



*Connecting our Community*

BikeWalkDunwoody.org

# Chamblee-Dunwoody Gateway Feedback & Recommendations February 22, 2015

VERSION 2.0

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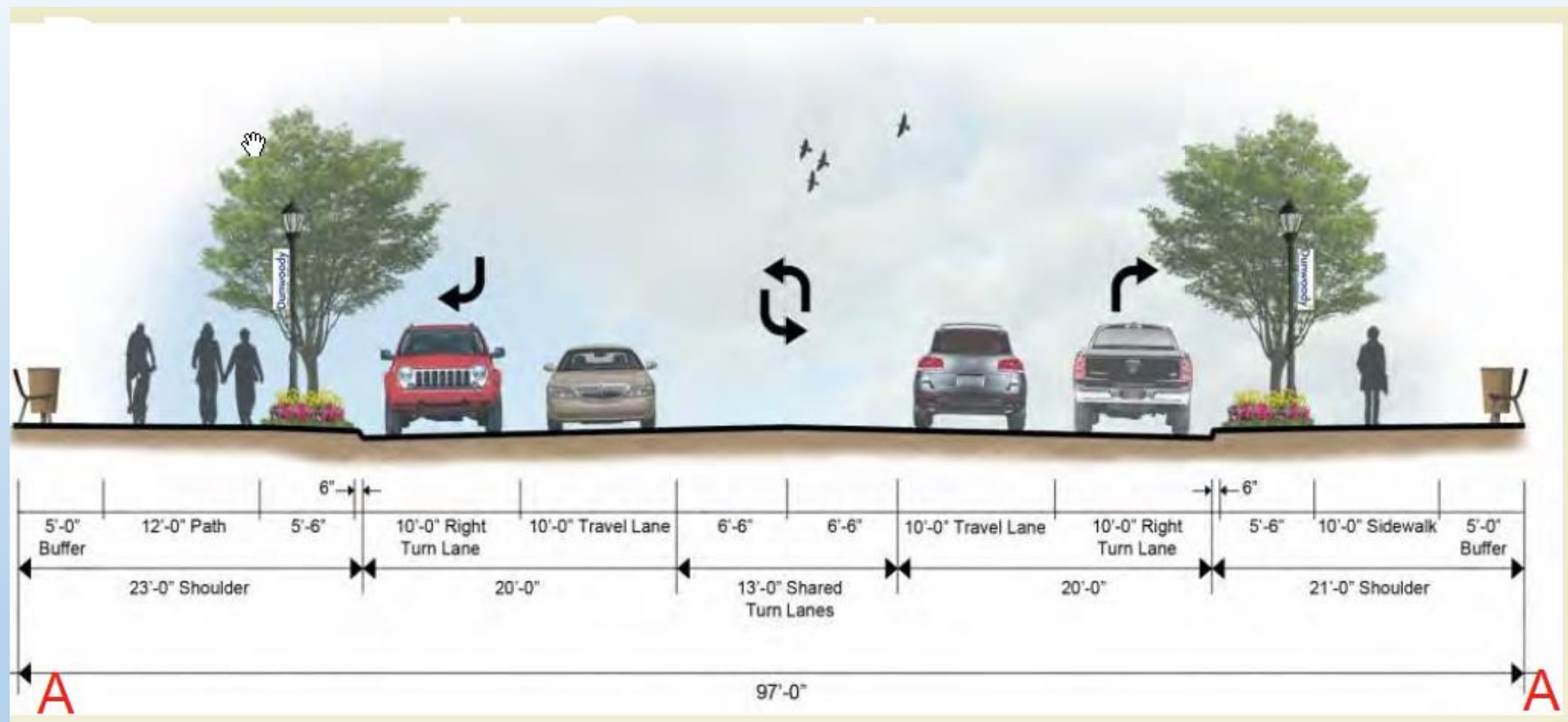
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# Consultant Recommended Option: Cotillion to Old Springhouse

