



# NACTO

## Urban Bikeway Design Guide

April 2011 Edition

### Annotated Plans



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The purpose of the NACTO Urban Bikeway Design Guide (part of the Cities for Cycling initiative) is to provide cities with state-of-the-practice solutions that can help create complete streets that are safe and enjoyable for bicyclists.

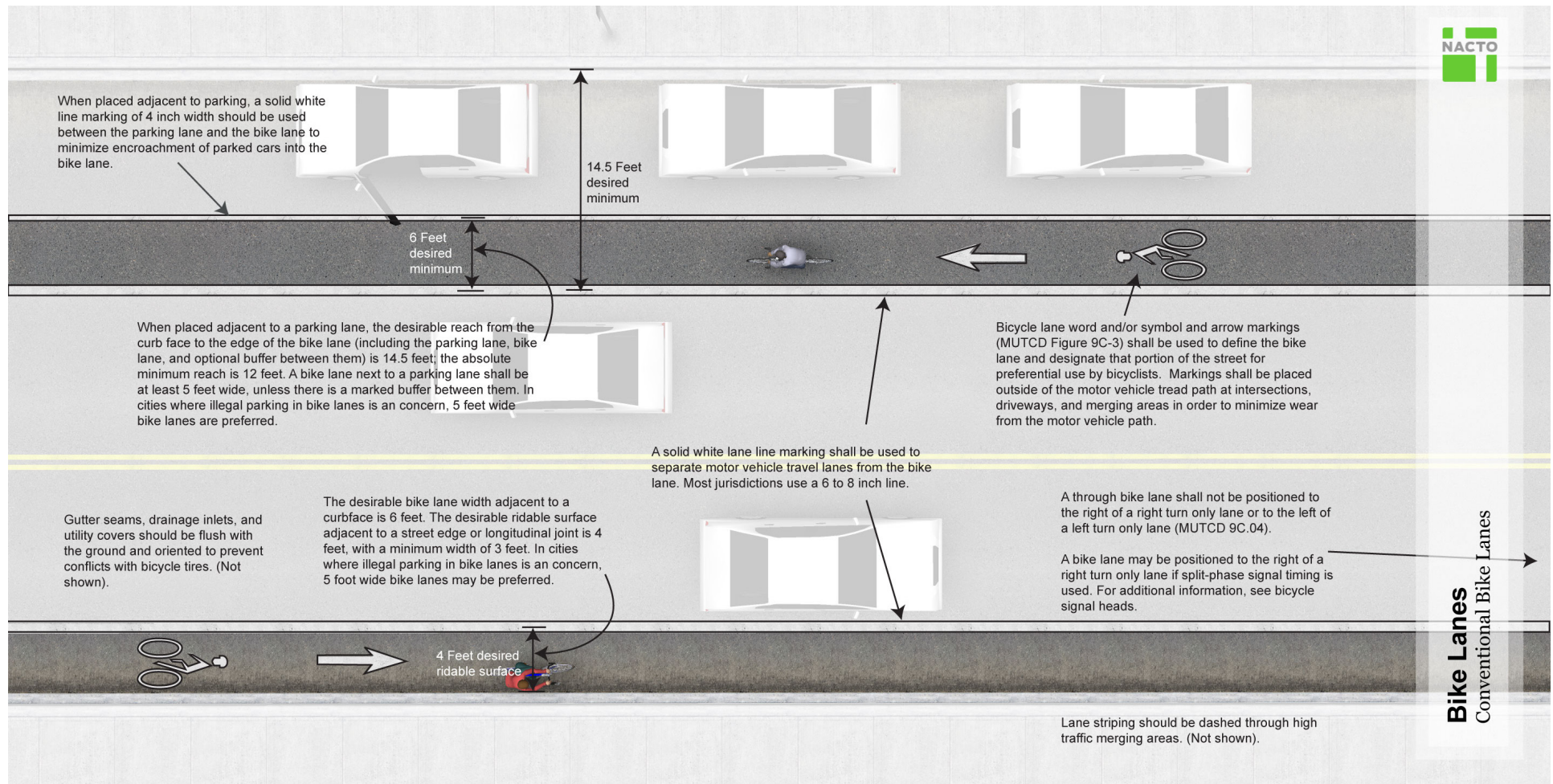
This document includes printable versions of the annotated plans from the complete Urban Bikeway Design Guide document.

## View more online:

For more details, information, resources, case studies, and photographs, please visit [www.c4cguide.org](http://www.c4cguide.org). The online platform of the NACTO Urban Bikeway Design Guide reflects the most current, up-to-date, available design guidance. It will be frequently revised, updated, and expanded to reflect the state of the practice in bicycle facility design.



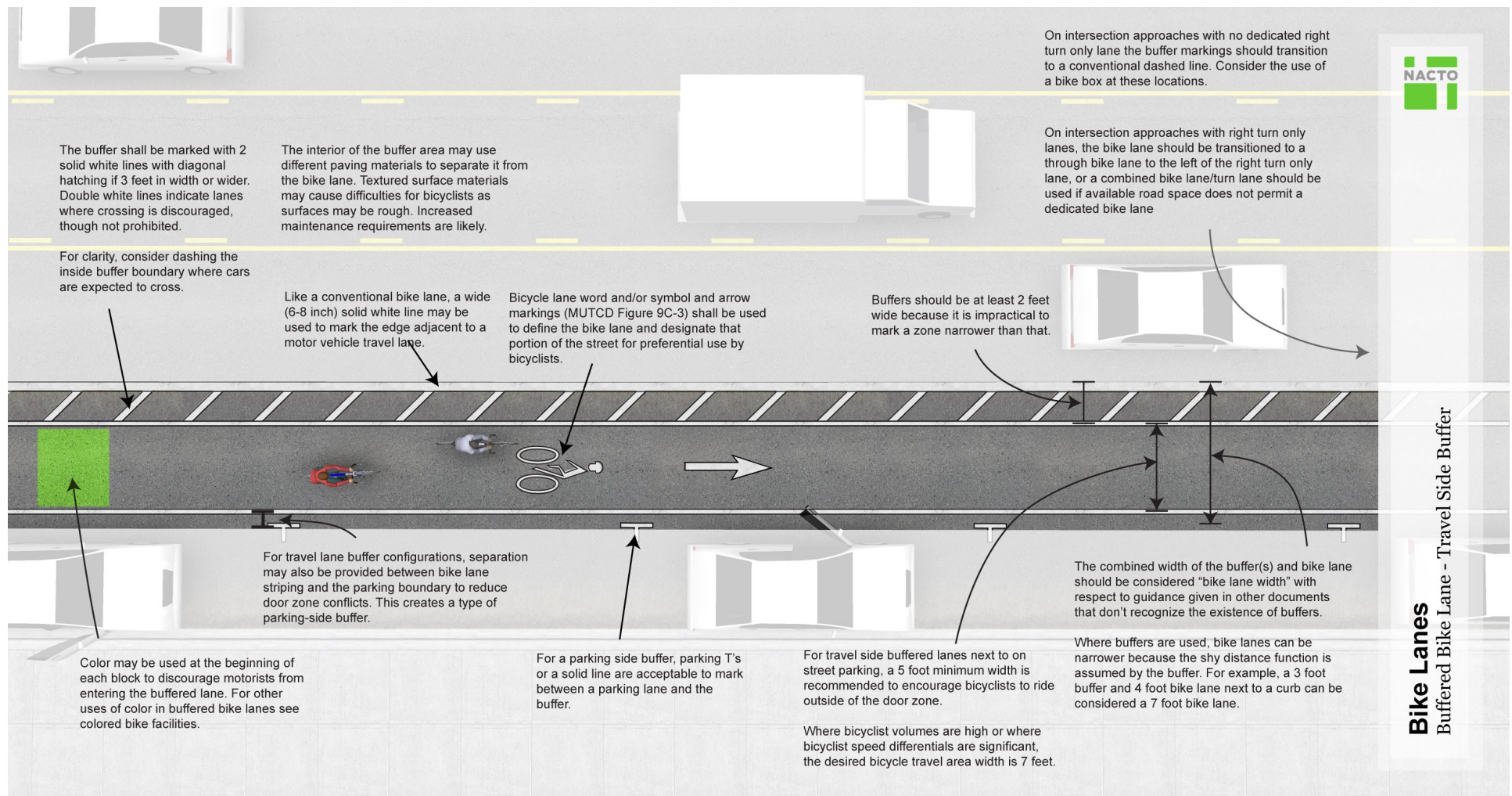
## Bike Lanes: Conventional Bike Lanes



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/Conventional-Bike-Lanes\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/Conventional-Bike-Lanes_Annotation.jpg)



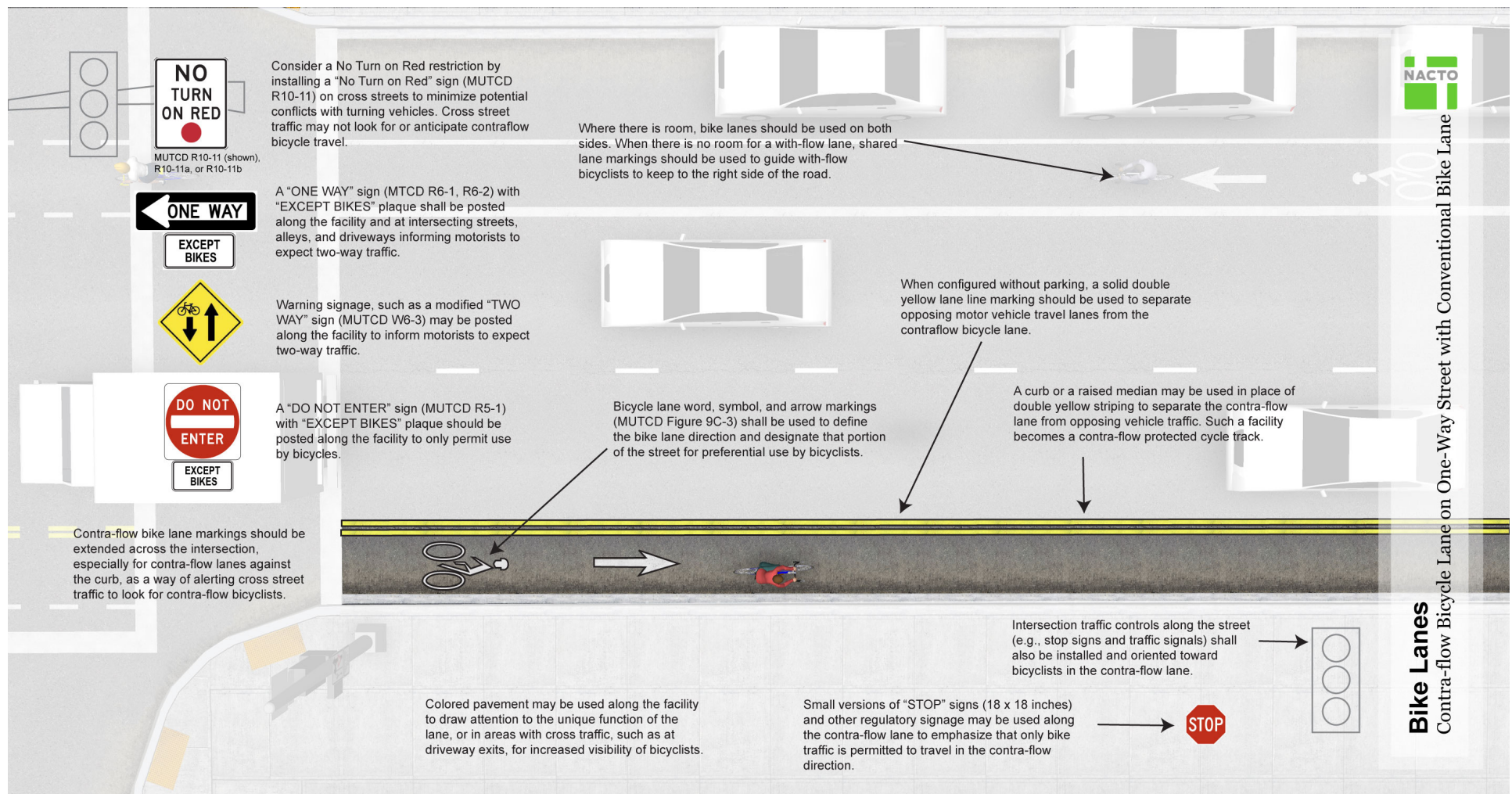
## Bike Lanes: Buffered Bike Lane



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/Buffered-Bike-Lane\\_Annotation1.jpg](http://nacto.org/wp-content/uploads/2010/08/Buffered-Bike-Lane_Annotation1.jpg)

