

# Bicycle Connection



**PARSONS  
BRINCKERHOFF**



Newark Broad Street ——— **T0** ——— Newark Penn Station



# Study Objective:

**To create a separated bike facility to connect Broad Street Station and Penn Station within the City of Newark.**

## Executive Summary:

Under the supervision and direction of the City of Newark, Parsons Brinckerhoff analyzed the roadways between Broad Street Station and Penn Station to determine viable alternatives for the creation of separated bicycle facilities to connect these critical transit nodes. Various alternative routes were analyzed based on their feasibility and overall impact on cycling between the two stations.

The primary goal of this study is to create a separated, low-stress bicycle facility that not only connects the two stations, but also creates a more pedestrian-friendly and vibrant downtown environment by calming traffic, shortening pedestrian crossing distances, and improving the streetscape of major downtown roadways. Given these considerations, a preferred route was chosen that will benefit local residents, students and visitors.

## Study Goals:

- Create a buffered or separated route for bicyclists.
- Design a direct route that minimizes turns and conflict points between the stations.
- Serve as a spine for destinations including the Rutgers-Newark campus, Military Park, the waterfront, Prudential Center, etc.
- Minimize impacts on traffic flow and parking.

## Alternatives Analyzed

Parsons Brinckerhoff Analyzed six different alternatives for connecting Newark Broad Street Station to Newark Penn Station via a separated bike facility. The routes included variations of the preferred route that used either full two-way separated bike lanes on University Avenue or separated bike lanes on Raymond Boulevard instead of Market Street. These alternatives were dismissed because of their expense and impacts on traffic. Another two alternatives utilized Broad Street but were dismissed due to the complexity of installing a facility on that road.

## Proposed Primary Route

**University Avenue/Washington Street/Market Street:** Route consists of 3 primary components (north to south):

- Two-way separated bike lanes along University Avenue from Broad Street Station to Central Avenue
- One-way separated bike lane southbound on University Avenue from Central Avenue to Market Street paired with a one-way separated bike lane northbound on Washington Avenue from Market Street to Central Avenue
- One-way separated bike lanes on either side of Market Street from University Avenue to Newark Penn Station
- Two-way separated bike lanes along Central Avenue from University Avenue to Washington Street

## Proposed Secondary Route

**Central Avenue/Center Street/Riverfront:** Two-way separated bike lanes from Washington Street to the riverfront path and Newark Penn Station