*Multi-Use Trail & sidewalks without separate Bicycle Facilities*

West

East



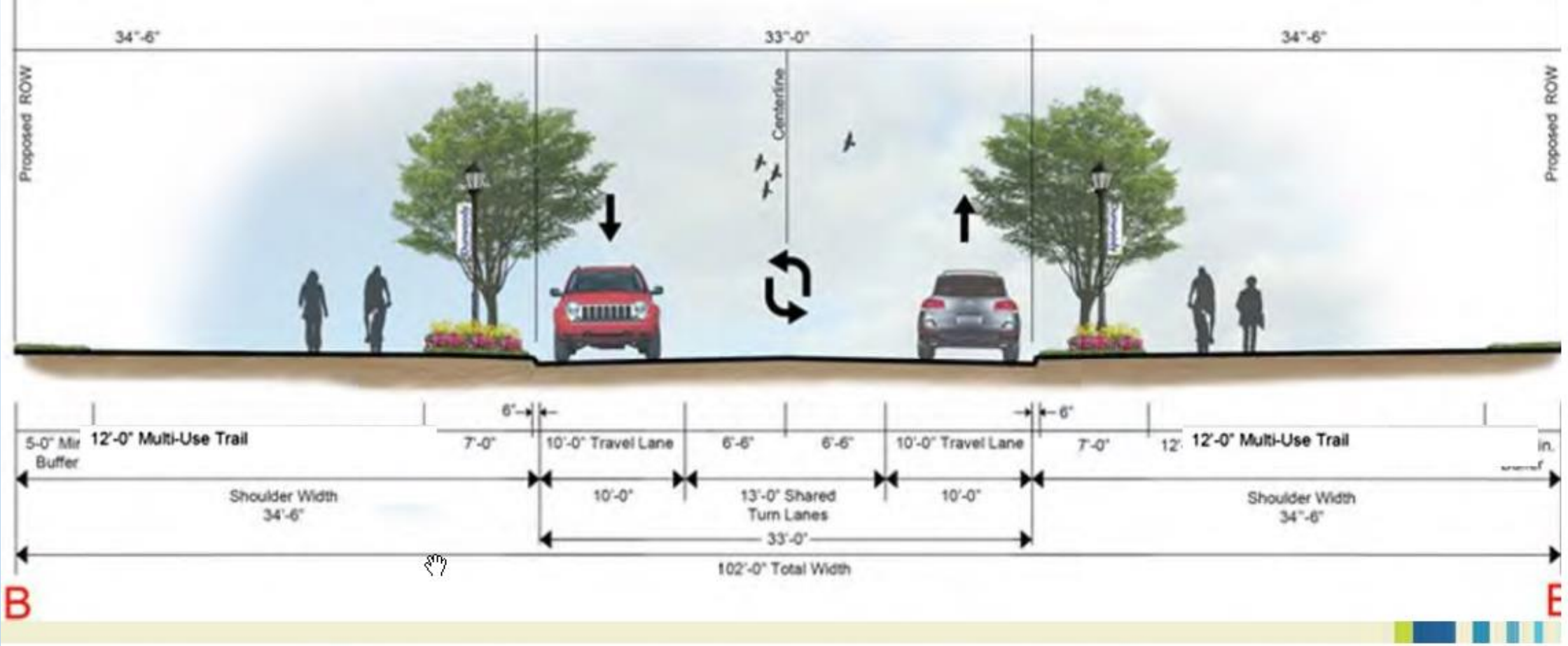
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# Consultant Recommended Option: Old Springhouse to N. Shallowford

## *Multi-Use Trail without separate Bicycle Facilities*

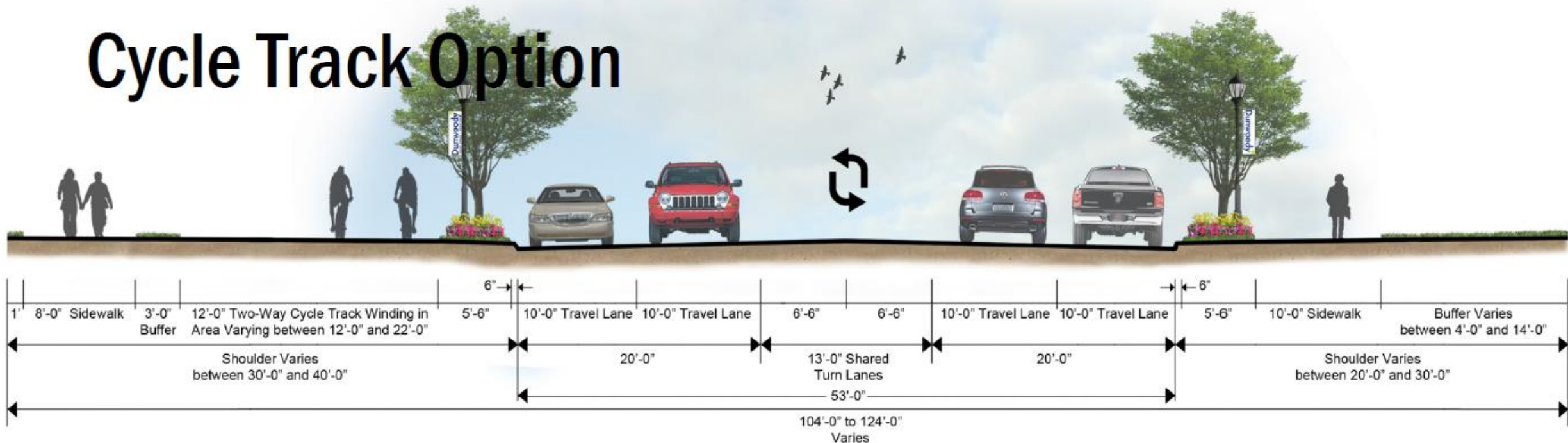
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# Discussion of Consultant Cycle Track Option

