

VAN AKEN DISTRICT
a connection plan Pattern Book 2016

Executive Summary

The City of Shaker Heights is realizing exciting new developments in the area surrounding the Warrensville Center Road/Chagrin Boulevard area. The Van Aken District Connections Plan supports the call to revitalize this district that was explored in the Shaker Heights Investment Plan (2000). This plan has been developed based on the City's overall economic

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development goal of creating a vibrant, mixed-use downtown for Shaker Heights. This includes recommended improvements to gateways, bicycle facilities, pedestrian amenities and signage developed to add vibrancy to the Van Aken District.

Rather than think about this as a static plan, this guide is viewed as a dynamic Pattern Book – a kit of parts that can serve as a

reference for current and future development in the Van Aken District. This Pattern Book has been prepared based on engagement with a range of community stakeholders allowing all participants to understand, embrace and build from a shared vision and character for the future of this area.

Acknowledgements

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*Community Meeting Minutes &
Presentations*

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VAN AKEN BOULEVARD

CHAGRIN BOULEVARD

FARNSLEIGH ROAD

NORTHFIELD ROAD

WARRENSVILLE CENTER ROAD



01 INTRODUCTION

The Van Aken District study area encompasses land in all quadrants of the Warrensville Center Road/Chagrin Boulevard intersection. The area was identified in the Shaker Heights Strategic Investment Plan as an area ideally suited to create a vibrant mixed-use downtown for Shaker Heights. The intent is to strengthen the Van Aken District, strengthen surrounding neighborhoods, increase demand for housing, redevelop the Van Aken Center, redevelop Van Aken District and spur additional office/commercial construction.

The Van Aken District Connections Plan is intended to identify and evaluate pedestrian and bicycle connections and amenities within the district along with context-sensitive infrastructure initiatives and complete street strategies that support surrounding development and reshape this urban space.

The project sponsor is the City of Shaker Heights. Project funding was provided by a Transportation for Livable Communities Initiative (TLCI) grant from the Northeast Ohio Areawide Coordinating Agency (NOACA) with local matching funding from the project sponsor.

Create a vibrant, transit-oriented, mixed-use district for Shaker Heights

GUIDING VISION

- 01 Engage the Shaker Heights community and key stakeholders in a process to develop a shared vision for the appearance, feel and sense of place in the Van Aken District.**
- 02 Define an aesthetic for the public realm that establishes a unique identity and promotes sense of place.**
- 03 Identify strategies, amenities and context-sensitive improvements that:**
 - **Promote walkability and the creation of a dynamic pedestrian environment**
 - **Support bicycle travel with appropriate facilities/infrastructure**
 - **Integrate transit within the district**
 - **Activate public/civic spaces**
 - **Seek to beautify district with landscape and special features**
 - **Engage development to create a vibrant, mixed-use environment**
- 04 Identify district gateways and prepare a wayfinding and signage framework to inform visitors and define the district.**
- 05 Develop a placemaking action plan and pattern book to guide and inform future development within the district.**

GOALS

USING THE PATTERN BOOK

Purpose

The Shaker Village Standards, first published in 1925, informed those interested in building a home of the architectural styles allowed as well as the materials and colors that should be used. Today the City has a high concentration of unique, architect-designed, early 20th century houses in a variety of historic revival styles. Each house in the city contributes to the overall character of the city with its respect for area context and its contribution of unique design details.

The spirit of the Shaker Village Standards lives on in this planning document. Stakeholders, residents, and city leadership worked to ensure that the Van Aken District achieves the highest possible quality of design and fits seamlessly into the broader character of Shaker Heights. Like each home approved by the Van Sweringen Company, the Van Aken District acknowledges the context of Shaker's history and aesthetics while adding something different.

Rather than think about a static plan, this guide is viewed, in a similar manner, as a dynamic Pattern Book – a kit of parts that can serve as a reference for any and all future development in the Van Aken District. This Pattern Book has been prepared based on engagement with a range of community stakeholders allowing all participants to understand, embrace and build from a shared vision and character for the future of this area.

Chapter Layout

This Pattern Book will help the city strengthen the district by guiding the selection of thoughtful, well-designed infrastructure and amenities over time.

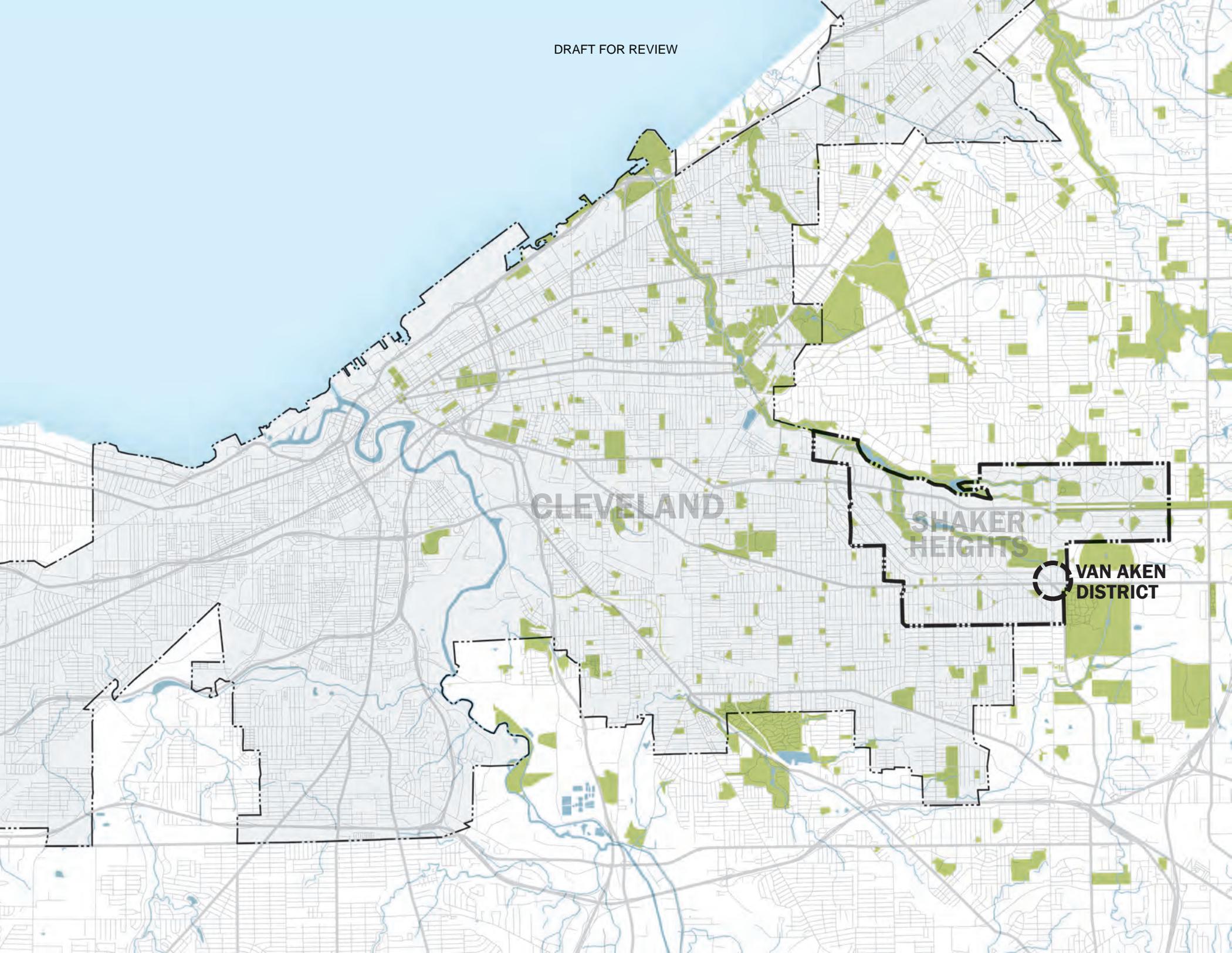
This pattern book provides an overview of existing conditions with respect to the street network, land use and zoning as these elements influence future development in the district. The District Connections Framework plan provides a map showing potential gateways along with non-motorized connectivity from a regional as well as a local perspective. The Street Framework plan classifies streets within the Van Aken District with respect to their functional emphasis and frontage context.

These recommendations, which are based, in part, on adjacent land use provide an overview of how streets with the district are to be used. The functional emphasis provides a framework for application of the Design Elements including landscape, hardscape, signage, lighting, furnishings, and public art.

The Design Elements have been prioritized across the proposed land use type to provide a menu of items appropriate for the various zones. The Design Elements section includes a description of applications appropriate to each element, how they can be incorporated into the distinct zones and is supported by a range of cost considerations for implementation but not including engineering, permitting or approvals.



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CLEVELAND

SHAKER
HEIGHTS

VAN AKEN
DISTRICT

02 EXISTING CONDITIONS

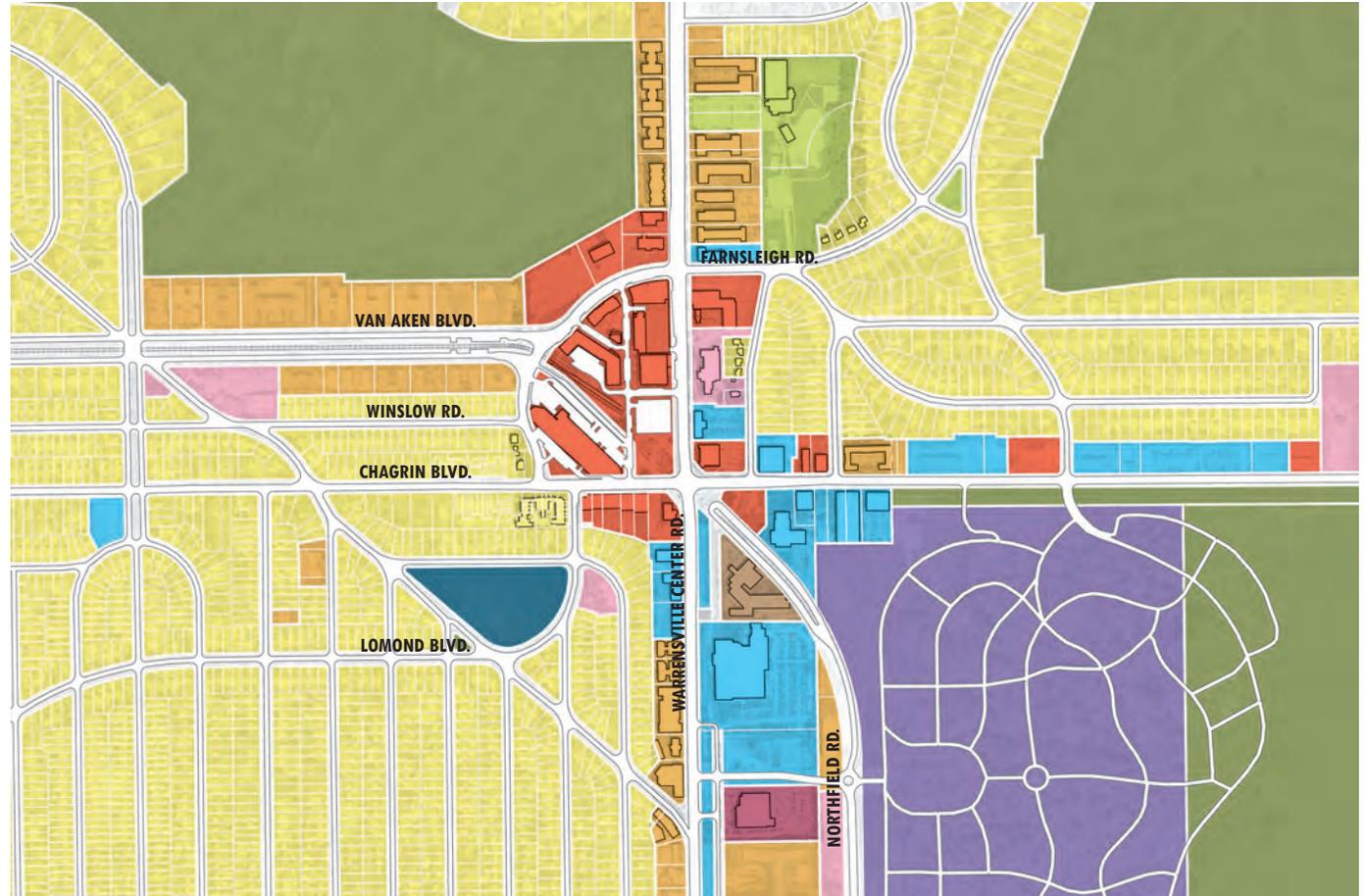
This section provides an overview of existing conditions within the Van Aken District with respect to land use, zoning, traffic, transit, development zones, rights-of-way, bicycle connectivity and pedestrian connectivity. These elements are important considerations in providing the context for organizing the public realm and understanding potential opportunities within the district.

LAND USE

Current land uses reflect existing patterns of development. A majority of the core is currently comprised of commercial/retail surrounded by office uses and housing of various densities.

KEY

- Golf Course
- Park Land
- Commercial Retail
- Residential
- Senior Housing
- Apartment Housing
- Religious
- Cemetery
- Office
- Government
- Education

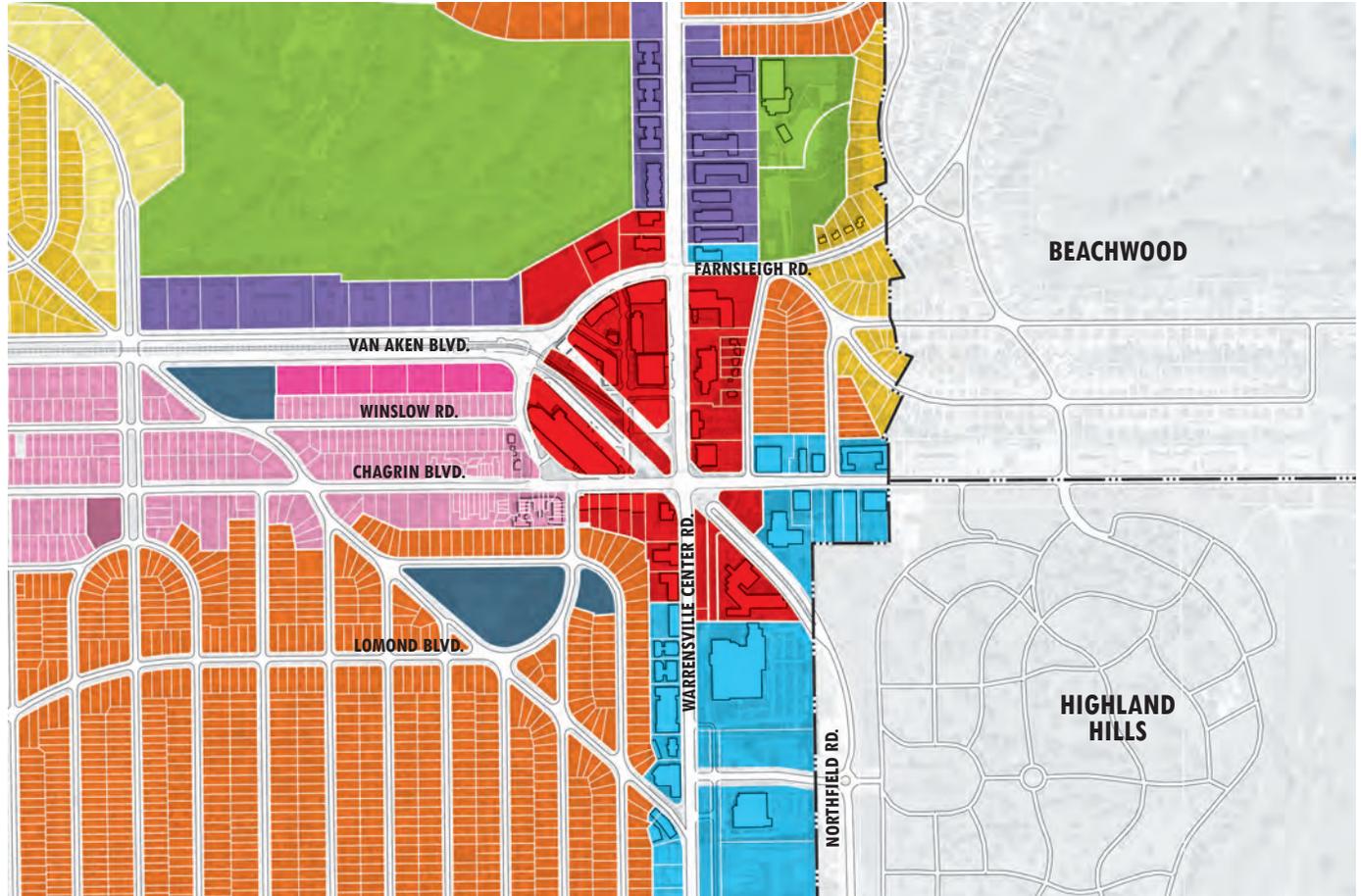


ZONING

KEY

- SF1 - Single Family Residential (15,000 SF Lot)
- SF2 - Single Family Residential (8,500 SF Lot)
- SF3 - Single Family Residential (5,600 SF Lot)
- TF - Two Family Residential
- MF - Multi-Family Residential
- Shaker Heights City Limits
- A - Apartment Residential
- O - Office
- CM - Commercial Mixed Use
- I - Institutions
- PR - Parks and Recreation

This map provides a record of regulated/permitted uses that are projected for future patterns of development. As with the land use map, a majority of the core is zoned as commercial/retail. The Warrensville corridor to the south is planned as office use and to the north as apartment housing.