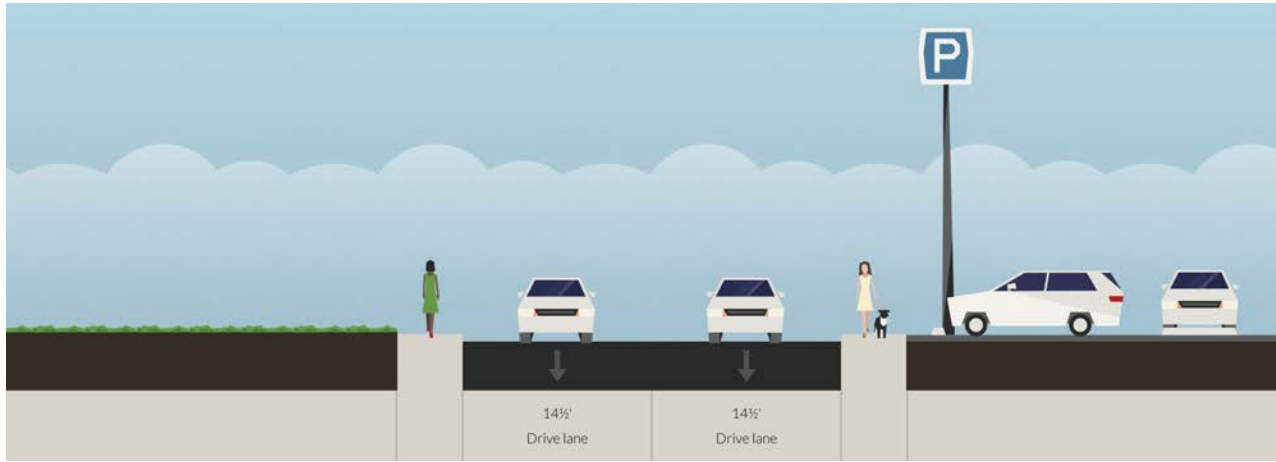




# University Avenue

## Broad Street Station to Orange Street

### Existing Configuration



### Proposed Re-Configuration



**Net Impact: Install two-way separated bike lane, remove one-travel lane**

### Plan View





# University Avenue

Orange Street to Central Avenue

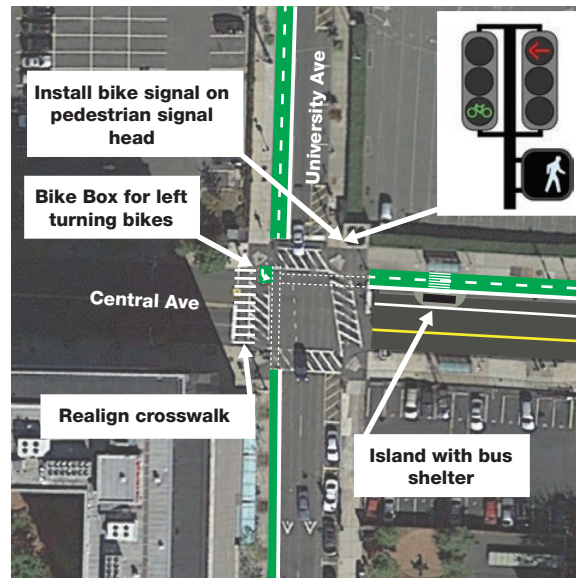
## Existing Configuration



## Proposed Re-Configuration



**Inset:**  
Intersection Treatment  
of University Avenue and  
Central Avenue