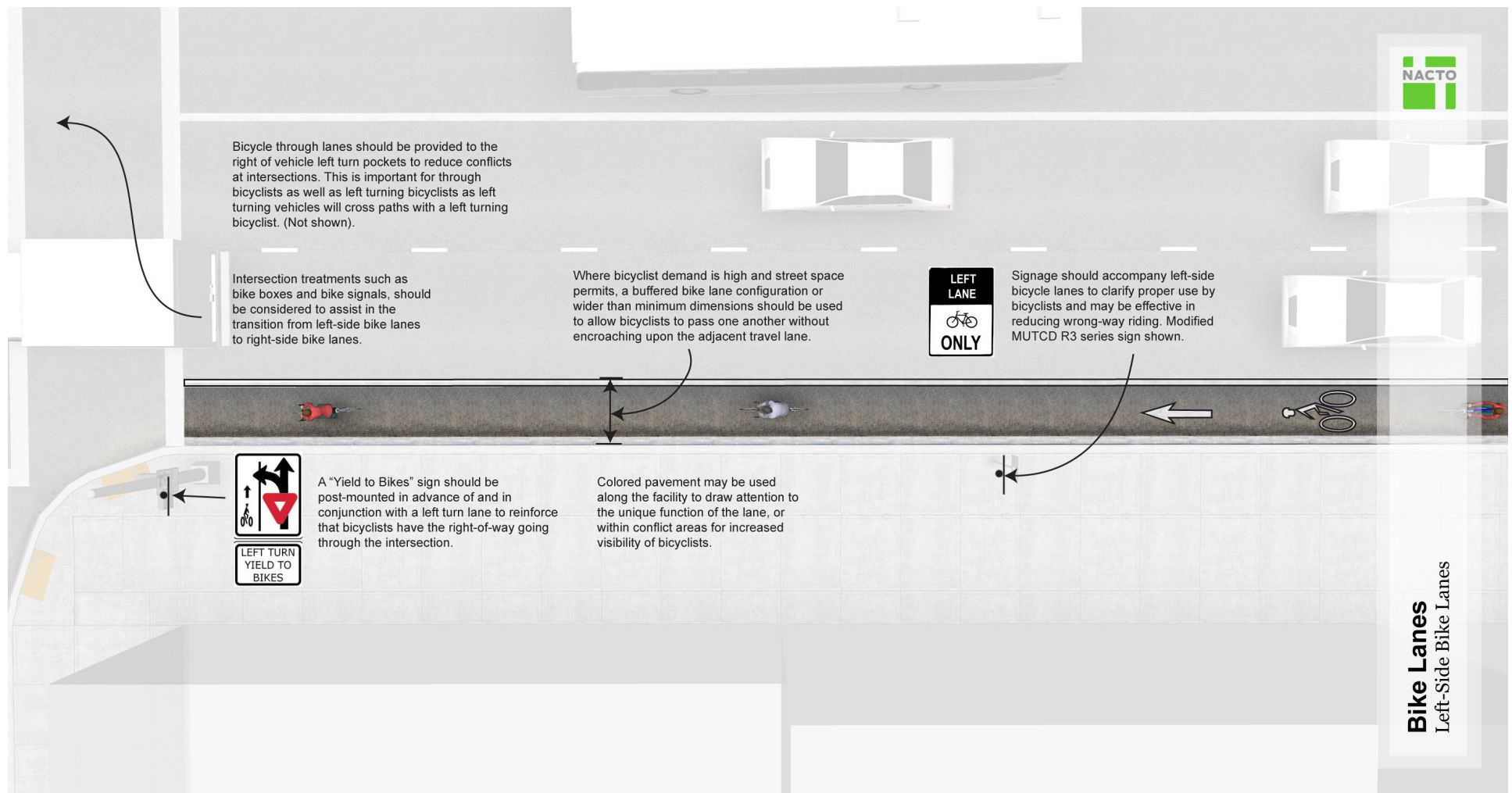


## Bike Lanes: Contra-Flow



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/ContraFlow\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/ContraFlow_Annotated.jpg)

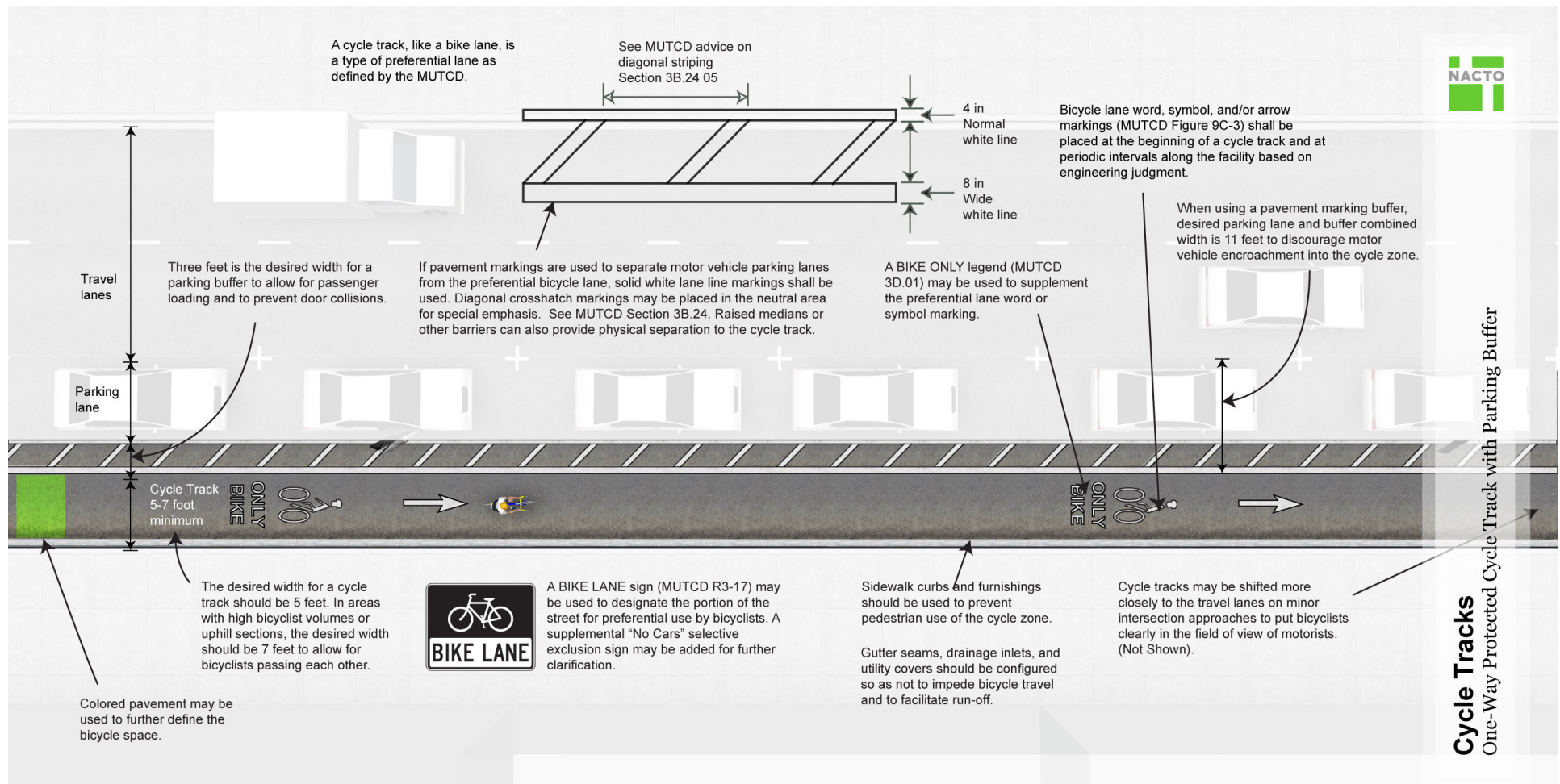
## Bike Lanes: Left-Side Bike Lane



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/LeftSideBikeLanes\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/LeftSideBikeLanes_Annotated.jpg)



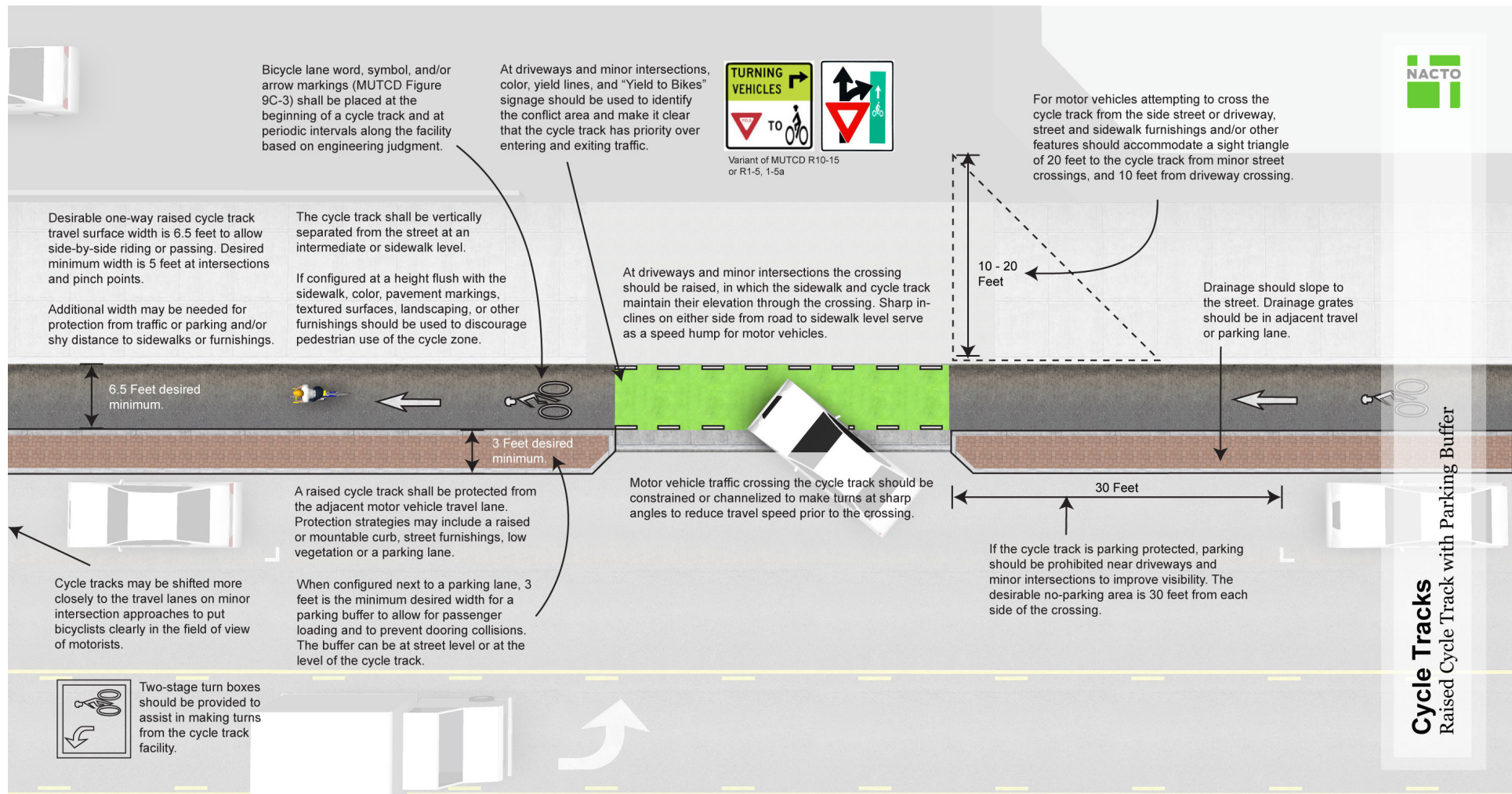
## Cycle Tracks: One-Way Protected



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/CycleTrack\\_Segment\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/CycleTrack_Segment_Annotated.jpg)

