



PRINCETON

bicycle master plan

Master Plan
Subcommittee
Meeting #2
May 23, 2016



WSP

**PARSONS
BRINCKERHOFF**



Facility Types



Shared-Use Path

- Minimum width: 8-10'
- Smooth surface
- Well-lit
- Wayfinding



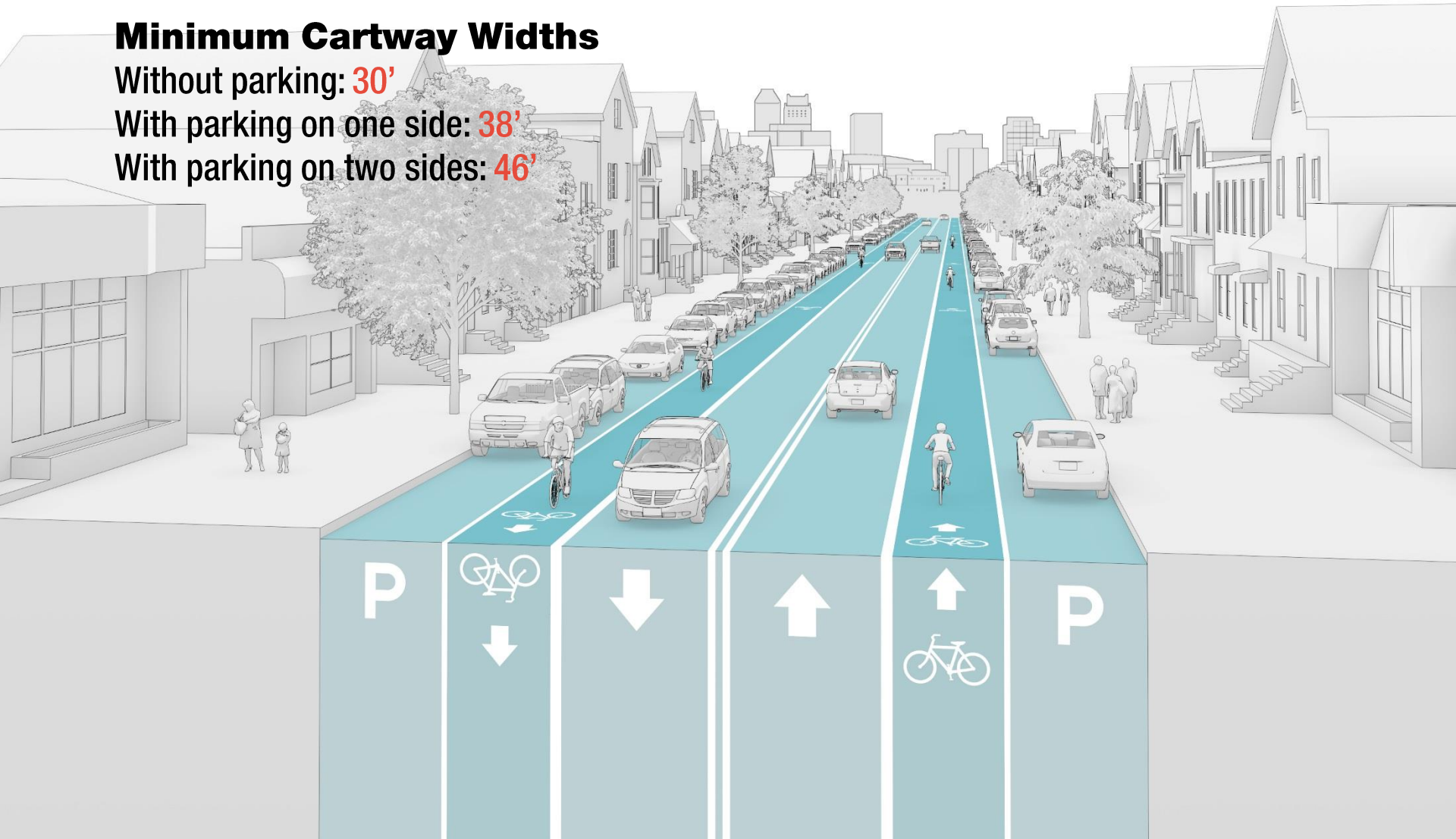
Bicycle Lane

Minimum Cartway Widths

Without parking: 30'

With parking on one side: 38'

With parking on two sides: 46'



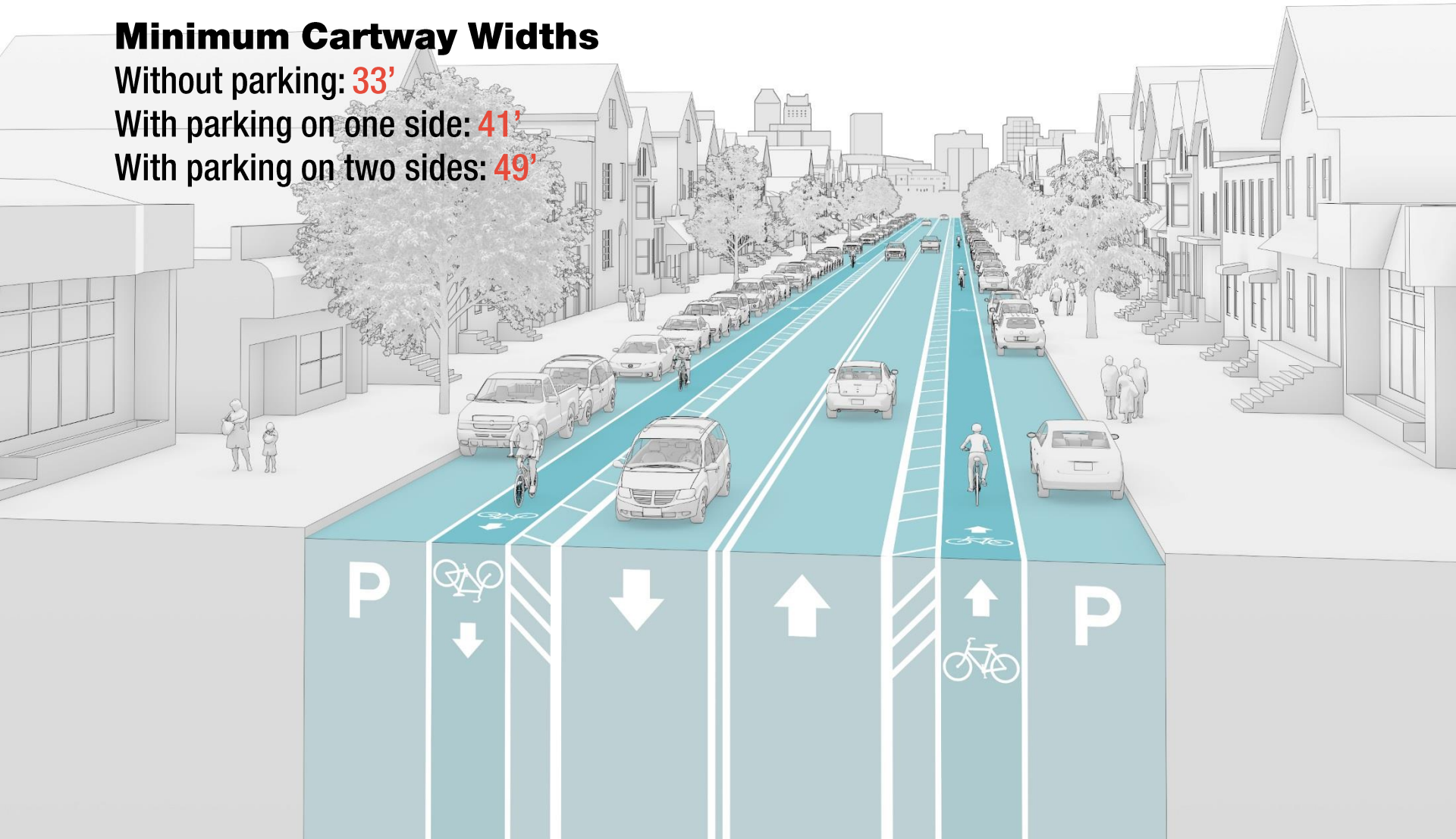
Buffered Bicycle Lane

Minimum Cartway Widths

Without parking: 33'

With parking on one side: 41'

With parking on two sides: 49'



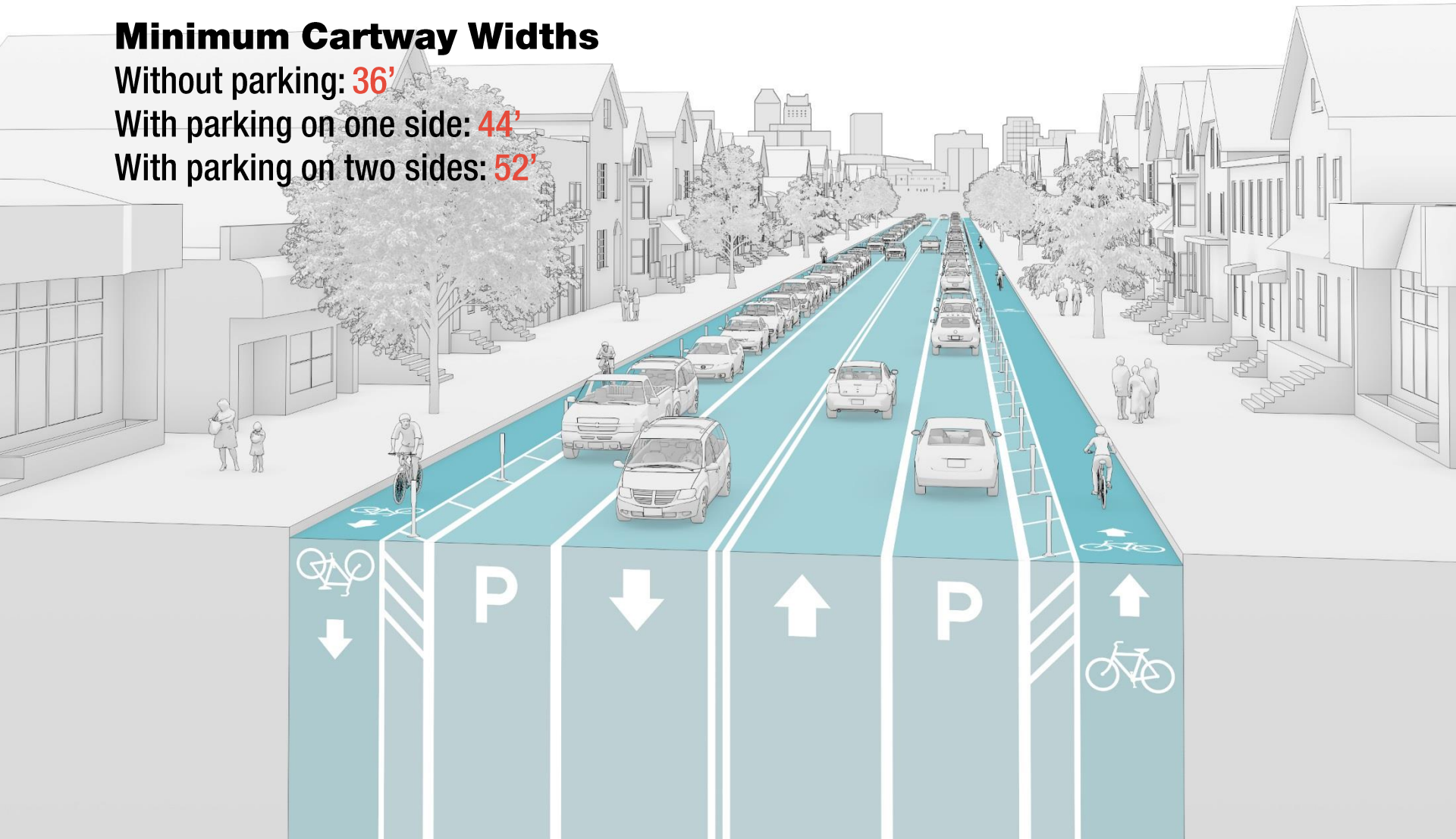
Separated Bicycle Lane

Minimum Cartway Widths

Without parking: 36'

With parking on one side: 44'

With parking on two sides: 52'



Two Way Separated Bicycle Lane

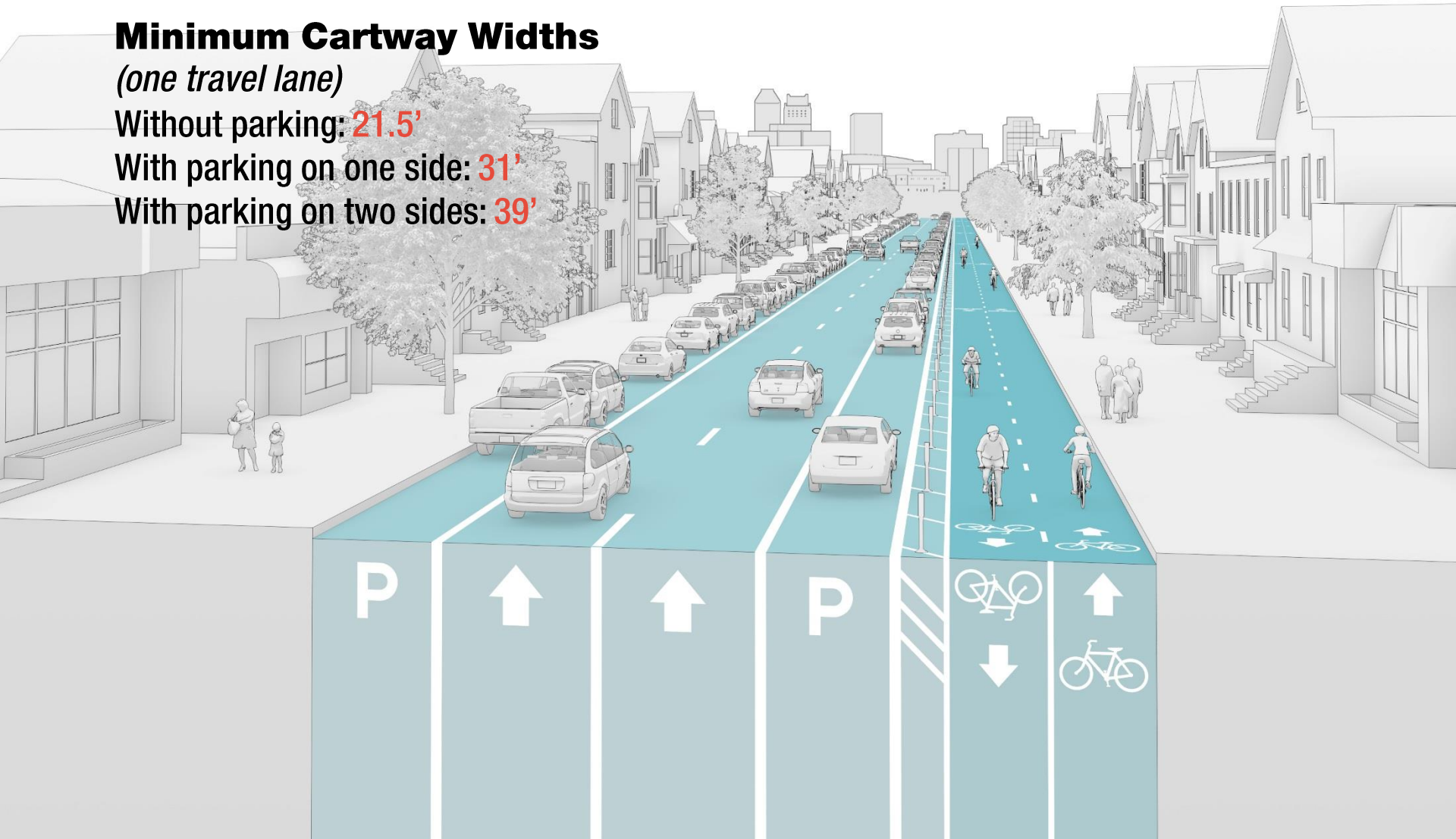
Minimum Cartway Widths

(one travel lane)

