

II. Getting Across the Street Intersections & Crosswalks



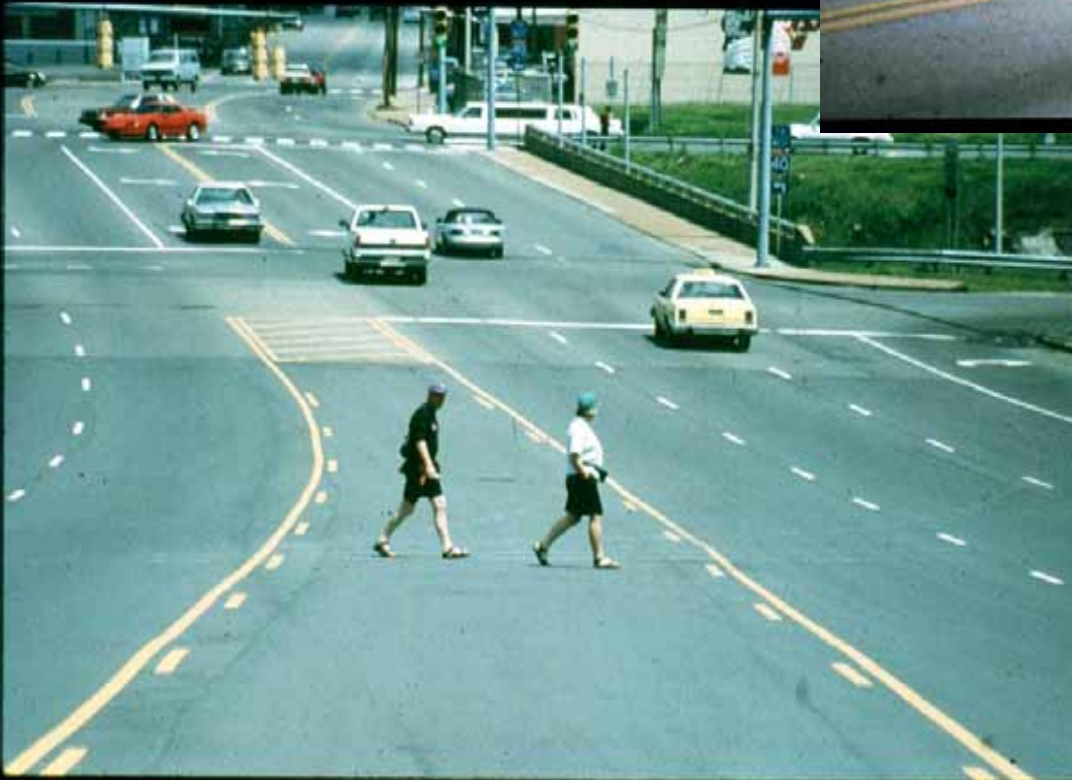


Up to 30% of
Residents in Your
Community Do
Not Have Direct
Access to an
Automobile

Would you want
to try crossing
this road?



Crossing Major Streets



"They widened
the road
and made it
impossible
to cross"



People want a safe place to raise a family. This includes safe and convenient walking trips to schools.