**Net Impact:** Install two-way separated bike lane, remove one-travel lane

## Plan View



# University Avenue

## Central Avenue to Raymond Boulevard

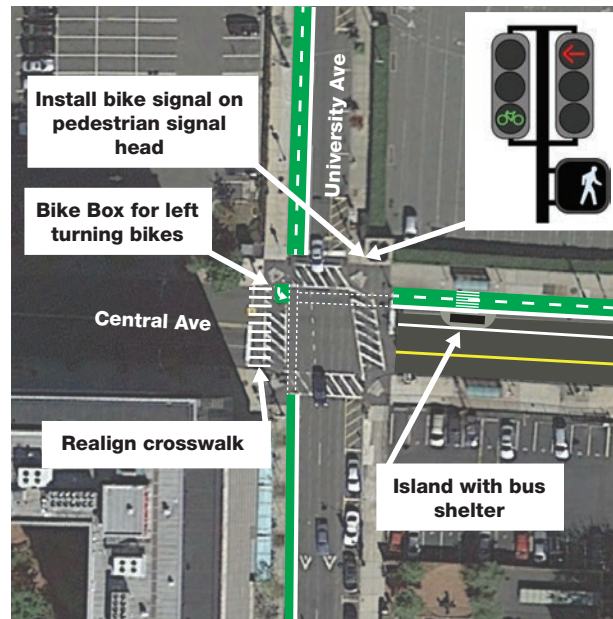
### Existing Configuration



### Proposed Re-Configuration

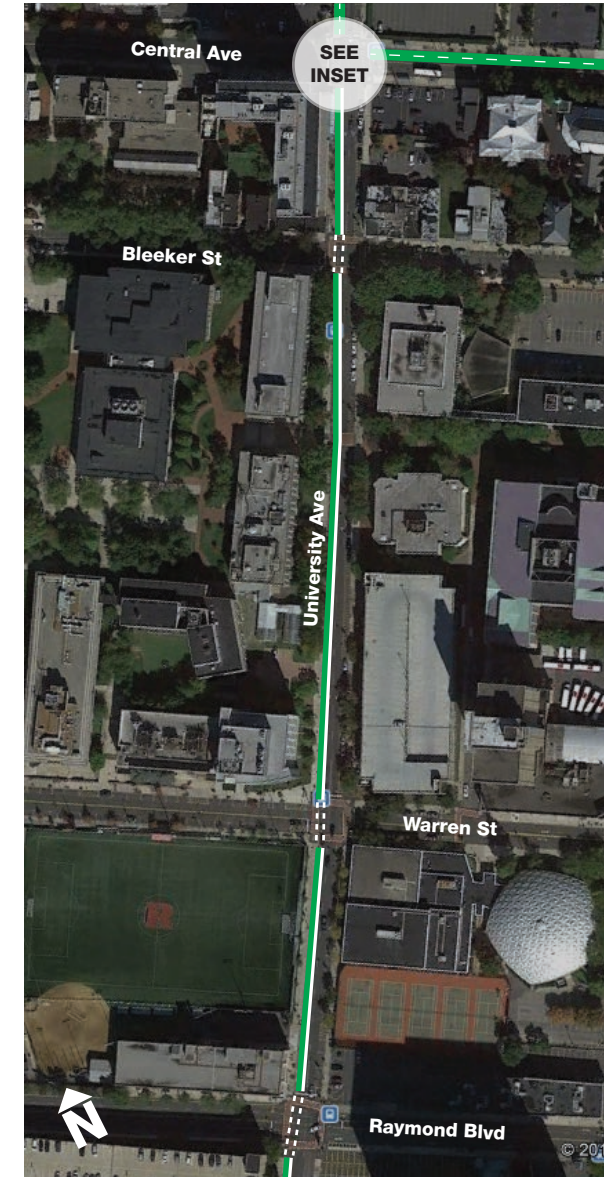


### Inset: Intersection Treatment of University Avenue and Central Avenue



**Net Impact:** Install southbound one-way separated bike lane, remove one-travel lane, add second parking lane

### Plan View





# University Avenue

## Raymond Boulevard to Market Street

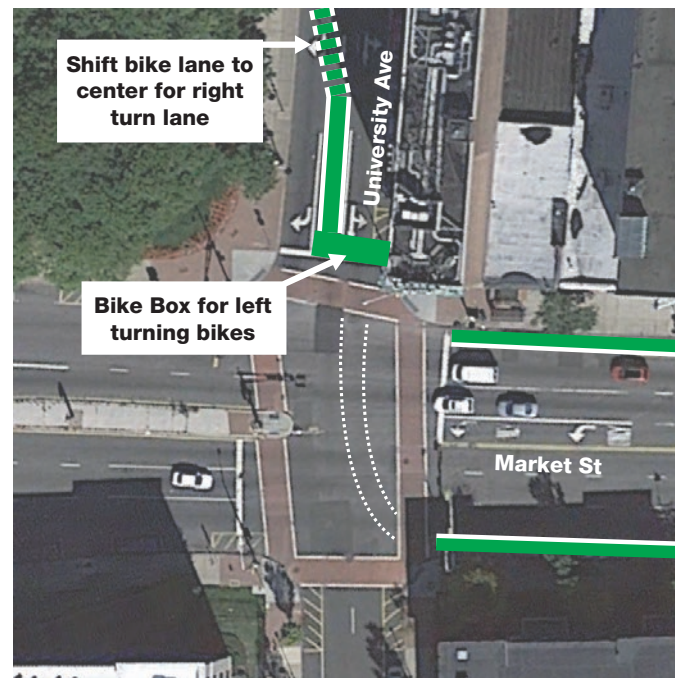