Without parking: 21.5'

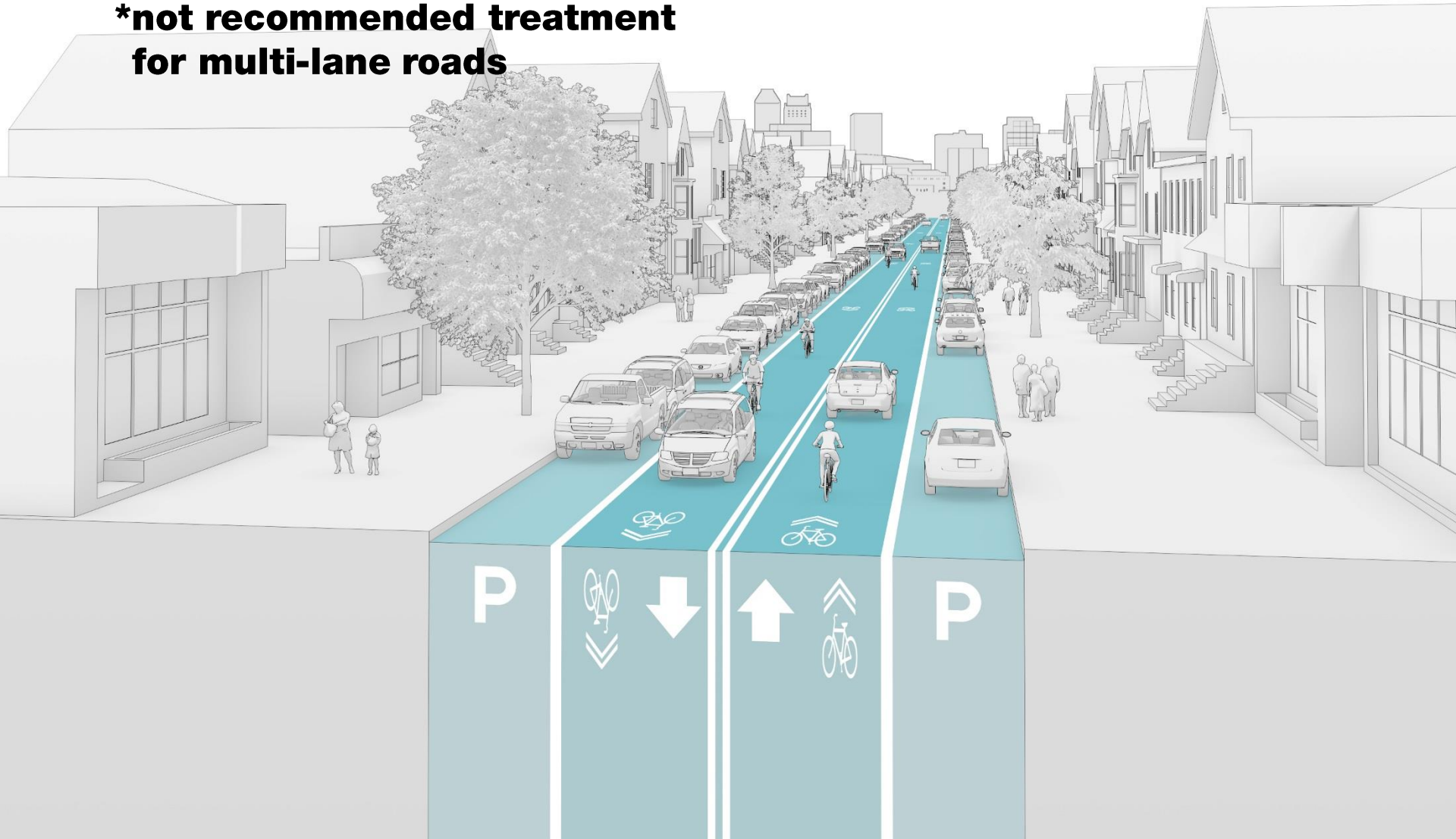
With parking on one side: 31'

With parking on two sides: 39'



Shared Lane Markings

- *no minimum cartway width**
- *not recommended treatment for multi-lane roads**



Enhanced Shared Lane Markings

- “Super Sharrow”
- Improves visibility
- Reinforces lane meant to be shared



Hybrid Lane

- Bicycle Lane + Shared Lane or Shared-Use Path
- Applications:
 - Constrained cartway
 - Hills



Bicycle Boulevard

- Traffic calmed street ($\leq 20\text{mph}$)
- Low volume/speeds
- Prioritize bicycle traffic
- Wayfinding





Creating the Network

- BMP Goals
- Existing Conditions Analysis
- Public Input
 - Wikimaps
 - Public Meeting #1
 - Survey



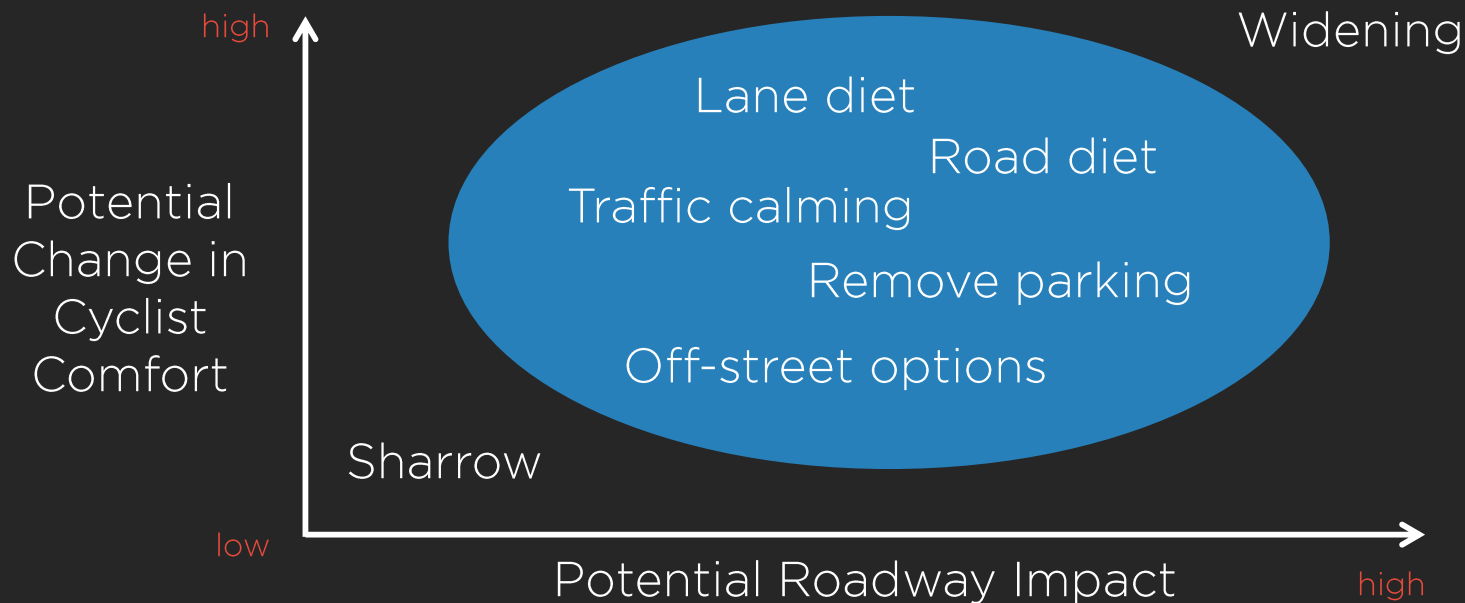
Considerations

- Context
 - Road width
 - Traffic speed/volumes
 - Land use and density
 - Parking supply/demand
 - Historic
 - Street trees
- Design target: LTS 1



Trade-Offs

- Goal: better balance & Complete Streets
- Minimize impacts



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Proposed Network



Map XX

Proposed Bicycle Network

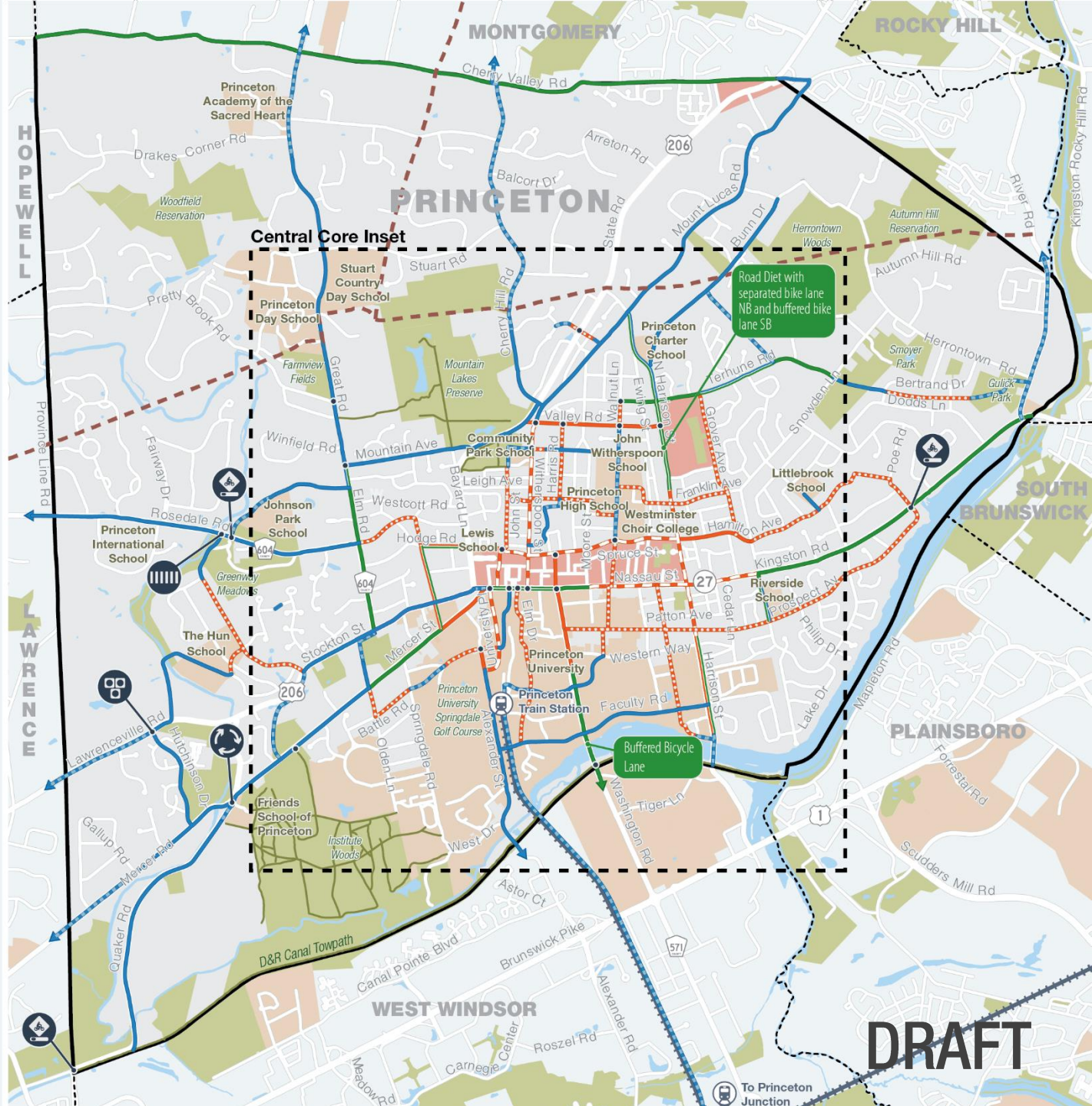
-  Improved Shared-Use Path
-  New Shared-Use Path
-  Separated Bike Lanes
-  Bicycle Lane
-  Bicycle Lane + Path
-  Bicycle Lane + Shared Lane
-  Bicycle Boulevard
-  Shared-Lane Markings
-  Enhanced Shared Markings
-  Pipeline Trail
-  School
-  Park
-  Commercial Area
-  Existing Trail

Intersection Improvement

-  Roundabout
-  RRFB
-  HAWK
-  Bike Box
-  Crosswalk Enhancements
-  Inset Intersection Improvement



0 0.25 0.5 1 Miles



Map XX

Proposed Bicycle Network: Central Core

-  Improved Shared-Use Path
-  New Shared-Use Path
-  Separated Bike Lanes
-  Bicycle Lane
-  Bicycle Lane + Path
-  Bicycle Lane + Shared Lane
-  Bicycle Boulevard
-  Shared-Lane Markings
-  Enhanced Shared Markings
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Intersection Improvement

-  Roundabout
-  RRFB
-  HAWK
-  Bike Box
-  Crosswalk Enhancements
-  Traffic Signal



0 0.25 0.5 1 Miles



Map XX

Proposed Bicycle Network

-  Improved Shared-Use Path
-  New Shared-Use Path
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Intersection Improvement

