

Mannakee Street Complete Streets Feasibility

City of Rockville

April 9th, 2024



Agenda

» Project Overview

- » Goals

- » Issues and Opportunities

- » Schedule

» Corridor Concepts

- » Concept 1: Traffic Calming and Shared Lanes

- » Concept 2: Bicycle Corridor Improvements

- » Concept 3: Multimodal Redesign

» Next Steps

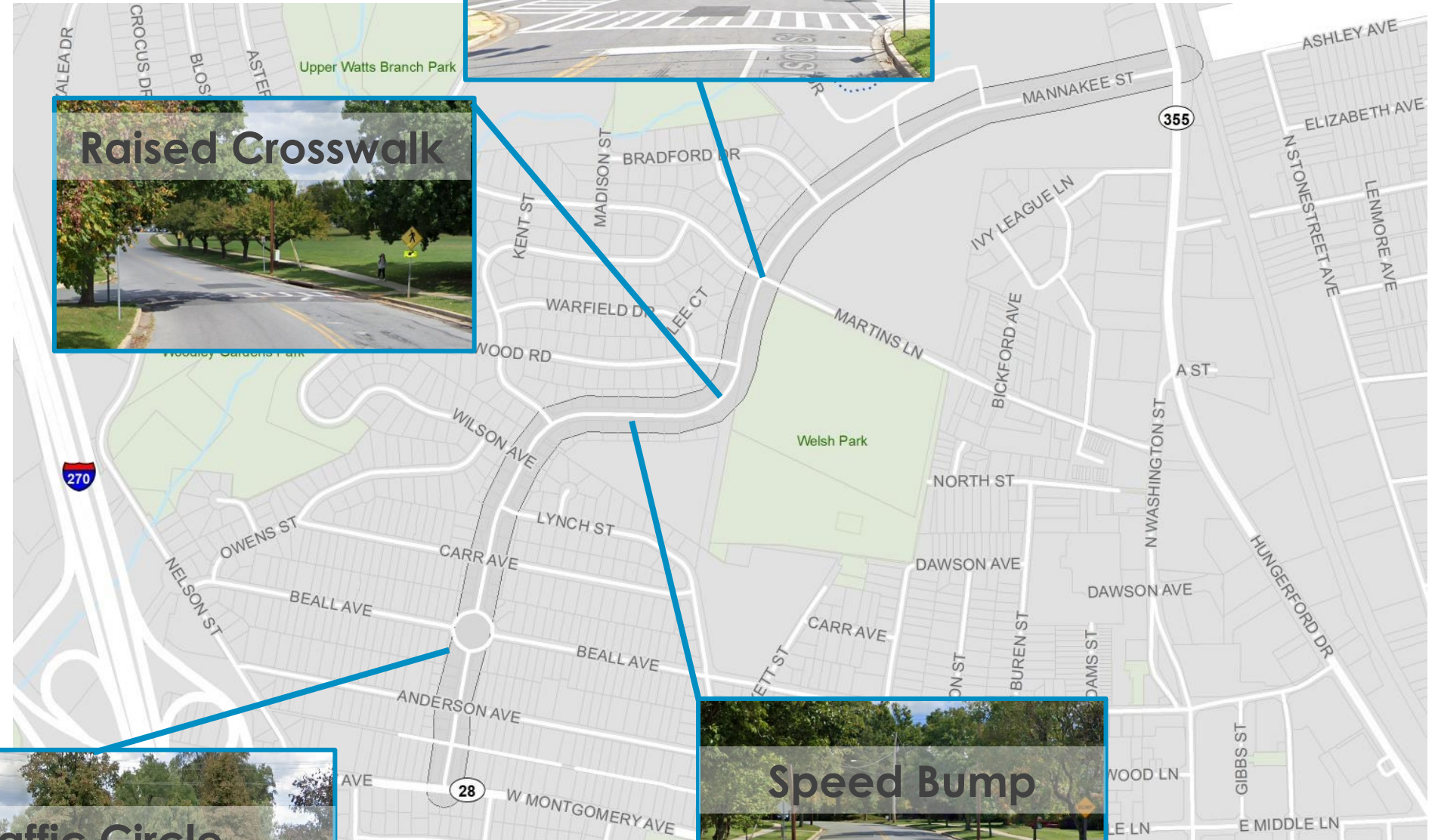
Project Overview

Mannakee Street Complete Streets Feasibility

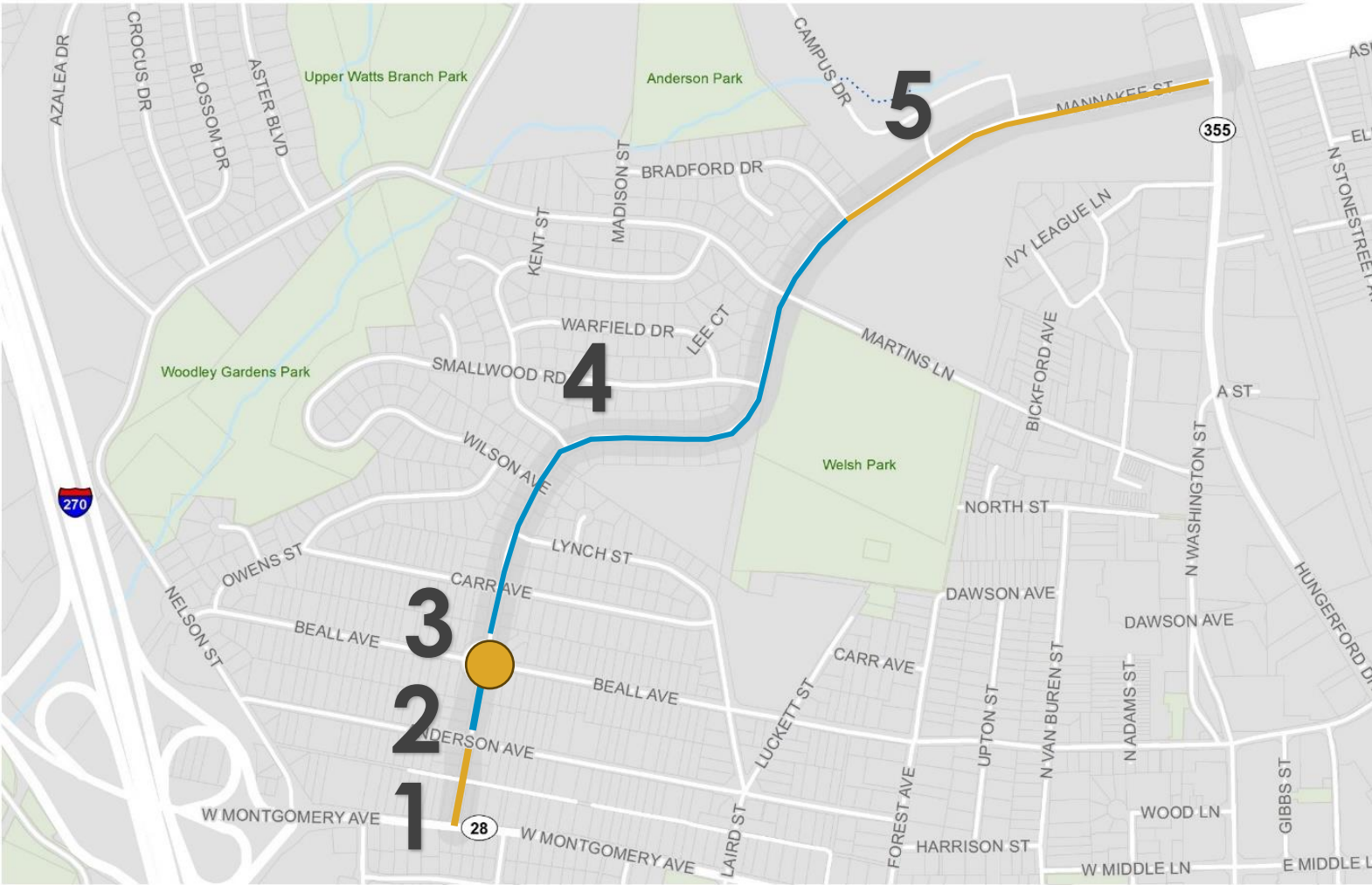


Study Area

- » 1.25 miles from W Montgomery Avenue (MD 28) to Hungerford Drive (MD 355)
- » Existing treatments:
 - » Henderson Circle
 - » Raised crosswalk
 - » High visibility crosswalks
 - » Speed bump



Study Area



Mannakee Street Segment	Sidewalk		Curbside Use		Curb to Curb Width	Transit Facilities
	West	East	West	East		
1. MD 28 to Anderson Avenue	Yes	No	Parking permitted	No parking permitted	36 feet	N/A
2. Anderson Avenue to Henderson Circle	Yes	No	No parking permitted		26 feet	N/A
3. Henderson Circle	Sidewalk available within Henderson Circle and outside of the Circle		Right side parking permitted (except from Mannakee St to Beall Ave)		22 feet	N/A
4. Henderson Circle to Bradford Drive	Yes	Yes	Parking permitted in most areas		36 feet	N/A
5. Bradford Drive to MD 355	Yes	Yes	Parking restrictions vary		36 feet	Ride On: 46, 55 WMATA: Q2, Q6

Project Goals

Provide safe transportation facilities for all modes by implementing Complete Street projects and attaining Vision Zero goals

(City of Rockville's Comprehensive Plan)

Promote walking, rolling, and bicycling modes with new and upgraded facilities

(City of Rockville's Comprehensive Plan)

Identify a combination of equitable engineering, enforcement, education, and evaluation, along with associated funding needed for the city to reach the goal toward zero deaths and serious injuries by 2030

(City of Rockville's Vision Zero Action Plan)

Improve the safety of bicycling in Rockville for users of all groups

(Rockville Bikeway Master Plan)

Promote healthy behaviors and prevent chronic disease by influencing policy, systems and environmental change (PSE) strategies that influence those behaviors

Healthy Montgomery Transforming Communities Initiative (TCI)

What are Complete Streets?

A **process and approach** to planning, designing, and building streets that enables safe access for all users of all ages and abilities (Smart Growth America)

- » Unique, contextual approach and response to community needs and street context
- » Response to traffic-related safety concerns
- » Address the needs of historically disadvantaged and underinvested communities and groups
- » Transportation demand management by encouraging non-single occupancy vehicle trips



Improving Safety for All Users – Traffic Calming



Issues and Opportunities

Issues:

- » Limited multimodality
- » Inconsistent parking regulations
- » Speeding on Mannakee Street
- » Driver yielding compliance for pedestrians
- » Visibility issues due to parked vehicles
- » Limited curb to curb width to accommodate all modes
- » Downhill slope towards MD 28
- » Need for improved crossing and signage at Smallwood Road
- » Lack of parking compliance in No Parking zones

Opportunities:

- » Connections to Montgomery College and Rockville Metro
- » Demand for multimodal travel
- » Traffic calming to slow vehicle speeds and increase safety and comfort
- » Connections to future Martins Lane bicycle improvements
- » Repurposing underutilized on-street parking
- » Gateway treatments at state roads: MD 28 and MD 355
- » Build on the corridor's assets: mostly complete sidewalk network, tree-lined streets, crosswalks, speed humps, Capital Bikeshare station
- » Quick-build treatments offer near-term responses to community concerns

Project Schedule

	October 2023	Nov 2023	Dec 2023	January 2024	February 2024	March 2024	April 2024	May 2024	June 2024
Task 1: Project Kick-Off and Ongoing Management									
Task 2: Existing Conditions Review									
Task 3: Identification of Recommended Strategies									
Task 4: Development of Conceptual Designs									
Task 5: Public Presentation									
Task 6: Final Recommendations & Next Steps									

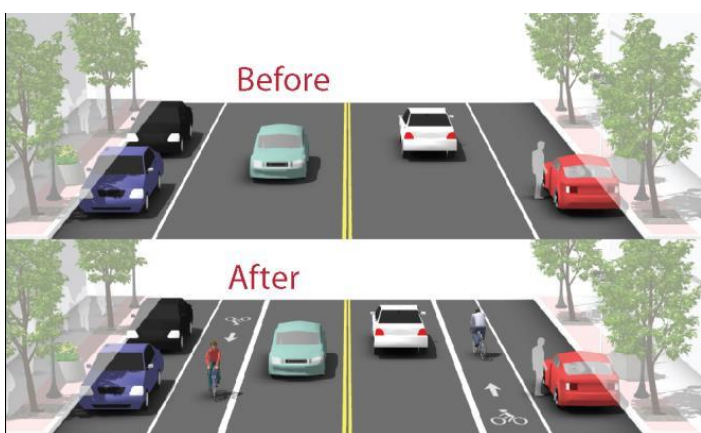
Corridor Concepts

Mannakee Street Complete Streets Feasibility



Toolbox of Strategies

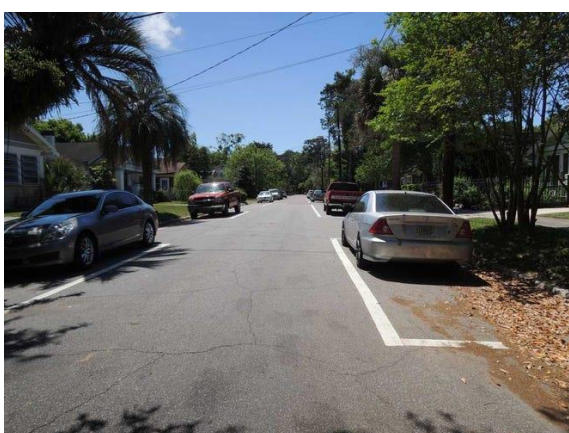
» Corridor Strategies



Lane Narrowing



Corridor-Wide Traffic Calming



Formalize On-Street Parking



Buffered Bike Lanes



Protected Bike Lanes



Downhill Shared Lane Markings

Toolbox of Strategies

» Intersection/Spot Treatments



Gateway Treatments;
Median Islands



Daylighting;
Double Yellow
Centerline Striping



Painted Curb
Extensions



Curb Extensions with
Bicycle Treatments



No Right Turn on Red



High Visibility Crosswalks



Bike Box



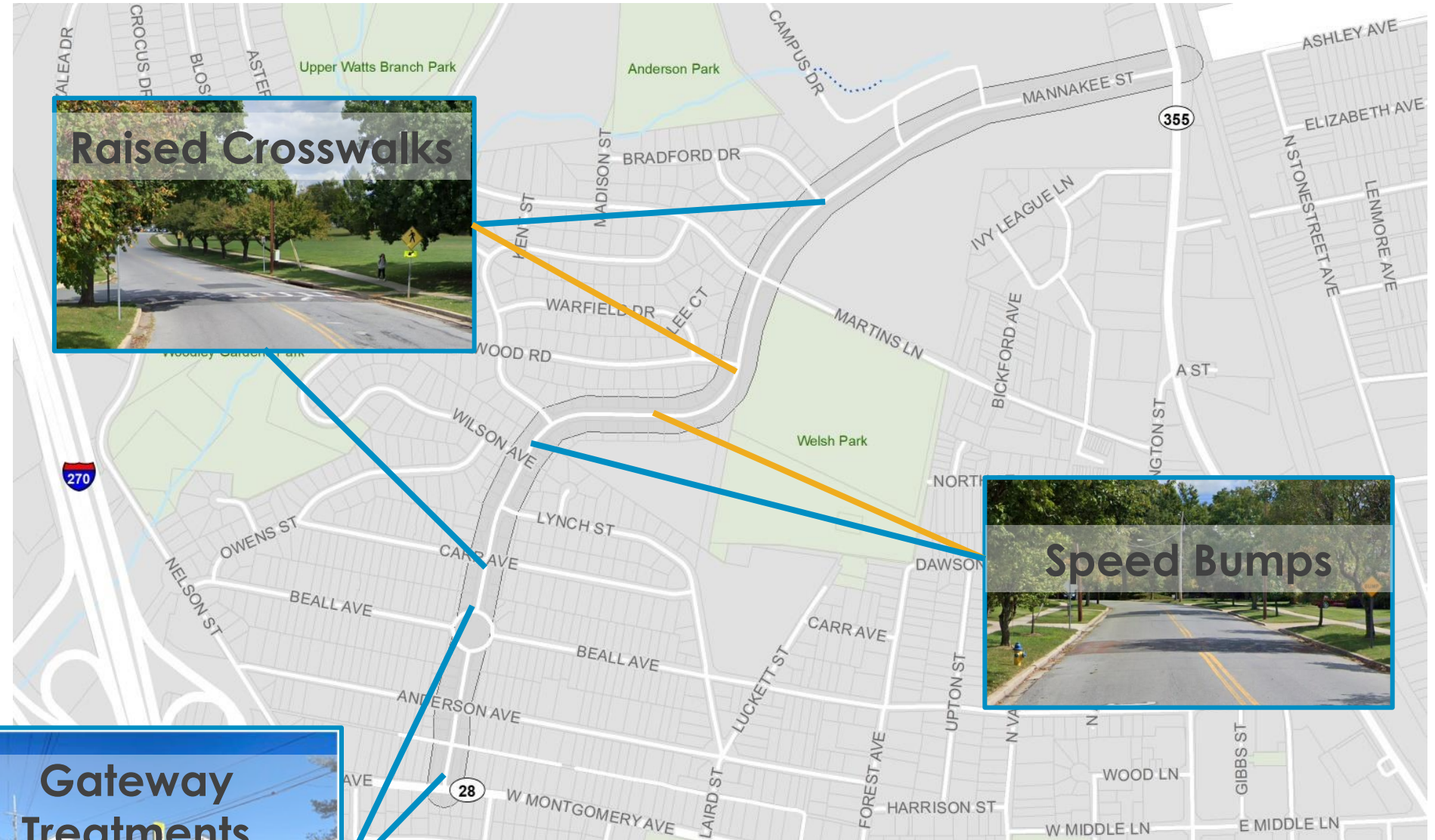
Curb Extensions with
Green Infrastructure

Option 1: Traffic Calming and Shared Lanes

- » Option for quick-build implementation
- » Maintain existing parking
- » No required construction
- » Maintain existing lane striping and configuration
- » Add shared lane markings for people biking
- » Implement traffic calming
 - » Formalize parking with striping
 - » Bicycle signage
 - » Speed humps

