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**DRAFT**

# Twinbrook

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Urban Design Guidelines

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May 2010

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# Contents

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## **How to Use the Guidelines**

Vision  
Design Objectives

Guidelines  
Streets  
Open Space  
Buildings

**Case Studies:** Adaptive Reuse

## **District Recommendations**

Metro Core Area  
Technology Employment Area  
Light industrial Area



Reconfigure existing mobility networks to improve connectivity between neighborhoods and to provide alternatives for moving safely through the area.

Combine responsible natural resource management with public open space design to create integrated and sustainable urban forms.

Promote architectural excellence and encourage sustainable and efficient building design and construction practices.

Identify and incorporate distinctive local character into the development of new and vibrant urban centers.

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## How to Use the Guidelines

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The Urban Design Guidelines are intended to assist in achieving design excellence through site development and to implement the recommendations in approved and adopted master plans or sector plans.

The planning process is structured in a hierarchy of decisions.

- Master and sector plan recommendations provide the vision for a specific area.
- Zoning Ordinance and other codes establish standards and regulations for development.
- Design Guidelines provide inspiration and suggestions to fulfill the plan’s vision, and serve as a problem-solving tool.

The guidelines are developed through work with property owners, residents, institutions, interest groups, and the County Executive. They are approved by the Planning Board for use in developing and evaluating proposed building projects and other applications. They will be revised and updated as necessary.

With the exception of street standards and other specific recommendations included in the Plan, the Guidelines are not regulations that mandate specific forms and locations for buildings and open space. They illustrate how Plan recommendations and principles might be met, and encourage applicants to propose designs that create an attractive and successful public realm.

The examples and case studies is intended to frame discussions regarding building design in a flexible way, without prescribing specific standards.

### Principles

Connectivity

Environment

Design

Diversify

# Vision

Successful urban centers stitch together different neighborhoods by combining newly developed areas with older, more established communities. The energy introduced by new development and the efficiency associated with new systems and services can create an attractive destination. Creating a synergy between new and old ensures longevity.

Adaptable building and site design urban is encouraged to allow a community to develop organically. Creating a flexible urban fabric is a priority for these Guidelines.

The Twinbrook Sector Plan recommends concentrating biotechnology and technology uses, adding residential uses, and retaining and maximizing existing light industrial uses that support the advanced technology industry.

The Guidelines don't issue specific design directives but highlight techniques and approaches that can help Twinbrook become a distinct neighborhood of street facing buildings and retail-oriented development near the Metro station, a high-tech employment district, and a manufacturing community of mixed uses.

Distinctive local character will be achieved by the creative reuse of many existing industrial structures, and by considering the long-term adaptability of any proposed construction.



*Twinbrook Station Development  
Rockville, MD*



## Design Objectives

Taking advantage of its proximity to the Metro station, the future Twinbrook will offer opportunities for social interaction in well designed public spaces. In a consolidated urban fabric, connected neighborhoods with a network of activities will promote interactions among people who live, work, or visit the area.

The Twinbrook Sector Plan's development and community priorities are supported by the following design objectives.

### Connectivity

Improve how people connect to transit, services, entertainment, and nature by:

- using building facades to create a comfortable pedestrian environment along streets
- providing on-street parking wherever possible
- providing closely-spaced trees along all pedestrian oriented streets
- minimizing driveway cuts along major pedestrian routes
- creating active mid-block pedestrian connections
- improving safety at pedestrian crossings.

### Environment

Reduce development impact on the natural environment by:

- creating walkable environments that reduce reliance on cars
- using innovative stormwater management techniques to meet the ESD guidelines for urban areas
- promoting energy conservation and generation as a primary building and public space design feature
- encouraging building massing that improves air flow and access to natural light
- integrating sustainable components into the design of buildings and public places (e.g., vegetated roofs, green walls, recycled content materials, etc.).

### Design

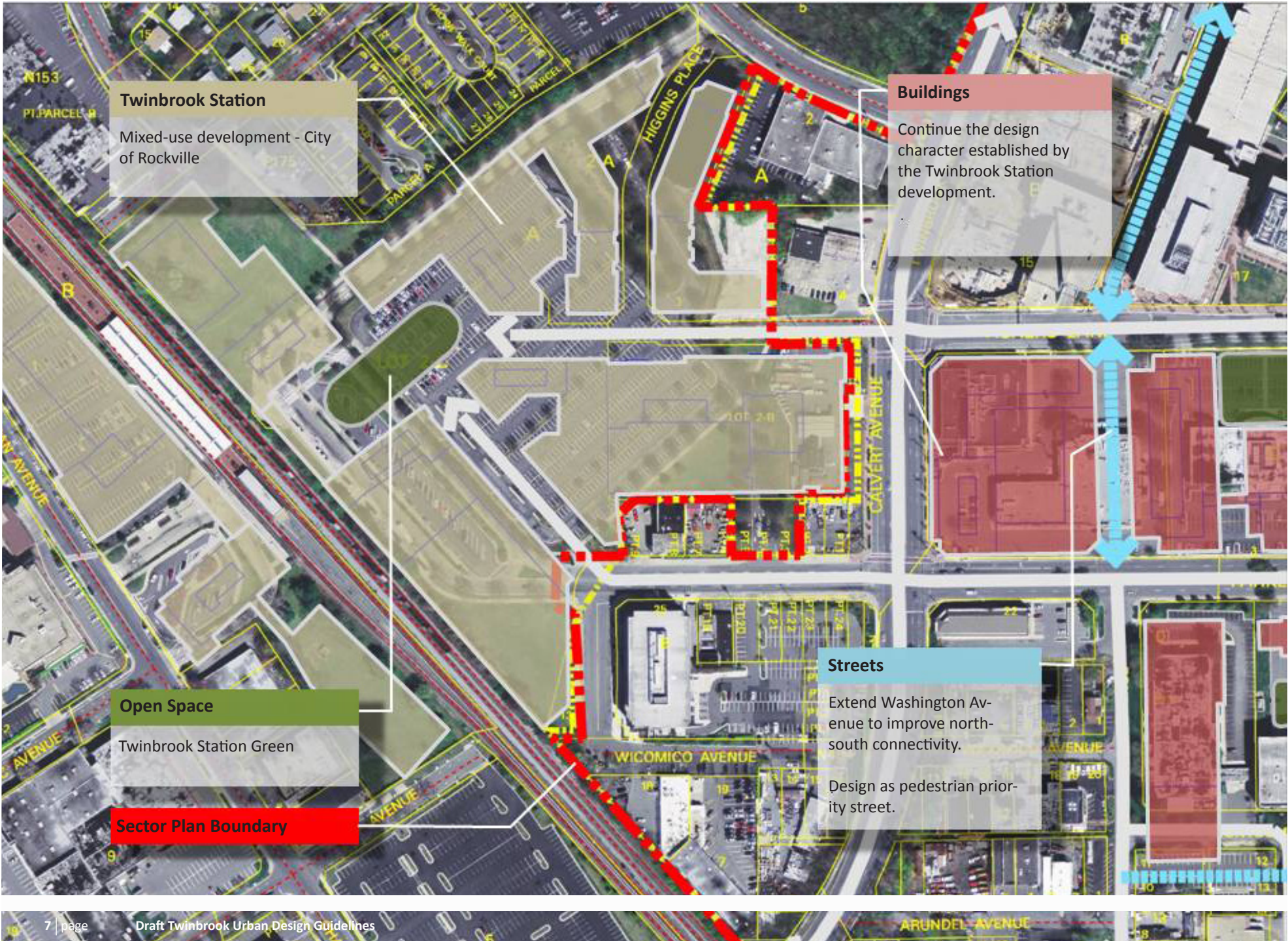
Apply sustainable principles to the way we build and how we live by:

- building adaptable facilities and spaces that can accommodate land use changes over time
- promoting compact development patterns and walkable communities
- focusing on quality buildings and spaces that will provide long term value to the community.

### Diversity

Create a true mix of choices in how and where we live and work by:

- implementing land use patterns that create a mix of homes, jobs, shopping, and public amenities
- redeveloping Twinbrook's light industrial area to retain flexibility for businesses to evolve.
- creating an attractive urban environment that will attract people of all ages, incomes, and ethnicities.



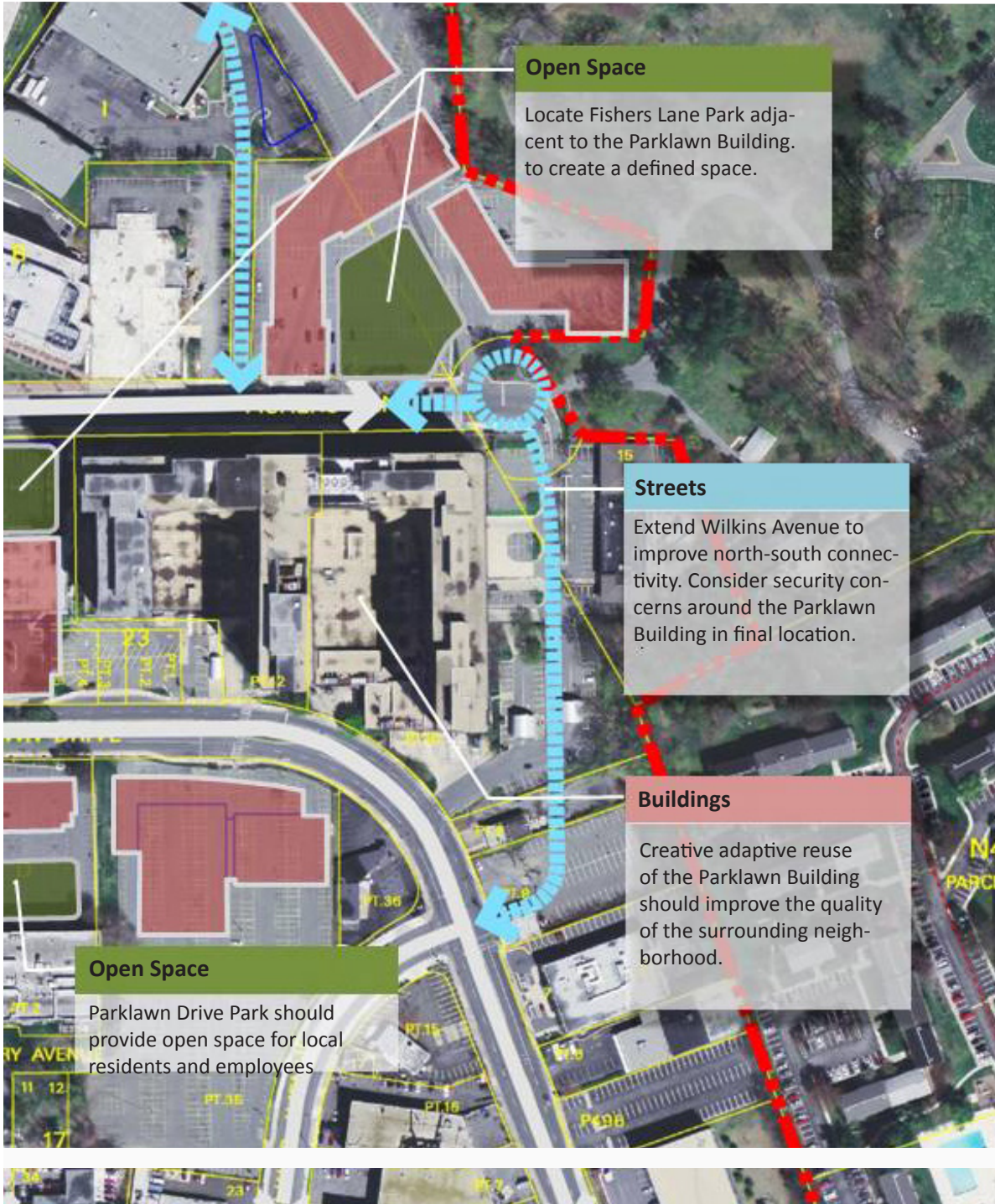
**Twinbrook Station**  
Mixed-use development - City of Rockville