TRAFFIC

This map provides a record of Average Daily Trips (ADT) by direction within the Van Aken District. The heavier lines on Warrensville Center and Chagrin Blvd. indicate higher traffic volumes. Vehicular traffic within the project area varies considerably by road corridor.



KEY

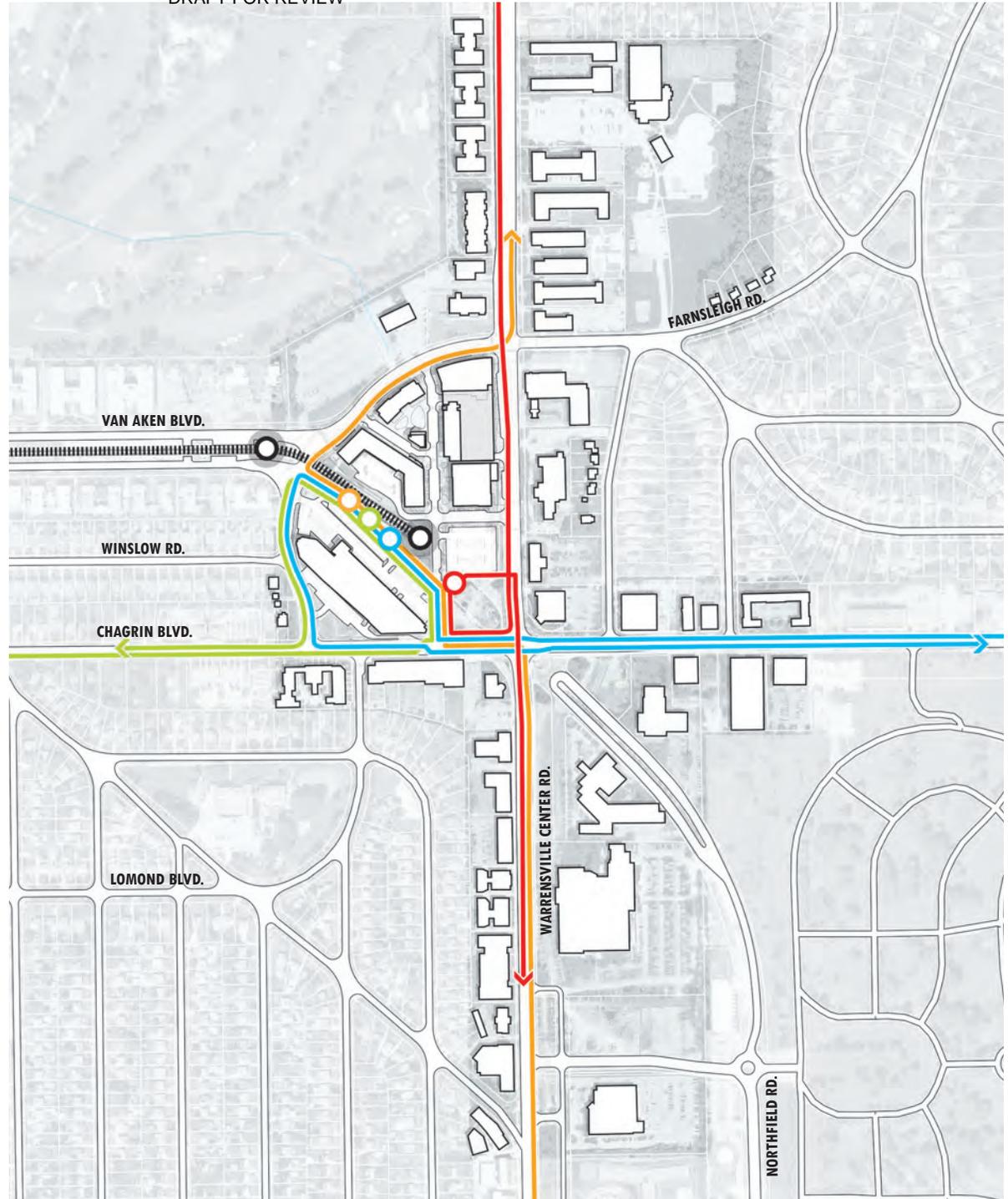
— Vehicular Circulation

● Signaled Intersection

1000 Average Daily Traffic (ADT)

TRANSIT

The Greater Cleveland Regional Transit Authority serves the project area with several bus and train routes as shown on this map.

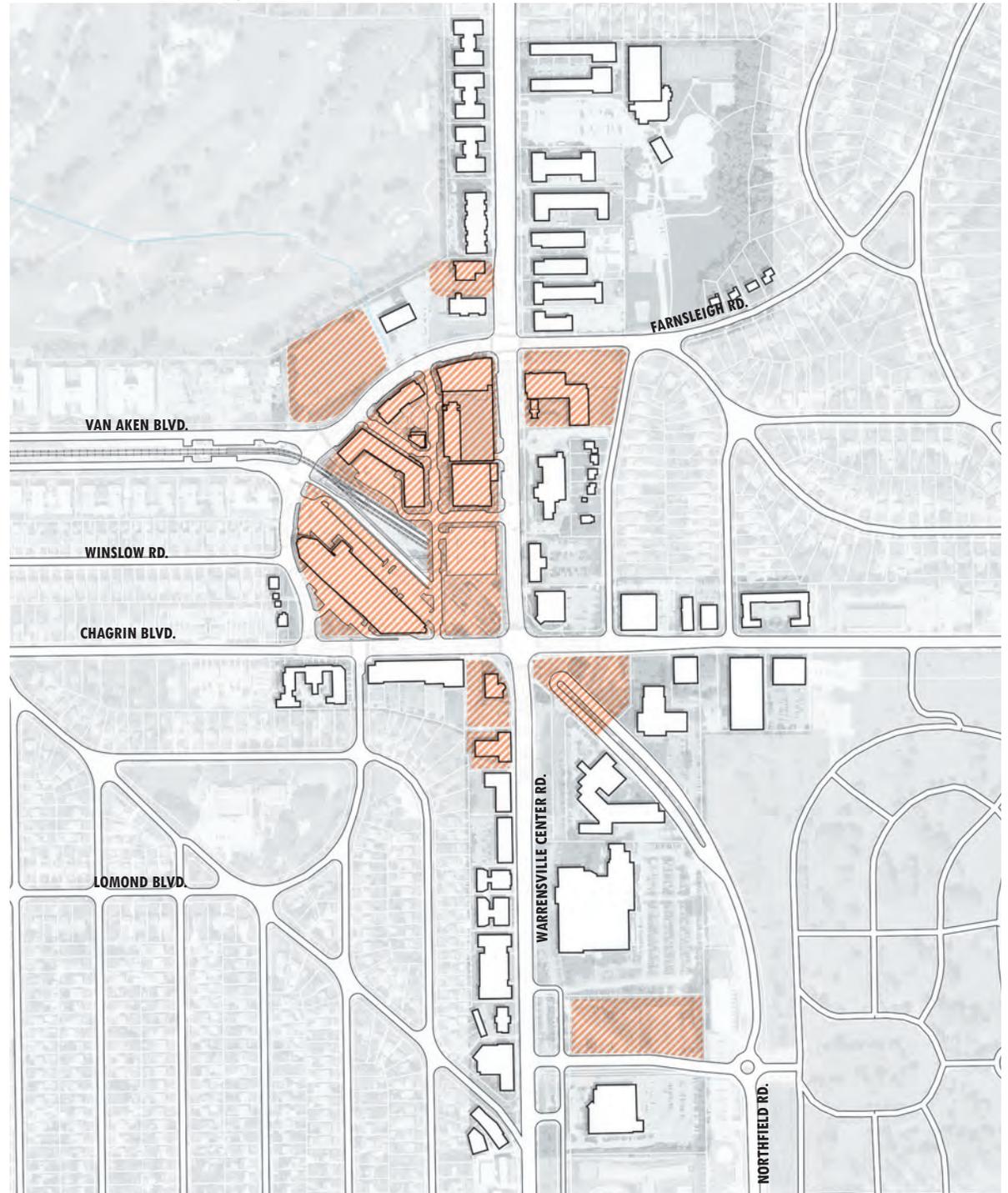


KEY

- Bus 14
- Bus 5
- Bus 41S
- Bus 41N
- RTA Rail Stations
- ● ● Bus Stops
- Blue Line

DEVELOPMENT SITES

This map provides a record of current development sites within the Van Aken District as of December 2016. A majority of these are associated with the Van Aken development bordering the Warrensville Center, Chagrin and Farnsleigh corridors.



KEY

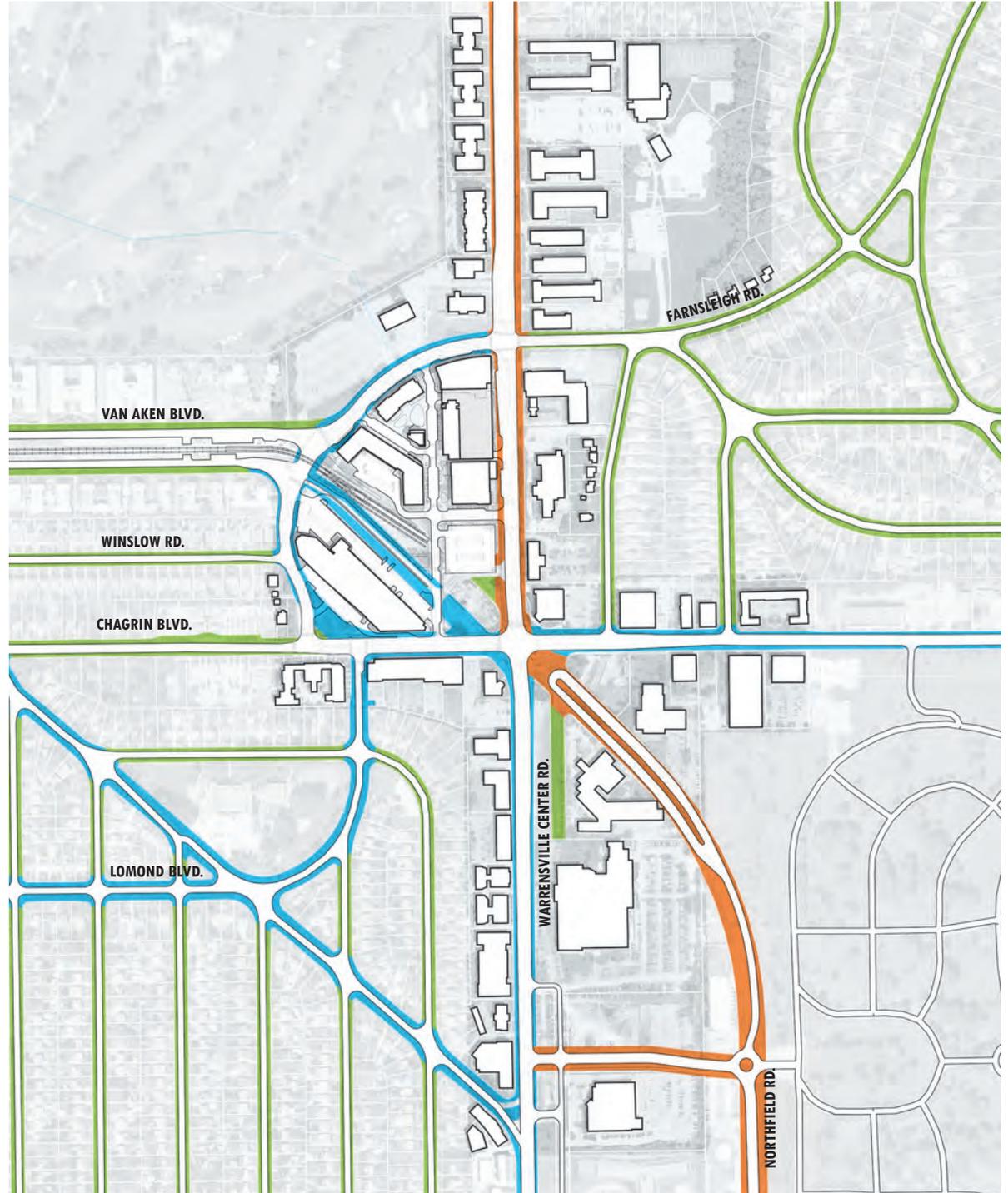
 Development Sites

RIGHT-OF-WAY

Right-of-way width varies along the roads in the Van Aken District. The existing curb-to-curb dimension, shown in white, has been subtracted from the color-coded right-of-way. The remaining areas in color represent the space available within which to make improvements within the public realm.

KEY

- 40'-60'
- 70'-90'
- 100'-120'

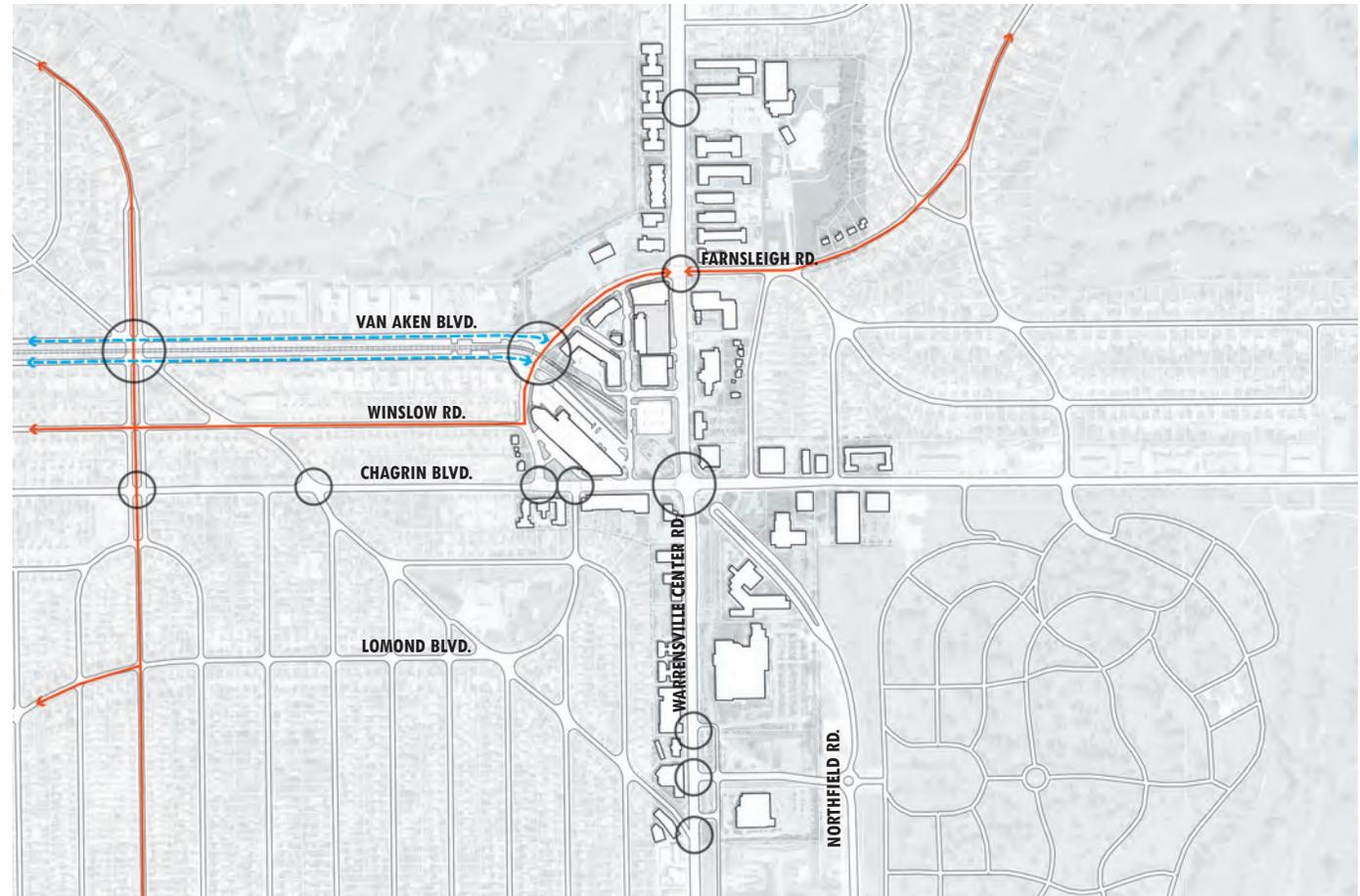


BICYCLE CONNECTIVITY

KEY

- Shaker Heights On Road Bicycle Network
- - - BMUFL
- Signaled Intersection

The map to the right shows the existing bicycle network in the Van Aken District. The On-Road Bicycle Network includes Van Aken Blvd, Winslow Road and Farnsleigh Road. A signed Bikes May Use Full Lane (BMUFL) route is located along Van Aken Boulevard.