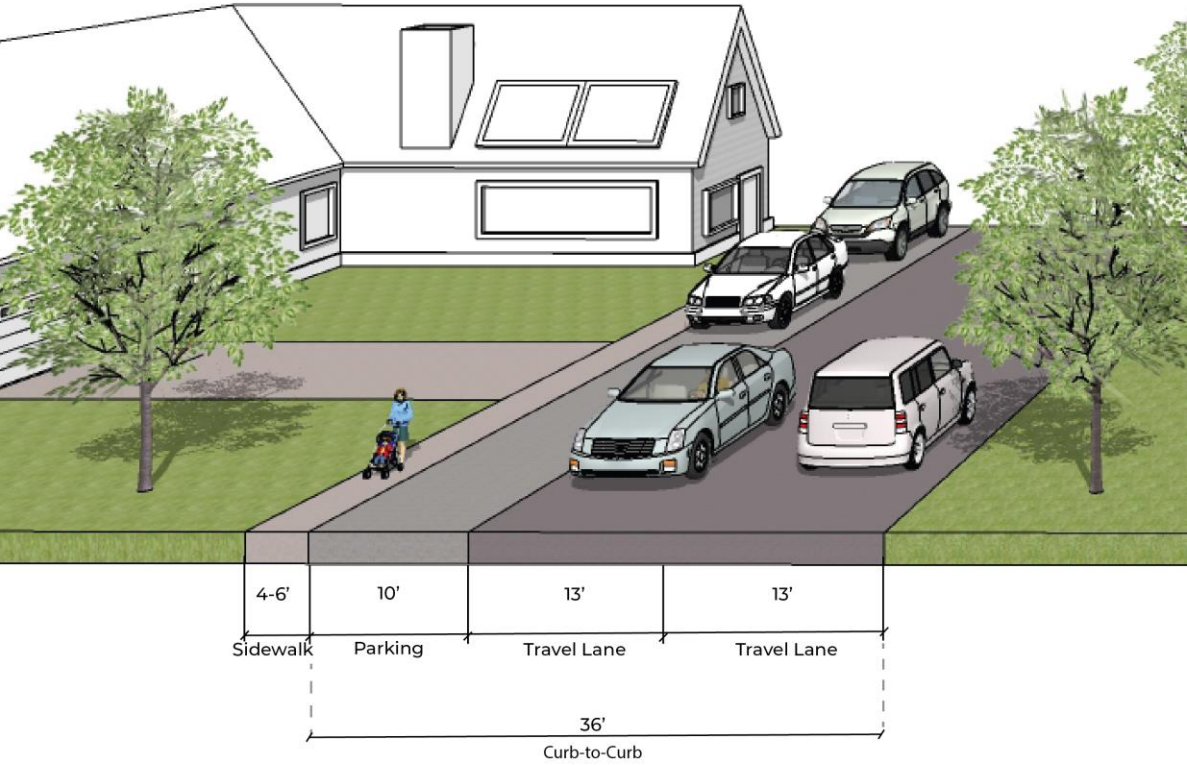
Option 1: Traffic Calming Treatments

- » Raised treatments spaced 500-750 feet apart
 - » Speed bumps
 - » Raised crosswalks
- » Gateway Treatments or painted curb extensions
- » No speed bumps north of Bradford Drive along bus route

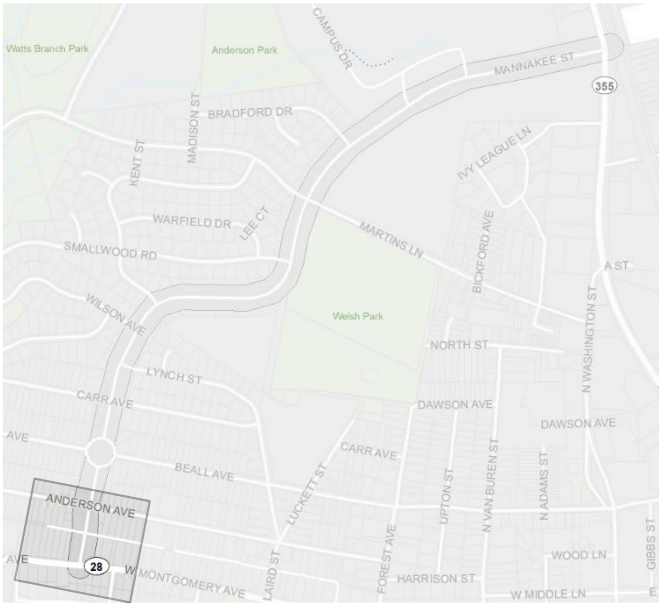
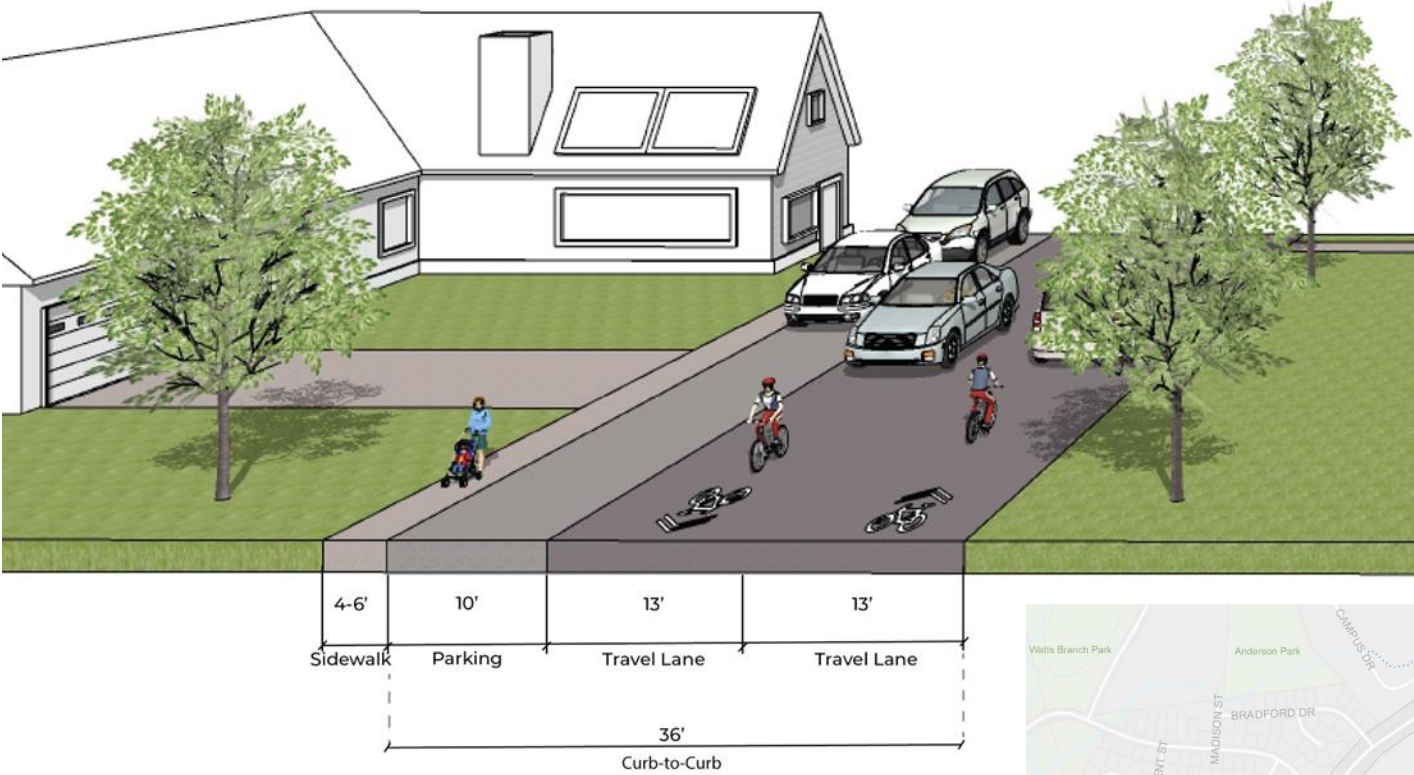


MD 28 to Anderson Avenue

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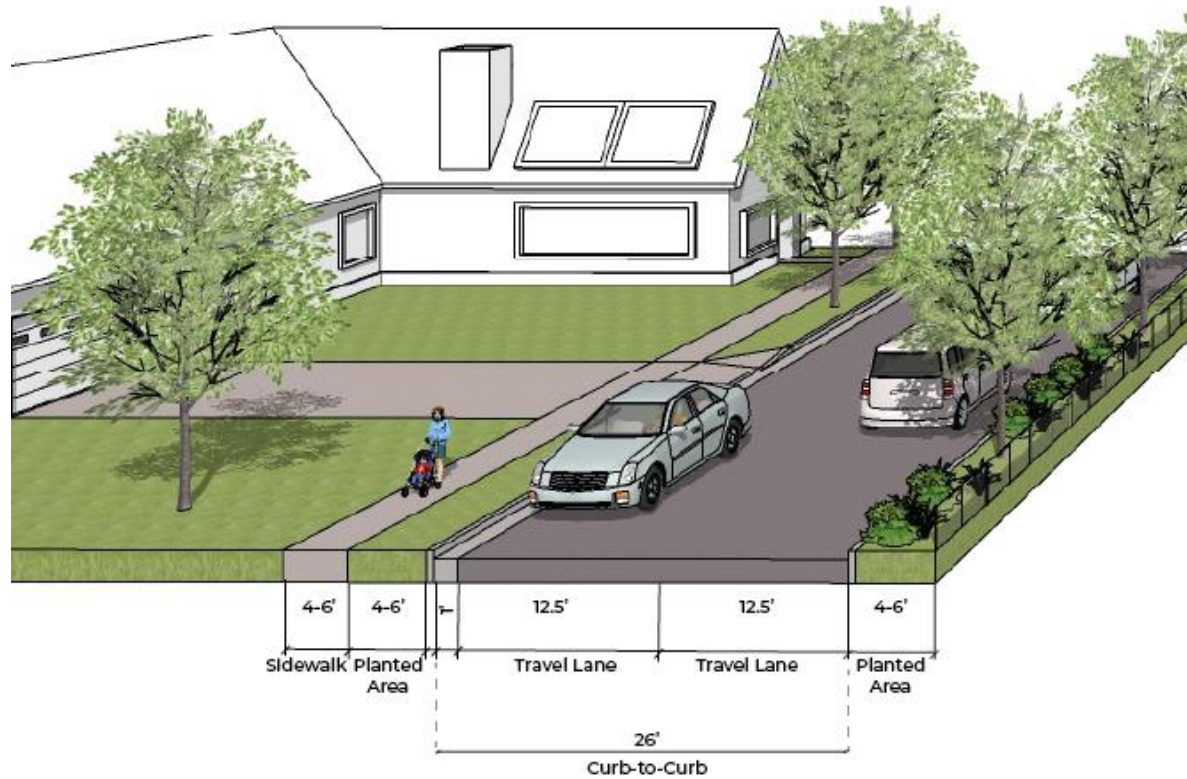


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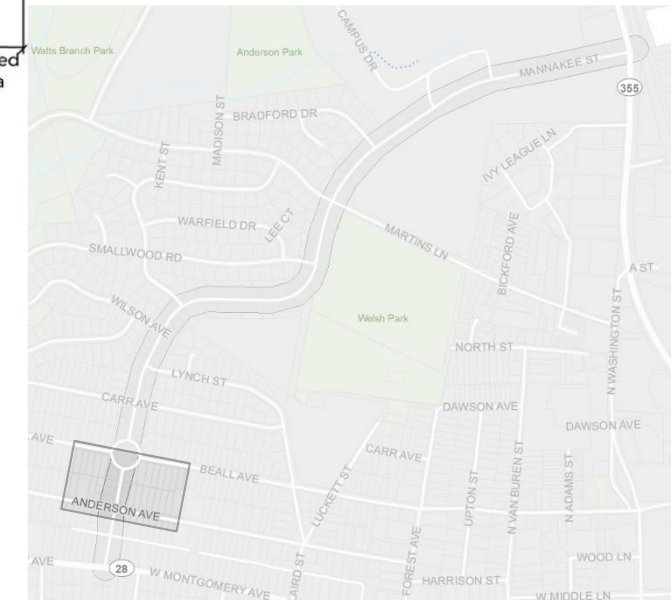
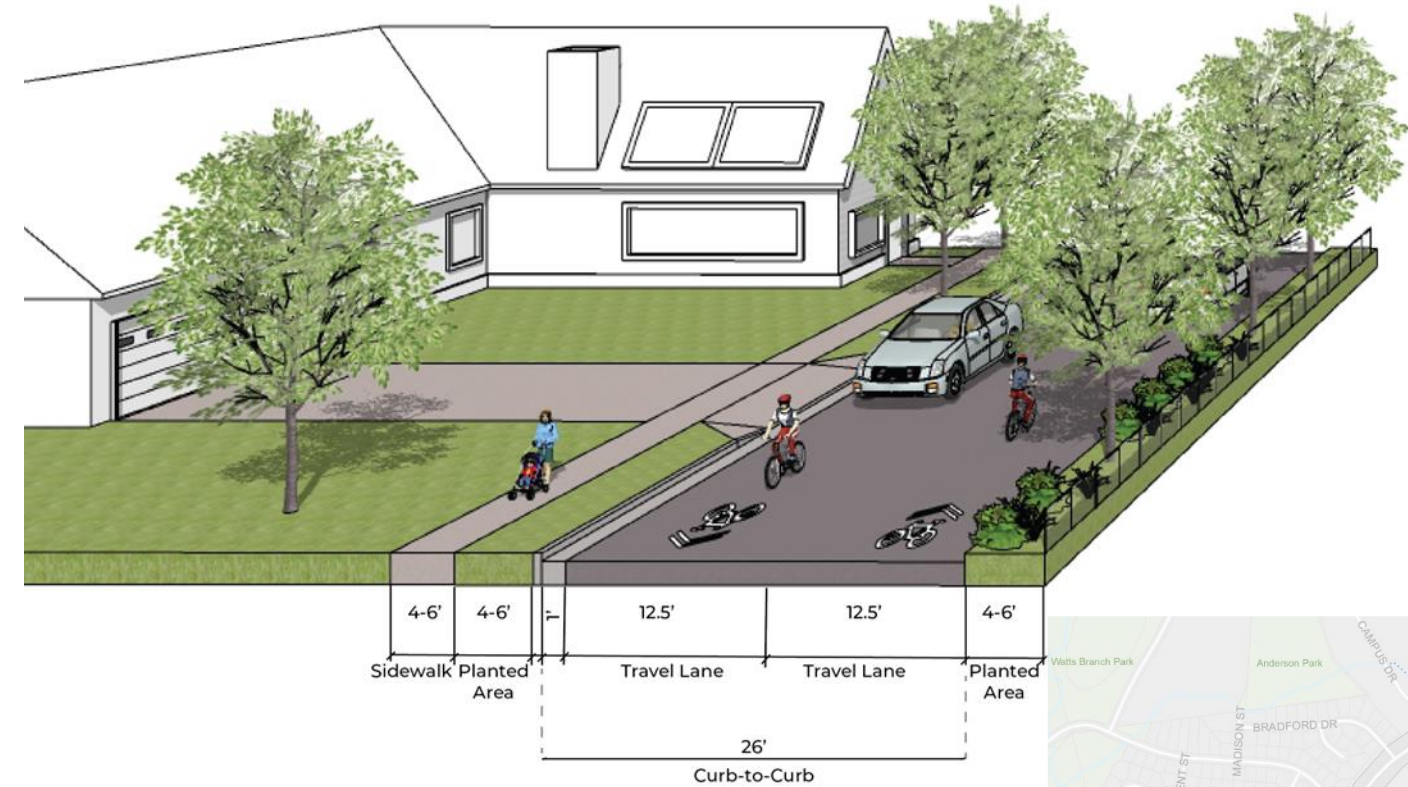


Anderson Avenue to Henderson Circle

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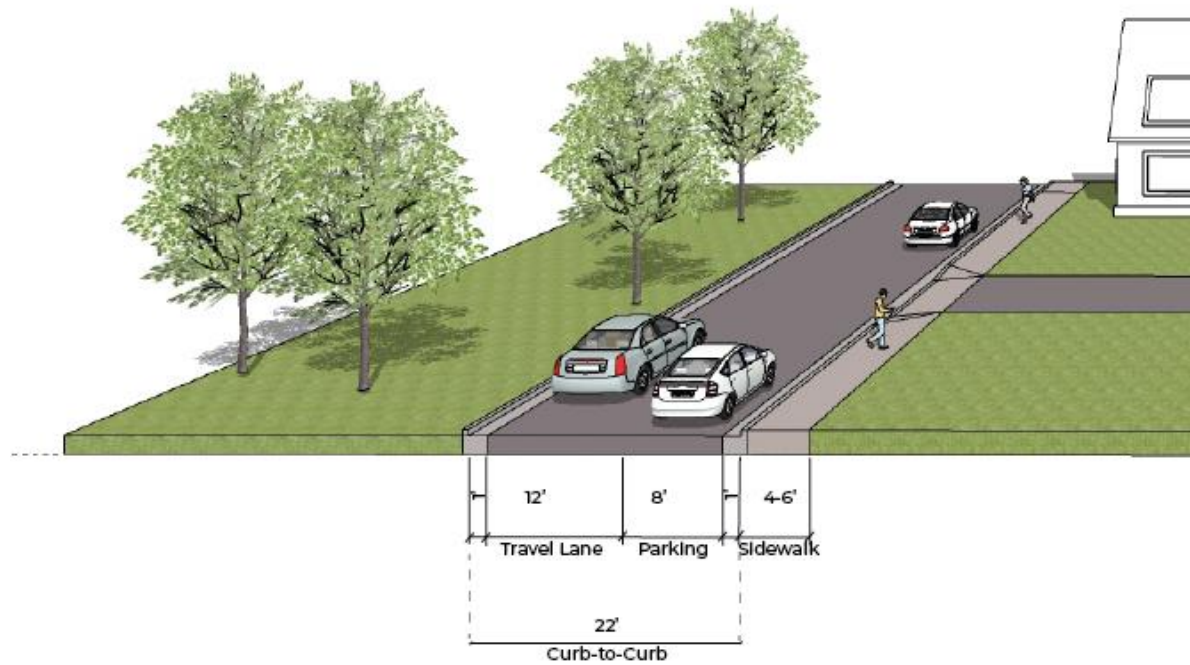
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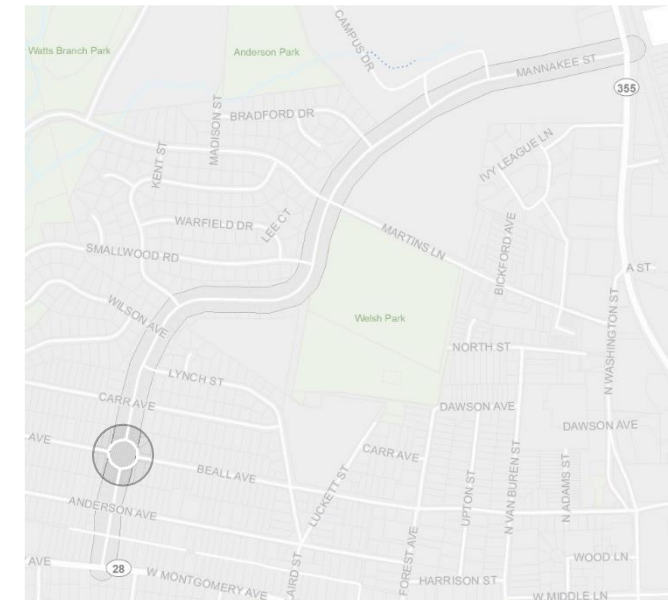
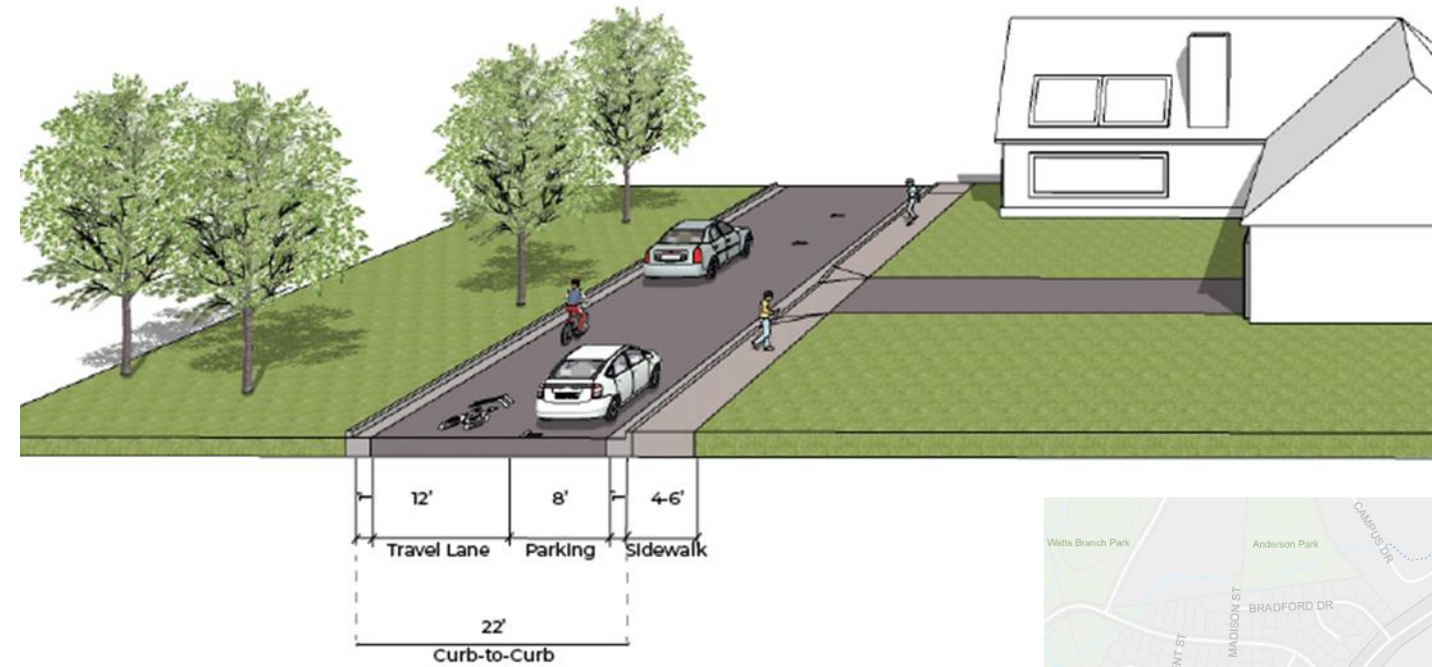
Henderson Circle