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-  HAWK
-  Bike Box
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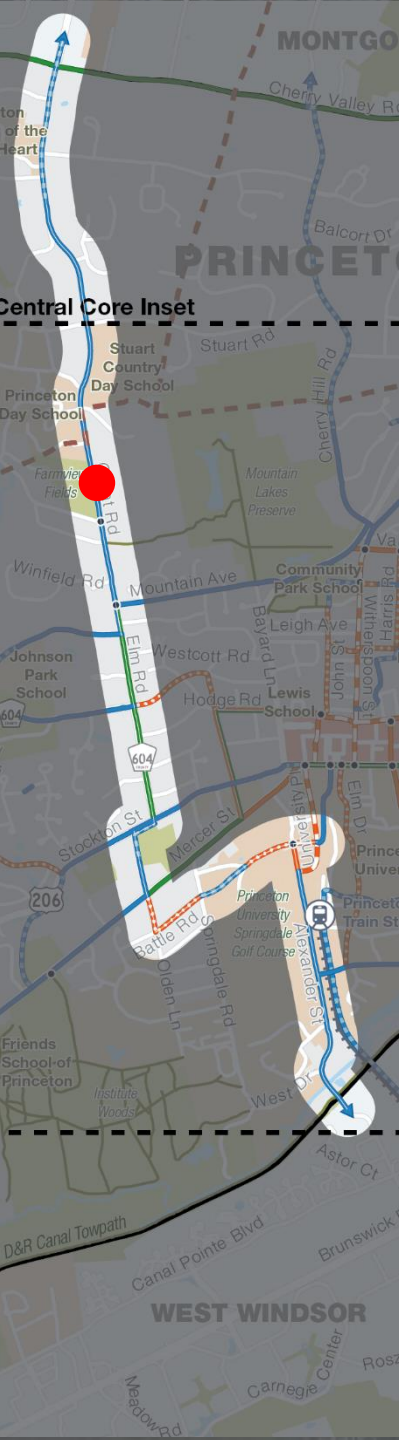
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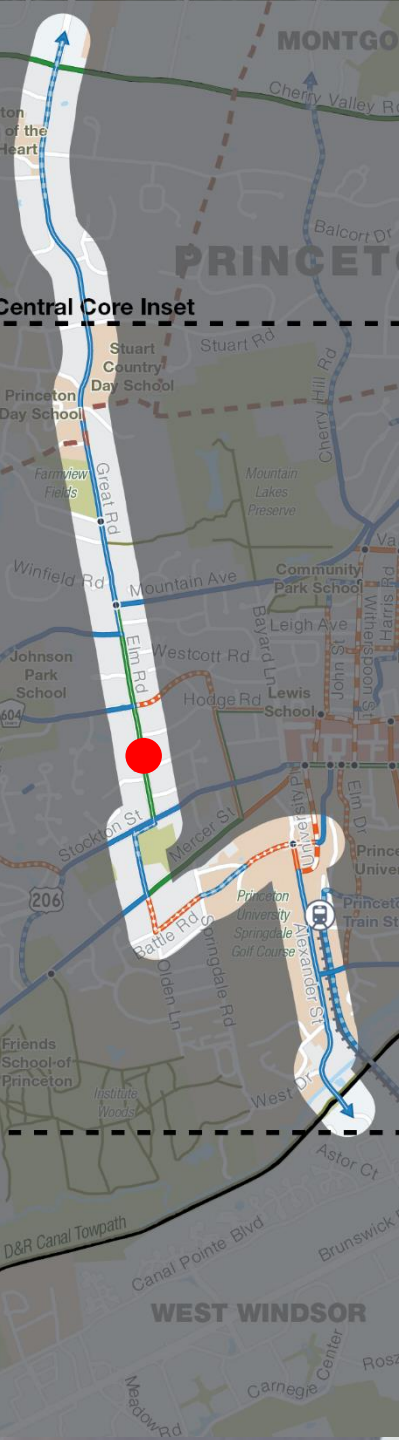
Great Road Corridor

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Great Road Corridor



Great Road Corridor





Proposed Bicycle Network

-
- Legend:
- Improved Shared-Use Path
 - New Shared-Use Path
 - Separated Bike Lanes
 - Bicycle Lane
 - Bicycle Lane + Path
 - Bicycle Lane + Shared Lane
 - Bicycle Boulevard
 - Shared-Lane Markings
 - Enhanced Shared Markings
 - Pipeline Trail
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 - Commercial Area
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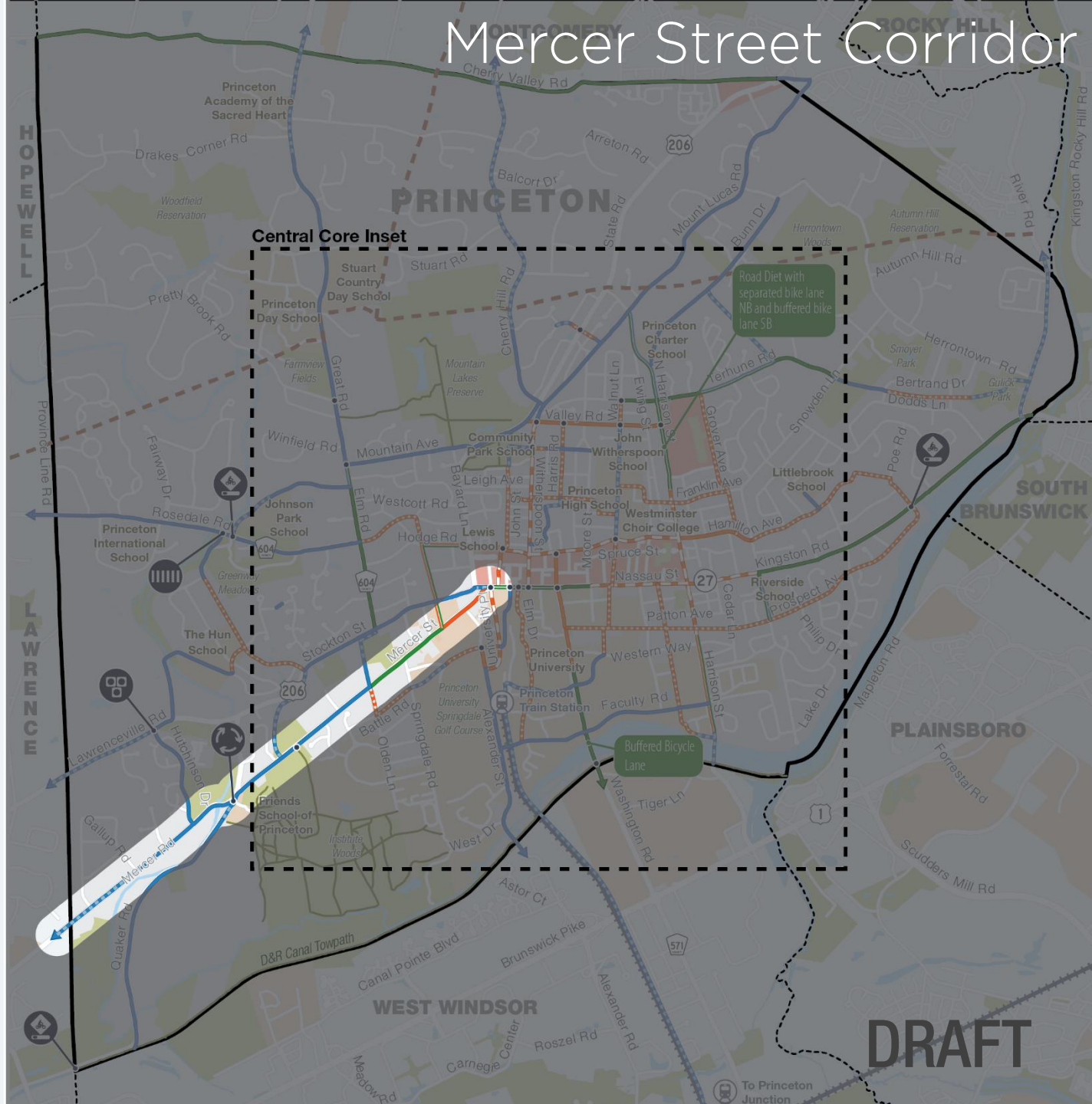
Intersection Improvement



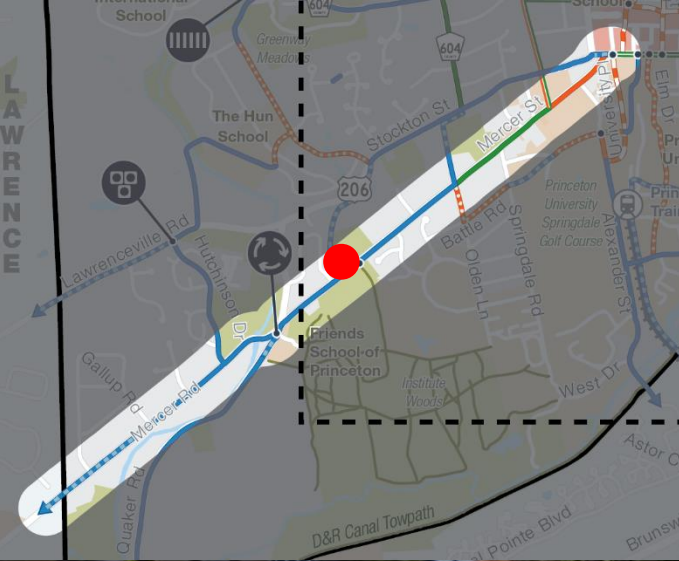
HAWK



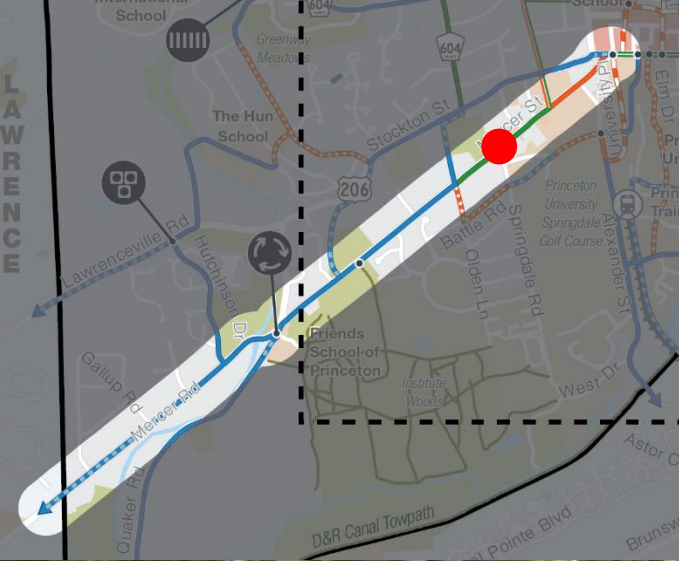
Inset Intersection Improvement



Mercer Street Corridor



Mercer Street Corridor



Map XX

Proposed Bicycle Network

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-  School
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-  Commercial Area
-  Existing Trail

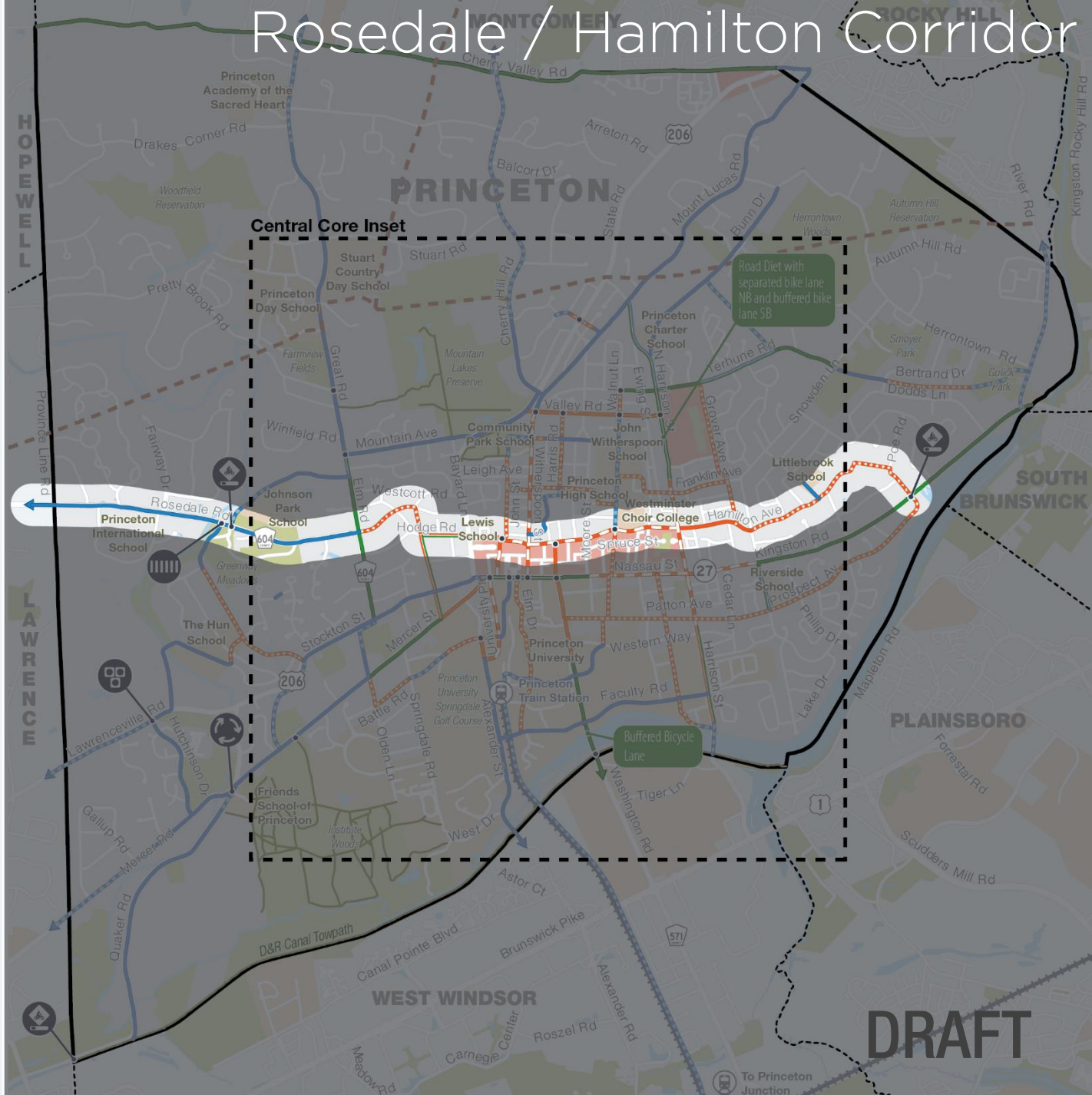
Intersection Improvement

-  Roundabout
-  RRFB
-  HAWK
-  Bike Box
-  Crosswalk Enhancements
-  Inset Intersection Improvement



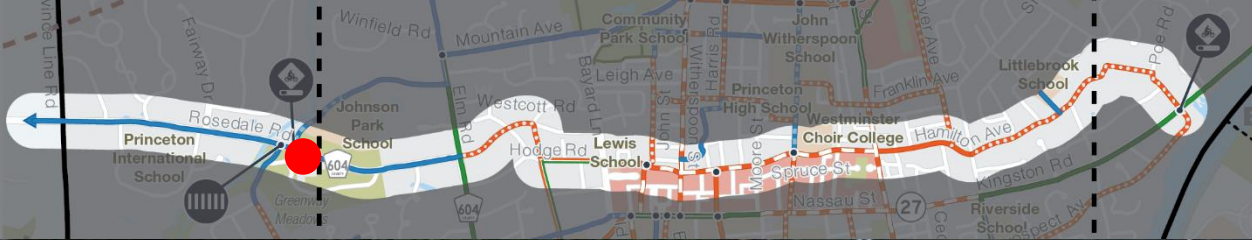
0 0.25 0.5 1 Miles

Rosedale / Hamilton Corridor

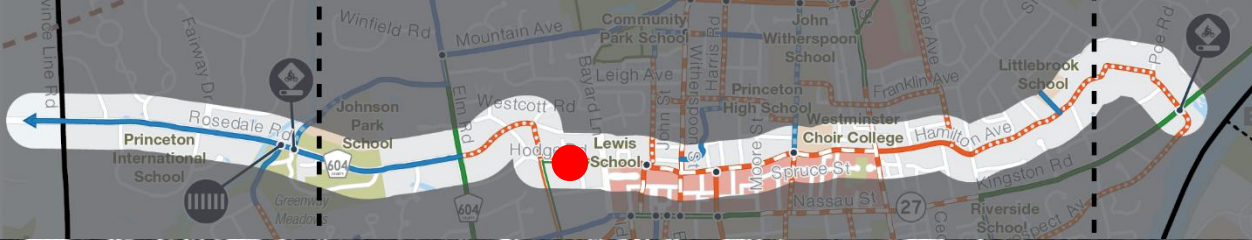


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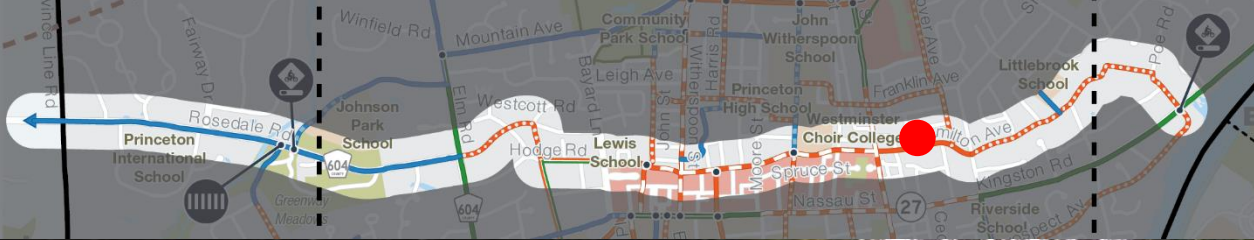
Hamilton Corridor