There are Better Options - We Have Choices



A Multiple Lane Intersection That Works



Build More Roads



Build More Roads

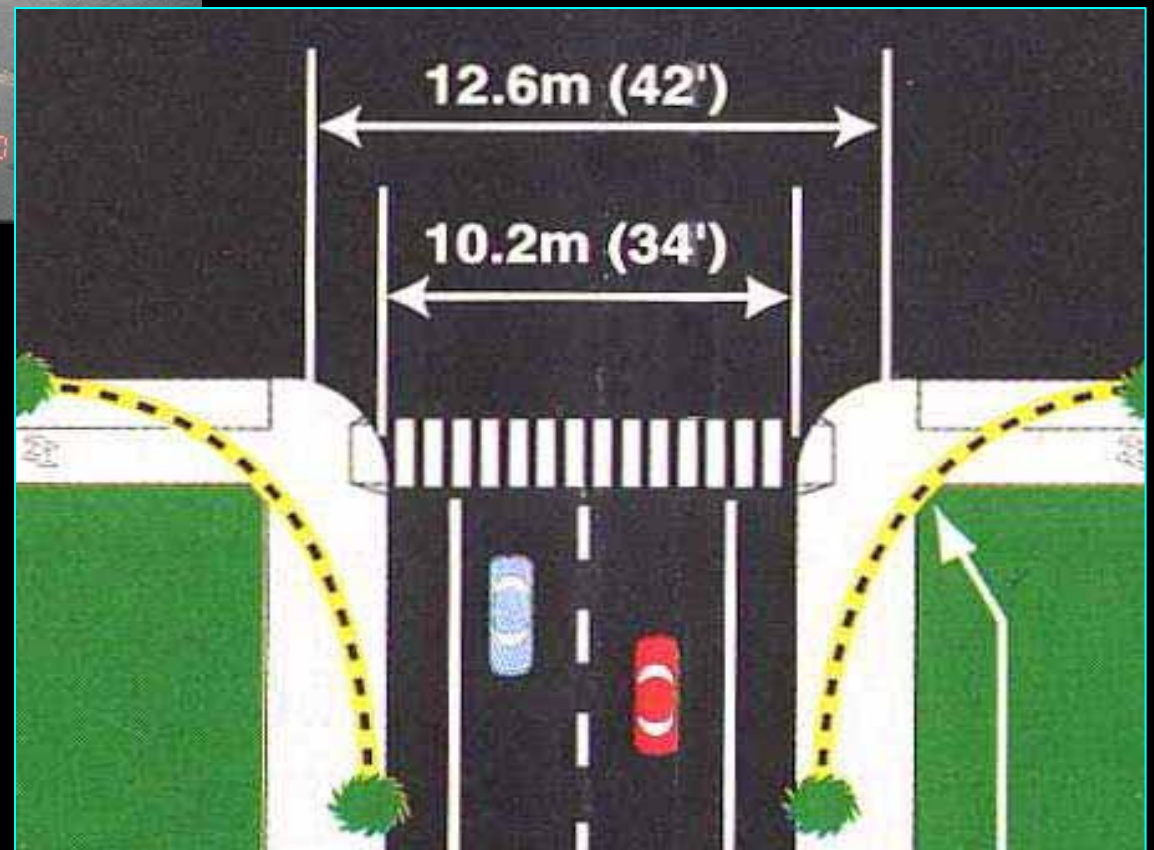
Good intersection characteristics:

- Tight
- Simple
- Slow speed
- Good visibility - maybe... ?
- Easy to understand
- If complex, break it up

