with multiple stops. Hermitage Road from the city line south to W. Broad Street, which encompasses the stretch of road through the Diamond District, was identified by the City and the Richmond Bicycle Master Plan project team as a key connection in need of bicycle infrastructure improvements. **The Fall Line Trail shall be located along the west side of Hermitage Road.** Refer to the Fall Line Vision Plan for additional design standards and guidance.

- Better Streets Manual Street Typology: Mixed-Use Street
- Existing Right-of-Way Width: Varies, 85'-0" +/-
- Proposed Right-of-Way Width: Min. 85'-0"

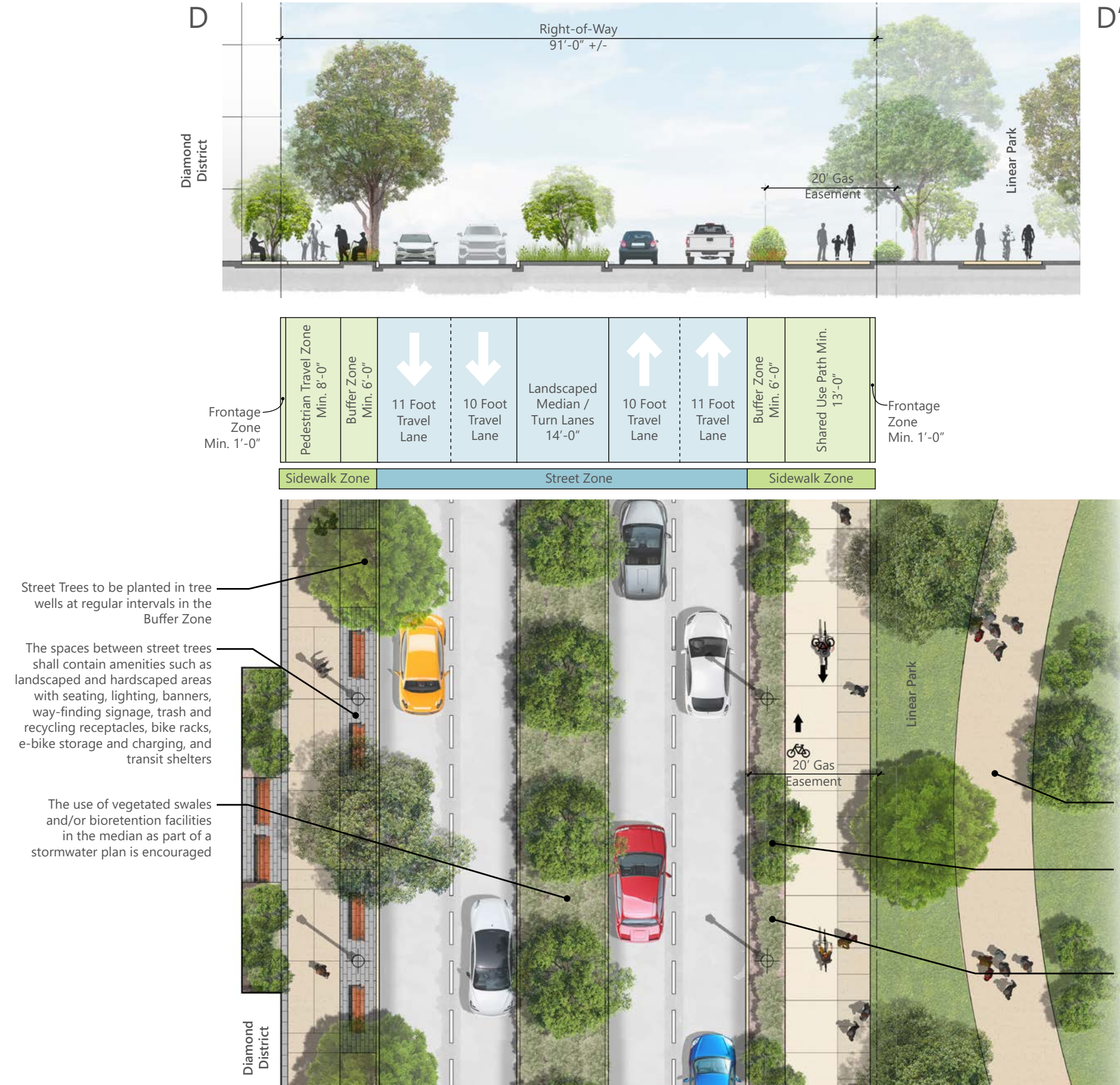
Street Location Map



Hermitage Road Conceptual Section & Plan



Robin Hood Road Conceptual Section & Plan

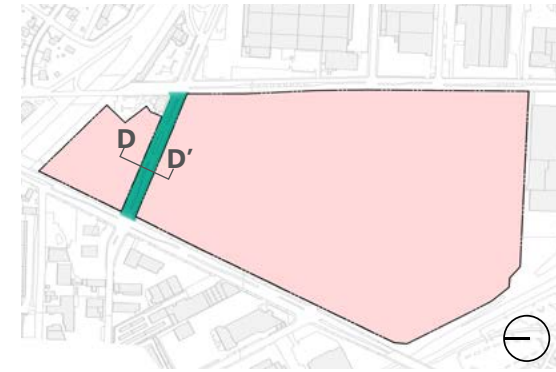


3.5 ROBIN HOOD ROAD

Robin Hood Road is one of the primary transportation circulation routes to and through the Diamond District, connecting the District to the rest of Greater Scott's Addition and various Northside neighborhoods. Robin Hood Road provides direct access to Interstate 95 South / 64 East as well as the proposed VCU Athletics Village. Residential and commercial development along Robin Hood Road within the Diamond District will begin to transform this route from an underdeveloped street marked with vast asphalt parking lots into a mixed use corridor. The northern edge of the proposed linear park will border Robin Hood Road, making Robin Hood Road a gateway into the park. The Richmond 300 Plan designates Robin Hood Road as a future high frequency transit route. An active high pressure gas pipeline within a 20' easement runs parallel to the south side of Robin Hood Road. **No plantings or shrubs greater than 5' in height at maturity are permitted within the easement.**

- Better Streets Manual Street Typology: Mixed-Use Street
- Existing Right-of-Way Width: Varies, 91'-0" +/-
- Proposed Right-of-Way Width: Existing to remain

Street Location Map



3.6 FESTIVAL STREET

The proposed Festival Street is expected to be a hub of activity in the Diamond District, with an increase in activity occurring on game days. The Festival street may be closed from time to time for special events, especially when there is a game at the ballpark. Pedestrian access to the ballpark will be from the Festival Street. Additionally, commercial development, including retail shops and a hotel, multi-family residential uses, and the linear park will front this street.

Consideration must be given to using design elements that designate the Festival Street as a special space within the Diamond District. String lights that transverse the street shall be included in the design. A street mural or stamped asphalt in the Street Zone shall be considered at key locations, particularly where the Linear Park borders the Festival Street. The Festival Street design shall include accommodations for food trucks and entertainment during special events, including space for food truck parking and electrical hook-ups. A plan shall be developed to safely and efficiently manage vehicular, pedestrian, and bicycle circulation when the Festival Street is closed for events.

A high visibility block-style crosswalk shall be installed all intersections. Stamped asphalt may be used for crosswalks at unsignalized intersections, especially where Linear Park Perimeter Streets intersect the Festival Street. Raised crosswalks shall be used where the public Mews intersects the Festival Street and where the Linear Park Perimeter Streets intersect the Festival Street.

The design of the Festival Street must address how valet drop off can safety and efficiently occur at the hotel proposed for the intersection of the Festival Street and N. Arthur Ashe Boulevard. Additionally, a school bus drop off area shall be located on the Festival Street or adjacent to the Stadium Plaza. See 4.7 Public Gathering Space Considerations.

- Better Streets Manual Street Typology: Mixed-Use Street
- Proposed Right-of-Way Width: minimum 80'-0"

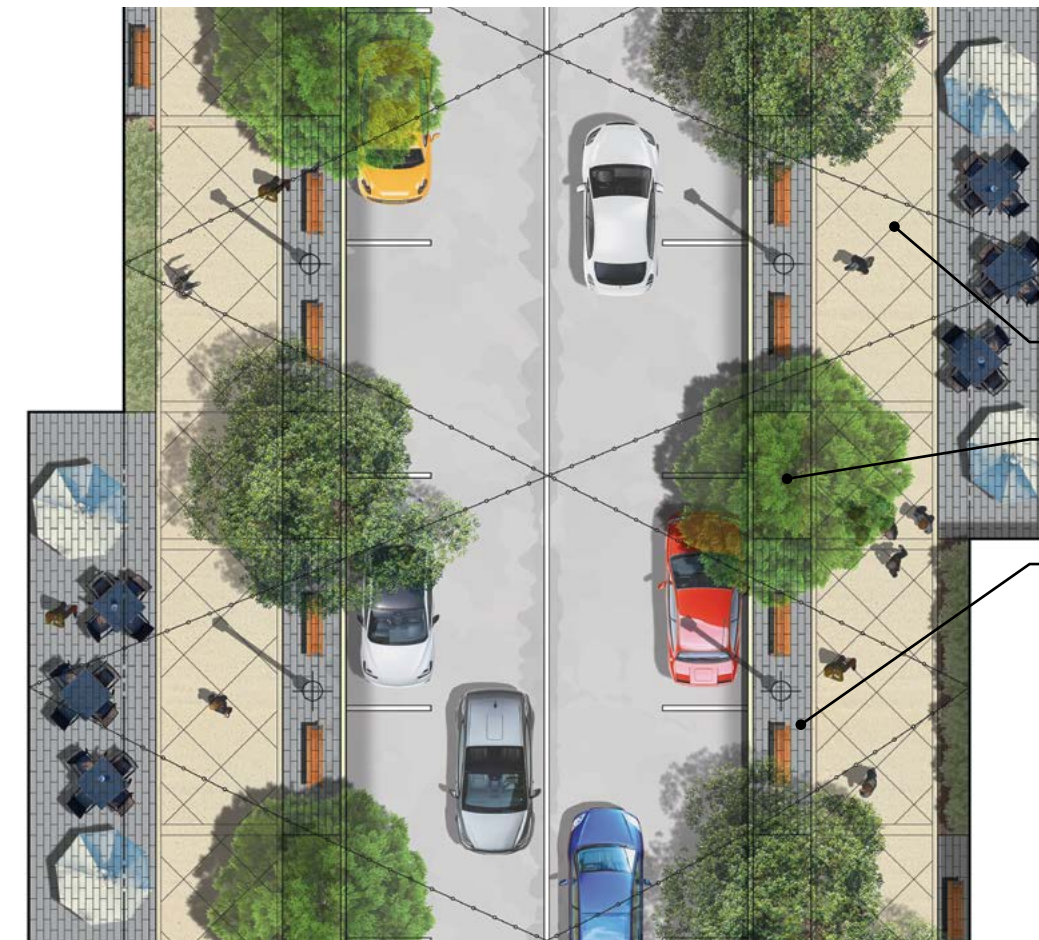
Festival Street Precedent Images



Festival Street Conceptual Section & Plan



Frontage Zone 3'-0"	Pedestrian Travel Zone 12'-0"	Buffer Zone 6'-0"	Parking Lane / Curbside Activities 8'-0"	11-Foot Travel Lanes 22'-0"	Parking Lane / Curbside Activities 8'-0"	Buffer Zone 6'-0"	Pedestrian Travel Zone 12'-0"	Frontage Zone 3'-0"
Sidewalk Zone			Street Zone			Sidewalk Zone		



- Scoring in the Pedestrian Travel Zone shall be diamond pattern
- Street Trees shall be planted in tree wells at regular intervals in the Buffer Zone
- The spaces between street trees shall contain amenities such as landscaped areas with seating, lighting, banners, way-finding signage, trash and recycling receptacles, bike racks, and e-bike storage and charging.

Festival Street Conceptual Section & Plan when Closed for Events



Frontage Zone 3'-0"	Pedestrian Travel Zone 12'-0"	Buffer Zone 6'-0"	Parking Lane / Curbside Activities 8'-0"	11-Foot Travel Lanes 22'-0"	Parking Lane / Curbside Activities 8'-0"	Buffer Zone 6'-0"	Pedestrian Travel Zone 12'-0"	Frontage Zone 3'-0"
Sidewalk Zone			Street Zone			Sidewalk Zone		



Festival Street Approximate Location

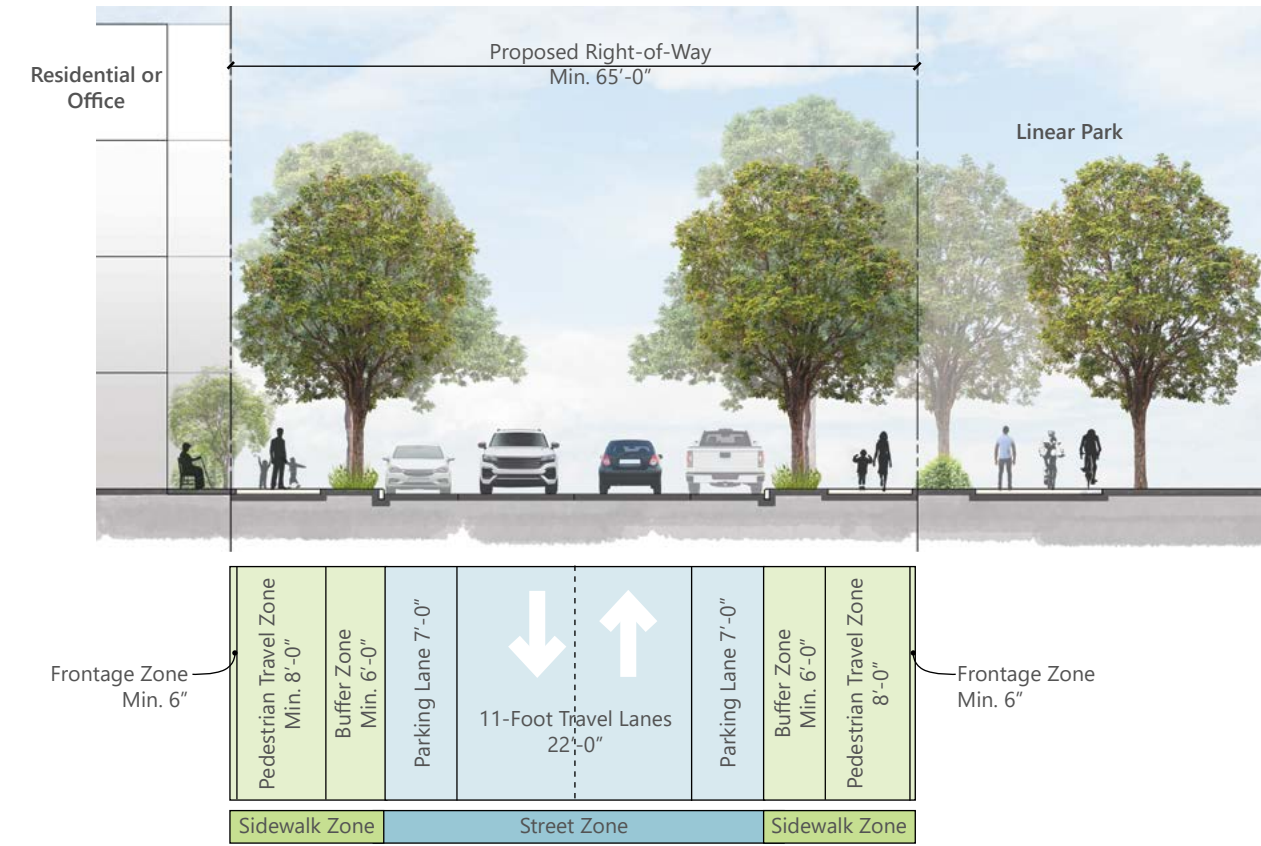


3.7 LINEAR PARK PERIMETER STREETS

The Linear Park Perimeter Streets will be internal to the Diamond District. They are unique in that on one side they will be bordered by the proposed linear park and on the opposite side, they will be bordered by multi-family residential or office land uses. They must accommodate the needs of residents as well as provide safe pedestrian access to this signature park. Tree lawns shall be used in the Buffer Zone rather than tree wells.

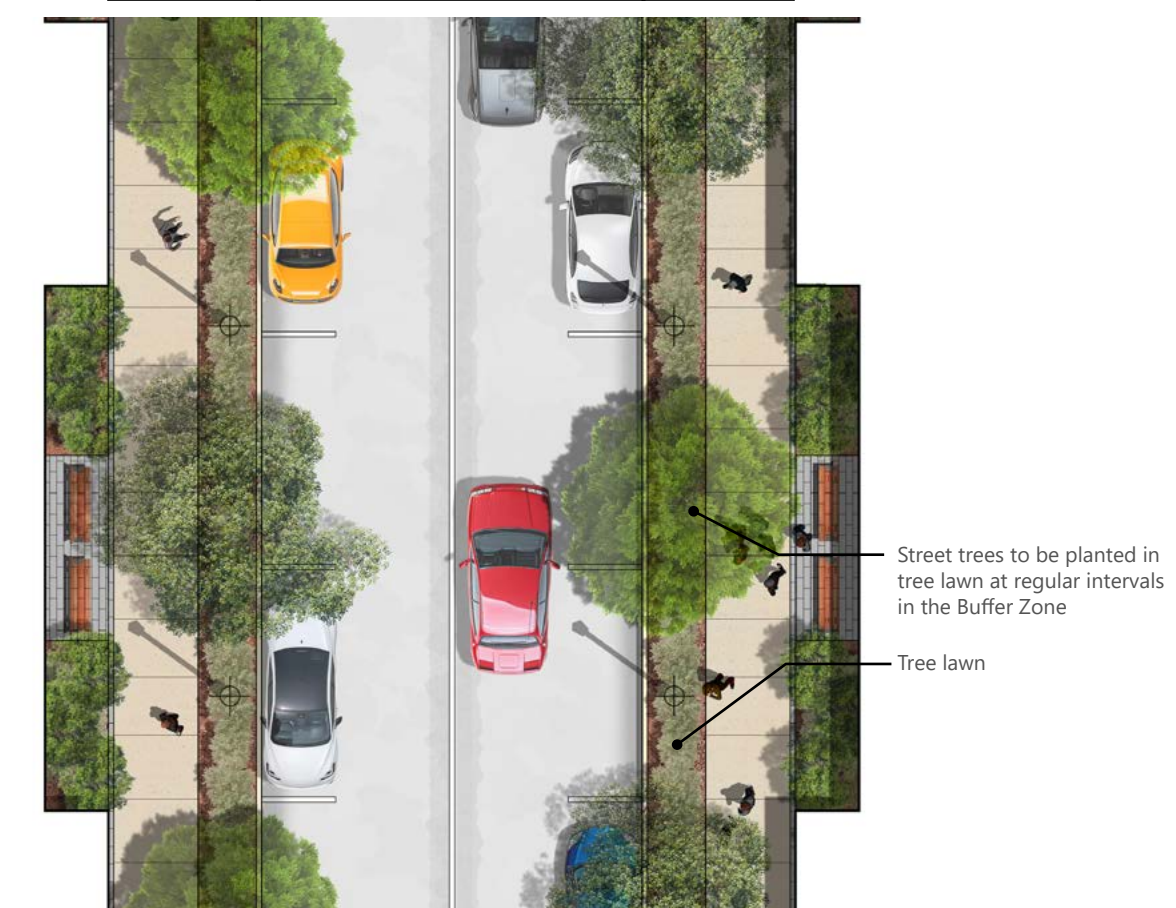
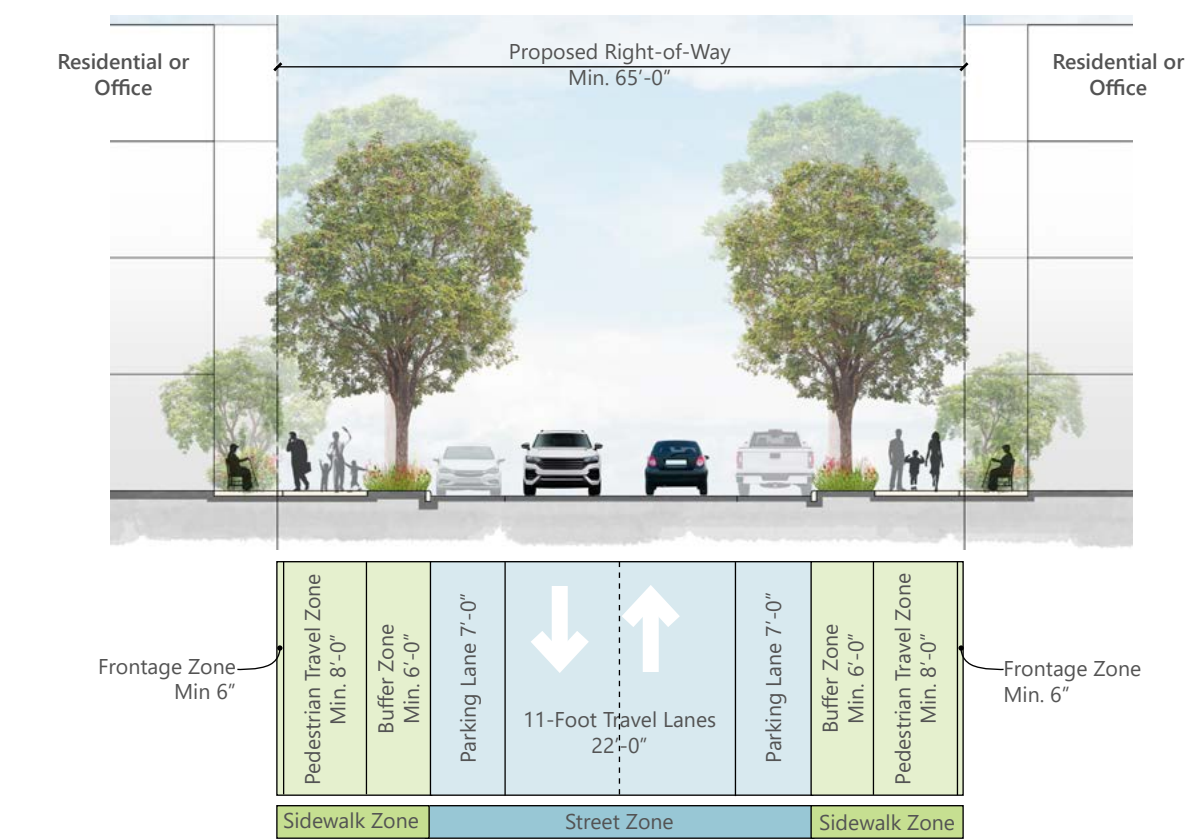
- Better Streets Manual Street Typology: These streets contain elements of Neighborhood Residential Streets and Parkways
- Proposed Right-of-Way Width: minimum 65'-0"

Linear Park Perimeter Streets Conceptual Section & Plan



3.8 NEIGHBORHOOD RESIDENTIAL STREETS

Neighborhood Residential Street Conceptual Section & Plan



Neighborhood Residential Streets will be internal to the Diamond District. They will be bordered on both sides by multi-family residential or office land uses. These streets will typically have lower levels of vehicular traffic and are not intended for cut through traffic. They will most often be frequented by people that reside in the neighborhood. Tree lawns shall be used in the Buffer Zone rather than tree wells.

- Better Streets Manual Street Typology: Neighborhood Residential Street
- Proposed Right-of-Way Width: 65'-0"

3.9 SERVICE ROAD

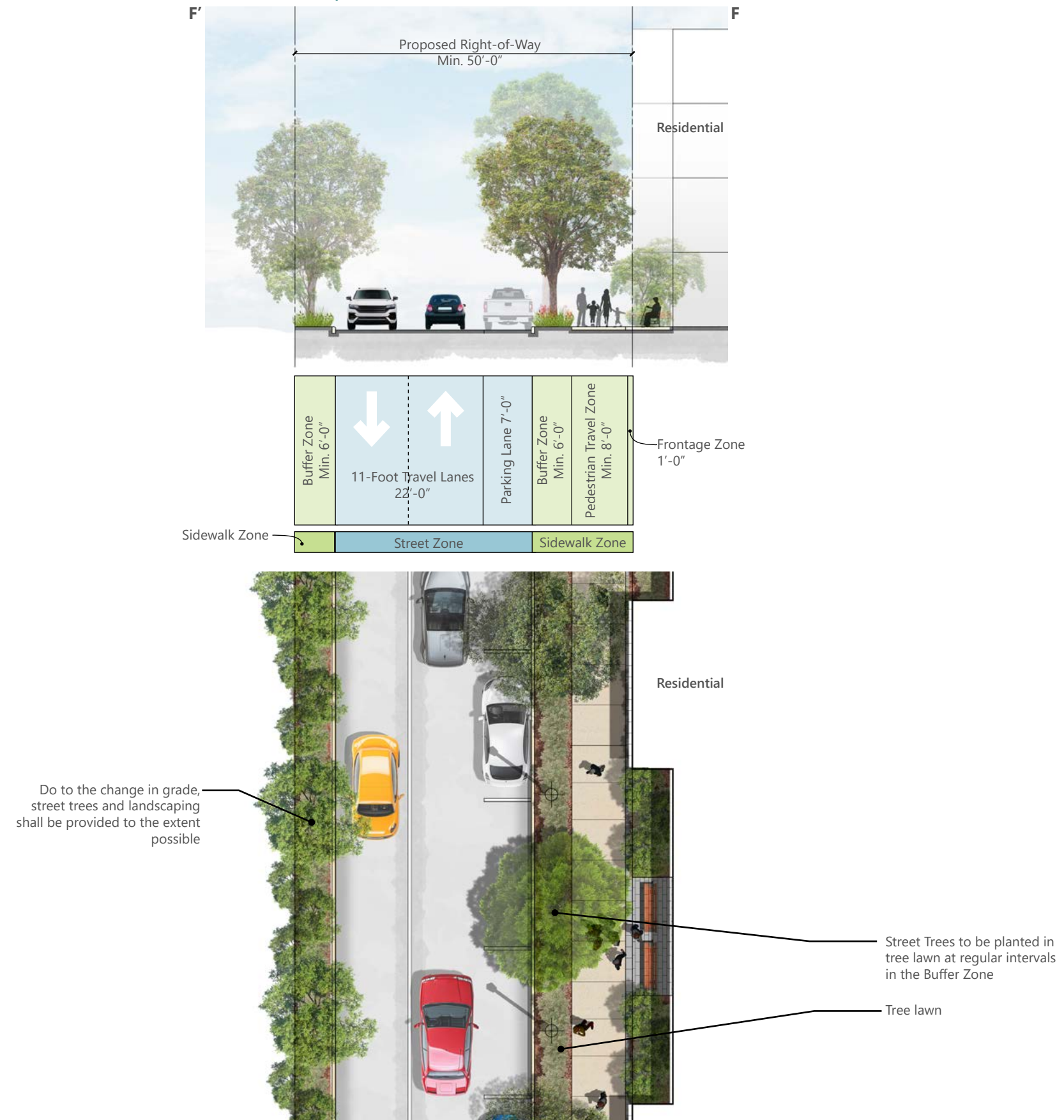
A service road along the south side of the Diamond District site will provide access to the baseball stadium for deliveries and emergency vehicles. The road will also provide limited access to some multi-family residential buildings as well as on street parking. Do to the change in grade along the south side of the site, the right-of-way may be 50'-0" wide. Tree lawns shall be used in the buffer zone rather than tree wells.