**Buildings**  
Continue the design character established by the Twinbrook Station development.

**Open Space**  
Twinbrook Station Green

**Sector Plan Boundary**

**Streets**  
Extend Washington Avenue to improve north-south connectivity.  
Design as pedestrian priority street.



## Opportunities

Twinbrook’s center of activity will be its central corridor defined by Fishers Lane and Parklawn Drive. These properties and streets will link the employment area with the Twinbrook Station project and the Light Industrial Area.

Mobility options with well defined street edges, appropriate open space, and pedestrian links will be key to its success.

### Adjacent Development

The Twinbrook Station project establishes the character along the western edge of the Plan area’s central corridor. It includes street facing buildings, retail frontages, green building design, and functional open space.

### Open Space

Twinbrook Station’s green will be the western anchor for the Fishers Lane corridor. The Plan recommends two additional large public spaces (Fishers Lane Park and Parklawn Park)

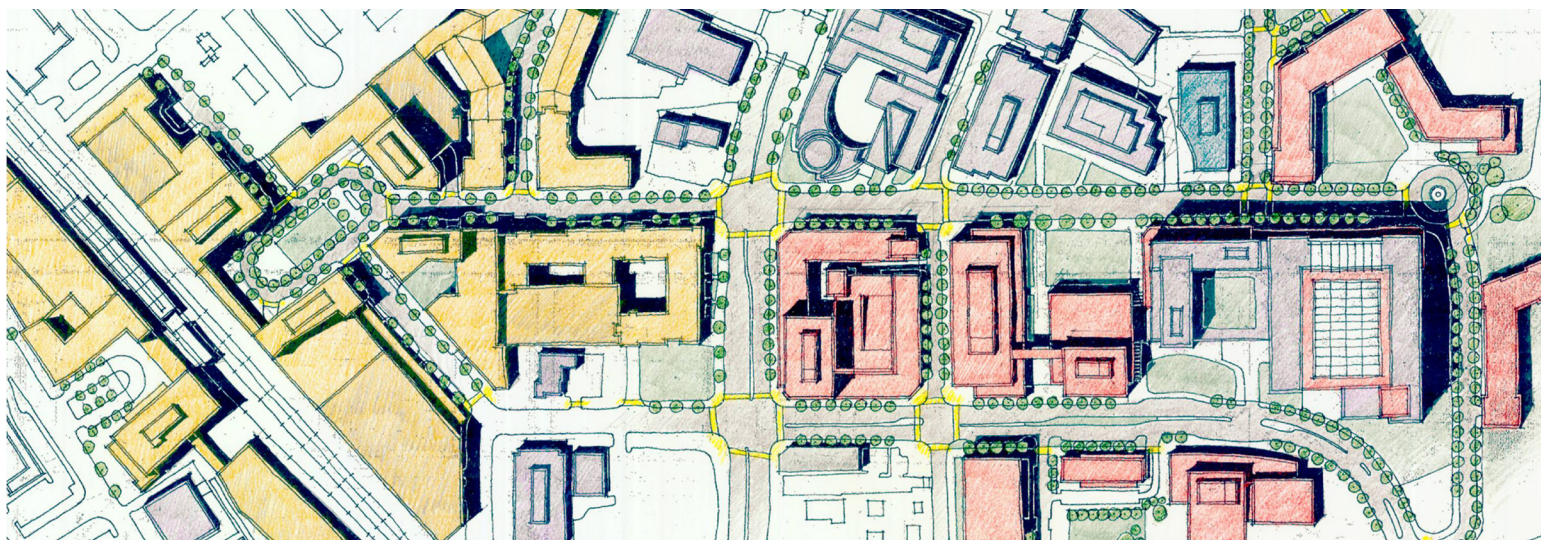
### Streets

Streetscape improvements will be required along public roads. Street walls should be defined by building facades.

### Buildings

A few key properties present possibilities for extending, improving, and establishing neighborhood character. Recognizing the potential of each district the Guidelines’ case studies illustrate redevelopment approaches.





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# Guidelines

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# Streets

## Road Code

Chapter 49 of the Montgomery County Code--the Road Code--codifies street classification standards, including right-of-way and paving widths. The Road Code emphasizes context sensitive street design to meet the needs of an existing street pattern in locations such as the Twinbrook Sector Plan area.

All applicants must comply with the Road Code. **Applicants pursuing streetscape designs inconsistent with the road code must apply for a waiver.** Portions of Parklawn Drive and Wilkins Extended may be adjusted to meet federal security requirements.

## Utilities

All utilities should be accommodated underneath sidewalk paving within the right-of-way limits, to be coordinated by MCDOT and utility companies.

## Streetscape

Closely-spaced street trees will be included along all streets. Specifics of street furnishings are available online at WWW.

Sidewalks should be at least 10 feet from curb to building, with at least 15 feet for retail streets.

Street trees and streetscaping will be provided along all streets.

## Intersections

Improving the intersection of Twinbrook Parkway with Fishers Lane and Parklawn Drive is a priority to establish a safe east-west pedestrian connection from the Metro station to the Technology Employment and the Light Industrial areas.

Improvements should include:

- special crosswalk paving
- raised and/or planted medians
- pedestrian priority signal timing
- extensions of Washington Avenue and Wilkins Avenue to reduce traffic at the intersections at Fishers Lane and Parklawn Drive.

## B12, B14, B16 Unclassified Business District Streets



### Sector Plan

Min. R.O.W.: 60 ft  
Lanes: 2

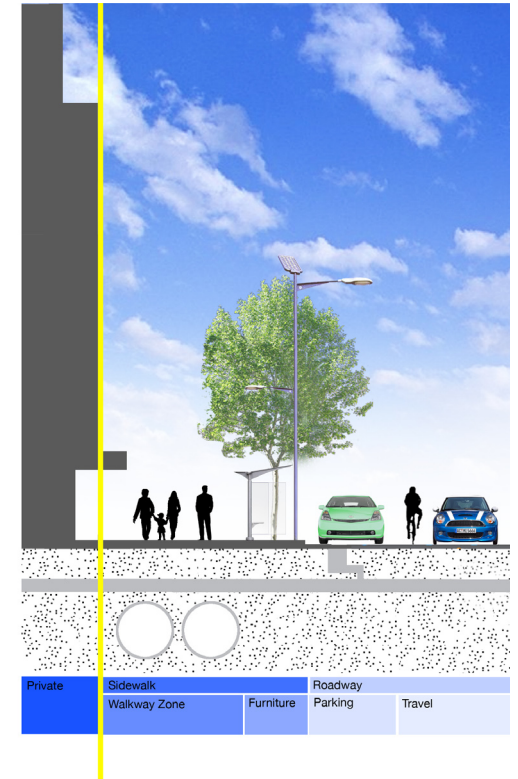
### Guidelines

Parking: One Side  
Trees: 30-35' o.c.  
Sidewalk: Minimum 10'  
Setback: None  
Street Wall: 42-60' H. max  
Median: None

### Comments:

Wilkins Avenue extended (B14) may require a private street designation and/or a minor change in location to accommodate security requirements.

## B9, B12, B13, B15 Business District Streets



### Sector Plan

Min. R.O.W.: 70 ft  
Lanes: 2

### Guidelines

Parking: Both Sides  
Trees: 30-35' o.c.  
Sidewalk: Minimum 10'  
Setback: None  
Street Wall: 42-60' H. max  
Median: None

**Parklawn Drive**  
Arterial Street

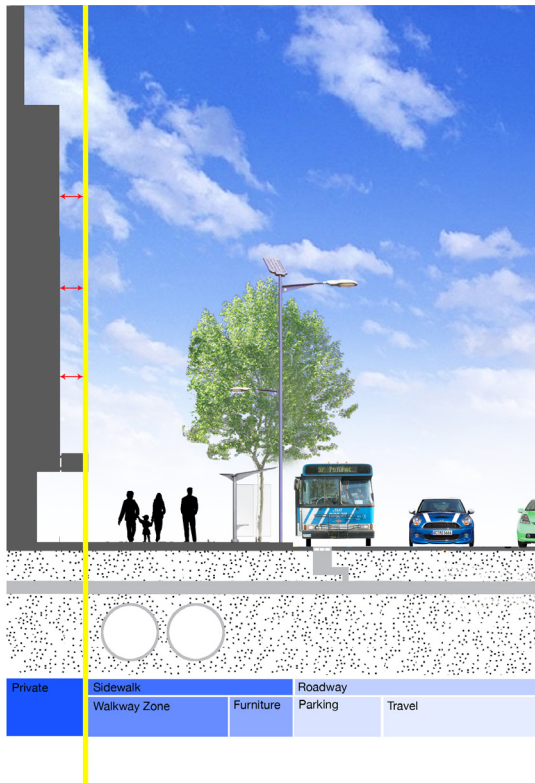


**Sector Plan**  
Min. R.O.W.: 80 ft  
Lanes: 4

**Guidelines**  
Parking: Off-peak  
Trees: 30-35' o.c.  
Sidewalk: 20' wide  
Setback: 5' from R.O.W.  
Street Wall: 45' H. max  
Median: Planted with turn lanes

**Comments:**  
A minor shift in location is appropriate adjacent to the Parklawn Building to provide setback to meet federal security requirements.