- The information available for Public Viewing up until the afternoon of the Open House did **not** offer a Cycle Track Option
- The 2-way Cycle Track Option as shown below from the consultants does not show sufficient material, illustrations nor even an actual Cycle Track per NACTO Design Guidelines. Defines Cycle track as “Winding”, which **does not follow NACTO Guidelines**. Cycle Tracks are a part of the On-Street Infrastructure (See definition & examples later).





# Discussion of Consultant Recommendations

The consultants at URS / AECOM have offered two choices in the design of this corridor.

#1: 10' sidewalk and 8' Bike Lane (including 3' buffer)

#2: 12' multi-use trail with no dedicated or separated bicycle facility

- Each alternative comes with trade-offs. Most notably, a buffered bike lane (especially one that only has paint as a buffer, i.e. no planters or bollards) does not offer the same experience of separation that a multi-use trail does, making it less appealing for less confident or comfortable users (such as children, the elderly, and new riders). We would not recommend implementing a buffered bike lane without at least bollards or a raised space (such as a small curb; NACTO guidance identifies a suite of options for these barriers). A multi-use trail may offer better access for these users.

- On the other hand, a multi-use trail that exists in the same functional space as a sidewalk becomes vulnerable to the major issue with having bicyclists on sidewalks, which are:

1. Persons on bicycles & pedestrians may struggle to share the space due to the difference in their behaviors and expectations, and
2. Persons on bicycles may be traveling at a speed that makes it hard for vehicles approaching the multi-use trail on their way through it on a driveway or cross street to react or predict easily. For example, a car pulling out of the parking lot of the Waffle House may be able to react to a pedestrian approaching in front of them, but not a bicyclist (who may not immediately be visible or may be obscured at their speed by other objects).

# Bike-Walk Dunwoody Recommendation

- **10 to 12 ft wide sidewalk on both sides** that is marked as a multi-use trail for the purposes of allowing slower, more casual persons on bicycles and pedestrians to coexist (10' width meets AASHTO standards for a Multi-Use Path) legally, and
- **Barrier-Protected One-Way 6 ½ ft bike lanes with 3-ft buffer** of planters or another form of barrier. Also known as a Cycle Track. One-way on each side of the road in the direction of travel
- **13-ft barrier-separation between motor vehicles and Multi-Use Trail**
  - *Versus 6 or 7 ½ ft separation per Consultant Recommendation*
- Lastly, we would also take a careful look at the intersections along this corridor, as they will play a large role in how comfortable, safe, and functional the final design is. Intersections can be a major challenge to effective multi-use trails and buffered bike infrastructure, as turning vehicles are too often unaware of users in crosswalks or adjacent bike lanes. Special signage or innovative approaches may be needed to mitigate those issues.

# Cham-Dwy: Cotillion to Old Springhouse (97-ft)

97' ✓



Different

Same

Same

Different

Same

Same

Different

Same

Dif

## Same as Consultant Option C:

- ✓ 10-ft Multi-Use Path on one side
- ✓ 2 x 10-ft Drive Lanes
- ✓ 2 x 10-ft Right Turn Lanes