- Better Streets Manual Street Typology: Neighborhood Residential Streets
- Proposed Right-of-Way Width: 50'-0"

Service Road Approximate Location



Service Road Conceptual Section & Plan



3.10 MEWS

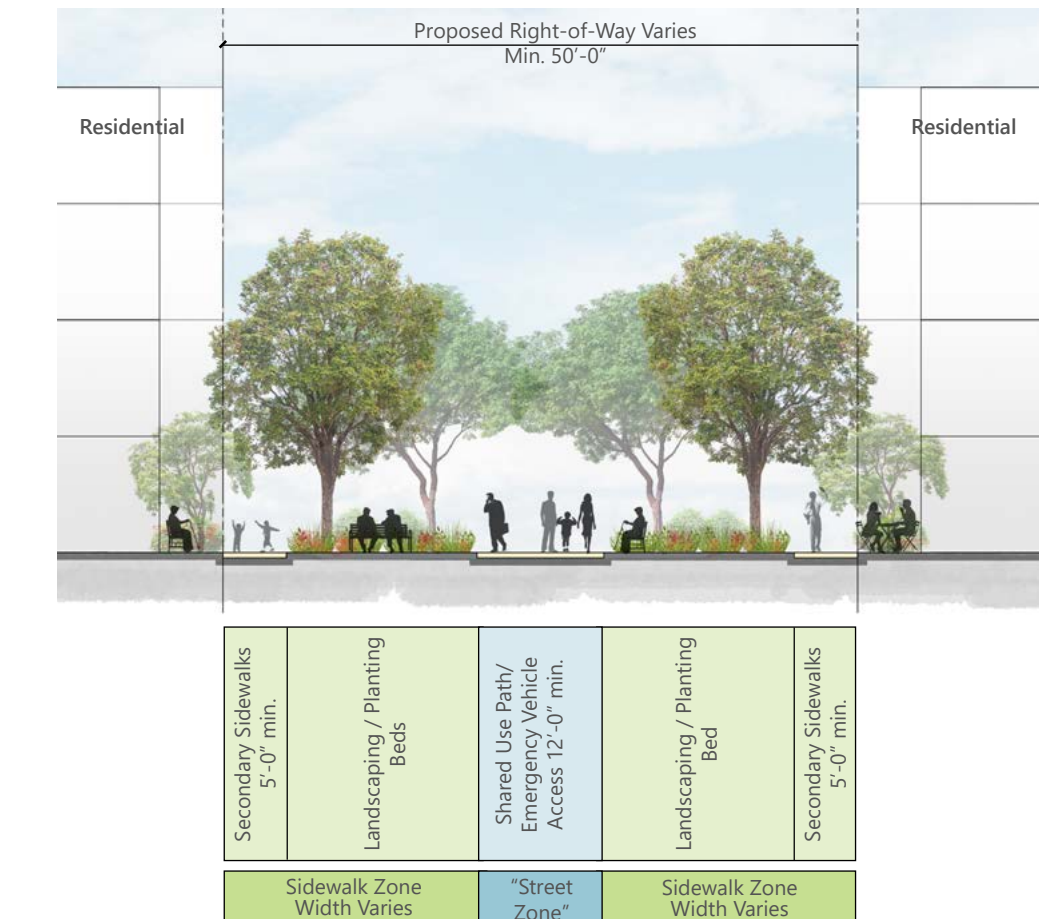
Mews Precedent Images



A public Mews that weaves between multi-family residential buildings shall provide a secondary north south pedestrian and bicycle route through the Diamond District in addition to the linear park. The mews is primarily intended to be used by residents of the adjacent buildings. A minimum 12' wide shared use path through the Mews shall be provided for pedestrian & bicycle circulation. This path shall be designed and constructed in manner that it can be used by emergency vehicles when necessary to access the residential units. Secondary sidewalks shall be provided access to residential buildings. Landscaped areas with seating interspersed throughout the Mews shall be provided. Raised crosswalks shall be used where the public Mews intersects other streets. Refer to section 4.7 Public Gathering Space Considerations and section 5.3 Public Gathering Spaces for additional standards.

- Better Streets Manual Street Typology: None
- Proposed Right-of-Way Width: Varies, Minimum 50'-0"

Mews Conceptual Section & Plan





Credit: F11photo | Adobe Stock

4.1 CHAPTER INTRODUCTION

The purpose of this chapter is to provide a guide for addressing elements and situations that are common throughout the public realm and not specific to any one street or public space.

4.2 SUSTAINABILITY STRATEGIES

Incorporating sustainability strategies into the design of the public realm of the Diamond District will support human health and the health of the environment, improve the quality of life for all users, and help preserve this neighborhood for generations to come. Sustainability strategies aim to reduce some of the negative impacts that urban environments have on the natural environment by improving water, soil, and air quality, promoting biodiversity, treating stormwater in a manner that more closely mimics natural processes, reducing the consumption of materials and resources, and providing for alternative energy strategies. **Sustainability measures shall be incorporated into the design of the public realm to the greatest extent possible.** This includes but is not limited to the following:

- Selecting materials and products with low carbon and sustainable design elements
- Using regionally sourced materials and products
- Using recycled materials and products
- Selecting high durable, low maintenance materials and products.
- Providing electric vehicle charging stations for vehicles and e-bikes throughout the site
- Incorporating green infrastructure techniques to address stormwater
- Harvesting and reusing rainwater and greywater
- Installing pavement with high solar reflectance in sunny areas
- Increasing the urban canopy
- Using native plant species and removing invasive plant species
- Providing a community garden in the public realm
- Limiting the use of turf grass
- Using LED lighting and solar energy

Specific sustainability requirements can be found throughout this document. Refer to the Richmond Sustainable Design Standards for more information on the city's sustainability initiative.



Credit: Think B | Adobe Stock
Electric Vehicle Charging Stations



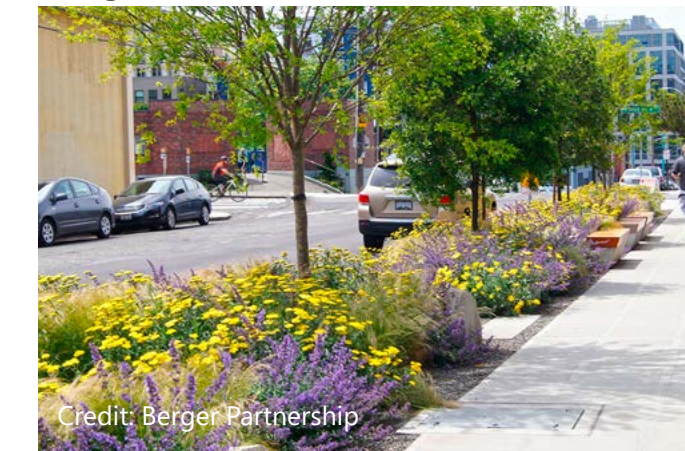
Credit: Pure Energy Solar
Solar Bench



Credit: National Association of City Transportation Officials
E-bike Charging Stations

4.3 STORMWATER MANAGEMENT

The Diamond District developer shall create a comprehensive stormwater management plan for the Diamond District site for review and approval by the COR. This plan shall be implemented by the developer during design. The plan shall prioritize a centralized stormwater management system for the entire site under the linear park, supported with distributed green infrastructure facilities integrated into the streetscape. Larger green infrastructure practices, such as linear bioretention and permeable pavement shall be prioritized over smaller-scale green infrastructure to minimize maintenance needs. All green infrastructure shall consider pedestrian, bike, and vehicular safety. In addition to bioretention facilities and permeable pavement, green infrastructure may include vegetated swales, green/vegetated roofs, rainwater and greywater harvesting & reuse systems, infiltration basins, bioswales, tree box filters, and other practices approved by the City. If vegetated swales are used, Linear Park Perimeter Streets and Neighborhood Residential Streets are better suited for them as opposed to other street typologies. Where additional information is found during design that impacts the stormwater master plan, the developer shall notify the City of Richmond to discuss and agree to an alternative.



Credit: Berger Partnership
Bioretention Planting



Credit: City of Lake Oswego
Bioretention Planting

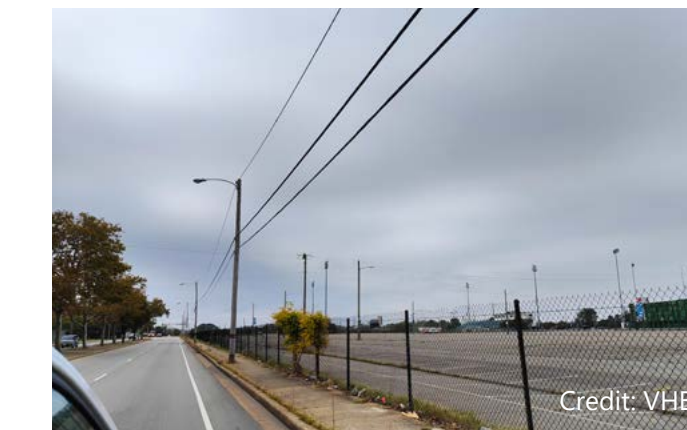
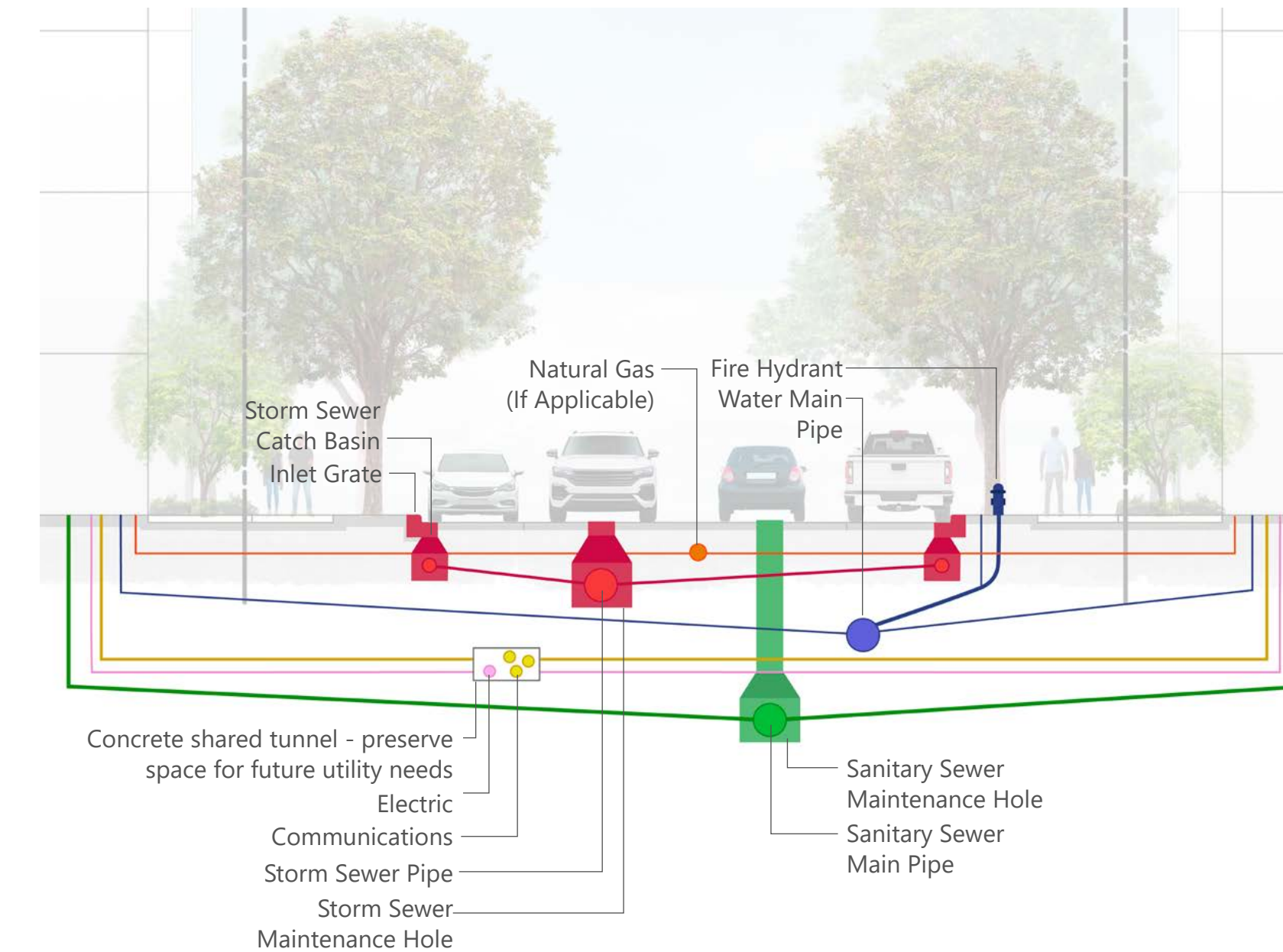


Credit: Oregon State University
Vegetated Swale

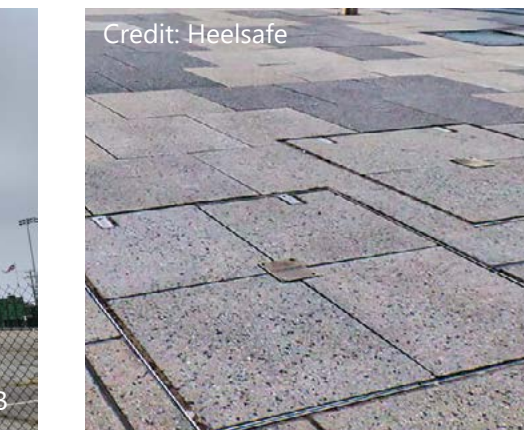


Credit: Midwest City Oklahoma
Vegetated Swale

Conceptual Utility Section



Credit: VHB
Overhead power lines shall be located underground



Credit: Heelsafe
Discrete utility access cover



Credit: Iron Age Designs
Decorative utility access cover

4.4 UTILITIES

The location of utilities must be carefully planned so that they can efficiently and effectively provide services while minimizing conflicts between the utility and other elements of the streetscape. Potential points of conflict between utilities and street trees must especially be avoided.

Design Standards

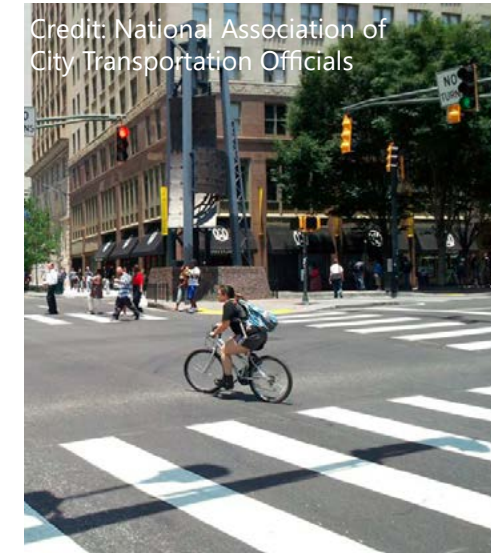
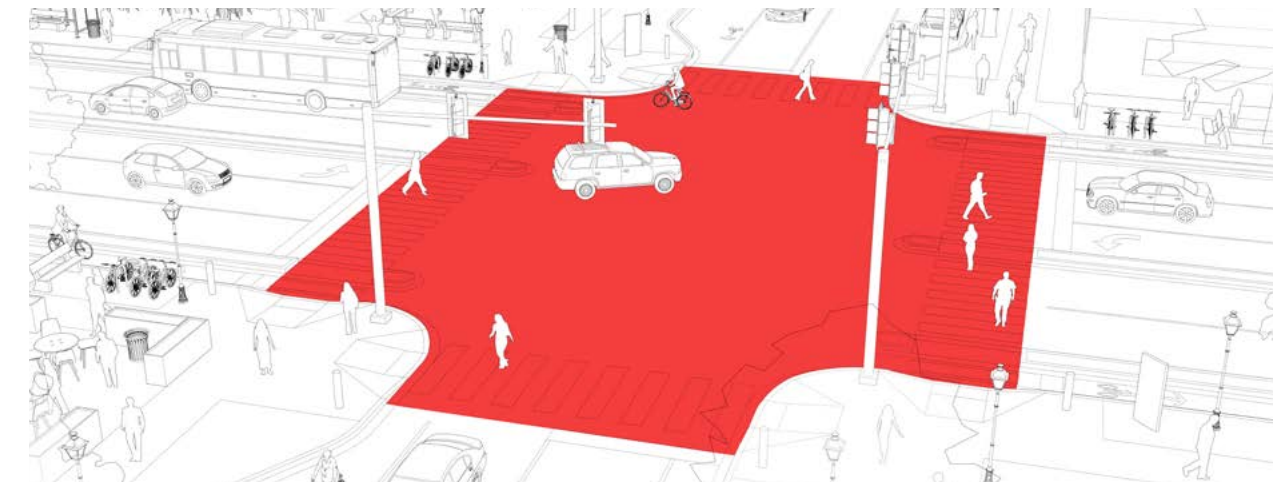
1. All utilities shall be located underground.
2. Utilities shall be situated within the roadway; should a utility need to be located within the sidewalk, a root barrier should be provided. Root barriers around laterals to buildings are recommended.
3. The City's Urban Design Guidelines recommend the development of a plan for a phased network of underground cable-ready infrastructure, which would consist of a series of interconnected hollow tubing which could accommodate existing and future wires and cables. Such a plan should be implemented in the Diamond District to minimize the impact of overhead wires and cables on the visual environment, facilitate the placement of existing overhead wires and cables underground, and accommodate future wires and cables in an appropriate manner.
4. All utility lines should be located so that they will not interfere with tree well locations.
5. Above ground gas meters and other development specific equipment must not be located within the right-of-way.
6. Trees shall be pruned or located in a manner to maintain a 6-foot clearance from any streetlight so that the tree doesn't damage the streetlight or interfere with light that is being cast.
7. Transformers and other at grade utility equipment shall be located as unobtrusively as possible, such as in vaults either under the sidewalk or in the Frontage Zone. They shall not be located in the Pedestrian Travel Zone or any pedestrian or bicycle path of travel.
8. Transformers shall be situated strategically to accommodate Level 3 EV charging.
9. Utility access covers and other access points to below-grade equipment located in the public realm shall be metal and finished in a color or pattern that matches or compliments the surrounding pavement.
10. Grates, utility covers, and similar shall all be ADA, baby stroller wheel, and heel appropriate.
11. Mechanical equipment that is visible from the street shall be screened using walls, landscaping, or other materials. See section 7.9 Screening and Fencing.
12. No tree plantings or shrubs greater than 5' in height at maturity are permitted within the existing 20' high pressure gas easement along Robin Hood Road. See section 3.5 Robin Hood Road.

4.5 INTERSECTIONS & CROSSWALKS

Intersections are an area where pedestrian, bike, and vehicular traffic converge. It is important that design allows for all users to safely move through the intersection.

Design Standards

- Intersections should be designed to balance the needs of all road users, notably the most vulnerable users - pedestrians and cyclists. Better Streets outlines three design principles for improving pedestrian safety and comfort: minimize crossing distance, minimize conflicts with turning vehicles, and provide sufficient signal time to cross the street at signalized intersections.
- Curb extensions (bulb-outs) shall be used at all intersections where feasible. Curb extensions shall be long enough to ensure that no vehicle can park 20' from edge of crosswalk and 30' from stop sign.
- Urban curb radii shall be used.
- Refuge islands the width of the crosswalk shall be provided for streets with 4 or more travel lanes or over 60 feet of distance between curbs.
- Crosswalks at signal controlled crossings and other crossing locations deemed appropriate by the City Traffic Engineer shall be high-visibility white block style pavement markings that avoid the predominant wheel tracking of the major through movements. Crosswalks at unsignalized crossings should be white transverse parallel lines. Crosswalks should be the same width as the sidewalk zone feeding them.
- Crosswalks at unsignalized intersections on the Festival Street shall also be high-visibility white block style pavement markings due to the anticipated pedestrian volume. The use of stamped asphalt at these intersections may be used. Refer to section 3.6 Festival Street for more information.
- Mid-block crosswalk shall only be permitted with the use of a raised crosswalk or a crosswalk with a pedestrian hybrid beacon. Raised crosswalks shall be used where the public Mews intersects other streets.
- Raised crosswalks are permitted.
- Pedestrian crosswalk signals shall be installed at all signalized intersections. Include a pedestrian delay on traffic signals.
- "Two curb ramp crosswalks" where each curb ramp is directly aligned with a crosswalk shall be used at all intersections.
- Trees at intersections shall be planted at least 25 feet away from the corner to allow for adequate line of sight in all directions. Landscaping placed within site triangles at intersections must not exceed 12 inches in height.
- Bicycle lanes through intersections must be highly visible through the use of pavement markings and signage.
- The use of roundabouts may be considered at certain intersections in order to more safely and effectively move vehicular, pedestrian, and bicycle traffic.
- 14.A 10' wide pedestrian path of travel from the main game day parking garage(s) to the ballpark must be provided.**



Credit: National Association of City Transportation Officials
White Block Style Crosswalk



Credit: CACTX
Stamped Asphalt



Credit: City of Knoxville
Raised Crosswalk

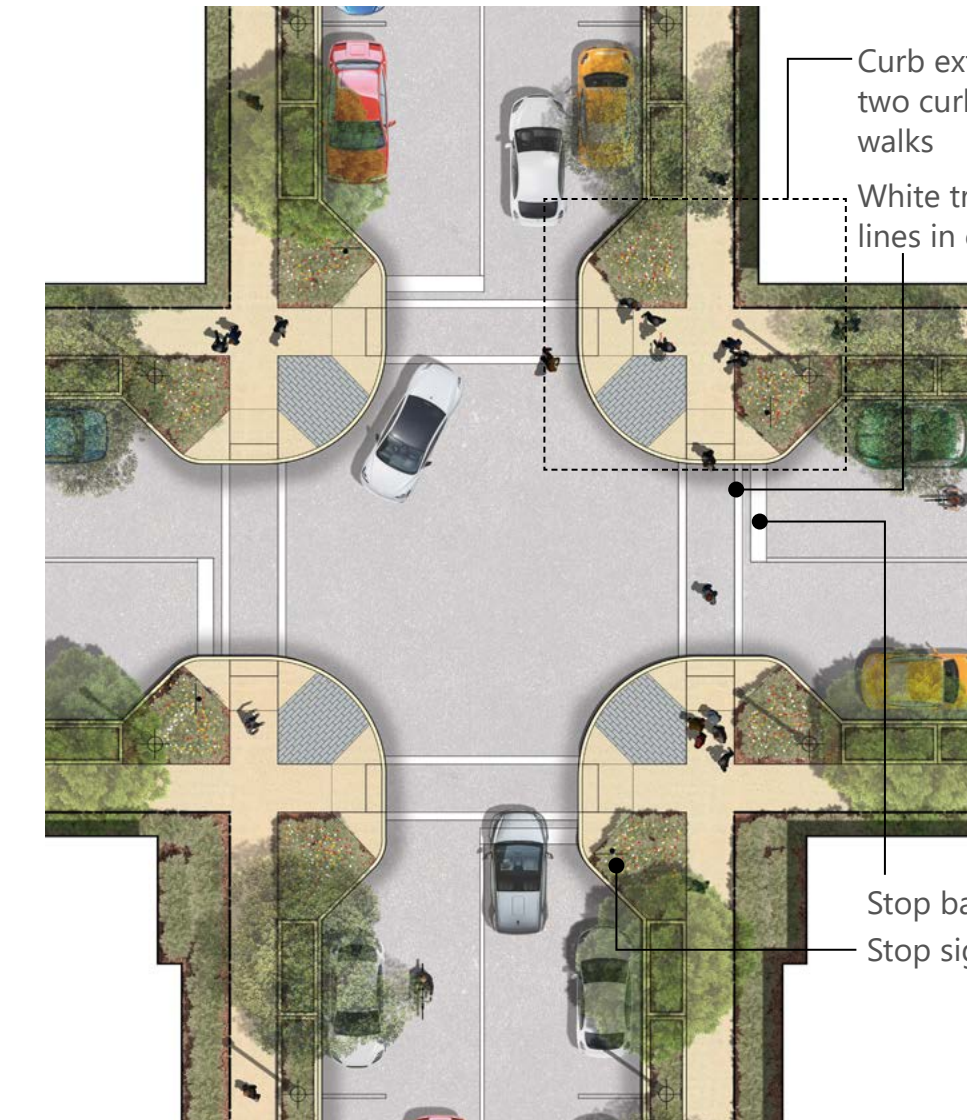


Credit: City of Cambridge, MA
Curb Extension

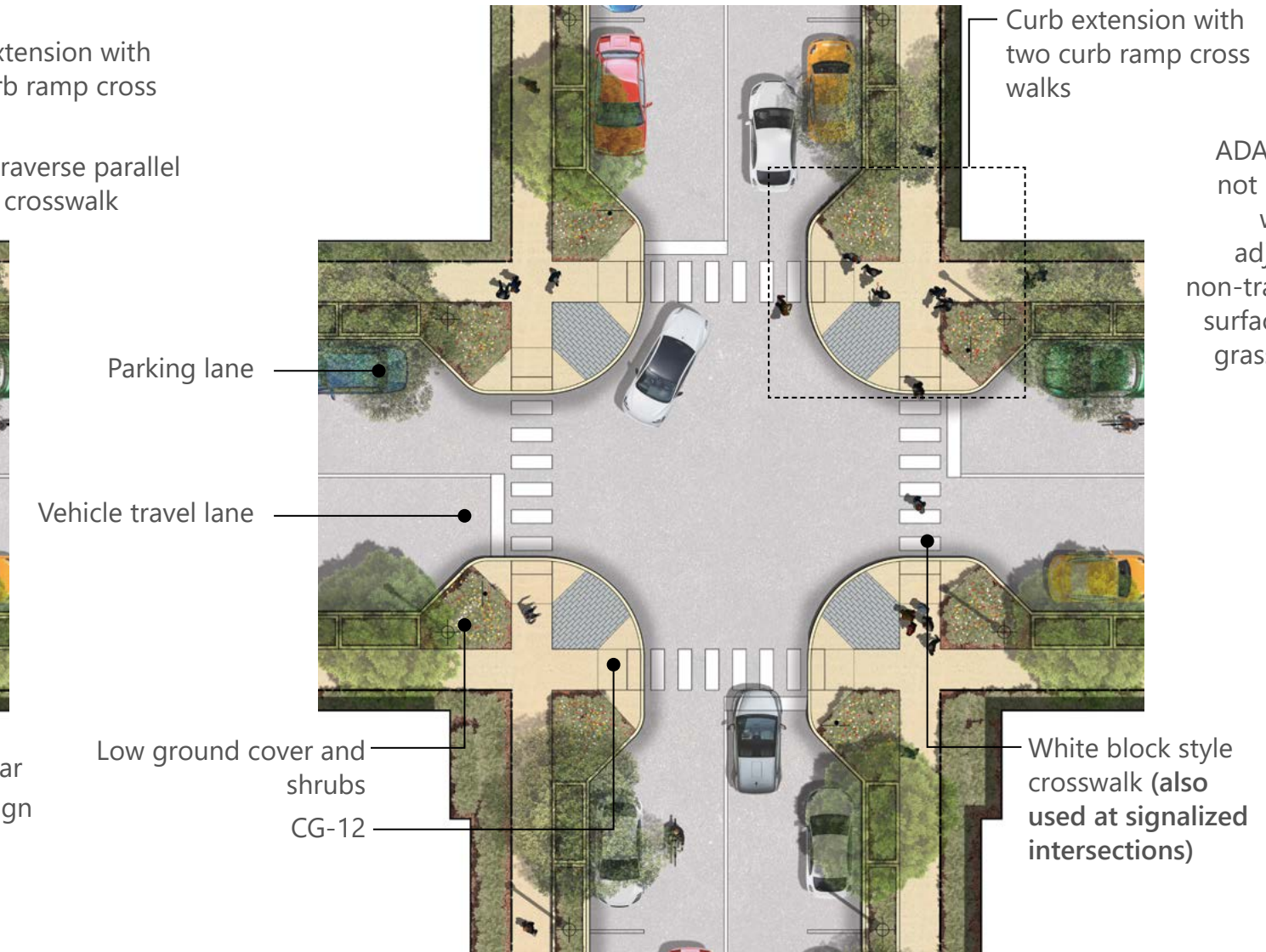


Credit: City of Dover
Roundabout

Conceptual Intersection Plan - Unsignalized Intersection with Curb Extensions



Conceptual Intersection Plan - Festival Street Unsignalized Intersections



ADA ramps do not need wing walls when adjacent to a non-transversible surface, such as grass or mulch