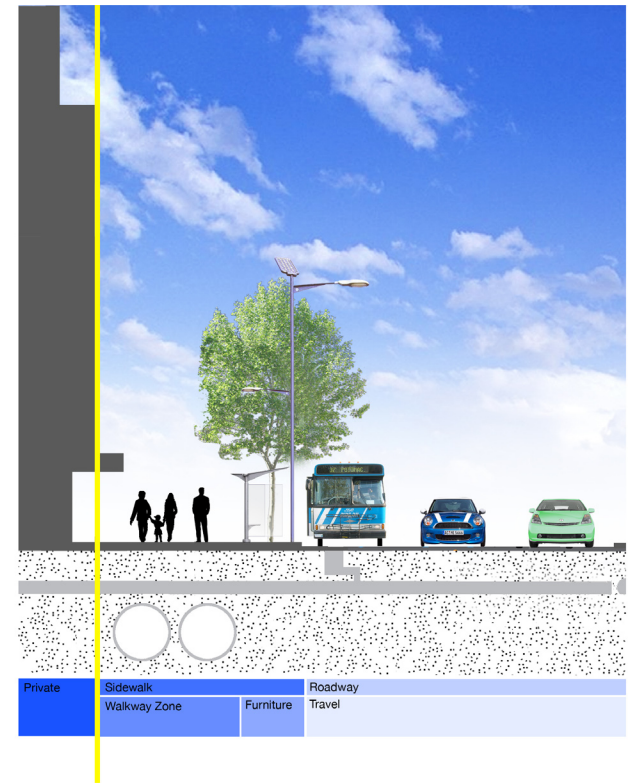
**Fishers Lane**  
Business District Street



**Sector Plan**  
Min. R.O.W.: 80 ft  
Lanes: 4

**Guidelines**  
Parking: Both sides  
Trees: 30-35' o.c.  
Sidewalk: 20' wide  
Setback: 5' from R.O.W.  
Street Wall: 60' H. max  
Median: Left turn lane

**Twinbrook Parkway**  
Arterial Street



**Sector Plan**  
Min. R.O.W.: 120 ft  
Lanes: 4-6

**Guidelines**  
Parking: Off-peak\*  
Trees: 35-40' o.c.  
Sidewalk: 20' wide  
Setback: None  
Street Wall: 45' H. max  
Median: Planted with turn lanes

**Comments:**  
\*Off-peak parking limited to segment of Twinbrook Parkway between Parklawn Drive and Fishers Lane.

## Parking

### Zoning Ordinance

Parking requirements in the Twinbrook Sector Plan area are set by the Montgomery County Zoning Ordinance.

For most uses zoned either I-4 or TMX, see Section 59-E  
Some retail and restaurant uses in the TMX zone may be eligible for parking reductions, see Section 59-C-14.214

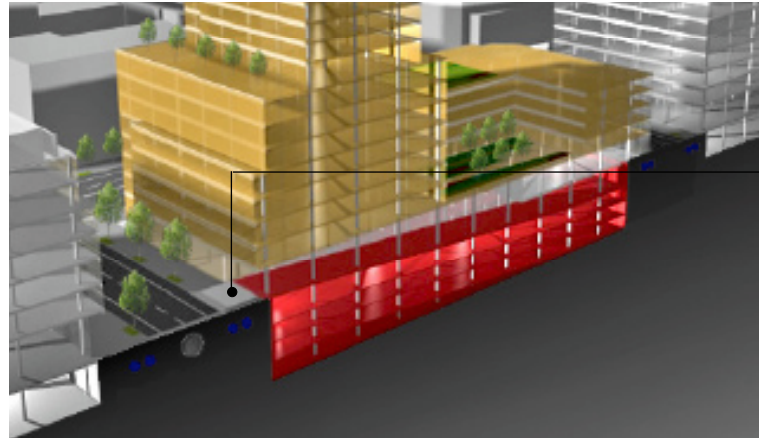
### Twinbrook Sector Plan

The Sector Plan establishes the following guidelines for parking:  
Limit parking supply through the Zoning Ordinance based on Metro Station proximity and allow parking waivers in the Industrial Area.

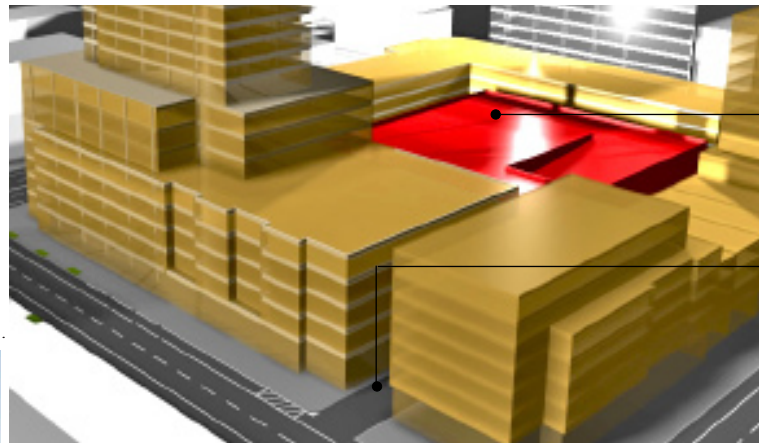
Encourage shared and structured parking rather than surface lots

Locate parking mid-block, using green construction techniques and activated facades

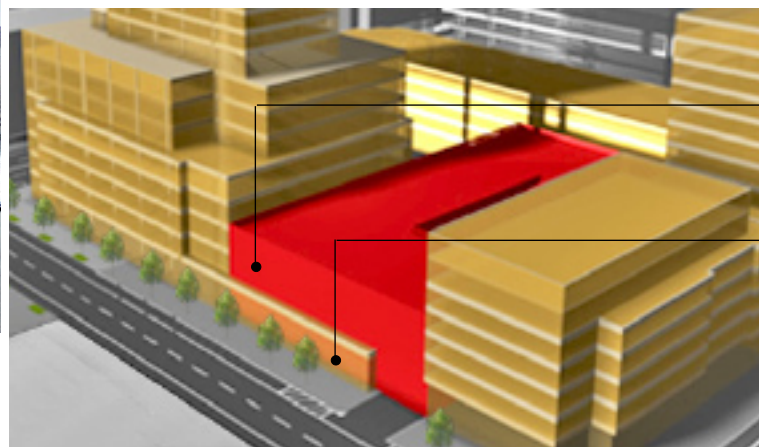
Locate garages in a way that does not interrupt pedestrian



**Narrow Entrance**  
Minimize width of entrance and egress lanes.



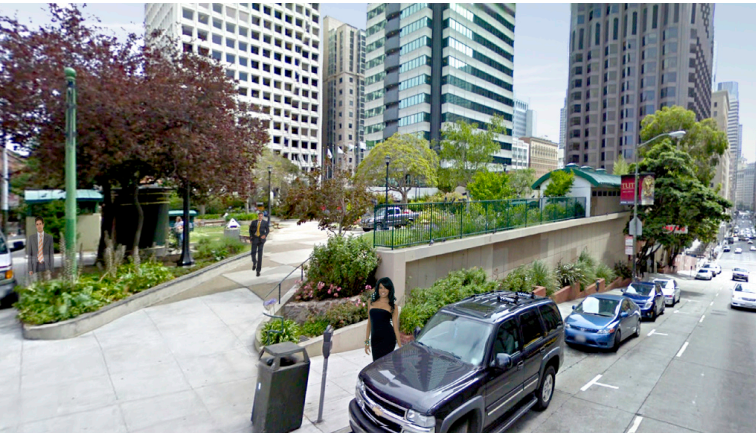
**Wrapped Parking Deck**  
Place garage centrally within the block



**Minimize Street Exposure**  
Reduce the amount of the garage facade facing street.

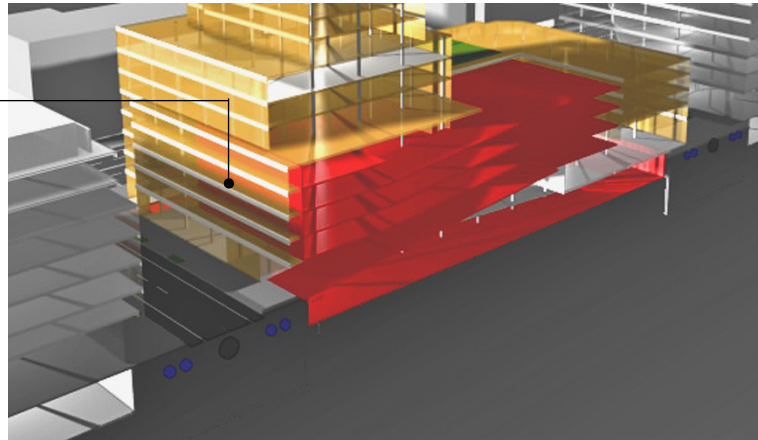
**Ground Floor Frontage**  
If possible, activate ground floor with retail or other uses.

### St. Marys Square Garage and Park San Francisco, CA

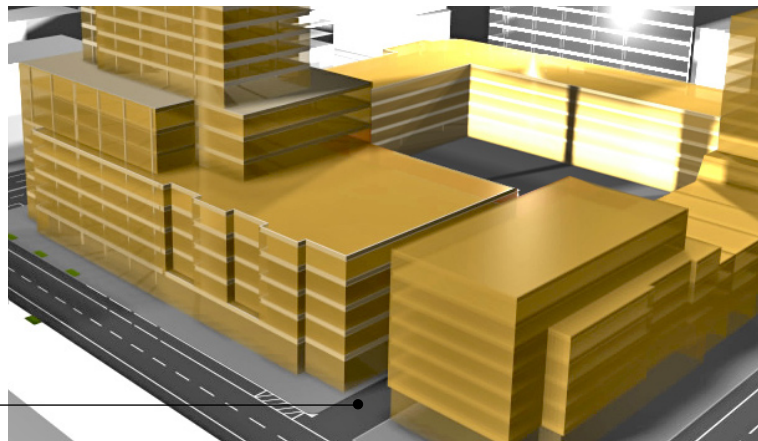


Using the site's sloped topography, St. Marys Garage is built into the side of a hill and covered with a public park. The park is heavily vegetated to mitigate runoff, and reduces the garage's visual impact on the street.