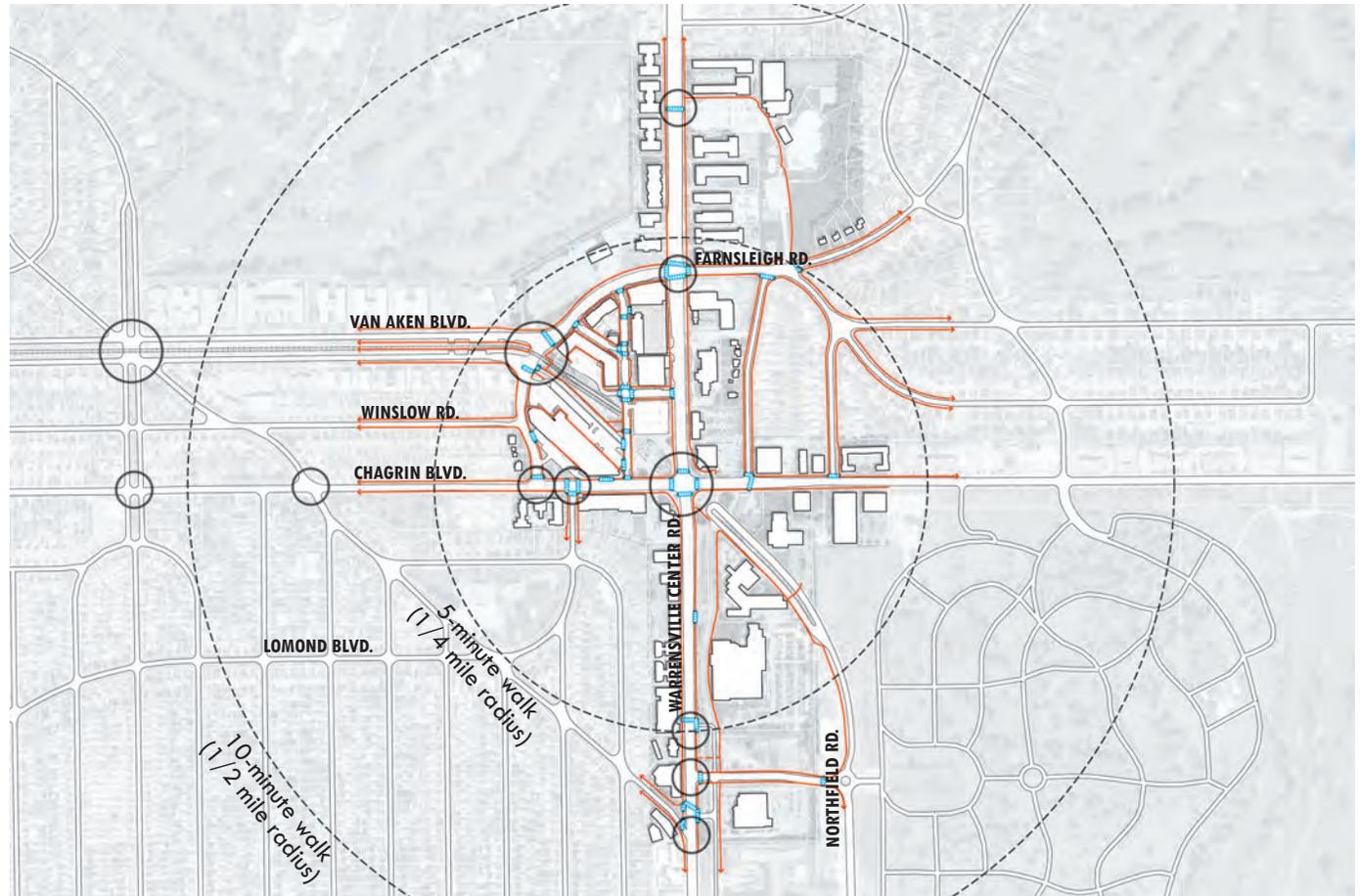
PEDESTRIAN CONNECTIVITY

Pedestrian connectivity is reflected by the existing sidewalks, crosswalks and signaled intersections in the Van Aken District. These routes are vital to supporting local trips within the district from surrounding neighborhoods.

Five-minute and ten-minute walking radii taken from the Warrensville Center/Van Aken intersection are also shown.

KEY

- Sidewalks
- ▬▬▬ Crosswalk
- Signaled Intersection





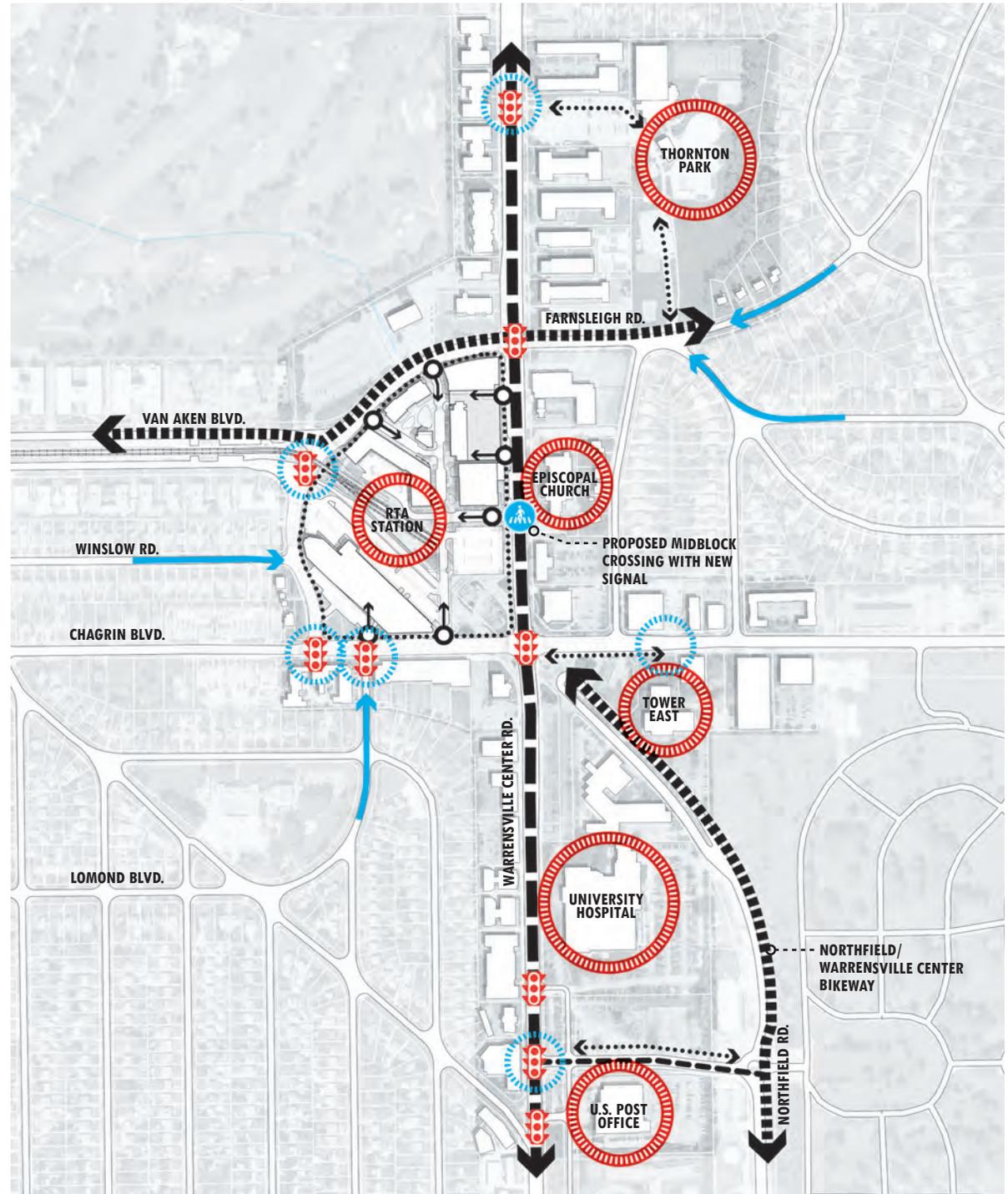
Community Meeting #1, June 20, 2016

03 DISTRICT CONNECTIONS FRAMEWORK

DISTRICT CONNECTIONS FRAMEWORK PLAN

KEY

-  Multi-Use Path
-  Multi-Use Path
-  Community Connector
-  On-Street Bike Signage
-  Primary Sidewalk Connector
-  Pedestrian Connector
-  Proposed Midblock Crossing
-  Gateway
-  Community Anchor
-  Signaled Intersection



District Connections Framework Plan

The Van Aken District Connections Framework Plan provides a vision for regional, community and local non-motorized and pedestrian connectivity to and from the Van Aken District. This will serve to facilitate connections to transit and strengthen proposed and future retail, office and residential land uses as part of the transit oriented district development.

The regional corridors on Warrensville Center Road and Van Aken Boulevard/Farnsleigh Road are important links connecting the district to surrounding population centers. These are proposed as off-road multi-purpose paths located behind the back of curb and physically separated from vehicle traffic. This type of path can accommodate a wide range of users.

The primary elements of the Framework Plan include:

- Proposed gateway locations have been identified that will serve to highlight the district boundaries. These gateways are proposed at the following intersections:

- Warrensville Center/Thornton Park
- Van Aken/Farnsleigh
- Chagrin/Farnsleigh/Lomond
- Warrensville Center/Northfield
- Tower East

These locations have been chosen based on a current understanding of where land use changes and the identity of a “district” starts to emerge. Branded gateway signage, described

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in Section 5 of this report, is proposed for these locations. As the district develops, there may be a need to adjust the locations of these gateways.

- A multi-use path is recommended on the east side of Warrensville Center Road in alignment with the findings from the Eastside Greenway Plan. This multi-use path will provide regional north-south connectivity to the Van Aken District. It will also improve the pedestrian environment and serve to identify the extent of the district
- A multi-use path is also recommended on the north side of Van Aken Boulevard and Farnsleigh Road. An existing signaled pedestrian crossing at Warrensville Center Road provides a connection to Thornton Park, a popular recreational destination for kids and adults. This multi-use path provides regional east-west connectivity to the Van Aken District.
- The Framework Plan also acknowledges the recommendation from the Northfield/Warrensville Center Corridor Plan of a bikeway on Northfield Road.
- The Community Connectors provide corridors from the surrounding neighborhoods to the core of the district and are proposed as an on-road bicycle and sidewalk network.
- On-street Bike Signage is proposed for new Northfield Road most likely in the form of sharrows.
- Primary Sidewalk Connectors highlight important pedestrian links within the district connecting people with retail and recreational destinations
- Pedestrian Connectors indicate pedestrian routes into the central core of the Van Aken District.

- In addition, a new, signalized mid-block crossing is proposed to cross Warrensville Center Road in the vicinity of the Christ Episcopal Church to facilitate access between the core of the Van Aken District and this important destination.

All signage and markings for bicycle and pedestrian facilities should be in compliance with the Manual of Uniform Traffic Control Devices (MUTCD).



Indianapolis Cultural Trail



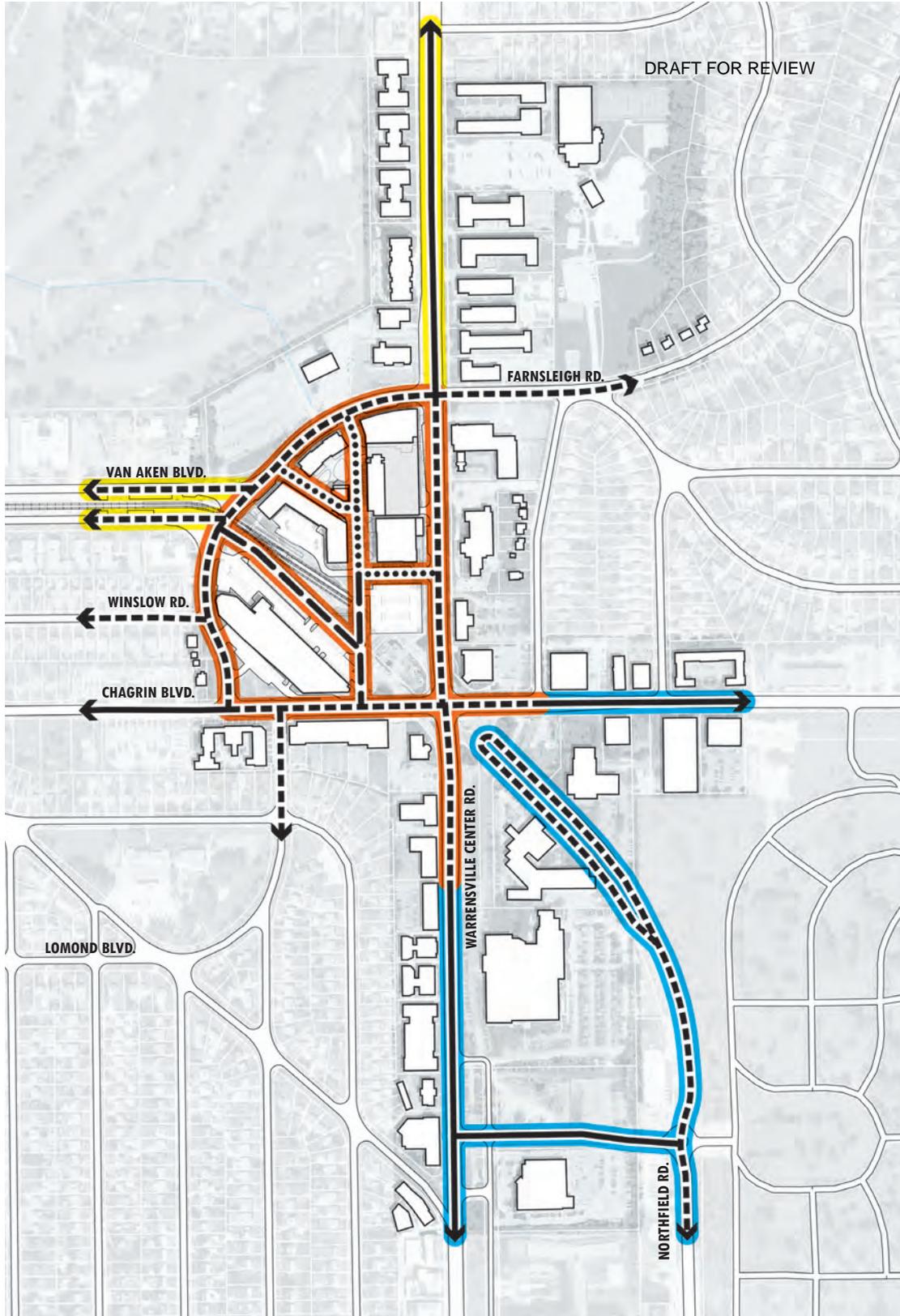
Multi-Use Path

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04 STREET TYPOLOGY

Downtown streets do not conform to the strict dichotomy of mobility versus access. While automobiles continue to be an important mode of travel, access and mobility by other modes are equally important and essential. District streets must provide inviting environments for efficient movements of pedestrians, bicycles, and transit riders.



Street Typology

The Street Typology Plan classifies streets within the Van Aken District with respect to their functional emphasis and frontage context. These recommendations are based, in part, on adjacent land use and provide an overview of how streets within the district are used. The functional emphasis facilitates predictable and consistent street design by identifying when and where certain transportation modes or activities are emphasized over others.

The functional uses range from primarily pedestrian to transit, balanced, bicycle or primarily a vehicle use.

KEY

FUNCTIONAL EMPHASIS

- Vehicle
- Bicycle
- - - Balanced
- - - Transit
- Pedestrian

FRONTAGE CONTEXT

- Mixed Use/Commercial
- Office/Institutional
- Residential

Functional Emphasis

Streets and public rights-of-way typically range in width throughout the Van Aken District. Not all streets can serve all modes equally and still provide an efficient, reliable and easy-to-navigate system. While Frontage Contexts may vary from block to block, the transportation Functional Emphasis of a street generally remains consistent along long segments of a corridor to make a logical system for multi-modal circulation and travel.