A Tight Curb Radius Reduces Turning Speed



Pedestrian
Exposure Time
is Reduced





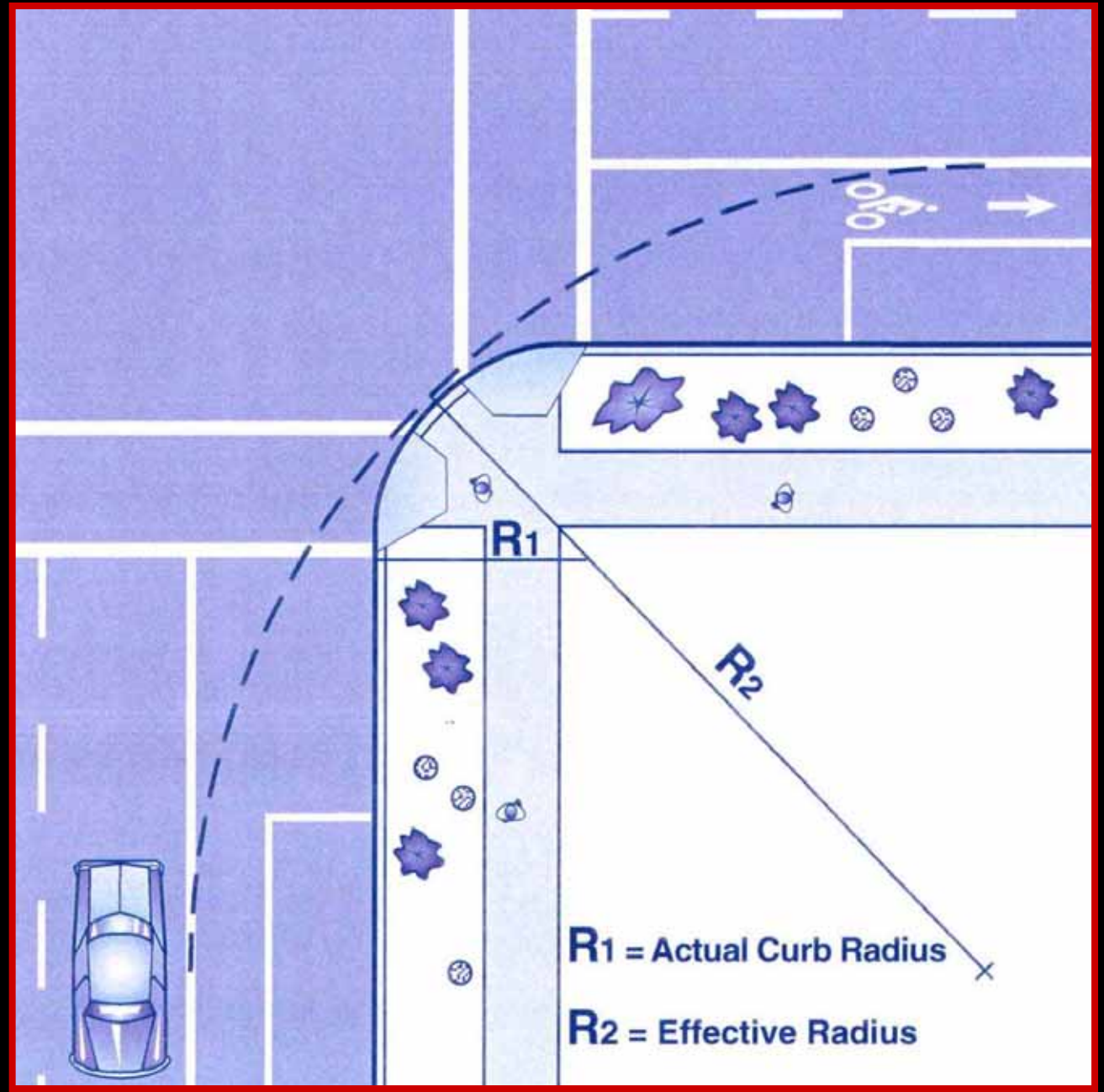
Effect of Large Radius on Drivers

They drive fast...