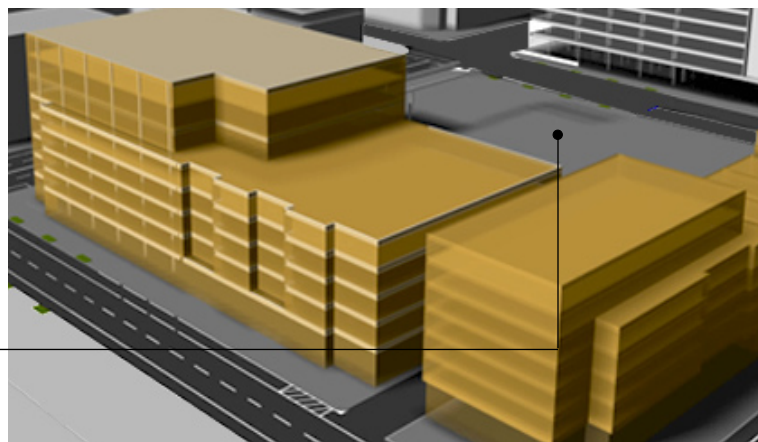
**Integrated Building Facade**  
Garage and building are indistinguishable



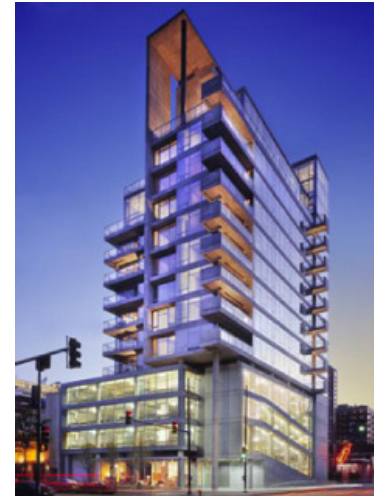
**Access off Side Street**  
Provide side street access to minimize traffic impact



**Parking Behind Building**  
Internalize parking structures where possible.



## The Contemporaine Chicago, IL



*Perkins + Will*

The Contemporaine creates an integrated aesthetic by applying the same materiality and design sensibility to both the podium parking structure and residential units. The ground floor of the building is activated by retail on the primary street while the garage is accessed from an alley in back.

## Parking Best Practices

### Underground and Structured Parking

Parking should minimize its impact on the pedestrian environment and public realm.

Locate entrances and exits on an alley or business district street.

Minimize impact on building's architectural character. Buildings above structured parking should make no distinction between the facades of the garage and building unless they enhance the overall architectural quality of the building. Enhancements may include artwork such as murals or interactive features or a vegetative screen that obscure the garage.

Minimize the width of driveways and height of garage entrances.

Where possible, combine loading dock and garage access.

### Surface Parking

Locate parking on the back or side of building, with the building fronting the primary streets and sidewalks. Surface parking should not be visible from primary streets.

Where possible, cover surface spaces with a low-albedo pervious surface to reduce heat island warming and use as much landscaping as possible to treat stormwater. Provide tree canopy and permeable areas to treat stormwater.

## Open Space

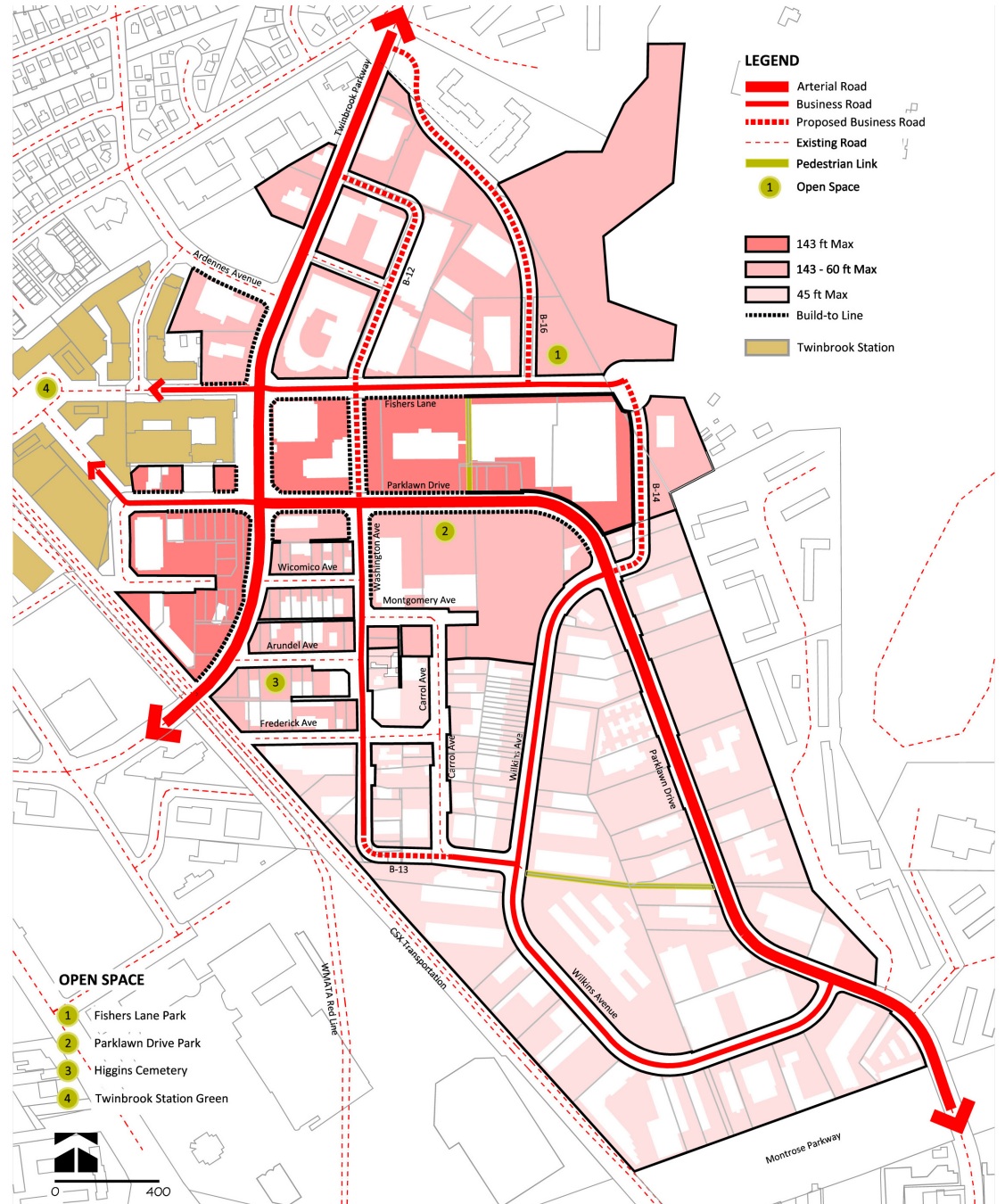
The best urban spaces create opportunities for people to interact either spontaneously or through programmed activities.

The Plan locates spaces in Twinbrook to be distributed through the area, to be visible and accessible, and to create visual anchors

Public use space required by the zone should respond to project needs and adjacent uses. Restaurant uses, for example, should provide areas for outdoor seating, retail should maintain a street wall but provide pocket parks for seating. When open space doesn't contribute to a development's needs, public use space should be provided off site or an in lieu payment should be made.

Through redevelopment, the locations will shift, but they should always:

- easily visible the street
- obviously public and accessible
- include landmark features such as structures or artwork





### Designated Open Space

Two open spaces have been designated in the Twinbrook Sector Plan area--Fishers Lane and Parklawn parks. They should include :

- varied recreational opportunities
- maximizum vegetated permeable area
- large open...
- tree canopys and pervious surface
- seating, signage, and other
- furnishings



### Pedestrian Links

Two through block connections--one connecting Fishers Lane with Parklawn Drive near the Parklawn Building and the other connecting Wilkins Avenue to Parklawn Drive--should be designed to improve pedestrian access. The should include:

- retail activity that doesn't compromise retail located along public streets
- windows overlooking the connections
- lighting and furnishings
- opportunities for public art



### Public Use Space

Small public open spaces will be created from the Zoning Code requirements for open space. The should be:

- Active or passive
- Not located to separate buildings from public streets
- Visible and usable.

Outdoor public use spaces can be combined from several projects to create a larger public use area.



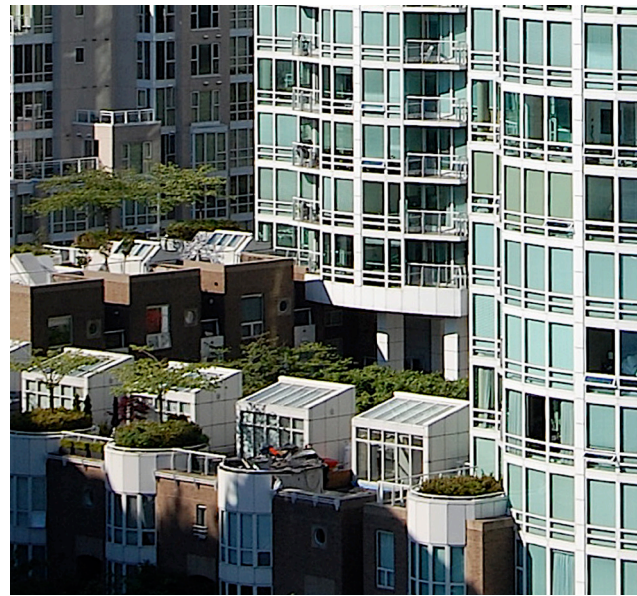
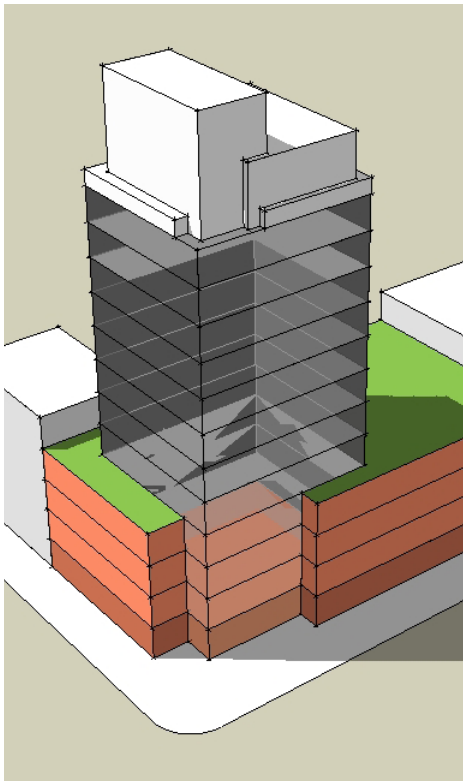
## Buildings

The Twinbrook Sector Plan makes only limited recommendations for buildings, including maximum height, street-orientation, design character and scale, and retail locations.

The Guidelines help visualize the Plan's recommended building heights with building examples for each district, and by illustrating how buildings might define the public realm.

Building design should:

- provide landmarks
- provide street walls
- create a design character for the area
- be energy-efficient, adaptable, and mitigate environmental impacts.



## Building Rooflines

Encourage distinctive building rooflines in towers.