The Functional Emphasis facilitates predictable and consistent street design by identifying when and where certain transportation modes or activities are emphasized over others. The Functional Emphases address the four primary modes of transportation – walking, bicycling, transit, and auto or truck travel. The five major Functional Emphasis types are:

- Pedestrian
- Bicycle
- Transit
- Vehicle
- Balanced street

In addition to the five Functional Emphasis street types, two other street types are included that provide secondary linkages and access and service into the core of the district:

- Public alleys
- Pedestrian connectors

Transportation is multi-dimensional. Although streets may emphasize and enhance one or more particular modes, each and every street in the district must accommodate all modes

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comfortably. The transportation types address not only travel through downtown by common modes such as walking, bicycling, driving and transit, but also address the transportation function of getting to downtown destinations.

Frontage Context

Street Frontage Contexts are aspirational. While in some instances, district blocks are beginning a change toward the desired land use context, there are other areas where the district continues to evolve. This manual designates streets with the envisioned rather than existing street Frontage Context in order to encourage street design that supports this continued evolution.

Street Frontage Context and associated activity varies in the district. This tapestry of frontage uses was simplified down to three primary types of street frontages:

- Mixed-use/Commercial
- Office/Institutional
- Residential

The axonometric sketches and proposed street cross-sections presented later in this section indicate the relationship of the pedestrian area to existing roadways and adjacent land use.

Design Elements

The Street Typology Plan provides a framework for application of Design Elements including landscape, hardscape, signage, lighting, furnishings, and art. These elements are described in more detail in chapter 5. For each street type, a table is provided that identifies what elements are important to incorporate into the street design. The elements are prioritized as:

- Applicable – meaning these items would clearly enhance the character of the public realm in this typology and should be considered, where appropriate, in any future street improvement and/or development opportunity.
- ◐ Semi-applicable – meaning these elements may enhance the character of the public realm in this typology; however, they may require special consideration, be dimensionally or otherwise constrained or require coordination with adjacent land owners; opportunities to incorporate them should be fully explored.
- Not applicable – meaning these elements are not appropriate for the public realm in this typology.

Street Zones & Design Elements

Streets are considered to be the entire right of way and are divided into a series of zones as follows:

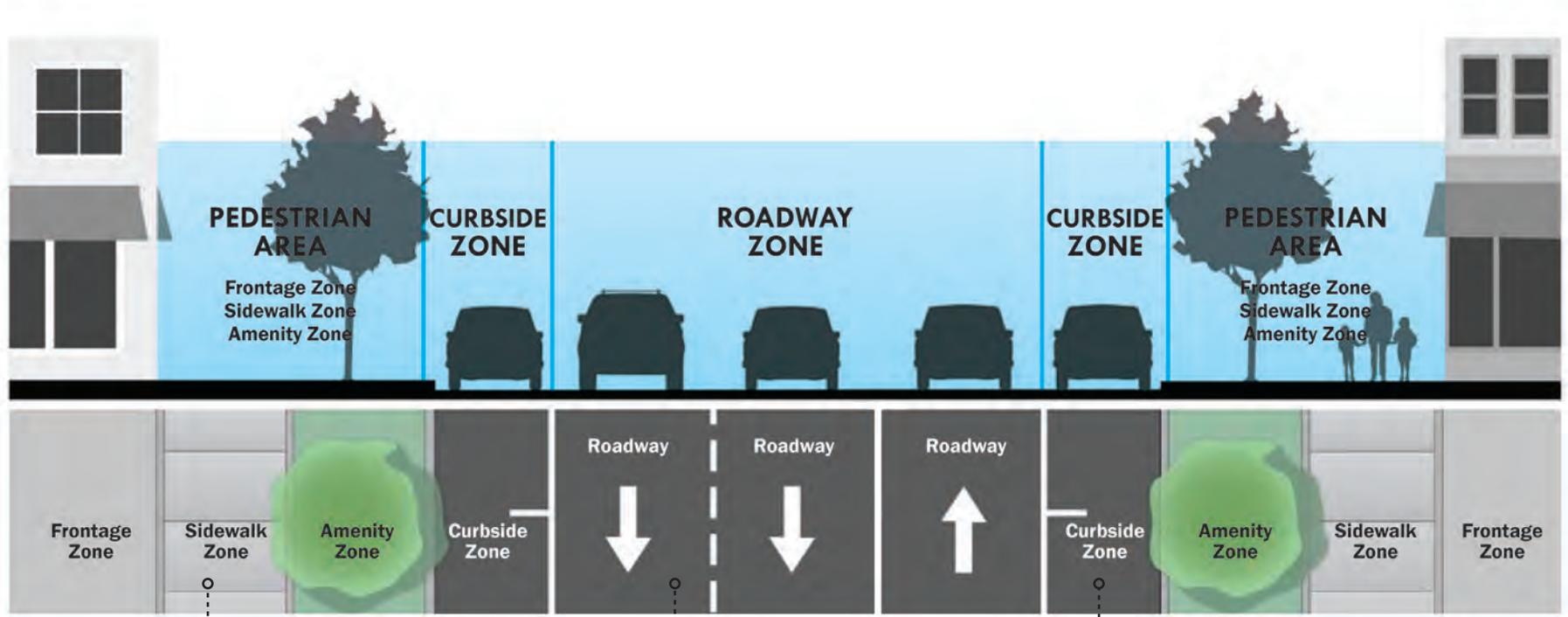
- **Roadway Zone:** Includes travel lanes for traffic including cars, transit, trucks and bicycles.
- **Curbside Zone:** May include parking lanes, bumpouts, loading zones and other uses adjacent to the curb.
- **Pedestrian Area:** Extends from the curb to the face of the building and/or the edge of the right-of-way and encompasses the following three specific zones:

Amenity Zone – between the curb and sidewalk area, often containing lighting, signage, street furnishings, amenities, landscaping and expanded pedestrian areas.

Sidewalk Zone – primary through travel zone for pedestrians where sidewalks and multi-use paths are located.

Frontage Zone – Area between the sidewalk and the building face, often a clear zone immediately adjacent to buildings.

It is the Pedestrian Area that represents the public realm and the area with which this report is primarily focusing on.



Pedestrian Area

- Sidewalk / Multi-use Path
- Outdoor Retailing / Cafe Seating
- Driveways
- Porches, Stoops, Yards
- Street trees / Landscape
- Street Furniture
- Green Infrastructure

Roadway Zone

- Travel Lanes
- Turn Lanes
- Medians
- Bus Lanes
- Bicycle Lanes
- Pedestrian Crosswalks

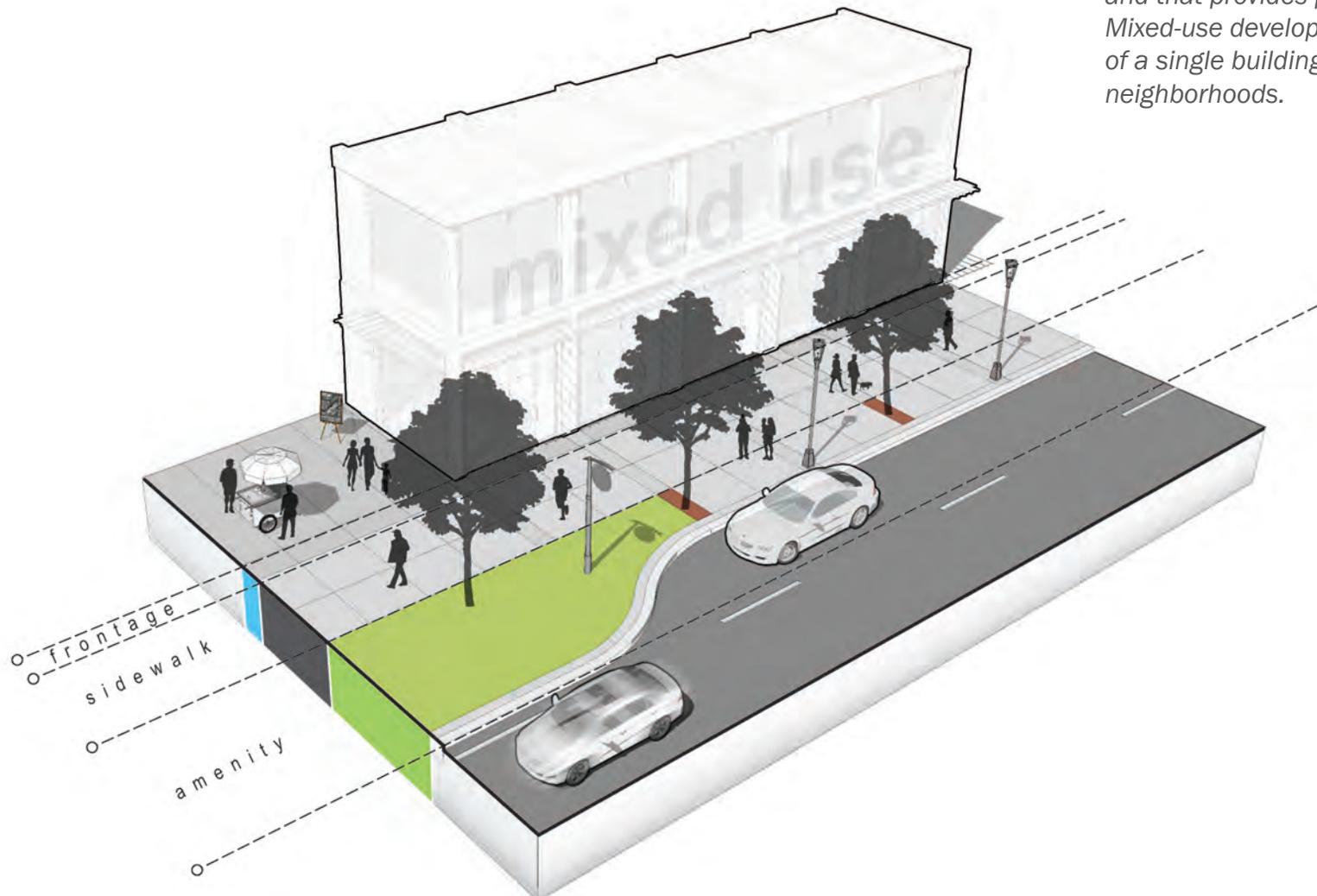
Curbside Zone

- On-street Parking
- Curbside Loading
- Bus Zones
- Bicycle Corrals
- Protected Bike Lanes



MIXED-USE/COMMERCIAL

Mixed-use development is a type of urban development that blends residential, commercial, cultural, institutional, or industrial uses, where those functions are physically and functionally integrated, and that provides pedestrian connections. Mixed-use development can take the form of a single building, a city block, or entire neighborhoods.



applicable ●
 semi applicable ◐
 not applicable ○

DESIGN ELEMENTS - Mixed-use/Commercial

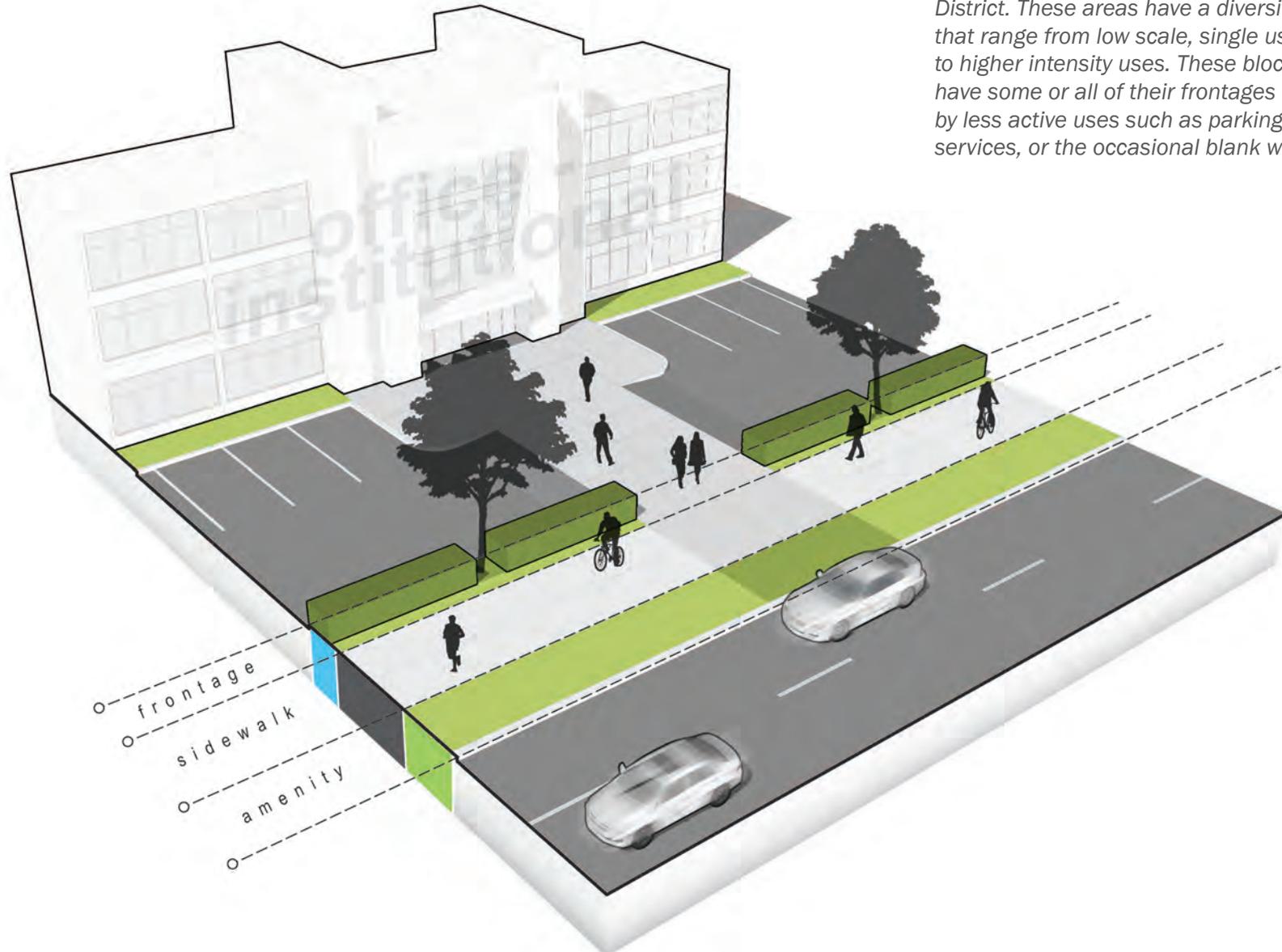
This chart provides an indication of the applicability of the design elements described in Section 5 within each of the pedestrian area zones.

		frontage	sidewalk	amenity
 <p>Landscape</p> <ul style="list-style-type: none"> Street Trees Landscape Planters Seasonal Installations Green Infrastructure 		◐ ● ● ●	○ ○ ◐ ●	● ● ● ●
 <p>Hardscape</p> <ul style="list-style-type: none"> Standard Paving Special Paving Seatwalls Multi-use Path Crosswalks Pedestrian Signals 		● ● ● ○ ○ ○	● ● ○ ● ● ○	◐ ● ● ○ ○ ●
 <p>Lighting</p> <ul style="list-style-type: none"> Pedestrian Lighting Feature Lighting Landscape Lighting 		● ● ●	○ ○ ○	● ◐ ●
 <p>Furnishings</p> <ul style="list-style-type: none"> Benches Refuse and Recycling Bicycle Elements 		● ● ●	○ ○ ○	● ● ●
 <p>Signage</p> <ul style="list-style-type: none"> Gateway Signs Vehicular Signs Pedestrian Signs District Identification Signs Street Signs 		○ ○ ● ◐ ○	○ ○ ◐ ○ ○	● ● ● ● ●
 <p>Art</p> <ul style="list-style-type: none"> Permanent Installations Temporary Installations 		● ●	◐ ◐	● ●



OFFICE/INSTITUTIONAL

Office and institutional types of land use are a common Frontage Context in the Van Aken District. These areas have a diversity of uses that range from low scale, single use buildings to higher intensity uses. These blocks may also have some or all of their frontages occupied by less active uses such as parking lots, public services, or the occasional blank wall.