Hamilton Corridor



Hamilton Corridor



Map XX

Proposed Bicycle Network

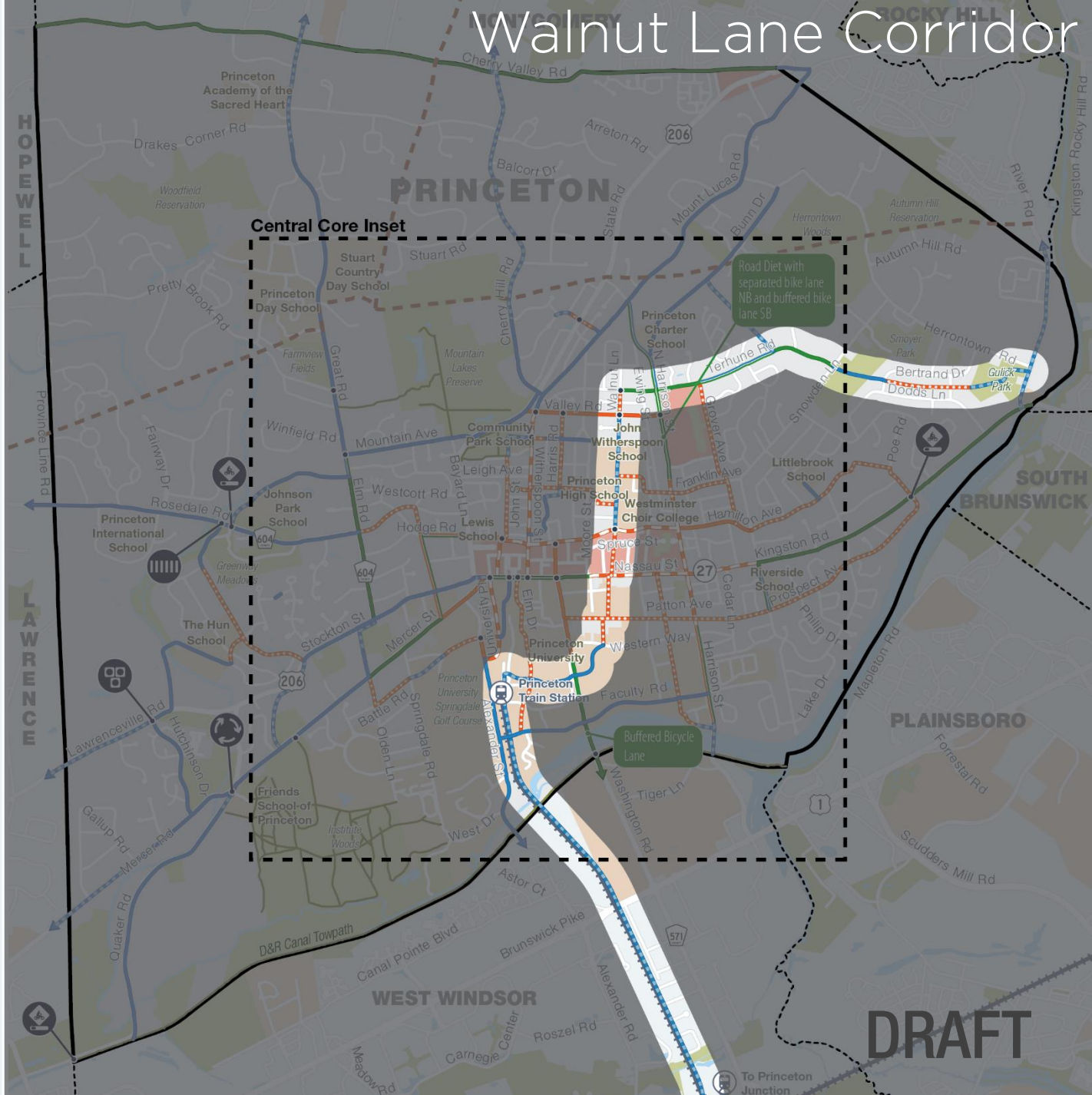
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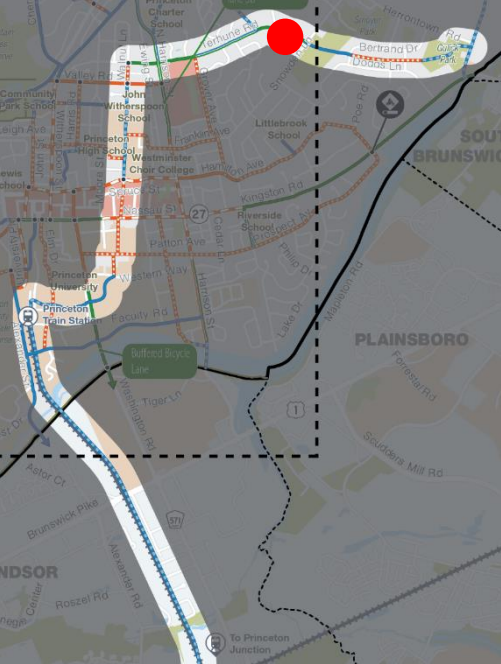
-  Roundabout
-  RRFB
-  HAWK
-  Bike Box
-  Crosswalk Enhancements
-  Inset Intersection Improvement



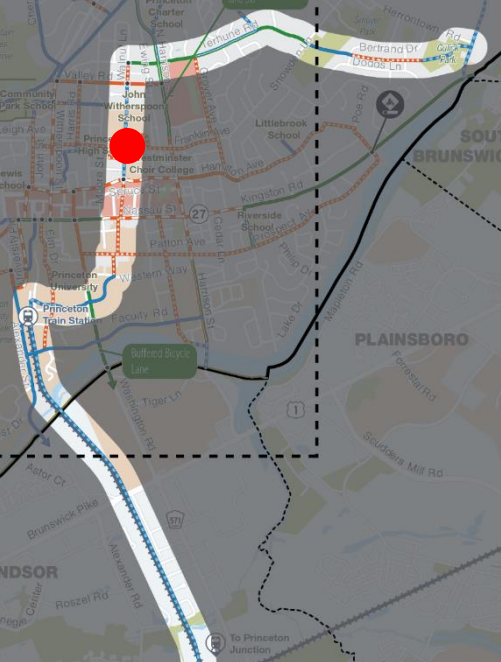
0 0.25 0.5 1 Miles



Walnut Lane Corridor



Walnut Lane Corridor



Map XX

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Intersection Improvement

-  Roundabout
-  RRFB
-  HAWK
-  Bike Box
-  Crosswalk Enhancements
-  Inset Intersection Improvement