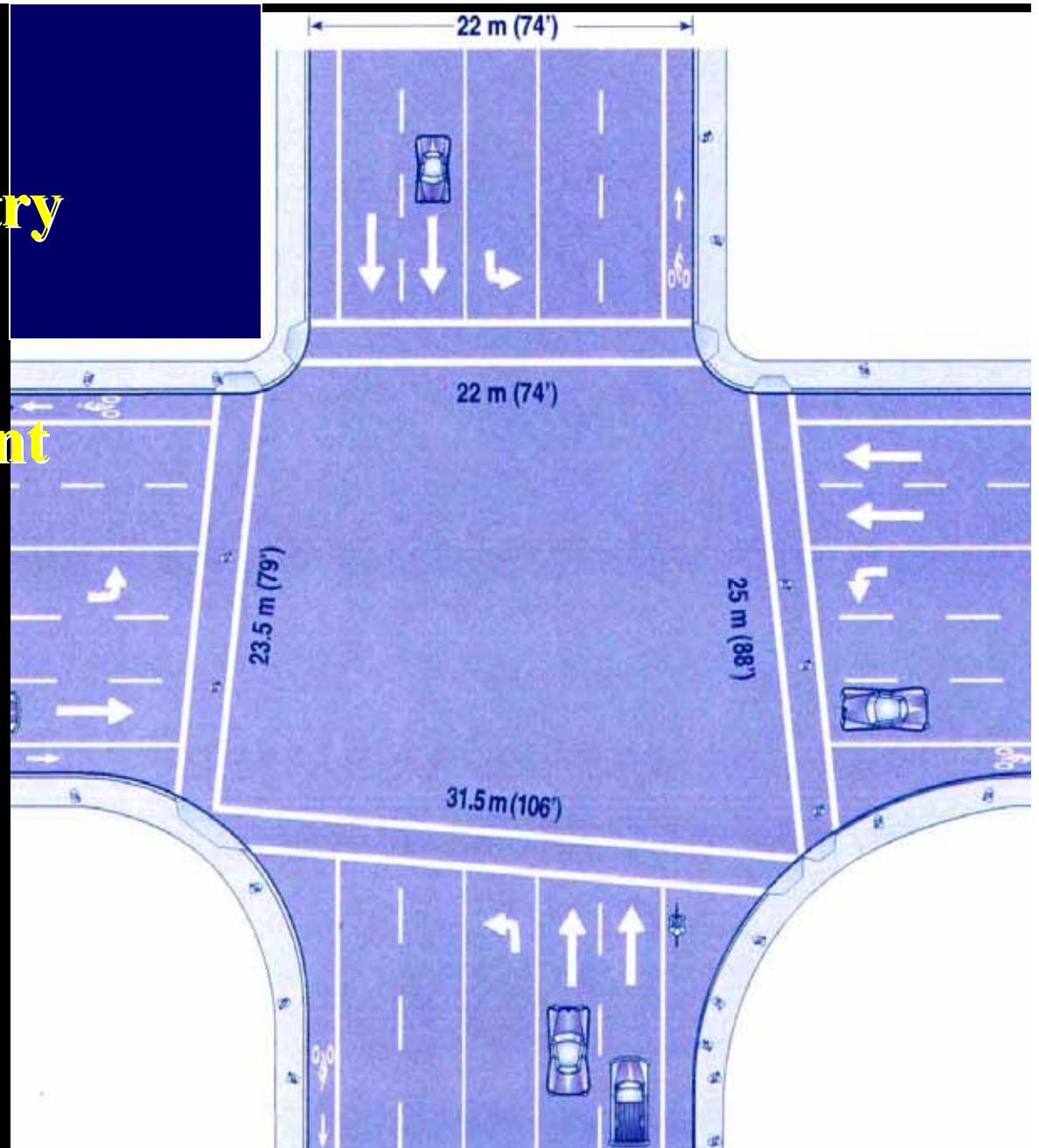
**Keeping it
Tight**

Curb Radii



Radius affects:

- Intersection geometry
- Crossing distance
- Crosswalk placement
- Ramp placement