4.6 CURBSIDE MANAGEMENT

Activity along the street generated by adjacent land uses places demands on the curb that require effective curbside management strategies. Limited curb space is increasingly in demand by competing factions. The growing list of curbside activities in the Diamond District may include:

- Long term and short term on-street parking for personal vehicles.
- Parking for emergency vehicles and police
- Passenger pick-up and drop off
- Parking for parcel and food delivery
- Parking for commercial delivery
- Transit stops
- Parking spaces with electric vehicle charging stations
- Parking for vendors and food trucks
- Stormwater management
- Curb cuts for driveways and alleys
- Parklets/curbside dining



Credit: Teltonika

EV Charging Station



Credit: Parking Lot Striping Atlanta

Fire Lane Markings



Credit: Soapbox Cincinnati

Food Trucks



Credit: Tryba Architects

Curbside Dining



Credit: Venture Richmond



Credit: Evanston Now

Curbside Dining

Design Standards

A curbside management plan that corresponds to activities associated with adjacent land uses shall be developed for each block within the Diamond District. A wide variety of curbside management strategies that may be employed include:

- Using the same space for multiple designated curbside activities such as combining passenger pick up and drop off with parcel and food delivery zones, all of which are short term uses.
- Allocating permitted curbside uses by the time of day based on the needs of surrounding land uses.
- Dividing blocks into different zones with each zone accommodating a different curbside activity.
- Placing time limits or fees on certain activities at peak use times.
- Assigning specific spaces for specific activities or restricting the type of activities that are permitted.
- Implementing a curbside reservation system.
- Designating certain curb space for parking by permit only.

The following design standards apply to the Diamond District:

1. Curbside regulations, including permitted and prohibited activities, shall be clearly communicated to users via signage and proper street markings.
2. Emergency vehicle parking shall be located adjacent to the ballpark and shall be marked with signage and special asphalt paint pattern.
3. Fire Lanes shall be marked with signage and red indicator paint on the curb for the extent of the fire lane. Fire Lanes shall be pre-planned so that street parking can be maximized.
4. A high turnover/loading on-street parking spot shall be provided at the end of every block on both sides of the street when street parking is provided. High turnover locations shall be signed as 15-minute parking or rideshare/delivery parking.
5. On-street parking shall be provided on both sides of the street as often as possible.
6. Parking spaces with electric vehicles supply equipment shall be provided throughout the Diamond District. A mix of Level 2 and Level 3 chargers shall be provided throughout the site.
7. Curbside space along the Festival Street shall be designed to accommodate vendors and food trucks during special events. Electrical hook-ups shall be provided at these locations.
8. A school bus drop off area shall be located on the Festival Street or adjacent to the Stadium Plaza.

Well planned public gathering spaces can encourage activity and draw people to the Diamond District year-round. Spaces should offer a wide range of activities and meet a wide range of users needs. Careful consideration shall be given to how each space will be used. The landscape palette, hardscape materials, and site furnishings are the elements that will tie each space together and make it recognizable as being part of the Diamond District. Public gathering spaces include spaces within the right-of-way, the linear park, the stadium plaza, the public Mews, and other areas as designated.

General Design Standards

1. Gathering spaces shall be visually and physically connected to the street network via a network of tree lined sidewalks, shared use paths, and other pedestrian and bicycle circulation routes.
2. A variety of gathering spaces shall be incorporated into the public realm; spaces for active and passive recreation, large and small groups, and people of various ages and abilities. Programmed activity areas as well as flexible use spaces that can be adapted for a variety of uses and activities shall be provided.
3. Public gathering spaces must be compatible with adjacent land uses.
4. Gathering spaces shall contain the appropriate levels of seating, lighting, shade, plantings, and other amenities to make them desirable places in which to spend time.
5. Areas of shade shall be provided throughout public gathering spaces, especially at seating areas. Landscaping or structures may be used to provide shade.
6. Pedestrian scale lighting shall be provided throughout gathering spaces.
7. Large gathering spaces shall have numerous entrances and exits.
8. The pedestrian path of travel shall be a minimum of 8' wide and clearly delineated within a gathering space.
9. Gathering spaces shall be buffered from Street Zone through the use of street trees, landscaping, planters, and bollards. See section 7.8 Bollards & Planters for more information.



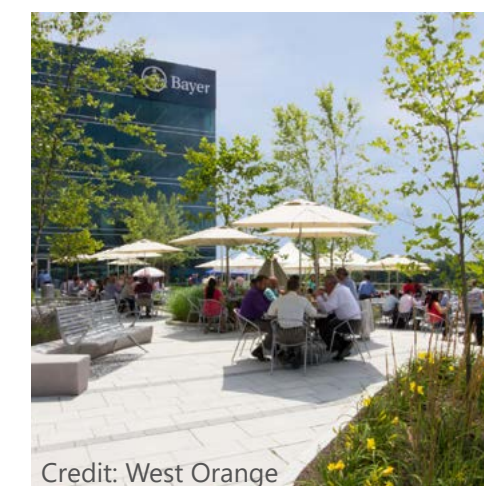
Credit: Federal Realty Investment Trust

Special treatment at street corner



Credit: WRT Design

Gathering space in the buffer zone



Credit: West Orange

Gathering space in the buffer zone

4.7 PUBLIC GATHERING SPACE CONSIDERATIONS

10. Incorporate existing natural features and utilize sustainable design practices to the extent possible.
11. Seating and spaces for vendor kiosks shall be incorporated into the Buffer and Frontage Zones at key locations through the Diamond Site.
12. At least one community garden shall be located within the Diamond District near residential areas.
13. A Public Safety substation shall be located in the public realm, preferably in or near the stadium plaza.
- 14.A 10' wide pedestrian path of travel from the main game day parking garage(s) to the ballpark must be provided.**

Linear Park Design Standards

In addition to the general design standards, the following standards shall apply to the Linear Park:

1. A community garden shall be provided.
2. Restrooms shall be provided within the linear park.
3. A 12' pedestrian path that is centrally located and runs east to west through the park shall be provided. This path shall be designed and constructed to accommodate emergency vehicles in order to access or transverse the park in the event of an emergency. It may also be use as an access point for concert service vehicles, maintenance vehicles, and food trucks within the park.
4. Per the Diamond District development agreement, the Arthur Ashe Jr. Legacy Path shall weave through Diamond District within the linear park from north to south.

Stadium Plaza Design Standards

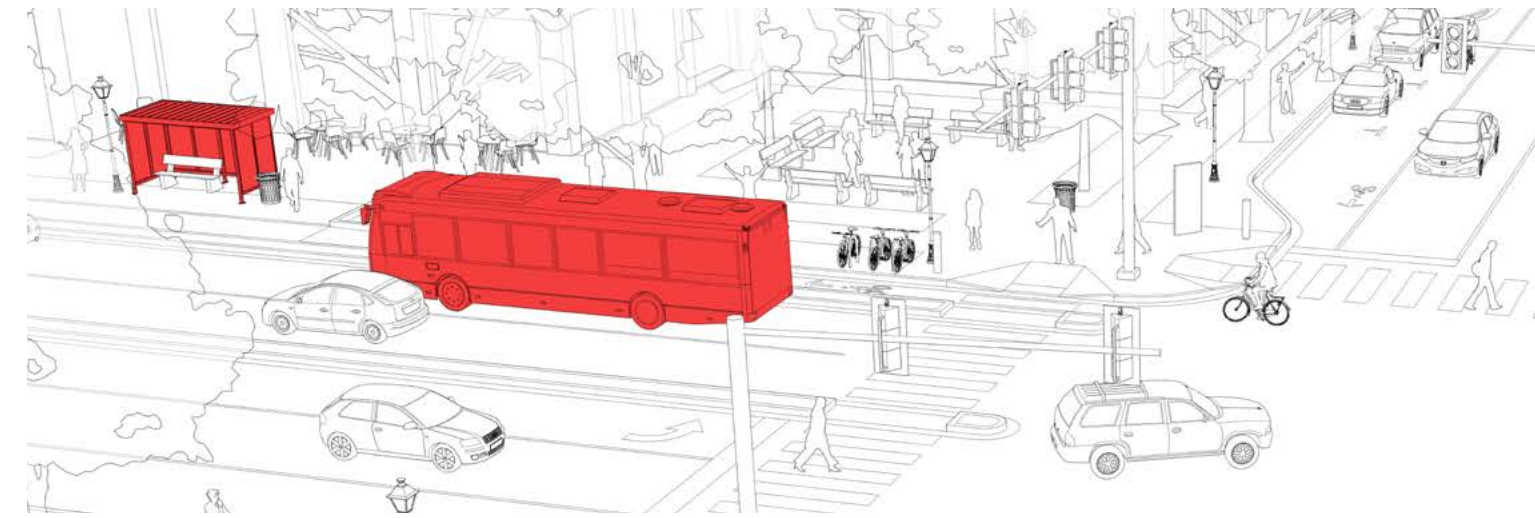
A large pedestrian plaza shall be provided in front of the baseball stadium's main entrance and ticket area. In addition to the general design standards, the following standards shall apply to the plaza:

1. A large bike parking location that provides bike racks to accommodate 200 bikes shall be provided adjacent to the stadium for stadium attendees. To avoid pedestrian/cycling conflicts, bike parking shall not impede accesses to the main gates, but shall be located within a short walking distance. Some covered bike parking shall be provided at this location. See 7.6 Micromobility Amenities.
2. Vehicular access to the stadium plaza shall be limited to emergency vehicles and designated food truck areas.
3. Shaded seating areas shall be provided within the plaza for gathering and meeting prior to a game.
4. A diamond scoring pattern may be used for pedestrian circulation routes within the stadium plaza and shall be coordinated with the paving pattern on the Festival Street.
5. Special landscaping, such as a tree lined path, shall be used to emphasize the entrance to the stadium.
6. A location for public art shall be designated within the stadium plaza. See section 7.10 Public Art.
7. A school bus drop off area shall be located adjacent to the Stadium Plaza or on the Festival Street.

4.8 PUBLIC TRANSIT CONSIDERATIONS

Design Standards

1. New or relocated transit stops shall be determined via a collaborative effort between the Greater Richmond Transit Company (GRTC) and the City's Department of Public Works (DPW) and Department of Planning and Development Review (PDR).
2. Transit stops shall not be located mid-block unless adjacent to a crosswalk with a pedestrian hybrid beacon or raised crosswalk.
3. Transit stops shall be located within curb extensions for any stops on the interior of the Diamond District site. Curb extensions shall not be used along N. Arthur Ashe Boulevard, Hermitage Road, or Robin Hood Road.
4. Areas around transit stops should be well lit to provide greater visibility and safety at night.
5. See section 7.11 Essential Transit Infrastructure for information on transit shelters and other transit infrastructure.



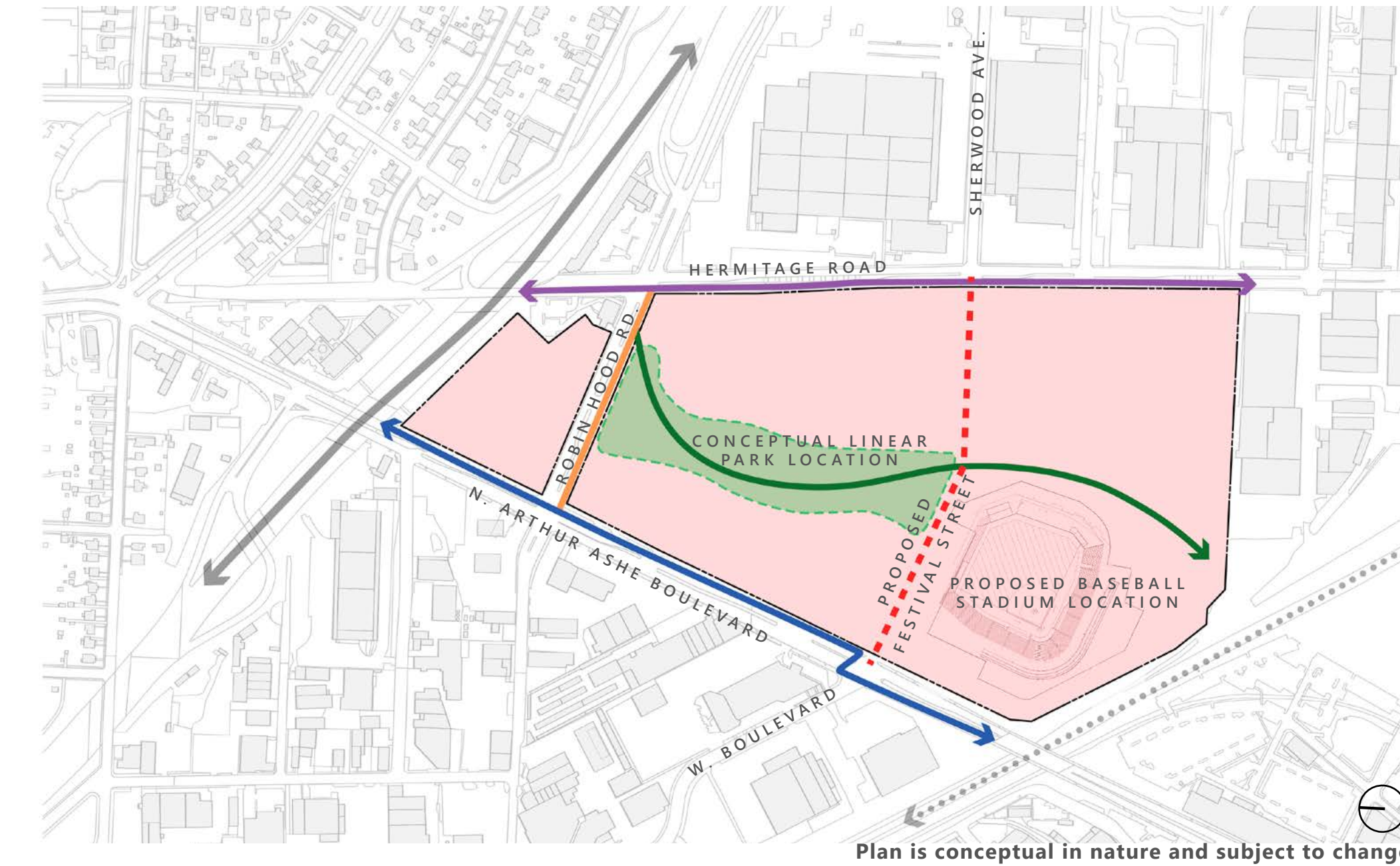
Credit: Mass Transit Mag
Curb Extension At Transit Stop



Credit: Transportation for America
Pulse Transit Stop

4.9 BICYCLE CONSIDERATIONS & CIRCULATION

Conceptual Bicycle Circulation Routes



Plan is conceptual in nature and subject to change.

Bicycle facilities within the Diamond District that connect to the greater city wide bicycle network should be provided along with associated bicycle amenities.

Design Standards

1. The Fall Line Trail shall be located on the west side of Hermitage Road. It shall be a shared use path.
2. Buffered bike lanes shall be provided along N. Arthur Ashe Boulevard.
3. Per the Diamond District development agreement, the Arthur Ashe Jr. Legacy Path shall weave through the linear park from north to south. The path shall be a shared use path.
4. Bicycle lanes, including direction of travel, must be clearly marked with pavement markings and signage. Bicycle lanes through intersections must be made highly visible through the use of pavement marking and signage.
5. Bike crossings shall be signalized.
6. See section 03 Street Network & Streetscape Standards information regarding N. Arthur Ashe Boulevard, Hermitage Road, and Robin Hood Road.
7. See section 7.6 Micromobility Amenities regarding bike storage and other bike related amenities.

- Existing I-95 / I-64
- Fall Line Trail
- Proposed Buffered Bike Lanes
- Arthur Ashe Legacy Path
- Shared Use Path
- Proposed Festival Street
- Existing Railroad

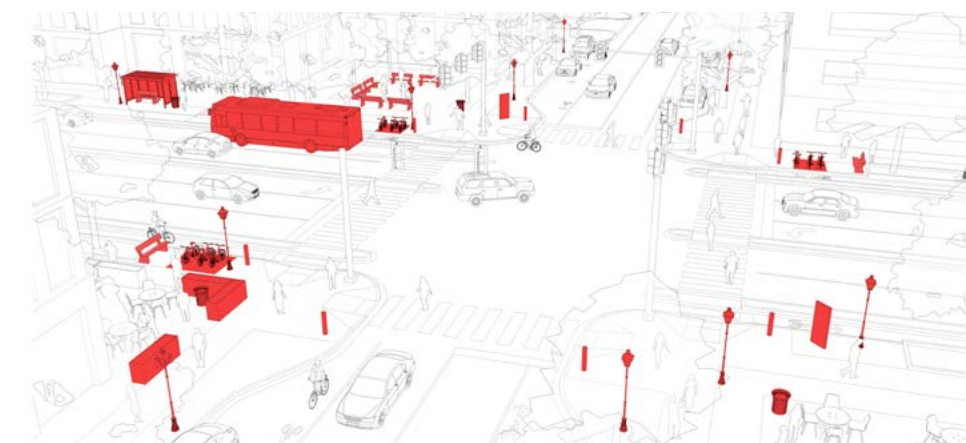
4.10 BRANDING CONSIDERATIONS

The Diamond District will be a special neighborhood destination within the City of Richmond. A recognizable branding campaign linked to a greater strategy of marketing the development shall be undertaken. A recognizable branding theme shall celebrate and promote the aspects of the Diamond District that make it a unique place within the city - particularly the ballpark and the linear park. Successful branding can contribute to making the Diamond District a vibrant and economically successful community by:

- Generating excitement about the Diamond District, thus drawing the attention of potential residents, businesses, and visitors to the District
- Encouraging a sense of belonging and community pride
- Encouraging community collaboration efforts

Design Standards

1. A style guide that includes acceptable fonts and colors shall be developed that communicates the Diamond District vision as a vibrant, inclusive mixed-use community.
1. A logo and slogan for the Diamond District shall be developed that can be consistently applied to elements throughout the public realm.
2. The Diamond District logo shall be applied to banners, benches, wayfinding, and interpretive signage.
3. Gateway features shall be used to market the District and define its edges.
4. Banners shall be placed on all light poles along streets to promote the Diamond District as a whole and to promote special events and festivals within the District.
5. Sidewalk medallions that promote the Diamond District at key locations may be installed.
6. Artwork or murals that celebrate the Diamond District may be installed.
7. See section 7 - Site Furnishings and Amenities for more information on signage, wayfinding, gateways, banners, and public art.



Examples of Community Branding



Credit: AJC



Credit: Proline



Credit: PixaDesign Canada



Credit: The British Ironwork Centre



Credit: Trashcans Unlimited



Credit: Carpenter Realtors, Inc.



Credit: Site Design Group

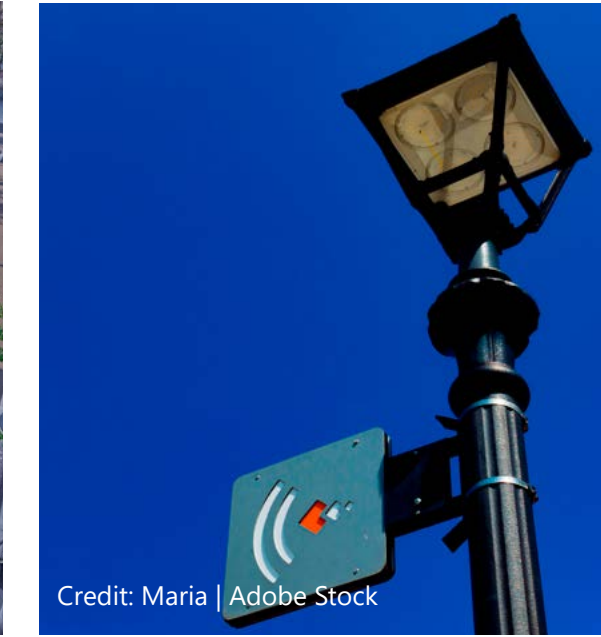


Credit: University of Notre Dame

Examples of Smart City Elements



Credit: Tech Nexion



Credit: Maria | Adobe Stock



Credit: EY



Credit: Xiao Liangge | Adobe Stock



Credit: Bits and Splits | Adobe Stock

Credit: Cities Today



4.11 SMART CITY ELEMENTS

The City of Richmond envisions a future where digital solutions integrate seamlessly into operations, infrastructure, and services, optimizing efficiency, accessibility, and sustainability. By prioritizing community engagement, collaboration, and urban planning, we create a resilient, vibrant city.

The Diamond District is envisioned to be developed as a Smart City innovation hub, which will further advance the City's goals and objectives related to:

- 1) Enhanced Public Engagement and Accessibility
- 2) Efficient Government Operations and Resources Management
- 3) Economic Development and Innovation
- 4) Infrastructure Modernization and Resilience
- 5) Environmental Sustainability and Quality of Life.

As the City further develops its vision and role as a Smart City, the Diamond District development will account for new and emerging technology solutions to meet these goals. Smart City elements shall be prioritized to the extent possible in order to create the City's first-ever Smart District. Immediate technology solutions to be incorporated into the District are:

- Public Wi-Fi
- Charging stations for electronic devices, which may be located in seating throughout the community
- Smart adaptive LED lighting
- Environmental sensors
- Smart parking for daily use and event use
- API to link together various smart technology solutions
- Street cleaning, landscaping, and maintenance services
- Traffic management
- Wayfinding/messaging



Credit: F11Photo | Adobe Stock

5.1 CHAPTER INTRODUCTION

Paving materials and patterns in the Diamond District should be used to define spaces within the public realm, add beauty and texture, draw attention to special features, and provide visual cues to help pedestrian, bicycle, and vehicular traffic safely navigate the Diamond District. It is important that materials and patterns are well coordinated throughout for a cohesive, comfortable environment. The use of too many paving materials or patterns can be distracting or unsettling, detracting from the outdoor spaces by competing with other elements of the public realm. Too few materials and patterns, and the hardscape becomes a bland background that doesn't serve the aforementioned purposes. Paving should serve as a neutral surface with simple patterns and clean lines to help highlight and enhance other aspects of the public realm including the landscape, amenities, and site furnishings. Paving selections may vary from street to street provided that there is a seamless transition between streets. Paving in the public realm shall be selected based on durability and performance, maintenance requirements, cost, aesthetics, compatibility with adjacent materials and landscaping, and environmental considerations.

5.2 THE SIDEWALK ZONE

The Sidewalk Zone consists of the Frontage Zone, the Pedestrian Travel Zone, and the Buffer Zone. Each Zone serves a different purpose. The Frontage Zone serves as a buffer between pedestrians in the Pedestrian Travel Zone of the sidewalk and activities associated with adjacent buildings, including opening doors, storefront seating, and outdoor dining. The Pedestrian Travel Zone is reserved for active pedestrian use, and in some cases bicycle use, and must be free of all impediments. The Buffer Zone provides a safe separation between pedestrians in the Pedestrian Zone and vehicles in the Street Zone. Paving shall be used to differentiate each zone of the sidewalk. See also section 3: Street Network and Streetscape Standards.