## Different from Consultant Option C:

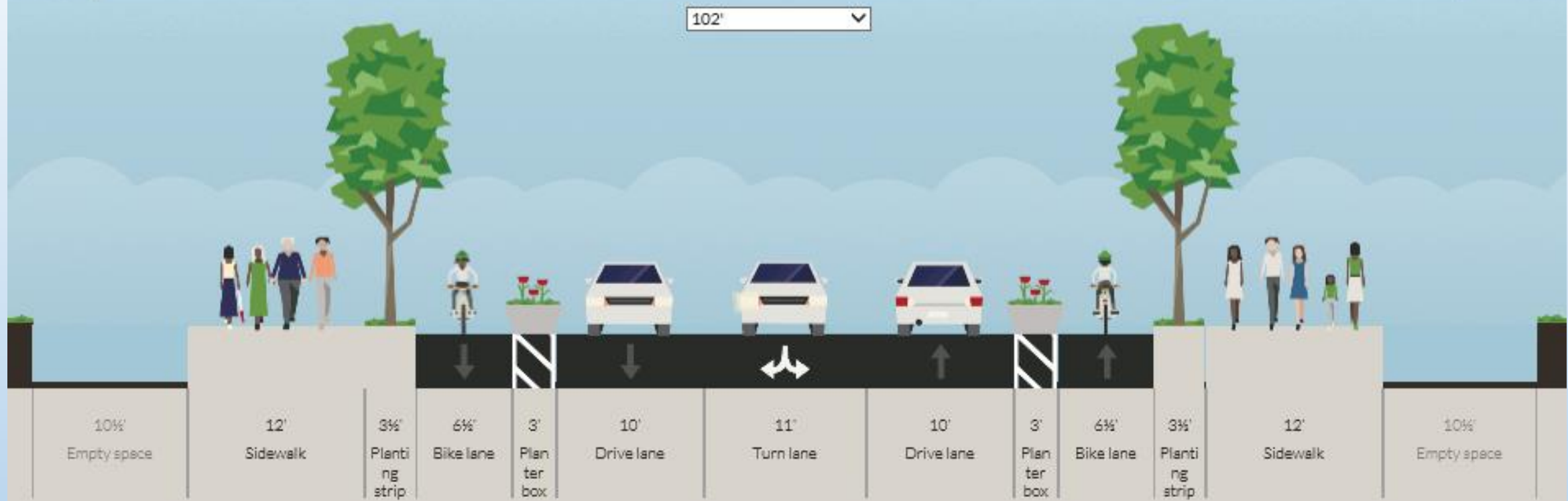
- ✓ 11-ft Center Turn Lane (Consultant= 13-ft)
- ✓ 10-ft Multi-Use Path (Consultant=12-ft)
- ✓ 6 1/2-ft Protected / Buffered Bike Lanes
- ✓ 3-ft Buffers (Bollards, planters, etc.)

## Different from Consultant Option C:

- ✓ No Outside Benches
- ✓ 3 1/2-ft Planting Strip (Consultant = 5.5-ft)



# Cham-Dwy: Old Springhouse to N. Shallow (102-ft)



- Consistent, same configuration of 6 ½ -ft bicycle facility & 3-ft planter/buffer (Per NACTO Guidelines)
- Save “homeowners front yard” by 10 + feet less encroachment
- Retains consultant-recommended 12-ft wide multi-use trail along this segment
- Retain consultant-recommended motor vehicle travel lane configuration. Able to install pedestrian crossing islands

# Recent Example: Protected Bike Lane / Cycle Track

## Washington Ave, Minneapolis



Photo by Kimley-Horn and Associates

- Creates space for persons on bicycle on a track above the curb that would separate them from pedestrians with trees and planters.
- Cyclists will ride above the curb on 5-foot-wide tracks
- Bikers and foot traffic will be separated by planters and rougher pavement.

Reference: [http://www.startribune.com/local/minneapolis/290402101.html?utm\\_content=bufferc77d4](http://www.startribune.com/local/minneapolis/290402101.html?utm_content=bufferc77d4)

# Cycle Track - Definition

Space that is intended to be **exclusively or primarily used for bicycles**

**Separated** from motor vehicle travel lanes, parking lanes, and sidewalks

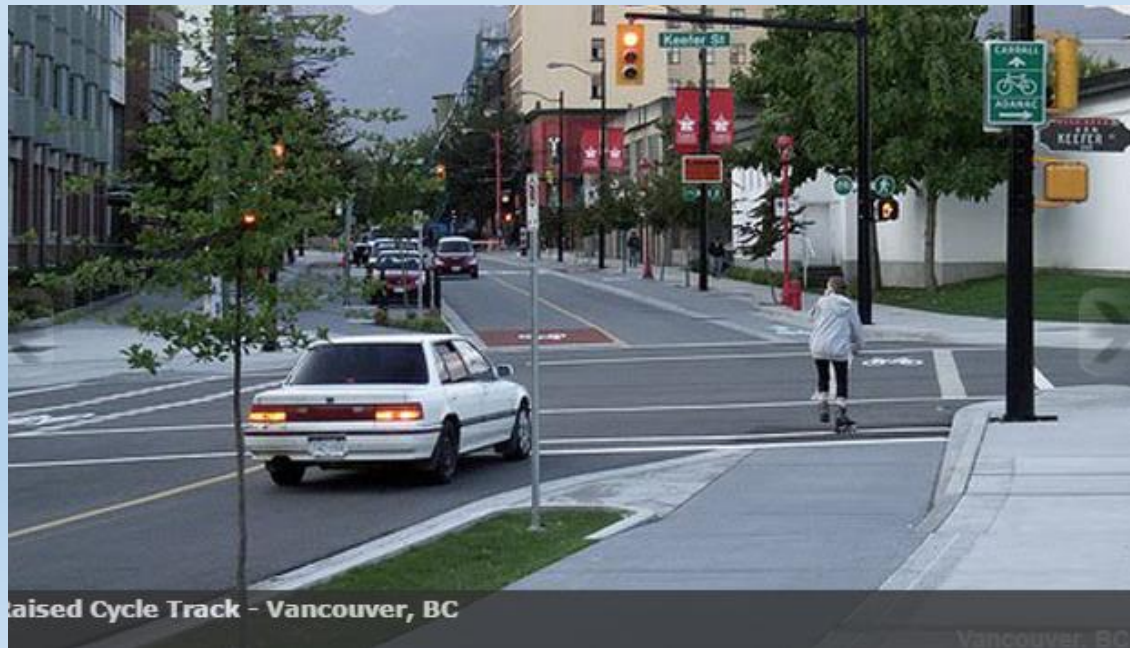
- Combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane.
- By separating cyclists from motor traffic, cycle tracks can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public.