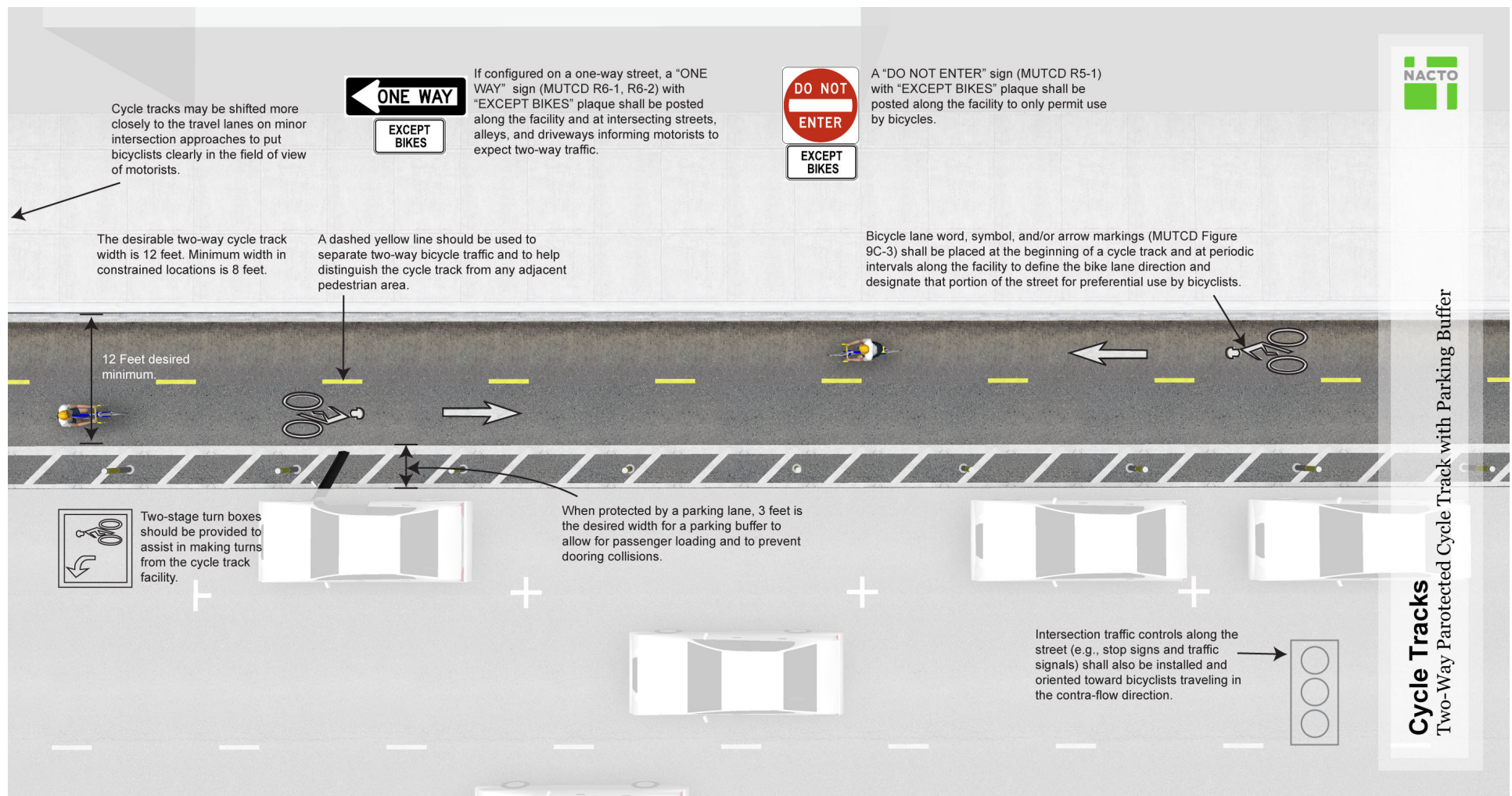


## Cycle Tracks: Raised



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/Raised\\_Separated\\_CycleTracks\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/Raised_Separated_CycleTracks_Annotation.jpg)

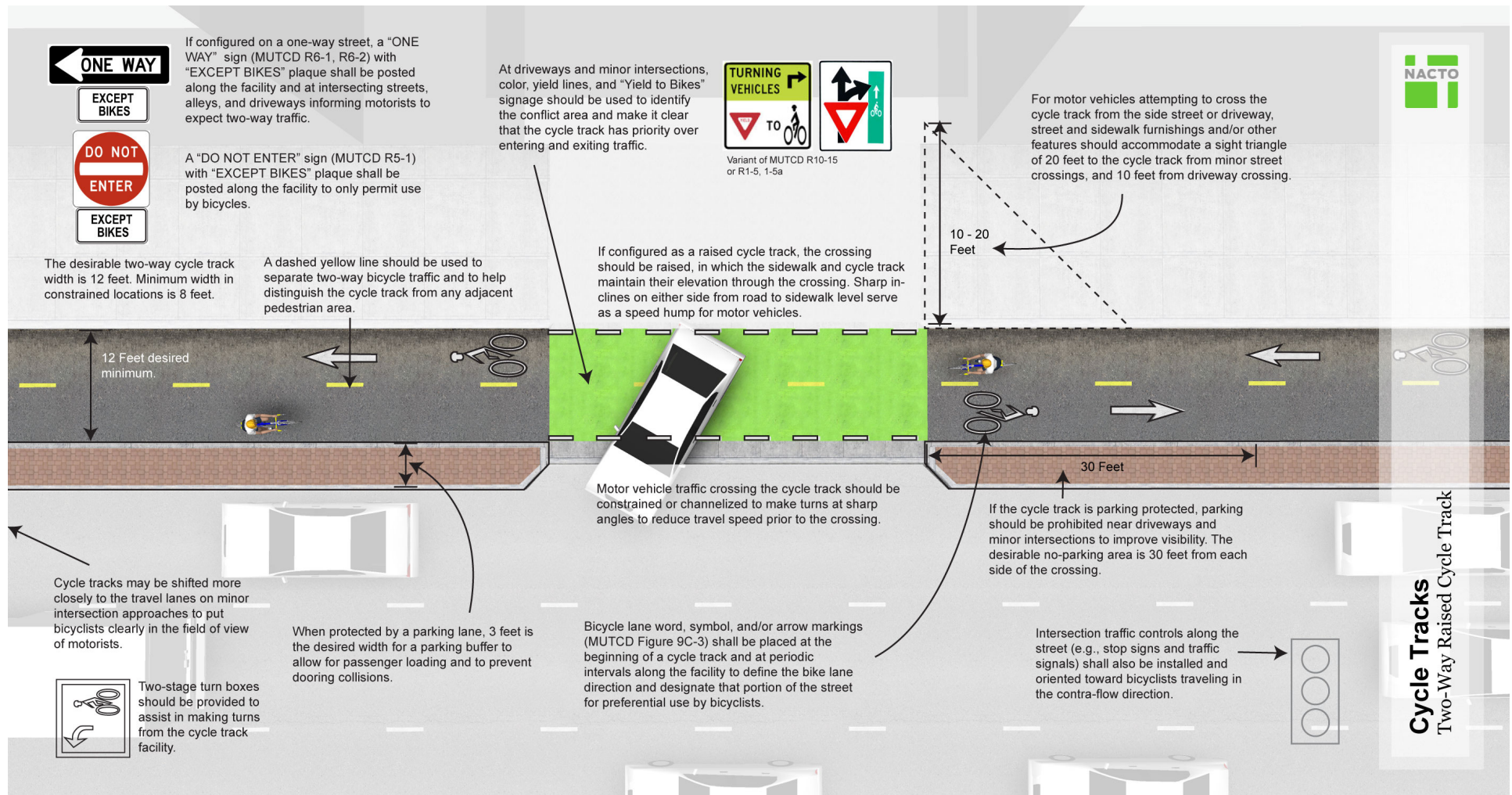
## Cycle Tracks: Two-Way Protected



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/CycleTrack\\_TwoWay\\_Protected\\_Plan\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/CycleTrack_TwoWay_Protected_Plan_Annotation.jpg)



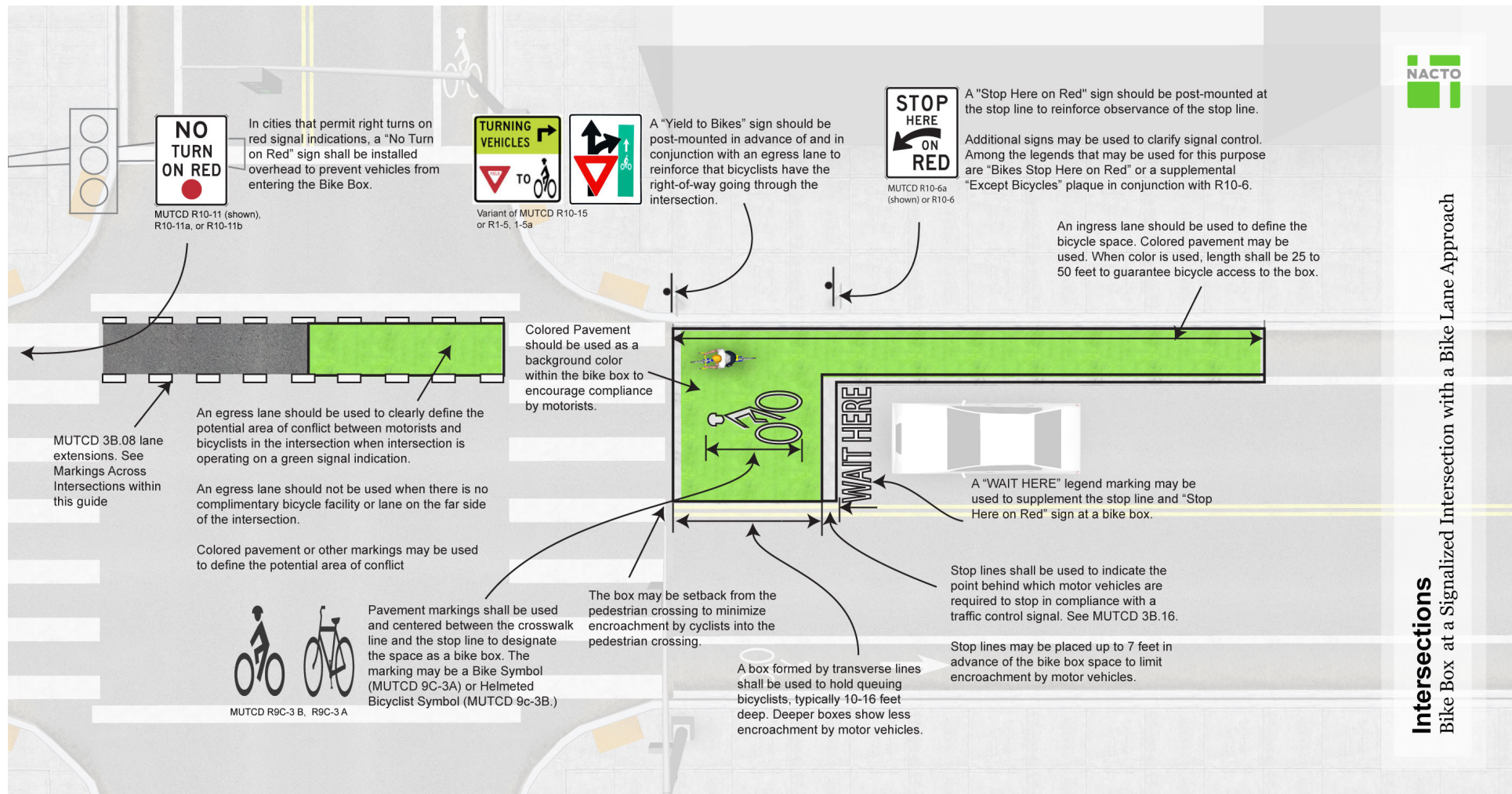
## Cycle Tracks: Two-Way Raised



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/CycleTrack\\_TwoWay\\_Raised\\_Plan\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/CycleTrack_TwoWay_Raised_Plan_Annotation.jpg)

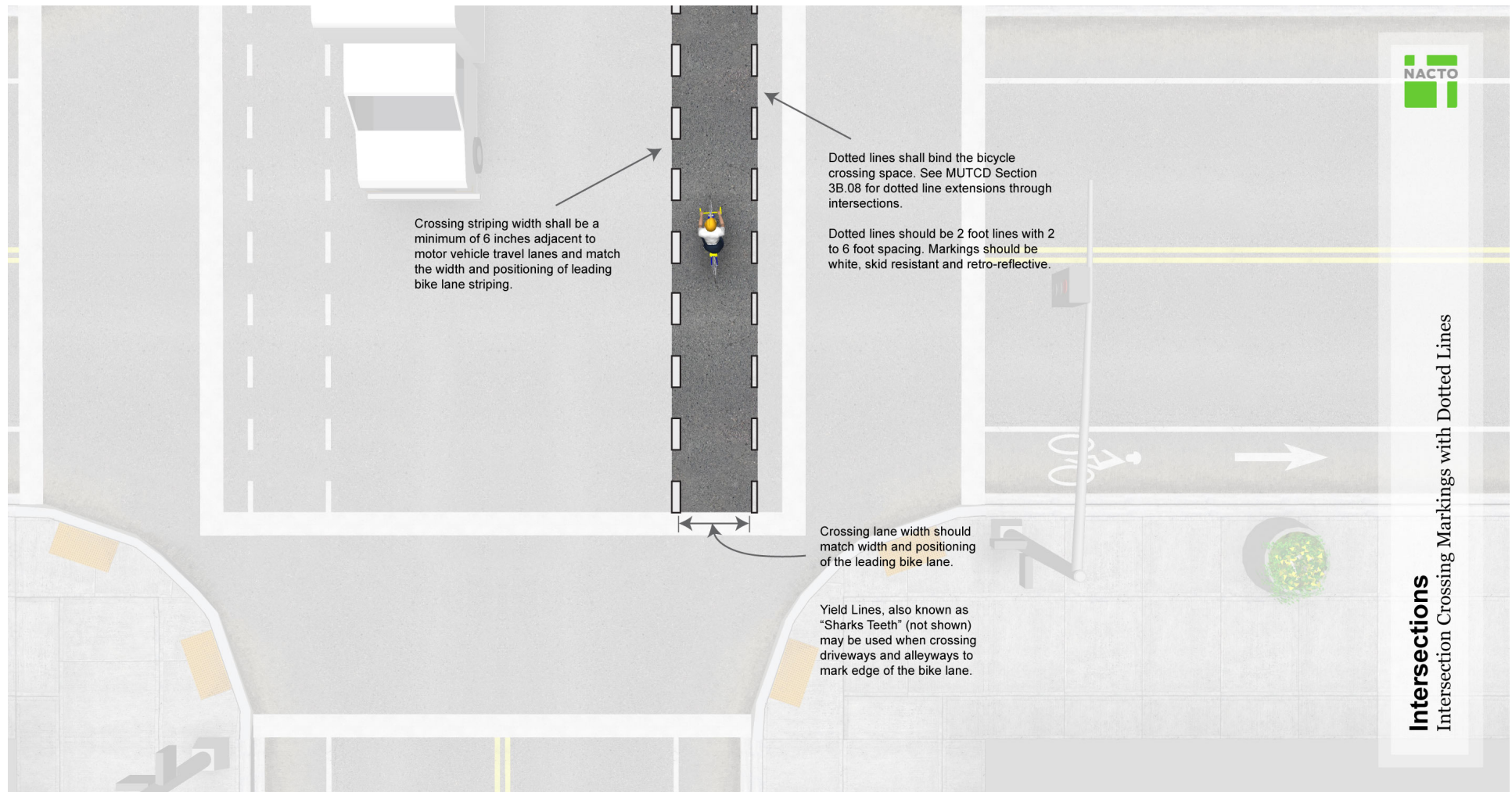


## Intersections: Bike Box



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/BikeBox\\_Plan\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/BikeBox_Plan_Annotated.jpg)