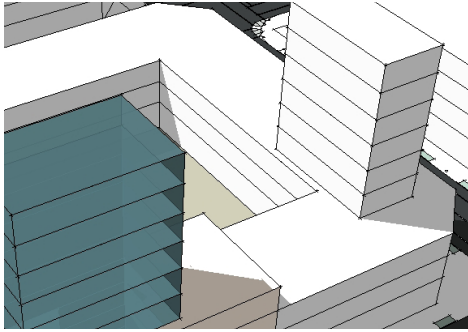
## Towers

Setback or located to reduce their impact on the streets below, allowing for light and air flow.

Towers to the south of residences or open space should be located farther away and be as high as possible.

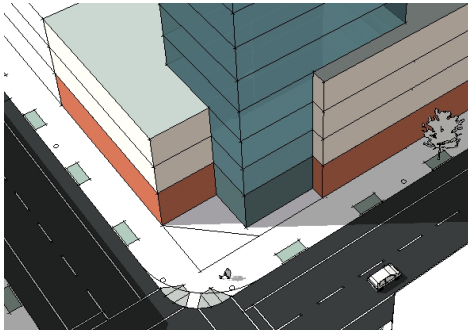
## Podiums

The structure's lower floors should establishing continuity with adjacent buildings. Height will vary from two to five stories, depending on location.



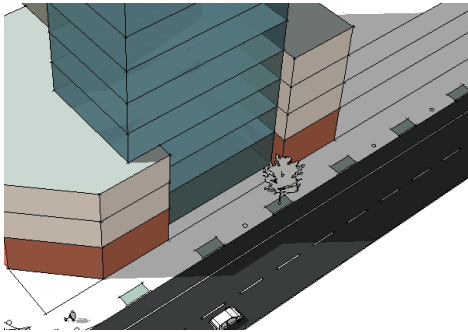
### Tower Setback

Required on streets with right-of way of 70 feet or less. Amount of setback to be determined by building's structure, but should be no less than 15 feet.



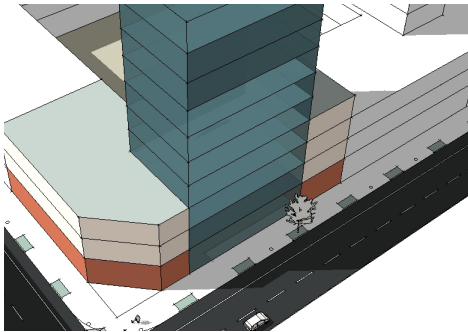
### Street Wall Recess

Full tower full height may be fully shown in relation to frontal open space or setback from right-of-way.



### Corners

Full tower full height may be expressed at corners, as part of building articulation. Street wall continuity must be maintained through articulation.

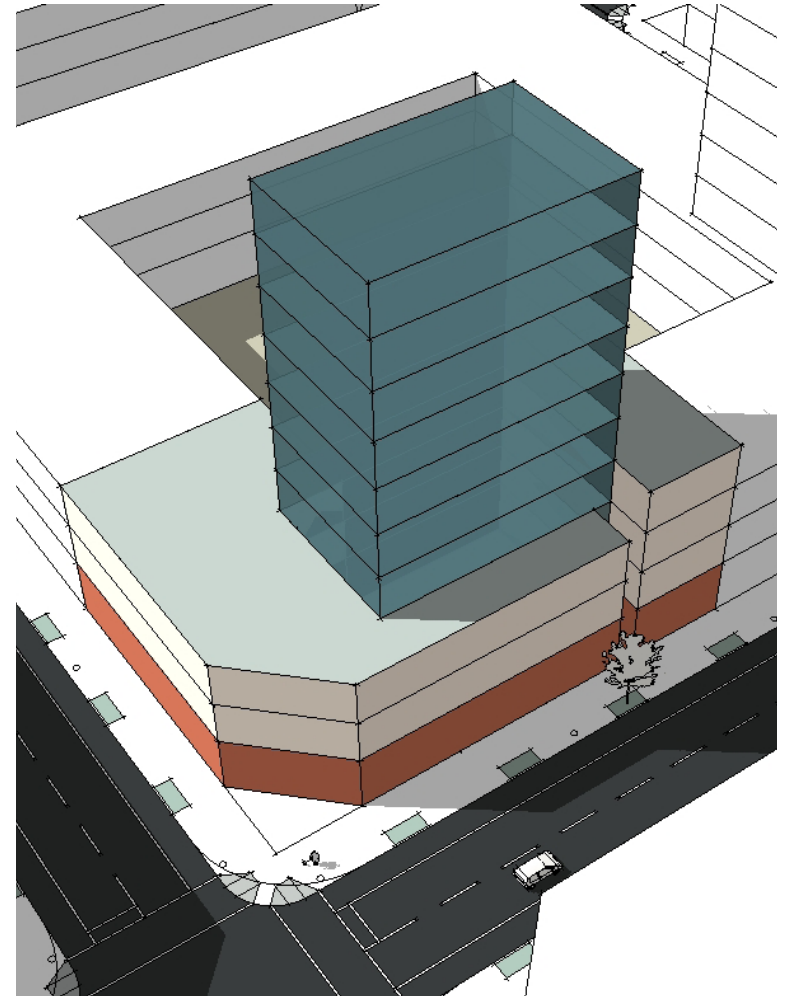


### Tower Separation

Podiums should meet walls at corners. Facade articulation is strongly encouraged.

## Building Towers

Locate buildings to reduce their impact on the street's pedestrian environment and on adjacent open space.




## Street-Defining Buildings

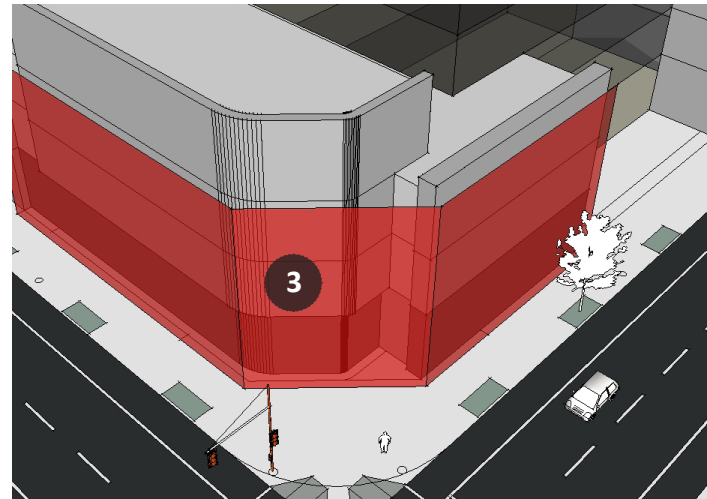
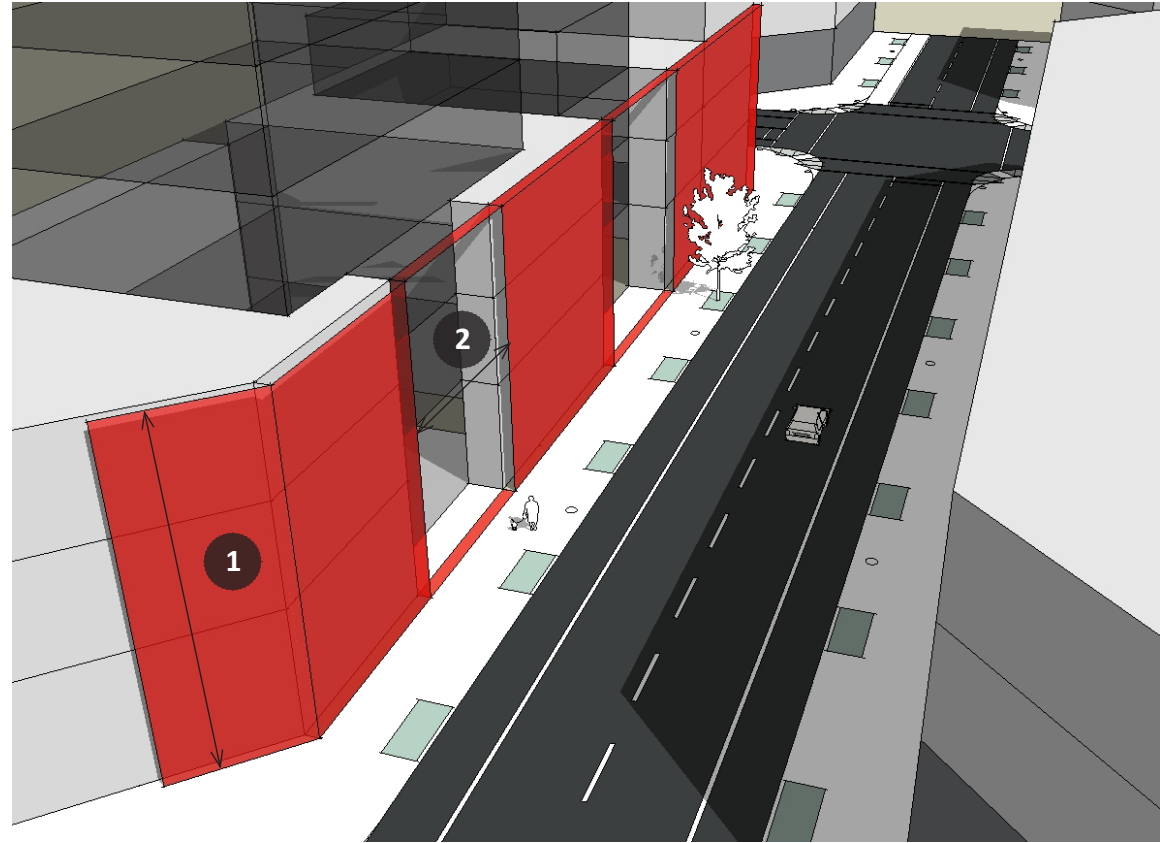
Streets should be defined by consistent street walls. Building podiums shall meet build-to lines on both sides of the street where indicated on district maps.