Option 1

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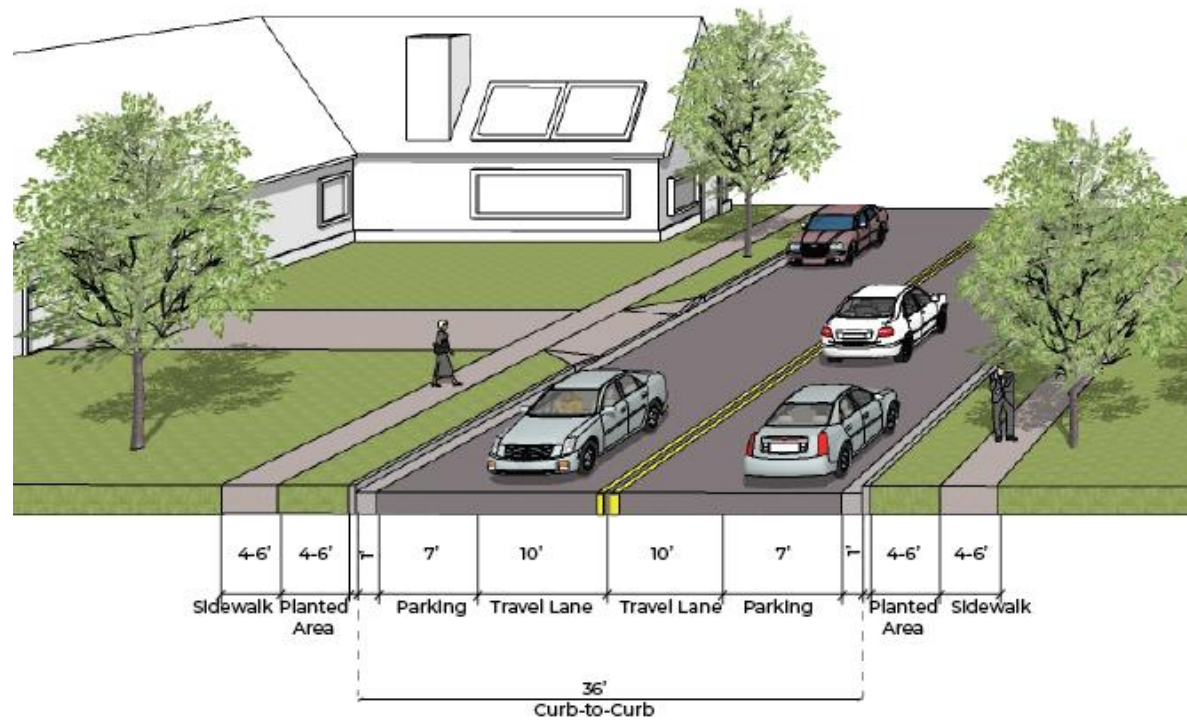


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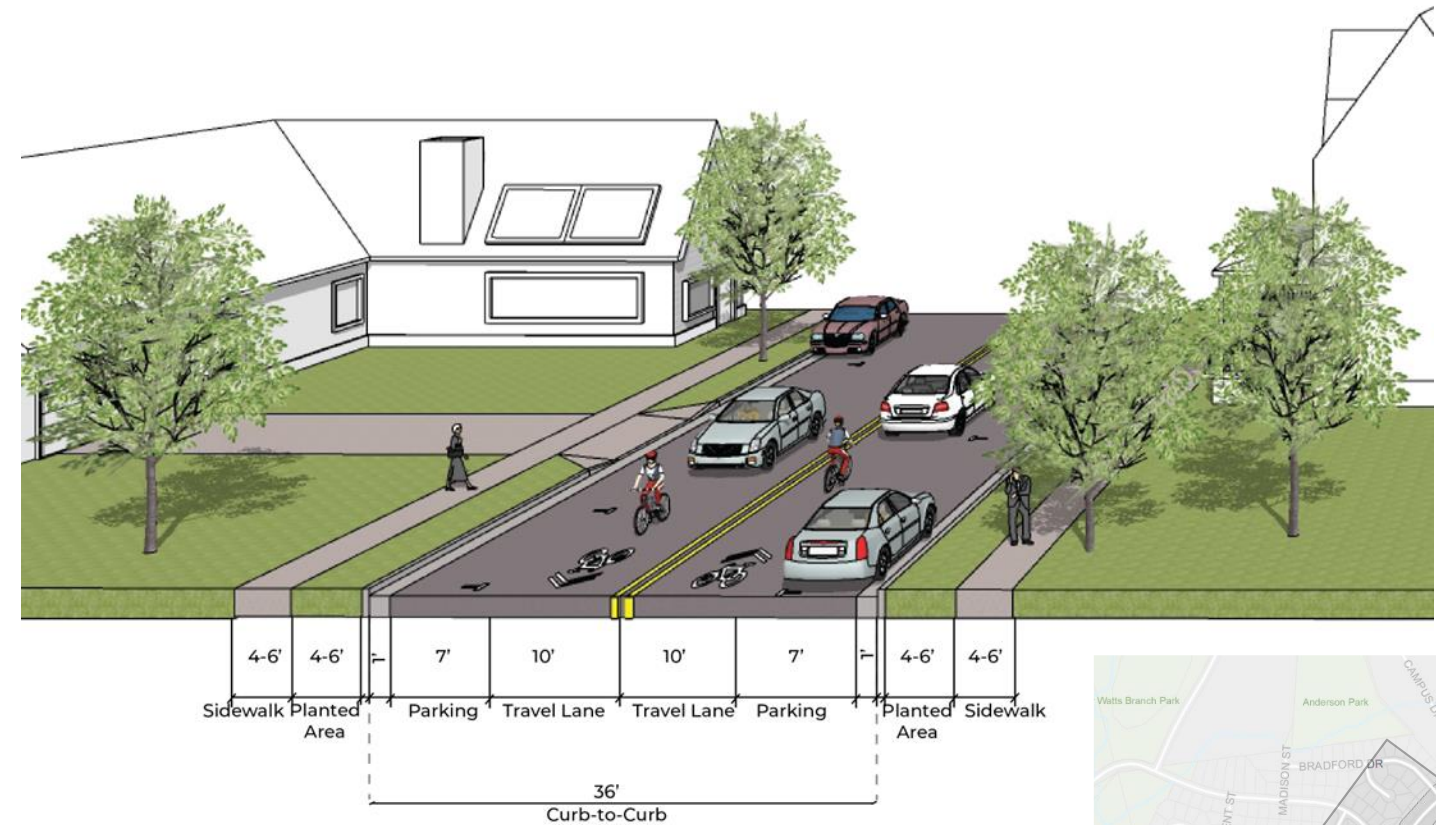


Henderson Circle to Bradford Drive

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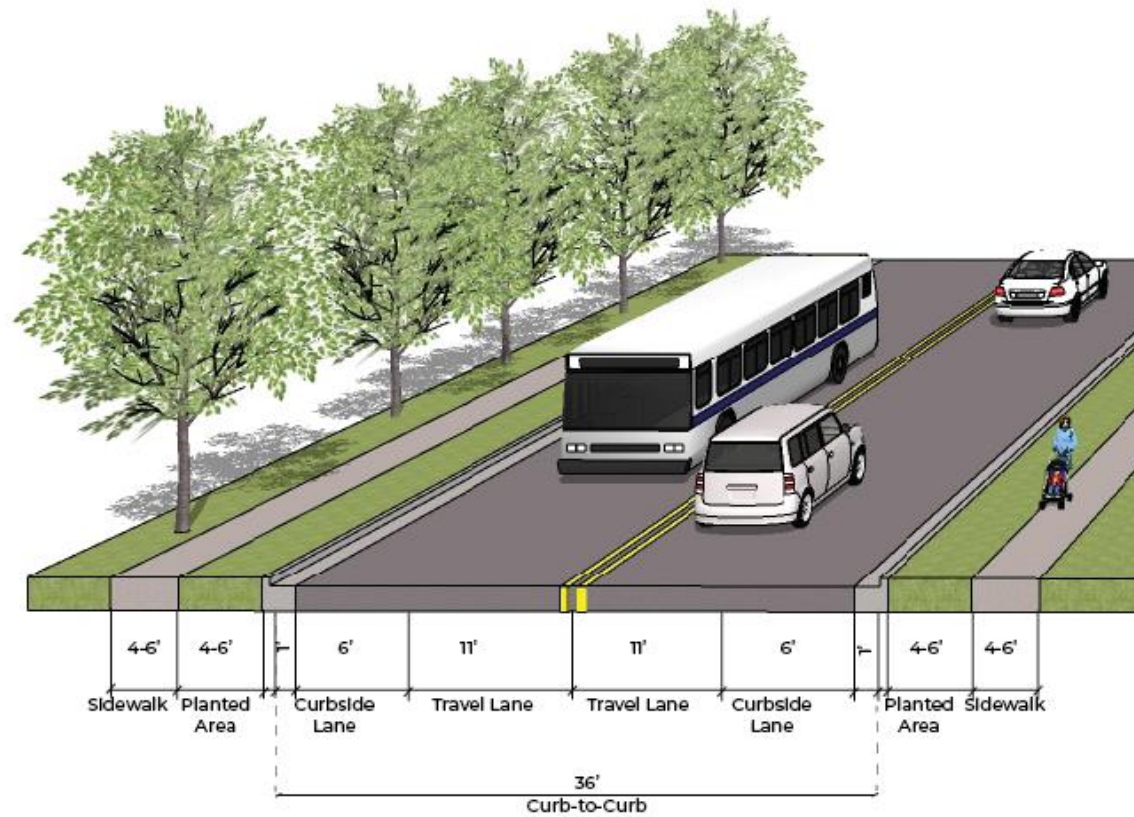


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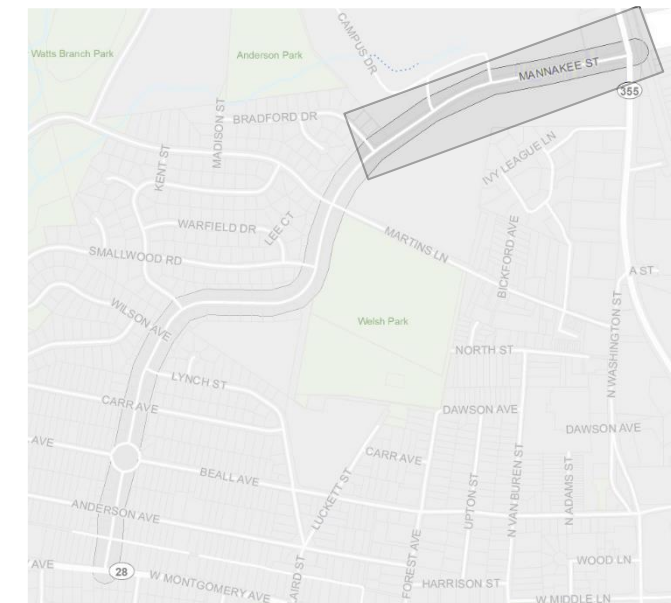
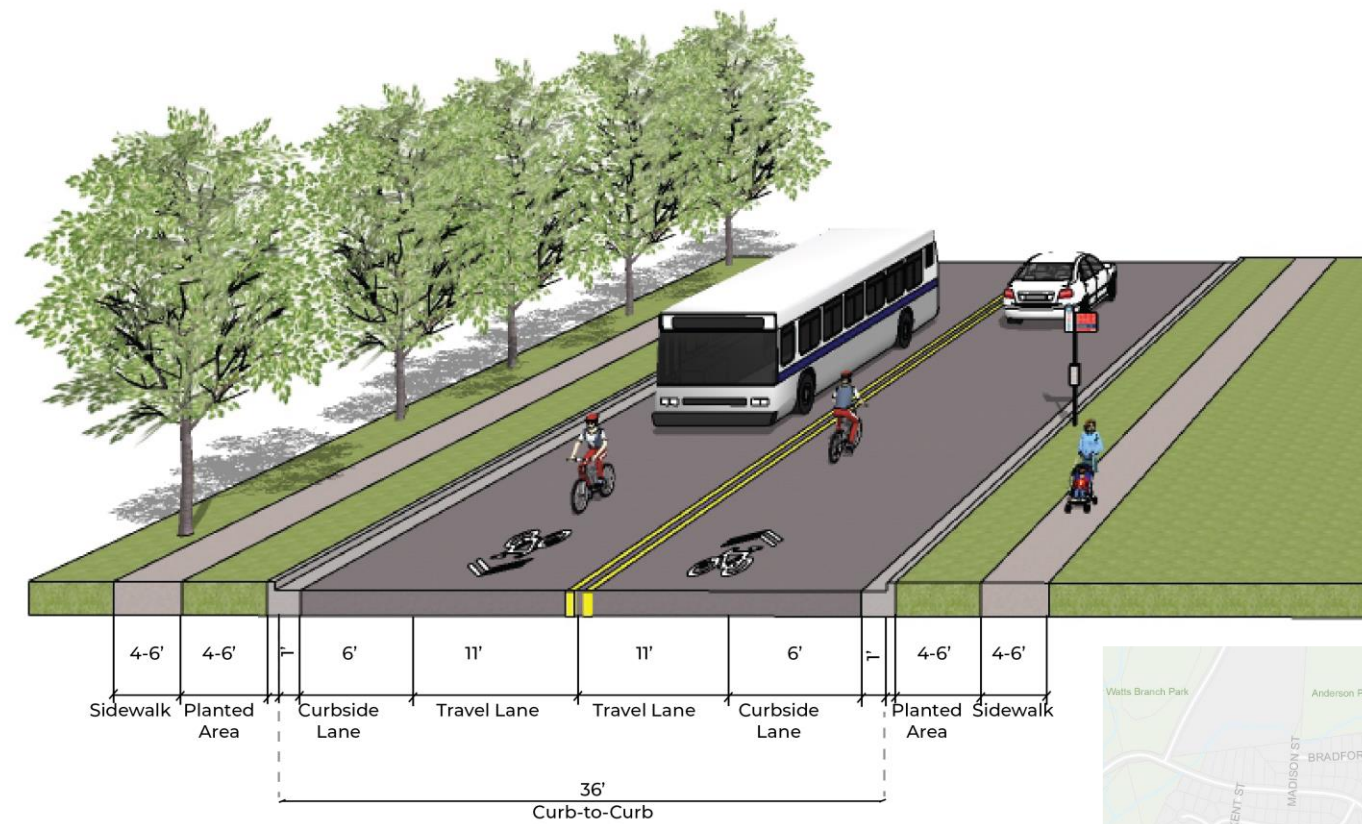


Bradford Drive to Hungerford Drive

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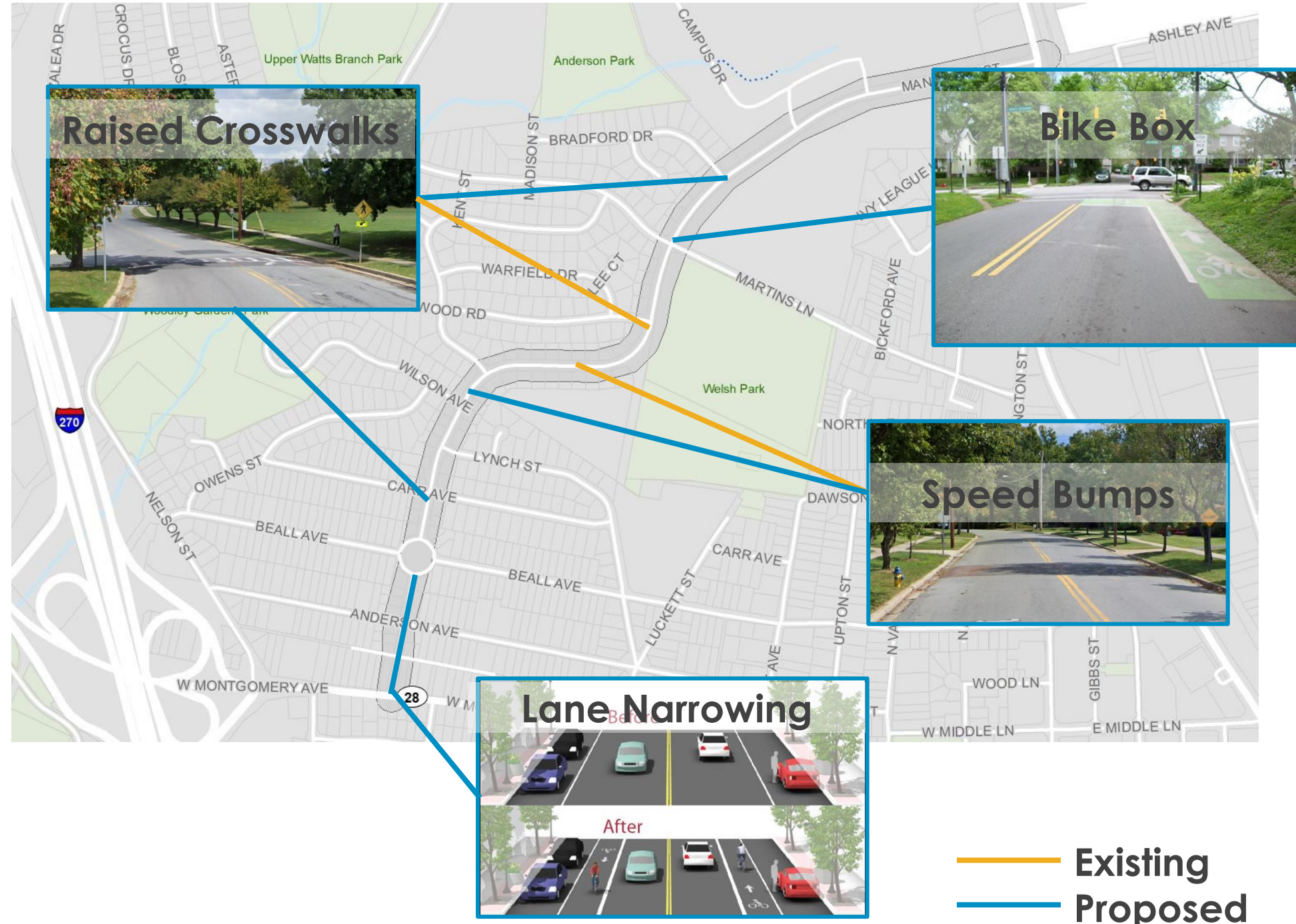