applicable ●
 semi applicable ◐
 not applicable ○

DESIGN ELEMENTS - Office/Institutional

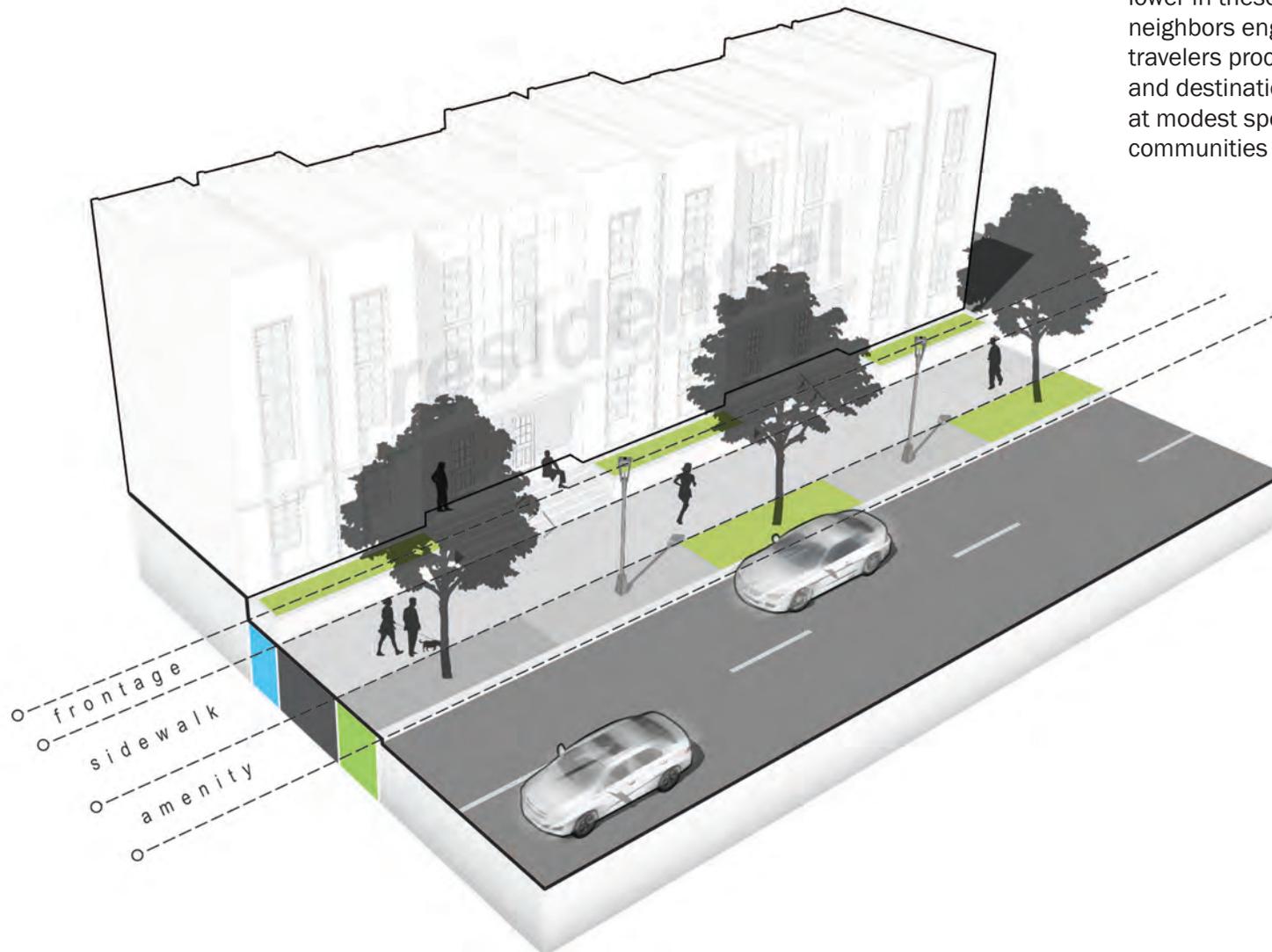
This chart provides an indication of the applicability of the design elements described in Section 5 within each of the pedestrian area zones.

		frontage	sidewalk	amenity
 Landscape	• Street Trees	●	○	●
	• Landscape Planters	◐	○	◐
	• Seasonal Installations	●	○	●
	• Green Infrastructure	●	○	●
 Hardscape	• Standard Paving	●	●	◐
	• Special Paving	◐	◐	◐
	• Seatwalls	●	○	●
	• Multi-use Path	○	●	○
	• Crosswalks	○	●	○
	• Pedestrian Signals	○	○	●
 Lighting	• Pedestrian Lighting	●	○	●
	• Feature Lighting	●	○	◐
	• Landscape Lighting	●	○	◐
 Furnishings	• Benches	●	○	◐
	• Refuse and Recycling	●	○	◐
	• Bicycle Elements	●	○	●
 Signage	• Gateway Signs	○	○	●
	• Vehicular Signs	◐	○	●
	• Pedestrian Signs	◐	○	●
	• District Identification Signs	○	○	●
	• Street Signs	○	○	●
 Art	• Permanent Installations	●	○	◐
	• Temporary Installations	◐	◐	◐



RESIDENTIAL

Residential or near-residential frontage contexts feature lawn extensions, porches, large shade trees, and other uses which define the interface between the public street and private property. Pedestrian activity is lower in these areas and is characterized by neighbors engaging in social exchange or travelers proceeding to other nearby districts and destinations. Vehicle traffic should travel at modest speeds respectful of the residential communities through which they are traveling.



applicable ●
semi applicable ◐
not applicable ○

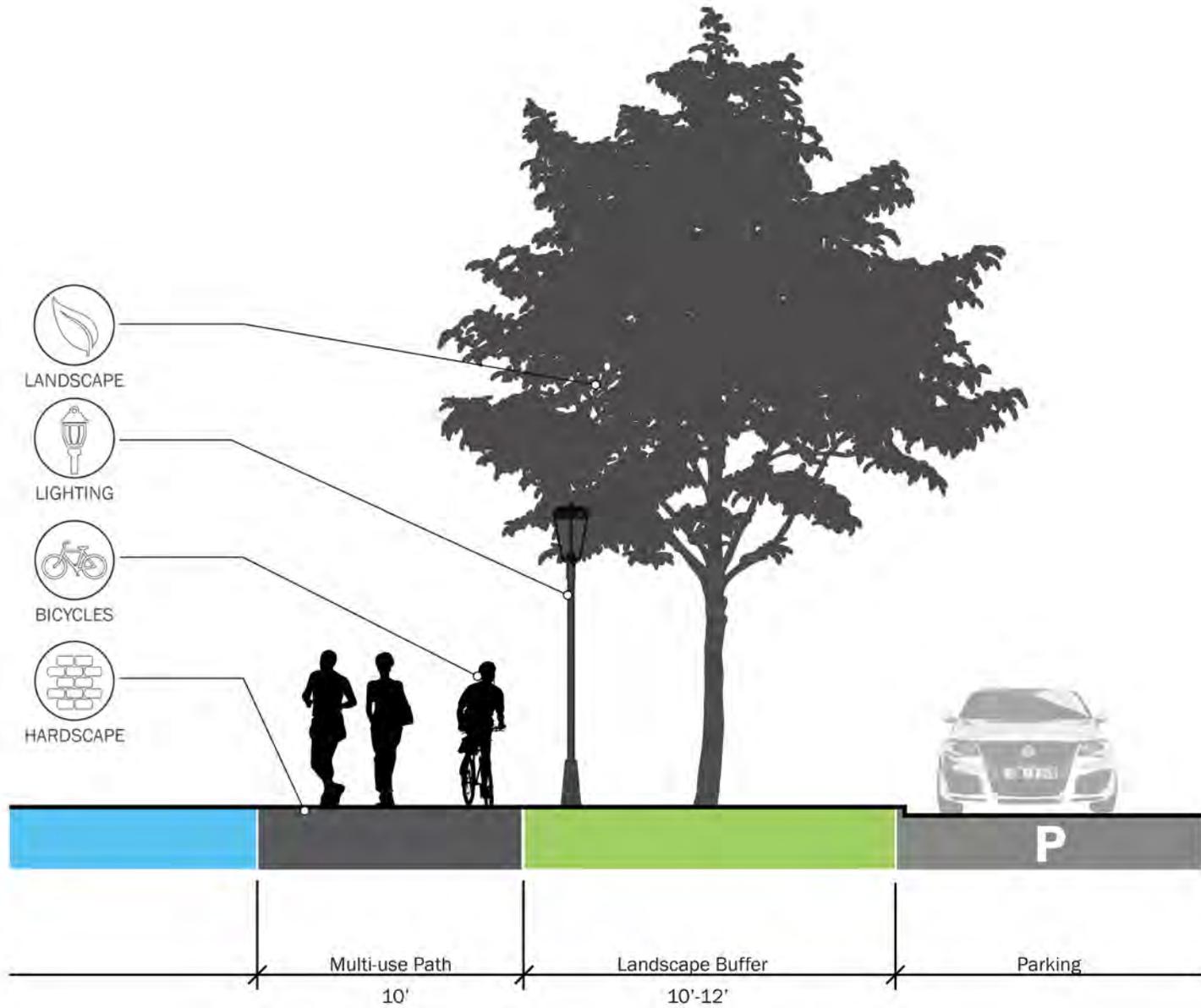
DESIGN ELEMENTS - Residential

This chart provides an indication of the applicability of the design elements described in Section 5 within each of the pedestrian area zones.

		frontage	sidewalk	amenity
 Landscape	• Street Trees	●	○	●
	• Landscape Planters	◐	○	◐
	• Seasonal Installations	◐	○	◐
	• Green Infrastructure	◐	○	●
 Hardscape	• Standard Paving	○	●	◐
	• Special Paving	◐	◐	◐
	• Seatwalls	●	○	●
	• Multi-use Path	◐	●	○
	• Crosswalks	○	●	○
	• Pedestrian Signals	○	○	●
 Lighting	• Pedestrian Lighting	◐	○	◐
	• Feature Lighting	◐	○	◐
	• Landscape Lighting	◐	○	◐
 Furnishings	• Benches	●	○	●
	• Refuse and Recycling	●	○	●
	• Bicycle Elements	●	○	●
 Signage	• Gateway Signs	○	○	●
	• Vehicular Signs	○	○	●
	• Pedestrian Signs	○	○	●
	• District Identification Signs	○	○	●
	• Street Signs	○	○	●
 Art	• Permanent Installations	●	○	●
	• Temporary Installations	●	◐	●