## Benefits

- Dedicates and protects space for bicyclists in order to improve perceived comfort and safety
- Eliminates risk and fear of collisions with over-taking vehicles
- Reduces risk of 'dooring' compared to a bike lane and eliminates the risk of a doored bicyclist being run over by a motor vehicle
- More attractive for bicyclists of all levels and ages



# Raised Cycle Track Examples



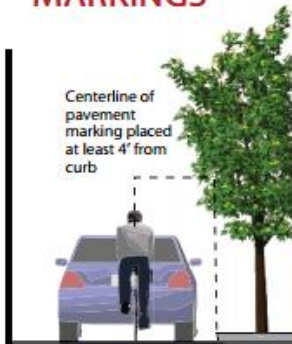


# Protected / Buffered Bike Lane Examples





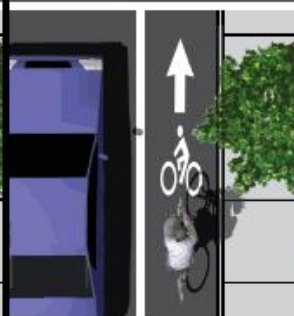
## SHARED LANE MARKINGS



Travel Lane | 4' Min. | Side-Walk

- Positions bicyclists in the travel lane
- Alerts motorists to the presence of bicyclists
- Encourages bicyclists to ride an appropriate distance away from the "door zone" on streets with parking
- Should never be used as a replacement for bicycle lanes

## BIKE LANE



Travel Lane | 5'-7' | Side-Walk

- Exclusive bicycle travel lane increases safety and promotes proper riding
- Reduces possibility that motorists will stray into bicyclists' path
- Visual reminder of bicyclists' right to the road
- 6' width recommended. 5' width in constrained locations
- Bike lanes wider than 7' may encourage vehicle loading in bike lane

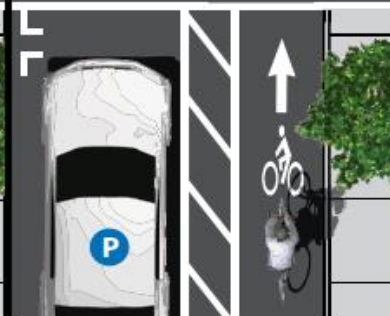
## BUFFERED BIKE LANE



Travel Lane | 2-6' | 5-7' | Side-Walk

- Provides cushion of space to mitigate friction with motor vehicles on streets with frequent or fast motor vehicle traffic
- Allows bicyclists to pass one another or avoid obstacles without encroaching into the travel lane
- Increases motorist shy distance from bicyclists in the bike lane
- Requires additional roadway space and maintenance
- Reduces risk of 'dooring' compared to a bike lane

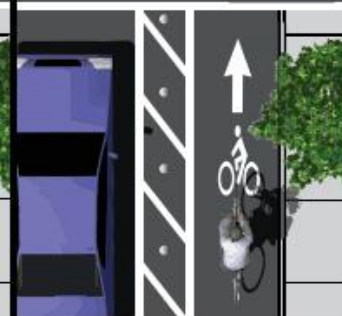
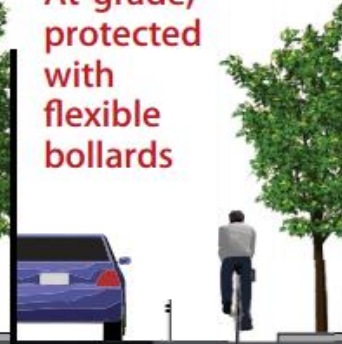
## CYCLE TRACK: At-grade, protected with parking