Option 2: Bicycle Corridor Improvements

- » Focus on improving bicycle facilities
- » Minimal parking impacts
- » Mix of bicycle treatments
 - » Northbound bike lane and southbound shared lane markings
 - » Buffered bike lanes
- » Complement with traffic calming treatments
 - » Speed humps
 - » Raised crosswalks
 - » Pedestrian refuge areas, pinch points

Option 2: Traffic Calming and Additional Treatments

- » Lane narrowing from MD 28 to Henderson Circle
- » Raised treatments spaced 500-750 feet apart
 - » Speed bumps
 - » Raised crosswalks
- » Gateway Treatments
- » No speed bumps north of Bradford Drive along bus route
- » Bike box at Martins Lane

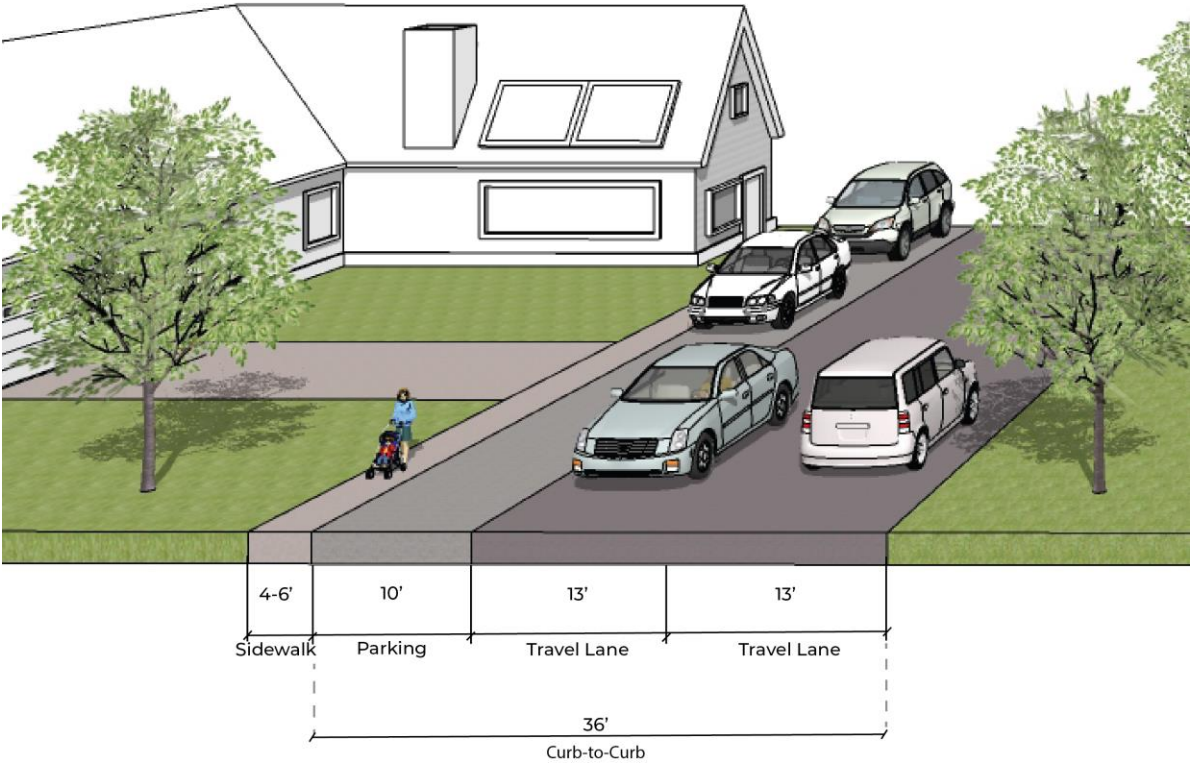


Option 2: Bicycle Corridor Improvements

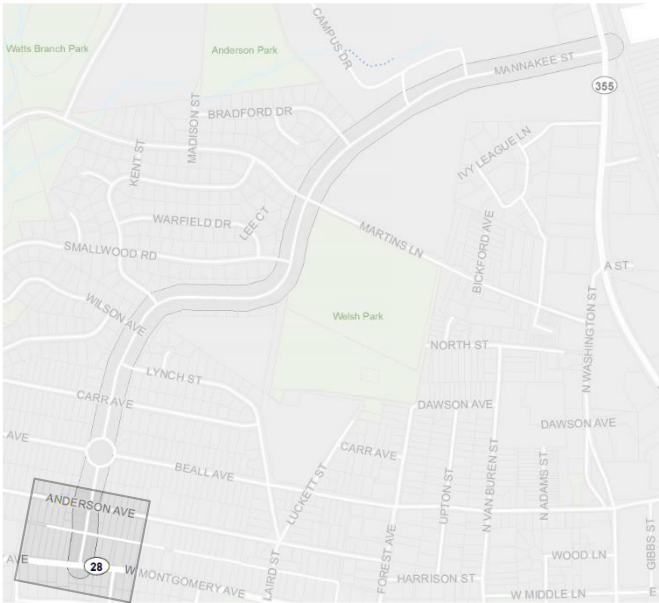
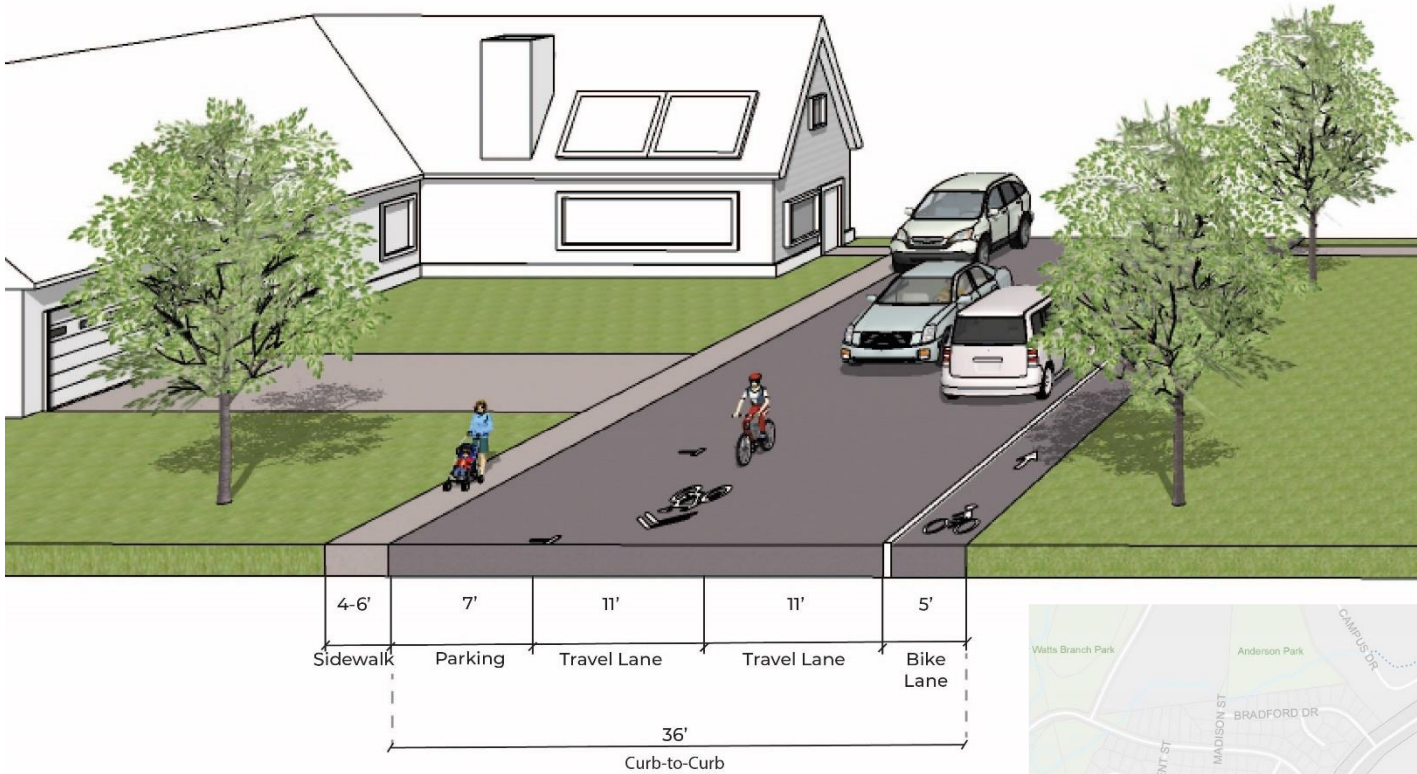
Segment	Bicycle Corridor Improvements	Parking Impacts
<u>Segment 1</u> MD 28 to Anderson Avenue	Northbound: 5' bike lane Southbound: Shared lane marking	No parking changes
<u>Segment 2</u> Anderson Avenue to Henderson Circle		
<u>Segment 3</u> Henderson Circle	5' bike lanes with 3' buffers	Remove on-street parking
<u>Segment 4</u> Henderson Circle to Bradford Drive	Northbound: 5' bike lane with 2' buffer Southbound: Shared lane marking	East side: Maintain parking West side: Remove parking
<u>Segment 5</u> Bradford Drive to Montgomery College Parking Lot	5' bike lanes with 2' buffers	Remove parking

MD 28 to Anderson Avenue

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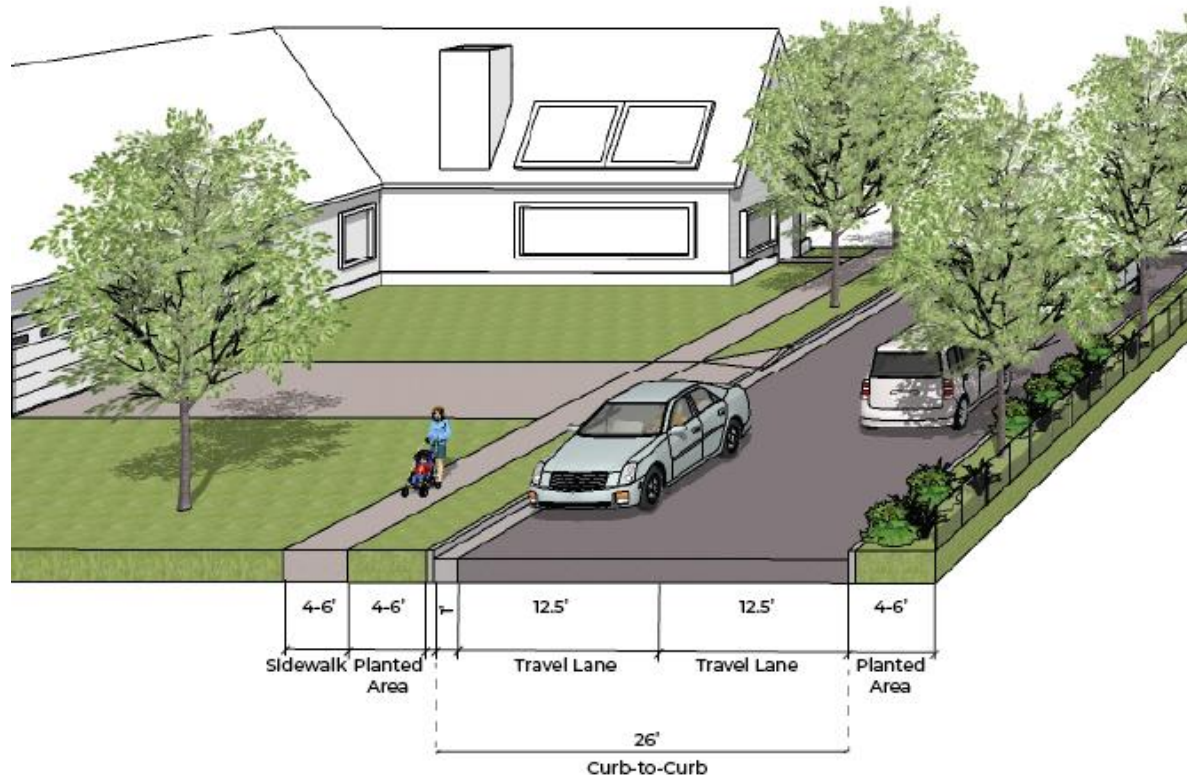


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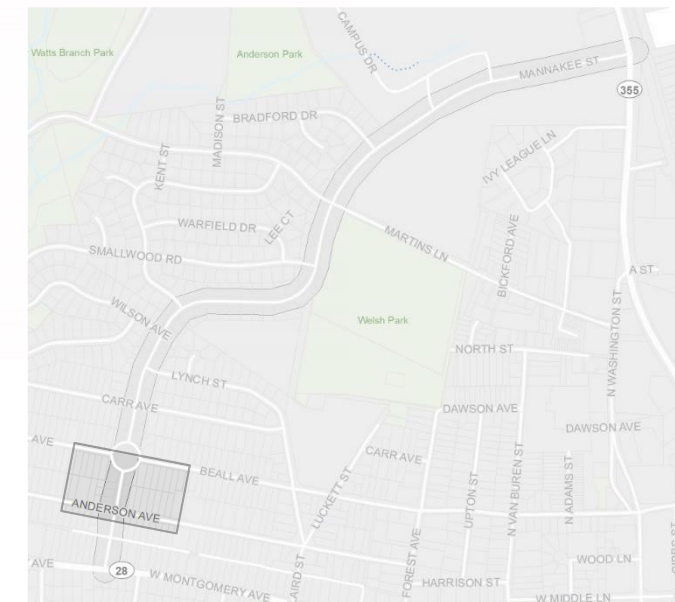
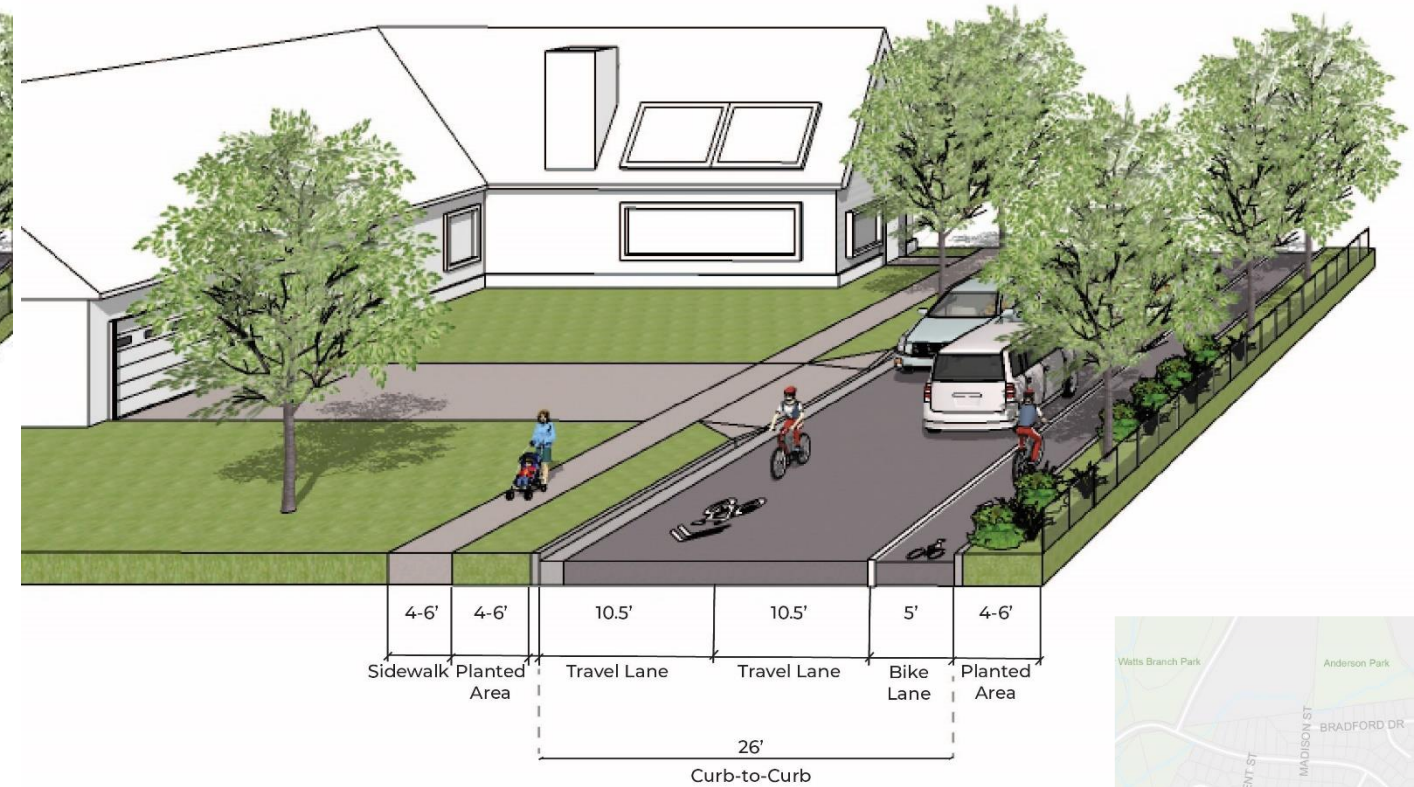