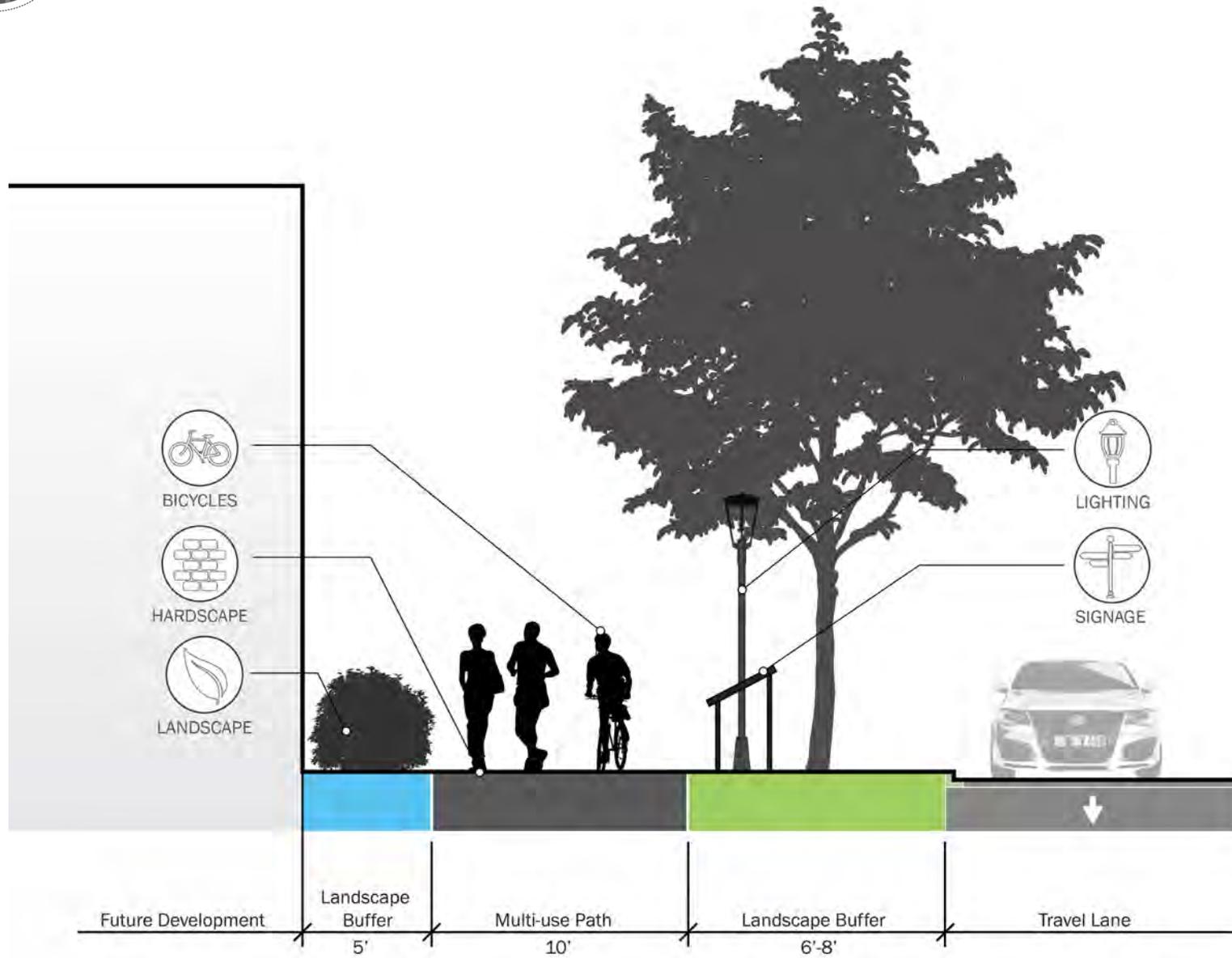


SECTION: VAN AKEN BLVD - PROPOSED



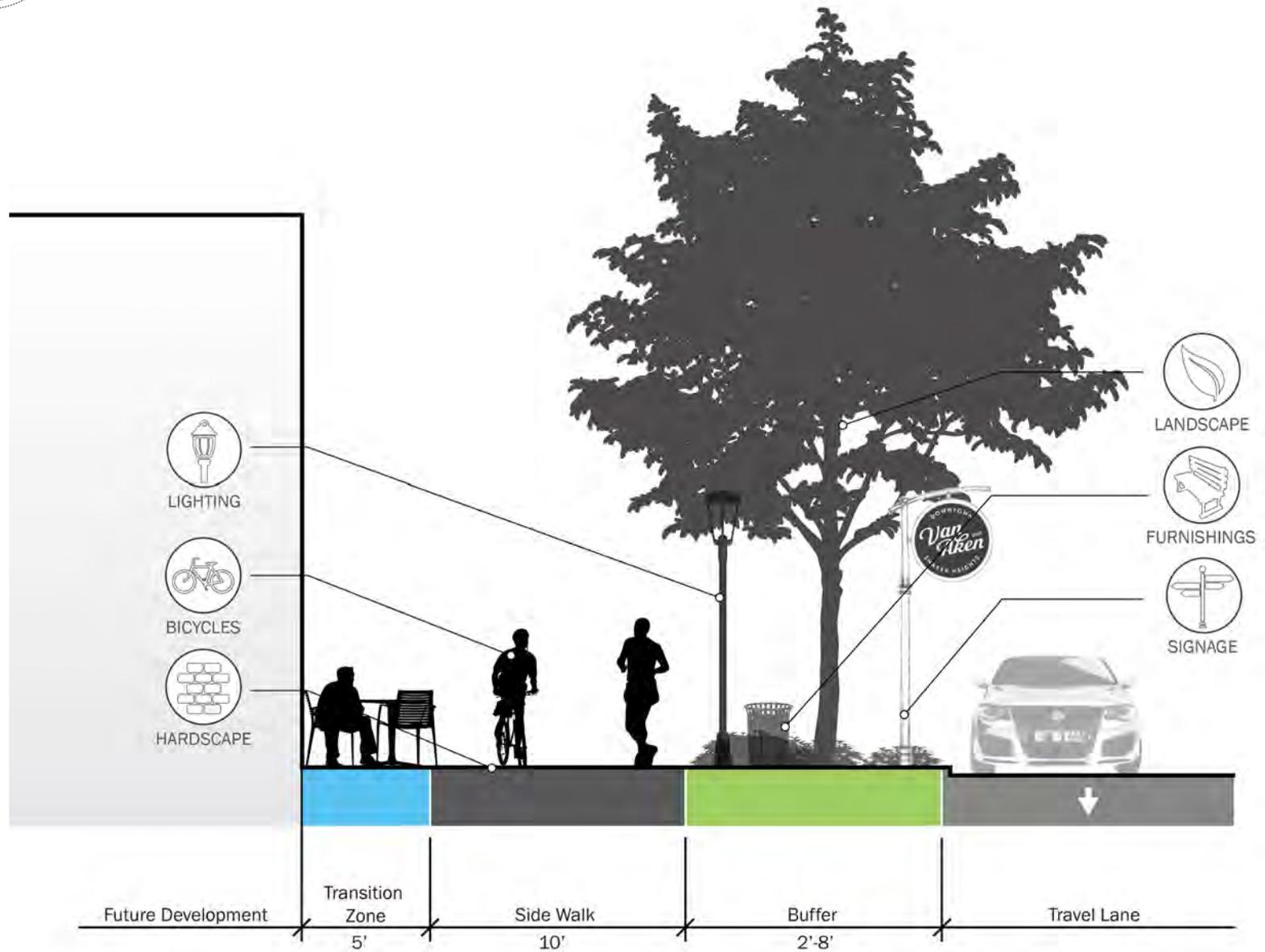


SECTION: FARNSLEIGH RD - PROPOSED



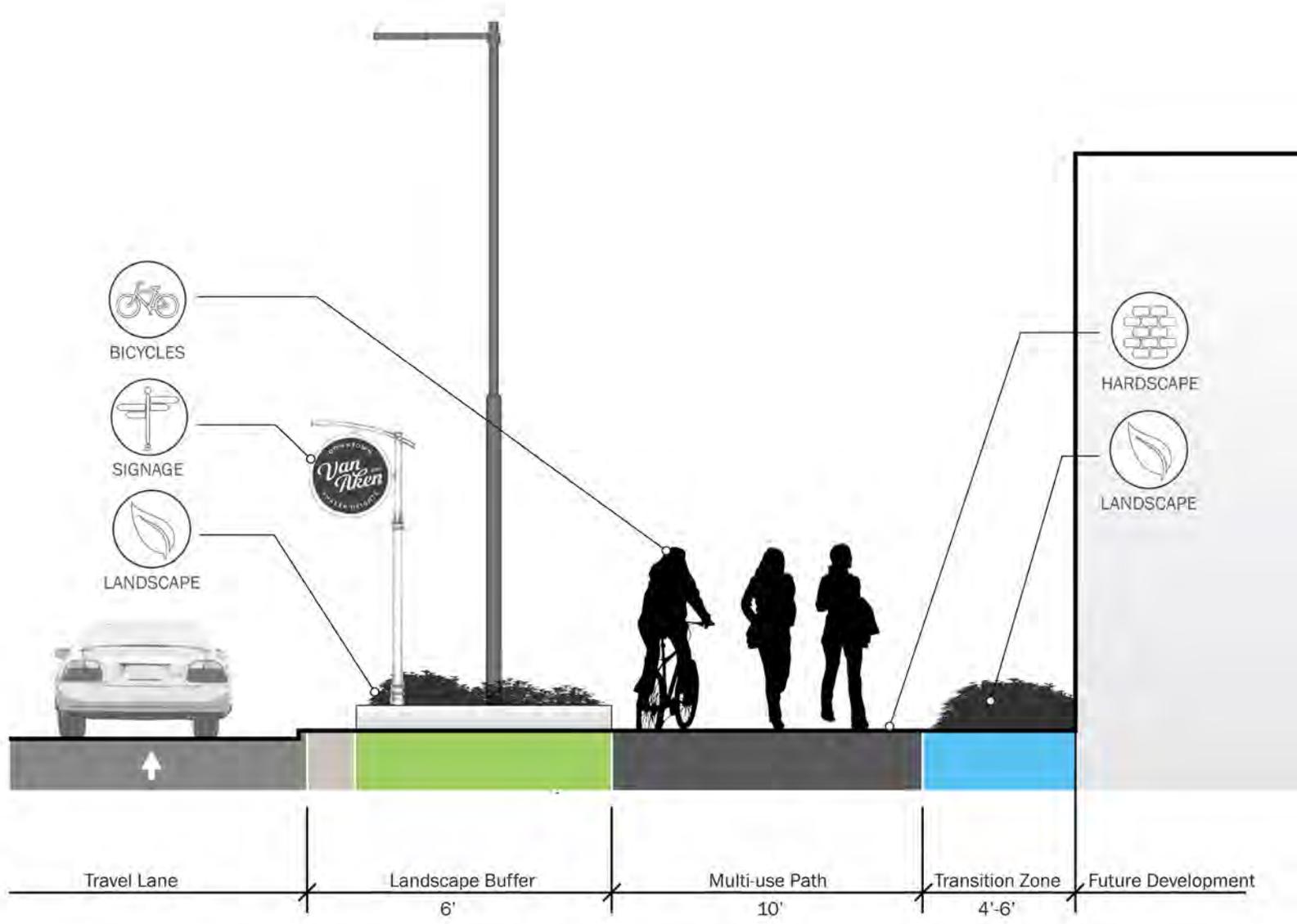


SECTION: CHAGRIN BLVD - PROPOSED



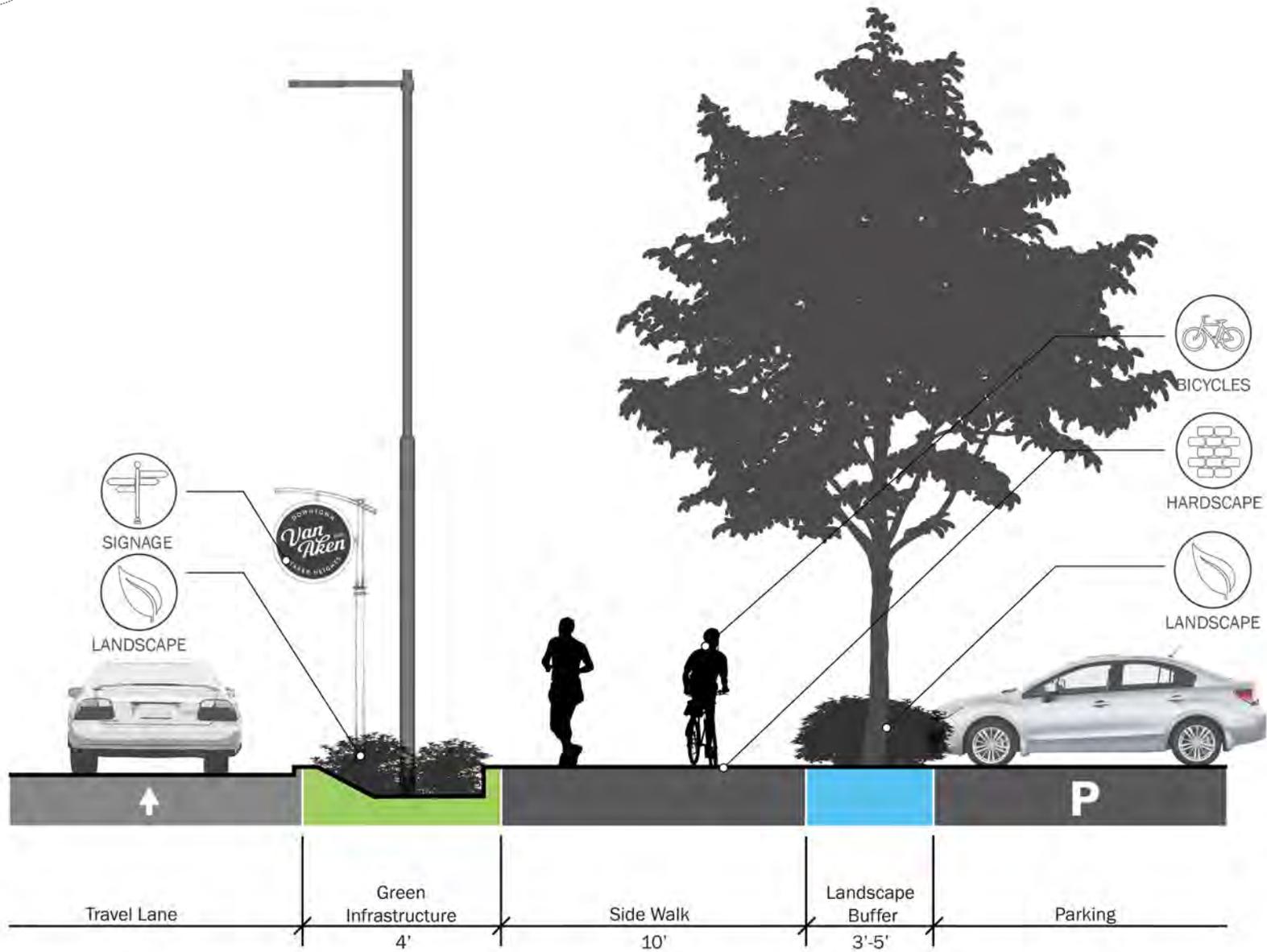


SECTION: WARRENSVILLE CENTER ROAD (NORTH) - PROPOSED





SECTION: WARRENSVILLE CENTER ROAD (SOUTH)- PROPOSED





landscape



hardscape



lighting



furnishings



signage



art

05 DESIGN ELEMENTS

The pedestrian area is the portion of the street right-of-way set aside for use primarily by pedestrians. This area is typically from the curb edge to either the building wall or property line. The pedestrian area has three distinct zones, each running parallel to the right-of-way: Frontage Zone, Sidewalk Zone, and Amenity Zone. These zones are defined by a family of design elements covered in this chapter.



LANDSCAPE



Overview

Plants are an important element in the public realm. They serve to soften the street environment, provide visual interest, create enclosure and separate pedestrians from vehicles. They also provide environmental benefits such as decreasing the urban heat island effect, absorbing air-borne pollutants and improving stormwater infiltration.

Use

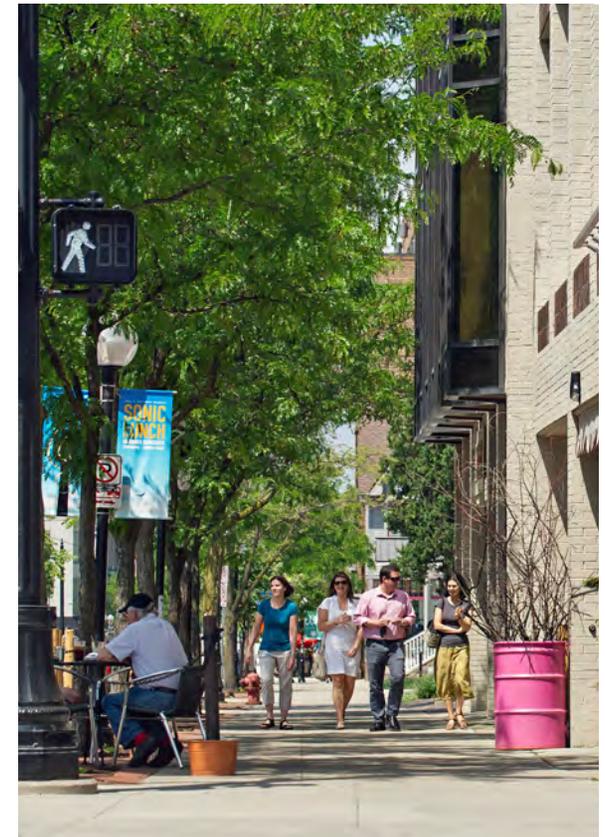
Plants can be used in a variety of ways in the frontage and amenity zones. The frontage zones, which are typically associated with adjacent land uses, may have more intensive plantings that can be tailored to individual needs. The amenity zone typically includes street trees and landscape planters.

Street Trees

Street trees provide aesthetic benefits as well as providing a cooler and more comfortable place to walk. They are instrumental in creating a buffer in the amenity separating pedestrians from vehicles. They come in a variety of sizes with shapes ranging from columnar, to be used in confined spaces, to spreading where there is more room. In the amenity zone, street trees are typically planted in tree wells that should be designed to accommodate growth of the root ball and longevity of the tree.

💰 Cost Considerations

Individual street trees range from \$500-\$800 each assuming a 3" caliper tree. Depending on the conditions, installation can also include excavation, backfill with structural soil, underdrainage, topsoil, and mulch. A decorative tree grate is frequently used to protect the tree from compaction. These items can raise the cost to \$3,000-\$4,000 per tree.



Landscape Planters

Landscape planters are curbed or raised soil areas designed to accommodate decorative plantings in a clean and maintained fashion within the streetscape. Landscape planters can make the street environment more appealing and engaging for all types of users. Raised planters are typically 18” in height and can also provide an opportunity to incorporate informal seating areas in the public realm.

💰 Cost Considerations

The cost of landscape planters varies depending on the design.

Ground level/curbed planters: \$10-\$15 per square foot including plants, topsoil and mulch

Raised planters: \$15-\$20 per square foot including concrete, plants, topsoil and mulch



Seasonal Installations

Seasonal installations include items such as hanging baskets supported on light pole brackets or perennial pots. Hanging baskets are a common way to provide 3-season color and variety. Perennial pots come in numerous shapes, sizes, colors and materials and are frequently arranged in clusters.

💰 Cost Considerations

Hanging baskets: \$500-\$800 each including installation and seasonal maintenance (watering, weeding) The cost of perennial pots themselves varies dramatically depending on the style preferred.



Green Infrastructure

Managing stormwater in the urban environment is critical for protecting water quality and reducing the volume of stormwater entering rivers and other water bodies. Stormwater management techniques, often referred to as green infrastructure, include many different types of facilities designed to infiltrate, store and filter stormwater.

Within the urban environment, a variety of techniques may be applied in order to achieve management targets. Typically, these techniques include infiltration planters and underground infiltration. These practices capture and infiltrate runoff close to where it falls, filtering the water to protect water quality and protecting rivers and water bodies from excess erosion.

Green infrastructure can also provide habitat for numerous animals and help reconnect patches of habitat in the urban landscape. It can provide places for animals to forage or rest and help to maintain healthy ecosystems close to home.

Coordinating private development projects with public street projects should be explored to provide as much stormwater management as possible. Options for managing additional stormwater runoff on private property and/or within the right-of-way can be a means to meet, and possibly exceed, management targets.

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Infiltration Planters

Infiltration planters are open landscaped areas that are typically located in the Amenity Zone. They may also be located in other zones depending on the overall design of the street.

Infiltration planters are designed to capture runoff from the roadway and other impervious areas of the street. Captured water is filtered through plants and soil and infiltrated completely through the planter or into an overflow underdrain connected to the stormwater system.

Infiltration planters can be designed as part of a street reconstruction project. They can also be retrofitted into an existing streetscape by repurposing landscape planters or constructing new ones in the existing sidewalk.

\$ Cost Considerations

Infiltration planters: \$30 per square foot including concrete curbing, aggregate drainage bed and underdrain



Miller Road Rain Gardens, Ann Arbor, MI



Infiltration Planter, State Street Parking Lot, Battle Creek, MI

Underground Infiltration

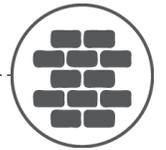
Subsurface infiltration can take a number of forms including underground infiltration vaults, infiltration trenches and dry wells. These systems can be used to provide stormwater infiltrations in constrained urban areas with limited space available for landscape planters or in conjunction with surface treatments to add additional storage and infiltration capacity.

💰 Cost Considerations

The cost of underground infiltration is dependent on the area drained and volume needed.



HARDSCAPE



Overview

Hardscape refers to hard landscape materials in the built environment that are incorporated into the landscape. This includes paved areas with common materials as well as special paving, retaining and seat walls and other elements made up of hard wearing materials such as stone and concrete. Hardscape also includes water features such as fountains or pools.

Use

Hardscape is incorporated into the built environment across the frontage, sidewalk and amenity zones. It is used to accommodate vehicular and pedestrian traffic as well as to retain earth where needed. This often doubles as a seating wall where the height is appropriate. Hardscape also serves as a foundation to secure or confine other elements such as lighting, signage, planters or public art.

Standard Paving

A majority of the hardscape in the public realm is made of concrete. Concrete is a composite material composed of coarse aggregate bonded with Portland cement. When mixed with water, it forms a fluid mass that is easily molded into shapes. After curing, it forms a durable stone-like material. There are numerous additives that can be included with the mix to provide different colors and textures.

💰 Cost Considerations

Regular Concrete: \$6-\$8 per square foot depending on the complexity of the shape and ease of access

Amended Concrete: \$10-\$14 per square foot depending on the amendment

Special Paving

Special paving is used to designate important areas and destinations and to reinforce the identity of districts. This is frequently at pedestrian gateways and areas of high pedestrian activity. Special paving can include precast concrete or brick pavers which come in a variety of sizes and colors and can be installed in a number of ways, stamped concrete in a variety of patterns and pervious pavers.

💰 Cost Considerations

The cost for special paving can vary widely depending on the product specified and the intended use.

Recommended budget: \$10-\$15 per square foot

Seatwalls

Seatwalls typically serve double duty either to retain earth, contain plantings or to provide a physical barrier. They are usually made out of concrete but can be constructed of other materials as well. The industry standard for adult seating height is 18"-22" tall.