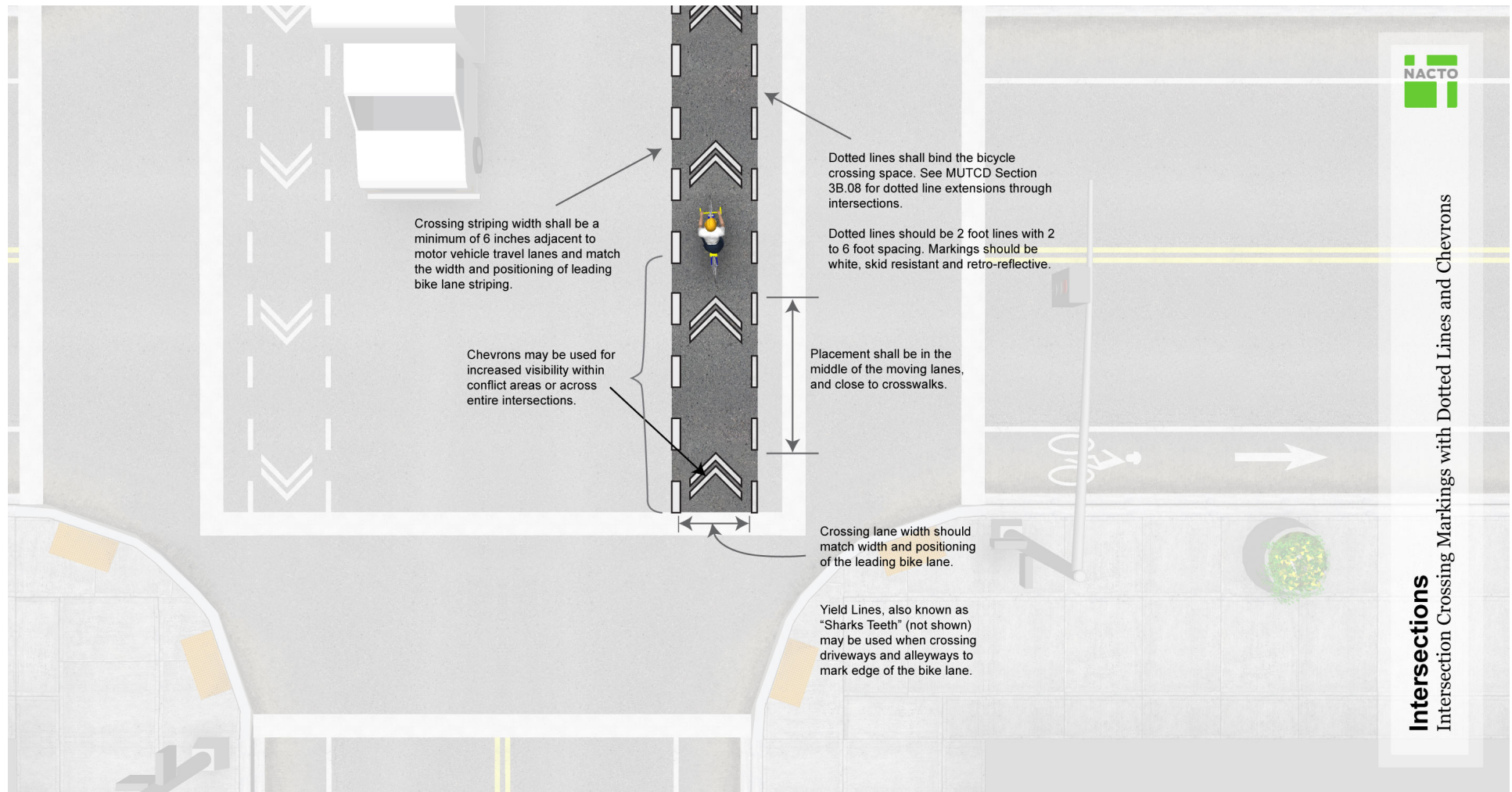
## Intersections: Intersection Crossing Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking\\_OptionA\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking_OptionA_Annotated.jpg)



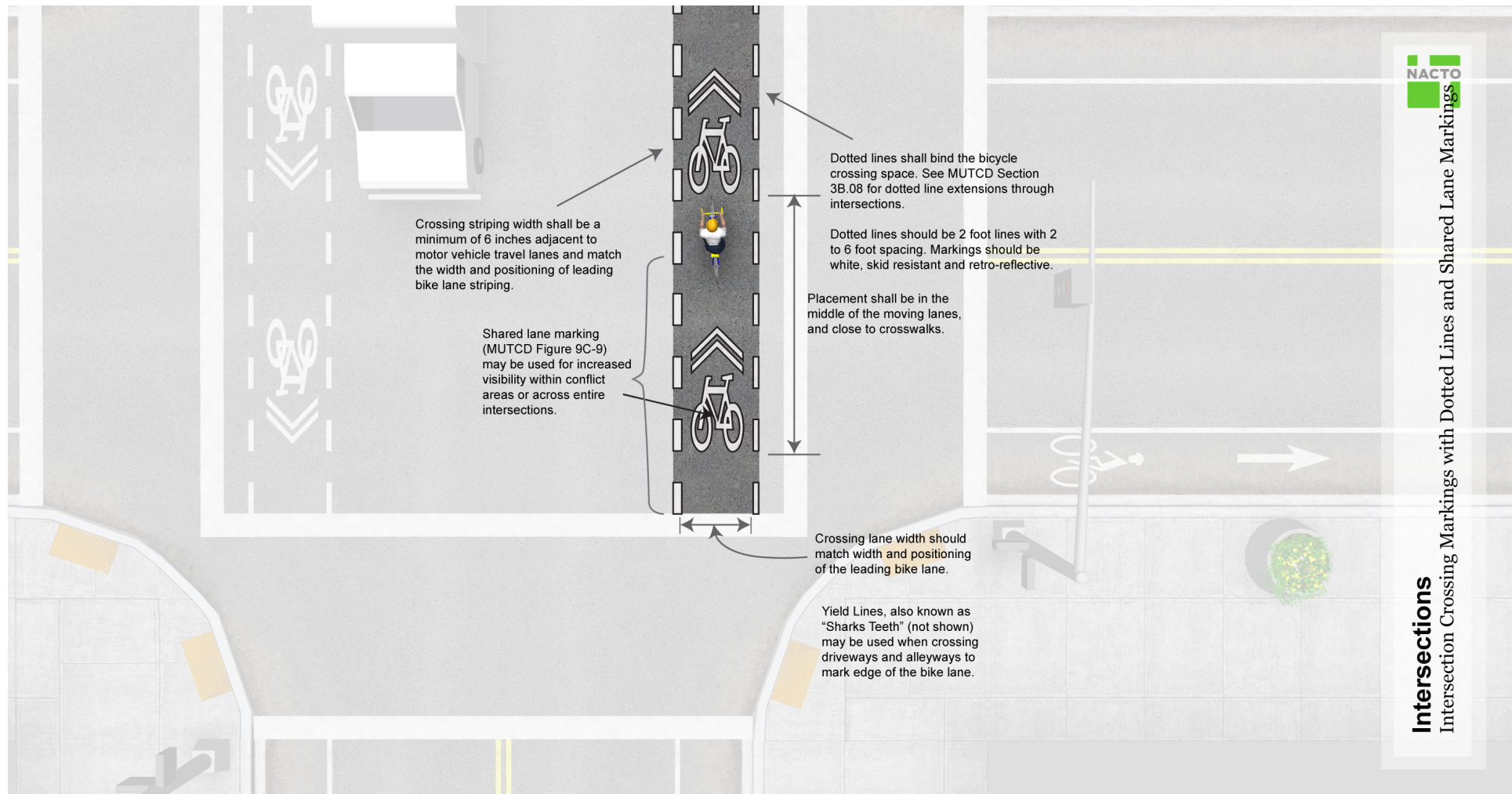
## Intersections: Intersection Crossing Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking\\_OptionB\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking_OptionB_Annotated.jpg)



## Intersections: Intersection Crossing Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking\\_OptionC\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking_OptionC_Annotated.jpg)

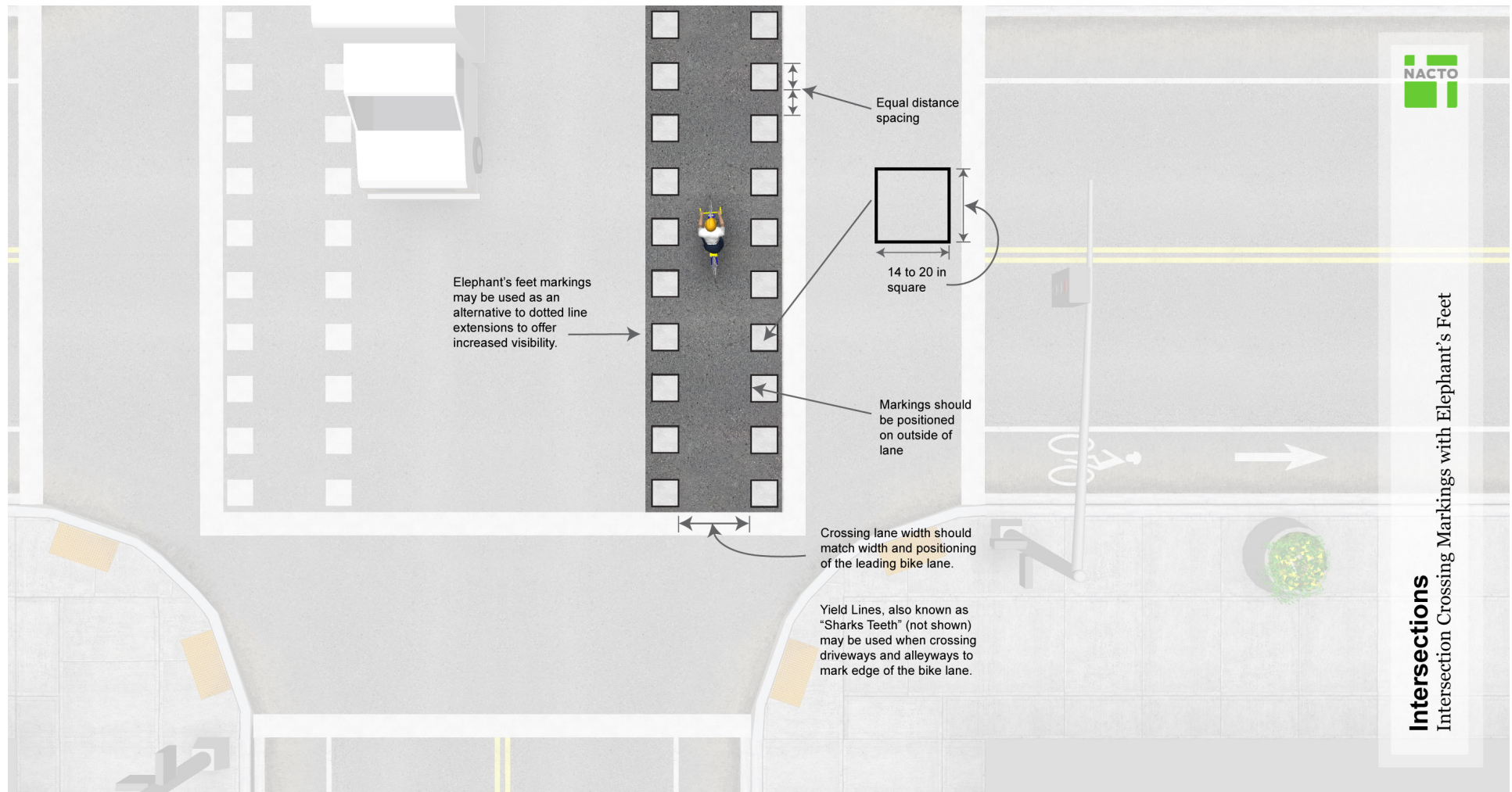
## Intersections: Intersection Crossing Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking\\_OptionD\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking_OptionD_Annotated.jpg)