### Existing Configuration



### Proposed Re-Configuration

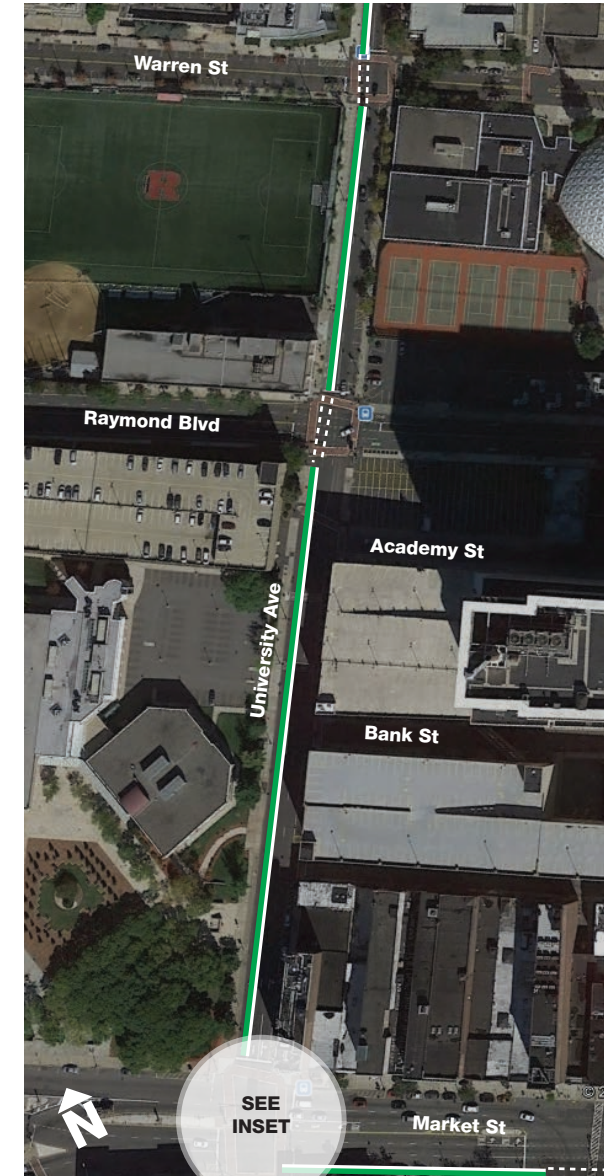


**Inset:**  
**Intersection Treatment**  
**of University Avenue and**  
**Market Street**



**Net Impact: Install southbound one-way separated bike lane, remove one-travel lane**

### Plan View





# Washington Street

Market Street to Raymond Boulevard

## Existing Configuration

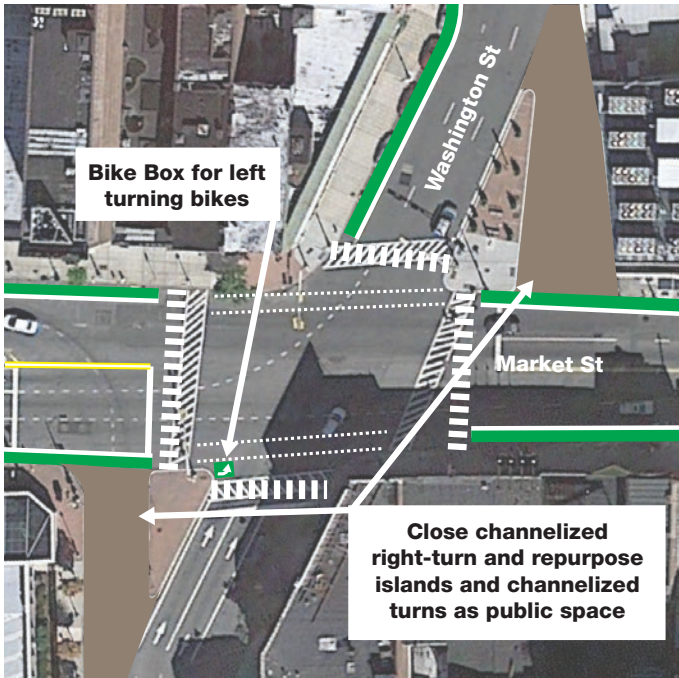
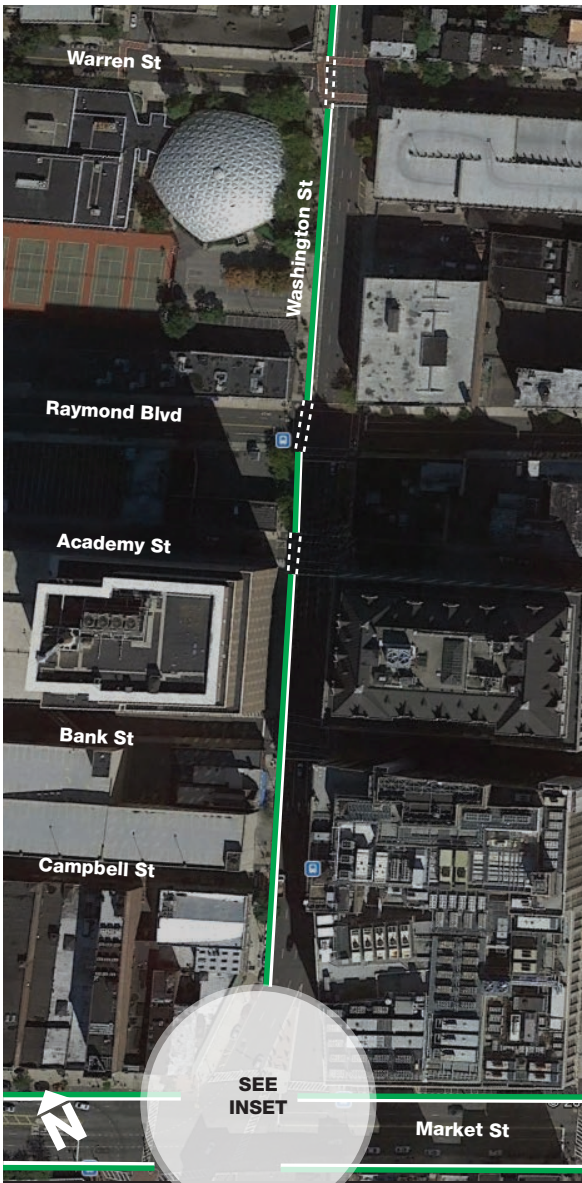


## Proposed Re-Configuration



Net Impact: Install northbound one-way separated bike lane, narrow travel lanes from 12.5' to 10'