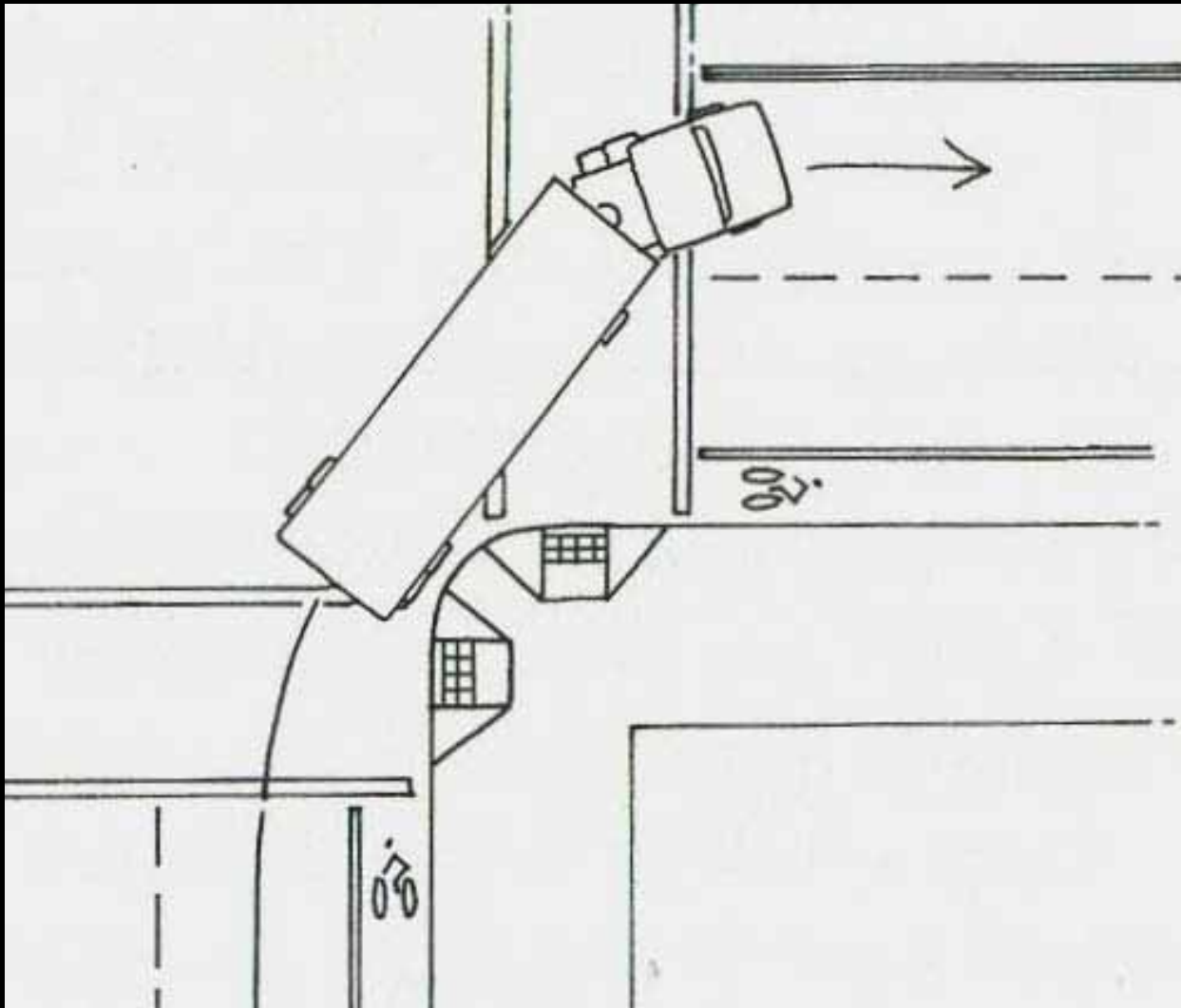




Truck Turns an Issue



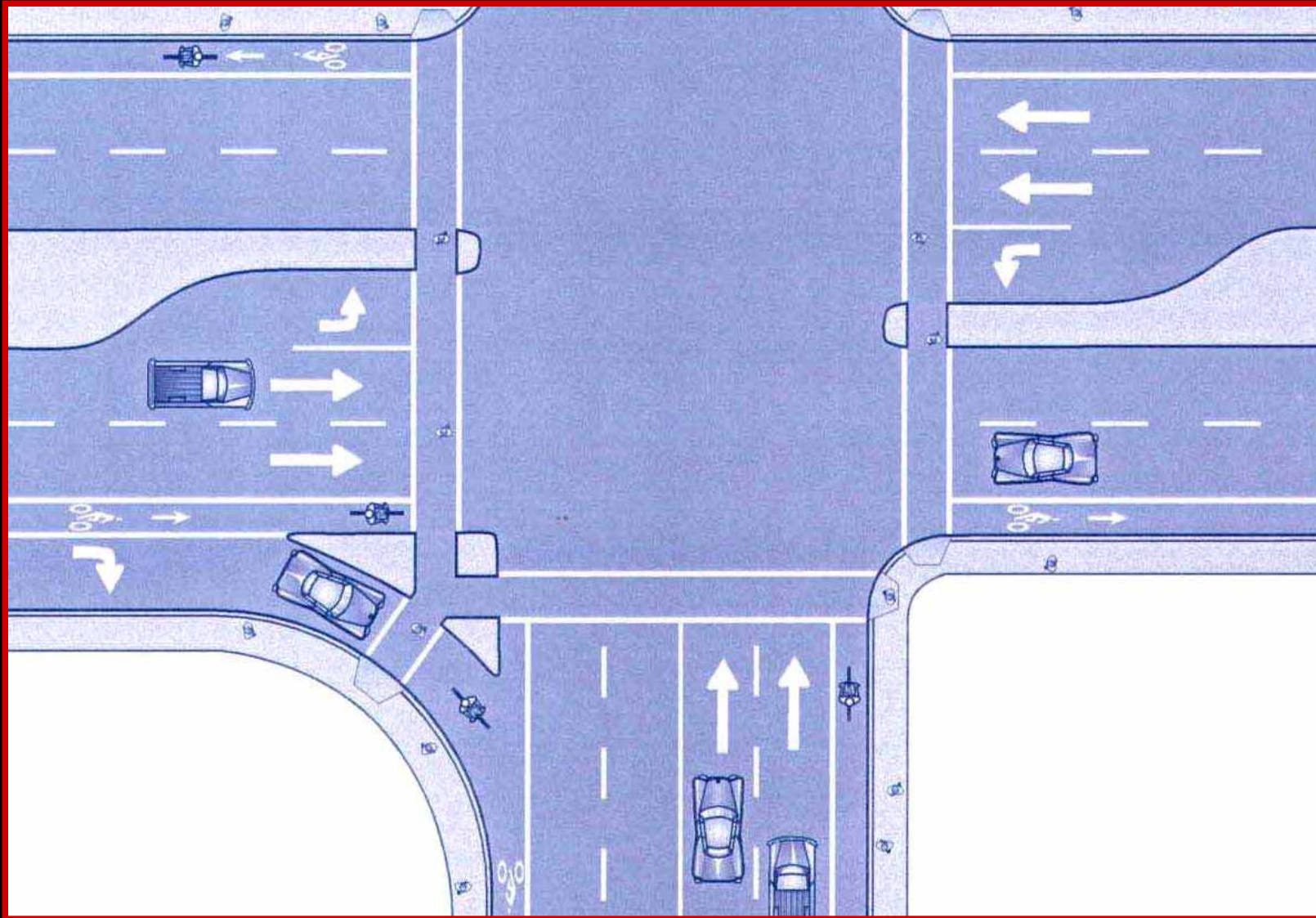
Consider the Design Vehicle



Acceptable Receiving Lane



Stop Bar Setback



**Islands at intersection reduce crossing distance &
*separate conflicts***



Which Crossing Island is Correctly Designed?