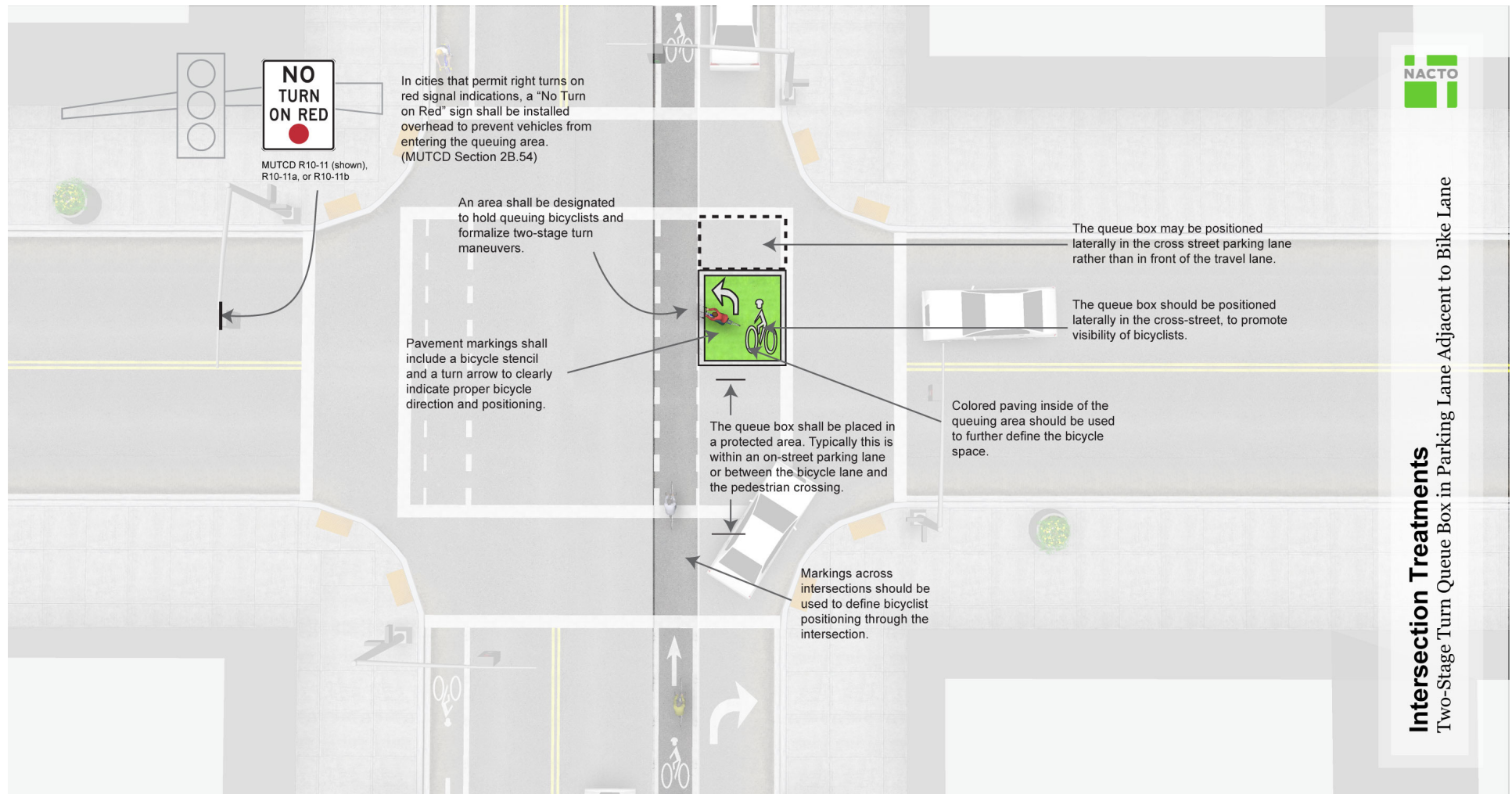
## Intersections: Intersection Crossing Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking\\_OptionE\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/IntersectionMarking_OptionE_Annotated.jpg)

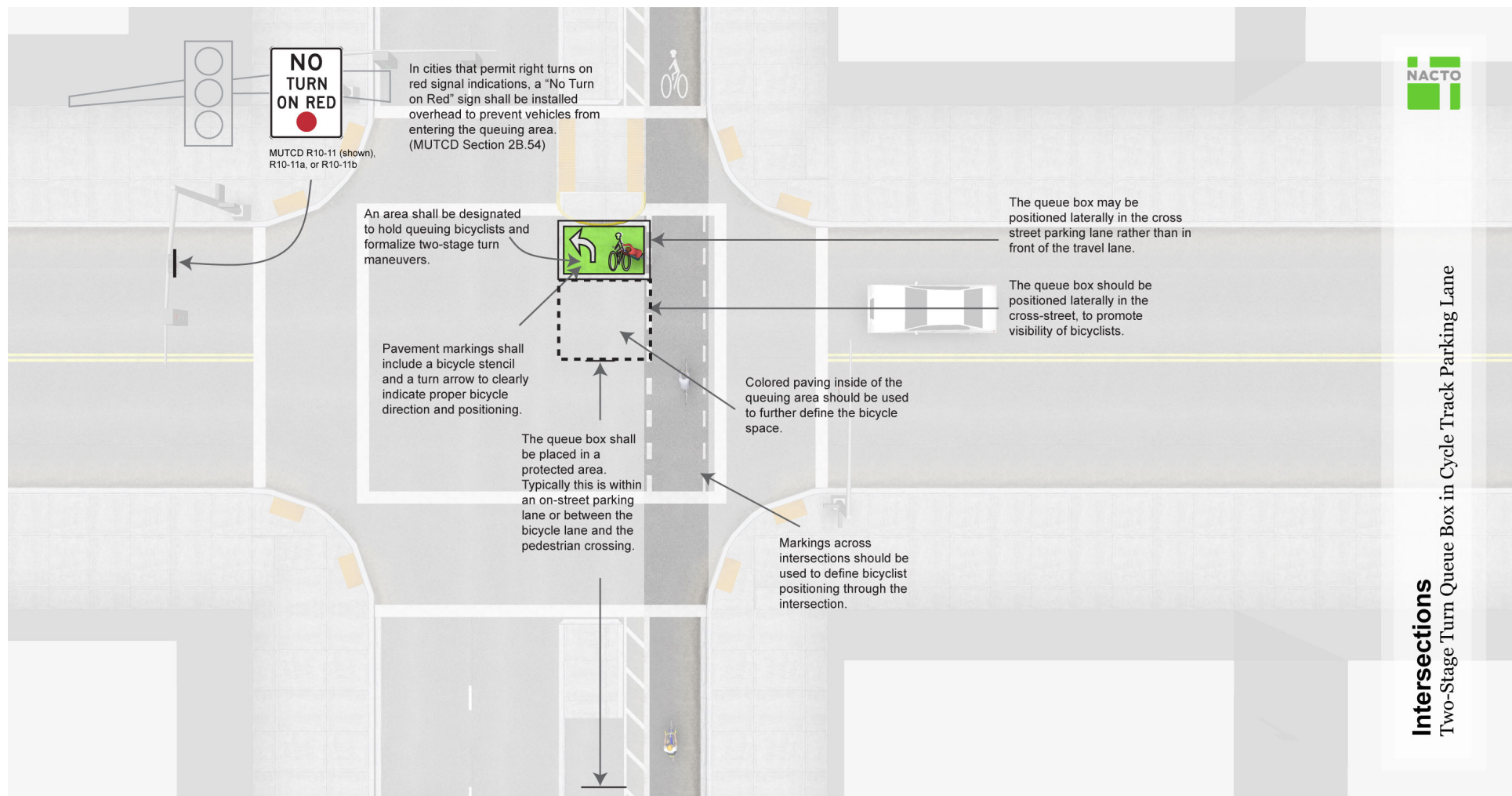


## Intersections: Two-Stage Turn Queue Box



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn\\_CycleTrackParking\\_Reference\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn_CycleTrackParking_Reference_Annotated.jpg)

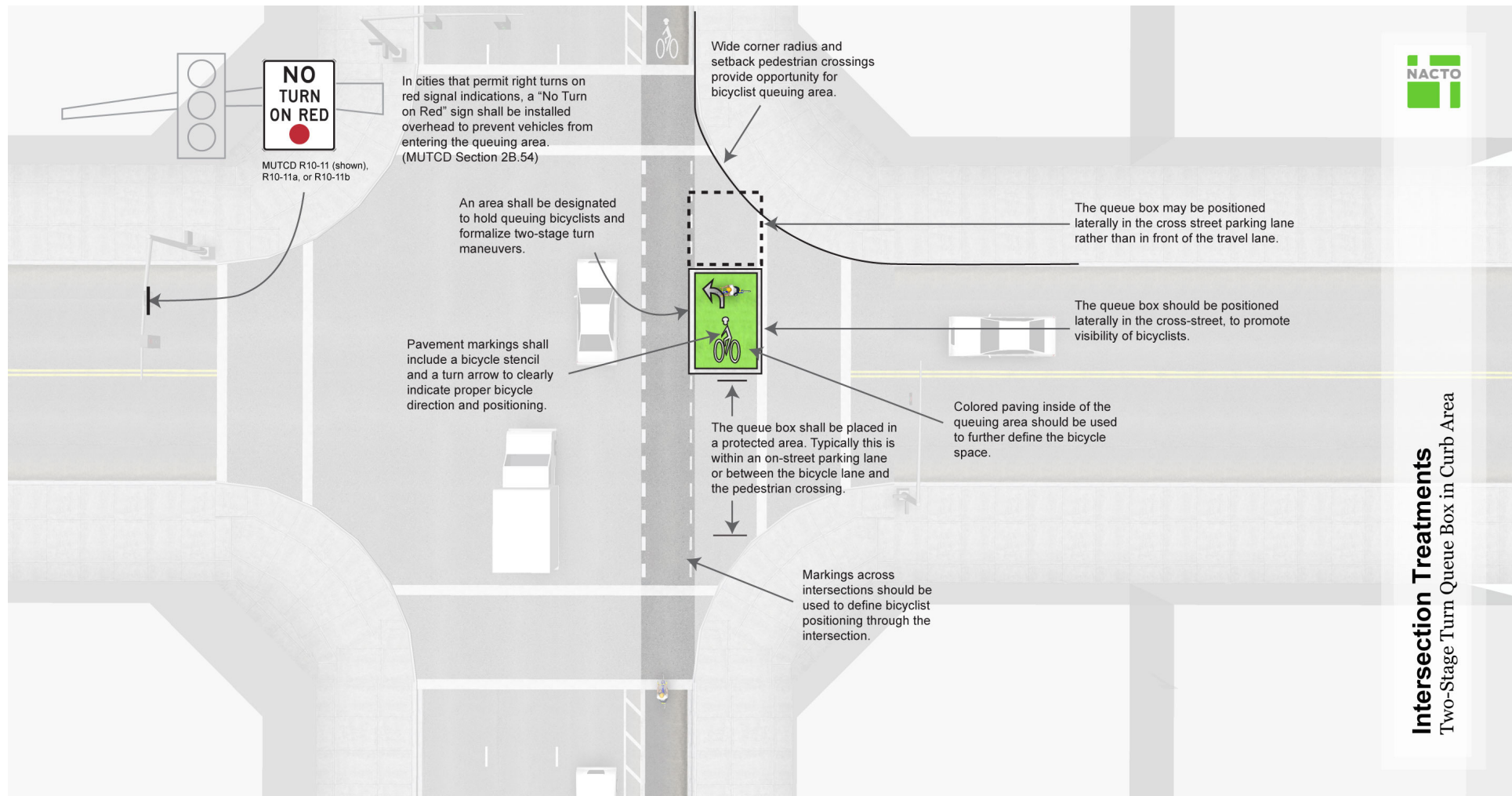
## Intersections: Two-Stage Turn Queue Box



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn\\_Front\\_Reference\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn_Front_Reference_Annotated.jpg)