💰 Cost Considerations

Recommended budget: \$100-\$150 per square foot for a concrete seat wall



Multi-use Path

Multi-use paths are built to accommodate both bike and pedestrian traffic promoting regional and local non-motorized connectivity. They are physically separated from vehicle traffic which further enhances safety by a range of users. In accordance with recommendations from the Eastside Greenway Master Plan, a north/south multi-use path is proposed on Warrensville Center Road. An east/west multi-use path is proposed along Van Aken Blvd and Farnsleigh Road providing a connection to Thornton Park.

💰 Cost Considerations

Recommended budget: \$80-\$100 per linear foot assuming a 10-foot wide concrete path with appropriate markings, signage and site restoration.

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In addition to providing sidewalks and streetscape elements in the pedestrian realm, it is important to prioritize pedestrians at signalized intersections with measures that address pedestrian safety and comfort including crosswalks and pedestrian signals. The following elements should be incorporated:

Crosswalks

Crosswalks are the portion of the roadway designated for pedestrian use while crossing the street. Marked crosswalks provide a safe, clear, place to cross the street on foot, while requiring motorists to stop.

The recommended crosswalk marking is the standard continental design indicated by a series of lines parallel to the curb proceeding from curb ramp to curb ramp. FHWA has determined that this design is the most visible to motorists. It is also possible to incorporate aesthetic applications into crosswalk design that identifies them as special zones. This could include stamped and/or colored concrete or asphalt.

💰 Cost Considerations

Recommended budget:
Striped Crosswalk - \$500-\$800 each
Stamped/Colored Crosswalk - \$10-\$20 per square foot



Pedestrian Signals

Pedestrian signals are also important in the public realm. Countdown pedestrian signal heads should be provided to inform pedestrians and provide improved comfort and confidence associated with crossing the street. Rather than using pedestrian push buttons in the Van Aken District, signal timing should be set using pedestrian recall; this means that there will be sufficient time for pedestrians to cross the street every time the associated through street green is called. "Ped recall" timing is commonly used in downtown areas to accommodate pedestrians without requiring the push of a button. Industry standards for pedestrian clearance time must be considered.

💰 Cost Considerations

Recommended budget: \$5000 each



LIGHTING



Overview

Lighting is a critical element of the public realm. The purpose of lighting is 1) to improve the legibility of critical nodes, landmarks and circulation and activity zones in the landscape 2) facilitate the safe movement of pedestrians and vehicles, promoting a more secure environment and minimizing the potential for personal harm and damage to property and 3) to help reveal the salient features of a site at a desired intensity of light in order to encourage nighttime use of a particular environment

Lighting also provides atmosphere and a means to delineate a district or neighborhood. The technology behind lighting is very complex and has led to a specialty in lighting design itself. It not only provides a functional use but can also influence the way users interpret and experience the public realm.

Use

In the context of the Van Aken District, the lighting section covers pedestrian, feature and landscape lighting. These aspects of

the lighting element are associated with the frontage, sidewalk and amenity zones. Lighting is typically installed in the frontage and amenity zones and is designed to illuminate the sidewalk zone and to highlight specific features in the frontage and amenity zones.

Pedestrian Lighting

Pedestrian lighting is typically mounted lower than roadway lighting at a height ranging from 12 to 16 feet above the sidewalk. It is primarily used to illuminate the sidewalk zone although ambient light from pedestrian lighting is often sufficient to serve both the amenity and frontage zones as well. Light poles are placed in the amenity zone at a set distance behind the curb, typically 2 feet.

Lights can be spaced from 50'-75' apart depending on specific conditions. Lighting placement and levels should be sufficient

for personal safety and security permitting recognition of people and objects while avoiding creation of excessive shadows.

There are a wide range of light fixture styles. One should be selected for use throughout the Van Aken District that is consistent with the current Van Aken development. This will serve to reinforce the character and image of the district.

Cost Considerations

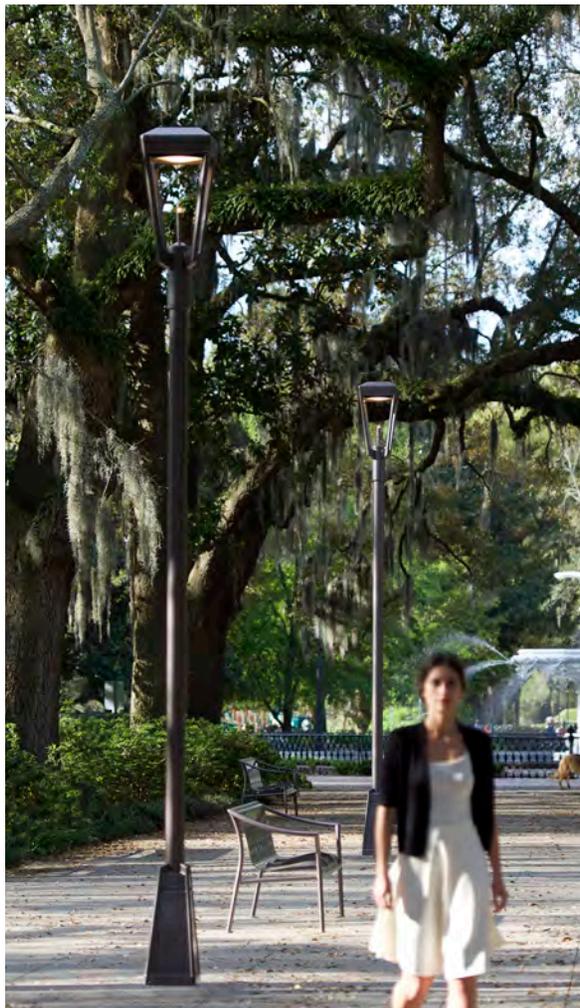
Depending on the style, materials and lighting technology selected, it is recommended to budget \$8,000-\$10,000 per fixture. This assumes installation and includes electrical outlets on each pole. Brackets for banners, hanging baskets or other ornamentation may be affixed to the light pole which would add to the cost.

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Feature Lighting



Feature lighting can provide a dramatic setting or atmosphere in specific situations and can serve to guide pedestrians to targeted destinations. Buildings and special objects can be lighted with shielded fixtures using spot lamps mounted on structures or ground mounted. Uplighting using well lights with louvers can also be used.



💰 Cost Considerations

As with the pedestrian lighting, a variety of feature lighting fixtures and technologies is available. Application of feature lighting frequently requires expertise in lighting design and engineering to achieve the desired effects. Depending on the complexity of the feature lighting needed, this can range from \$10,000 to \$15,000. One difference from pedestrian lighting is that feature lighting typically requires fewer fixtures.

Landscape Lighting

Landscape lighting refers to the use of outdoor illumination of public spaces for the enhancement of safety, nighttime aesthetics, accessibility, security and social and event uses. It is frequently used to create an atmosphere and not always intended to serve as a lighting source in itself. While pedestrian lighting is typically pole mounted, landscape lighting can be installed in a variety of ways including bollards, recessed wall mounts, tree mounts, rope lighting and even string lights.

💰 Cost Considerations

Costs for landscape lighting can vary dramatically depending the intended uses. A recommended budget should be determined based on the extent and style of lighting selected.





FURNISHINGS & AMENITIES



Overview

Furnishings and amenities are an important element in the public realm. They serve an aesthetic as well as a utilitarian function and can enliven and provide variety to outdoor spaces. Street furniture includes all items placed with the public realm. Several of these items are covered under other sections of this chapter. This section will address benches, refuse and recycling receptacles and bicycle elements. Proper selection, design and placement of these amenities will reinforce a unified district theme and create a lively and festive atmosphere throughout.

Use

The design and selection of street furnishings shall include considerations for the security, safety, comfort and convenience of the user. Durability of materials and ease of maintenance after installation are critical considerations. Provisions to accommodate persons with disabilities shall be incorporated into the design and siting of furnishings.

This includes provision for space adjacent to walkways for wheelchair and/or stroller parking.

Materiality and Style

Based on feedback from stakeholder and community meetings, flexibility and a mixture of materials in a contemporary style were preferred for furnishing and amenities. A contemporary style is compatible with the current Van Aken development branding and provides a distinctive aesthetic for the district.

Benches

Street furnishings include benches, chairs, seat-walls and other fixed structures that provide places for pedestrians to sit and rest. Street furnishings make using the public streets more accessible for all users and especially those with mobility challenges by providing places to stop and rest, to wait for services, or just to pause and relax.

Historically, street furnishings have been secured to the hardscape to prevent vandalism. There are current trends to incorporate movable furnishings in some locations.

\$ Cost Considerations

Recommended budget: \$3,500-\$5,000 each depending on materials and design.



Refuse and Recycling

Refuse and recycling receptacles keep the public realm as clean as possible and free from loose trash. Refuse and recycling receptacles should be provided regularly throughout the district so that pedestrians encounter them frequently when walking. Receptacles should be durable, visible and conveniently placed. In addition, receptacles should be easy for maintenance workers to access and empty.

Cost Considerations

Recommended budget: \$2,000-\$2,500 each depending on materials and design.



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Bicycle Elements

01 BICYCLE PARKING

Among the necessary supports for bicycle transportation, bike parking stands out as both vital and easy. Consideration of short-term and long-term installations are important as the Van Aken District serves as transportation hub as well as a destination in itself. Effective bike parking for short-term users depends on proximity to the destination and ease of use. Users of long-term parking generally place high value on security and weather protection. Short term parking is typically associated with a bike hoop, post or rack. Long term parking can include a bike locker or sheltered structure.

Cost Considerations

Recommended budget:
Bike hoops - \$1,000 - \$1,500 each
Bike lockers - \$1,800 - \$2,500 each

02 BICYCLE SHARE

Bike share is a service in which bicycles are made available for shared use to individuals on a short term basis. It can serve as a convenience for travelers without a bike and can also extend the range of service for a public transit system. It is recommended that implementation of a bike share system in the Van Aken District be coordinated with UHBikes which is currently being installed in downtown Cleveland and University Circle. Sharing with this technology would provide a tremendous regional benefit to expand the bike share network and greater flexibility for bike share users.

Cost Considerations

Bike share stations are often implemented through cost-sharing agreements with local businesses. Recommended budget: \$25,000 per site

03 REPAIR STOP

A bicycle repair stop provides a location for individuals to make minor repairs to their bicycle. These stops include all the tools necessary to perform basic bike repair and maintenance, from changing a flat tire to adjusting brakes and derailleurs. The tools and air pump are securely attached and a hanger arm allows the pedals and wheels to spin freely while making adjustments.

Cost Considerations

Recommended budget: \$1,200-\$2,500 each depending on materials and design.

04 BICYCLE STATION

A bike station makes cycling easier and more convenient with secure indoor bike parking. Bike stations frequently include other amenities such as restrooms, showers and/or changing rooms, day-use lockers and bicycle repair services. A common location for installation of a bike station is within the limits of a parking deck as seen with The Bike Rack in downtown Cleveland.

Cost Considerations

Typical per square foot prices would range from \$120/square foot to \$150/square foot depending on the level of amenities provided.

BICYCLE ELEMENT MAP



Recommended locations for bicycle elements are based on current information. Other sites may be identified as conditions change.

KEY

- 01** BICYCLE PARKING
- 02** BICYCLE SHARE
- 03** REPAIR STOP
- 04** BICYCLE STATION

BICYCLE ELEMENTS



01 BICYCLE PARKING



02 BICYCLE SHARE



03 REPAIR STOP



04 BICYCLE STATION



SIGNAGE



Overview

The most basic form of wayfinding is the street sign. Although often forgotten, street signs are essential for locals and visitors alike to get around the city efficiently. Missing, blocked or unreadable signs are a source of frustration for travelers. Wayfinding elements can also function as district identifiers, with branded signage becoming a unifying vertical component.

Use

Pedestrian-oriented wayfinding is generally concentrated within the commercial areas of downtown. Pedestrian wayfinding leads to the various commercial districts and key landmarks, cultural assets and other destinations within them.

On-street maps give pedestrians an opportunity to orient themselves and discover other destinations in downtown.

Wayfinding systems enable travelers to

navigate downtown independent of mobile devices or physical maps. Visitors, in particular, benefit from wayfinding systems. The information they provide increases visitor level of comfort and confidence in visiting and traveling around downtown.

Gateway Signs

Gateway signs announce arrival when entering into an area, such as districts and neighborhoods. They are often placed at points where one feels as if they have arrived rather than at jurisdictional boundaries.

💰 Cost Considerations

Gateway signs can be quite elaborate depending on the level of detail and materials involved.

Recommended budget: \$15,000 - \$20,000 dollars each

Vehicular Signs

Vehicular signs are intended to provide primary directional information. Typically they convey more than one direction and information is presented sequentially starting with right-turn, left-turn and straight ahead.

💰 Cost Considerations

Recommended budget: \$2,000 - \$5,000 depending on the level of wayfinding information required

Pedestrian Signs

Pedestrian signs are smaller in scale and are intended to provide directional information to specific places at a pedestrian level.

Cost Considerations

Recommended budget: \$2,000-\$3,000 each

District Identification Signs

District identification signs are similar in purpose to gateway elements in that they announce arrival into a specific area. However, the scale differs significantly; they are much smaller than gateway elements.

Cost Considerations

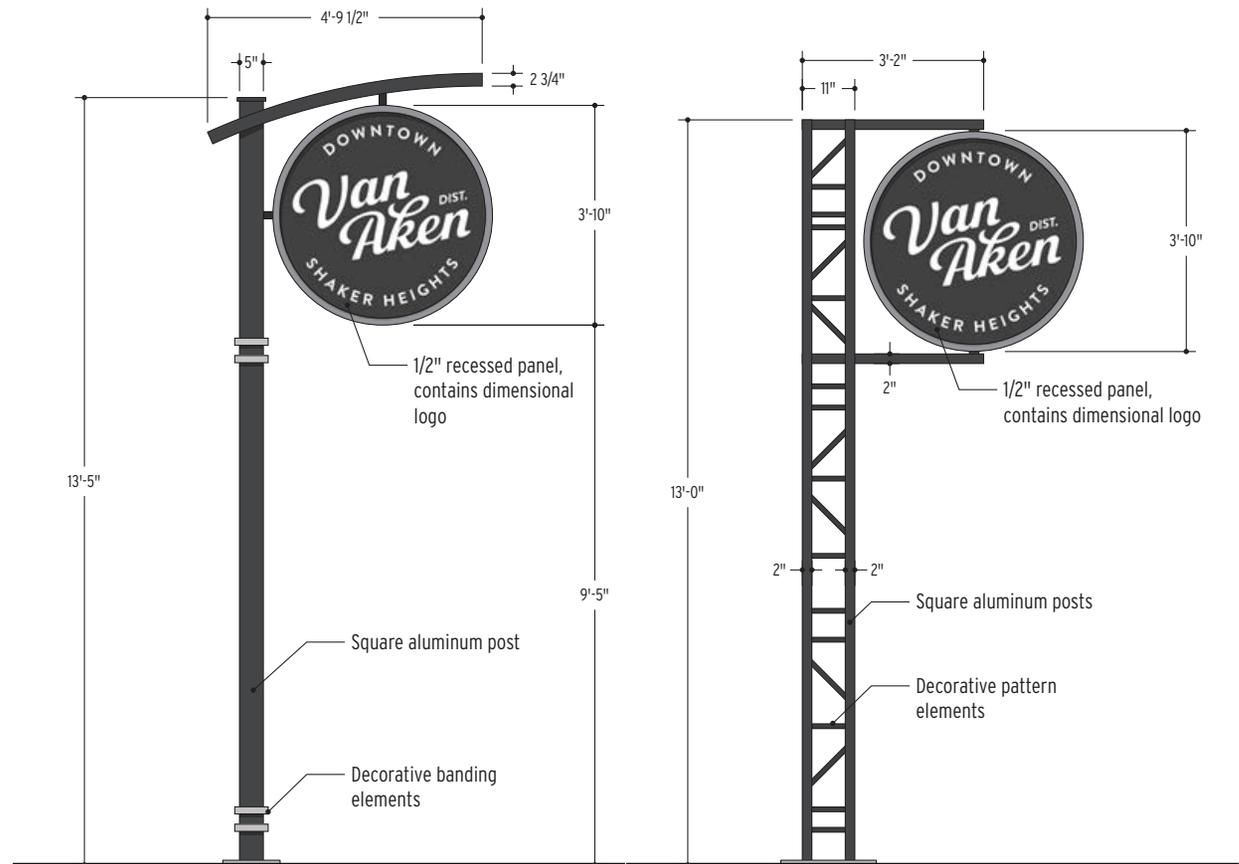
Recommended budget: \$2,000-\$3,000 each

Branded Street Signs

A branded element included with the street signs ties the signs in with the rest of the wayfinding system. The branding element can also be used to identify districts.