Long Approach Tail = Good Design

Design of Refuge Islands

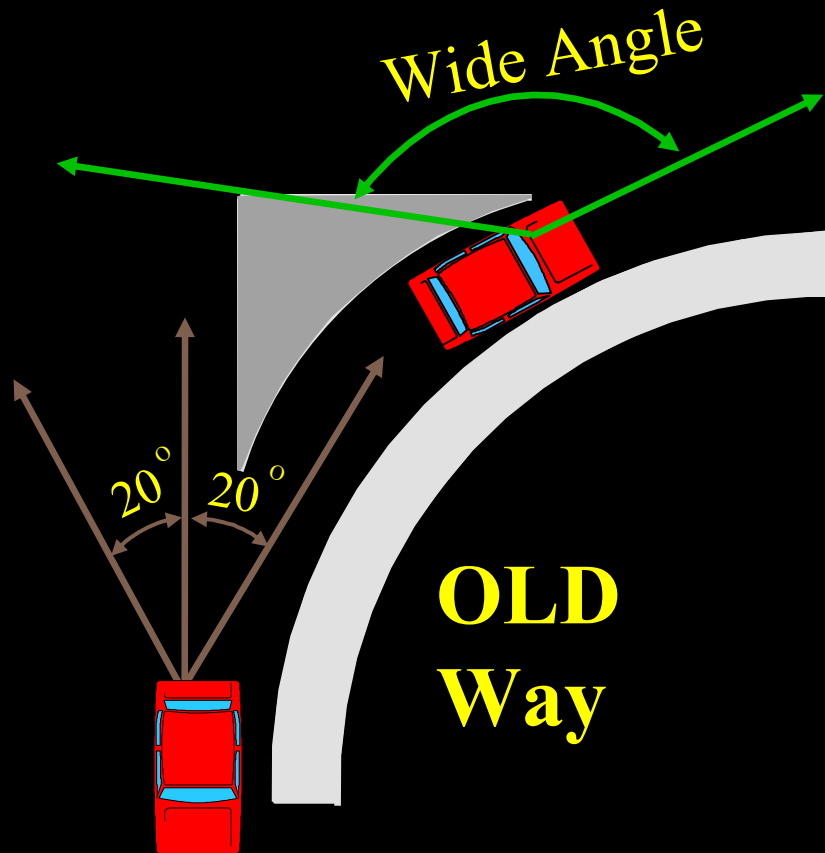


Delineate with Curbs, Guideposts, Signs

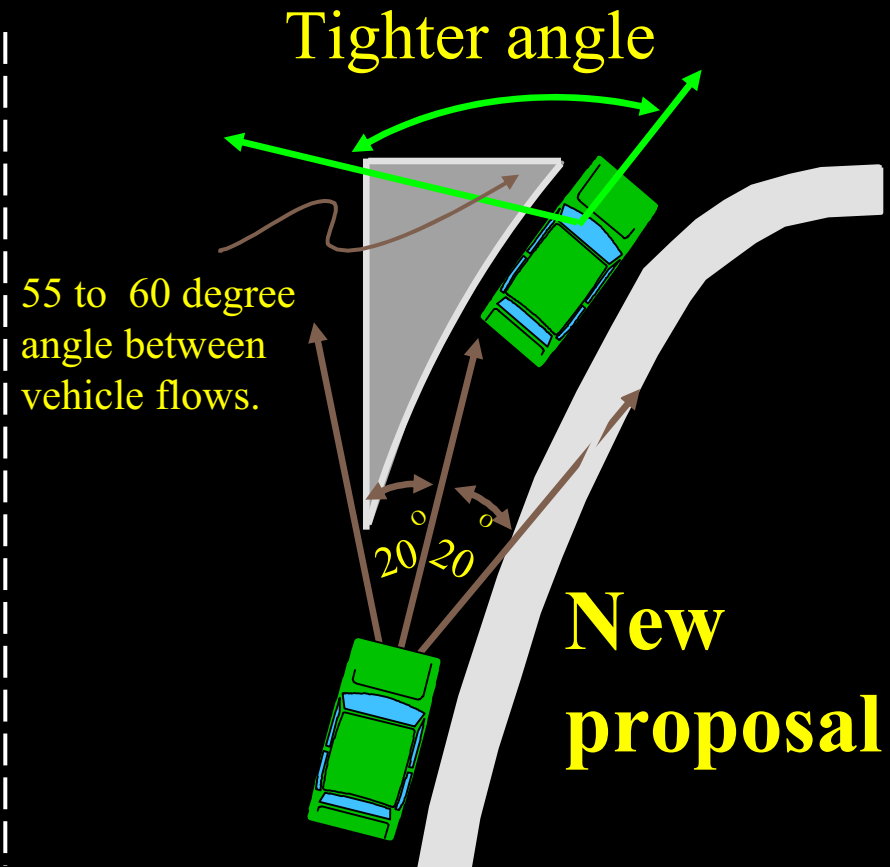


Long Approach Tail = Good Design

RIGHT-TURN SLIP LANE DESIGN

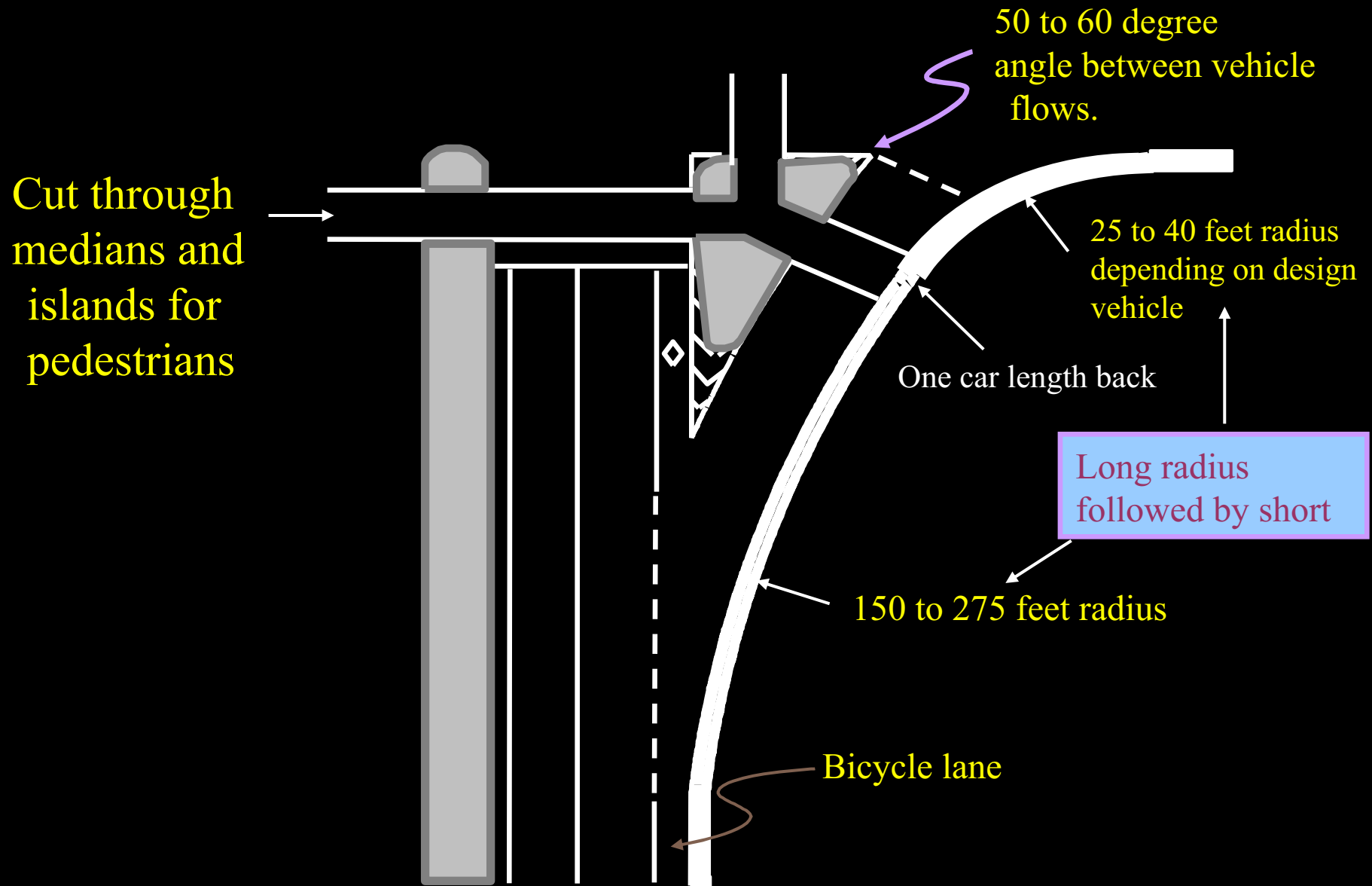