Parking Lane | 3-6' | 5-7' | Side-Walk

- Dedicates and protects space for bicyclists and improves perceived comfort and safety
- Reduces risk of 'dooring' compared to a bike lane, and eliminates the risk of a doored cyclist being run over by a motor vehicle
- Low implementation cost through use of existing pavement using parking lane as a barrier
- Use along roadways with high motor vehicle volumes and/or speeds
- Best on streets with parking lanes with a high occupancy rate

## CYCLE TRACK: At-grade, protected with flexible bollards



Travel Lane | 3-6' | 5-10' | Side-Walk

- Provides similar benefits as a cycle track with an on-street parking buffer
- Best used on roads with high speeds and long distances between intersections and driveways
- Innovative bicycle-friendly design needed at intersections to reduce conflicts between turning motorists and bicyclists
- Width should never be taken from the pedestrian zone to make room for a cycle track

## CYCLE TRACK: Raised and curb separated



Travel Lane | 6.5-10' | Side-Walk

- Change in level clearly demarcates space for different users and reduces conflicts between bicyclists and pedestrians
- Where bicyclists may enter or leave the cycle track, or where motorists cross at a driveway, the curb should be mountable with a small 45 degree ramp, allowing cyclist turning movements

## CYCLE TRACK: Raised and protected

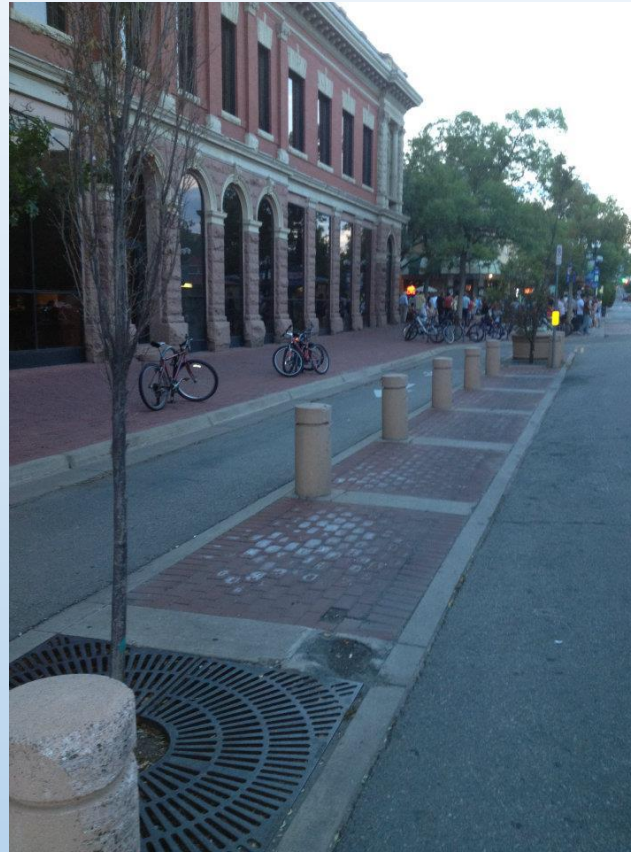


Travel Lane | 3-6' | 6.5-10' | Side-Walk

- Cycle track should be two or three inches above street-level, and the sidewalk should be an additional two to three inches above cycle track
- Maintenance of the cycle track requires specialized sweepers
- Where opportunities exist, the buffer zone may be expanded to include bicycle parking