General Design Standards

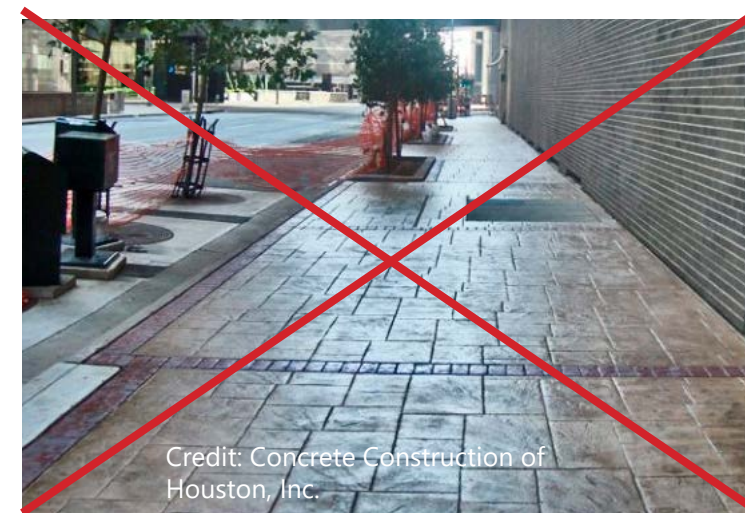
1. Poured concrete shall be natural in color. Dyed or stained concrete is not permitted.
2. Stamped concrete is not permitted.
3. All joints in poured concrete shall have a tooled edge. Decorative joints in poured concrete shall be hand tooled.
4. Poured concrete shall have a broom finish perpendicular to the direction of travel.
5. Concrete pavers shall be natural color or gray tones.
6. Pavers shall be square edge pavers with hand tight joints.
7. Paving shall have a slip resistant surface.
8. Changes in materials and scoring or paving patterns shall be used to differentiate the Frontage Zone, the Pedestrian Travel Zone, and the Buffer Zone. Where more than one mode of mobility exists in the Pedestrian Travel Zone (ie pedestrians and bikes), scoring shall be used to differentiate between modes. Materials and patterns shall be complimentary to each other to create a cohesive environment.



Credit: VHB
Scoring pattern differentiates the Buffer and Pedestrian Travel Zones



Credit: Realokie Concrete
Diamond scoring pattern



Credit: Concrete Construction of Houston, Inc.
Dyed and/or stamped concrete is not permitted.



Credit: Annandale Today
Materials and paving patterns differentiate the Buffer and Pedestrian Travel Zones

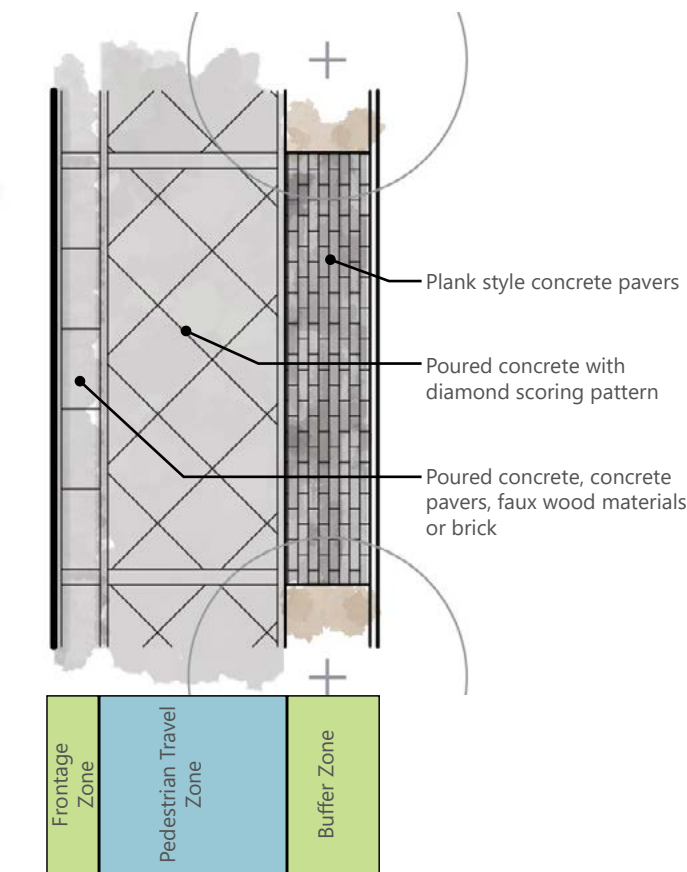


Credit: Metten Design
Plank style pavers

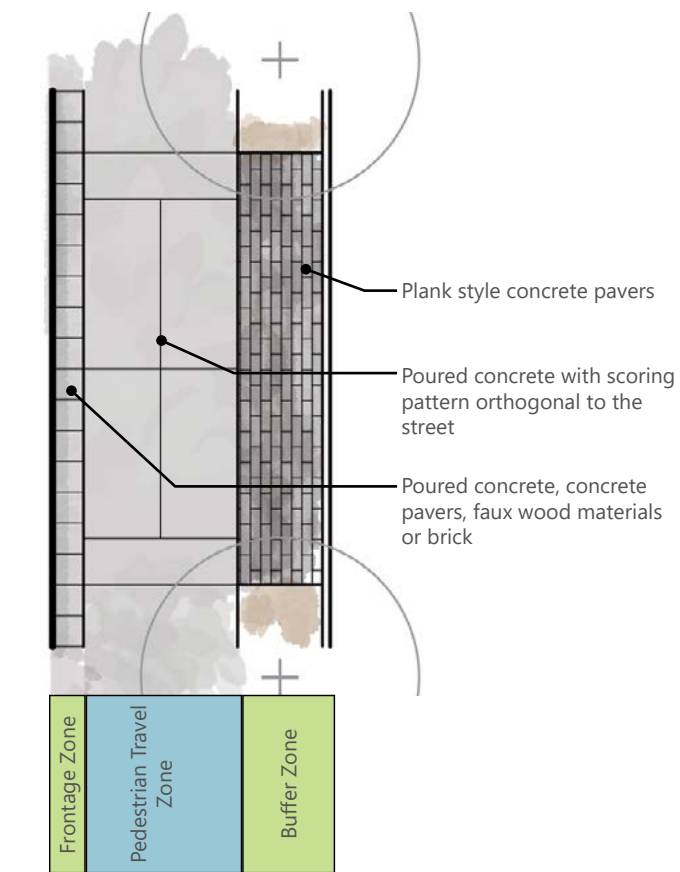


Credit: Tenax USA
There is no differentiation between sidewalk zones.

Conceptual Paving Pattern - Festival Street



Conceptual Paving Pattern - Typical Street



Frontage Zone Design Standards

1. Poured concrete, concrete pavers, faux wood materials or brick may be used in the Frontage Zone. Frontage zone materials shall not be pervious to ensure structural integrity of building foundations.
2. Paving materials and patterns in the Frontage Zone shall be coordinated with the hardscape within the setback to create a seamless transition.

Pedestrian Travel Zone Design Standards

1. Paving in the Pedestrian Travel Zone shall be poured concrete with a consistent scoring pattern no tighter than 3' x 3'. An occasional strip of concrete or concrete pavers with a varied scoring pattern tighter than 3' x 3' may bisect the Pedestrian Travel Zone to emphasize a significant feature, such as an important buildings entrance or open space.
2. Scoring or paving patterns shall be looser in the Pedestrian Travel Zone than in the Frontage or Buffer Zones so as to clearly delineate the pedestrian realm.
3. A diamond scoring pattern shall be used in Pedestrian Travel Zone of the Festival Street. A scoring pattern that is orthogonal to the street shall be used on all other streets.
4. Paving shall continue across driveway aprons and service entry drives that cross the Pedestrian Travel Zone to maintain a consistent streetscape material for the length of the sidewalk. A distinguishing band of material or change in scoring pattern shall clearly highlight the edge of the drive, visually marking the transition from the sidewalk to the driveway crossing.

Buffer Zone Design Standards

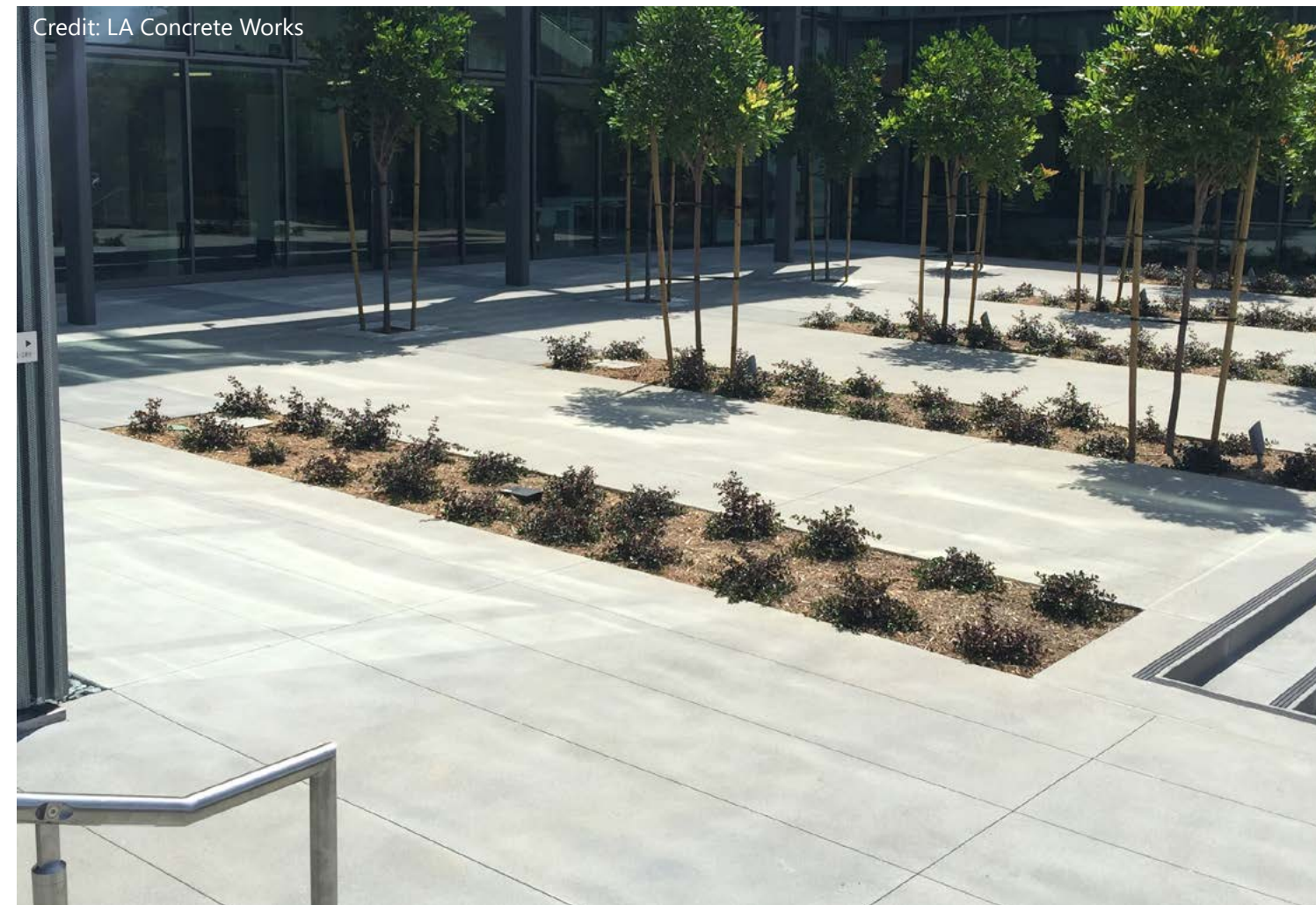
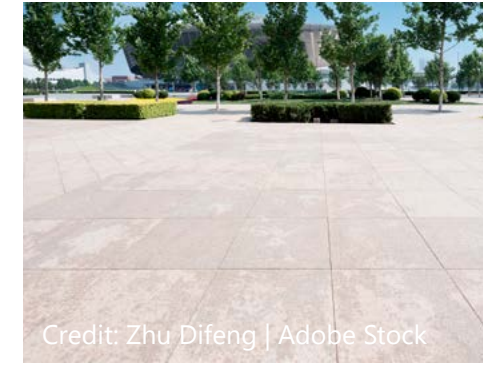
1. Paving materials in the Buffer Zone shall be poured concrete or concrete pavers.
2. Plank style pavers shall be used.
3. The use of permeable paving systems shall be used in used in the Buffer Zone as often as possible. Selected permeable pavers must be able to receive winter treatment.
4. Permeable pavers shall be spaced as far apart as possible while still conforming to ADA requirements.
5. Balance paving selection and construction with the installation needs of street trees and landscaping to allow for trees to flourish and hardscape to remain in good condition.
6. Special paving treatment at significant street corners, such as a special paving pattern, is encouraged.

5.3 PUBLIC GATHERING SPACES

Paving can be used to define these spaces, much as it is used to differentiate the three different Sidewalk Zones. Public gathering spaces shall include spaces within the sidewalk zone of right-of-way, the linear park, the stadium plaza, the public mews, and other areas as designated.

Design Standards

1. The use of permeable paving systems shall be used in public gathering spaces as often as possible. Pavers shall be spaced as far apart as possible while still conforming to ADA requirements.
2. Pedestrian circulation routes must be at least 8' wide through public gathering spaces, unless otherwise designated. They shall be poured concrete or concrete pavers with a consistent scoring pattern no tighter than 3'x3'. An occasional strip of concrete or concrete pavers with a varied scoring pattern tighter than 3' x 3' may bisect the pedestrian circulation routes to emphasis a significant feature, such as a building entrance or a fountain or to differentiate the gathering space where it meets the Sidewalk Zone.
3. Paving materials used outside of pedestrian circulation routes shall be poured concrete or concrete pavers.
4. Poured concrete shall be natural in color. Dyed or stained poured concrete is not permitted.
5. Stamped concrete is not permitted.
6. Poured concrete used in pedestrian circulation routes should have a broom finish perpendicular to the direction of travel.
7. All joints in poured concrete shall have a tooled edge. Decorative joints in poured concrete should be hand tooled.
8. Concrete pavers shall be natural color or gray tones.
9. Paving patterns should be well thought out and designed to draw attention to significant features, such as an important buildings entrance, public art, or a fountain. Variations in hardscape along with landscaping should be used to differentiate "rooms" within a gathering space or outdoor seating areas. Paving materials and patterns shall be complimentary to each other to create a cohesive environment. Landscaping should be used to break up and soften large expanses of paving in public gathering spaces.
10. Paving shall have a slip resistant surface.
11. Selected permeable pavers must be able to receive winter treatment.
12. Pavers shall be square edge pavers with hand tight joints. Permeable pavers shall be spaced as far apart as possible while still conforming to ADA requirements.
13. Balance paving selection and construction with the installation needs of trees and other landscaping to allow for trees to flourish and hardscape to remain in good condition.



5.4 BUFFERED BIKE LANES & SHARED USE PATHS

Design Standards

1. Bike lanes and shared use paths located within the Sidewalk Zone shall be poured concrete. Asphalt is not permitted.
2. Permeable pavers shall be used for bike paths and shared use paths that are located in an independent right-of-way or easement separate from the Sidewalk Zone. Where possible, surfaces or landscaping adjacent to shared use paths should be pet friendly. Additional surface materials may be used with approval if wetlands or fragile eco-systems are present.
3. Bike lanes and shared use paths shall be clearly marked with lane stripping and arrows to show the direction of travel and to differentiate between pedestrian and bike circulation.
4. Crosswalks where bike lanes or shared use paths intersect with vehicular traffic shall be properly marked.
5. The use of porous asphalt is not permitted.



Poured concrete buffered bike lane



Poured concrete bike path



Permeable pavers in parking lane



Permeable pavers in parking lane



Porous asphalt is not permitted

5.5 THE STREET ZONE

The Street Zone is located within the right-of-way between the two opposite curbs. The Street Zone consists of the Parking Lane and the Travel Lane. The Street Zone is for vehicle and bicycle travel, parking, and other curbside activities.

Design Standards

1. Vehicular Travel Lanes shall be asphalt.
2. A permeable concrete paving system may be used with City approval for Parking Lanes in the Street Zone and in alleys. Selected permeable pavers must be able to receive winter treatment. Concrete pavers shall be natural color or gray tones.
3. Pavers shall be square edge pavers with hand tight joints. Permeable pavers shall be spaced as far apart as possible while still conforming to ADA requirements.
4. Bike lanes located in the Street Zone shall be asphalt. Bike lanes should be properly marked with directional signage and to differentiate them from vehicular travel lanes. Asphalt paving may be painted solid green or with green stripes to draw attention to bike lanes at areas where bike and vehicular traffic may conflict such as intersections.
5. The use of porous asphalt is not permitted.
6. Grass block or turf block pavers are not permitted.
7. See section 4.5 Intersections & Crosswalks for information regarding materials in crosswalks.
8. See section 3.6 Festival Street for information regarding the treatment of the Street Zone in the Festival Street.
9. Any coatings applied to asphalt, such as lane markings and street murals, shall have a reflective coating.



Credit: F11Photo | Adobe Stock

6.1 CHAPTER INTRODUCTION

A well designed urban landscape should define outdoor spaces, soften the public realm, and positively effect the environment, wellbeing, and safety. A landscape that changes with the seasons will add beauty and visual interest year round. Lush landscaping will provide people with a connection to nature which promotes relaxation and lowers stress. It should also bring the scale of a place to the pedestrian level and add value to adjacent properties. Trees and plants in an urban setting reduce storm water runoff, improve air quality, provide habitats for animals, and reduce the heat island effect. Landscaping should provide shade and act as a buffer from traffic, making a street feel more comfortable thus encouraging people to walk and gather outdoors rather than drive. Choosing the right plant palette, proper installation and soil volume, and on-going maintenance are all critical components for achieving the benefits of the landscaped environment within the Diamond District.

6.2 STREET TREES

The inclusion of consistently spaced street trees on both sides of the street are a priority for all streets within the Diamond District. They provide shade and beauty and act as a natural buffer between pedestrians in the Pedestrian Travel Zone and vehicular traffic in the Street Zone. Street trees also reduce the negative effects of urban heat islands. Street trees placed within the Buffer Zone and along pedestrian walkways in public gathering spaces help define the Pedestrian Travel Zones, providing a feeling of safety and comfort. Street trees can also have a traffic calming effect by slowing driving speeds and creating a visual wall that helps keep drivers on the road.

Design Standards

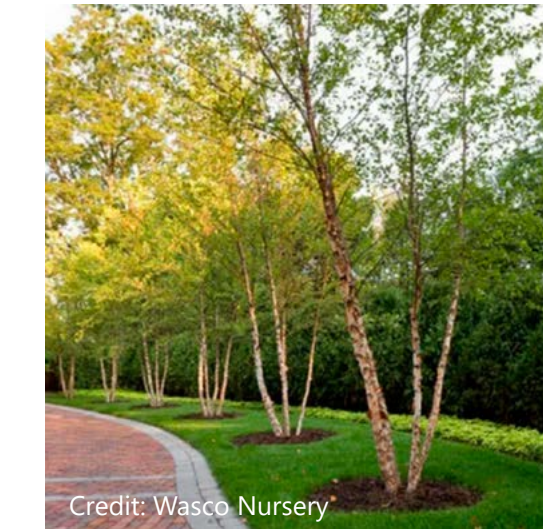
1. Street Trees shall be consistently spaced along the street within the Buffer Zone. The location of utilities shall be secondary to tree placement. When large street trees are used, they shall be spaced a minimum of 40-45 feet apart. Medium street trees shall be spaced 30-35 feet apart, and small street trees shall be spaced a minimum of 25 feet from each other. Adjustments in spacing is expected to accommodate for certain conditions such as drop inlets, underground utilities, pedestrian lights, signage, and driveway entrances/curb cuts, etc. Locations may have to be adjusted to provide adequate building access for fire trucks. Trees should not be planted within 25 feet of an intersection or 15 feet of a curb cut.



2. Street trees shall be appropriate for the street conditions they are placed within. When choosing a street tree, consider the adjacent land uses, the scale of adjacent buildings, the street width, the sidewalk width, available sunlight, the direction of the sun and shadows that will be cast, and the surrounding landscape, as well as the ultimate height, form, growing needs of the tree, and available soil volume.
3. When tree wells are used, street trees shall be centered in tree wells. When possible, street trees shall be at least 3 feet from the back of curb. Individual tree wells shall be a minimum of 6' x 10'. The use of tree grates over tree wells is prohibited.
4. Raised curbs around tree wells and planting strips are prohibited.
5. Tree wells and planting strips shall extend to the back of curb.
6. Use two different species of street trees that are of similar texture and form when planting along a single block face of a street. This is to create consistency and to maximize visual impact and prevent entire streetscapes of mono-cultures, which are more susceptible to impact from pests and diseases. A third street tree species may be used to highlight intersections or where circumstances may prohibit the use of the primary species (i.e. overhead utilities). Street tree species may vary by block.
7. Coordinate alignment between trees on both sides of the street and maintain that alignment as much as possible.
8. Street trees shall be chosen from the Street Tree Palette provided. Final plant selection must be approved by the City of Richmond.
9. Street trees must be drought tolerant, and wet foot tolerant. All plants listed on the Virginia Department of Conservation and Recreation Invasive Plant Species are prohibited.
10. Tree well surface shall be permeable and covered with mulch. If adequate soil volume is available and City approval is given, street trees may be combined with low level plantings such as hardy ground cover or grasses to help to soften the streetscape. Pea gravel is not permitted under street trees.
11. Street trees shall be planted along pedestrian circulation routes in public gathering spaces to the maximum extent practicable.
12. Choose smaller street trees from the plant palette where overhead utilities are present to prevent trees from impacting the utilities.

Street Tree Palette

- *Betula nigra* (River Birch)
- *Fagus grandifolia* (Beech)
- *Ginkgo biloba* (Ginkgo)
- *Ilex opaca* (American Holly)
- *Liquidambar styraciflua* 'Rotundiloba' (Fruitless Sweetgum)
- *Magnolia virginiana* (Sweetbay Magnolia)
- *Nyssa sylvatica* (Tupelo)
- *Parrotia persica* (Persian Ironwood)
- *Platanus acerifolia* (London Planetree)
- *Oak* (all species)
- *Tilia americana* (American Linden)
- *Tilia cordata* (Littleleaf Linden)
- *Ulmus americanus* (American Elm)
- *Ulmus parvifolia* (Lacebark Elm)



Credit: Wasco Nursery
River Birch



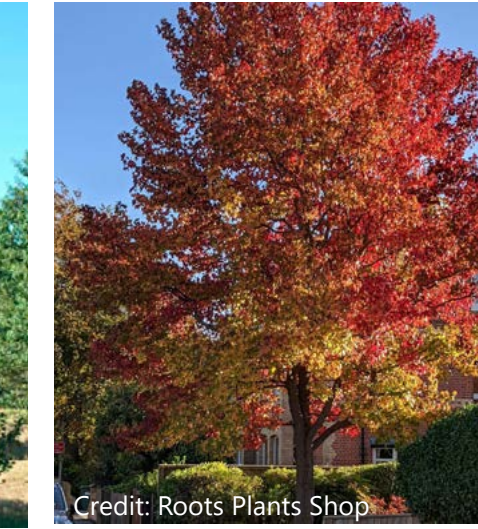
Credit: NC State University
Beech



Credit: University of Liege
Ginkgo



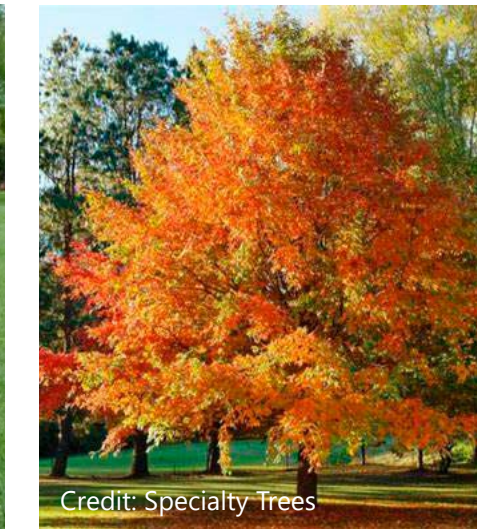
Credit: Halka Nurseries
American Holly



Credit: Roots Plants Shop
Fruitless Sweetgum



Credit: Missouri Botanical Garden
Sweetbay Magnolia



Credit: Specialty Trees
Tupelo Tree



Credit: Dave's Garden
Persian Ironwood



Credit: Hoss Tree Farm
London Planetree



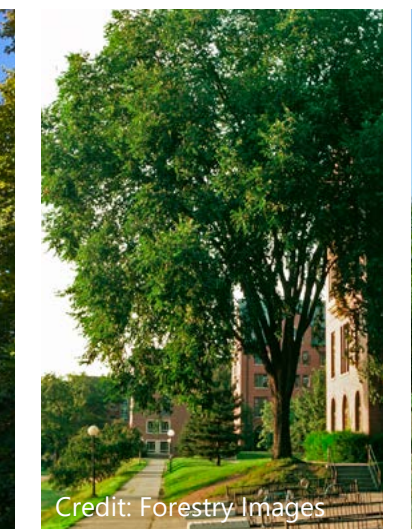
Credit: The Tree Center
Oak Tree



Credit: Nature Hills Nursery
American Linden



Credit: Udoba
Littleleaf Linden



Credit: Forestry Images
American Elm



Credit: Select Trees
Lacebark Elm



Credit: Seattle Gov
Low level plantings under street trees

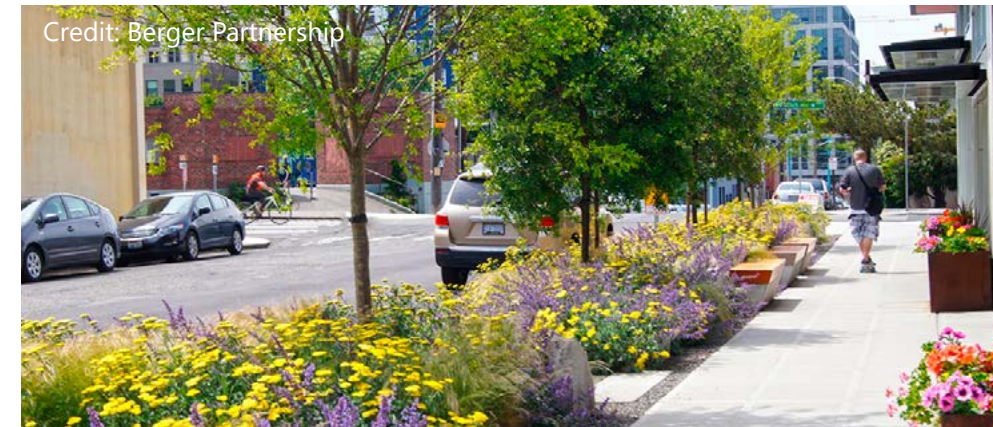
6.3 OTHER TREES & PLANTS

Besides street trees, additional landscaping in the Diamond District should be used to further enhance the street environment and define spaces or “rooms” within the public realm as places for gathering, playing, or just relaxing. Trees and plants should be used to provide shady areas of respite. Planted areas shall contain a diverse mix of plant species to add color and visual interest year round. Landscaping shall also be used to frame points of interest along the streetscape, and call attention to building entrances. A hierarchy of trees and plants should be used in planting beds to provide texture and dimension, including deciduous trees, evergreen trees, shrubs, perennials and ground cover.