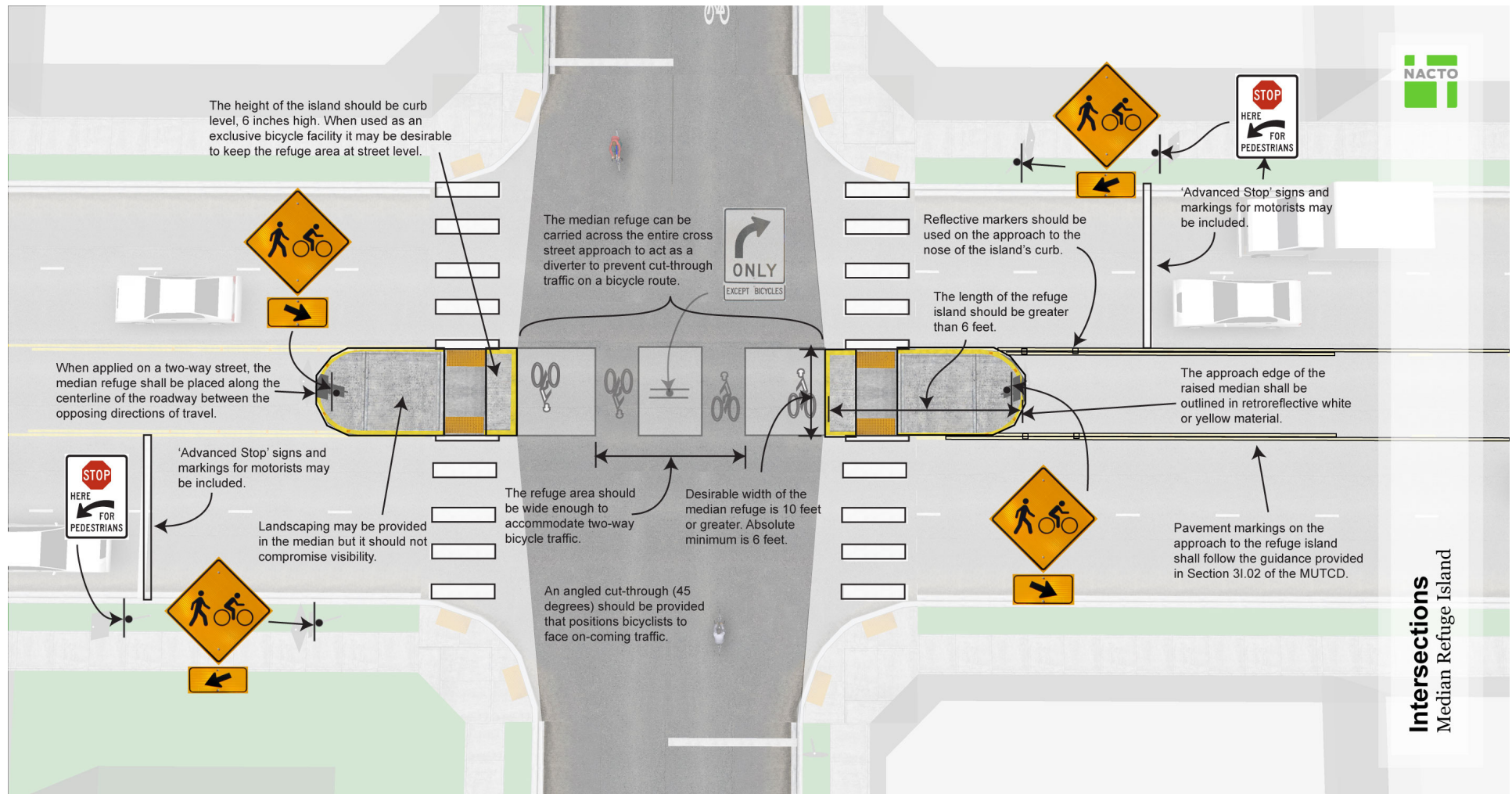


## Intersections: Two-Stage Turn Queue Box



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn\\_BikeLaneParking\\_Reference\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn_BikeLaneParking_Reference_Annotated.jpg)

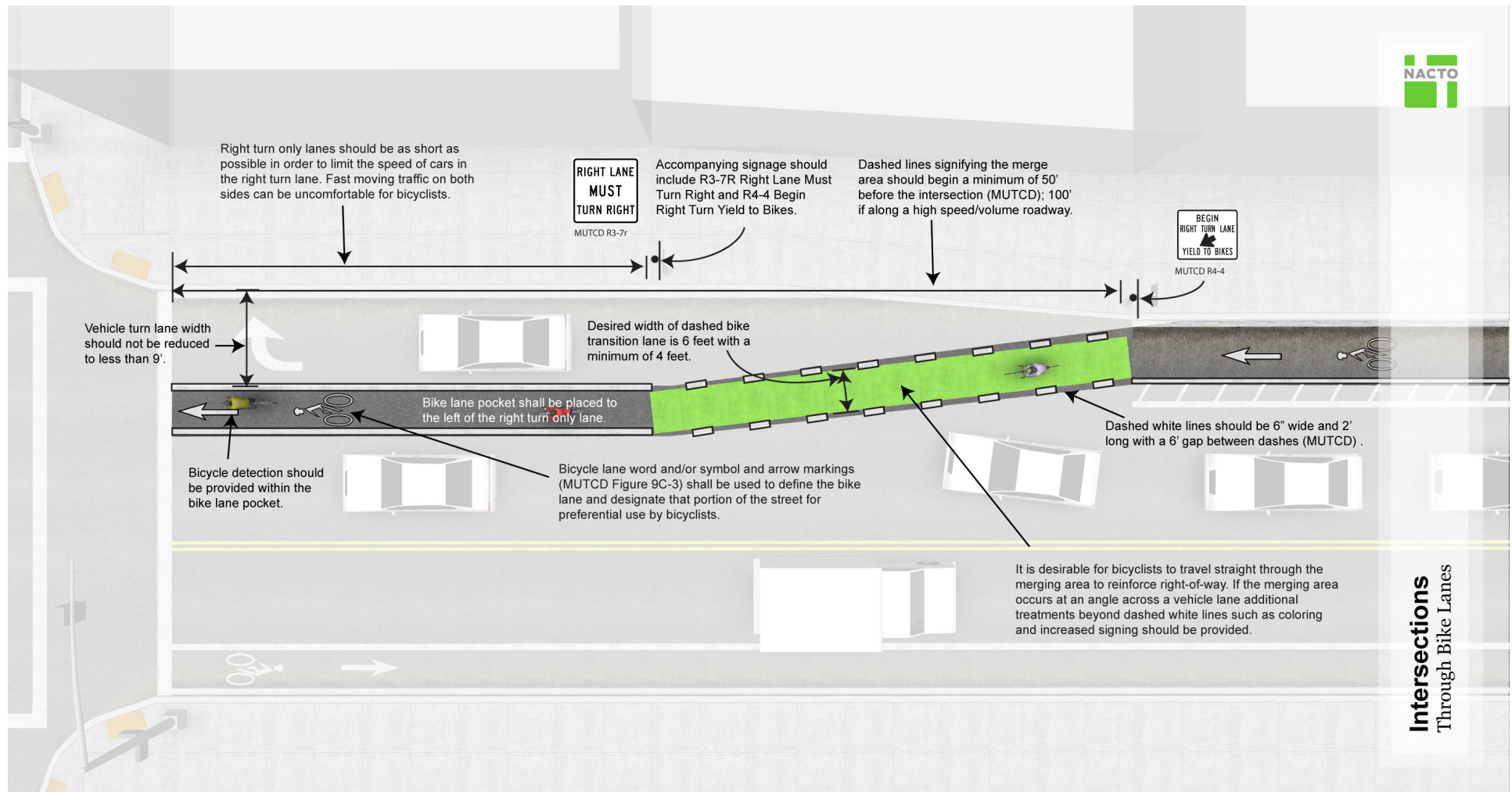
## Intersections: Median Refuge Island



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/MedianRefugeIsland\\_Diverter\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/MedianRefugeIsland_Diverter_Annotated.jpg)



## Intersections: Through Bike Lanes



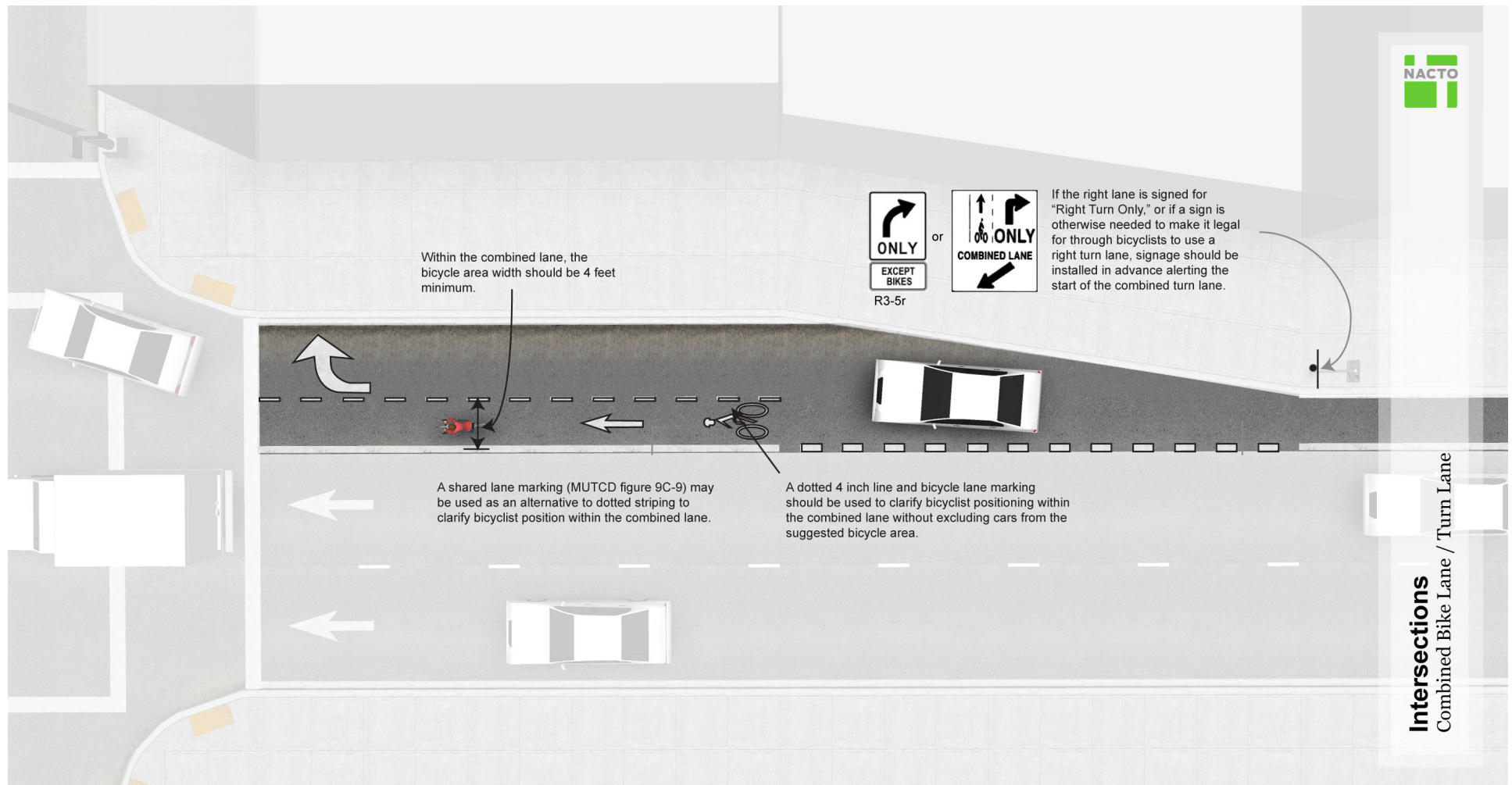
**Intersections**  
Through Bike Lanes

View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/ThroughBikeLanes\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/ThroughBikeLanes_Annotated.jpg)



National Association of  
City Transportation Officials

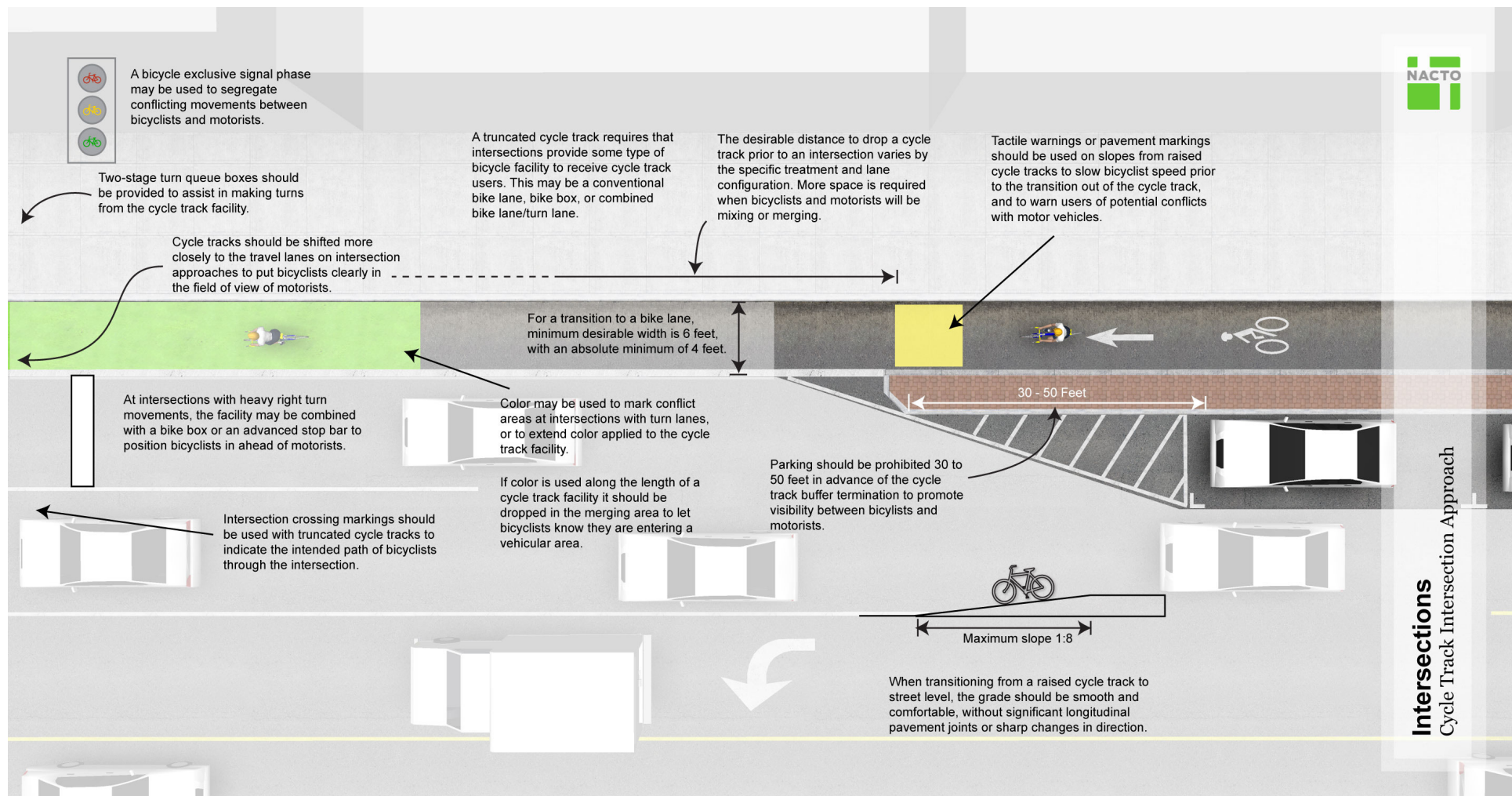
## Intersections: Combined Bike Lane/Turn Lane