## Plan View



**Inset:**  
Intersection Treatment  
of Market Street and  
Washington Street

# Washington Street

Raymond Boulevard to Central Avenue

## Existing Configuration



## Proposed Re-Configuration

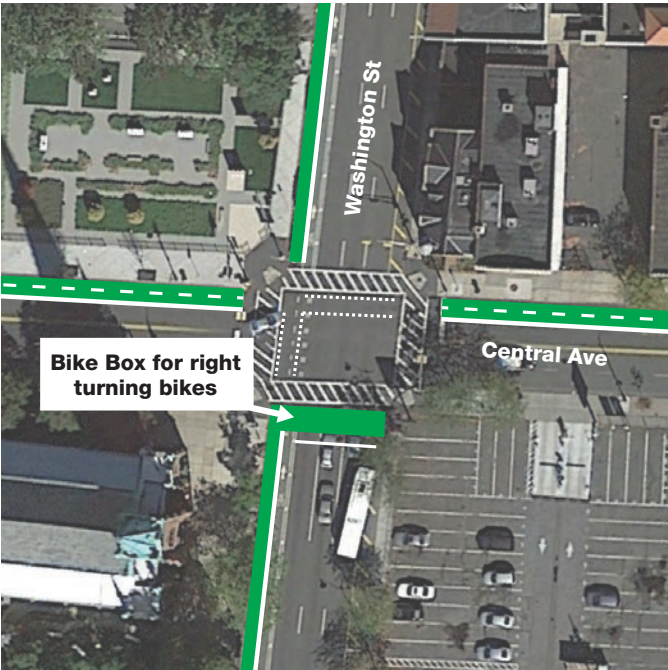


Net Impact: Install northbound one-way separated bike lane, narrow travel lanes from 11' to 10'

## Plan View



**Inset:**  
Intersection Treatment of  
Washington Street and  
Central Avenue

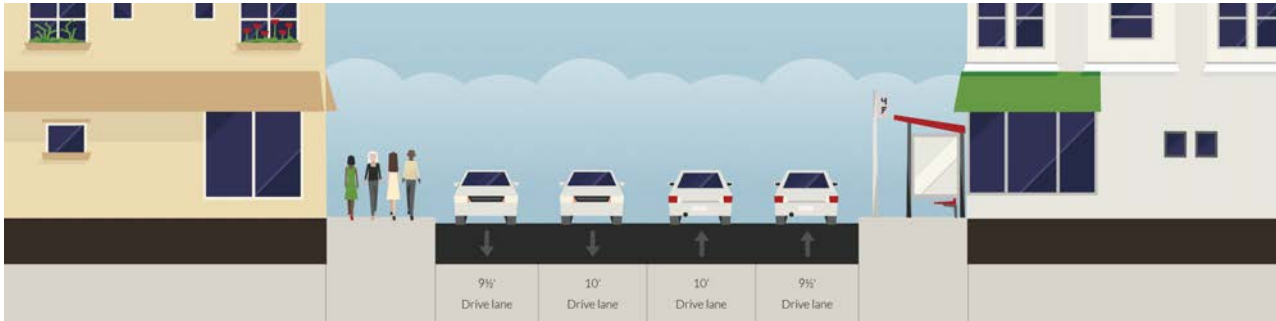




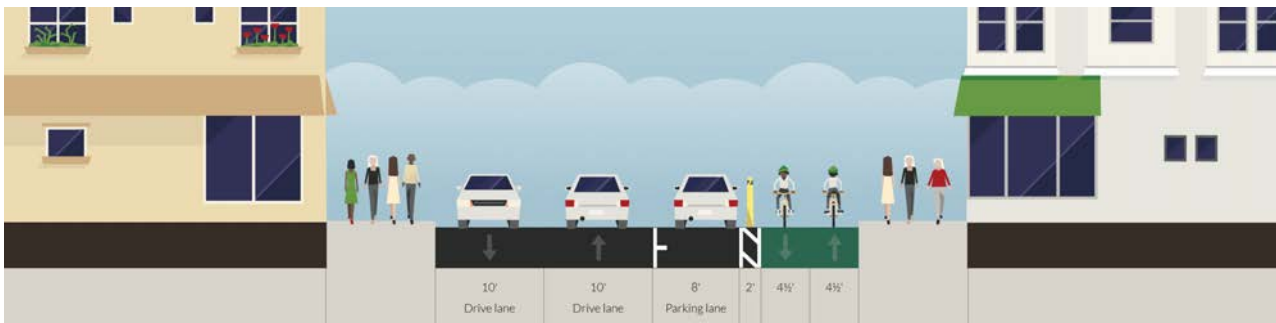
# Central Avenue

## Broad Street to University Avenue

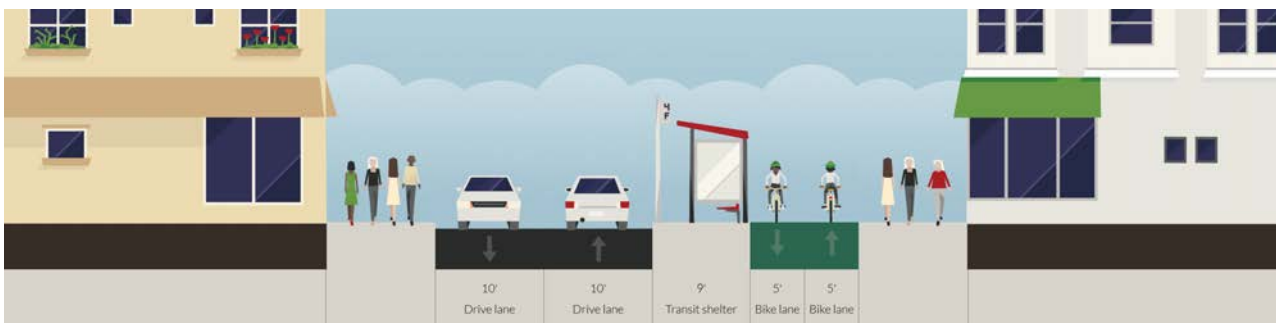
### Existing Configuration



### Proposed Re-Configuration - Typical Cross Section



### Proposed Re-Configuration - At Bus Stop



*Additional information on bus stops and separated bike facilities can be found on page 12*