Design Strategies

- Where space allows, landscaping in the Frontage Zone is encouraged whether in raised planters or planting beds. Trees and plants shall be used to identify building entrances, provide shade for outdoor dining, and further define the Pedestrian Travel Zone.
- In addition to street trees, shrubs, perennials, and ground cover may be used in the Buffer Zone to further delineate the Pedestrian Travel Zone, add beauty to the street, and define gathering spaces where their is sufficient space.
- Trees, shrubs, perennials, and ground cover shall be grouped together in well composed planting beds rather than in individual, scattered locations. Landscaping shall include a diverse palette of plant species.
- Planting palettes shall be developed that provide year round beauty and visual interest. The plant palette shall be appropriate for the growing conditions of the space (i.e. shade/full sun, drought tolerant, etc). Priority shall be given to native and pollinator friendly species. Multiple palettes shall be developed, to allow for a variety of case conditions and high diversity of species used.
- Similar yet alternating palettes of tree and plant species shall be planted along the length of a block for consistency and to maximize visual impact. Avoid entire streetscapes of mono-cultures, which would be more susceptible to impact from pests and diseases.
- Trees and plants shall be appropriate for the street conditions they are placed within. When choosing a plant palette, consider the adjacent land uses, the scale of adjacent buildings, the street width, the sidewalk width, available sunlight, the direction of the sun and shadows cast, and the surrounding landscape, a well as the ultimate height, form, and growing needs of the selected trees and plants.
- Trees and plants shall be chosen from the Plant Palettes provided. Final plant selection must be approved by the City of Richmond.

- Trees and plants must be drought tolerant, and wet foot tolerant. All plants listed on the Virginia Department of Conservation and Recreation Invasive Plant Species are prohibited.
- Plant materials shall be adaptable to existing soils, climatic and lighting conditions, and be disease resistant.
- Edible landscaping may be used near residential uses.
- Large and medium evergreen trees may be used for screening or as a consistent background with deciduous trees and plants planted in the foreground. See section 7.9 Screen & Fencing for further information.
- Trees selected from the Tree Palette provided shall be used instead of street trees in medians and roundabouts when appropriate. Final plant selection must be approved by the City of Richmond.
- Large areas of mulch without plant material are prohibited.
- Landscaping placed within site triangles at intersections must not exceed 12 inches in height.
- The use of edible landscaping may be used where appropriate.
- Landscaping shall allow for surveillance and policing activities. Avoid using high hedges and landscaping that block visibility.



Tree Palette (not street trees)

- Carpinus betulus (European Hornbeam)
- Carpinus caroliniana (American Hornbeam)
- Cercis canadensis (Eastern Redbud)
- Chionanthus virginicus (White Fringetree)
- Cornus kousa (Kousa Dogwood)
- Crataegus (Hawthorne)
- Halesia caroliniana (Carolina Silverbell)
- Magnolia accuminata (Cucumber Tree)
- Magnolia grandiflora (Southern Magnolia)
- Magnolia x soulangeana (Sweetbay Magnolia)
- Prunus serrulata / Prunus yedoensis (Ornamental Cherry)

Shrubs Palette

- Callicarpa americana (American beauty berry)
- Ceanothus americanus (new Jersey tea)
- Cornus sericea (Red twig dogwood)
- Euonymus americanus (heart’s-a-bustin’)
- Ilex glabra (inkberry)
- Ilex vomitoria (yaupon)
- Itea virginiana (Virginia sweetspire)
- Juniperus horizontalis (creeping juniper)
- Morella cerifera (Wax Myrtle)
- Viburnum acerfolium (maple-leaved viburnum)
- Viburnum dentatum (Arrow-wood Viburnum)
- Viburnum prunifolium (Black Haw Viburnum)

Forbs Palette

- Achillea millefolium (yarrow)
- Agastache rugosa (Butterfly mint)
- Amsonia illustris (Ozark bluster)
- Asclepias syriaca (common milkweed)
- Asclepias tuberosa (butterfly weed)
- Aquilegia canadensis (columbine)
- Baptisia australis (false indigo)
- Coreopsis tinctoria (plains coreopsis)
- Coreopsis verticillata (threadleaf coreopsis)
- Conoclinium coelestinum (blue mistflower)
- Eutrochium fistulosum (hollow Joe-pye weed)
- Heliopsis helianthoides (smooth Oxeye)
- Heuchera (coral bells)
- Hypericum prolificum (St John’s-wort)
- Liatris pilosa (gayfeather blazing star)
- Liatris spicata (dense blazing star)
- Monarda fistulosa (wild bergamot)
- Phlox divaricate (woodland phlox)
- Pycnanthemum muticum (clustered mountain mint)
- Pycnanthemum tenuifolium (narrow-leaf mountain mint)
- Rudbeckia fulgida (orange coneflower)
- Rudbeckia hirta (black-eyed susan)
- Salvia lyrata (lyre-leaf sage)
- Symphotrichum novae-angliae (New England Aster)
- Symphotrichum novi-belgii (New York Aster)
- Verbena hastata (Blue Vervain)
- Vernonia noveboracensis (New York Ironweed)
- Waldsteinia fragarioides (barren strawberry)
- Yucca filamentosa (common yucca)
- Zizia aurea (golden Alexanders)

Vines Palette

- Gelsemium sempervirens (Carolina jessamine)
- Lonicera sempervirens (coral honeysuckle)

Ferns Palette

- Dryopteris marginalis (marginal wood fern)
- Polystichum acrostichoides (Christmas Fern)

Grasses Palette

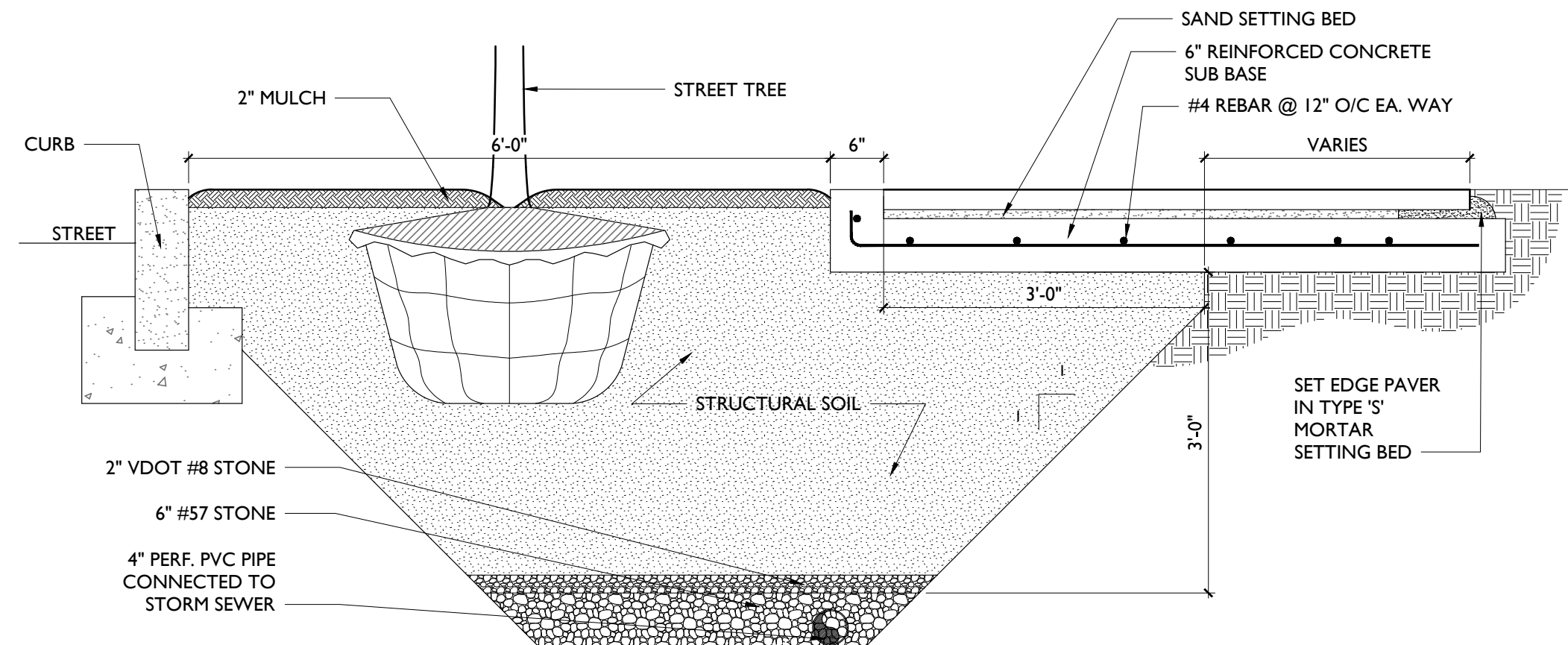
- Andropogon ternarius (splitbead bluestem)
- Eragrostis spectabilis (purple love grass)
- Panicum virgatum (switchgrass)
- Muhlenbergia capillaris (muhly grass)
- Schizachyrium scoparium (little bluestem)
- Chasmanthium latifolium (river oats)

6.4 PLANTING & INSTALLATION DETAILS

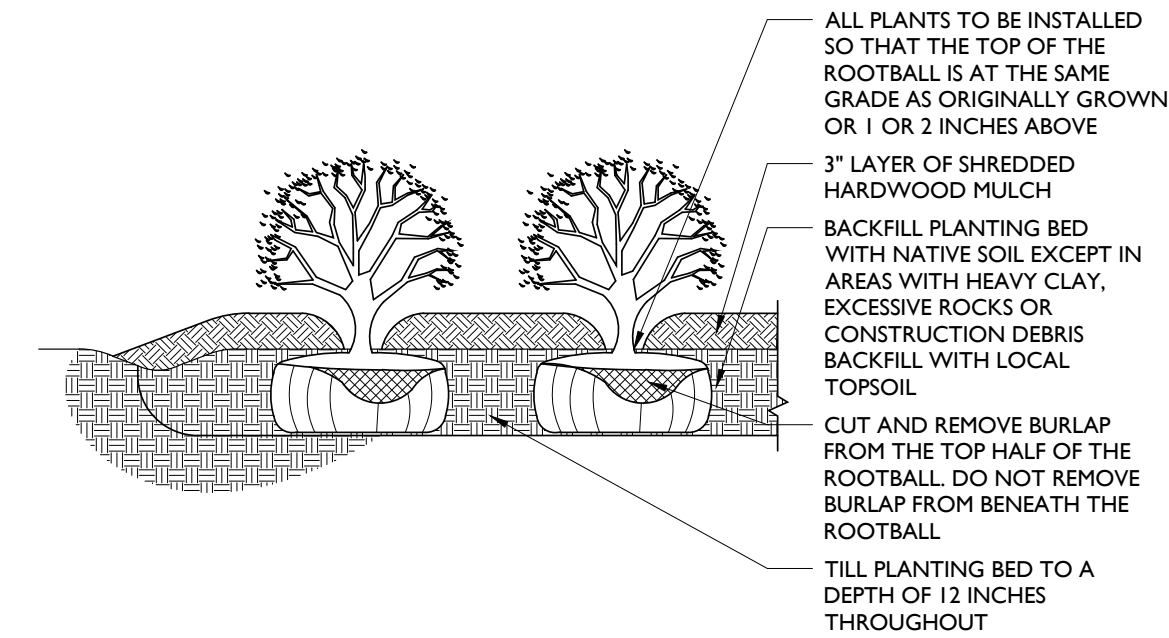
Design Standards

1. Soil volumes for tree wells should range from a minimum of 45 cubic feet (CF) for smaller trees with a required 3' depth, to a minimum of 180 CF for larger trees.
2. A continuous tree trench should be used whenever possible to provide the most CF of soil, with a required 3' depth and minimum width of 6'
3. Tree wells shall be at least 6' x 10' unless otherwise noted.
4. Cantilevered (suspended) pavement system or a structural soil cell systems shall be used for all tree wells.
5. Tree wells should be fully excavated and backfilled with clean, debris free soil to ensure maximum tree viability.
6. The design of new tree wells shall incorporate stormwater BMP infrastructure, such as bioretention basins, bioswales, curb cuts, etc.
7. Hard ground cover such as gravel or pavers is not permitted in tree wells.
8. Street trees shall be 2 1/2" caliper at the time of planting.
9. Structural soils shall be used when trees are surrounded by hardscape.
10. Planting beds shall be mulched with a 2 or 3-inch layer of brown shredded bark except where shrub and ground cover plants provide a solid mass.
11. Automatic drip irrigation shall be provided whenever possible, particularly when ideal planting conditions cannot be met. A drip ring design is preferable over a flood bubbler design to reduce risk of root disease issues. All irrigation systems shall be commercial grade equipment and piping. Systems shall be provided with soil moisture sensors and rain check gauges to prevent unnecessary water use. Backflow preventers and controllers shall be screened from public view. All irrigation systems shall have controllers which automatically turn the system on and off. All irrigation systems shall be installed by qualified irrigation contractors. Zones shall be provided that account for the varying water needs of different plant types, species, and lawn areas.

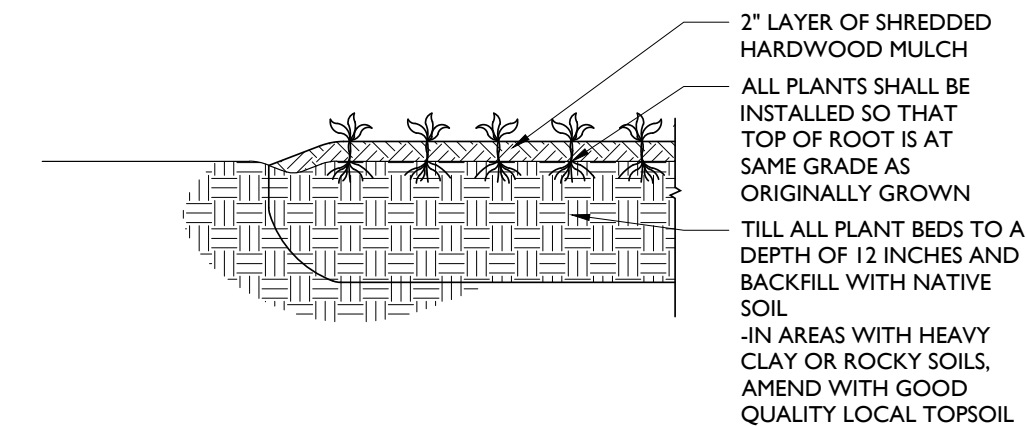
Cantilevered Tree Well System



Shrub Planting Detail



Ground Cover Planting Detail



Structural Soil Cell System



6.5 TURF GRASS LAWN AREAS

Turf lawns can provide wide open spaces for play, relaxation, people watching, sports, and gathering for a picnic. Turf lawns may be found in limited instances within the public realm of the Diamond District.

Design Standards

1. The use of turf grass shall be limited to larger, contiguous areas meant for recreation. Turf grass is not permitted in the Sidewalk Zone or medians.
2. Structural soils shall be used for all turf grass areas.
3. Turf grass lawns shall be cool season varieties such as Tall Fescue, Kentucky Bluegrass, or a blend. The use of warm season grasses for lawn areas is discouraged.
4. Where turf grass is used, it is required to be sod.
5. Turf grass shall be irrigated.
6. The use of synthetic turf may be permitted with City approval in specific limited instances such as play areas. Synthetic turf should be green.
7. Turf grass lawns shall be broken up by pedestrian and bicycle paths and areas of landscaping to provide access to the lawn, occasional shade, frame views and add color and visual interest.

6.6 MAINTENANCE

Proper maintenance of all landscaped areas is critical for ensuring healthy tree and plant growth and for achieving the benefits the landscaped environment will bring to the Diamond District.

Design Standards

1. A maintenance plan that specifies the entity responsible for upkeep shall be provided with all street trees plantings and landscaping.
2. All tree pruning shall be conducted under the supervision of a certified arborist.
3. Hazardous, dead, or dying trees shall be removed and replaced.
4. Trees shall be trimmed to maintain a vertical clearance of 14-feet where they extend over a roadway and 80 inches where they extend over sidewalks.
5. Trees and shrubs shall be trimmed to maintain a 10' overhead clearance where they extend over bike paths.
6. Trees shall be pruned to maintain a 6-foot clearance from any street light.
7. Trees shall be pruned to maintain a 2-foot clearance from any building facade and building signage.
8. Re-mulch as needed to maintain the appropriate layer of brown shredded bark mulch in mulch beds.
9. Turf grass lawns shall be mowed on a regular basis so as not to exceed 3-inches in height.
10. Turf grass lawns shall be aerated and seeded every fall.
11. Irrigation systems shall be maintained in proper working order.
12. If a maintenance plan includes pest and weed control, only organic, chemical-free treatments shall be utilized.
13. De-icing can negatively effect tree health. De-icing methods that have the least impact on tree growth shall be used.

7 | SITE FURNISHINGS & AMENITIES



7.1 INTRODUCTION

The integration of site furnishings and amenities plays a pivotal role in enhancing the functionality, aesthetics, and overall user experience of the public realm. These elements, which range from benches, waste receptacles, and lighting fixtures to bicycle racks, planters, and informational kiosks, are fundamental components that contribute to the livability and appeal of urban environments. Site furnishings can transform the public realm into vibrant, welcoming outdoor rooms that encourage community interaction, promote sustainability, and reflect the unique character of the Diamond District.

7.2 GENERAL DESIGN STANDARDS

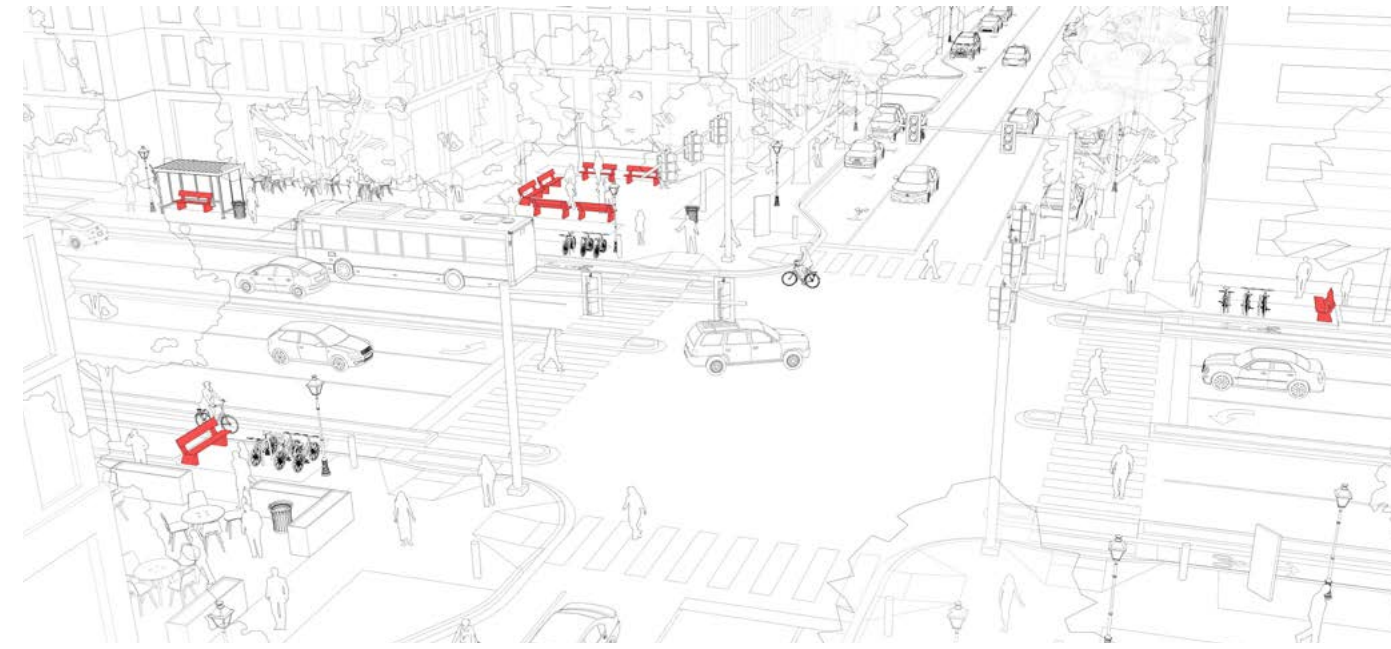
1. Site furnishings shall be located where people congregate, such as at bus stops, along mixed use streets, in front of major attractions such as the ballpark, and in public gathering spaces and recreation areas.
2. The placement of site furnishings should not create visual clutter in the public realm. Furnishings may be grouped together, where appropriate.
3. Site furnishings shall be appropriately styled and scaled to complement building architecture and to reinforce the character of the public realm.
4. Site furnishings may also be integrated into a site design as part of the proposed architecture, such as walls and steps used as seating.
5. Unless otherwise specified, furnishings shall be metal, wood, or resin, appropriate for outdoor use.
6. All exposed metals shall be coated or otherwise treated to withstand oxidation/corrosion, abrasion, and damage from airborne salts.
7. Wood shall be Forest Stewardship Council (FSC) certified. The use of wood from the "Red List" is not permitted. Avoid the use of treated lumber except where necessary.
8. Choose low carbon, low VOC materials.
9. Use recycled materials as often as possible.
10. Use locally sources materials when possible.
11. Site furnishings shall have vandal-resistant features. Replacement parts or components shall be readily available and easily installed. Finish colors shall be easily matched.
12. Site furnishings and amenities shall be durable and low maintenance.

7.3 SEATING

Seating is an essential component of the public realm. It should be not only functional, but add to the overall aesthetic. Seating provides a place of respite in the urban environment, as well as a place to socialize or gather for a meal or snack. Properly places seating can help define rooms within the public realm and contribute to a vibrant street life.

Design Standards

1. A variety of seating options shall be provided, from benches that seat just a few people to tables and chairs for larger groups, to swings or lounge type seating. Creative design of seating is encouraged including incorporating seating that functions as permanent sculptural structures in the landscape. Low walls and even grass or turf mounds may be used as seating. Low walls used for seating purposes should be 18 to 24 inches high and a minimum of 18 inches deep.
2. Seating shall be provided at transit stops, entrances to major buildings, at the entry points to parking structures, near vendor kiosks, and at significant views and points of interest. Along mixed use streets, seating clusters shall be spaced no further than 90 feet apart. On residential streets, there shall be a minimum of one seating cluster per block.
3. Seating in the Buffer Zone must be permanently fixed to the ground. Moveable seating, such as tables and chairs that can be reconfigured, may be installed in public gathering spaces.
4. Outdoor seating areas affiliated with private dining establishments is encouraged. Such seating that encroaches into the public right-of-way must comply with all applicable city regulations.
5. Seating shall be constructed primarily of metal or wood. Metal shall be matte or glossy powder-coated. High quality composite wood materials may be used. Wood shall be a natural color or stained, not painted. Wherever possible, street furnishings should be of a contrasting color to the sidewalk to aid pedestrians with visual impairments. Wood shall be FSC certified.
6. Environmental factors such as sunlight, shadow, glare reflection, wind, and rain should be considered in the placement of seating areas. Seating shall be provided in shady areas as well as sunny locations.
7. Seating areas must be sufficiently illuminated. Seating shall not be placed in areas that are hidden from view.
8. Seating should be comfortable and have a backrest and arms whenever possible. Tables may have umbrellas made of durable, stain resistant material. Seating areas that are not located in the Sidewalk Zone may have trellises or other covering made of durable materials.



Creative Seating Options



Acceptable Metal Bench Specifications:

This bench can be placed throughout the public realm.

Manufacturer: Landscape Forms

Model: Parc Vue Bench, Backed Arms

Color: Gloss Black

Length: 6 ft.