Anderson Avenue to Henderson Circle

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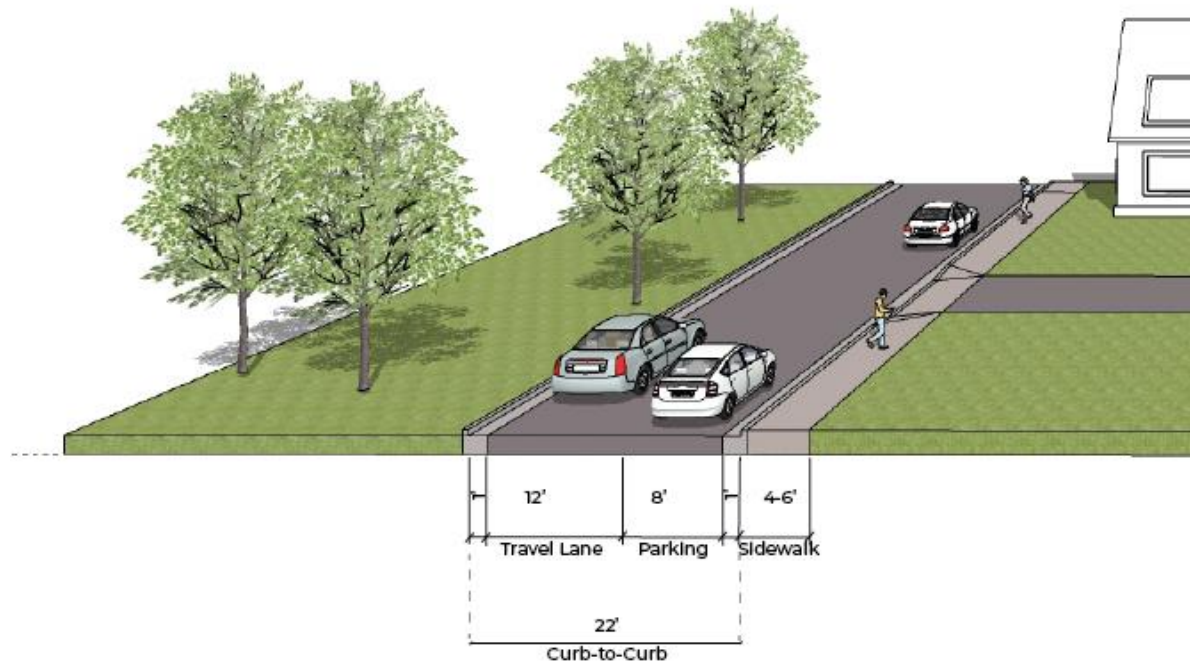
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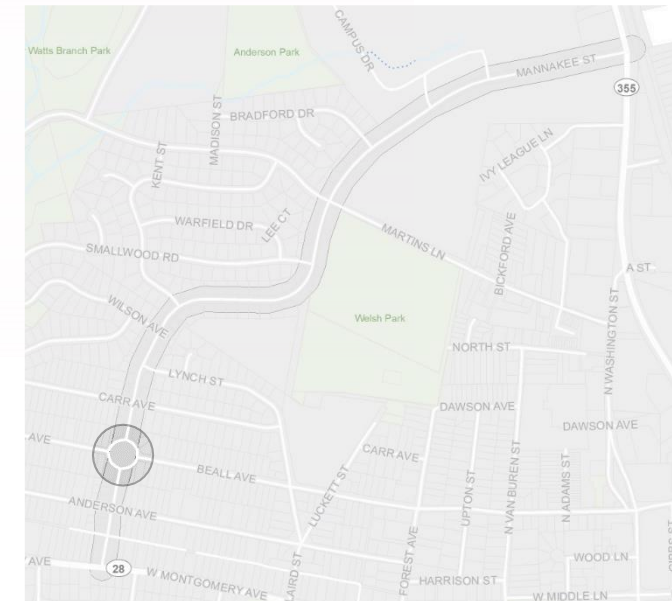
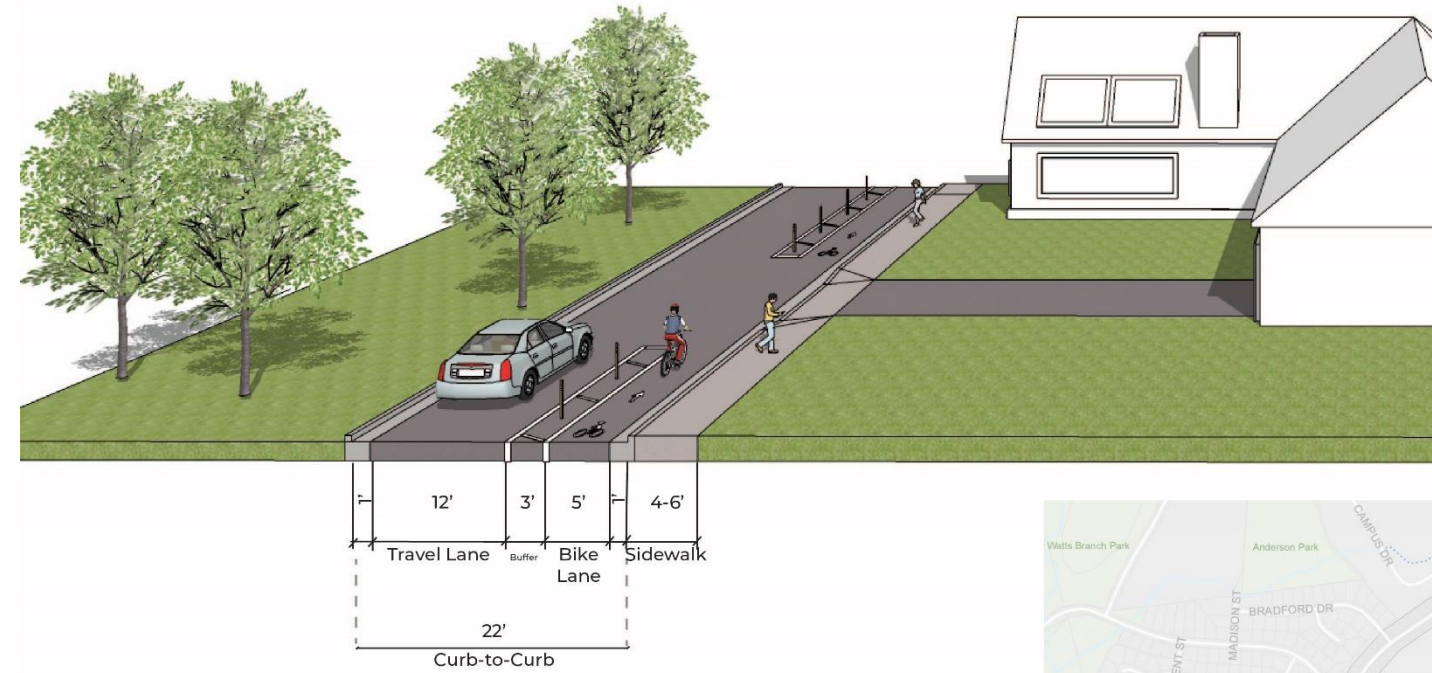
Henderson Circle

Option 2

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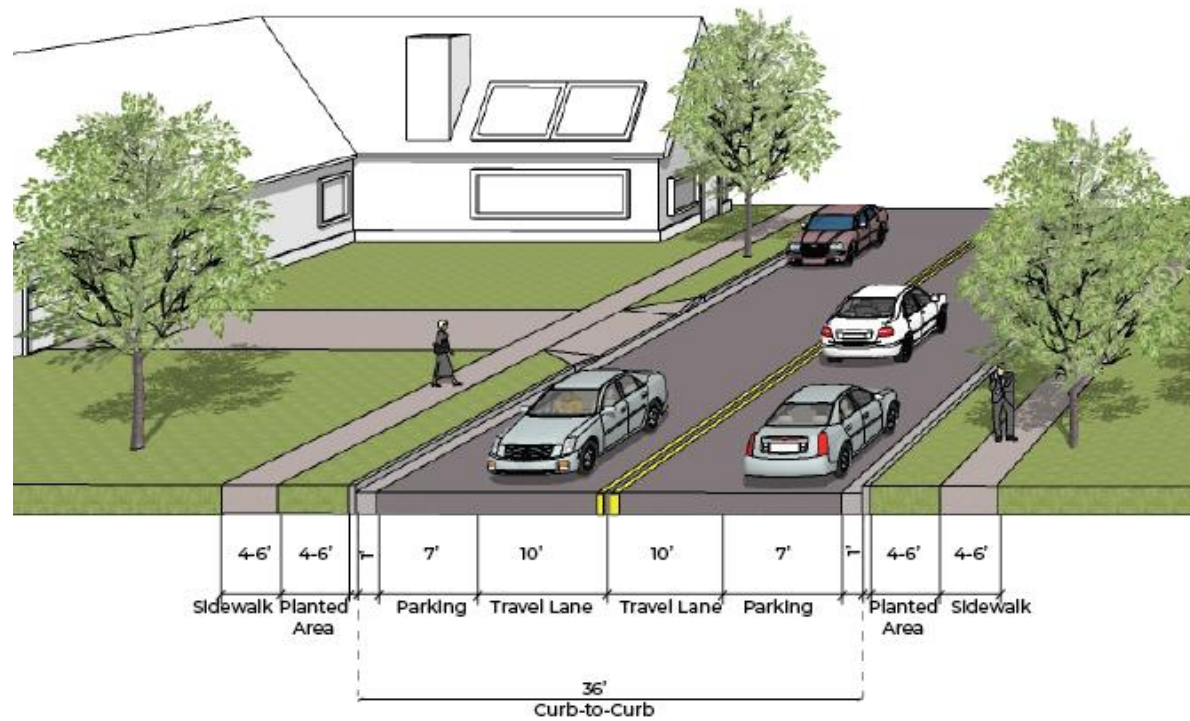


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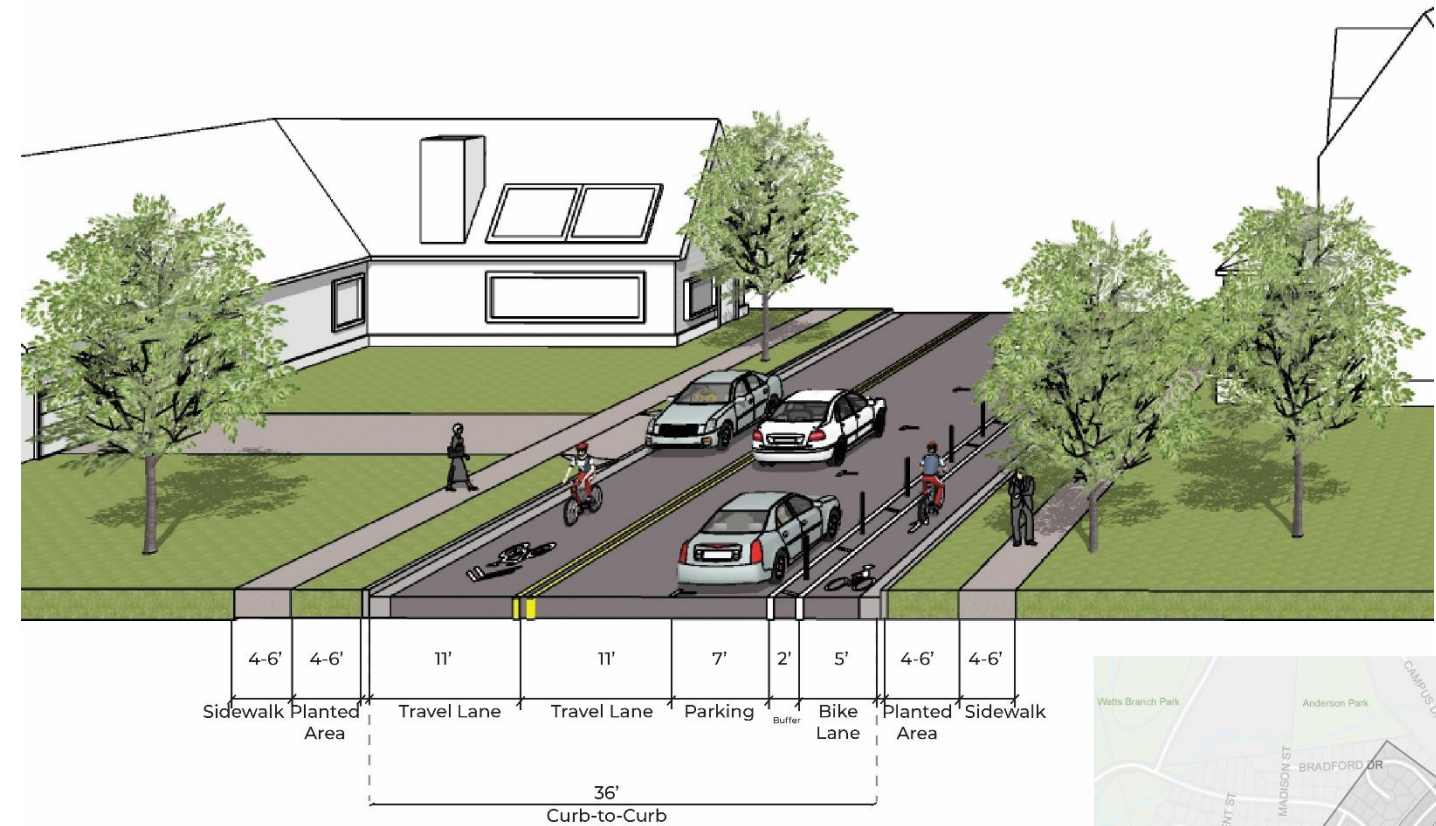


Henderson Circle to Bradford Drive

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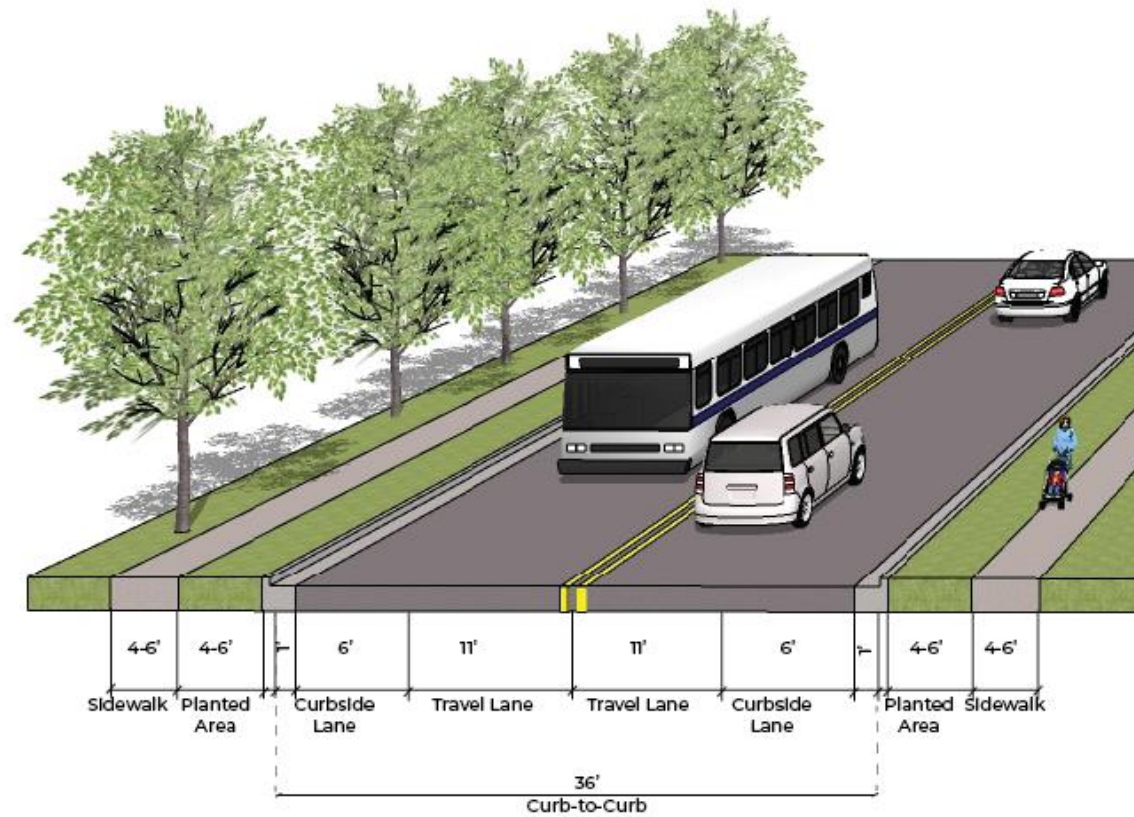


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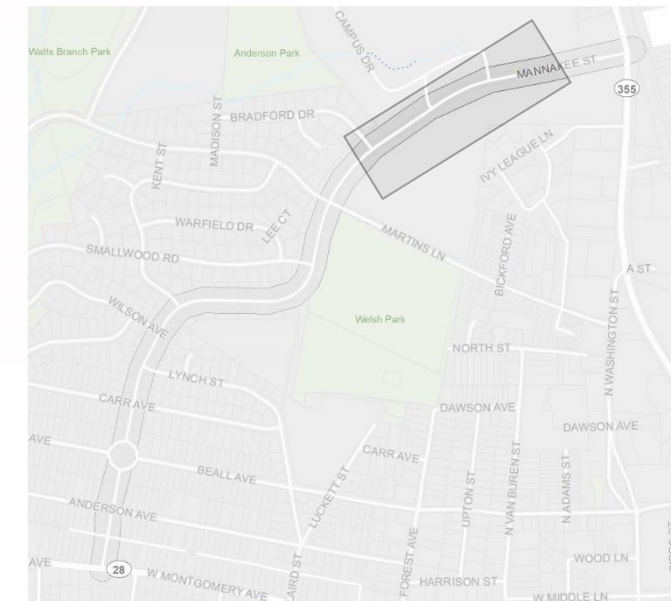
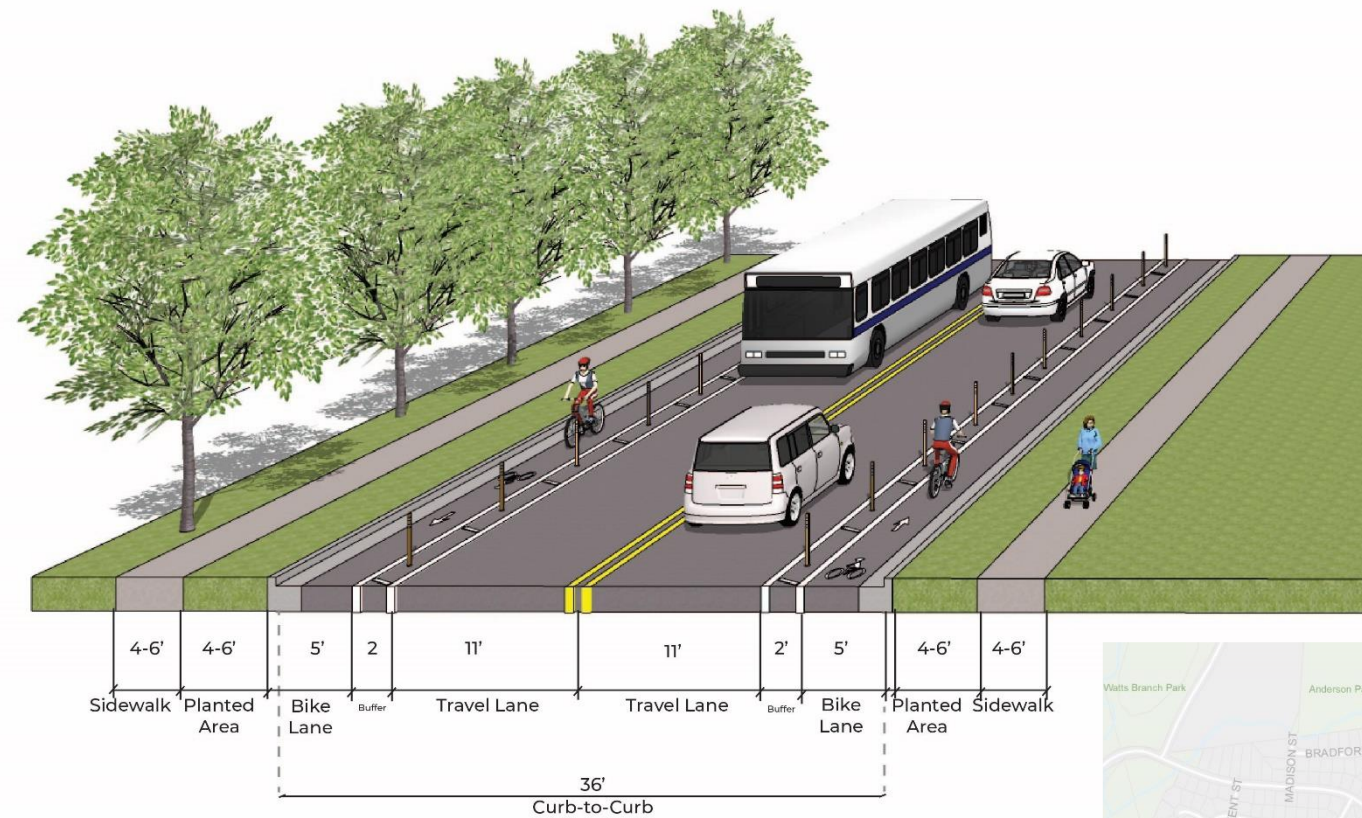