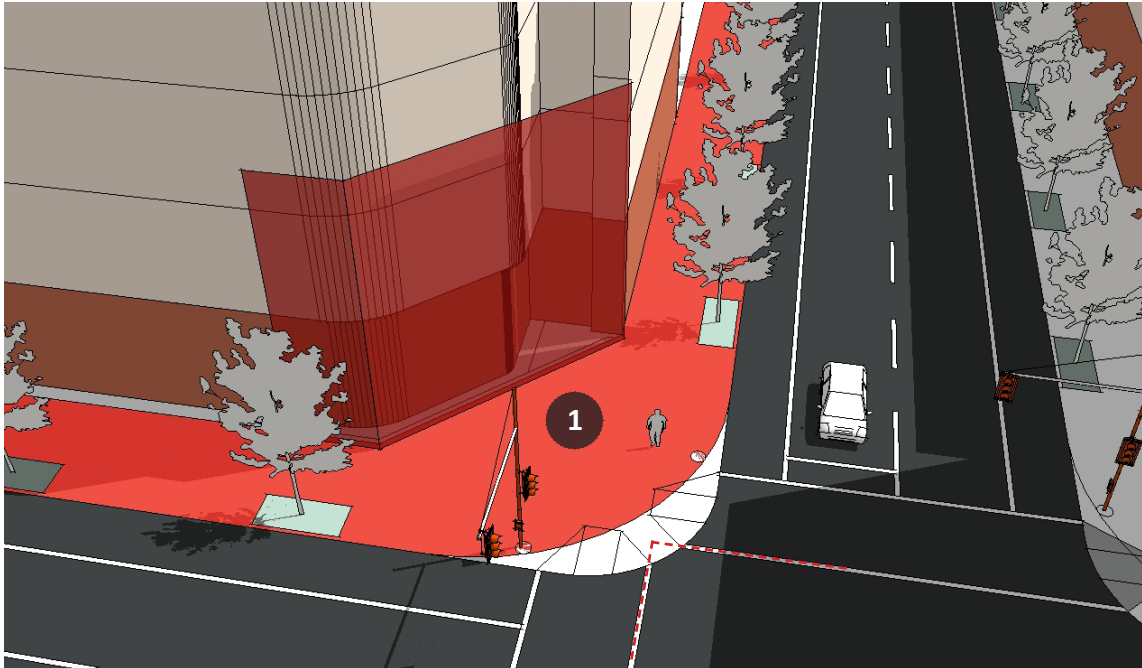
**1. Podium Height** - should range between 3 and 5 stories, as indicated on street sections.

**2. Street Wall** - Permit breaks along street walls on block frontages 200 feet or longer. Breaks shall be away from block corners, and should be infrequent on retail streets.

**3. Podiums** - Podiums should meet built-to walls at corners. Facade articulation is strongly encouraged.

 Building street wall required to meet built-to line.





## Urban Corners


Urban corners should be safer for pedestrians and convenient for safety and service vehicles.



**1. Road Code** - Highlighted area indicates sidewalks and required corner truncation per MCDOT standards at the intersection of two hypothetical streets with rights-of-way each. A corner radius of 30 ft is shown. This standard requires a single handicapped ramp (not shown) oriented towards the center of the intersection.

**2. Design Guidelines** - Corner radii should be tight (15 feet shown), and should include a double ramp at the corner, waiving the truncation requirement for most urban streets. Ramps shall align with path of pedestrian travel and street crossings.

**3. Vehicle turning radius** - Effective turning radius should be 30 feet in the recommended configuration.

 Focus Elements

# Achieving the Vision



## Neighborhood Character

### Adaptive Reuse in Twinbrook

While adaptability could be an applicable principle for all new development in Montgomery County, it is particularly salient in the Twinbrook Sector Plan area where building functions – living, research, government employment, and small business and industrial uses – reflect a need for accommodating change. In the Technology Employment area, anticipated growth of laboratory functions calls for the implementation of adaptable design principles – high ceilings, flexible floor space arrangements, energy efficiency – to ensure the long-term viability of these buildings.

At 40-years-old, the 935,000-square-foot Parklawn Building is ready for rehabilitation to attract new tenants. Further, the Twinbrook Sector Plan reaffirms its vision of the Light Industrial Area as an incubator for crucial service and small business operations. Located in the oldest part of the Twinbrook neighborhood, development in this area can strengthen the urban fabric by linking and associating with the interspersed warehouses and industrial buildings.

Existing buildings offer good opportunities for community redevelopment through adaptive reuse. Older structures can be retrofitted for new purposes when original uses become outdated. Architects can change the structure’s primary function, while retaining architectural details that make the building unique.

### Relationship to the Twinbrook Sector Plan

The Twinbrook Sector Plan specifically provides for the transformation of:

- Office Buildings - Rezone the Parklawn Building property to allow adaptive reuse that would keep the building viable and generate employees, residents, and street activity at an urban scale.
- Industrial Buildings - Amend industrial zoning to preserve the existing mix of light industrial and retail uses, and to encourage redevelopment on existing small sites, rather than assembled lots, with minimal improvements to the public realm.

A primary goal of the Guidelines is to support the Plan’s recommendations for improving the existing urban environment by fostering the creation of sustainable urban fabric. The case studies are intended to expand the discussion on the possibilities of adaptive reuse, while strongly recommending consideration of reuse attitudes similar to those described in the Plan on other existing properties throughout the planning area, as they redevelop.

# Types of Adaptive Reuse

## Conversion

Building conversions result in a change of function, usually due to the obsolescence of the property use or the transition to a new building type.



Multi-tenant Office, San Diego, CA  
Graham Downes Architecture

## Refurbishment

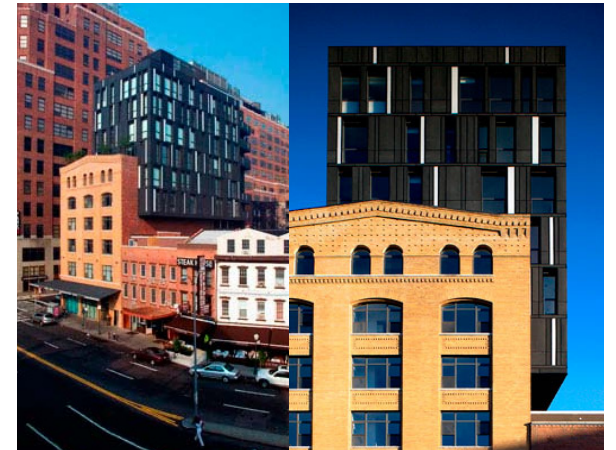
Refurbishment projects result in an improvement of the building's performance, usually including upgrades to the exterior to improve energy efficiency and interior conditions.



304 South Gay Street, Knoxville, TN  
Sanders Pace Architecture

## Renovation/Expansion

Changes in size resulting from renovation and expansion are usually the result of an increasing demand for space to improve, expand or diversify the structure's use.



Porter House, New York, NY  
SHoP Architects

# Principles of Adaptive Reuse

Convertible	Adaptable	Divisible	Expandable	Flexible
How can a building be designed to allow its use to change? How can a building accommodate new functions?	How can buildings be taken apart, in part or whole to allow for building expansion, new uses, and enhanced performance?	Can building materials be separated and recycled or repurposed?	How can buildings increase capacity and volume?	How is the building arranged to allow reconfiguration of interior space? How can the floor plan be made more efficient?

## Buildings



### Parking Garage Conversion

**Project:** Weill Cornell Medical College Laboratories  
**Architect:** Stonehill & Taylor Architects and Planners  
**Reuse Type:** Building Conversion and Expansion  
**Location:** New York, NY

With few available locations in close proximity to the school's main campus that met their specifications, the college purchased a parking garage to be home to a 65,300 square-foot laboratory and office building. The façade was maintained and renovated, and the existing structure was modified to accommodate an additional 26,300 square-feet.

This exemplifies how existing structures can accommodate seemingly incompatible uses. Twinbrook has only one above ground parking structure, but others have been proposed to consolidate existing parking on surface lots. As land availability in the area shrinks, the development potential of parking structures may become increasingly appealing, whether for partial conversion for ground floor uses, or wholesale renovation. How these structures are designed today has long-lasting implications for their future use.

## Buildings



### Energy Efficient Retrofit

**Project:** Norwegian University of Science  
**Designers:** Oyvind Aschenhoug and Dagfinn Bell  
**Reuse Type:** Refurbishment  
**Location:** Trondheim, Norway

As part of a research effort sponsored by BP Solar, a second façade was installed on the exterior of an existing laboratory to mitigate energy loss from leaky, inefficient windows. The double façade system creates an additional layer of air between the outer skin and the main wall, improving the building's thermal insulation, while photovoltaic cells part of the new assembly generate energy and regulate sunlight into the building.

Complete façade replacement allows property owners to update the building's appearance and performance, without investing in an entirely new building. Because these exterior skins are non-load bearing, replacement is relatively feasible, and in some situations can be performed without first removing the existing façade. In situations that do not allow for a total façade replacement, a double façade, such as in the example shown, can be implemented.

## Blocks



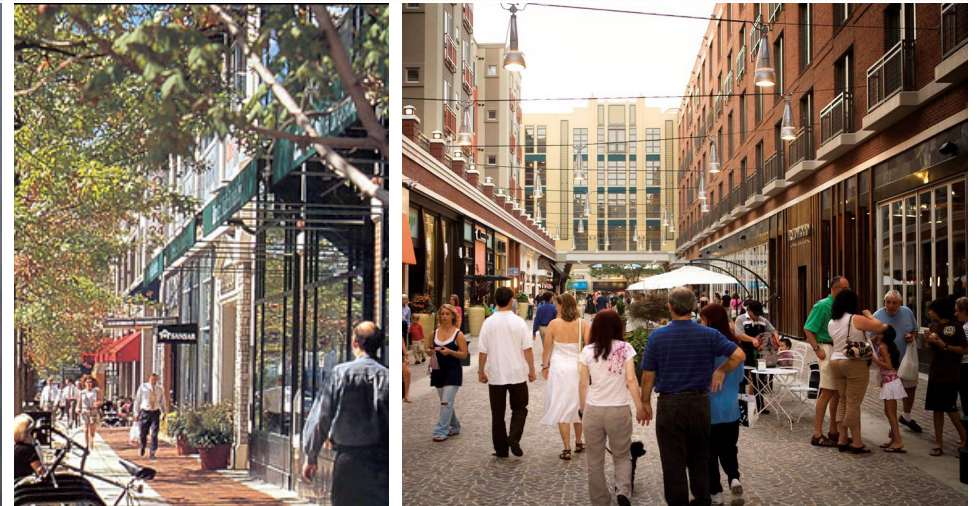
### Neighborhood Revitalization

**Project:** Rag Flats  
**Architect:** Onion Flats  
**Reuse Type:** Conversion and Expansion  
**Location:** Philadelphia, PA

.....Rag Flats is a renovation and expansion of a former factory. At the front of the site, new construction fills a gap between the existing warehouse and a neighboring lot, unifying the street front. With access from a side alley, five new stand-alone units rise three stories and enclose the courtyard, which provides parking and access to the interior units.

In Twinbrook's Light Industrial area, the I-4 zone allows accessory residential up to 40 percent of the site. This provision was intended to encourage a community where business owners and employees live near or above their place of work. Much like the example, the industrial area is composed of small lots, and numerous individual landholders. Rag Flats provides an excellent example of how adaptive reuse can strengthen neighborhood character, and creatively provide housing in industrial contexts.