# Protected Bike Lane Buffer Examples

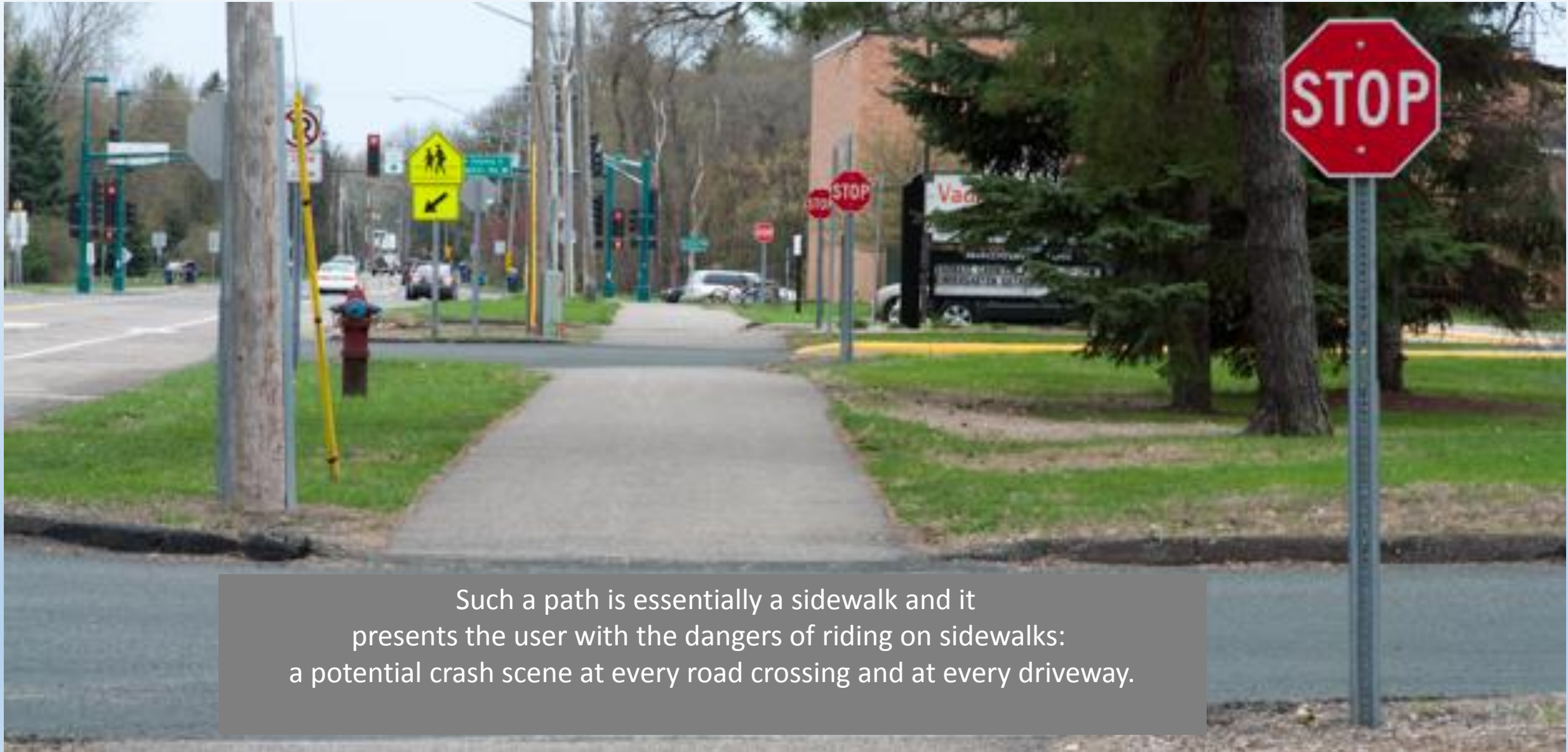


Source: PeopleForBikes Greenlane Project

<http://www.peopleforbikes.org/blog/entry/tech-talk-19-beautiful-ways-to-protect-bike-lanes-photos>



# Dangers of “Sidepaths” / Multi-use trails in built up areas



Such a path is essentially a sidewalk and it presents the user with the dangers of riding on sidewalks: a potential crash scene at every road crossing and at every driveway.

# Dangers with Sidepaths

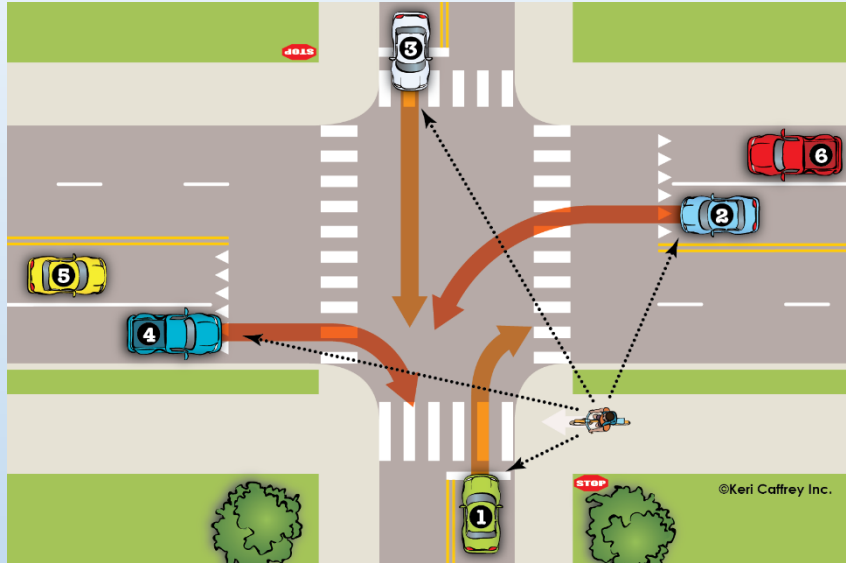
- Essentially a sidewalk; and it presents the user with the dangers of riding on sidewalks: a potential crash scene at every road crossing and at every driveway.
- Riding on sidewalks and paths also introduces conflicts with pedestrians.
- Many bicycle facility designers introduce hazards because they simply do not understand bicycle operation. Often these designers are landscape architects, not trained in roadway design.
- They ***produce paths that twist and wind around and under trees***, with sight lines obscured by foliage and other obstacles.
- These paths may look pretty, but they are unsafe except at walking speed.
- Reference: <http://www.labreform.org/blunders/b5.html>