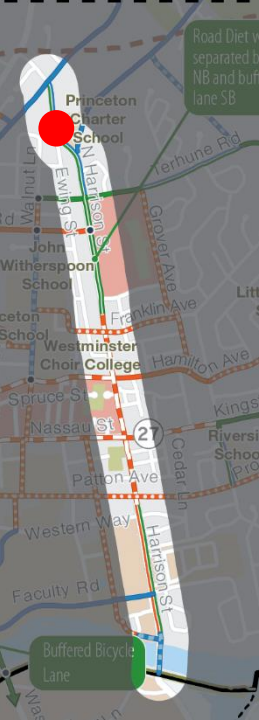


0 0.25 0.5 1 Miles

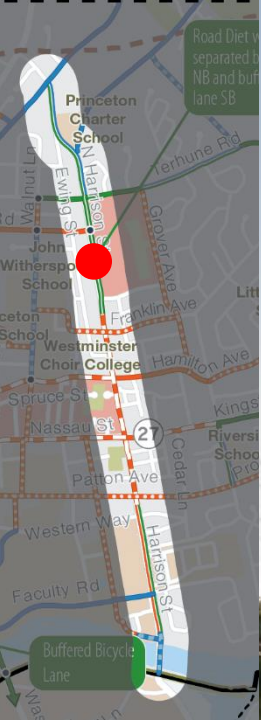
Harrison Street Corridor



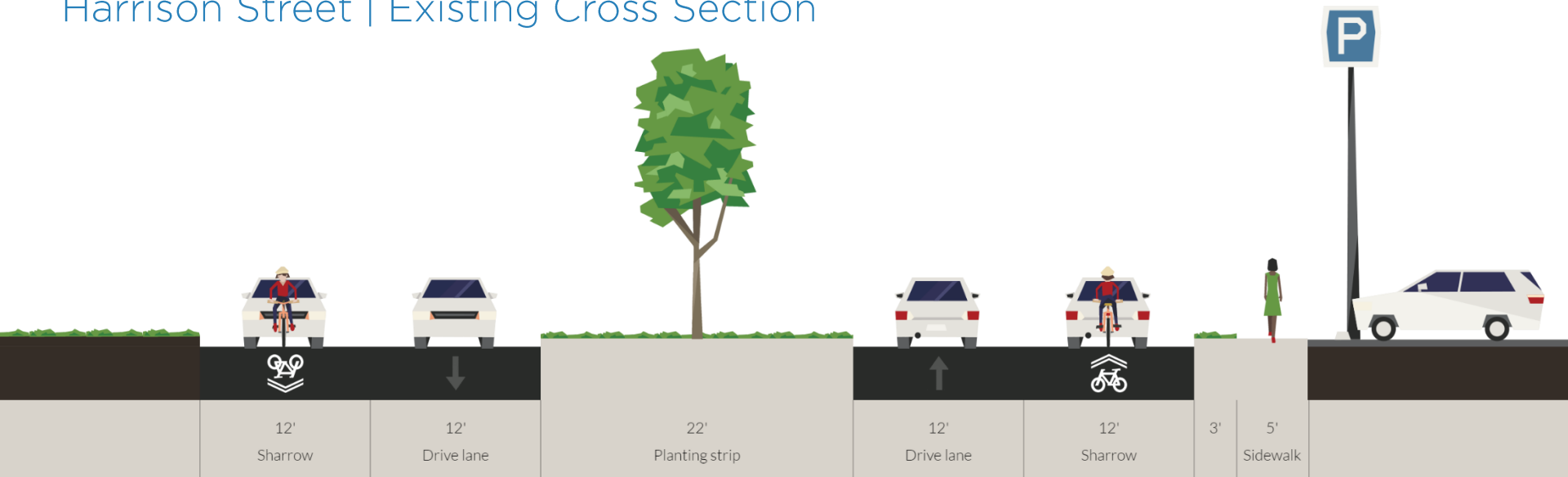
Harrison Street Corridor



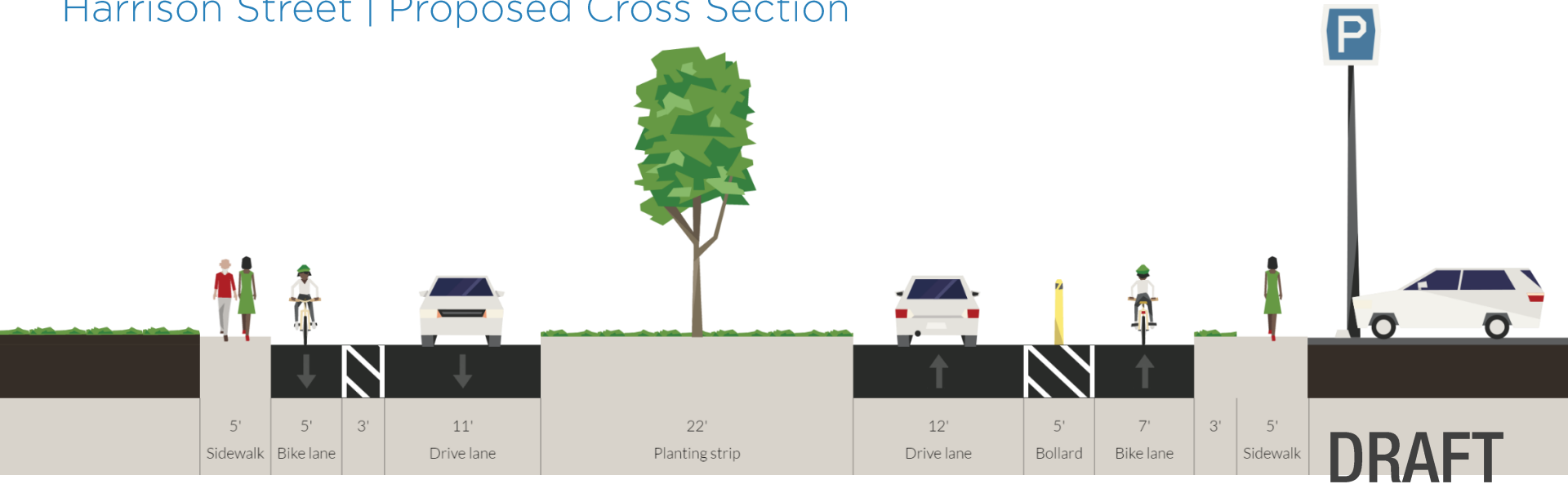
Harrison Street Corridor



Harrison Street | Existing Cross Section

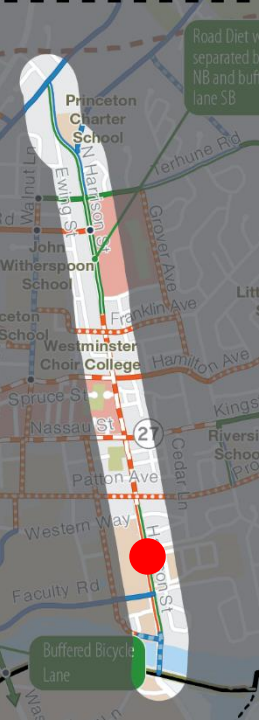


Harrison Street | Proposed Cross Section



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Harrison Street Corridor



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0 0.25 0.5 1 Miles

Prospect Avenue Corridor



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Existing



Bike Boulevard Sim DRAFT



Existing



Shared- Street Sim DRAFT





Proposed Bicycle Network

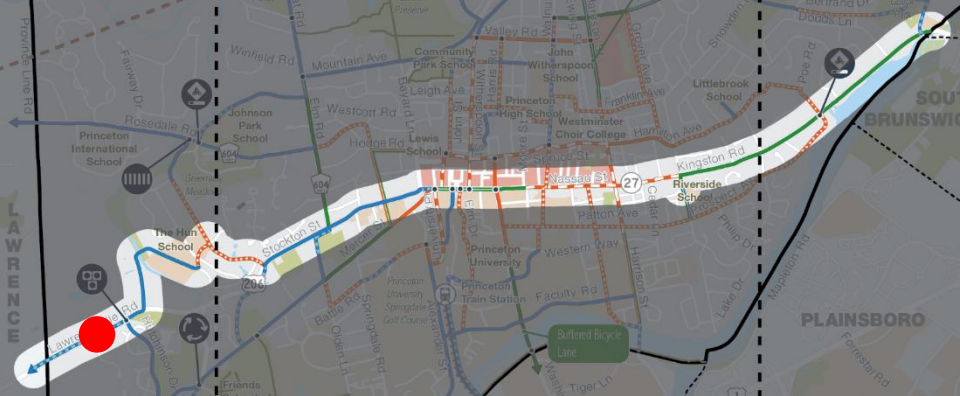
- ## Intersection Improvement



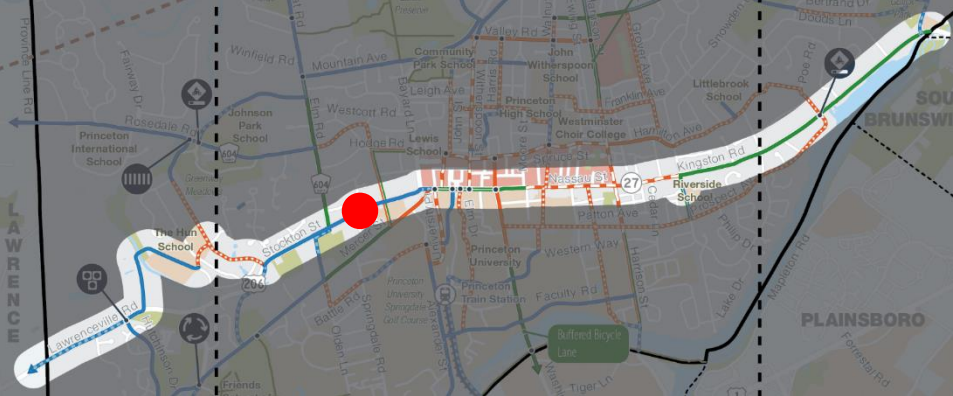
Inset Intersection Improvement



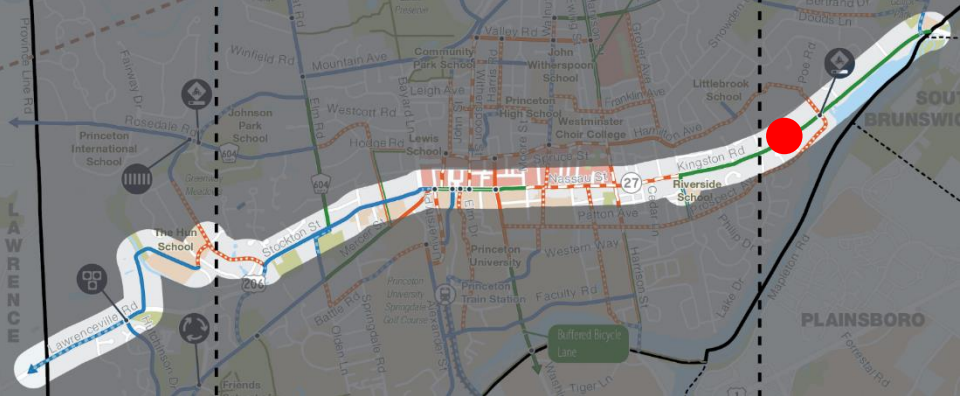
Rt 206 & 27 Corridor



Rt 206 & 27 Corridor



Rt 206 & 27 Corridor

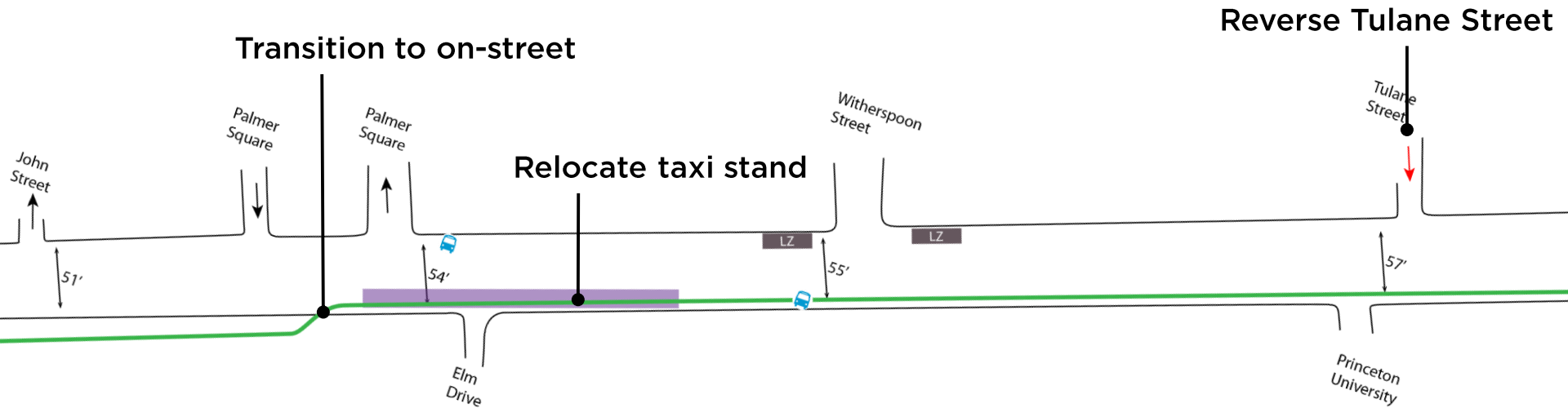


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Nassau Street Alternatives

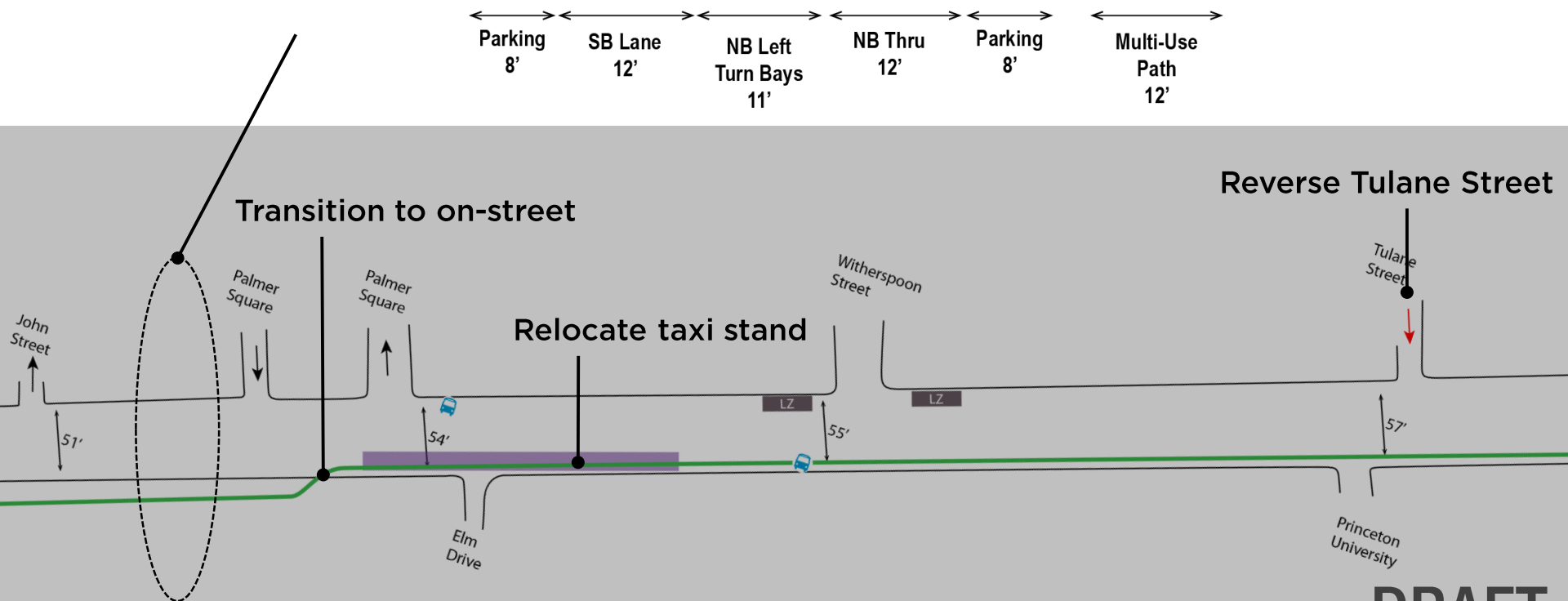
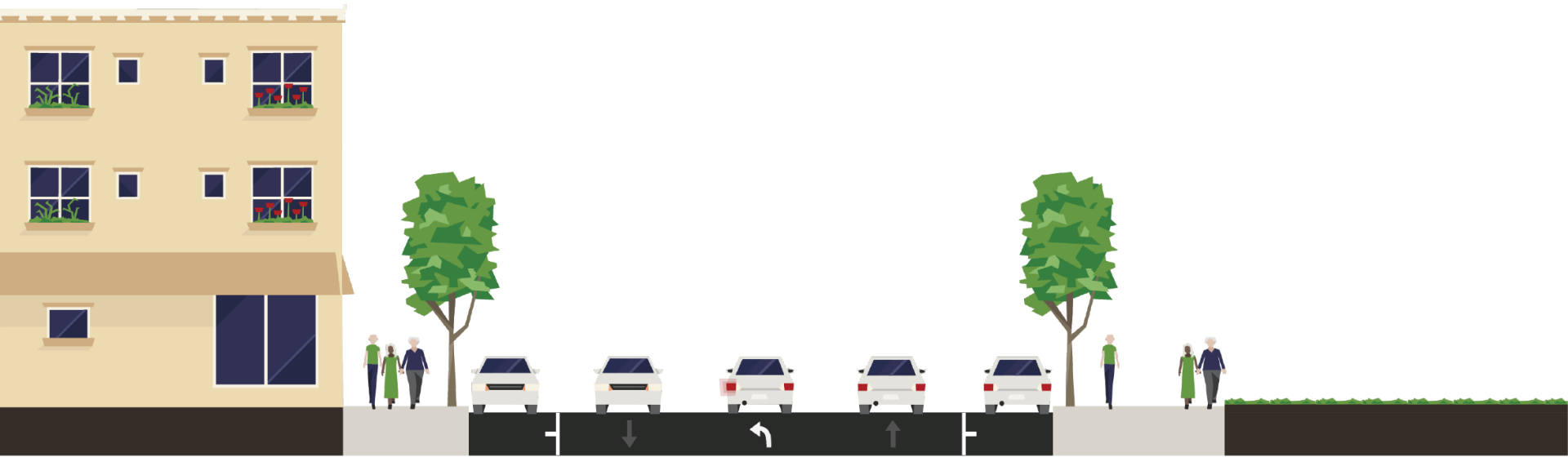


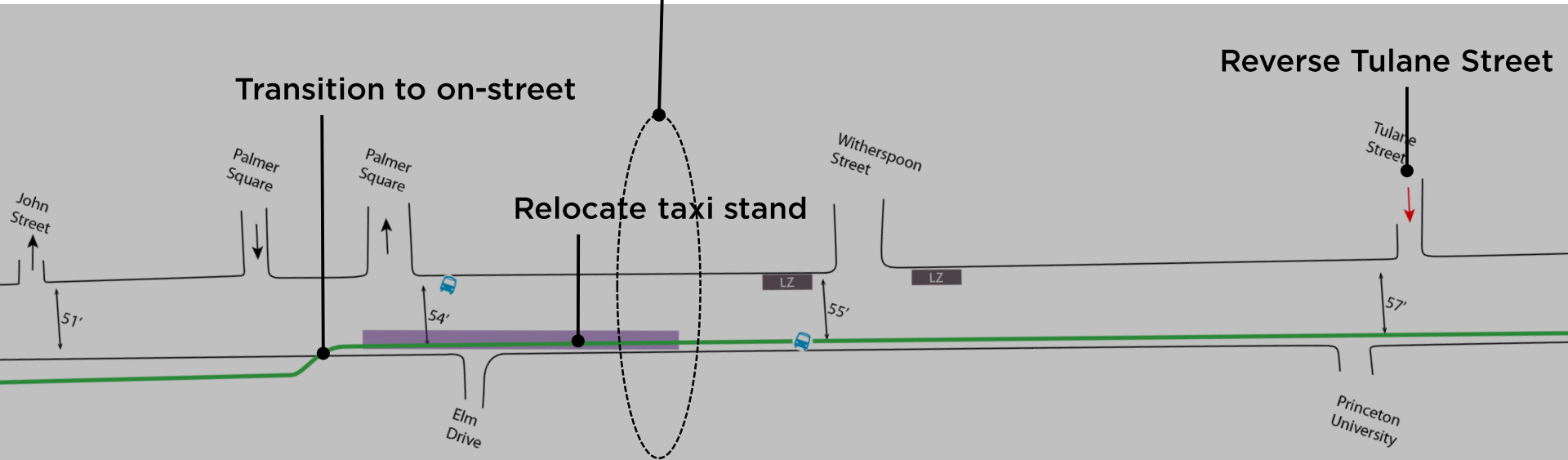
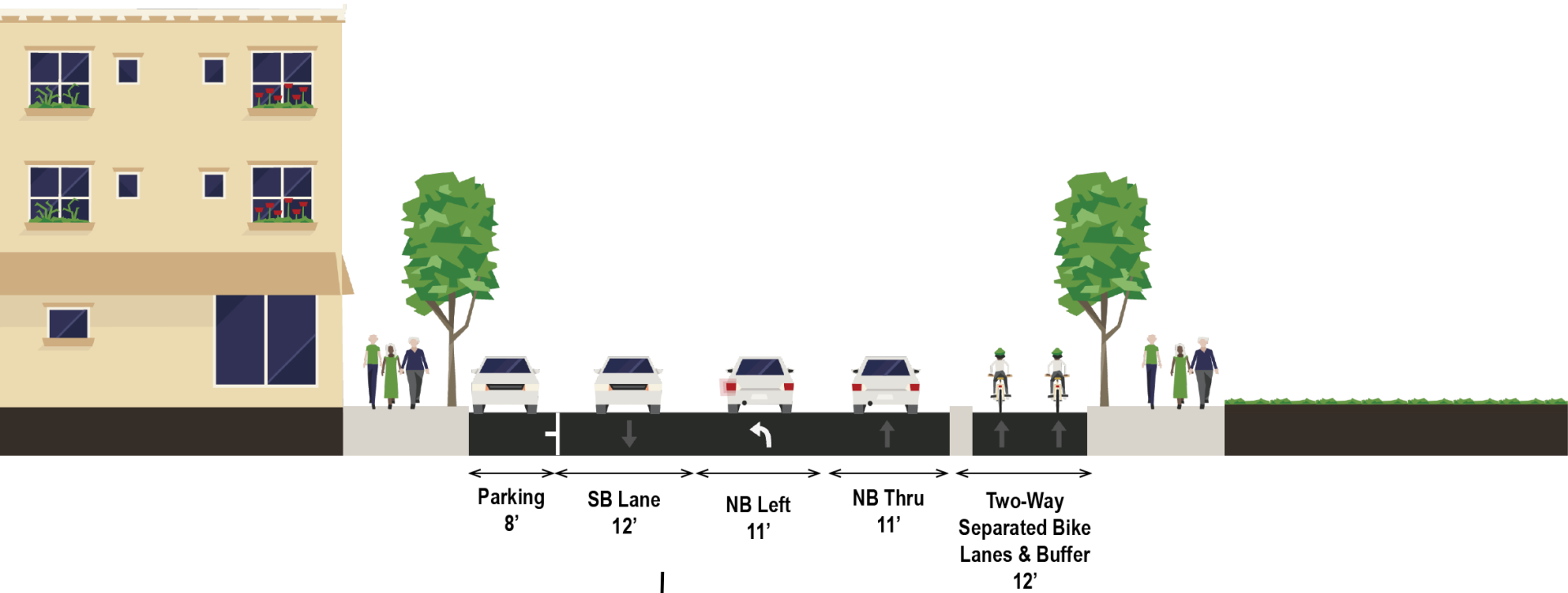
Nassau Street Alternative 1