## Neighborhoods



### Neighborhood Revitalization

**Project:** Arlington Road District  
**Architect:** Various Architects and Designers  
**Reuse Type:** Renovation/Expansion/New Construction  
**Location:** Bethesda, MD

The southwest area of the Bethesda CBD was formerly a light industrial area with surface parking, free standing buildings, a concrete mixing plant, and strip retail centers. Over twenty years, new uses and the conversion of existing buildings and streets have transformed the area into a lively urban area. Existing buildings have been converted to retail space. New housing units have improved the balance of housing and commercial space, and increased daily pedestrian activity. The existing blocks have been transformed by eliminating surface parking and orienting buildings to activate the streets, into a distinct urban neighborhood.





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### **Twinbrook Sector Plan**

The Twinbrook Sector Plan makes recommendations for three districts:

- Metro Core Area
- Technology Employment Area
- Light Industrial Area

Plan recommendations include standards for density, and percentage of housing and commercial use, along with the desired character of development for each district.

The Guidelines illustrate the desired design quality and character of development in each district with recommendations for streets, open space, and buildings to help visualize the neighborhood character envisioned by the Plan.

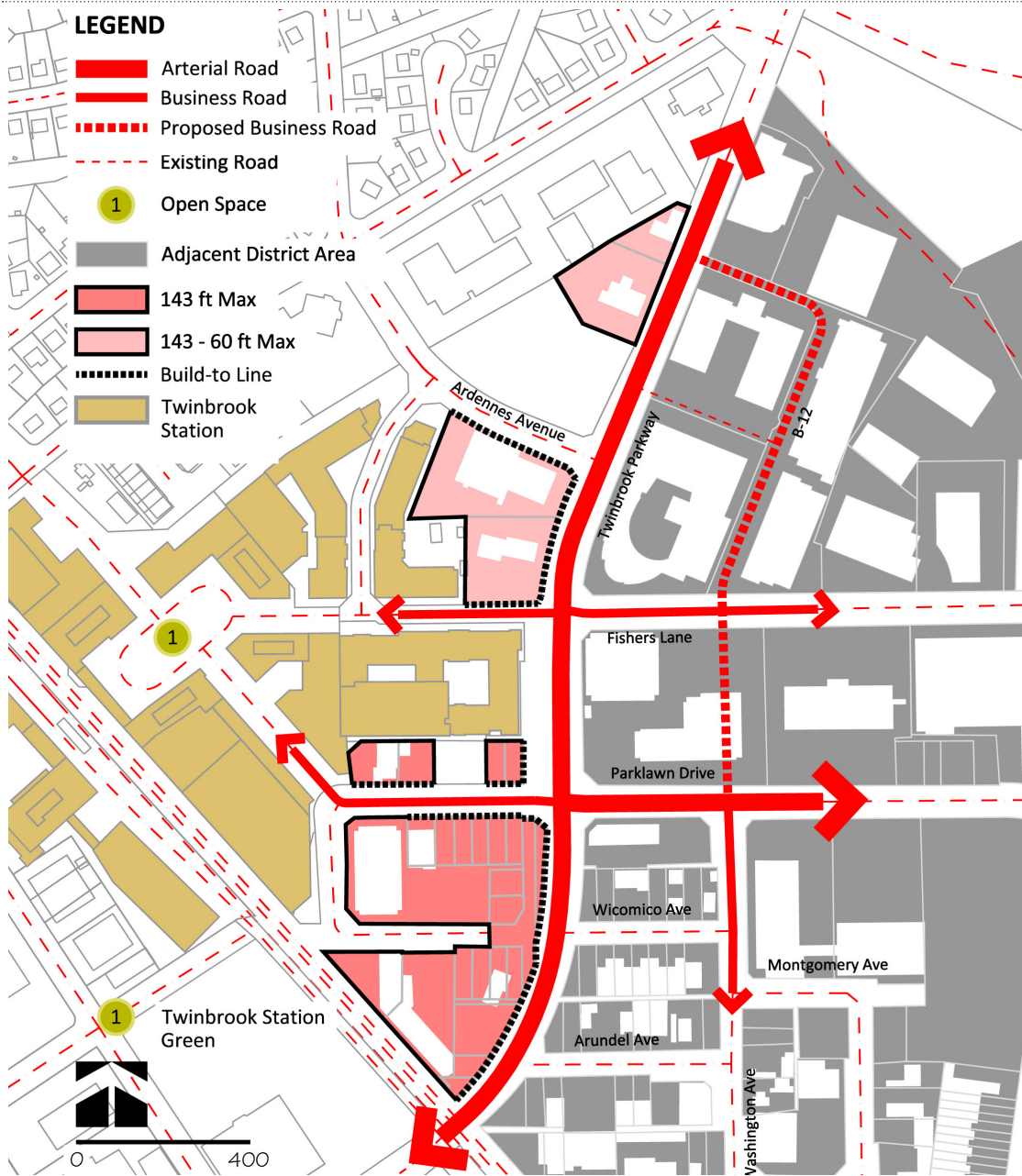
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# Districts

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# Metro Core Area



**Twinbrook Sector Plan Goal:**  
 “The Metro Core District will be an area of mixed uses focused on the Twinbrook Metro Station and its emerging neighborhood.”

The design of the three blocks in this neighborhood will extend the pattern of pedestrian-oriented streets, open spaces, and buildings established in the Twinbrook Station development.

## Achieving the Vision

The Metro Core District's surface parking lots and small-scale service industrial buildings should be redeveloped with housing, neighborhood-serving retail, employment uses, and active public spaces.

### Connectivity

- Reconstruct Fishers Lane and Parklawn Drive as pedestrian oriented, tree-lined streets connecting to the Twinbrook Metro Station.
- Include services for multi-modal transit hub of vehicles, bicycles, pedestrians, and transit riders.

### Design

- Redevelop the three parcels to continue the design features of the Twinbrook Station development.
- Locate the tallest buildings near the Twinbrook Metro Station and the lowest buildings along Twinbrook Parkway and adjacent to the City of Rockville.
- Design streets, open spaces, and buildings to enhance the pedestrian experience.

### Diversity

- Twenty five percent of an entire development must be housing suitable for a diversity of incomes and ages.
- Design public spaces to accommodate a variety of civic activities and community life.

### Environment

- Development in the Metro Core should exceed the LEED standards already established in the Code through development with green building technologies an integral part of neighborhood and building design.
- Building design should focus on adaptability, energy efficiency, and re-use.
- Focus streetfront retail on the western ends of Fishers Lane and Parklawn Drive



## Open Space

- Limited to public use space required by zoning.
- Provide seating, eating, etc, associated with restaurants.
- Encourage off site assembly of required open space and in lieu payments.
- Spaces should be functional, accessible and will generally be hardscaped.

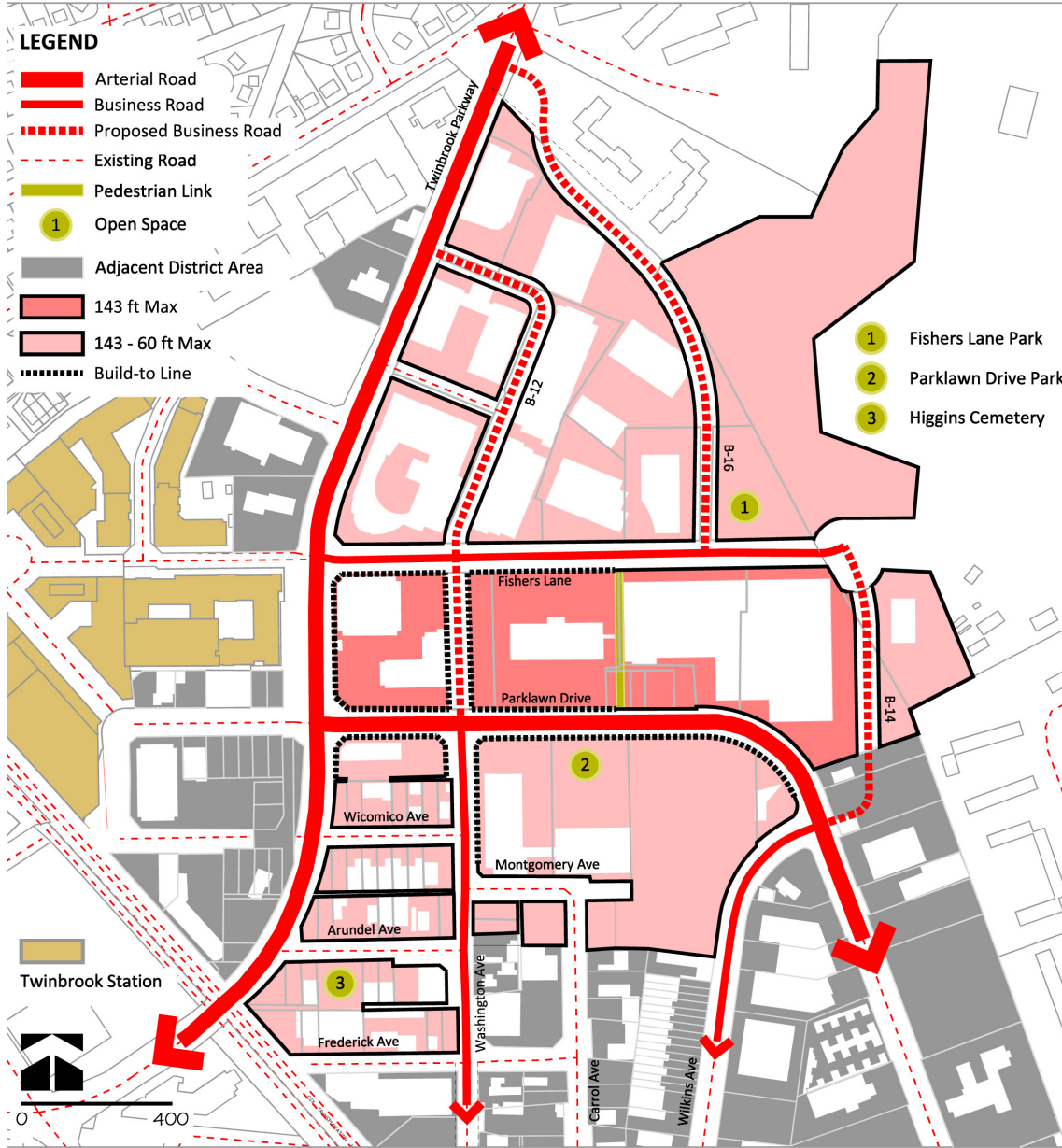
## Streets

- Extend Fishers Lane and Parklawn Drive as business streets west through the district, connecting to the Twinbrook Station development.
- Make significant intersection improvements at Fishers Lane and Parklawn Drive to improve connectivity and pedestrian safety between the western and eastern sides of Twinbrook Parkway.
- Off-peak parking should be considered for portions of Twinbrook Parkway.