Cost Considerations

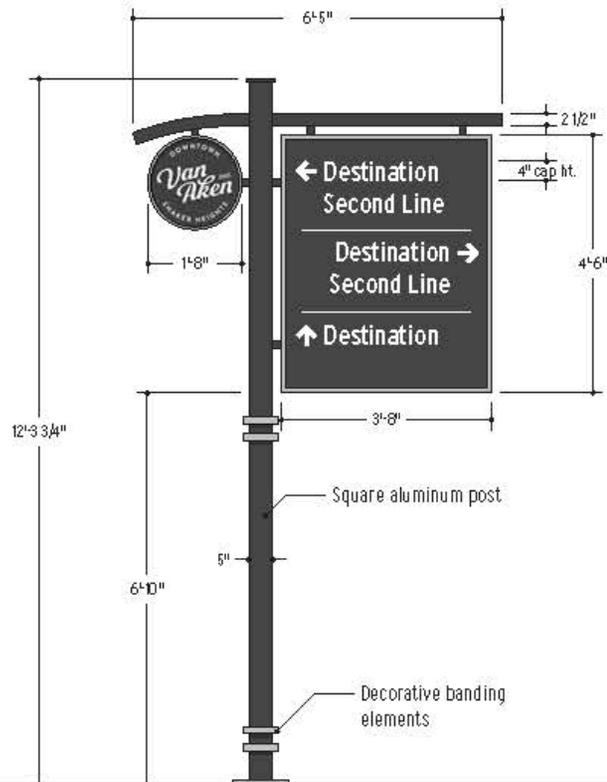
Recommended budget: \$200-\$500 each assuming poles are already in place



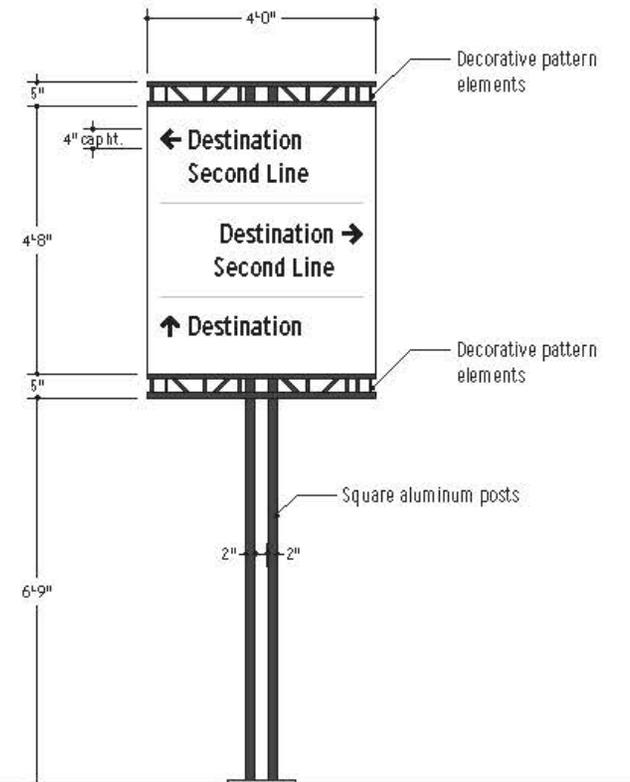
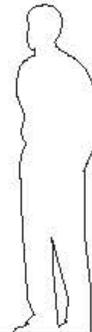
GATEWAY SIGN CONCEPT A - ELEVATION

GATEWAY SIGN CONCEPT B - ELEVATION

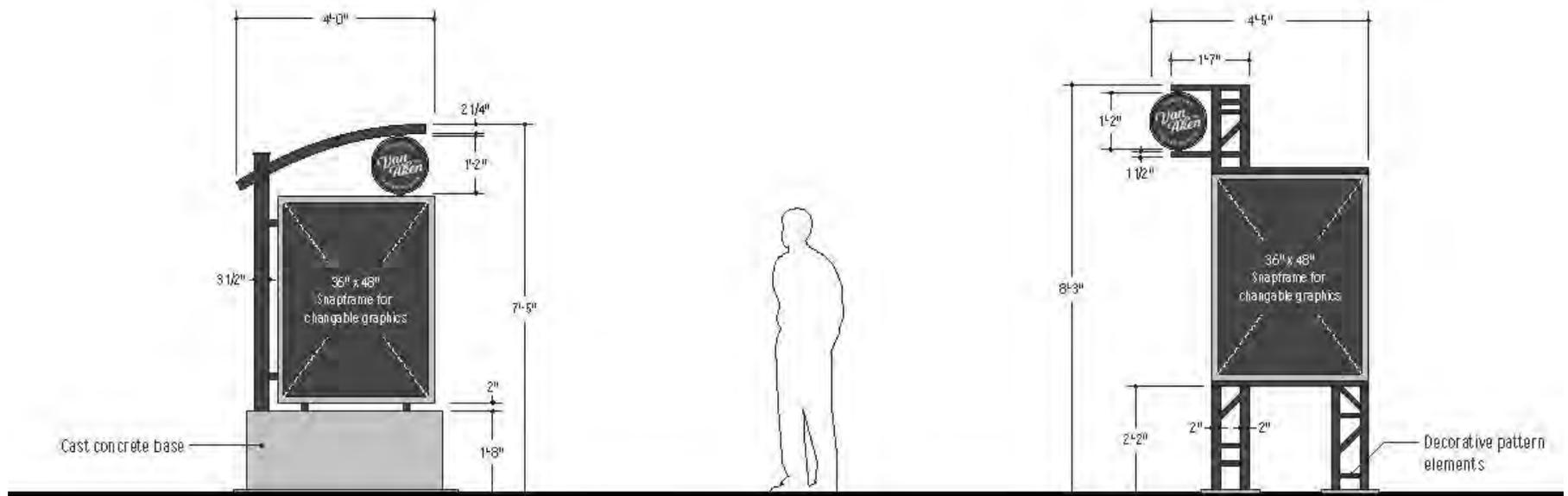
CONCEPTUAL DESIGN



VEHICULAR DIRECTIONAL CONCEPT A - ELEVATION



VEHICULAR DIRECTIONAL CONCEPT B - ELEVATION



KIOSK CONCEPT A - ELEVATION

KIOSK CONCEPT B - ELEVATION

ART



Overview

Public art in the district can create more vibrancy and interest for pedestrians and other users of the public right-of-way. Public art can assume many different forms, from murals on the sides of buildings, to fixed sculptures, artistic crosswalks, to temporary exhibits and installations. Incorporating public art into other street elements, such as light post banners, the sides of waste receptacles, and signal boxes, can transform common street elements into unique features. Public art helps activate less intensely used areas and fosters care and investment in downtown.

Use

- Public art can be incorporated in any place downtown and is appropriate to all street types and contexts.
- Public art can be freestanding works in the Amenity Zone or Frontage Zone, visible to pedestrians and road travelers alike. Artwork can also be horizontal surface treatments on walking surfaces, parking

surfaces, or travel lanes provided it does not cause hazards or confusion for street users. Public art can also be incorporated into building facades.

Permanent Installations

Permanent art installations include elements in a variety of media planned and executed with the intention of being staged in the public realm, usually outside and accessible to all. The physical location as well as the relationship between the content and the audience are important considerations.

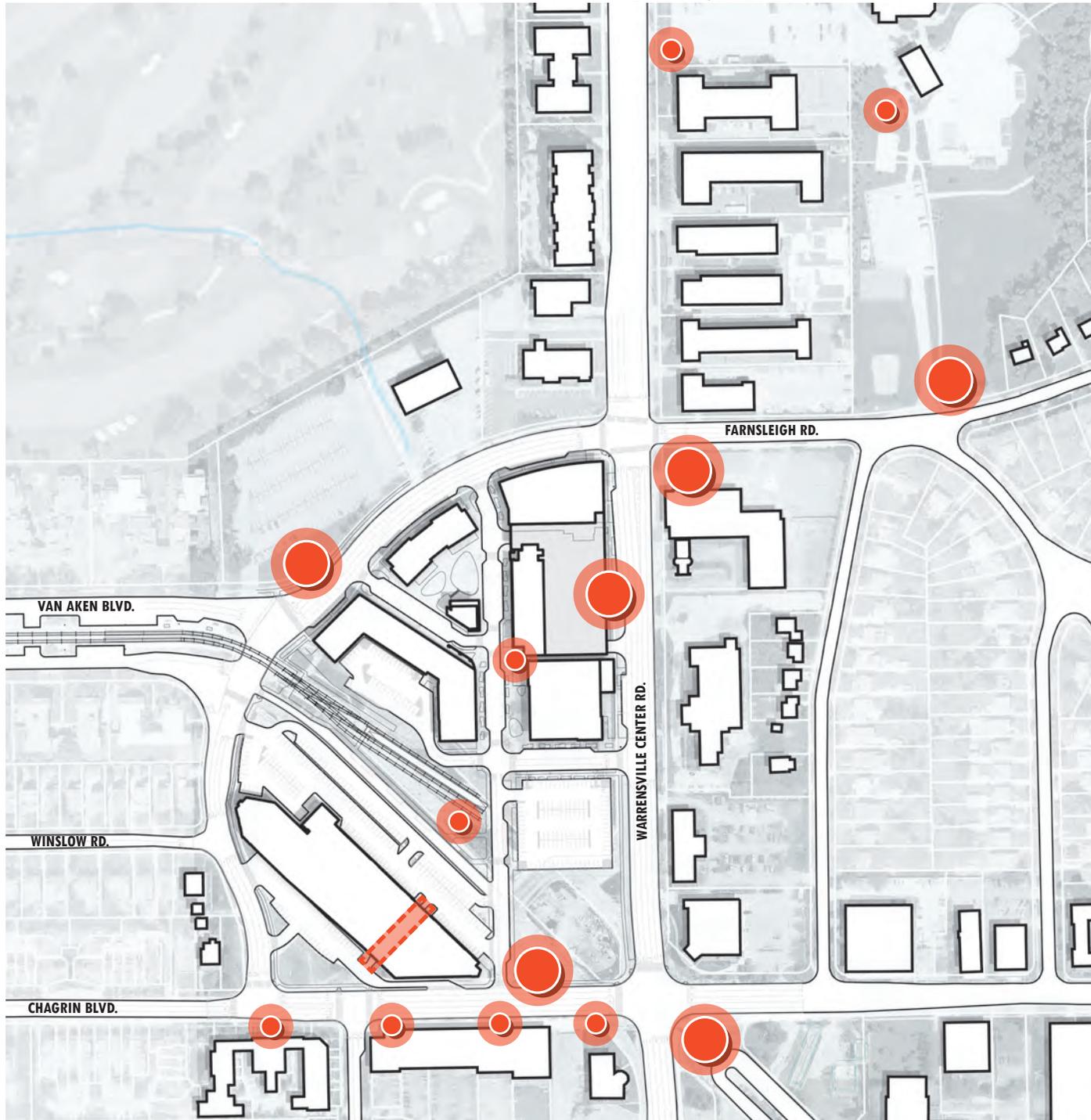
Temporary Installations

Temporary installations offer artists an opportunity to engage the public without being concerned about building a permanent installation. Temporary art is frequently created using unusual media or installed in unexpected locations. They may benefit a particular cause, stimulate public awareness

of an important or timely issue or simply add momentary beauty to a site.

\$ Cost Considerations

It is not possible to assign a recommended budget to public art. Frequently, a community will form a public art commission with the mission of generating interest, selecting locations and securing funding to implement public art. Many cities now have “percent-for-art” ordinances with a percentage of eligible capital improvement project funds set aside for public art.



Recommended locations for public art are based on current information. Other sites may be identified as conditions change.

 Potential Public Art Installations

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06 IMPLEMENTATION

This Pattern Book provides an aesthetic and functional foundation for the Van Aken District. It provides a vision for creating a harmonious public realm as the district develops and attracts new development or existing business choose to expand or update their facilities. As these opportunities occur, the City of Shaker Heights can join in collaborative conversations with those interested in creating a vibrant mixed-use downtown for Shaker Heights that will serve as both a regional and local destination.

PRIORITIES

High priority items that should be considered for initial implementation include 1) pedestrian and bicycle connectivity, 2) lighting, 3) landscape and 4) signage.

Pedestrian and Bicycle Connectivity

Improving the pedestrian and bicycle connectivity may be the single most important element of this plan. Communities have suffered from decades of auto-centric planning. This plan lays the foundation for a pedestrian and bicycle network that connects regionally, both east/west and north/south, and within the district itself. It will be important to collaborate with local businesses and land owners as well as future developers to ensure the elements of this network can be achieved.

Lighting

Lighting is another important element that serves to unify the public realm. Selection of a suitable lighting fixture and implementation of a pilot project should be considered as one of the initial projects.

Landscape

Landscape elements provide visual interest, create space and indicate a level of community pride. The importance of landscape was reiterated continuously by stakeholders and the community.

Signage

Signage serves an important role to identify that travelers are entering a unique part of the City. It would be a key statement to start with advancing and implementing the suggested Gateway sign concept which could be followed by hierarchy of vehicular and pedestrian signage.

VAN AKEN DISTRICT: *Priority Elements*

Stakeholder and community input indicated that the priority elements in the Van Aken District streetscape should include:

- Pedestrian/bicycle connectivity
- Landscape
- Lighting
- Signage

This illustrative sketch is an example of how these priority elements could be integrated into the pedestrian street environment.



FRAMEWORK PLAN RECOMMENDATIONS

The Framework Plan provides a vision for pedestrian and bicycle connectivity to and from the district, and identifies gateway locations and district elements that can be incorporated into the improvements. Key infrastructure projects recommended as part of the Framework Plan include:

Warrensville Center Road

A 10' wide multi-use path along the east side of Warrensville Center Road to provide north-south connections regionally and between community anchors in the district (University Hospitals, Tower East, the RTA station, Christ Episcopal Church and Thornton Park) as well as residential areas north of Farnsleigh Road. This is consistent with the previous recommendations provided in the Eastside Greenway Plan (2015).

Farnsleigh Road

A 10' wide multi-use path along the north side of Farnsleigh Road extending from Van Aken Boulevard, across Warrensville Center Road, to Thornton Park. This multi-use path will provide east-west connections between the district, Thornton Park and adjacent neighborhoods.

Van Aken Boulevard

A 10' wide multipurpose path along the north side of Van Aken Boulevard to provide east-west connections between the district, including the RTA station, and adjacent neighborhoods to the west of Farnsleigh Road.

New Northfield Road

Sharrows along new Northfield Road between Warrensville Center and the roundabout to facilitate motorist's awareness that cyclists are using the road.

Old Northfield Road

A bikeway along old Northfield Road, to be coordinated with a separate Cuyahoga County planning initiative for the Northfield/Warrensville Center corridor, will connect the communities of Warrensville Heights, Highland Hills and North Randall to the district.

Gateway Signage

Gateway signage identifying the limits of the Van Aken District, to be developed in conjunction with the RMS development, in the following locations:

- Warrensville Center/Thornton Park
- Van Aken/Farnsleigh
- Chagrin/Farnsleigh/Lomond
- Warrensville Center/Northfield
- Tower East

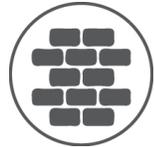
SUMMARY OF COST CONSIDERATIONS

This is a compilation of the cost considerations included in this report.



Landscape

	<i>Cost in Dollars</i>
Street /trees	3,000-4,000 each
Landscape Planters – Ground level/curbed	10 - 15 per square foot
Landscape Planters – Raised	15-20 per square foot
Seasonal Installations – Hanging baskets	300-500 each
Infiltration Planters	30 per square foot
Underground Infiltration	Varies



Hardscape

Standard Concrete paving	6-8 per square foot
Amended Concrete Paving	10-15 per square foot
Special Paving	10-20 per square foot
Multi-use Path – 10', concrete	80-120 per linear foot
Seatwalls	100-150 per square foot
Crosswalks – Striped	500-800 each
Crosswalks – Stamped/colored	10-20 per square foot
Pedestrian Signals	5,000 each



Lighting

	<i>Cost in Dollars</i>
Pedestrian Lighting	8,000-10,000 each
Feature Lighting	10,000-15,000 each
Landscape Lighting	Varies



Furnishings

Benches	3,500-5,000 each
Refuse and Recycling	2,000-2,500 each
Bike Parking	3,500-5,000 per site
Bike Share	25,000 per site
Bike Repair Stop	1,200-2,500 each
Bike Station	120-150 per square foot



Signage

Gateway Signs	15,000-20,000 each
Vehicular Signs	2,000-5,000 each
Pedestrian Signs	2,000-3,000 each
District Identification Signs	2,000-3,000 each
Branded Street Signs	200-500 each



Art

Permanent/Temporary Installations	Varies
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