# Dangers with Sidepaths

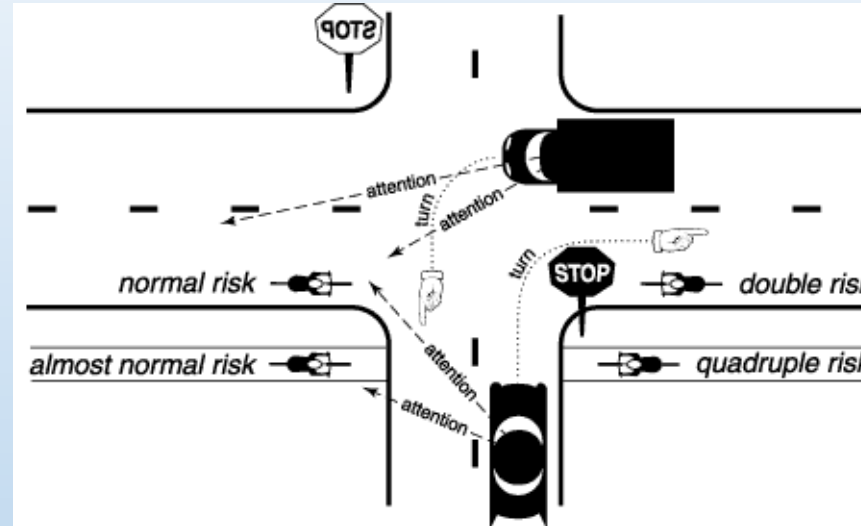
- Require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road.
- When the path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
- At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles. Motorists turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distances are limited.
- Reference: <http://www.bikexpert.com/bikepol/facil/sidepath/aashside.htm>



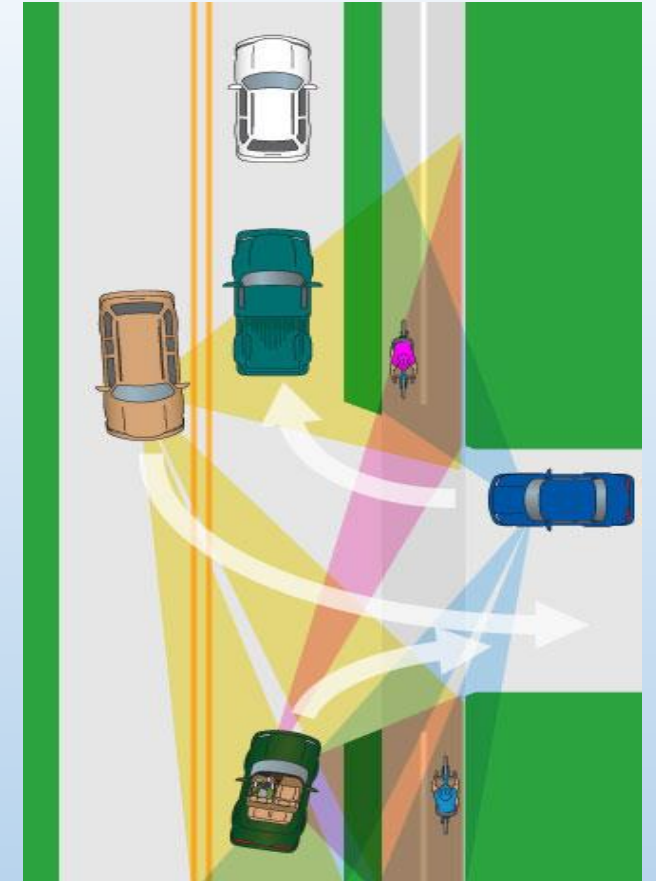
# Sidepath Danger Examples



Bicyclist traveling opposite the direction of traffic, crossing a street. Up to 4 or more conflict points.



Side path intersection hazards and risk factors from Wachtel and Lewiston 1995 study.



Does this look complicated? It is. A two-way side path increases the area a motorist needs to scan before executing a turn. In a congested environment, this burden can be too much. In the Real World it often requires traffic signals with special phases for bike traffic... and added delays for everyone.

References: Hover over each graphic for hyperlink to source documents