## Buildings

- Building facades should define the street and extend the character of the Twinbrook Station development.
- Encourage shared parking, located in the rear or center of the block.
- Encourage multiple storefront entries and transparent facades.

# Technology Employment Area



**Twinbrook Sector Plan Goal:**

To create “an area with mixed uses featuring advanced technology and biotechnology activities in an area of high quality public design.”

## Achieving the Vision

Development in the Technology Employment Area should emphasize useful open spaces, pedestrian-oriented streets, and flexible buildings to serve the needs of biotechnology and advanced technology employers.

### Connectivity

- Design Fishers Lane and Parklawn Drive as active, pedestrian-oriented streets that connect to the Twinbrook Metro Station.
- Create a system of bikeways, trails, and sidewalks that connect to the active recreation areas and stream valley parks located east of Twinbrook.

### Design

- Design buildings to allow the evolution of advanced technology and biotechnology industries.
- Renovate and significantly enhance the Parklawn Building to integrate its character and function.
- Design public spaces to accommodate a variety of civic activities.
- Encourage a mix of uses to create a lively pedestrian oriented environment.

### Diversity

- Encourage residential and hotel spaces to create a lively neighborhood for a variety of users.
- Concentrate retail along the eastern portion of Fishers Lane.

### Environment

- Use green building technologies as an integral part of the neighborhood and building design.
- Streetscape should include a pattern of closely spaced street trees.
- Create new open spaces that reduce the area's extensive imperviousness and expand the existing tree canopy.



## Open Space

Fishers Lane Park should mirror the Twinbrook Station Green at the western end of Fishers Lane. Parklawn Drive Park should be located approximately halfway between Fishers Lane Park and the Twinbrook Station Green along Parklawn Drive. Required public open spaces should be functional and consolidated in selected locations.

Each of these open spaces should include:

- approximately  $\frac{1}{4}$  to  $\frac{1}{2}$  acre
- substantial grass area
- substantial pervious area

## Streets

- Streetscape improvements should be made along Fishers Lane and Parklawn Drive
- Include provisions for off-peak parallel parking.
- The location of portions of Parklawn Drive and Wilkins Avenue extended may be adjusted to meet federal security requirements near the Parklawn Building.
- Final routes determined through development review

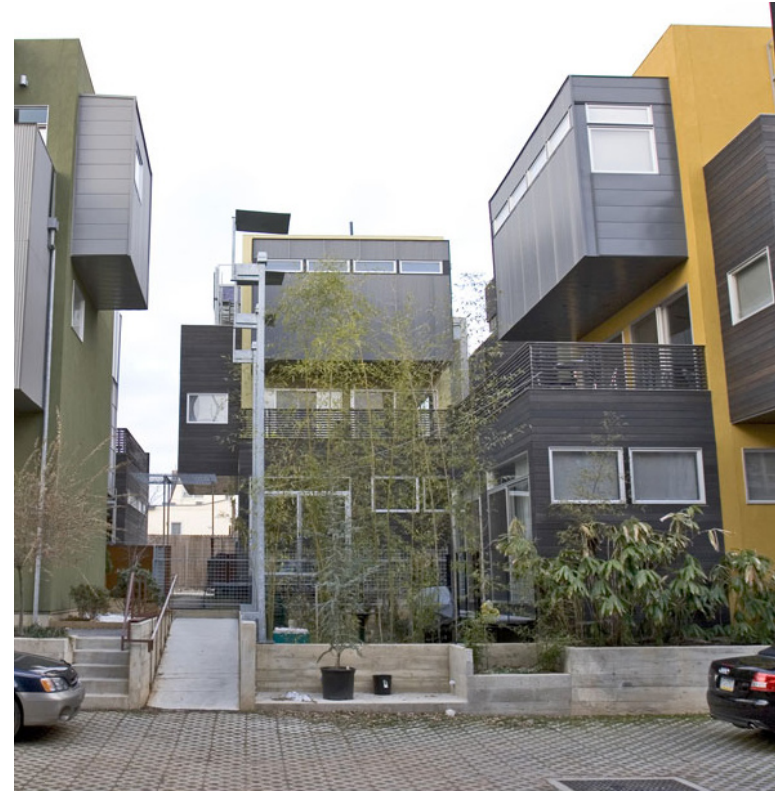
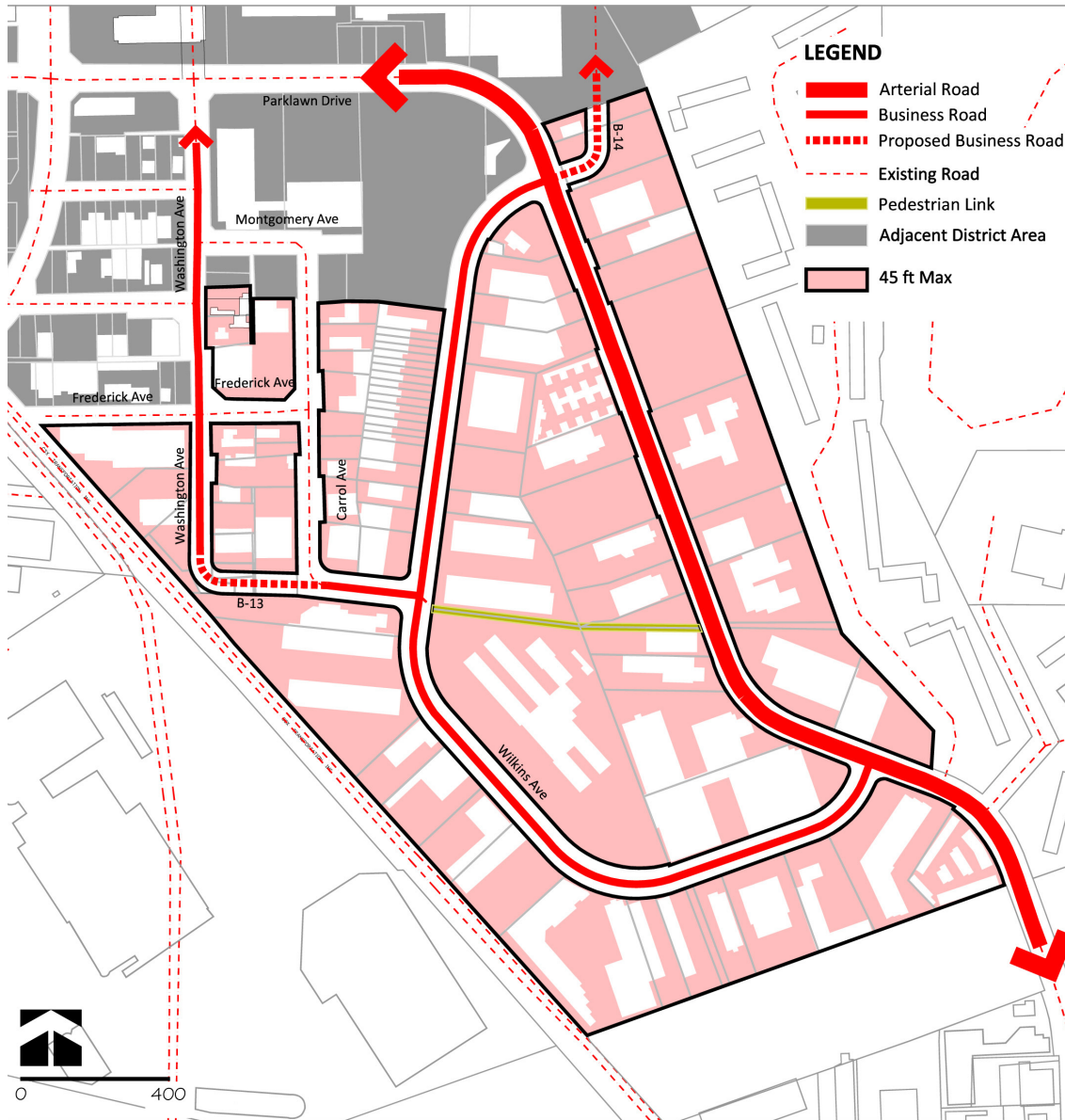
## Buildings

Buildings will be designed for advanced technology industries and to accommodate the mixed uses needed to create a dynamic work environment.

Building elements should include:

- 143-foot maximum height along Twinbrook Parkway at Fishers Lane
- heights stepped down to 60 feet at the Plan area's northern boundary with adjacent garden apartments
- visual interest at street level and design that connects the building to the street

## Light Industrial District



### Twinbrook Sector Plan Goal:

To maintain the industrial area as an “area for thriving goods and service businesses.” The I-4 Zone envisions low-scale buildings on small lots with a mixture of live/work space and industrial uses.

Following the Plan’s recommendation to preserve and enhance the existing mix of uses, the Guidelines support the adaptive reuse of existing buildings alongside new building construction.

## Achieving the Vision

Through adaptive reuse, development in the Light Industrial Area will continue to provide research and service commercial resources for residents and businesses.

### Connectivity

- Completing the sidewalk system, particularly along Washington Street
- Complete a new mid-block pedestrian link to improve connections within the district and to the Metro stations.
- Connect to the bikeway and trail system along Montrose Parkway.

### Design

- Adaptive reuse of existing buildings and new construction should preserve and enhance existing and potential light industrial uses.
- Create an appropriate pedestrian-oriented environment.

### Diversity

- Design buildings, streets, and open spaces that meet the diverse needs of light industrial businesses.
- allow a limited amount of housing for the on-site workforce and retail space.
- New development should accommodate large and small businesses.

### Environment

- Incorporate green building technologies as an integral part of building and neighborhood design.
- Encourage adaptive reuse of existing buildings to reduce the carbon footprint of development in the area.



## Open Space

Required public open space should provide landscape features for the benefit of the building's occupants. It should be visible, and useful and can be consolidated in selected locations.

## Streets

Several streets are built to standards that pre-date the Road Code. Given the Plan's recommendations to preserve the area's existing mix, these roads should remain with minimal improvements, if their performance is adequate.

## Buildings

To create a more urban setting for this industrial area and encourage its continued availability for light industrial uses:

- Do not apply the minimum one-acre lot size.
- Retain small lots, constructing smaller buildings, and renovating and expanding existing buildings.
- Focus streetscape on improving pedestrian access and safety.

Building elements should include:

- runoff controlled through permeable pavers
- a minimal setback from streets and between buildings
- buildings oriented to streets
- accessory residential units are encouraged.