Credit: Landscape Forms

Acceptable Wood Bench Specifications:

This bench can be placed throughout the public realm outside of the Buffer Zone

Manufacturer: Landscape Forms

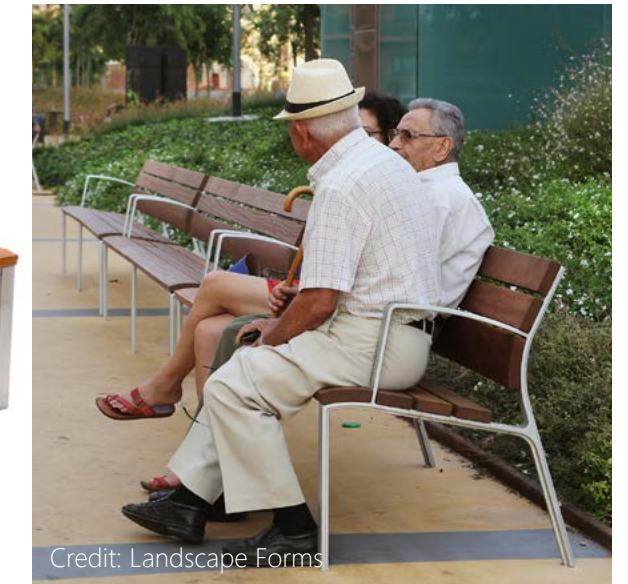
Model: Neoliviano Bench, Backed Arms

Materials: Aluminum and Domestically Sourced, Thermally Modified Ash

Length: 69"



Credit: Landscape Forms



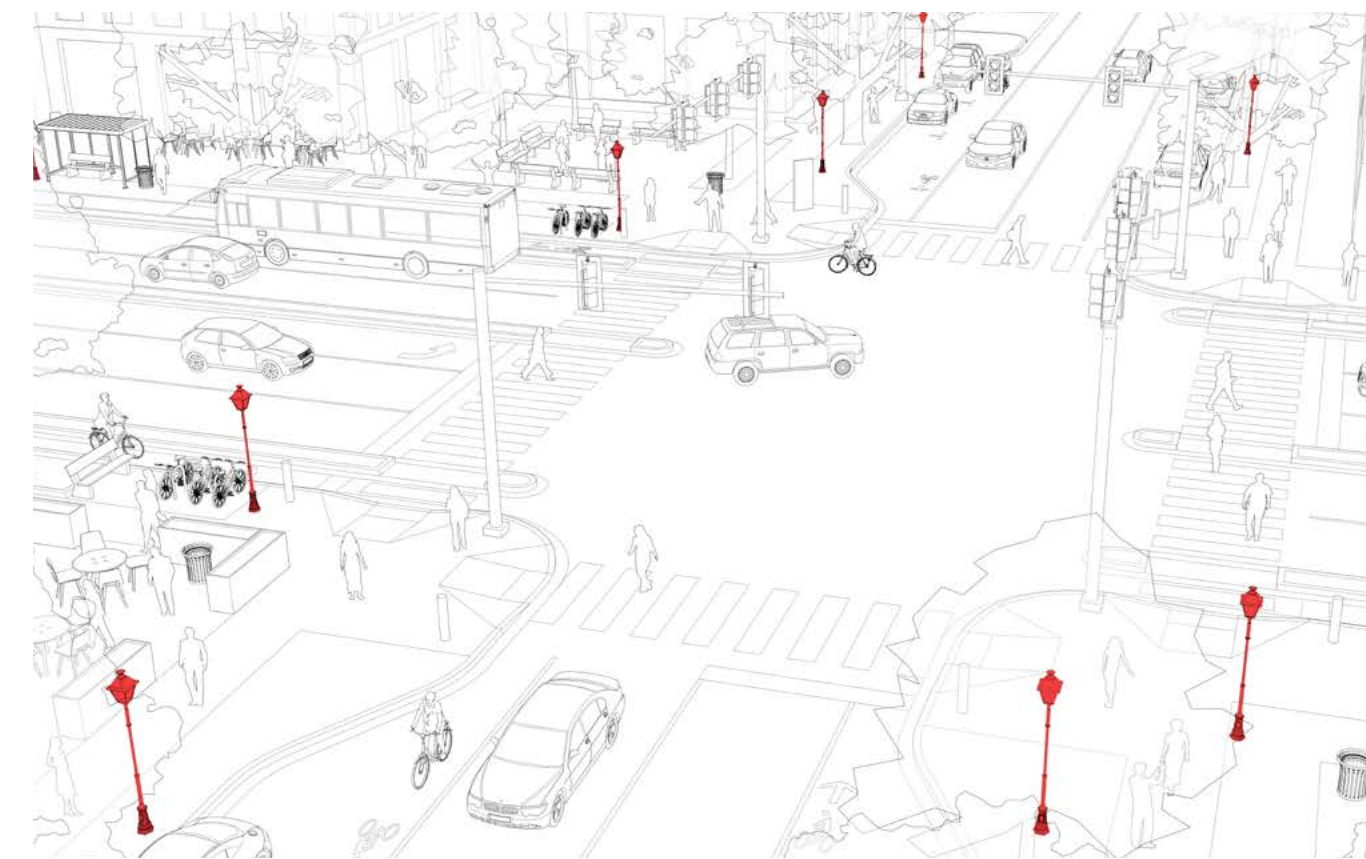
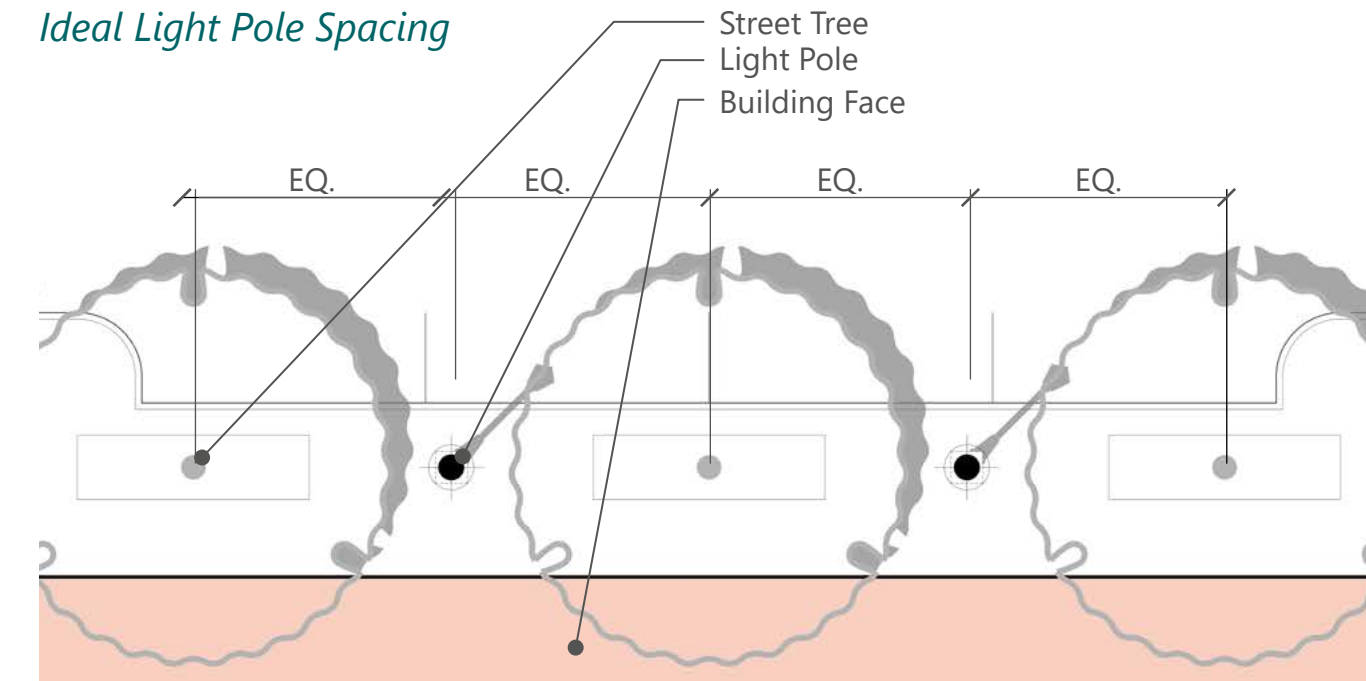
Credit: Landscape Forms

7.4 LIGHTING

Lighting helps visually define an urban environment at night. Lighting in the Diamond District will include pedestrian scale lighting to illuminate and define pedestrian circulation routes, streetlights to illuminate roadways, and lighting to illuminate landscaping or other site features.

Design Standards

1. Consistent levels of illumination shall be maintained in public areas. Safe and comfortable circulation depends more on the consistency of illumination than on the level or brightness of the lighting.
2. All lighting fixtures should comply with International Dark-Sky standards. Use only full cut-off fixtures. Uplighting is not permitted.
3. The color temperature of a light source shall not exceed 3000K. High pressure sodium lighting is not permitted. LED lighting is required.
4. Lighting shall incorporate aspects of Smart Cities technologies whenever possible. Solar lighting is strongly encouraged.
5. On major streets, such as N. Arthur Ashe Boulevard, Robin Hood Road, and Hermitage Road, pole mounted streetlights shall be used to illuminate the street. Streetlights shall be mounted at a height of 25 feet and located centrally within the Buffer Zone. Where pole mounted street lights are used, pedestrian-scaled lighting shall also be provided to illuminate the Sidewalk Zone. Pedestrian scale lighting may be mounted on the same pole or on its own pole at a height of approximately 15 feet.
6. On streets that don't require pole mounted streetlights, pedestrian scale light poles shall be installed at regular intervals. Lighting shall be mounted at a height of approximately 15 feet and located centrally in the Buffer Zone. Pedestrian scale light poles shall also be installed at regular intervals along pedestrian circulation routes within gathering spaces. Lighting shall be mounted at a height of approximately 15 feet.
7. Pedestrian scale light poles shall be placed 40 to 60 feet apart, depending on the desired light level and the photometric characteristics of the light fixture.
8. The location of street trees may affect the consistency of illumination along the streetscape. The distance between a street tree and a street light will depend on the type of light. Generally, the center of a street tree should be no closer than 10 feet from a streetlight.
9. If lighted bollards are used, they shall not exceed an overall height of 42 inches. Bollards may also be internally lit, reinforcing the visual separation of pedestrians, bicycle, and vehicular routes. Bollards shall be metal or textured concrete, stone, or a combination of these materials.
10. All electrical wiring for site lighting shall be underground.
11. All street light and pedestrian light poles shall include banner equipment.
12. Transformers shall be located in inconspicuous areas away from site and building entrances and screened.
13. Integrate solar options for outdoor lighting where feasible.



Acceptable Streetlight Specifications:

Streetlight
Manufacturer: Lumec by Signify

Model: Roadway RoadFocus LED RFM
 Cobrahead (medium)

LED Module: 160W 48LED

Color Temperature: 3000K

Height: 29 ft.

Color: Black



Credit: Signify



Credit: Signify

Acceptable Pedestrian Light Specifications:

Pedestrian Light
Manufacturer: Ligman Lighting

Model: Steamer Street USE-90002

LED Module: 80 W LED

Color Temperature: 3000K

Height: 14 ft

Color: Black (BLK)



Credit: Ligman Lighting



Credit: Ligman Lighting

7.5 SIGNAGE & WAYFINDING

Signage in the public realm conveys information about a community as a whole. The types of signs typically found in the public realm are: wayfinding signage and street signs to help people navigate, interpretive signs to educate, banners to celebrate a community or community event, and gateway features and neighborhood markers to define a neighborhood's edges and call attention to special spaces or areas within a community. Public signage can help provide a recognizable identity and a unified character for a place.

General Signage Design Standards

1. Signage should be visually comprehensive and clear with concise messaging. Font size should be clearly legible for the purpose the sign serves.
2. Signage throughout the Diamond District should be a unifying element. The use of the same font styles or complementarily font styles and color schemes on all signage is encourage. Avoid unusual or over-embellished fonts that are difficult to read.
3. Signage should be able to withstand weather conditions and should be constructed from durable materials and replaced as needed to maintain a high quality appearance.
4. Signage shall be clearly visible.
5. The area around signs may be landscaped provided that plantings do not obscure the sign or in the case of wayfinding signage, prevent access to the sign.
6. A Diamond District community logo shall be incorporated into all public banners and wayfinding signage.
7. Refer to the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) for criteria on traffic control devices, including signage.

Wayfinding Design Standards

1. Wayfinding shall generally conform to the City's existing wayfinding program, previously approved by the Planning Commission, but shall include any related specific branding developed for the Diamond District and may include elements unique to the District. The full wayfinding package shall be approved by the Planning Commission.
2. Wayfinding systems informs people about where they are and what is in their surroundings. Wayfinding may include text base signage, directional help, maps, and other graphics designed to help visitors navigate the Diamond District.
3. Pedestrian oriented wayfinding signage should be placed at regular intervals throughout the Diamond District, especially near transit stops, parking decks, and significant features, such as the ballpark and linear park. Signage should be located in the Buffer Zone or along pedestrians circulation routes within public gathering spaces.
4. When possible, the signage should be interactive and allow one to access online information with up to-date details on events and other relevant activities taking place in the Diamond District.
5. Pedestrian oriented wayfinding signage should not exceed (6) square feet.
6. Vehicular oriented wayfinding signage should be directional in nature, directing visitors to significant locations within the Diamond District, such as the ballpark or linear park. Text should be minimal, clear, and legible from a moving vehicle.
7. Wayfinding and signage cannot interfere with Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) signs.
8. Central points of entrance shall have wayfinding station with map.
9. Signage for the baseball stadium and primary stadium parking garage shall be the same throughout the Diamond District and surrounding streets.

Interpretive Signage

Interpretive signs shall be installed throughout the public realm to educate users about historical events, sustainability strategies in use, natural or landscaped features, and construction techniques. Interpretive signs should be subtle in nature so as to not interfere with the thing they are communicating about.

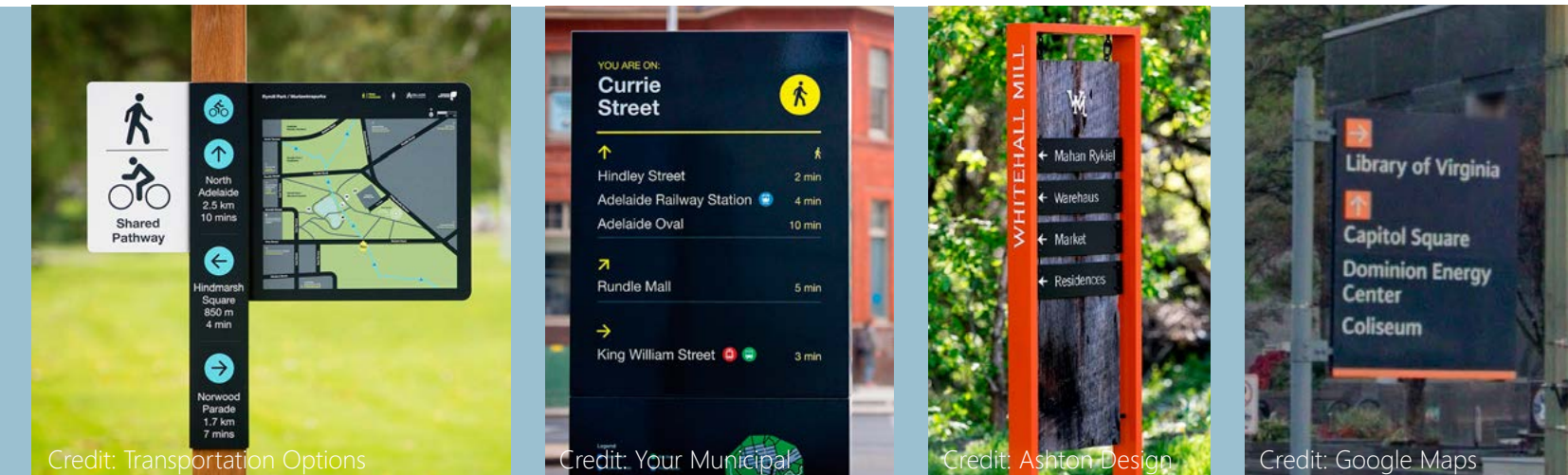
Banners

1. Banners must comply with the City's Urban Design Guidelines and the Banner Display Program.
2. Banners shall only be used to market the Diamond District as a whole or advertise an event taking place within the Diamond District. Banner design should celebrate and promote the Diamond District and convey the community's identity.
3. The lowest point of any banner or mounting hardware must not be less than 12 feet above the ground level.
4. All street light and pedestrian light poles shall include banner equipment.

Gateway Features & Neighborhood Markers

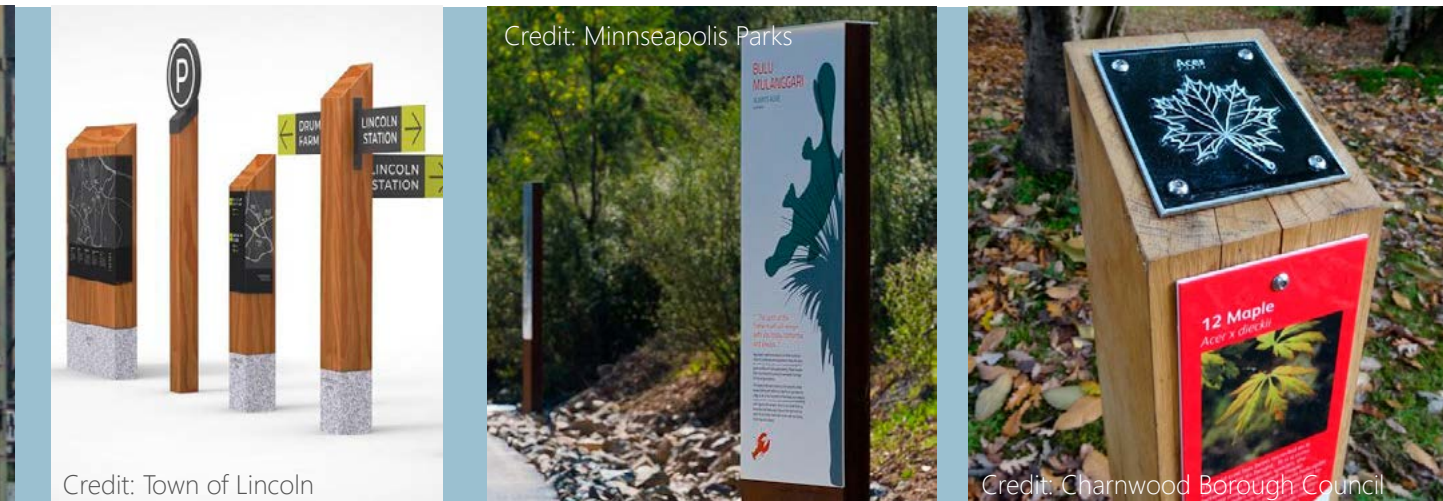
1. Gateways into the Diamond District can be denoted through the use of signage, distinct landscaping, art, and other visual elements.
2. Gateway design may differ at different gateways, but should be complimentary to each other.
3. Gateway features may be placed in medians. Signage must not impede visibility and must adhere to all applicable codes and ordinances.
4. Gateway features and text should be clearly visible to pedestrians, bicyclists, and those in a moving vehicle.
5. Neighborhood markers shall mark specific places within the Diamond District, such as the ballpark or linear park. All neighborhood markers shall be similar in style and shall be placed at ground level or on poles. Neighborhood markers are not directional in nature, but simply announce that one has arrived in a specific place.

Wayfinding Signage



Credit: Transportation Options | Credit: Your Municipal | Credit: Ashton Design | Credit: Google Maps

Interpretive Signage



Credit: Town of Lincoln | Credit: Minneapolis Parks | Credit: Charmwood Borough Council

Banners



Credit: Behance | Credit: Josh Marcos Record

Gateway Features & Neighborhood Markers



Credit: Square Peg Design | Credit: University of Notre Dame | Credit: Trademark Creative

7.6 MICROMOBILITY AMENITIES: BICYCLES, E-BIKES, SCOOTERS, ETC.

Micromobility amenities are an essential component of the circulation network in the Diamond District. With the number of micromobility users in the City ever increasing, these amenities are an important public realm feature that make micromobility a more viable form of transportation.

Design Standards

1. Landscape Forms 'Ride' Bike Rack shall be the bicycle rack specified throughout the Diamond District.
2. Bicycle racks and bike repair stations shall be placed in locations that are easily visible both to encourage use and for security.
3. Appropriate locations for bicycle parking and bike share parking shall be identified early in the design process so that they are properly integrated into the design of the site. Bicycle racks shall be provided along bicycle facilities and near transit stops. Bicycle racks located in the Sidewalk Zone shall be placed within Buffer Zone or Frontage Zone. A minimum of two bike racks shall be provided on both sides of the street on each block.
4. Bicycle racks shall be located a minimum of 2 feet from the curb face to avoid 'dooring.' Bicycle racks shall be placed at least 5 feet from fire hydrants and crosswalks; 4 feet from loading zones, transit stops, and benches; and a minimum of 3 feet from parking meters, newspaper racks, mailboxes, light poles, sign poles, and other street furniture. In all cases the length of typical bicycle (70 inches) shall be considered. Bicycle racks shall be spaced minimum 3 feet apart
5. Bicycle racks shall be able to withstand hacksaws and hammers. They shall also be resistant to rusting and bending or deformation. Racks shall be securely anchored to the ground.
6. Whenever possible, bicycle racks shall be covered or located where they are protected from the weather. Bike parking at key locations shall be covered.
7. Bicycle racks shall support the bicycle in at least two places, preventing it from falling over and allow locking of the frame and one or both wheels with a U-lock.
8. At least one bike repair station shall be placed in the Diamond District in the linear park close to the new stadium. The location of bike repairs stations may be indicated on wayfinding signage.
9. At least one e-bike charging station shall be located in the Diamond District. A solar powered e-bike charging station may be installed.
10. Dedicated micromobility parking for scooters shall be located near the stadium.
11. A large bike parking location that provides bike racks to accommodate 200 bikes shall be provided adjacent to the stadium for stadium attendees. See 4.7 Public Gathering Space considerations.



Credit: All 4 Cycling

Bike Repair Station



Credit: National Association of City Transportation Officials

E-bike Charging Stations

Acceptable Bike Rack Specifications:

Manufacturer: Landscape Forms

Model: 'Ride' Bike Rack, Metro40 collection

Height: In-ground embed

Color: Silver Metallic



Credit: Landscape Forms



Credit: Landscape Forms



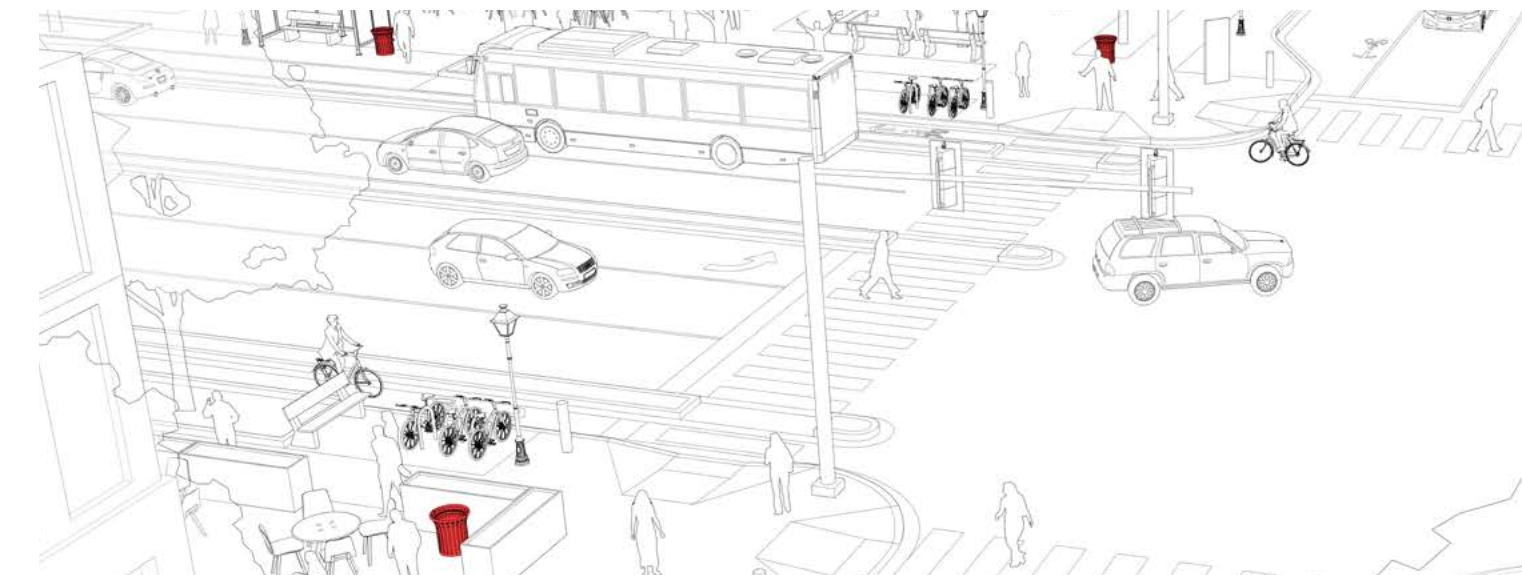
Credit: Landscape Forms

7.7 WASTE RECEPTACLES

Trash receptacles placed throughout the public realm will help keep the Diamond District free of litter. Recycling and compost receptacles will help encourage sustainable practices.

Design Standards

1. Trash and Recycling receptacles shall always be placed together.
2. Trash and recycling receptacles shall be located throughout the Diamond District primarily in the Buffer Zone and in public gathering spaces. They shall be visible and conveniently located for pedestrians. On mixed-use streets, they shall be located in high activity areas such as near seating areas, transit stops, and at street corners. On Neighborhood Residential Streets and Linear Park Streets, trash and recycling receptacles shall be placed at street corners. In public gathering spaces, they shall be placed near seating areas.
3. Compost receptacles shall be located at strategically selected locations chosen by the Department of Public Works and the Office of Sustainability, in alignment with the City's current Composting Program. Other locations for compost receptacles shall be determined in coordination with the City of Richmond Department of Parks, Recreation and Community Facilities.
4. Waste receptacles shall be constructed of durable, high-quality metal such as galvanized steel or cast aluminum. Materials shall be powder-coated to match colors of other furnishings. Recycling receptacles shall be blue or green to distinguish them from the adjacent trash receptacle. Compost receptacles shall be purple.
5. Trash receptacles shall consist of an outer decorative shell and a replaceable, impact-resistant liner.
6. Waste receptacles shall be permanently fixed to the ground.
7. Receptacles shall have a rain guard over the main opening.
8. Receptacles shall be clearly labeled "trash", "recycle", and "compost".



Acceptable Waste Receptacle Specifications:

Manufacturer: Landscape Forms

Model: Chase Park Litter

Option: Side Opening

Color: Matte Black for Trash
Loll Sky Blue for Recycling



Credit: Landscape Forms



Credit: Landscape Forms

7.8 BOLLARDS & PLANTERS

Bollards and planters introduce plants and decorative and safety elements that can complement the public realm and help define spaces. Lighted bollards can provide an added safety measure at night. Planters offer an opportunity to present vegetation together with architectural detailing. They may also be used to provide privacy for outdoor diners, separating eating areas from pedestrian circulation.

Design Standards

1. Bollards shall be constructed of durable materials and complement the surrounding architectural character.
2. Bollards shall be cylindrical with a flat top. They shall be quality metal with a durable finish in black.
3. Bollards must not exceed 40 inches in height. Lighted bollards may be used. Bollards shall be K-rated.
4. Where street trees cannot be provided in an area of the Buffer Zone, the use of bollards or reinforced planters shall be considered. Bollards shall not be placed in tree wells.
5. Bollards may be installed along shared use paths or bike paths near intersections with vehicular traffic.
6. Removable or retractable bollards are preferred and may be installed where they are intended for intermittent use, such as in multi-functional spaces and on the Festival Street.
7. The use of planters is encouraged at the following Frontage Zone locations: along individual storefronts, perimeter railings of outdoor cafes and dining areas, and at entrances to significant buildings.
8. Planters in the public realm must use plants from the plant palette. Planters may be free standing or fixed. Appropriate planting materials for planters includes perennials, ornamental grasses, small evergreen trees, and/or small shrubs. Annuals and other high maintenance landscape materials are not permitted.
9. Planters shall be easy to maintain and of durable material such as stone, freeze proof clay, decorative finished concrete, metal, or appropriate combinations thereof. Treated wood and plastic materials are not permitted.