Two-Way Separated Bike Lane

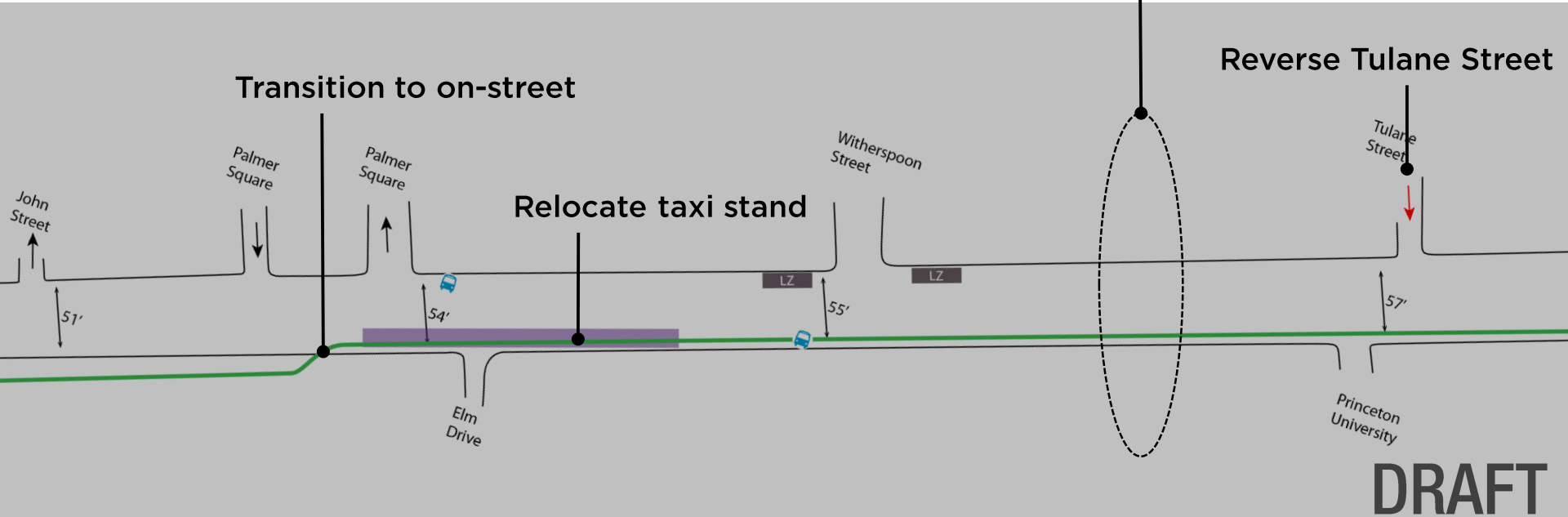
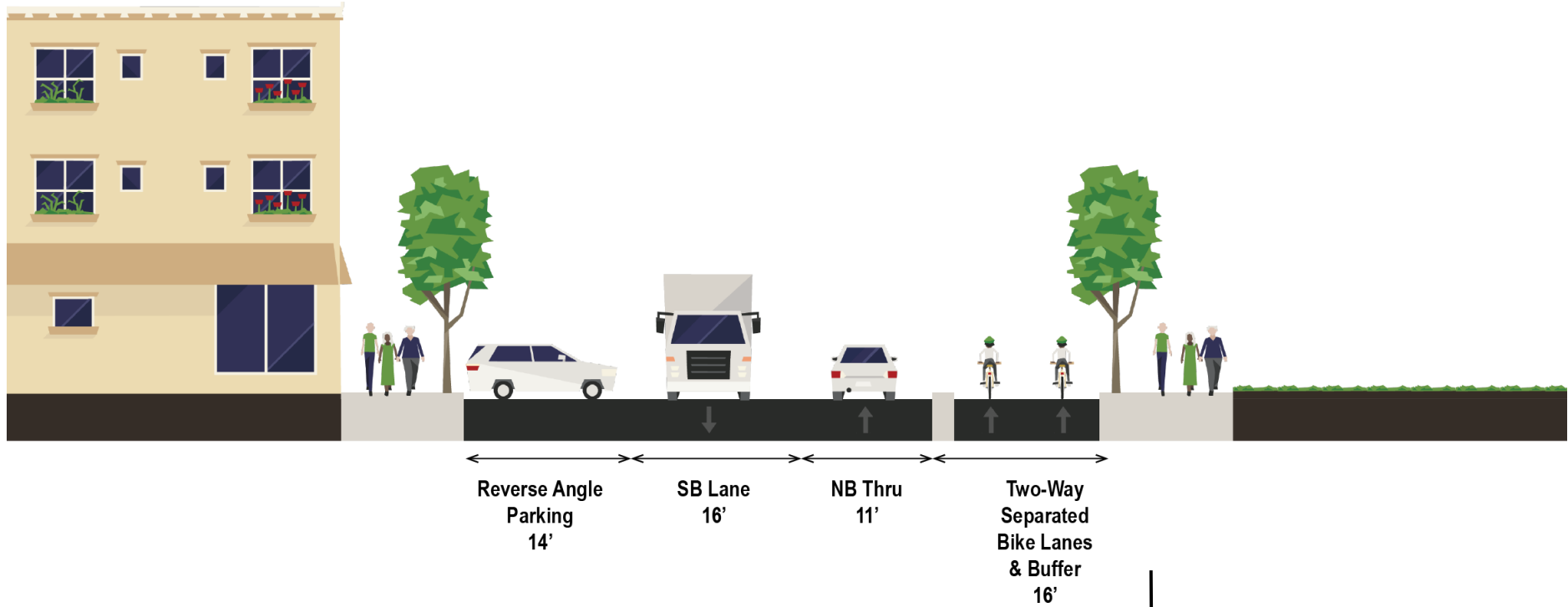


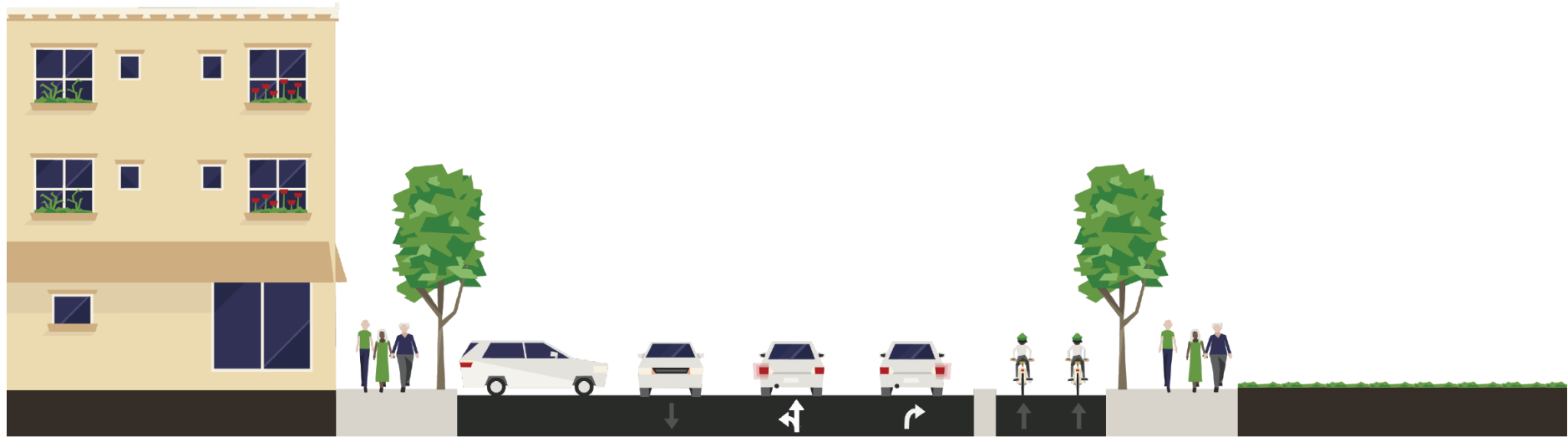
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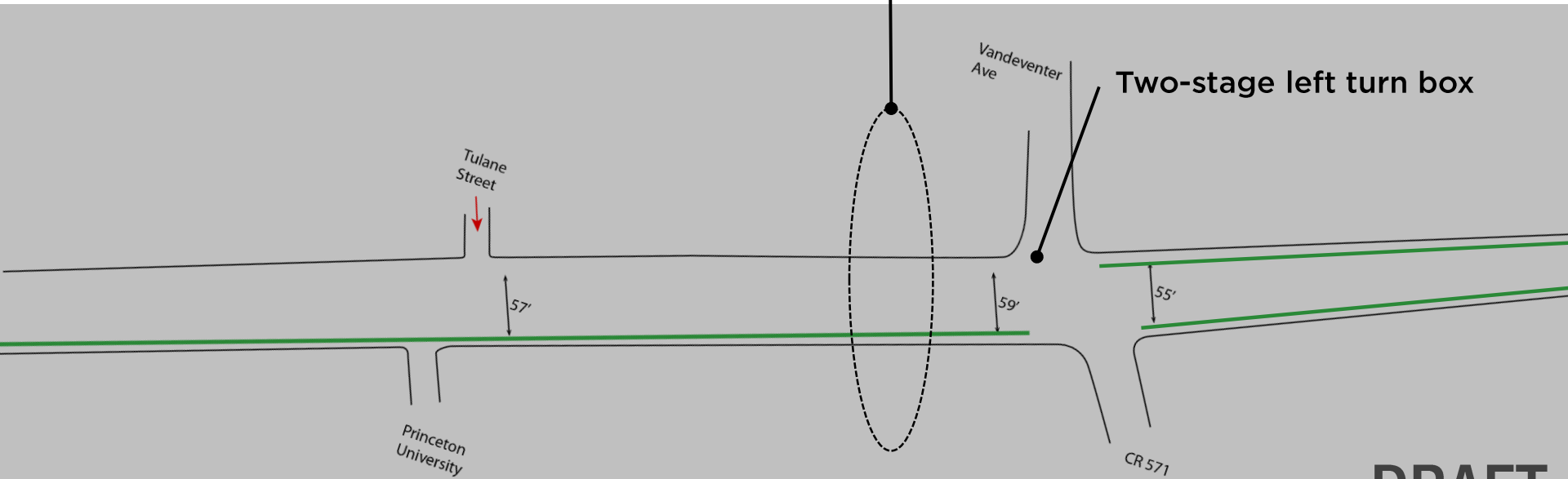
Reverse Angle
Parking
14'

SB Lane
11'

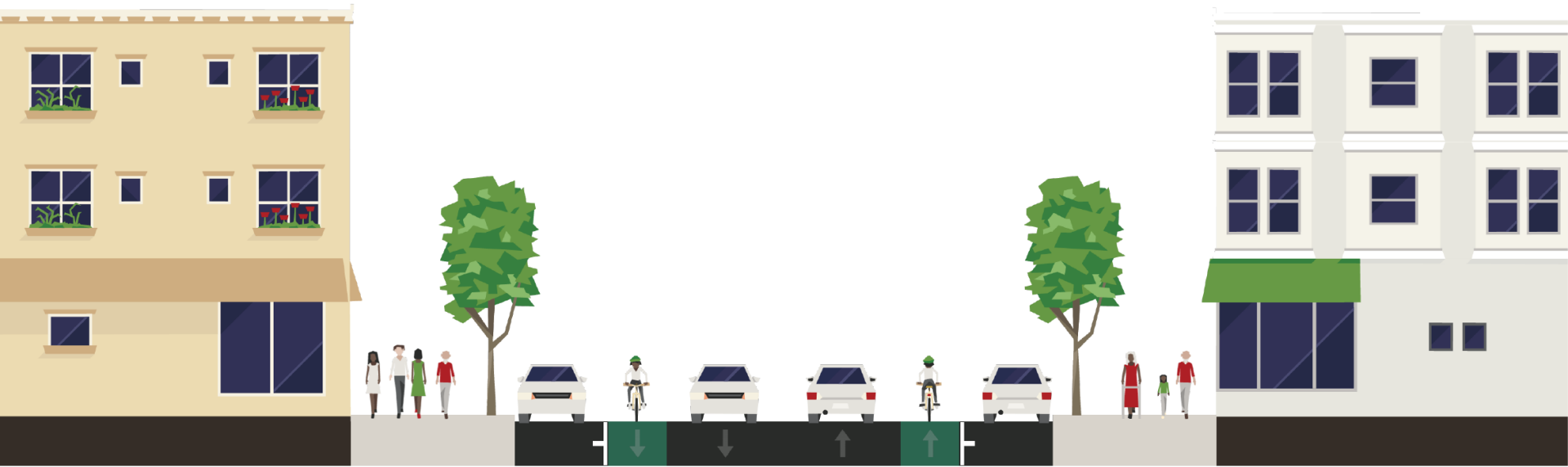
NB
Thru/Left
11'

NB Right
11'