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/CombinedRightTurnLane\\_Plan\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/CombinedRightTurnLane_Plan_Annotated.jpg)

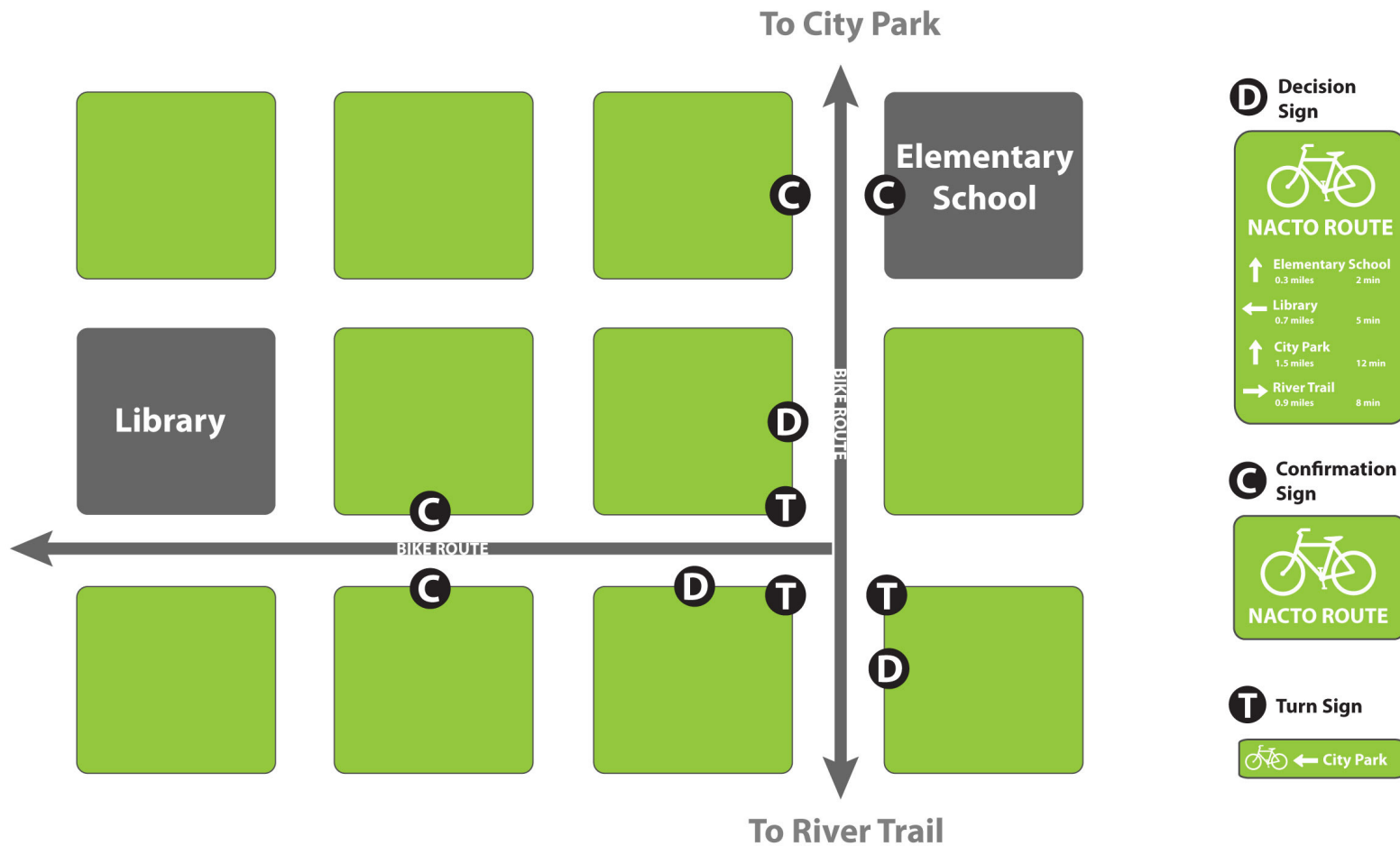


## Intersections: Cycle Track Intersection Approach



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/Cycle-Track-Intersection-Approach\\_Plan\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/Cycle-Track-Intersection-Approach_Plan_Annotation.jpg)

## Signing and Marking: Bike Route Wayfinding Signage System

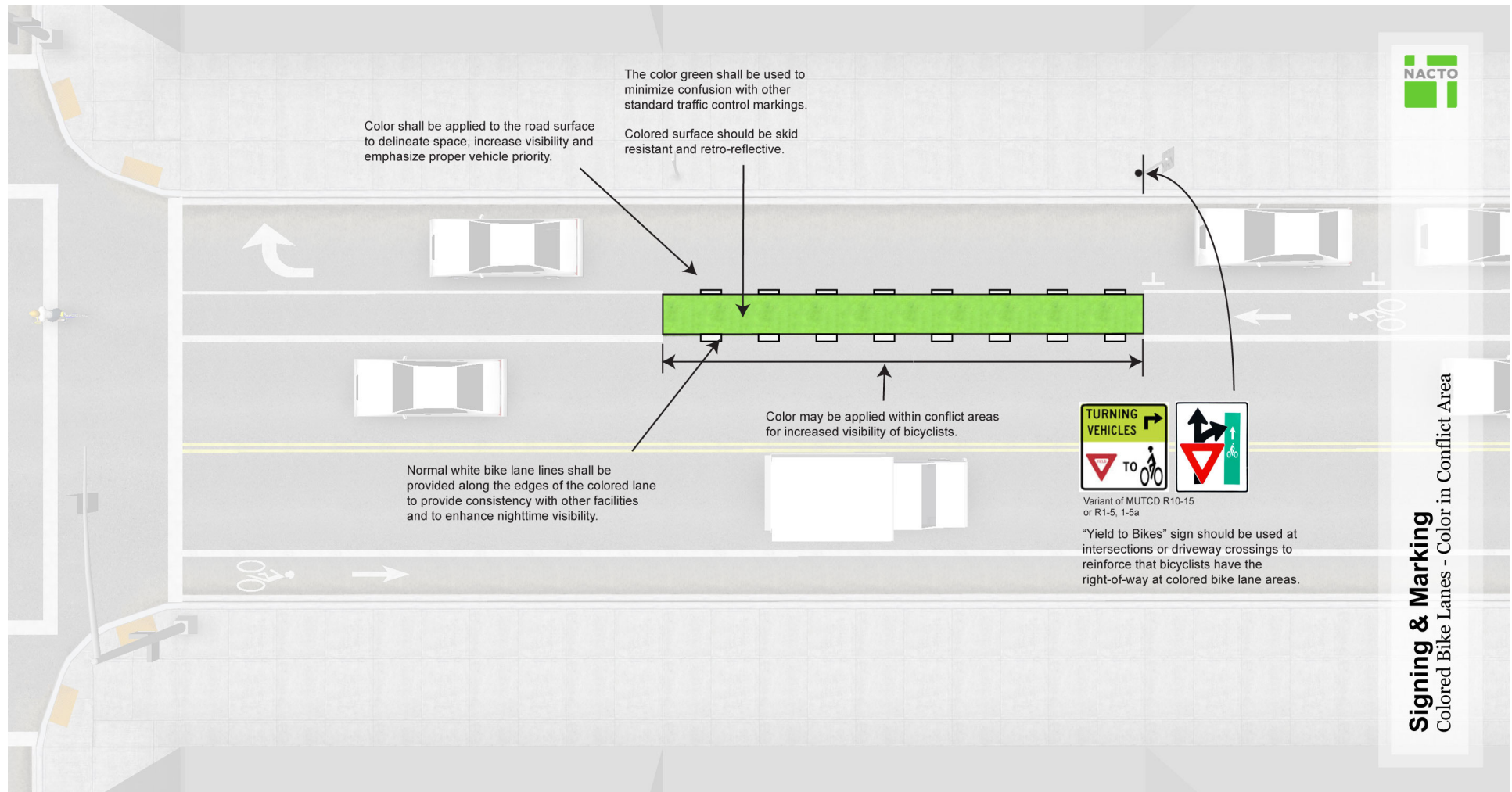


**Signing & Marking**  
Bike Route Wayfinding Signage System

View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/WayfindingSignage\\_Plan1.jpg](http://nacto.org/wp-content/uploads/2010/08/WayfindingSignage_Plan1.jpg)

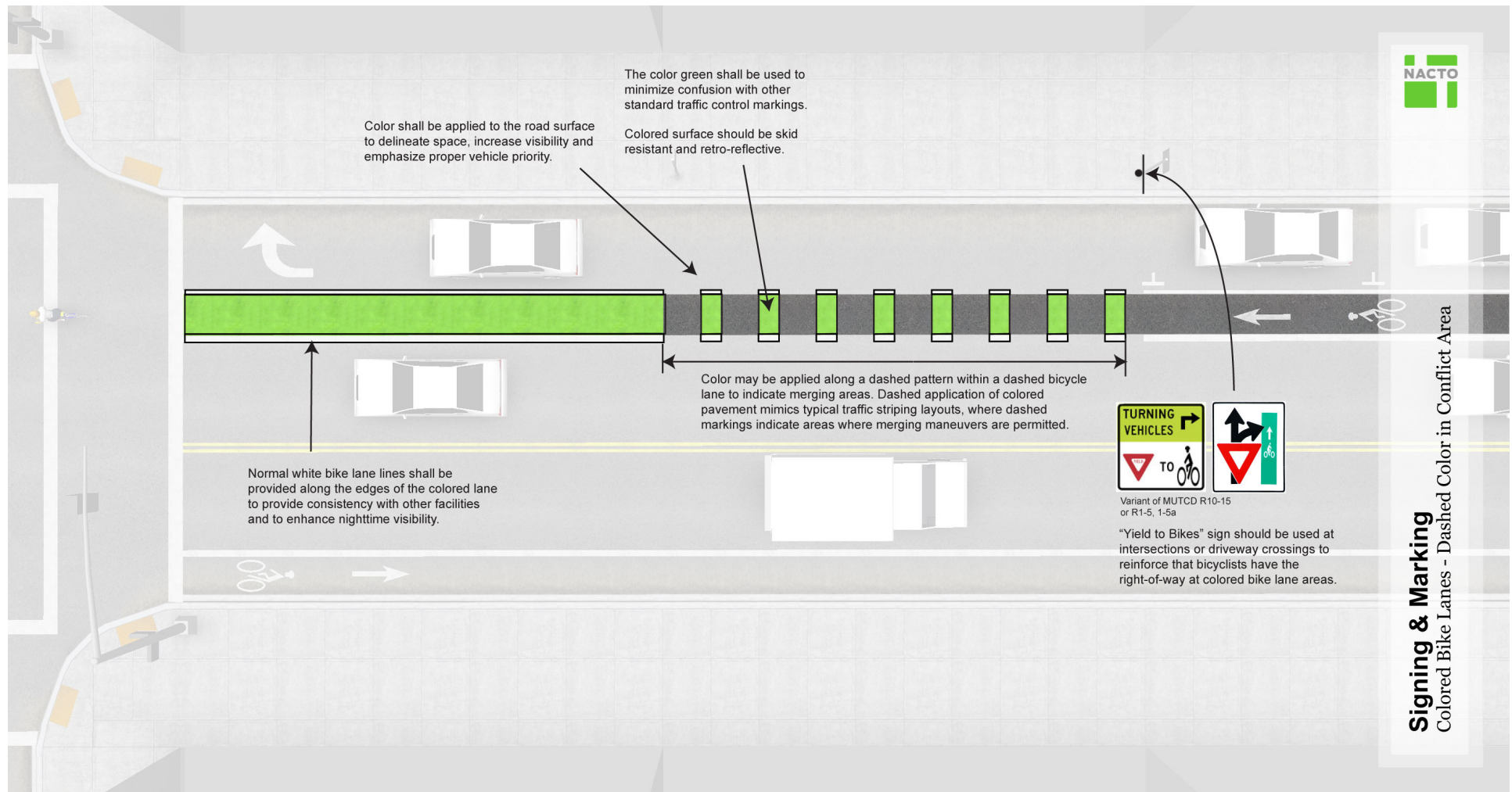


## Signing and Marking: Colored Bike Lanes



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes\\_OptionA\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes_OptionA_Annotated.jpg)