**Net Impact: Install two-way separated bike lane, remove two travel lanes, add one parking lane (or transit shelter where appropriate)**

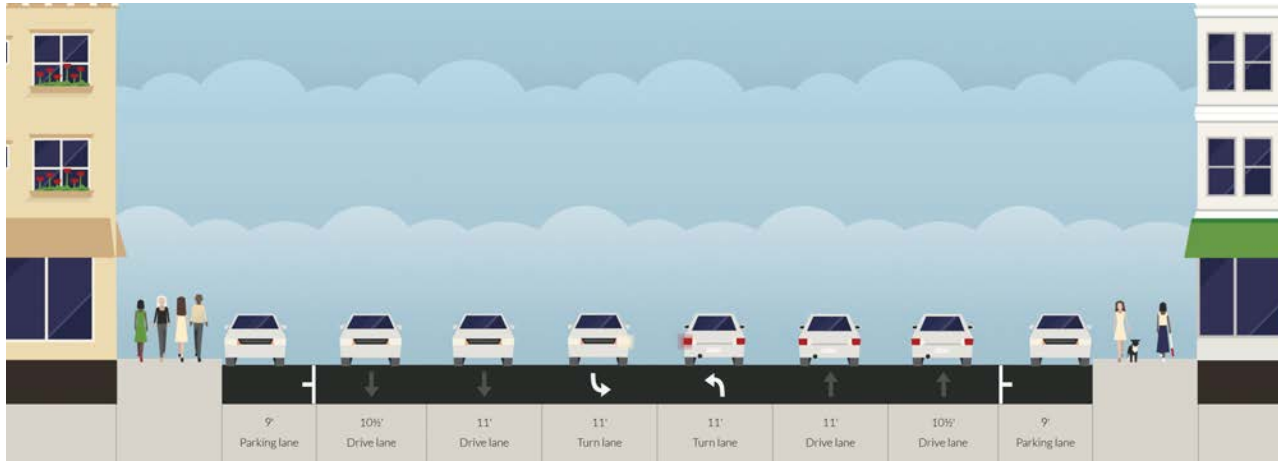
### Plan View



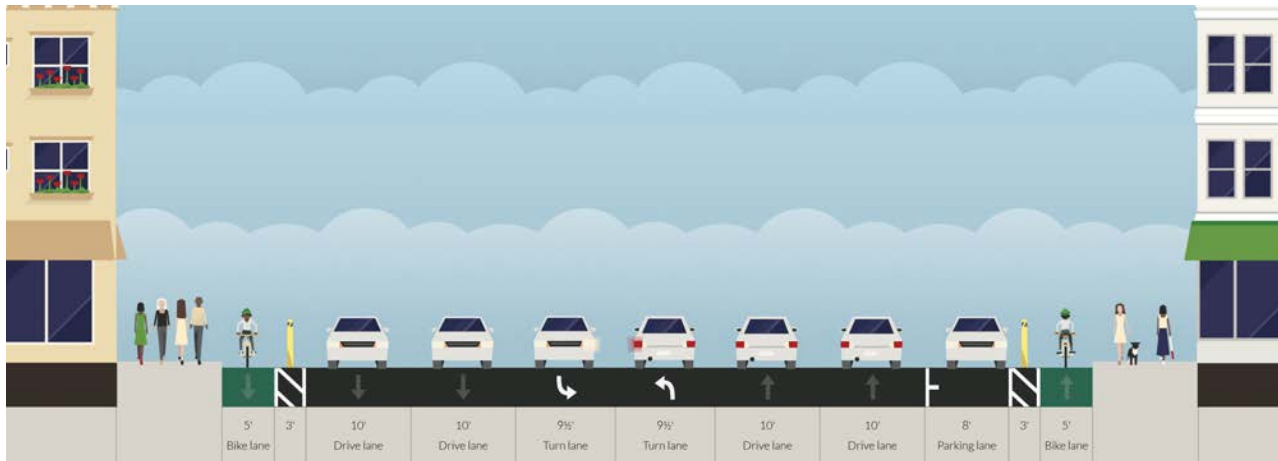
# Market Street

## University Avenue to Washington Street

### Existing Configuration (eastbound)

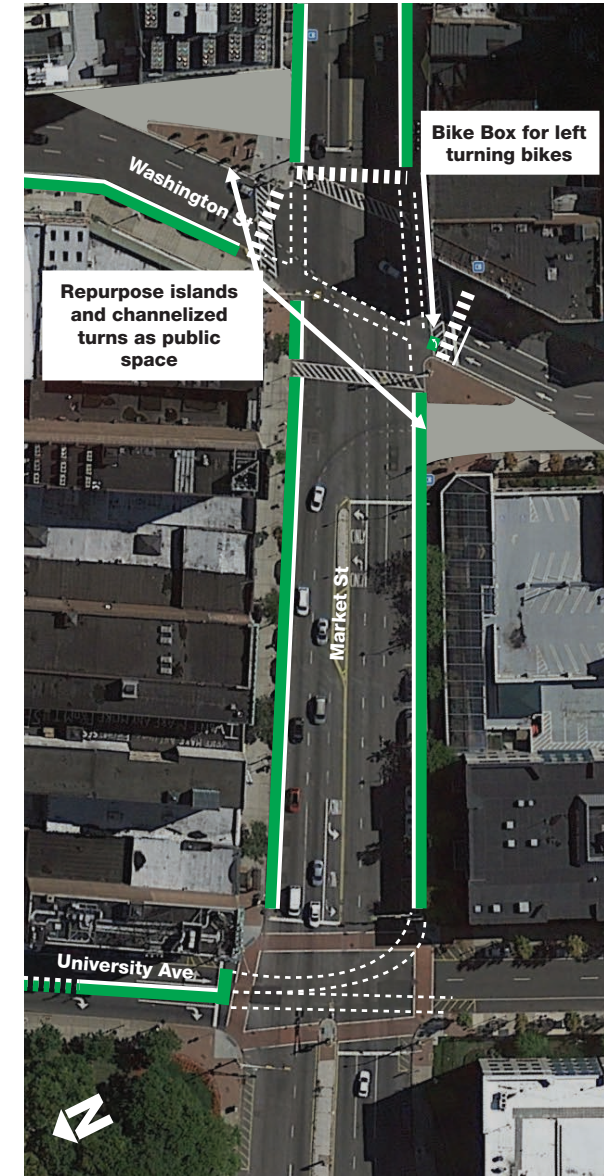


### Proposed Re-Configuration (eastbound)



**Net Impact:** Install one-way separated bike lanes in either direction, remove parking on westbound side

### Plan View

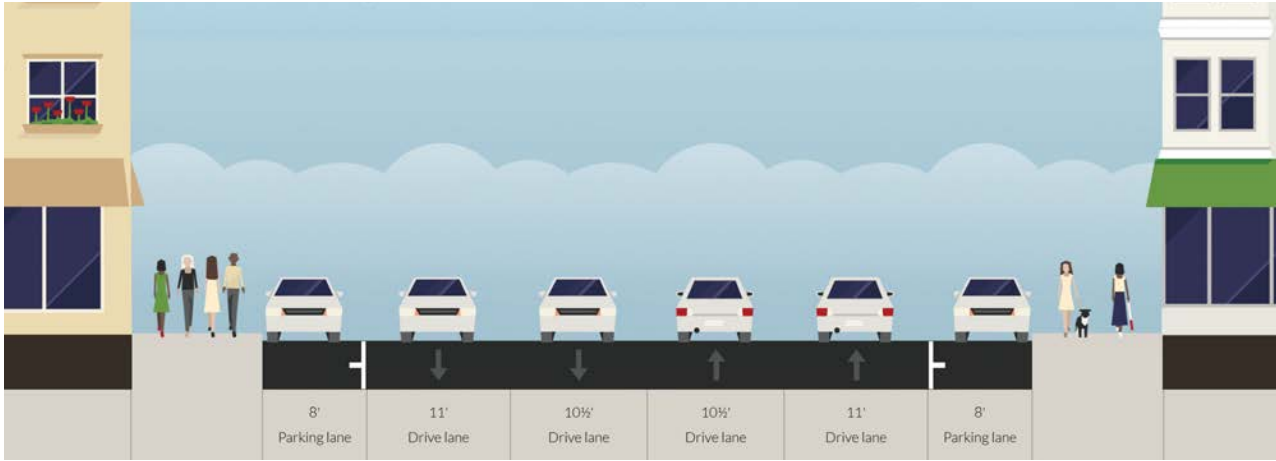




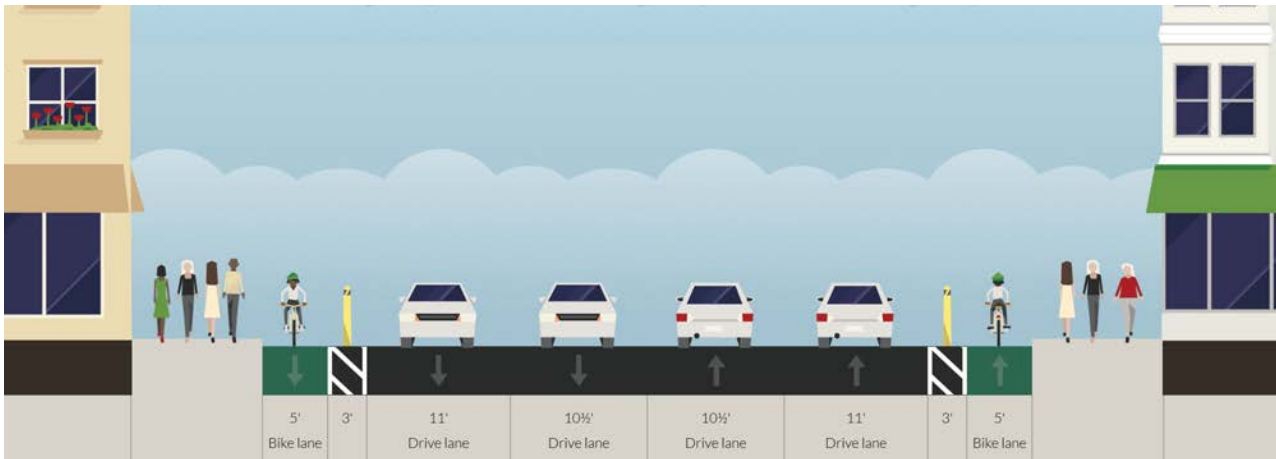
# Market Street

## Washington Street to Mulberry Street

### Existing Configuration



### Proposed Re-Configuration



**Net Impact:** Install one-way separated bike lanes in either direction, remove parking in both directions

### Plan View



# Market Street

## Mulberry Street to Penn Station

### Existing Configuration



### Proposed Re-Configuration

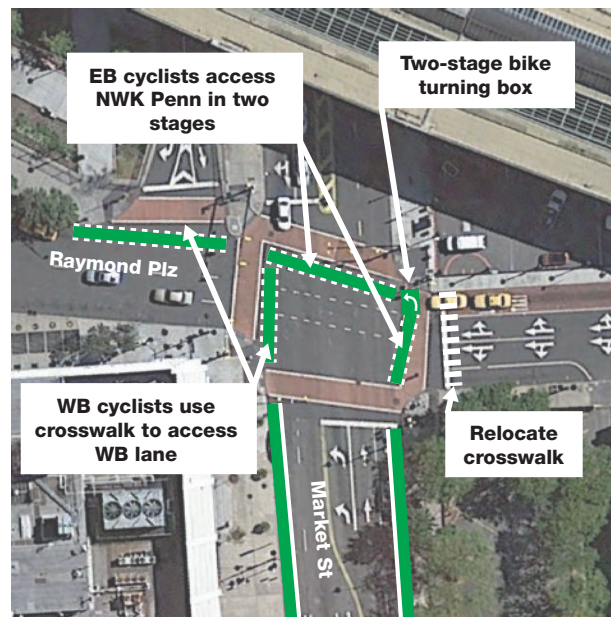