Bradford Drive to Montgomery College Parking Lot

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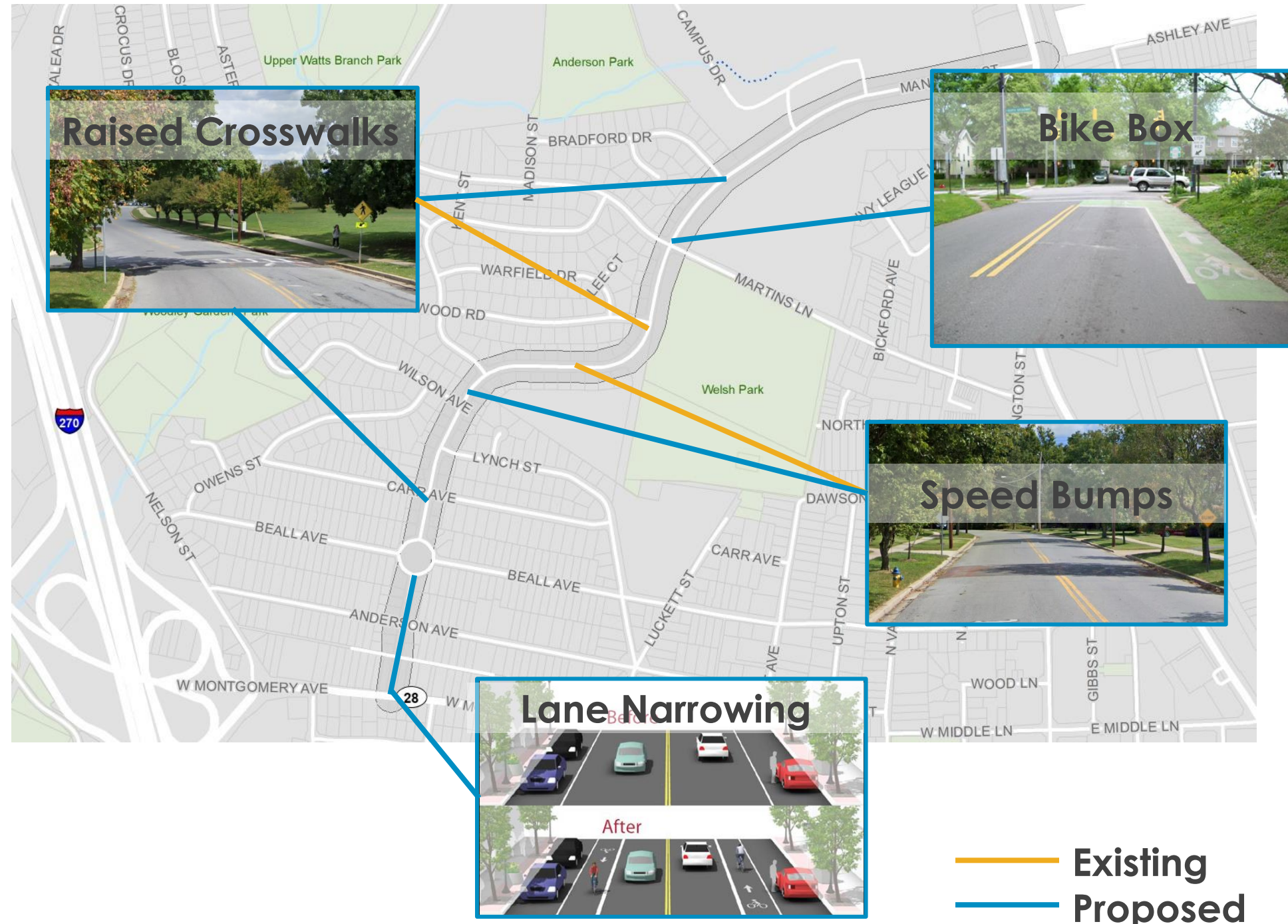


Option 3: Multimodal Redesign

- » Multimodal improvements
 - » Bicycle facilities
 - » Shared use path for people biking, walking, scootering
- » Moderate parking impacts
 - » Maintain parking near Welsh Park
- » Construction required

Option 3: Traffic Calming and Additional Treatments

- » Lane narrowing from MD 28 to Henderson Circle
- » Raised treatments spaced 500-750 feet apart
 - » Speed bumps
 - » Raised crosswalks
- » Gateway Treatments
- » No speed bumps north of Bradford Drive along bus route
- » Bike box at Martins Lane

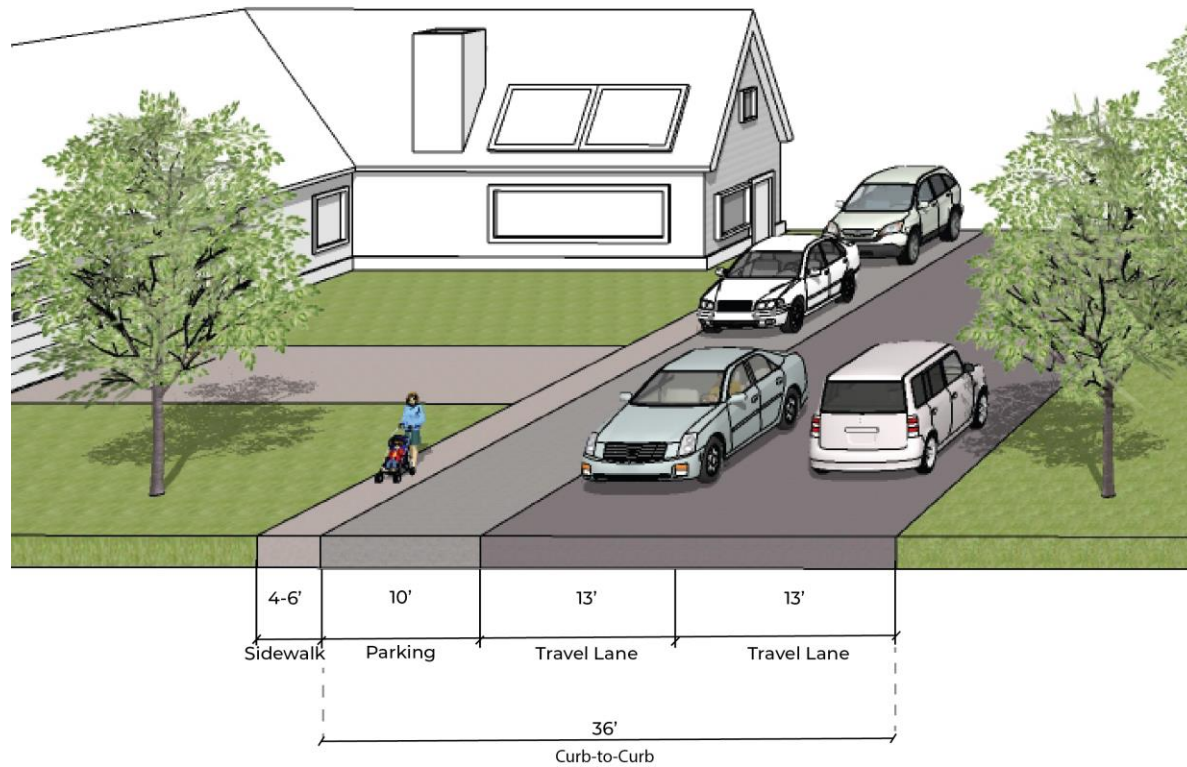


Option 3: Multimodal Redesign

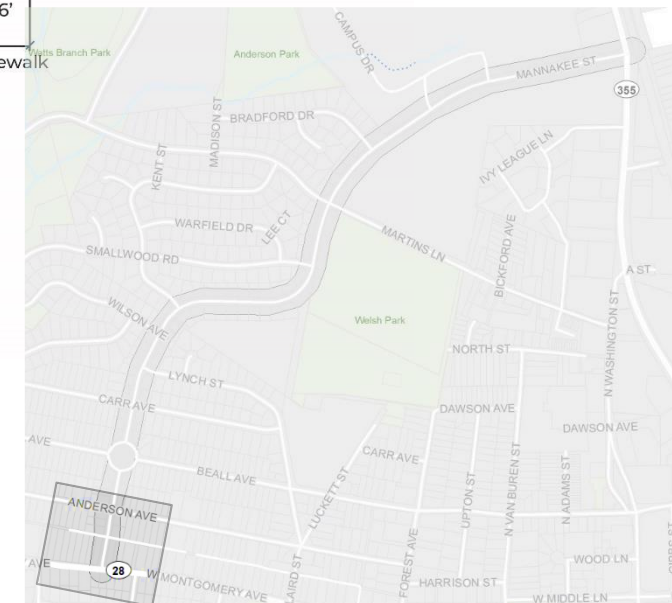
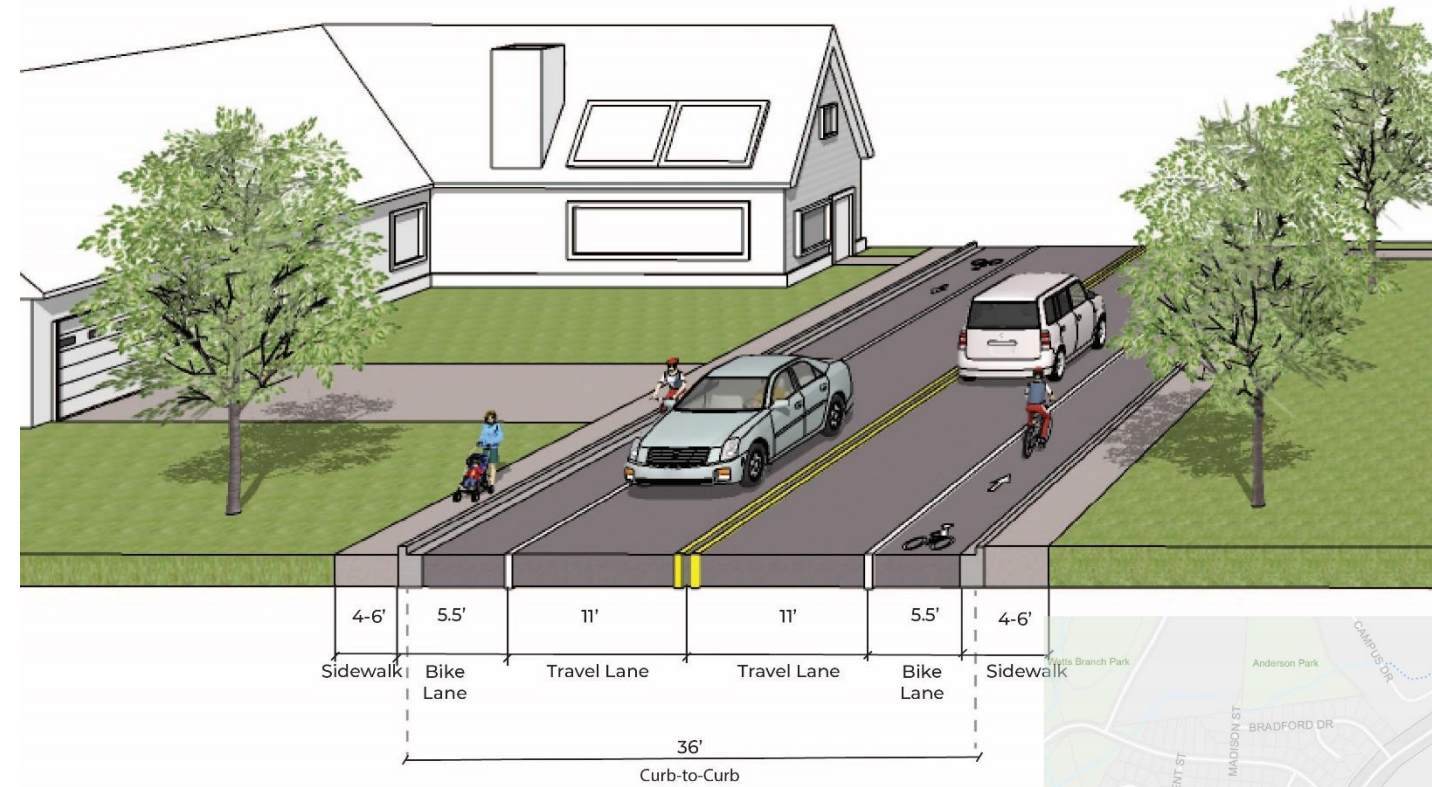
Segment		Bicycle Corridor Improvements	Parking Impacts
<u>Segment 1</u> MD 28 to Anderson Avenue		5.5' bike lanes	Remove parking
<u>Segment 2</u> Anderson Avenue to Henderson Circle		Northbound: 5' bike lane Southbound: Shared lane marking	No parking changes
<u>Segment 3</u> Henderson Circle		5' bike lanes with 3' buffers	Remove on-street parking
<u>Segment 4</u> Henderson Circle to Bradford Drive			
	Henderson Circle to Welsh Park Drive	5' bike lanes with 2' buffers	Remove parking
	Welsh Park Drive to Martins Lane	Northbound: 12' shared use path Southbound: 5' bike lane and 2' buffer	East side: Maintain parking West side: Remove parking
	Martins Lane to Bradford Drive	To Bradford Drive 5' bike lanes with 2' buffers	To Bradford Drive Remove parking
<u>Segment 5</u> Bradford Drive to Montgomery College Parking Lot		5' bike lanes with 2' buffers	Remove parking

MD 28 to Anderson Avenue

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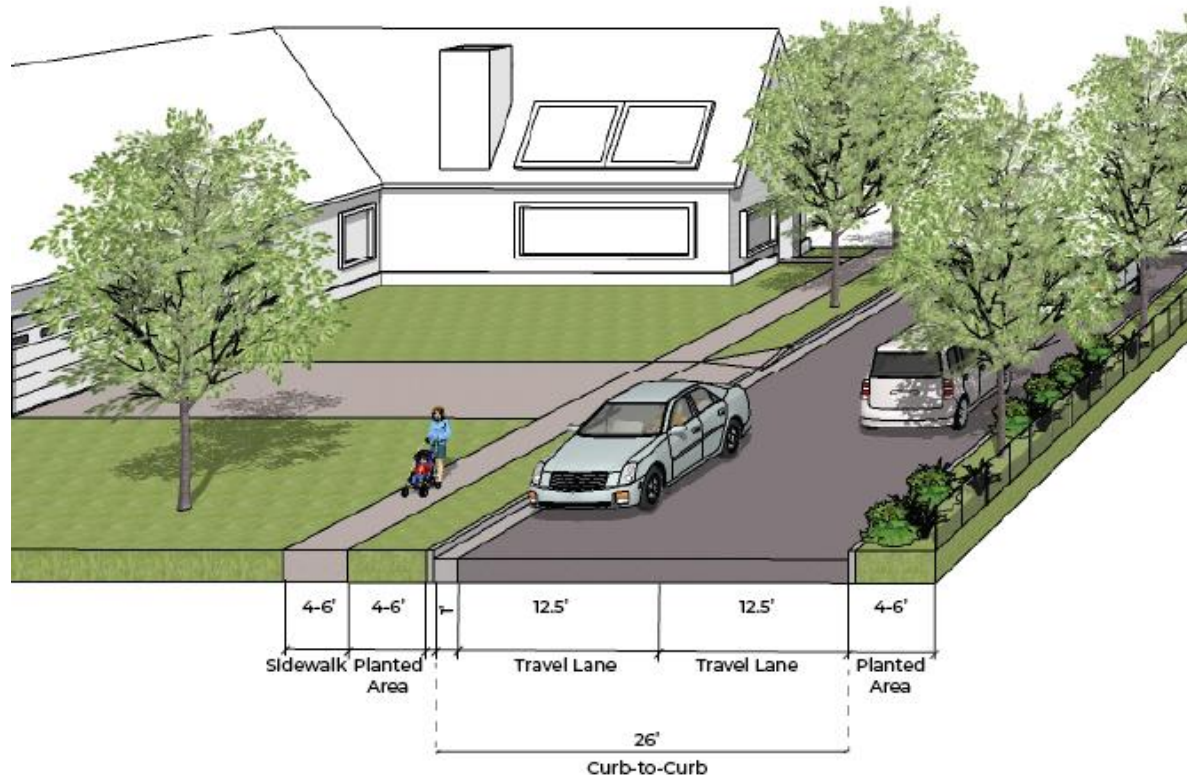


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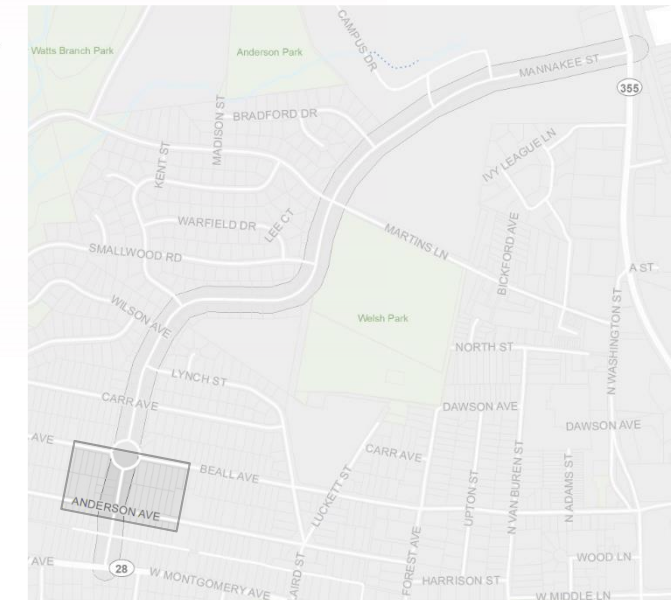
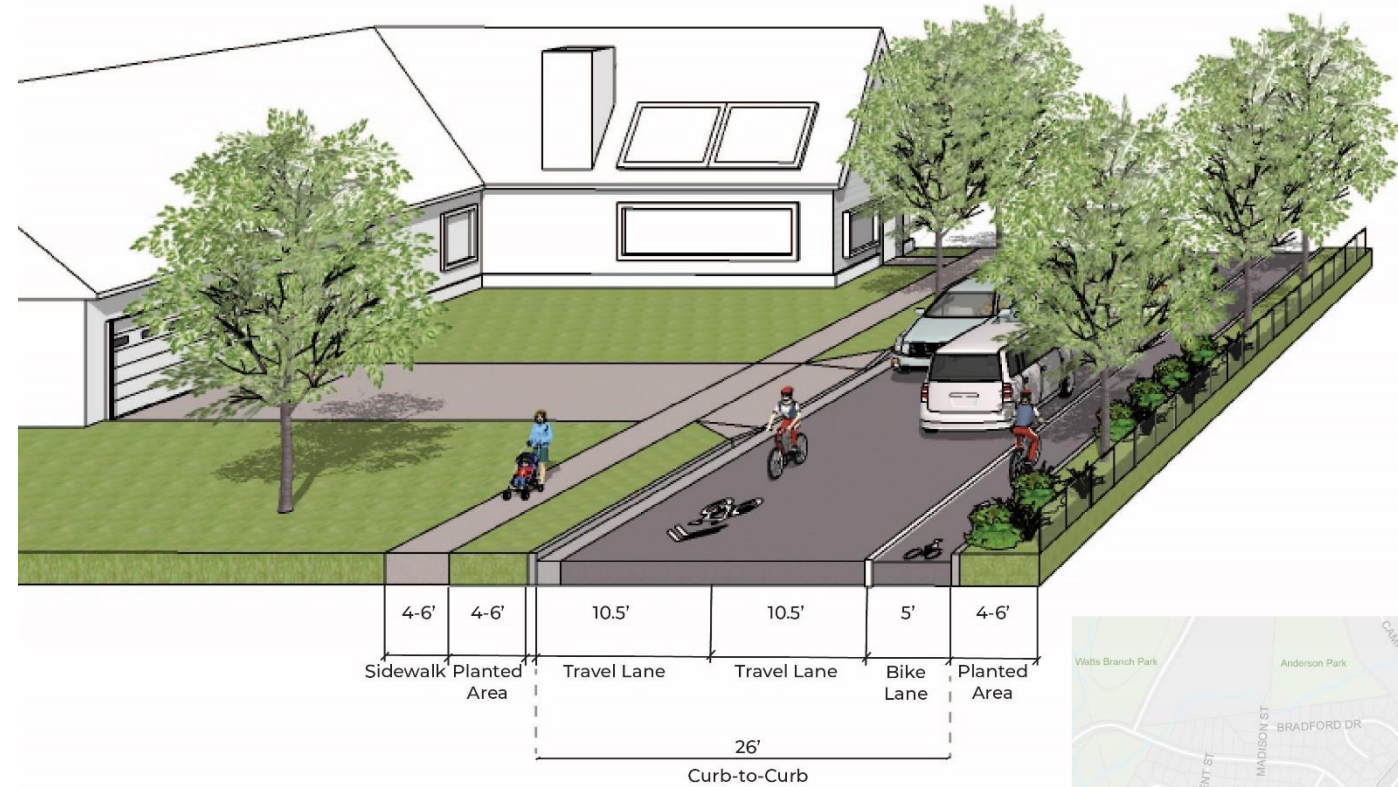