Credit: Bison Security Posts
Black cylindrical bollard with flat top



Credit: Bega
Lighted black cylindrical bollard with flat top



Credit: City of Concord



Credit: Wybohe

7.9 SCREENING & FENCING

Screening and fencing may be used from time to time in the public realm of the Diamond District to screen unsightly objects. Decorative fencing may be used to define a sidewalk cafe per the City's Sidewalk Cafe Ordinance.

Design Standards

1. Mechanical items and dumpsters are required by zoning to be screened from view of the public right-of-way. Walls or fences that screen such devices shall be visually opaque.
2. Screening material shall be a masonry wall with a black metal gate for dumpsters and larger mechanical items. Additional evergreen landscaping shall be provided where space permits. Gates shall have a steel framework attached to steel posts and shall be covered in such a manner so as not to be visible from public view or designed in an attractive manner.
3. Smaller items may be screened by evergreen landscaping planted at an interval to fully block the item from view. Vertical gardens and green walls may be used in addition to or in place of evergreen landscaping provided that they fully block the item from view.
4. Chain link fencing is not permitted in the Diamond District except along the rear of the stadium parcel. If provided, the entire structure (fabric, posts and railings) shall be coated with a dark colored vinyl, preferably black, and supplemented with sufficient evergreen landscaping.
5. Barbed wire, razor wire, or similar fencing is not permitted.
6. Vinyl fencing is not permitted.
7. Barriers or fencing around sidewalk cafes must comply with the City of Richmond Sidewalk Cafe Ordinance.
8. City owned property will need to receive proper approvals.



Credit: Hurst Companies
Masonry with metal gate



Credit: Select Space



Credit: Greenleaf Interior Plant Solutions
Green wall



Credit: Better Homes & Gardens
Evergreen screening



Credit: Seegars Fence Company
Masonry with metal gate



Credit: Watters Garden Center
Evergreen screening

7.10 PUBLIC ART

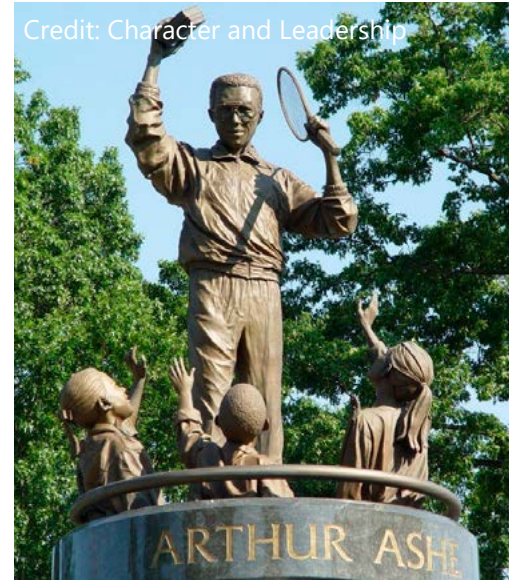
Public Art shall be approved by the community prior to installation. These Design Standards only cover the general character and extent of future public art installations. The integration of public art into every day life can help build a sense of place and pride in community by personalizing spaces and expressing community identity. The Public Art Commission, along with the Public Art Coordinator, administers the Public Art program for the City of Richmond, overseeing the selection and installation of public art that is funded through the City's Percent for Art Program. The Public Art Commission does not typically fund community-initiated projects like road murals and neighborhood place-making installations or temporary installations on public property, but approval of the Public Art Commission for such installations is required.

Design Standards

1. In coordination with the family of Arthur Ashe, Jr., the developer shall develop and create elements honoring the legacy of Arthur Ashe, Jr., in each project phase. None of such elements shall constitute public infrastructure, and the developer shall be solely responsible for the costs of such elements.
2. As a part of each project phase, the developer shall dedicate one percent (1%) of the total development cost of the private development for such project phase to be applied to fund public art in such Project Phase, which may be on the private development but must be visible and accessible to the public. This shall be done in consult with the City of Richmond's Public Art Commission in the development and implementation of the Developer's public art program. If any public art is to be dedicated to the City, or if the public art is to be installed on City owned property, the developer shall comply with the Public Art Commission's approval process for the creation of new public art
3. Art shall be provided over time at the entrance gateways, in the public space around the stadium, within and adjacent to the linear park.
4. Public art does not always need to be a centerpiece of a space. It can be subtle in nature. Seek opportunities to incorporate artistic elements to areas throughout the public realm, such as sculptural seating and planters, unique paving at significant areas, and at gateways.
5. Public art should be provided at a variety of scales and medias, to be experienced by both pedestrians and drivers, where possible.
6. If public art is to be permanent, maintenance and durability should be considered, particularly if the art will be exposed to the elements.
7. Public art must adhere to the principles laid out in the Public Art Master Plan.



Credit: Ramunas | Adobe Stock



Credit: Character and Leadership



Credit: Bay Area Discovery Museum



Credit: Alexander Denisenko | Adobe Stock

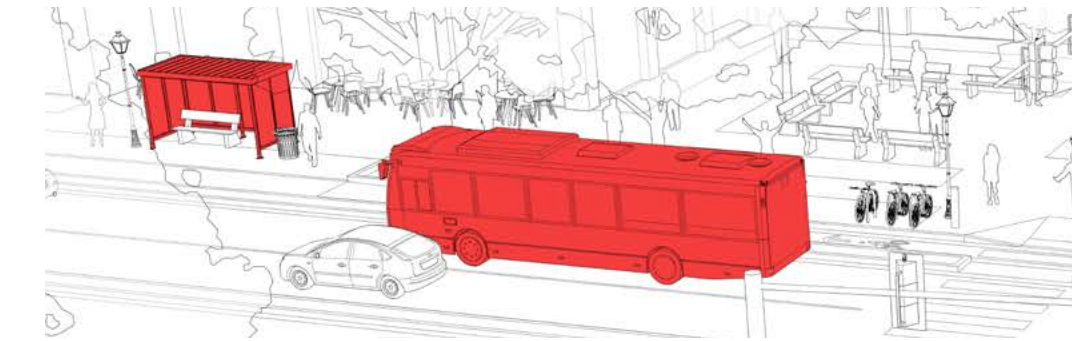


Credit: Eventbrite

7.11 ESSENTIAL TRANSIT INFRASTRUCTURE

Design Standards

1. All transit stops within the Diamond District shall include a transit shelter, seating, standard GRTC signage displaying route information, and a trash and recycling receptacle.
2. Standard GRTC 3-sided transit shelters shall be used.
3. Bus stop shelters require 6" reinforced concrete pads. Benches, trash cans and recycling receptacles may be bolted directly into standard 4" sidewalk.
4. Transit shelters and other transit related furnishing and amenities shall be located in the Buffer Zone of the sidewalk.
5. For high volume transit stops, additional seating should be located in close proximity to those stops either in the Buffer Zone or Frontage Zone.
6. Bicycle parking and wayfinding signage shall be located within close proximity to transit stops.
7. Areas around transit stops shall be well lit to provide greater visibility and safety at night.
8. Smart City technologies shall be incorporated into transit infrastructure, including real time route information as it becomes available.



Acceptable Transit Shelter Specifications:



Credit: GRTC

3 sided GRTC transit Shelter, with advertisement space



Credit: GRTC

3 sided GRTC transit Shelter

8 | APPENDIX A - EXISTING SITE IMAGES

The process of creating the Diamond District Public Realm Design Standards began with an extensive site walk with stakeholders to assess the existing site conditions and discuss a vision for the public realm. The following images of the existing site were taken by VHB during the site walk.



Sports Backers Stadium occupies a portion of the site, and is used year round by VCU, VUU, and other leagues and associations for soccer, track and field, and other athletics.



There's no landscaping or street trees along Hermitage Road, and the edge of sidewalks have been overgrown with weeds.



Existing parking lots are in poor condition.



No landscaping, edge treatment, or design code has been applied to the surface parking lot.



Sports Backers Stadium is well maintained.



Sports Backers Stadium features a track and soccer field.



Overgrown weeds and vegetation hides roadway and wayfinding signs from the street.



Large surface parking lots are occasionally used for non-parking uses, including motorcycle and fire department training.



Power lines running along the existing street limit the growth potential of street trees.



Fencing located along the road edges separates the sidewalk from private properties.



Existing trees that are set back from the road edge and power lines are larger and healthier.



Lack of street trees, dedicated bike lanes, on-street parking, and landscaping.



Existing pedestrian crossings include a CG-12 diagonal variation curb ramp and painted crosswalks on asphalt.



A lack of overhead power lines along adjacent streets allow street trees to grow larger and healthier.



Existing street trees struggle to grow due to the small planting beds and overhead power lines.



Street trees are trimmed back below power lines, resulting in stunted growth.



Existing bus stops currently have no shade or rain protection. No bus pullouts are provided.



There are no street trees, edge treatment, or markings present on existing roads within the site.



Formal landscaping is minimal and unattractive.



Existing bus stops are uninviting, with no covered canopies or seating.



Medians have no landscaping or trees, resulting in a poorly maintained lawn.



Piecemeal site planning and lack of maintenance has resulted in poor sidewalks, landscaping, and site experience.

9 | APPENDIX B - CASE STUDIES













Credit: New Media Systems

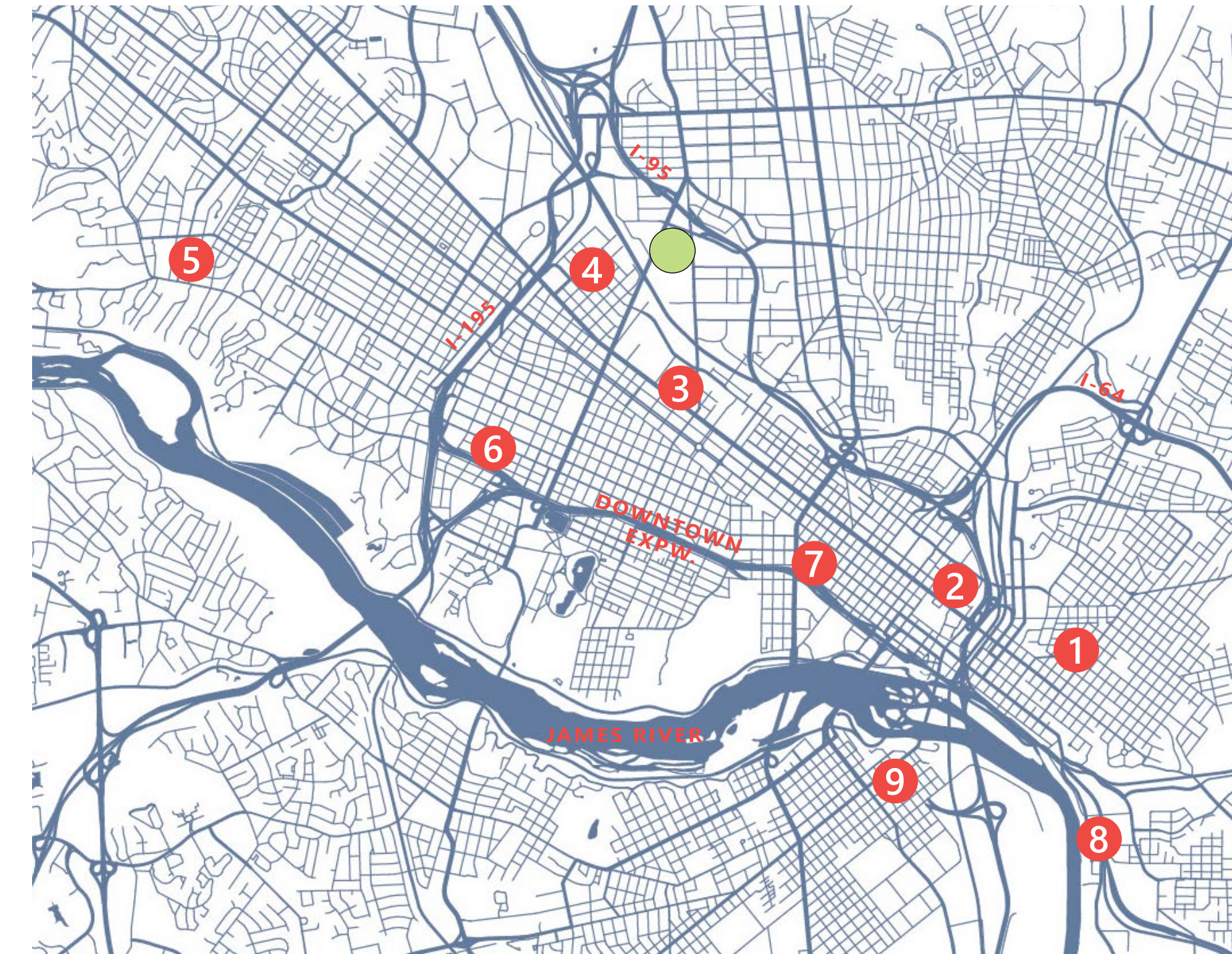
9.1 INTRODUCTION

A review of the City of Richmond's existing streetscapes was done to better understand the elements that make streets successful. The case studies were taken from six areas of Richmond to best understand the varying character and elements throughout the city.

Elements including street materials, site furnishings, sidewalk widths, and street plantings were analyzed. By incorporating successful streetscape elements used in the City, and avoiding those things that are less successful, the Diamond District can seek to provide streets that respects Richmond's historic character, while creating its own unique character.

Time was spent at each of the six locations observing and analyzing each streetscape. Streetscapes were documented with photos and a narrative as well as a summary of key lessons learned.

-  Diamond District Site
-  1 Church Hill
-  2 Downtown
-  3 Sauer Center
-  4 Scott's Addition
-  5 Westhampton
-  6 Carytown
-  7 VCU Main Campus
-  8 Rocketts Landing
-  9 Manchester



9.2 CHURCH HILL

Church Hill is one of Richmond's Historic Districts, with streetscape features including herringbone brick pavers, ornamental street lighting, and mature street trees.



A lack of maintenance has caused Church Hill sidewalks to have cracks, moss, and weed growth.



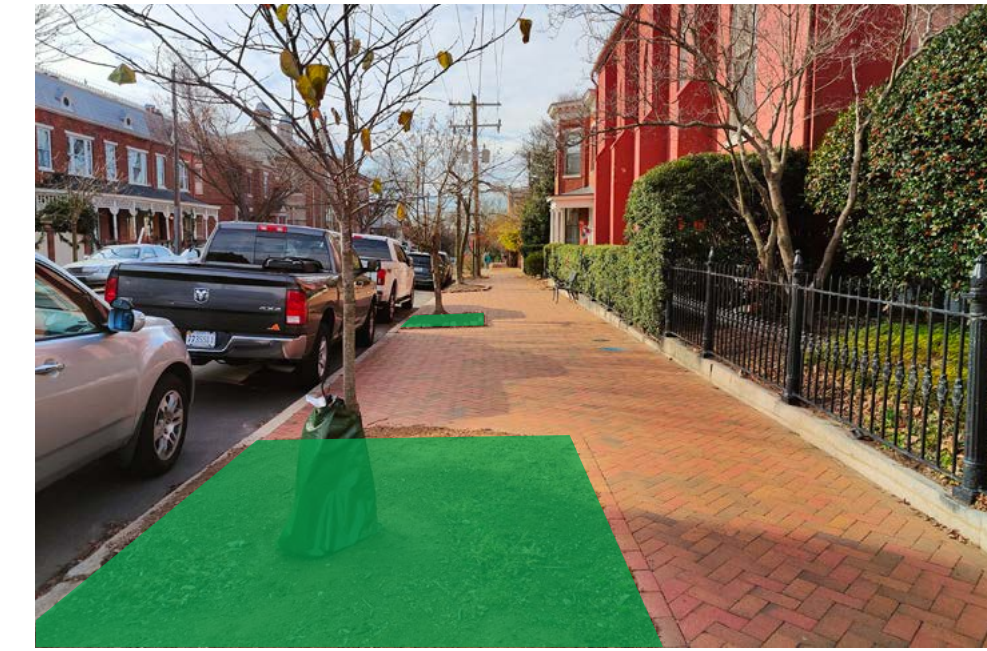
Existing intersections have white block style crosswalks, traffic lights, overhead power lines and poles.



Pedestrian crossings are split to align with the parallel sidewalks. These two curb ramp crosswalks are the City of Richmond's new standard.



The existing lights throughout Church Hill are of a historic design, with glass chambers and decorative posts and bases.



The width of the Buffer Zone varies throughout Church Hill, reducing consistency of the neighborhood streetscapes.



Community members have personalized the street character through added decorative features.



Crosswalks through Church Hill are predominantly white block style painted asphalt, also an emerging city standard.



Herringbone brick sidewalks define the character of Church Hill, and are also predominant throughout the City of Richmond as a distinctive character.



Coffee shops spill out onto the sidewalk (blue), with seating on both edges of the pedestrian circulation. This reduces the size of the Pedestrian Travel Zone (orange).



There is a clear definition between the Frontage Zone, the Pedestrian Travel Zone, and the Buffer Zone throughout many typical streets.



Brick pavers are used in multiple places throughout the streets, including borders, accent bands, and main thoroughfare routes.



Larger, historic trees have caused the existing pavers to move due to the growth of the tree root system.



Planting beds with shrubs throughout Church Hill are often customized by community members.



Newly developed apartments maintain the typical Church Hill streetscape. The wider Pedestrian Travel Zone removes the presence of any Frontage Zone.



Pedestrian crossings are currently a CG-12 ramp and white block style painted asphalt.



Street lights are designed to enhance the historic nature of the community. Bus stops match the posts and design through the City of Richmond.



A lack of maintenance has caused tripping hazards and a poor surface for wheelchair users.



Overhead power lines and poles are evident throughout most Church Hill streets, limiting the growth and choice of street trees.



Middle islands within intersections possess low shrubs and groundcover and no trees.



The existing bus shelter offers a canopy for shade or rain. The shelter is subject to graffiti or stickers.



Cobblestones are periodically used as an accent material throughout Church Hill for vehicle calming and aesthetics.



Multiple poles are evident, creating a cluttered streetscape.

Key Findings and Considerations

- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Pedestrian crossings are white block style painted asphalt
- Sidewalk zones to be clearly distinguished through design
- Historic lighting fixtures to be respected and considered
- Separate brick pavers from street trees to avoid roots affecting sidewalks
- Provide a varied, interesting street character
- Use a mix of materials, including brick pavers, concrete and cobblestone
- Streamline design to reduce streetscape "clutter"
- Encourage overhead utilities to be located underground to improve streetscape and increase street tree growth
- A basic level of maintenance may be expected; however, DPW will be limited in higher than basic services
- Crosswalk markings at signalized intersections are ladder style. At controlled crossings where a gap survey allows crosswalks, transverse only style is permitted.

9.3 DOWNTOWN (N. 12th St. between E. Broad St. & E. Marshall St.)

Recent Downtown projects exhibit design features that should be considered in future development within Richmond, including bike lanes, material changes, and matching street furnishings.



Pedestrian crossings include a concrete border and a herringbone brick paver pattern.



Designated bike lanes are separated from the vehicular travel lanes through traffic bollards.



The City standard bench, Victor Stanley's RB-28, is used throughout new Downtown projects.



Light fixtures are designed to match Richmond's historic character, with glass lantern boxes and decorative light poles.



Manholes and utilities are located in the center of the sidewalks for quick access, but do not blend with the surrounding materials.



Corten steel is used for storm drains to offer a unique aesthetic to the streetscape.



The trash receptacle matches those in other City Neighborhoods, with slight variance to the design.



Bollards are painted black to match adjacent site furnishings. Their design varies throughout City Neighborhoods.



Street furnishings are painted to match surrounding street and building character. A plaza design and cafe table seating offers seating to users near the street.



Mass sidewalk areas are design with herringbone brick pattern pavers to match other historic districts.



Tree wells located along 14th street are designed for stormwater capture, yet poor design and maintenance results in dangerous element for pedestrian users.

Key Findings and Considerations

- Sidewalks are predominantly brick pavers in a herringbone pattern
- Utilities within the streetscape should be screened or designed accordingly with the street design
- Utilize changes in materials to denote sidewalk crossings or other points of interest
- Respect the historic character of Richmond's site furnishings
- Create spaces within the streetscape for users to sit and stay
- Encourage the use of separated bike lanes for safety of all users
- Tree wells and other site elements to consider the pedestrian and their safety

9.4 THE SAUER CENTER

The Sauer Center project is a recent development adjacent to the Science Museum, located off W. Broad Street. The project respects and considers Richmond's historic character, while offering a modern touch through design.



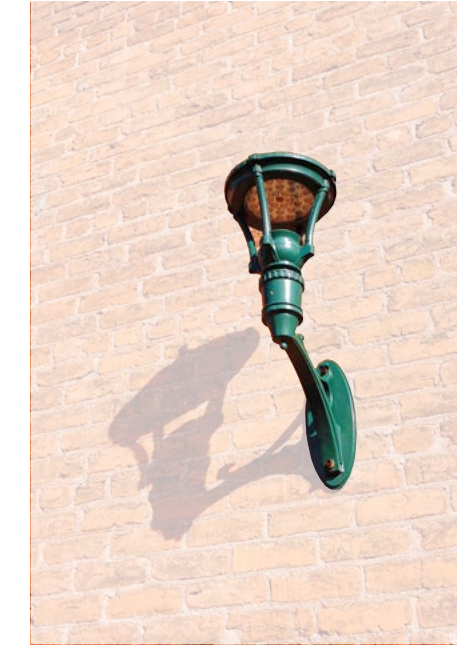
Concrete is used for aprons through the Sauer project, offering a different material for pedestrian crossings, and speed of road delineation.



Street tree wells correspond with the score lines of the concrete. Trees and low groundcover are both planted within the wells.



Narrower sidewalks are designed to offer a clear Pedestrian Travel Zone, a defined Buffer Zone, but no Frontage Zone.



Street fixtures throughout the project reflect the historic nature of Richmond's typical light, while offering a modern element with LEDs.



Plazas offer seating and small enclosures through walls and changes in elevation.



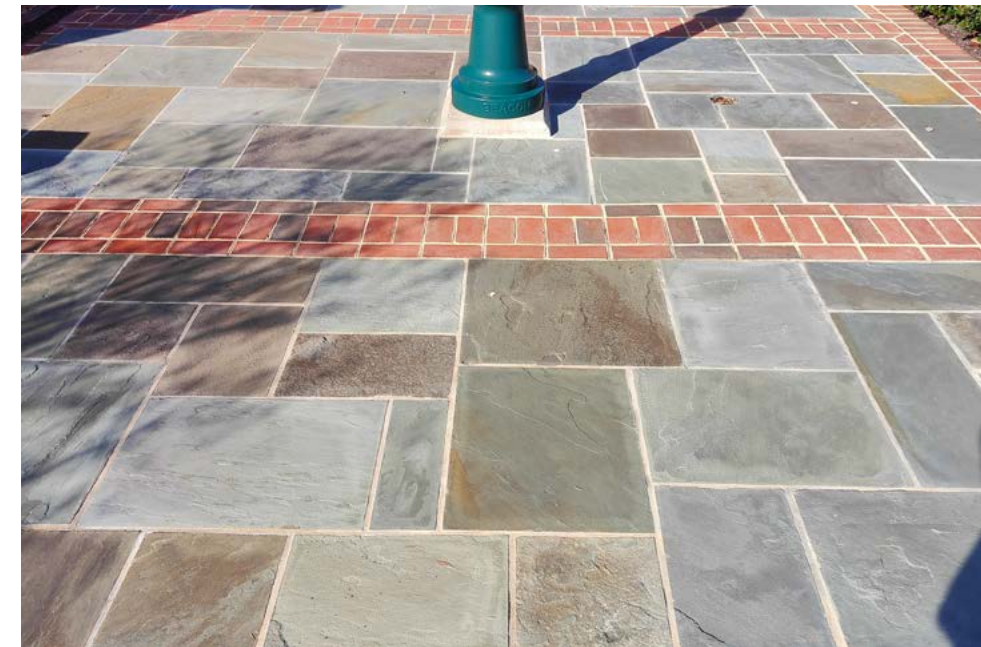
Electric car charging stations are provided throughout the project, increasing the likelihood of users to the site.



Different materials and patterns are used to provide a unique design at intersections, plazas and points of interest.



Decorative art installations throughout the project help with pedestrian wayfinding and offer visual points of interest.



Bluestone and brick pavers are used simultaneously to offer a variety in sidewalk design, and distinguish between plazas and sidewalks.



Steps and staircases are constructed with brick pavers to match and respect the surrounding built environment.



Different materials are used at junctions and pedestrian crossings to distinguish between vehicular and pedestrian zones. Detectable warnings visually match the surrounding design.



Bollards on site match Richmond's historic and traditional character, with grooves and a decorative top.

9.5 THE SAUER CENTER



Fire hydrants on site are located within the Pedestrian Travel Zone (orange), reducing the width of the walkway for pedestrians.



Traffic light signal poles are designed to match the site furnishings through the project, including color and detailing.



Pedestrian crossings are constructed with brick pavers and concrete borders to differentiate against the asphalt.



Light poles and trash cans are chosen to match the historic character of Richmond, with a matching color scheme.



Sidewalks are predominantly scored concrete, with a change of material to reflect a point of interest.



Larger planting beds and tree wells are under planted, resulting in large areas of mulch.



Decorative trench drains are designed to match the theme and design of the surrounding project.



Large street trees are located along the street frontage, equally spaced to offer tree canopy cover and visual interest.



A clear delineation between the Frontage Zone (blue), Pedestrian Travel Zone (orange) and Buffer Zone (green).



Detectable warnings visually match the surrounding character and warn users of a pedestrian crossing.



Granite curbs used for street tree wells offer visual interest, and a raised physical border to the planting beds.