### Separated bike lanes and bus stops:

Where a bus stop is adjacent to a separated bike lane (as would be the case on Market Street), the bike lane should always be raised to be flush with the curb, and striping should indicate priority for pedestrians boarding the bus (through gore striping, dashed line, signage, and/or other methods). Where possible, provide a transit shelter on the travel lane side of the bike lane (as shown on page 9). If there is not enough room for this configuration, provide bus accommodations on the sidewalk. Sample designs can be found in the FHWA *Separated Bike Lane Planning and Design Guide*.

### Inset:

**Connecting Market Street  
to Newark Penn Station**



**Net Impact: Install one-way  
separated bike lanes in either  
direction, remove parking in both  
directions**

### Plan View





# Proposed Routes

## Secondary Route:

### Concept:

A two-way separated bike lane from Washinton Street to the Passaic River waterfront and Newark Penn Station

### Background:

The City of Newark has existing plans for bicycle and pedestrian improvements between Broad Street and the waterfront, via Center Street. A two-way separated bike lane should be installed along Central Avenue to connect the primary facilities on University Avenue and Washington Avenue to Broad Street.

### Roadway Impacts:

- Reduce travel lanes along Central Avenue from 4 to 2
- Install 2-way separated bike facility along westbound travel lane
- Add parking lane in westbound direction between travel lane and bike facility
- Construct floating bus shelters in westbound direction using width from parking lane

**For Central Avenue cross section, see page 9**