Anderson Avenue to Henderson Circle

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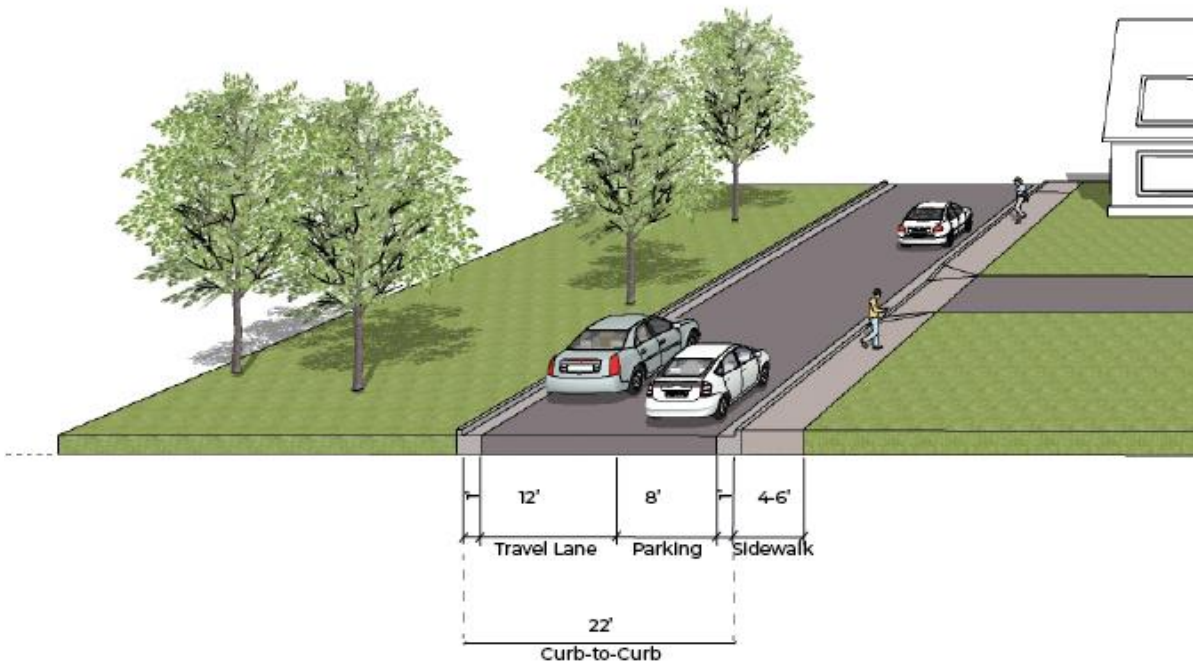
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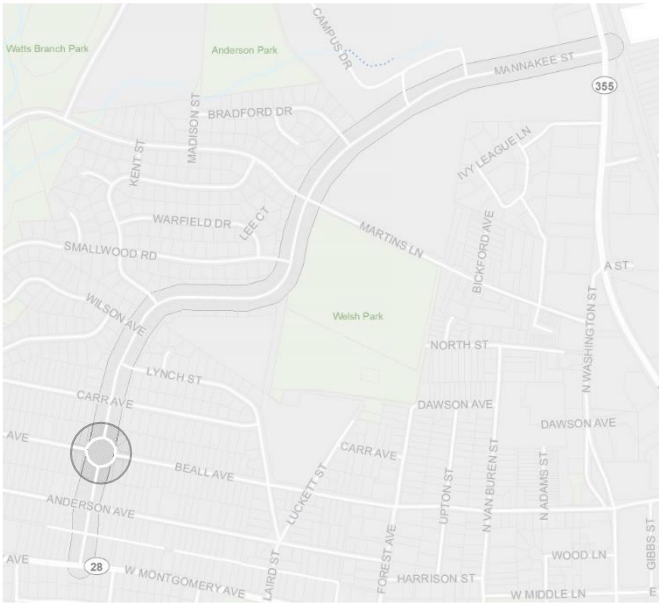
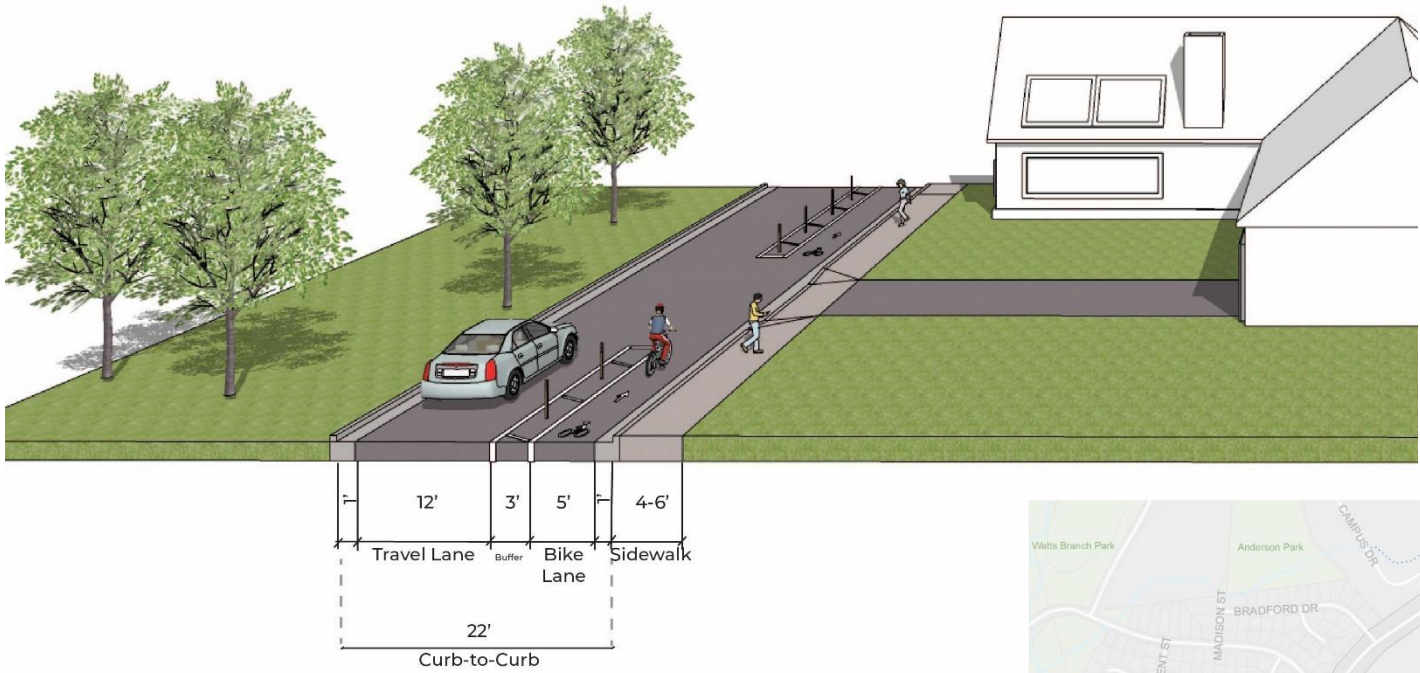
Henderson Circle

Option 3

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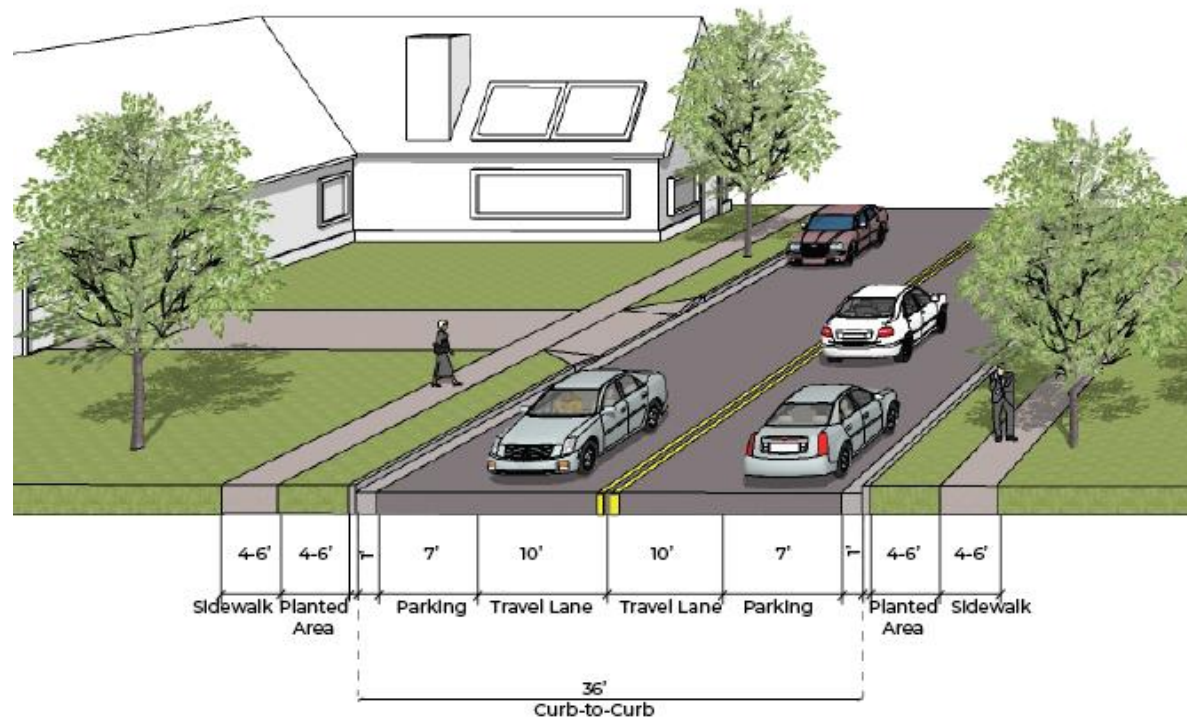


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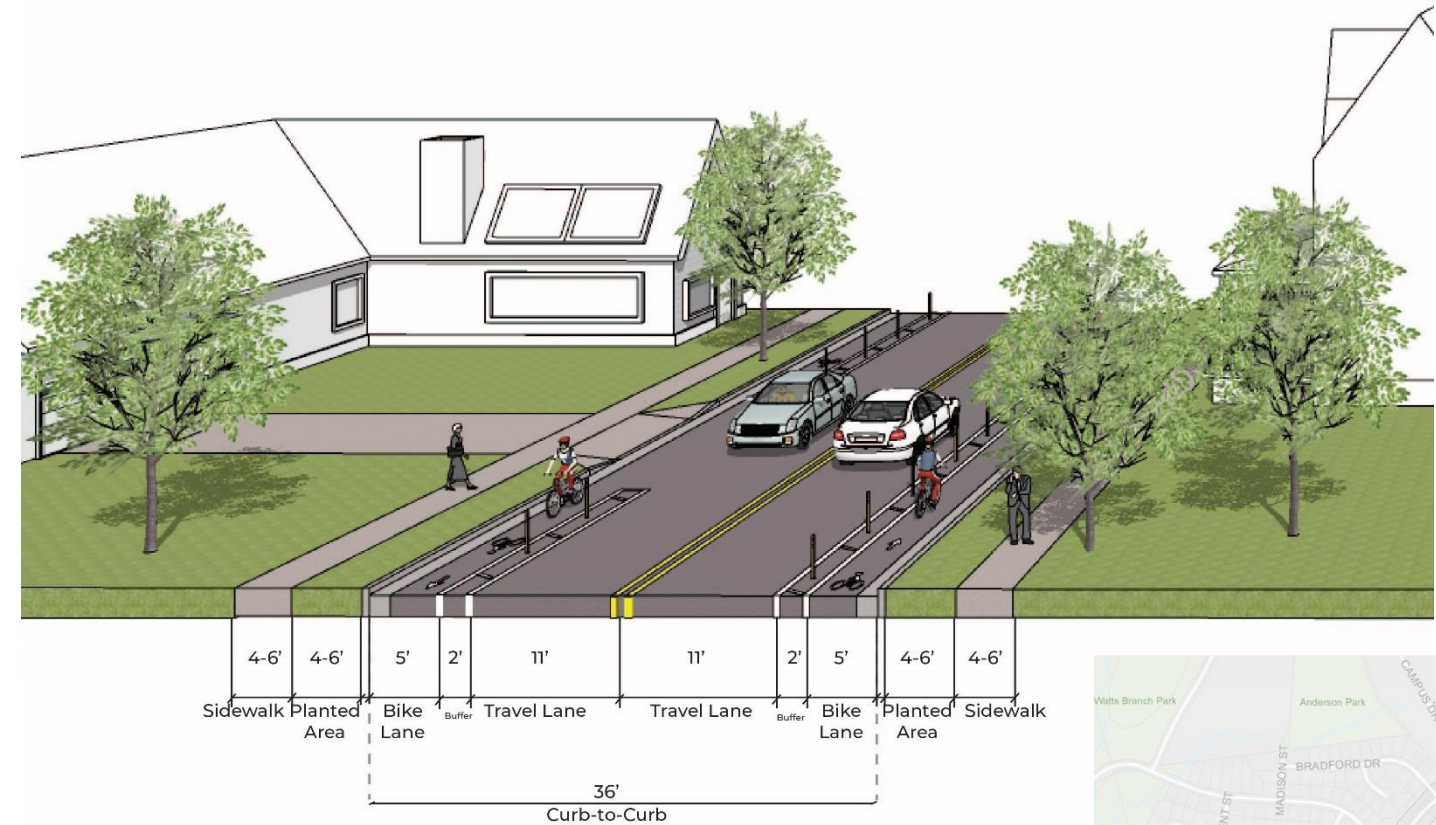


Henderson Circle to Welsh Park Drive

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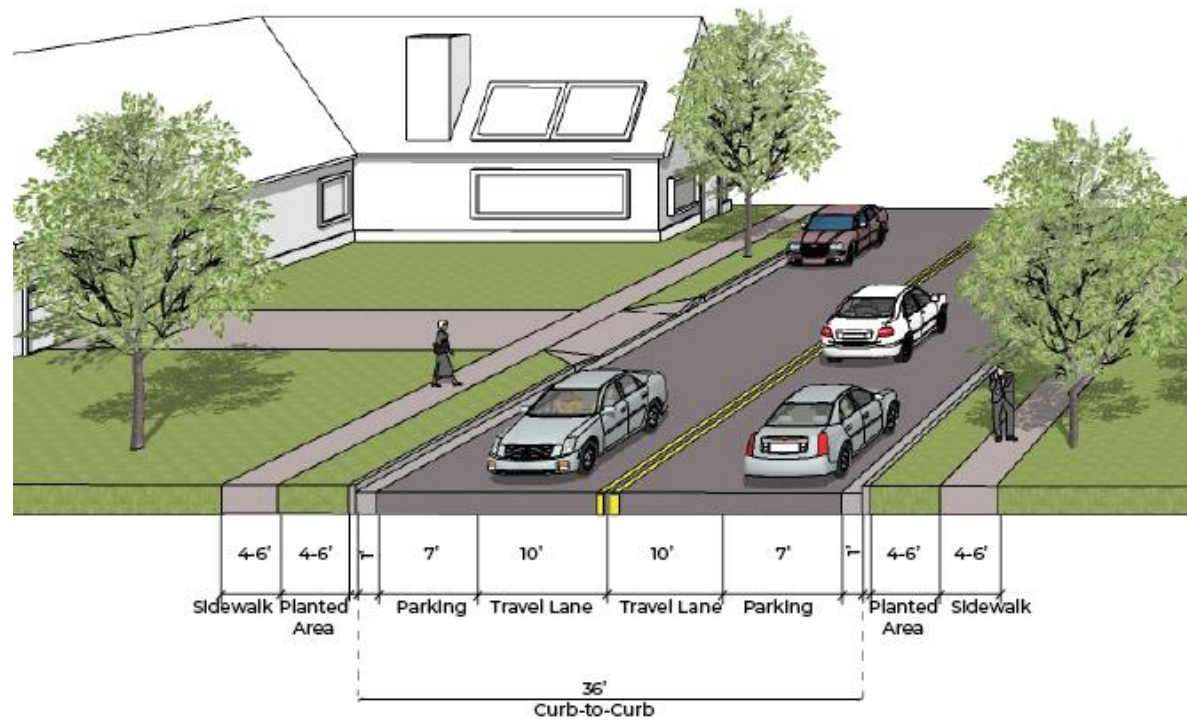