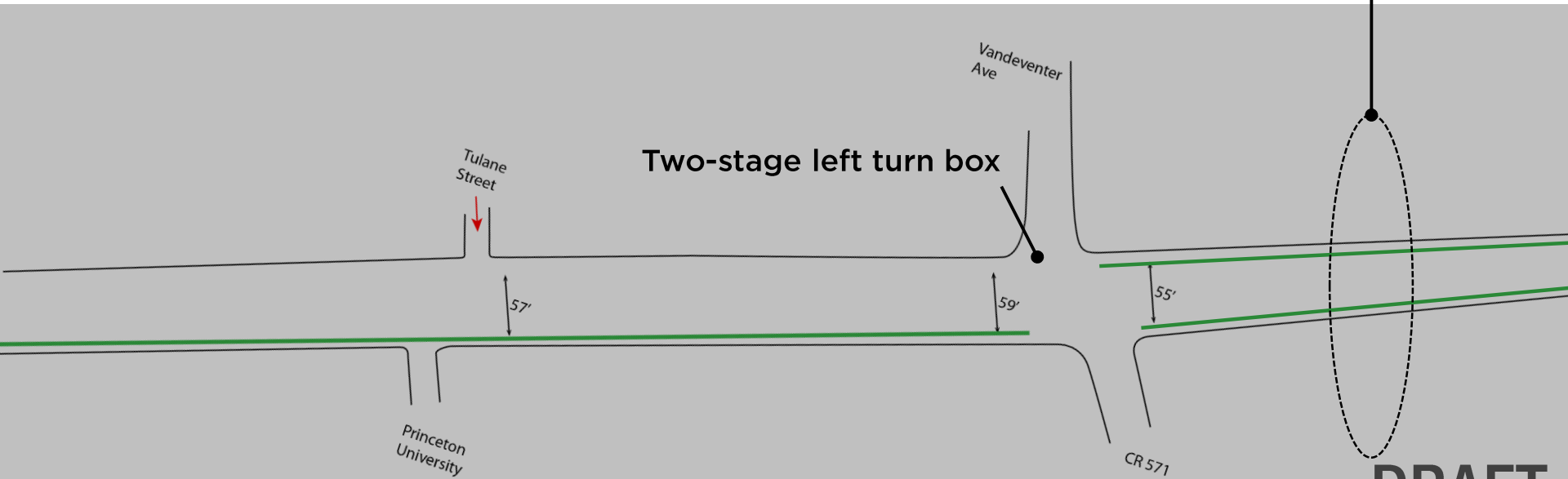
Two-Way
Separated
Bike Lanes
& Buffer
12'



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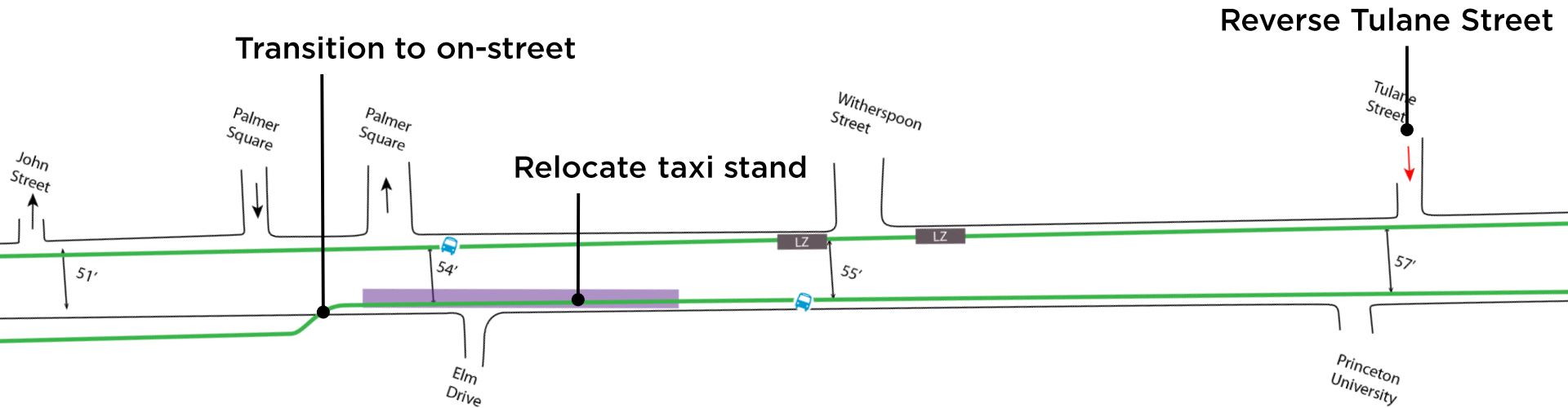
Parking 8'
 Bike Lane 5'
 Lane 10'
 Lane 10'
 Bike Lane 5'
 Parking 8'



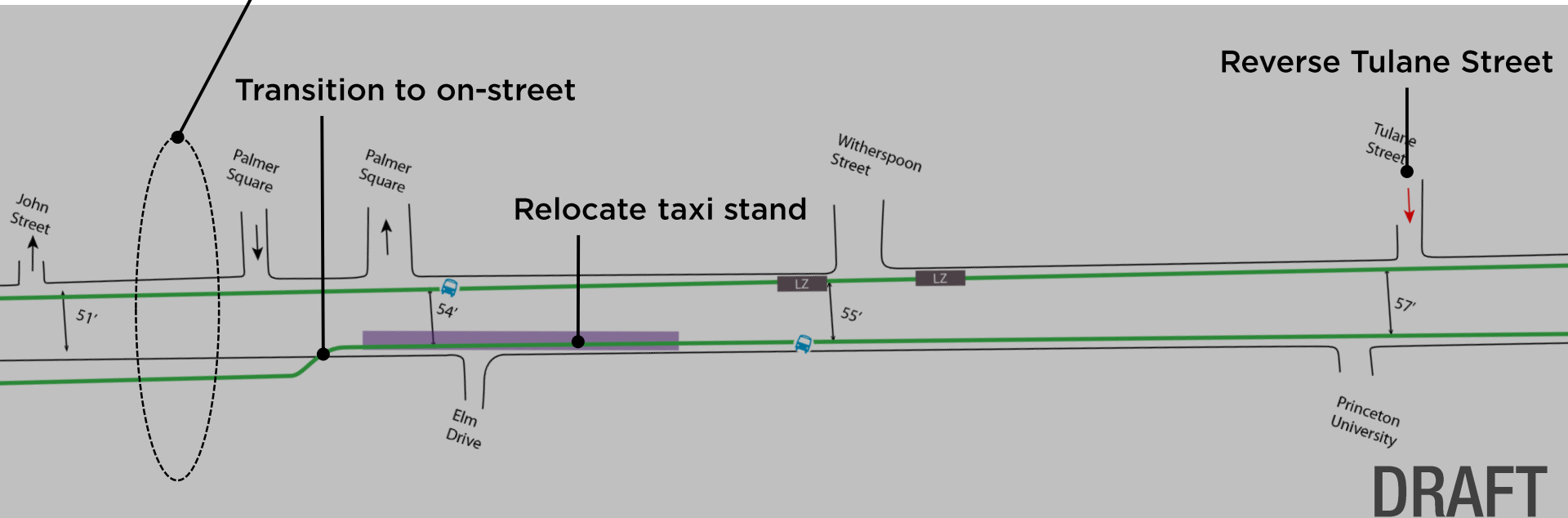
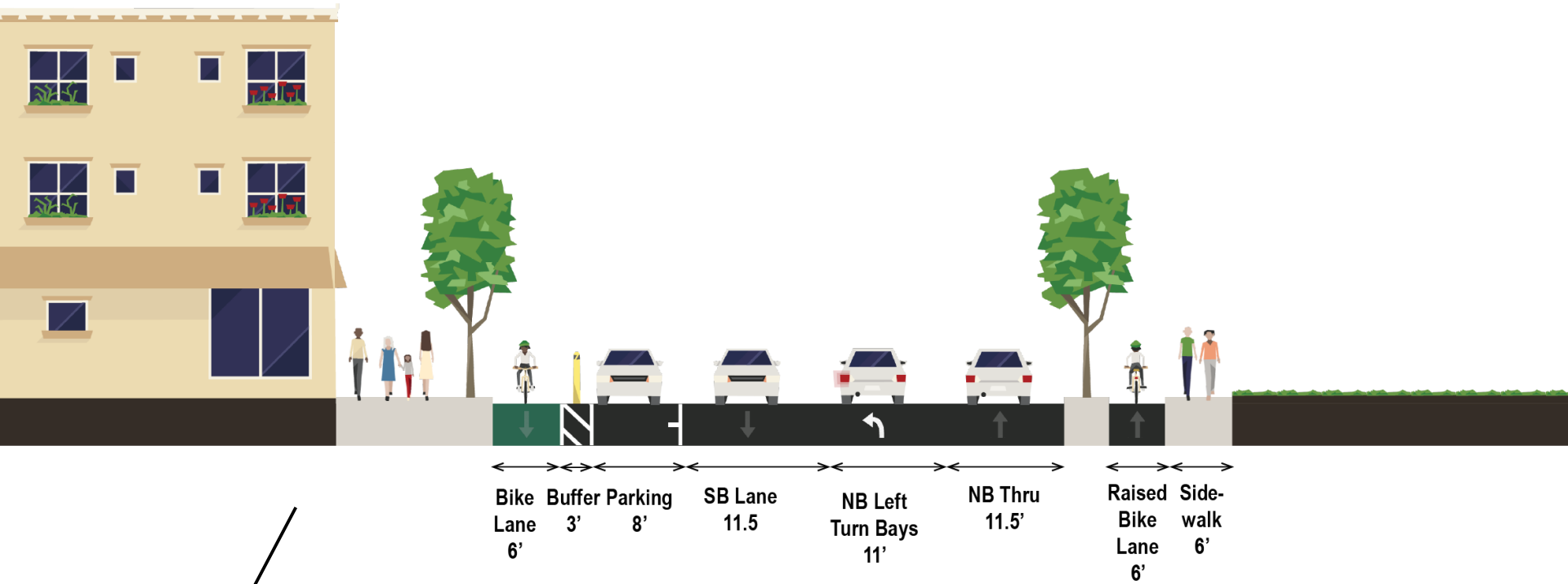
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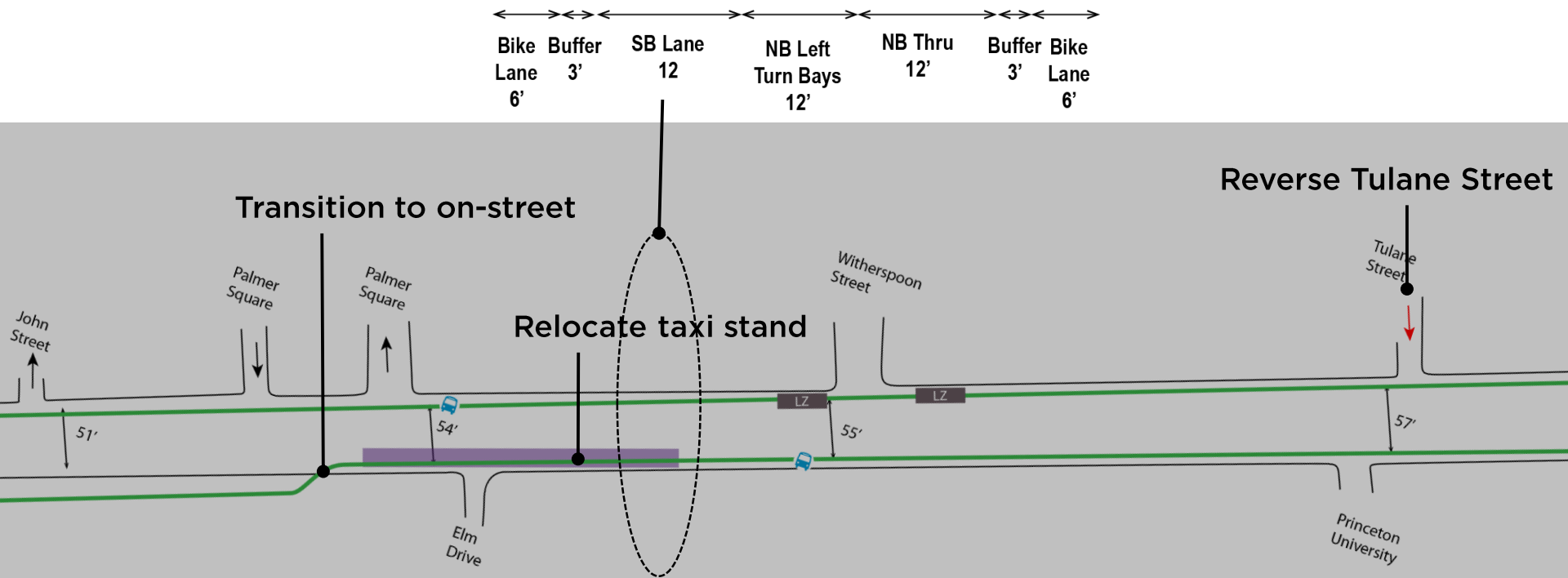
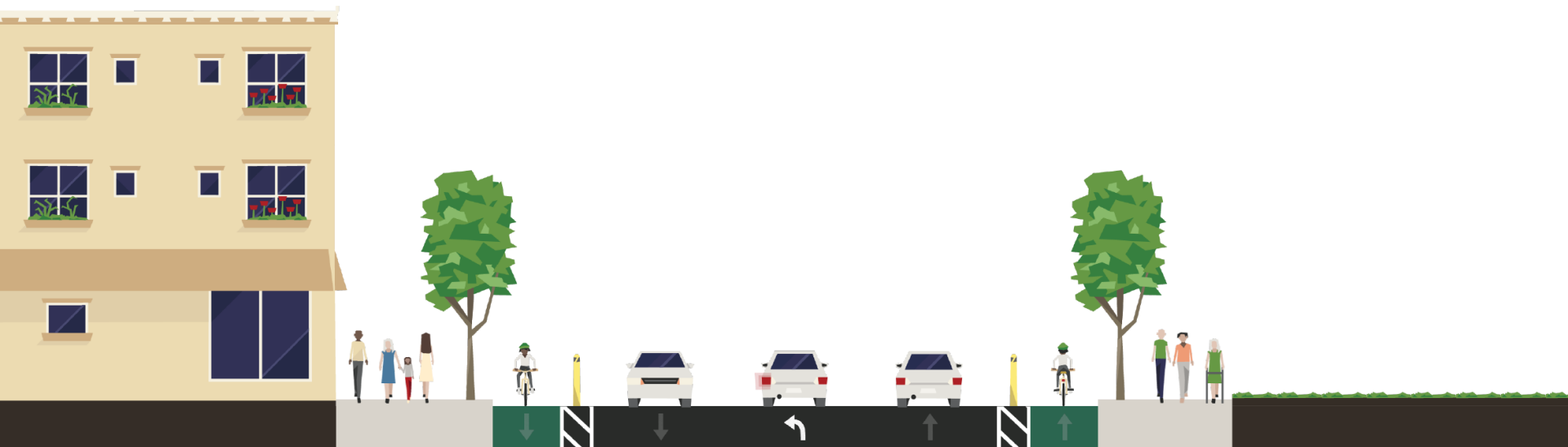
Nassau Street Alternative 2