Key Findings and Considerations

- Create nodes through public plazas and green spaces for wayfinding and gateways
- Utilize changes in materials to denote changes in spaces and vehicle spaces
- Respect Richmond's historic character and street furnishings design
- Use ornamental and unique design features to denote the project identity
- Clearly distinguish between the Frontage Zone, The Pedestrian Travel Zone and The Buffer Zone through design
- Encourage green spaces for the user
- Consider the integration of electric charging in the design
- EV Charging is not within the public right-of-way

9.6 SCOTT'S ADDITION

Scott's Addition exhibits new projects that possess design considerations for any future development, including the Science Museum of Virginia redevelopment and the Otis Apartments.



Projects outside of the Public right-of-way have site furnishings to closely match the traditional Richmond bench design.



The Pedestrian Travel Zone (orange) is clearly distinguished by the street furnishings located inside the Buffer Zone (green) and a lack of obstructions in the walkway.



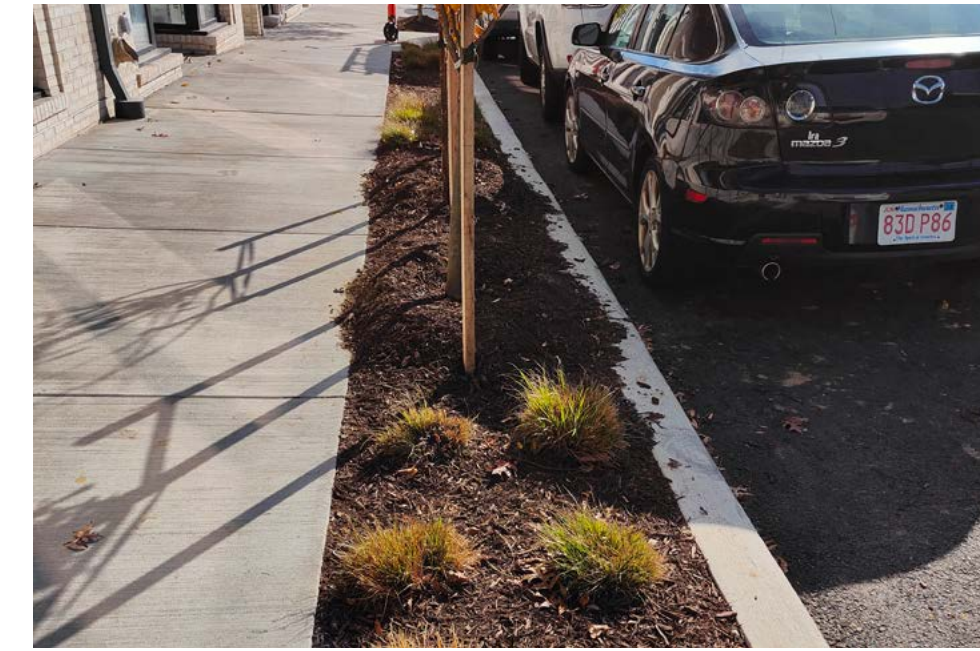
Benches located within the right-of-way match the character throughout the city, with variance in the color.



Continuous and long planting beds result in difficulty for the driver to exit their vehicle safely.



Overhead utilities along the street limits tree growth, allowing only ornamental trees or no trees.



Narrow, continuous planting beds and poor maintenance leads to mulch spillage on the road and sidewalk.



Trash receptacles and street poles reflect the historic character and furnishings around Richmond.



Large street trees are located along main thoroughfare streets, with light poles equally spaced for continuity.



Streetlights along main thoroughfare routes have two fixture heads for both traffic and pedestrians.



A clear delineation between the Pedestrian Travel Zone and the Buffer Zone however, the Frontage Zone is not clearly marked.



Difficult to identify public and private property from a lack of material diversity.

Key Findings and Considerations

- A clear delineation between the three sidewalk zones, including through changes in material or elevation
- The effect of continuous planting beds along streets for parallel parking
- The appropriate considerations for powerlines, and adjacent planting
- Street furnishings design to match Richmond's historic character
- Wider sidewalks for large volume of pedestrian traffic

9.7 WESTHAMPTON

Westhampton has experienced recent redevelopment, with projects that exhibit notable design changes, including choice of site materials, and design through landscaping.



Pet waste stations, light poles and wayfinding signs are located within planting beds to avoid obstacles in the Pedestrian Travel Zone.



Frontage Zones and the Pedestrian Travel Zones are clearly distinguished through an evergreen hedgerow and elevation change.



An evergreen hedgerow and planting within the streetscape softens the surrounding hardscape.



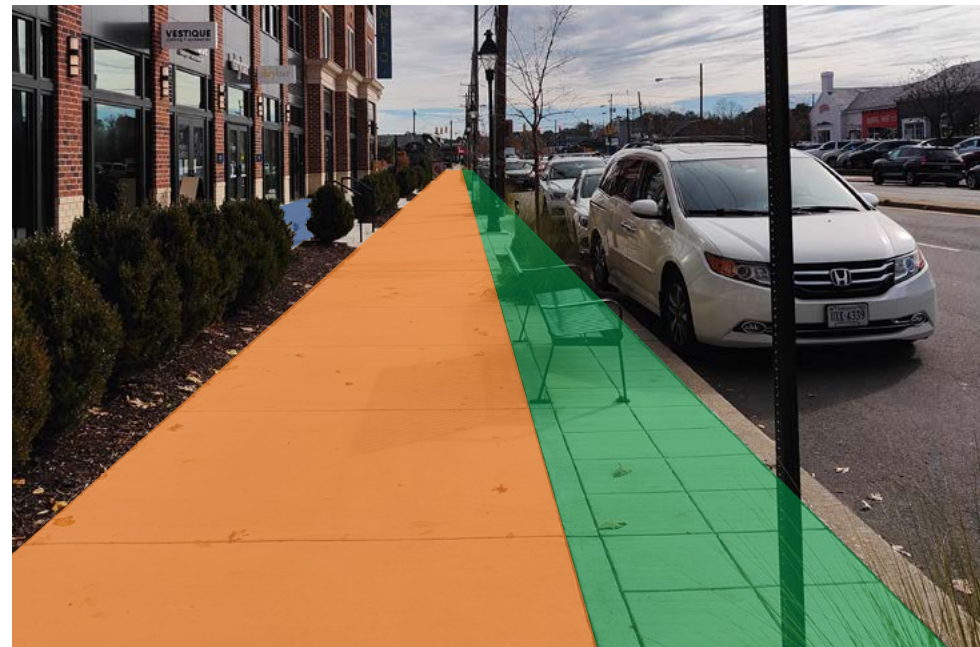
Concrete stairways and steps match the surrounding area, and strongly contrast to the adjacent brick walls.



Handrails are powder coated black tube for a traditional, Richmond look.



The Buffer Zone is clearly distinguished by a change in score line pattern.



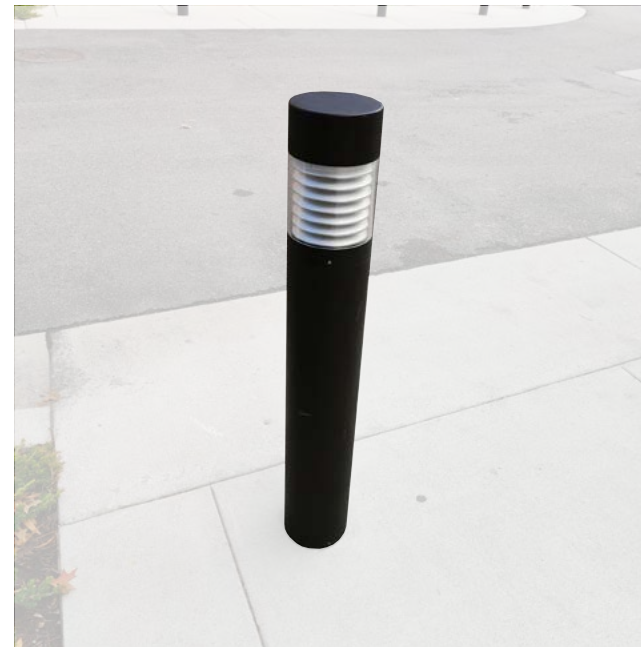
All three sidewalk zones are clearly distinguish through the use of furnishings, planting, and a change in concrete scoring.



Utilities located along in streets are inadequately screened from the road or sidewalk.



Ornamental trees are located underneath overhead utilities.



Bollards with LEDs do not match the standard, traditional bollard throughout Richmond.



Utilities along the road are not screened, and obstruct users of the sidewalk.



CG-12 ramp located at existing intersections.

Key Findings and Considerations

- Locate street furnishings and utilities out of the Pedestrian Travel Zone, in landscaping to avoid obstacles for users
- Consider a difference in material and/or design to distinguish the change in sidewalk zone
- Use elevation change and landscaping to separate public and private
- Create a consistent furniture look and design throughout the project
- Combine a mix of concrete and brick to match Richmond's character
- Use ornamental trees under powerlines

9.8 CARYTOWN & VCU MAIN CAMPUS

Carytown streetscape demonstrates a mix of positive and negative streetscape features that should be considered. The VCU area highlights design features that can be utilized for future development.



Poor maintenance has resulted in spreading mulch beds, cracked mossy sidewalks, and weed growth.



A lack of street trees and delineation from the Frontage Zone and the Pedestrian Travel Zone on side streets results in a poor streetscape.



Raised traffic islands with a gutter allows for water movement but design could be adjusted to allow for large landscaping areas.



A wide pedestrian sidewalk with smaller tree wells are suitable for larger volumes of pedestrian traffic.



The planting bed setback from the road edge allows for a larger planting area and a ease of access for drivers exiting / entering their vehicles, but collects debris and is a tripping hazard.



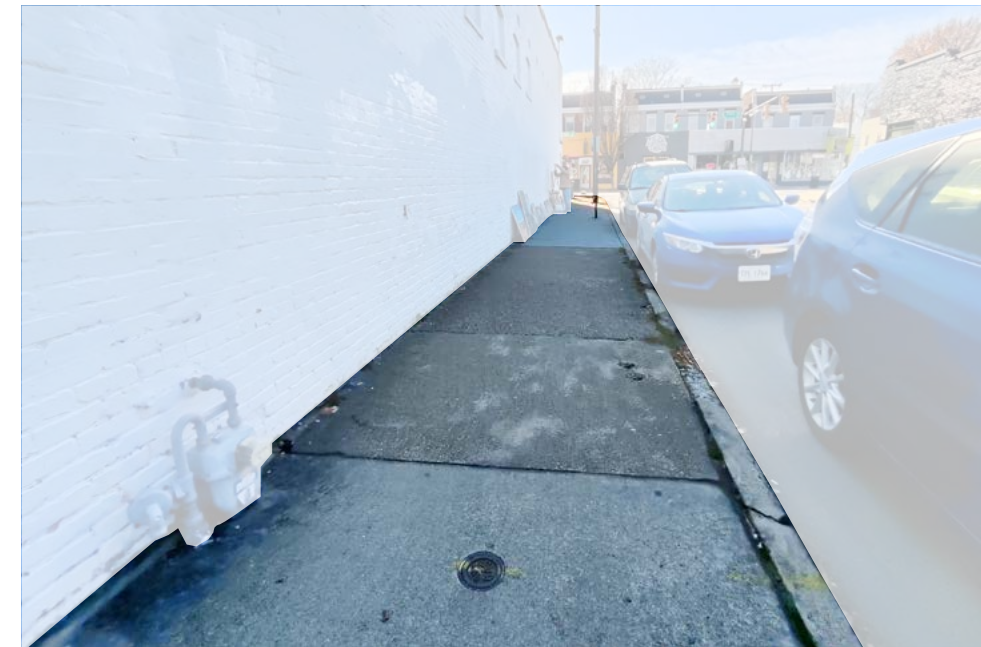
Storm drains are decorative metal which offers visual variety from the typical Richmond storm drain.



Wide sidewalks allow for large volumes of traffic.



Cobblestone has been used as an accent in the planting beds for visual interest.



A lack of street trees and maintenance results in a poor streetscape for site users.



A lack of obstacles along the main road allow for easier access for street parked cars.



Pedestrian crossings are white ladder style with no change in elevation or material.

Key Findings and Considerations

- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Avoid the design of streets with no landscaping or street trees
- Use a change of material for planting beds and tree wells
- Encourage more planting and larger planting beds where applicable
- Setback planting beds from the curb to reduce impact on parallel parking
- Use ornamental storm drain designs to provide visual interest

9.9 ROCKETTS LANDING

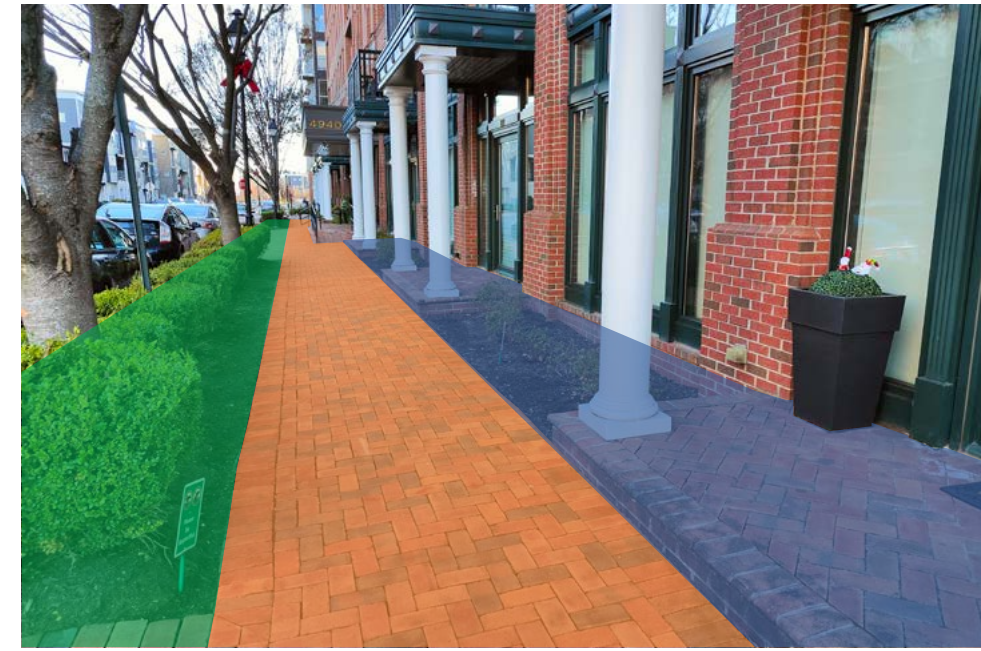
Rocketts Landing is a recent development that offers multiple positive elements to analyze to create a successful streetscape. Due to the project's infancy, Rocketts Landing also highlights elements that the City of Richmond prefer today.



Sidewalks in Rocketts Landing are predominantly brick pavers in a herringbone pattern.



Crossings include concrete CG-12 and a concrete apron to distinguish between thoroughfare roads and side roads.



Design elements, such as columns, elevation change and landscaping create a clear delineation between each sidewalk zone.



Site elements, including site lighting and stop signs, are painted in the same color for consistency in the development.



Elevation changes indicate a difference between public and private property, but has consistency through materials.



Landscaping and planting beds clearly distinguishes between the Buffer Zone, the Pedestrian Travel Zone and Frontage Zone.



Sidewalks, stairs and ramps are all brick pavers for a consistent look, with black handrails to match architectural elements.



Tree wells are set back from the curb to allow for unobstructed access from the car, with periodic paver sections for pedestrian access.



Utilities are located within the Pedestrian Travel Zone, with no screening, resulting in obstructions for users.



Continuous planting beds make it difficult to exit the car. Low groundcover offers visual variety with street trees.



Crosswalks are brick pavers in a herringbone pattern with a concrete edge to distinguish against the asphalt drive.

Key Findings and Considerations

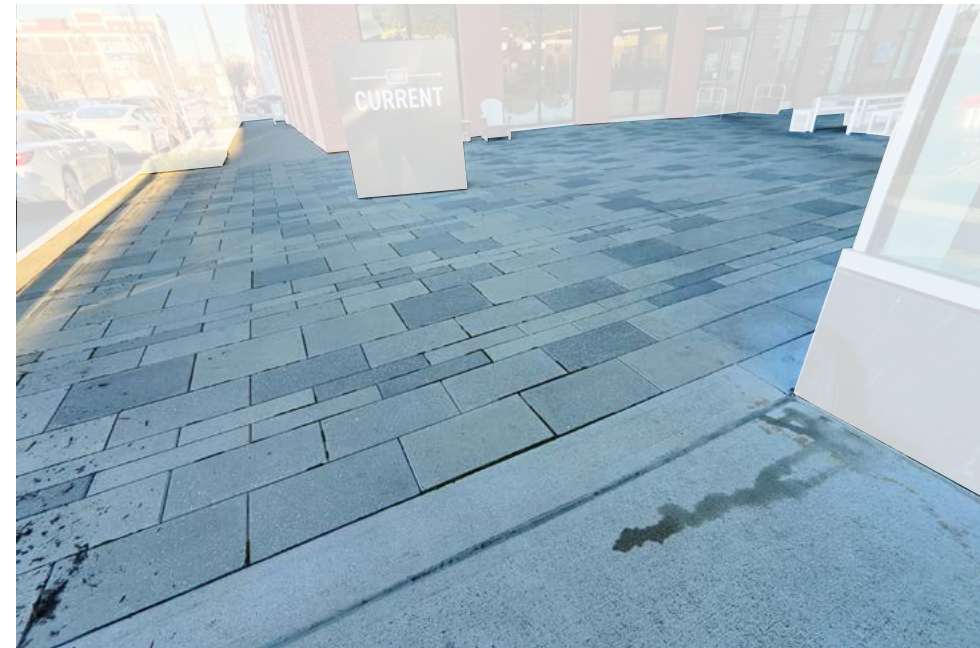
- Use a mix of pavers and concrete for visual variety and to distinguish between zones.
- Consider elevation and material changes to aid navigate the site users.
- Use planting beds and landscaping to clearly delineate between public, private and the sidewalk zones.
- Consider the pedestrian and car user when designing planting beds and sidewalks.
- Use a consistent theme and design palette throughout the development.
- Use a mix of planting material to provide visual interest.
- Highlight pedestrian crossings through a change of material or design.

9.10 MANCHESTER

Manchester is a case study that offers insights for a high density area of the City with apartments and high volume of traffic. Manchester has its own unique theme that should be analyzed.



No changes in sidewalk material or score pattern makes it difficult to distinguish between the Frontage Zone (blue) and the Pedestrian Travel Zone (orange).



A change of material helps identify a change from sidewalk to public plaza.



Tree wells are well maintained, with no spillage and healthy groundcover and tree growth.



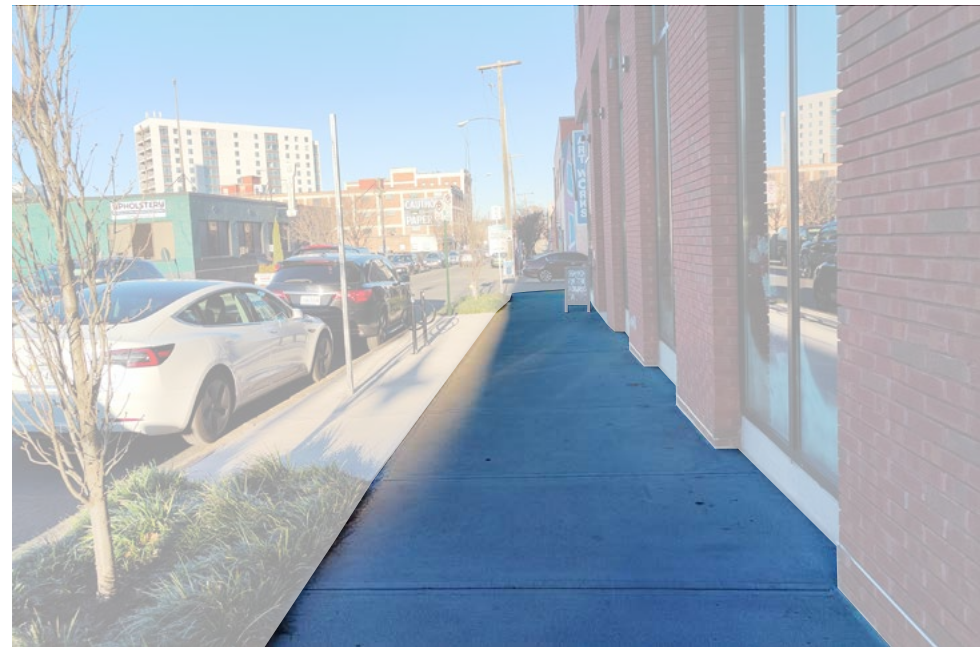
Light fixtures around the development are of similar design, creating continuity throughout.



Concrete score lines are constructed with a flat border for visual variety throughout the development.



Electric scooters used throughout Richmond are stored within the Buffer Zone (green). Consideration should be given for designed storage.



Wide sidewalks allow for passing and large volumes of traffic.



A variety of bicycle racks are installed, all in the same color.



There is little distinction between the zones of the sidewalk, but sidewalks are sufficiently wide.



Pedestrian crossings are white block styles with lowered detectable warnings for all site users.












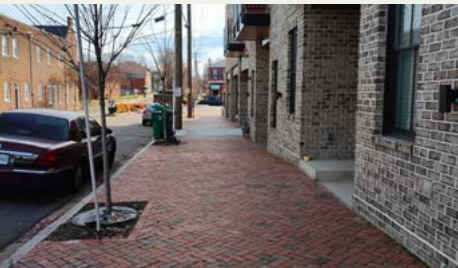
Parking within Manchester includes parallel and angled parking to allow for faster access for site users.





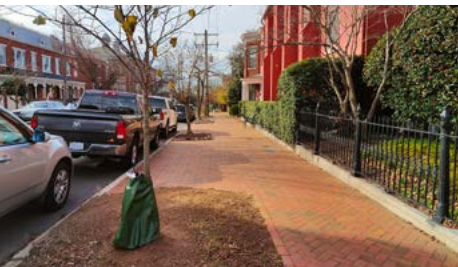
Key Findings and Considerations




- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Avoid the design of streets with no landscaping or street trees
- Use a change of material for planting beds and tree wells
- Encourage more planting and larger planting beds where applicable
- Setback planting beds from the curb to reduce impact on parallel parking
- Use ornamental storm drain designs to provide visual interest






9.11 RICHMOND CASE STUDIES SUMMARY OF FINDINGS

Category	Site Element
Sidewalk Zone	 Wider sidewalks accommodate higher volumes of traffic
	 A mix of materials can align with development theme
	 Scoring can be used to differentiate between sidewalk and Frontage Zone
	 Wide sidewalks clear of clutter accommodate high volumes of traffic
	 Utilities located within the sidewalk pose as a tripping hazard





Sidewalk Zone	 Dining in the Buffer Zone obstructs the path of travel
	 No clear distinction between sidewalk and Buffer Zone.
	 Bike / scooter parking is often located within Buffer Zone
	 Architectural features and planting bed defines sidewalk
	 A lack of a defined Buffer Zone results in a barren streetscape

Sidewalk Zone	 Frontage Zone defined by vegetation and elevation change
	 Buildings set back from sidewalk allow for planting in Frontage Zone
	 Larger Frontage Zone provides different streetscape
	 Street trees equally spaced along road length
	 Varying street well sizes results in varied streetscape character

Site Lighting	 Lighting fixtures within historic districts are of acorn design
	 The predominant lighting fixture through the City of Richmond is the ornamental fixture, painted black
	 Recent projects in Richmond include a variation on the traditional fixture design, with LEDs and painted a dark green
	
	

Category	Site Element
Site Furnishings	 Bike racks vary in design but are predominantly black in color
	 Bike racks designs include loops and rings
	 Bollard design varies but mostly matches the pole light design
	 Site furniture located outside of the main sidewalk
	 Older neighborhoods do not possess the latest transit shelter

Site Furnishings	 The City standard bus stop sign
	 Trash cans in new developments match older neighborhoods
	 Throughout the city, the same designed trash can is used
	 The slatted site bench is the most predominant in the city
	 The slatted design has variation but possesses the same theme

Intersections and Crosswalks	 Pedestrian ramps are concrete ramps, with concrete aprons
	 Pedestrian crossings in Manchester are painted asphalt
	 Various sites throughout the city have brick paver crosswalks
	 Downtown also possess white painted asphalt at junctions
	 Brick pavers with a herringbone pattern and concrete border

Utilities	 Utilities are located within the sidewalk as an obstacle
	 Utilities in the sidewalk rarely have screening
	 Ornamental grates offer variety to the standard inlets
	 Utilities rarely match the surrounding hardscape
	 Powerlines reduces the possibility for large street trees

Category

Site Element

Maintenance



Large street trees have uprooted brick pavers



Tree wells have overgrown sidewalks



Uprooted brick pavers from tree roots



Overgrown ground cover spills onto the sidewalk



A lack of maintenance has caused mulch to spill

Roadway Elements



Low planting can create a buffer between pedestrians & vehicles



No clear distinction between sidewalk and Buffer Zone.



Buffers between bike lanes and vehicular traffic is often minimal



People existing cars have to step over vegetation in planting strip



Tree wells are often long enough to hold more than one tree

Materials



Clean lines and neutral grays allow other elements to pop



Brick is a predominate material used for Richmond sidewalks



Vast brick sidewalks really need variation of color and pattern



Variations in scoring patters can add interest to concrete



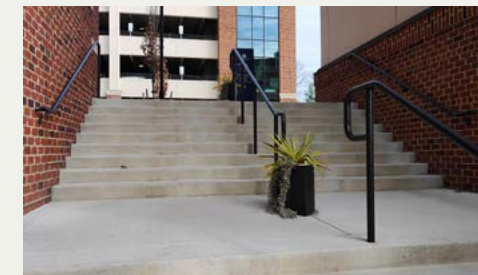
Variations in materials and patterns can add visual interest



Concrete sidewalks allow plants and site furnishings to be visible



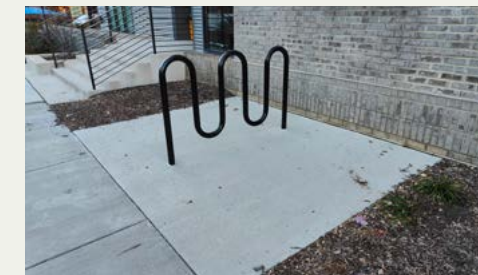
Changes in texture can add interest to concrete sidewalks



Concrete with no scoring or change in texture can be dull



In addition to brick, cobblestone is also a predominate material



Varying street well sizes results in varied streetscape character