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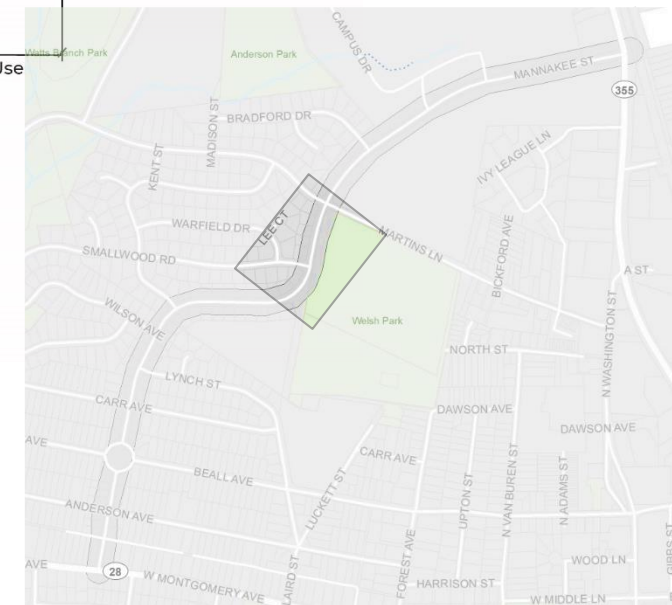
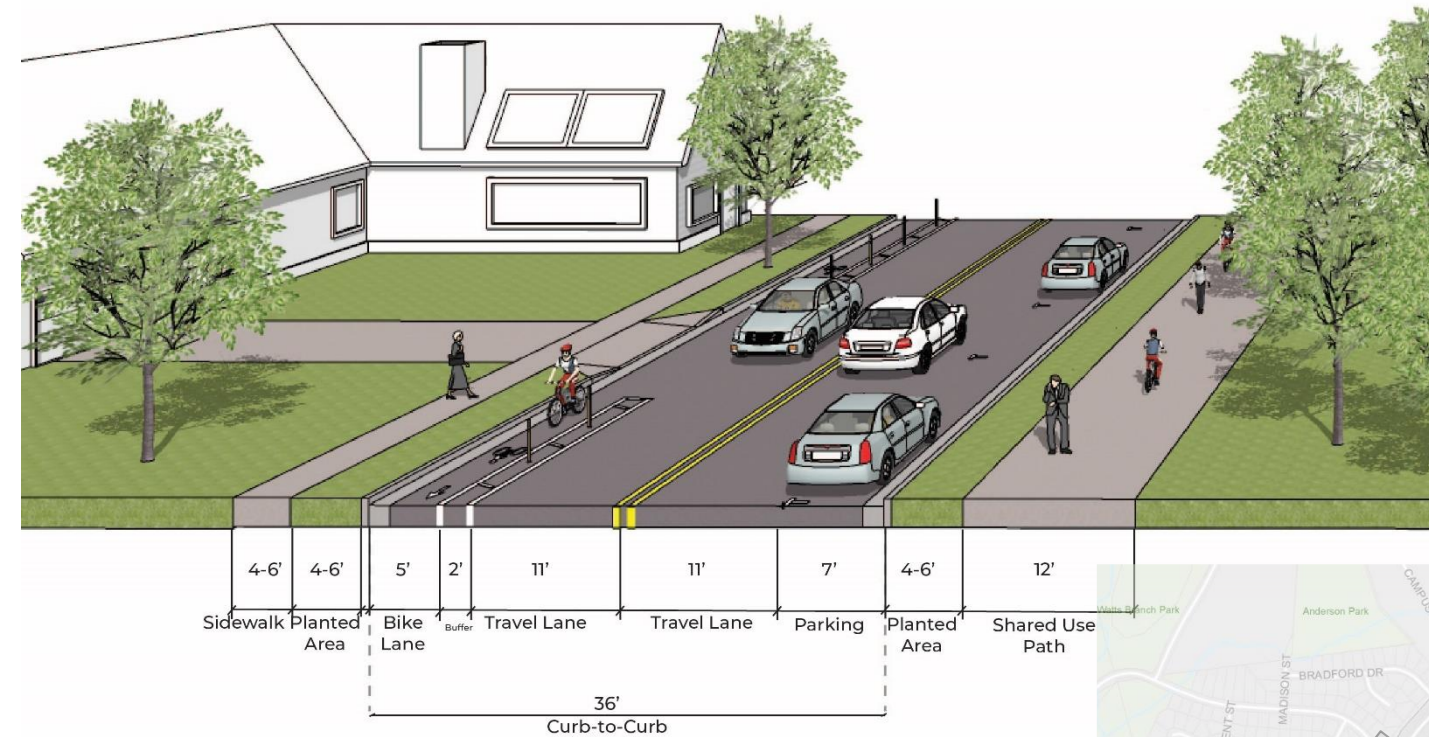


Welsh Park Drive to Martins Lane

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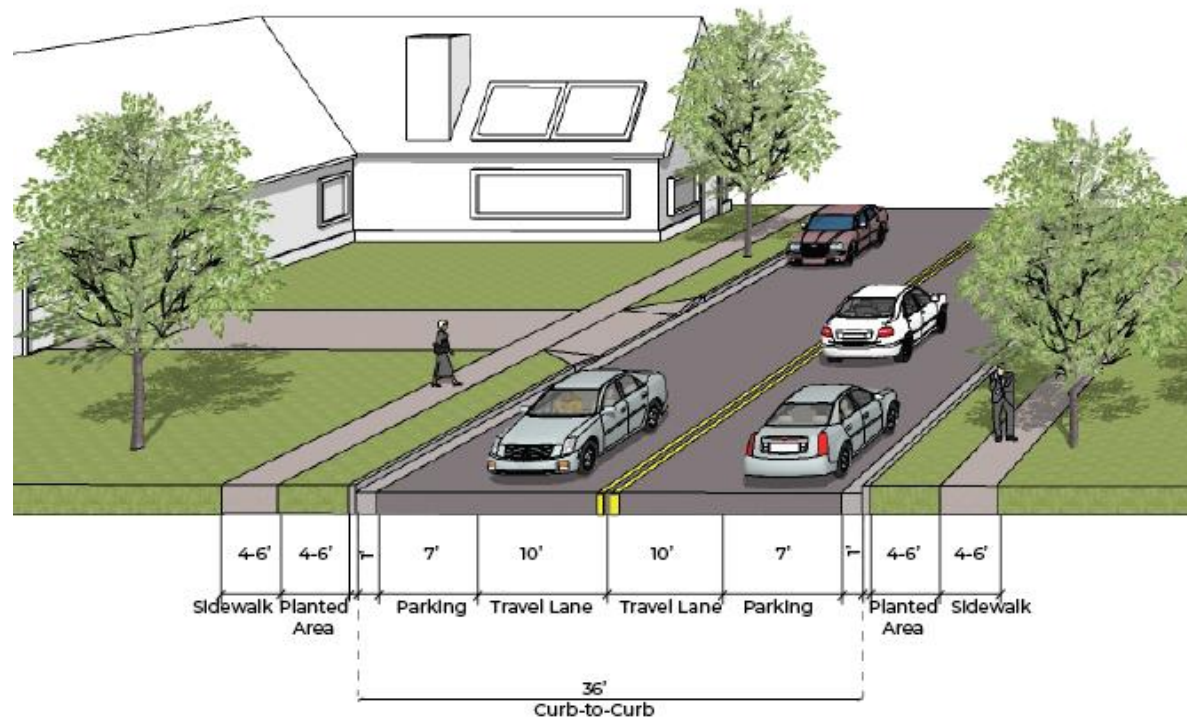


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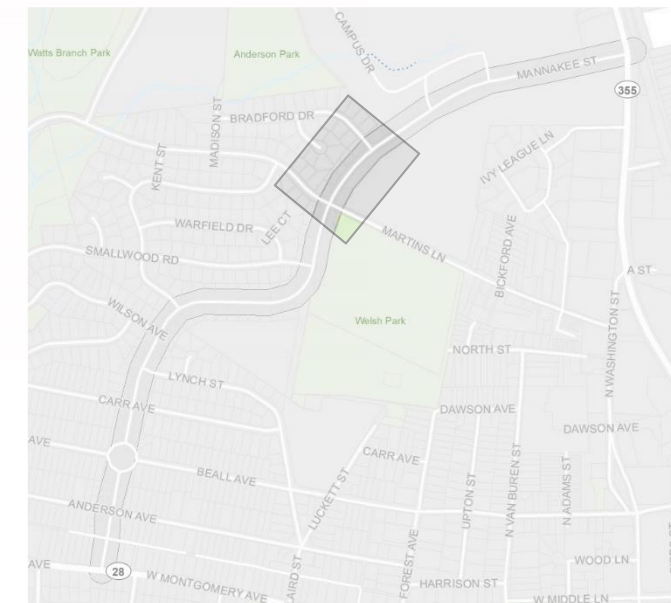
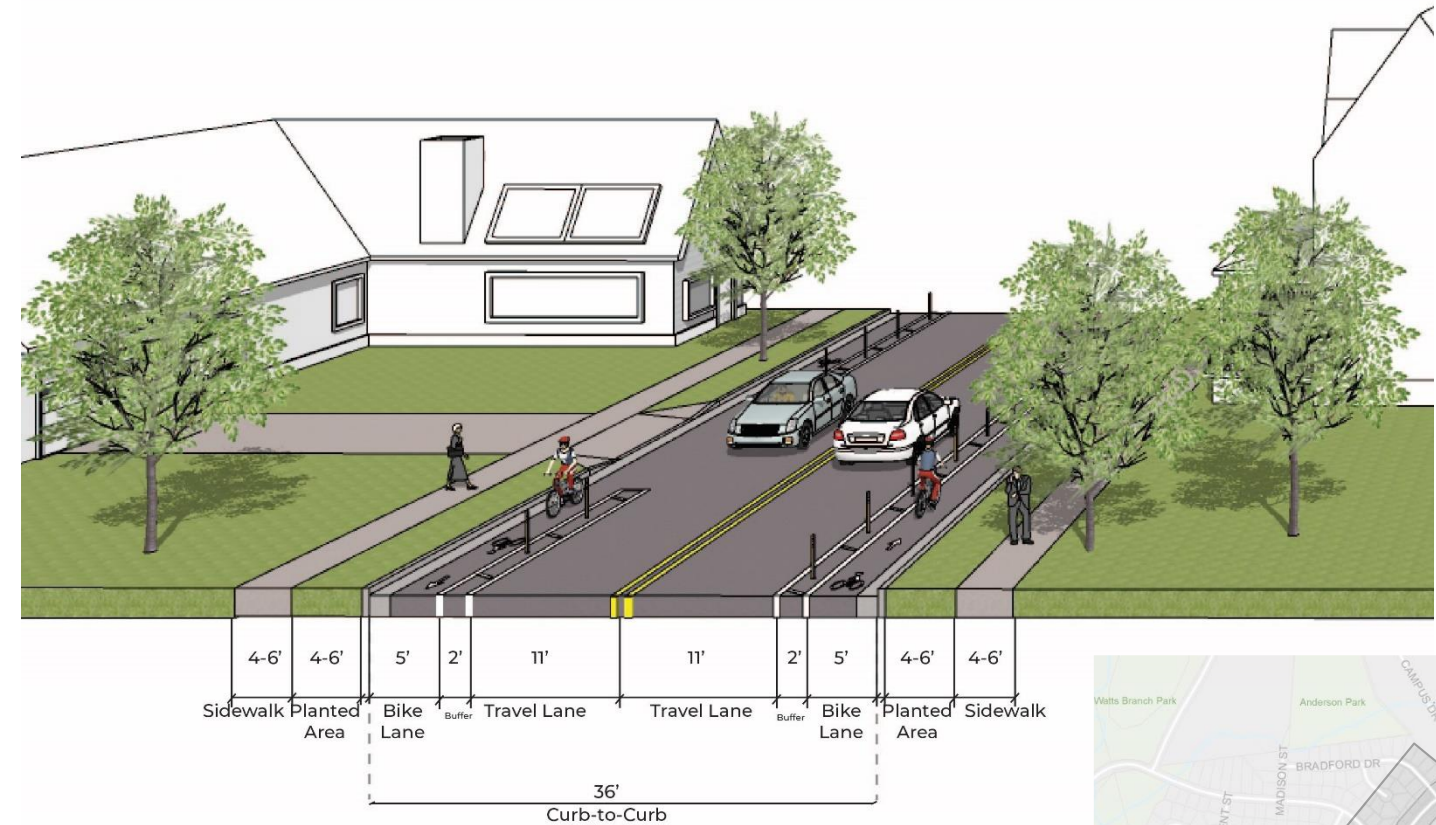


Martins Lane to Bradford Drive

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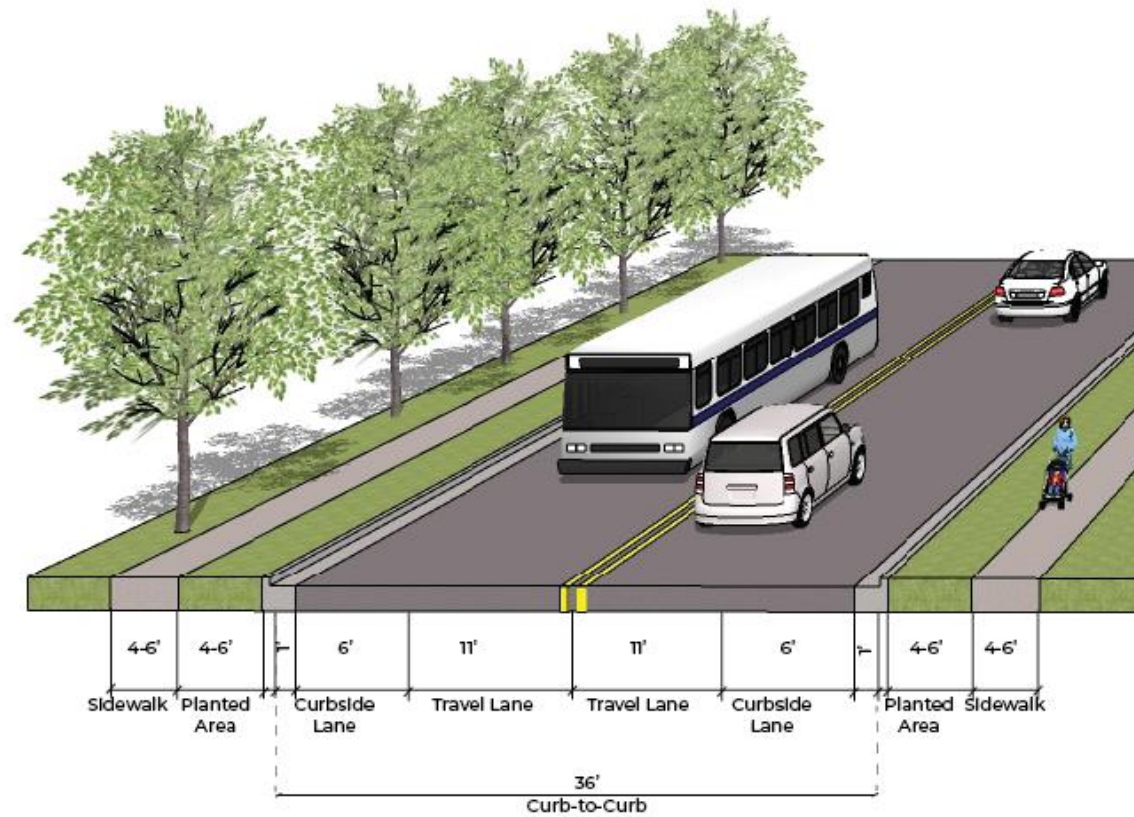


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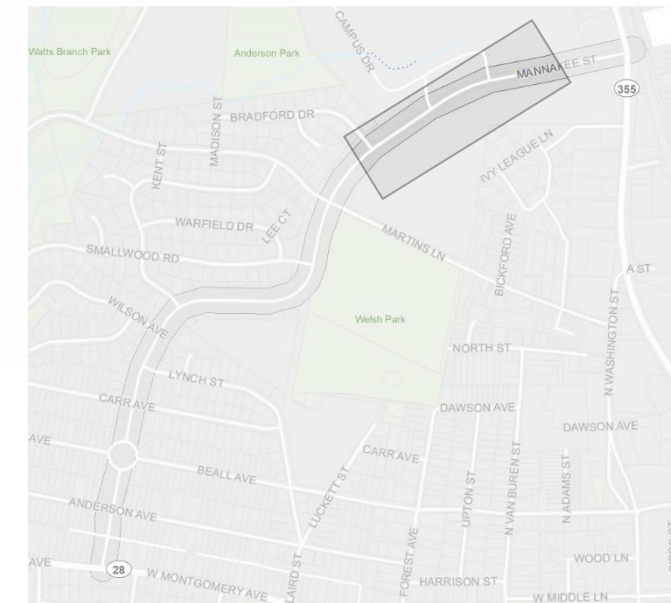
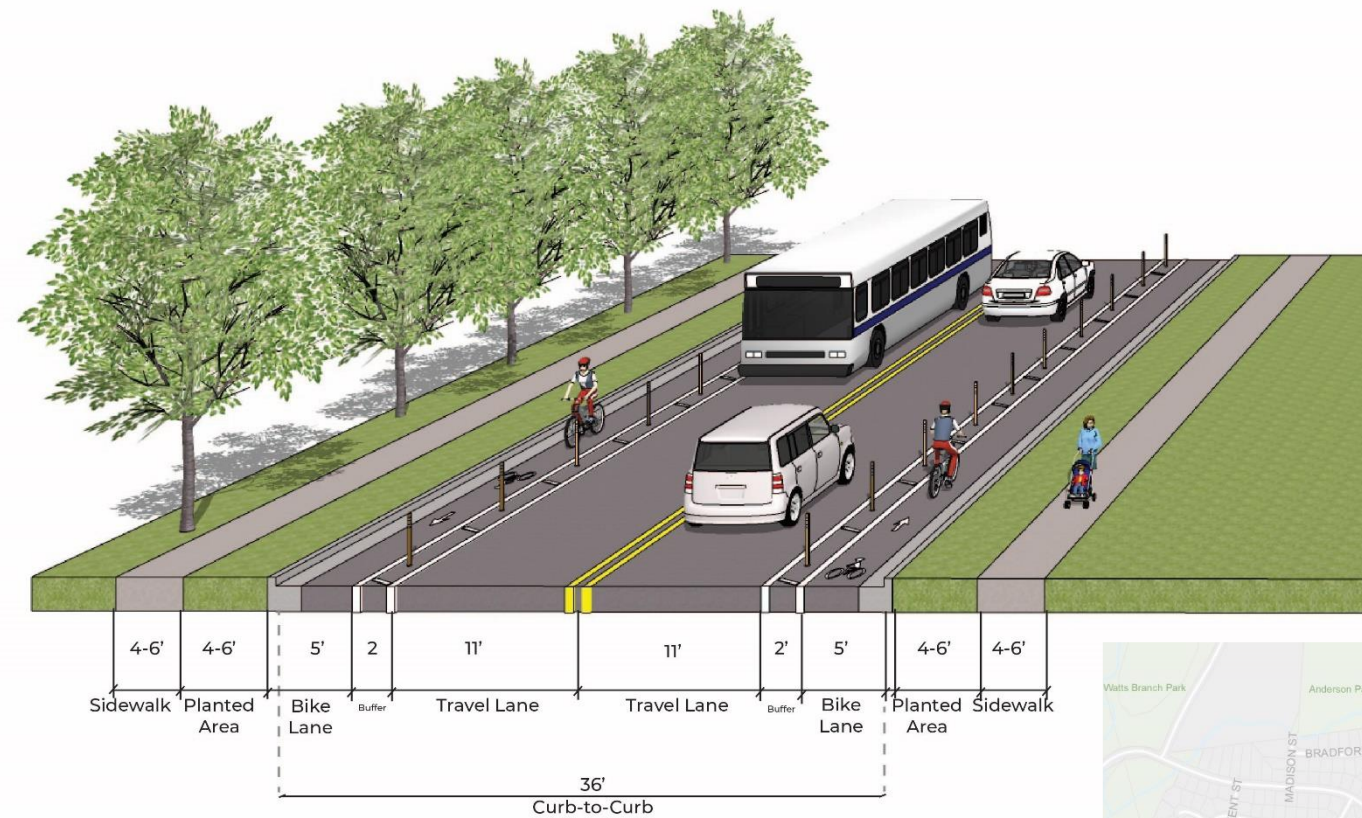


Bradford Drive to Montgomery College Parking Lot

EXISTING



CONCEPT



Next Steps

Mannakee Street Complete Streets Feasibility



MONTGOMERY AVE

28

W...

D ST

LUC

EST AVE

UP

NVA

N

WOOD LN

GIBBS ST

HUNGERFORD DR

N STONESTREET AVE

LENMORE AVE

ELIZABETH AVE

ASHLEY AVE

MANNAKEE ST

355

CAMPUS DR

Anderson Park

Upper Watts Branch Park

ASTER BLVD

BLOSSOM

CROCUS DR

AZALEA DR

Next Steps

- » Revise concepts based on public input
- » Continue to develop and refine concepts and intersection treatments
 - » Coordination with Martins Lane bicycle concepts
 - » Coordinate with MD 355 Flash Bus Rapid Transit (BRT) plans
- » Mannakee Street Complete Streets Feasibility to be completed by June 2024