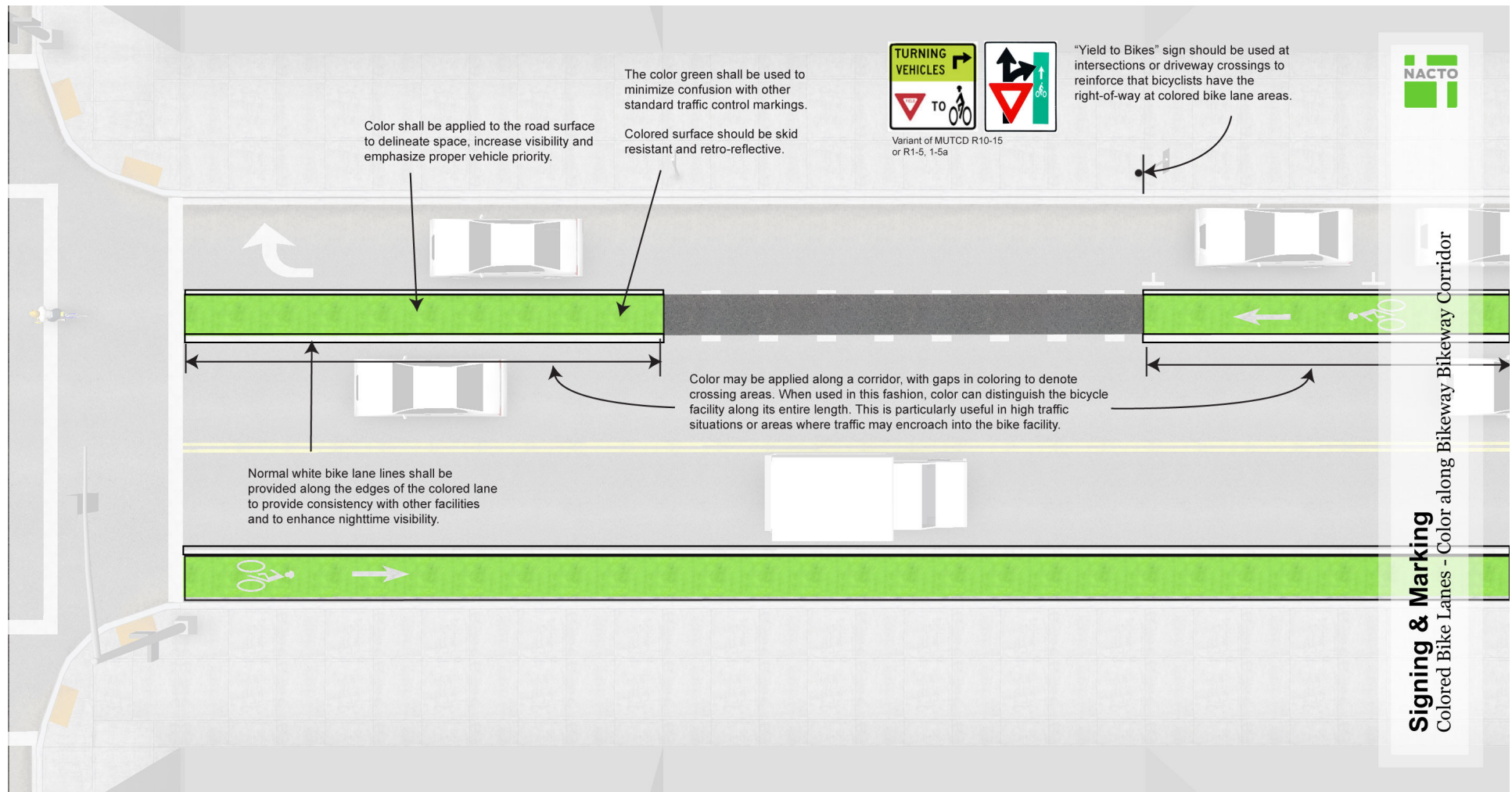
## Signing and Marking: Colored Bike Lanes



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes\\_OptionB\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes_OptionB_Annotated.jpg)

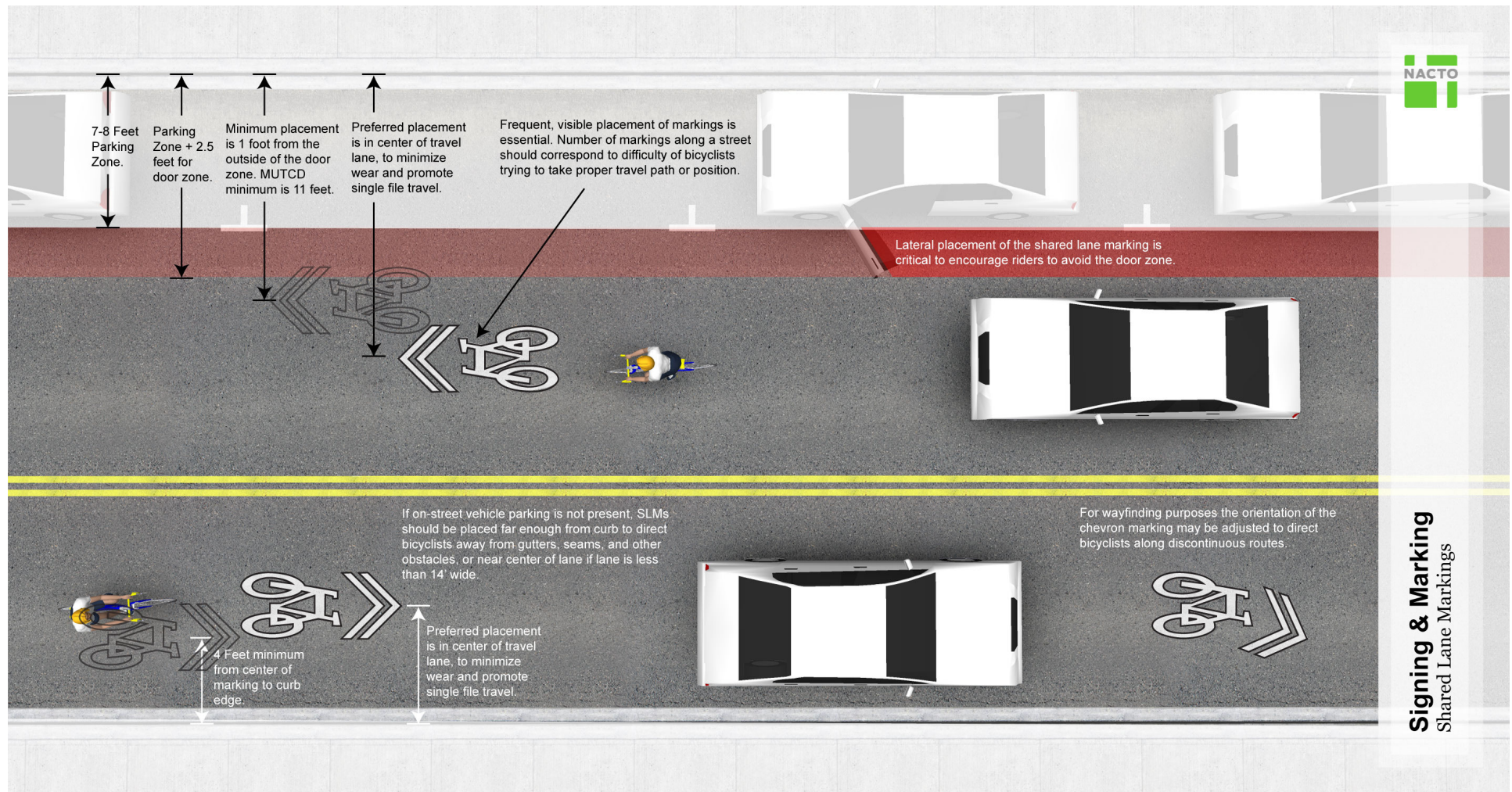


## Signing and Marking: Colored Bike Lanes



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes\\_OptionC\\_Annotated.jpg](http://nacto.org/wp-content/uploads/2010/08/ColoredBikeLanes_OptionC_Annotated.jpg)

## Signing and Marking: Shared Lane Markings



View a high resolution image here: [http://nacto.org/wp-content/uploads/2010/08/Shared-Lane\\_Annotation.jpg](http://nacto.org/wp-content/uploads/2010/08/Shared-Lane_Annotation.jpg)



## Sample Plan Drawings

### BIKE LANES

- Conventional Bike Lane  
[http://nacto.org/wp-content/uploads/2011/03/MichiganAve-Detroit\\_BikeLane.pdf](http://nacto.org/wp-content/uploads/2011/03/MichiganAve-Detroit_BikeLane.pdf)  
  
[http://nacto.org/wp-content/uploads/2011/03/MichiganAve-Detroit\\_BikeLane2.pdf](http://nacto.org/wp-content/uploads/2011/03/MichiganAve-Detroit_BikeLane2.pdf)
- Buffered Bike Lanes  
[http://nacto.org/wp-content/uploads/2011/02/Buffered-BikeLane\\_Seattle\\_Plans.pdf](http://nacto.org/wp-content/uploads/2011/02/Buffered-BikeLane_Seattle_Plans.pdf)  
  
[http://nacto.org/wp-content/uploads/2011/02/Buffered-BikeLaneIntersection\\_Seattle\\_Plans.pdf](http://nacto.org/wp-content/uploads/2011/02/Buffered-BikeLaneIntersection_Seattle_Plans.pdf)
- Contra-Flow Bike Lane  
[http://nacto.org/wp-content/uploads/2011/02/Chicago\\_Ardmore-Kenmore-to-Lakefront-Trail.pdf](http://nacto.org/wp-content/uploads/2011/02/Chicago_Ardmore-Kenmore-to-Lakefront-Trail.pdf)
- Left Side Bike Lane  
[http://nacto.org/wp-content/uploads/2011/02/MD-600\\_Allen-Pike.pdf](http://nacto.org/wp-content/uploads/2011/02/MD-600_Allen-Pike.pdf)

### CYCLE TRACKS

- One-way protected cycle track  
[http://nacto.org/wp-content/uploads/2011/02/MD-762\\_1A\\_9th-Ave.pdf](http://nacto.org/wp-content/uploads/2011/02/MD-762_1A_9th-Ave.pdf)  
  
[http://nacto.org/wp-content/uploads/2011/03/Market-st\\_Str-7635.1-Reservoir-St-to-Gough-St.pdf](http://nacto.org/wp-content/uploads/2011/03/Market-st_Str-7635.1-Reservoir-St-to-Gough-St.pdf)  
  
[http://nacto.org/wp-content/uploads/2011/03/Market-st\\_Str-7694-12th-St-to-8th-St.pdf](http://nacto.org/wp-content/uploads/2011/03/Market-st_Str-7694-12th-St-to-8th-St.pdf)
- Raised Cycle Track  
[http://nacto.org/wp-content/uploads/2011/02/Vassar\\_Street\\_West.pdf](http://nacto.org/wp-content/uploads/2011/02/Vassar_Street_West.pdf)
- Two-way cycle track  
[http://nacto.org/wp-content/uploads/2011/02/MD-627\\_Sands.pdf](http://nacto.org/wp-content/uploads/2011/02/MD-627_Sands.pdf)  
  
<http://nacto.org/wp-content/uploads/2011/02/15th-Street-NW-Separated-Bike-Lane-Pilot-Project-Interim-Results-and-Next-Steps.pdf>

### INTERSECTIONS

- Bike Box  
<http://nacto.org/wp-content/uploads/2011/02/WYMAN-PARK-BIKE-BOX.pdf>
- Bike Box, Left Side-Bike Lane  
[http://nacto.org/wp-content/uploads/2011/02/Project\\_LeftSideBoston\\_Plans.pdf](http://nacto.org/wp-content/uploads/2011/02/Project_LeftSideBoston_Plans.pdf)
- Median Refuge Island  
<http://nacto.org/wp-content/uploads/2011/02/MLK-CROSS-ING-ISLAND-167187.pdf>  
  
<http://nacto.org/wp-content/uploads/2011/02/MLK-CROSS-ING-MARKINGS-167189.pdf>  
  
<http://nacto.org/wp-content/uploads/2011/02/MLK-CROSS-ING-SIDE-SIGNS-167188.pdf>

### SIGNALS

- Bicycle Signal  
[http://nacto.org/wp-content/uploads/2011/03/Fell\\_Masonic\\_Signal-Drawing.pdf](http://nacto.org/wp-content/uploads/2011/03/Fell_Masonic_Signal-Drawing.pdf)
- Detection and Actuation  
[http://nacto.org/wp-content/uploads/2011/02/VideoDetection\\_Seattle\\_Plans.pdf](http://nacto.org/wp-content/uploads/2011/02/VideoDetection_Seattle_Plans.pdf)

### SIGNING AND MARKING

- Intersection Markings  
<http://nacto.org/wp-content/uploads/2011/02/Seattle-East-lake-Fuhrman-Plans.pdf>
- Colored Bike Facilities  
[http://nacto.org/wp-content/uploads/2011/02/Chicago\\_Colored-Bike-Lanes-Plan-set.pdf](http://nacto.org/wp-content/uploads/2011/02/Chicago_Colored-Bike-Lanes-Plan-set.pdf)