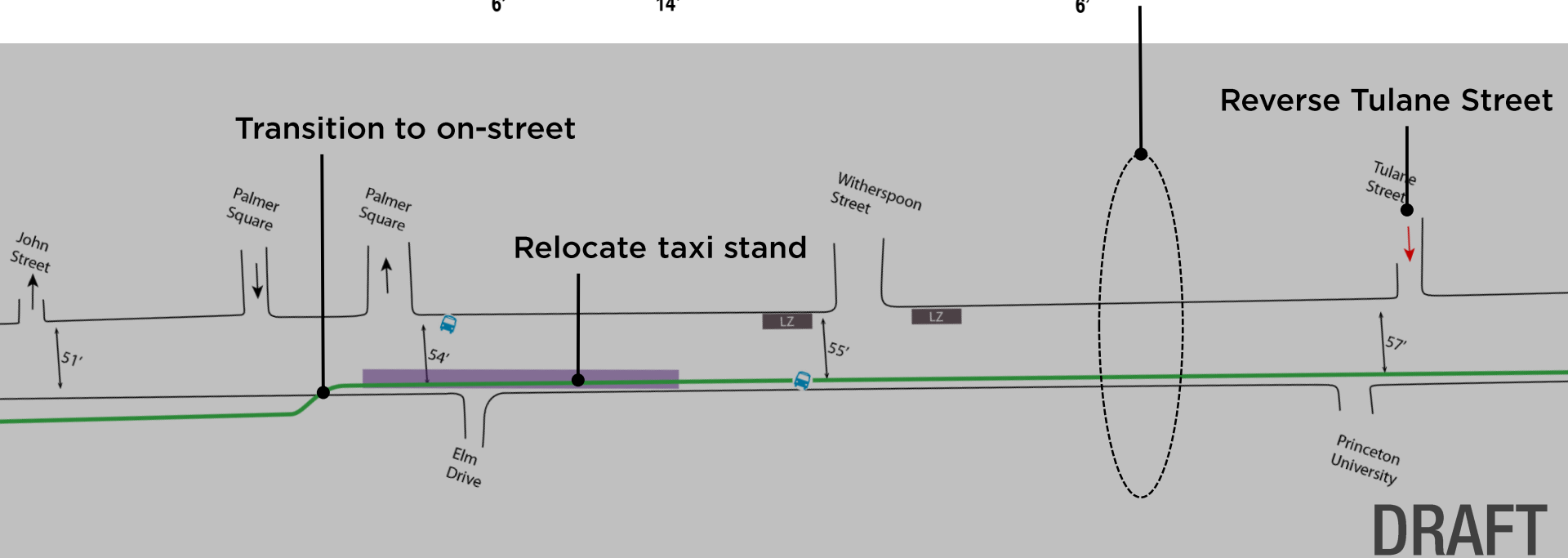
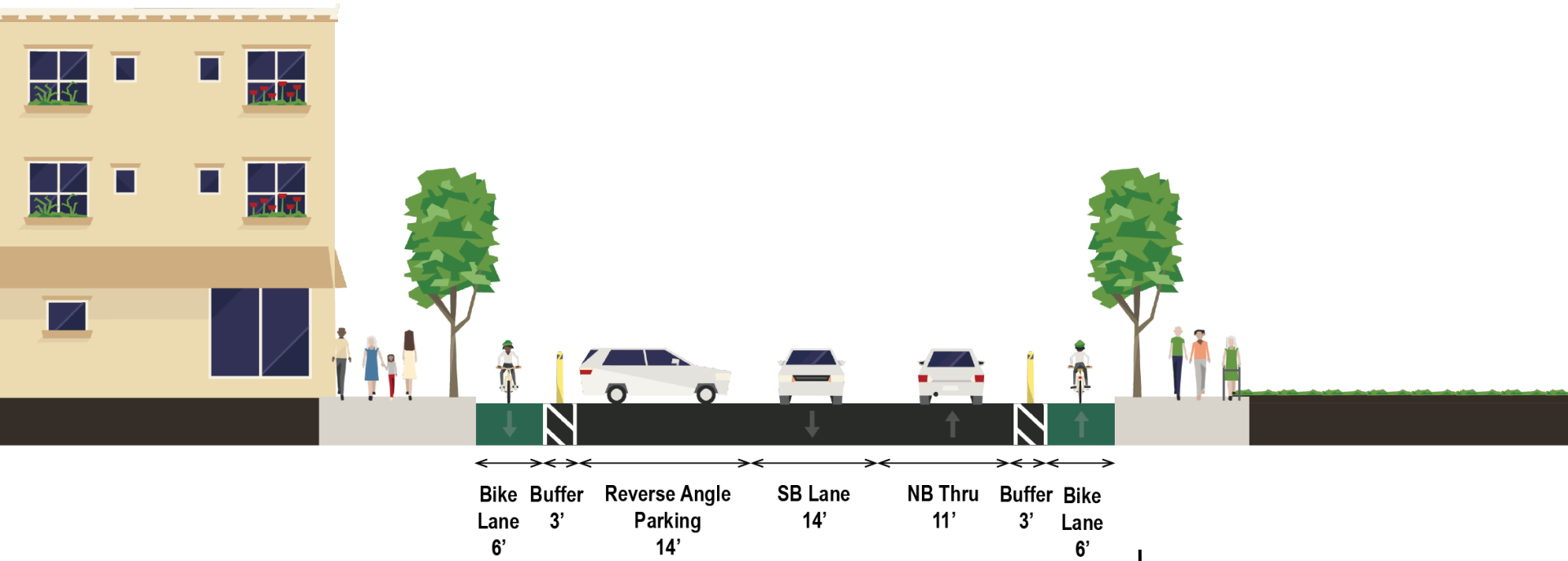
One-Way Separated Bike Lanes

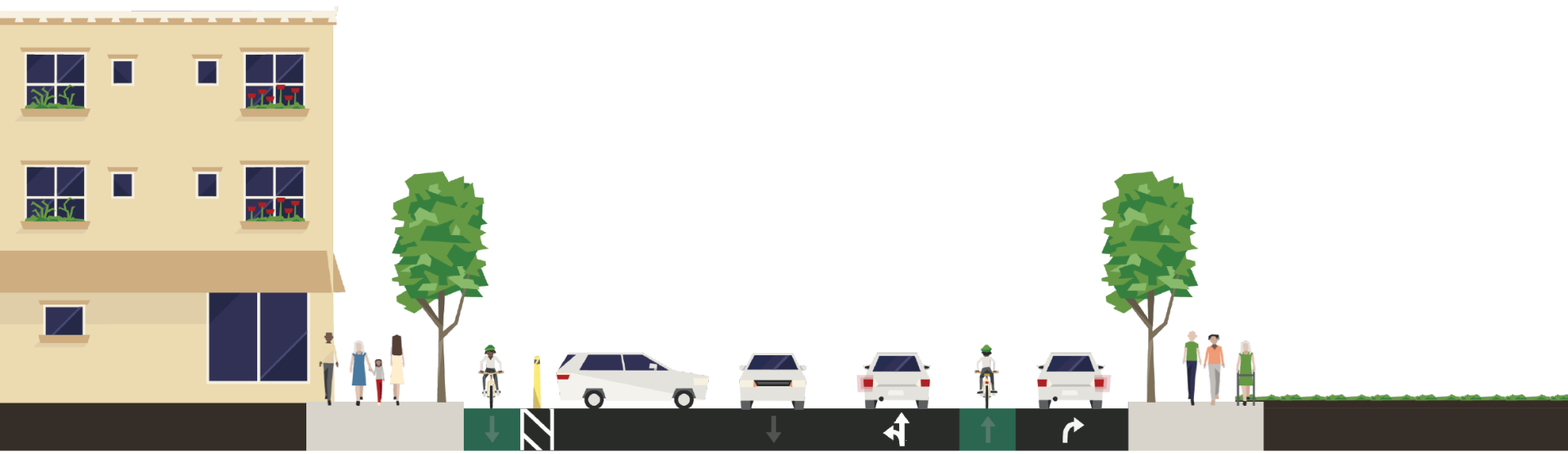


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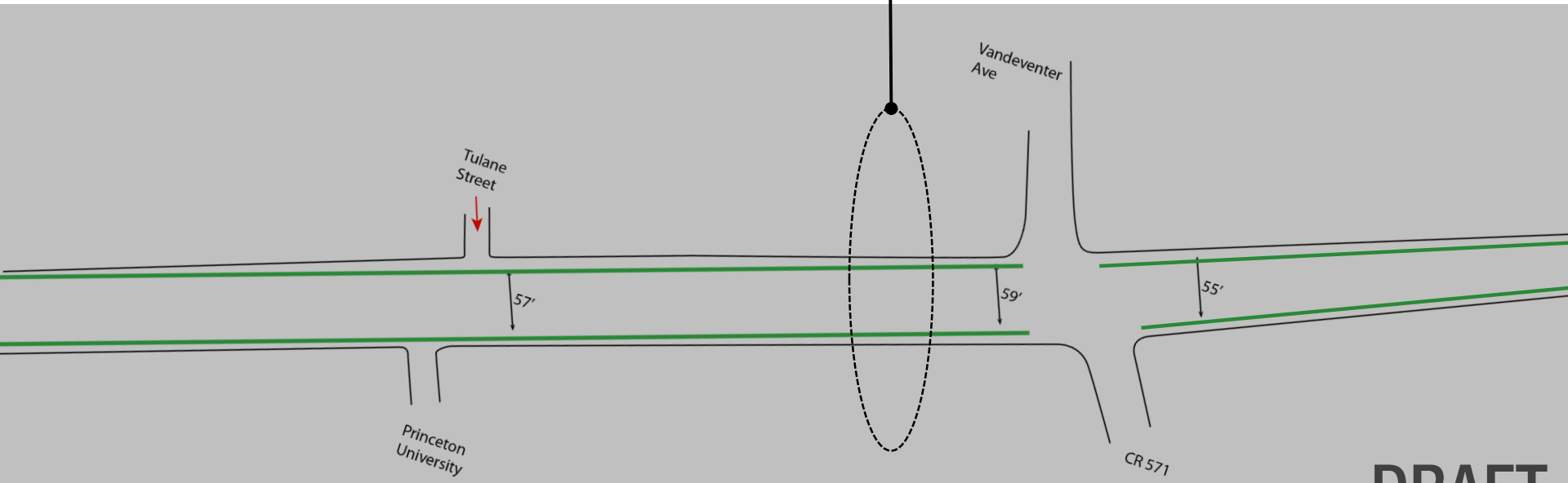


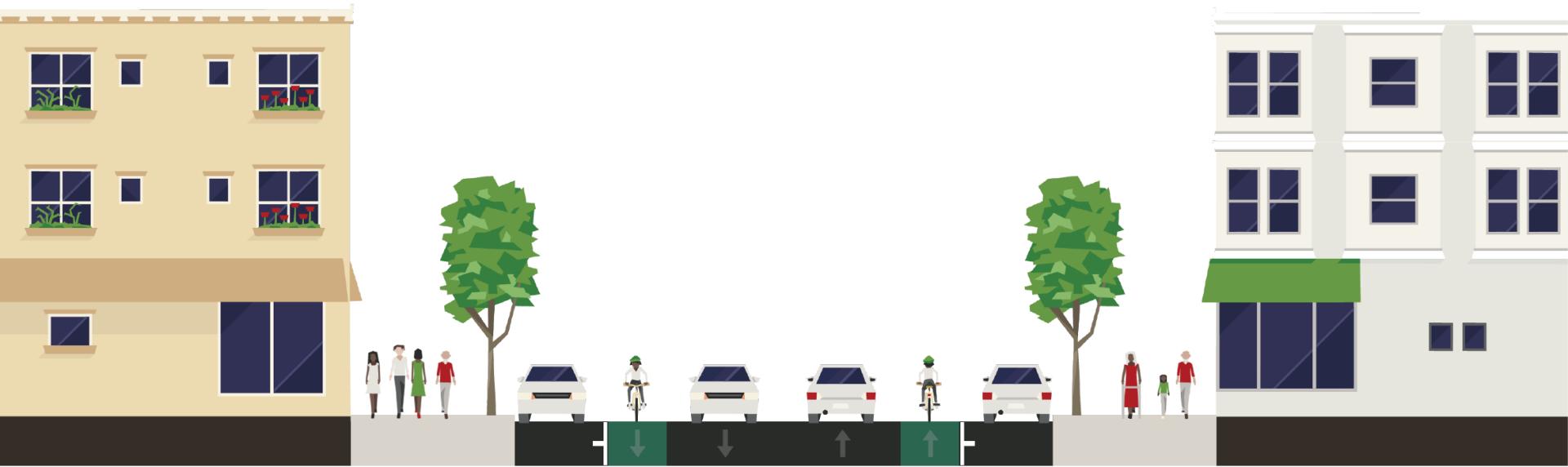




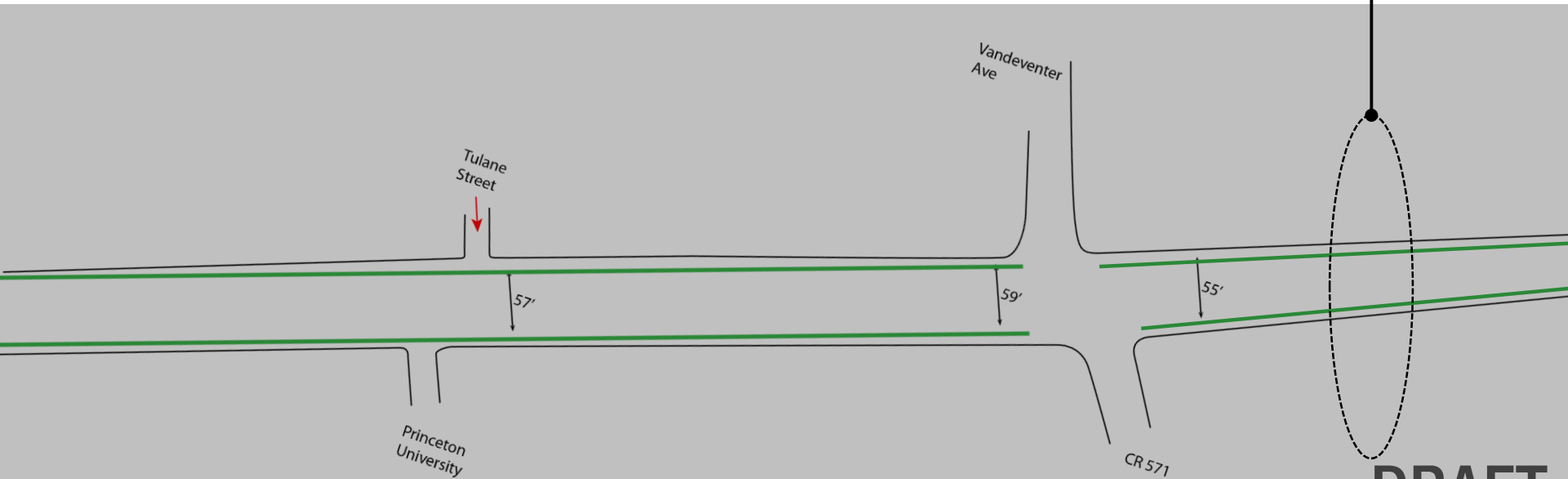


←-----→
Bike Lane 5' Buffer 3' Reverse Angle Parking 14' SB Lane 11' NB Thru/Left 11' Bike Lane 5' NB Right 10'





Parking 8'
 Bike Lane 5'
 Lane 10'
 Lane 10'
 Bike Lane 5'
 Parking 8'



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Raised Bike Lane Examples