High speed, low visibility of pedestrians, a real head turner

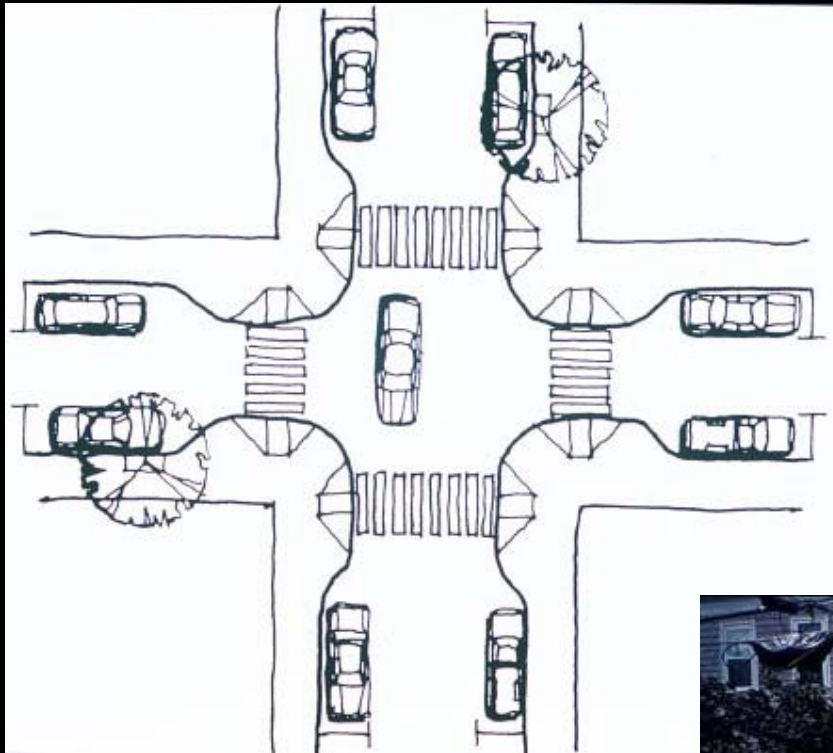


Vehicle speeds 14 to 18 mph, good visibility of pedestrians

RIGHT-TURN SLIP LANE



Curb Extensions





Seattle, Wa.

Kalamazoo, Mi.

Curb Bulbs Reduce
the Crossing Distance





Maximum Width of a
Curb Bulb: Six Feet

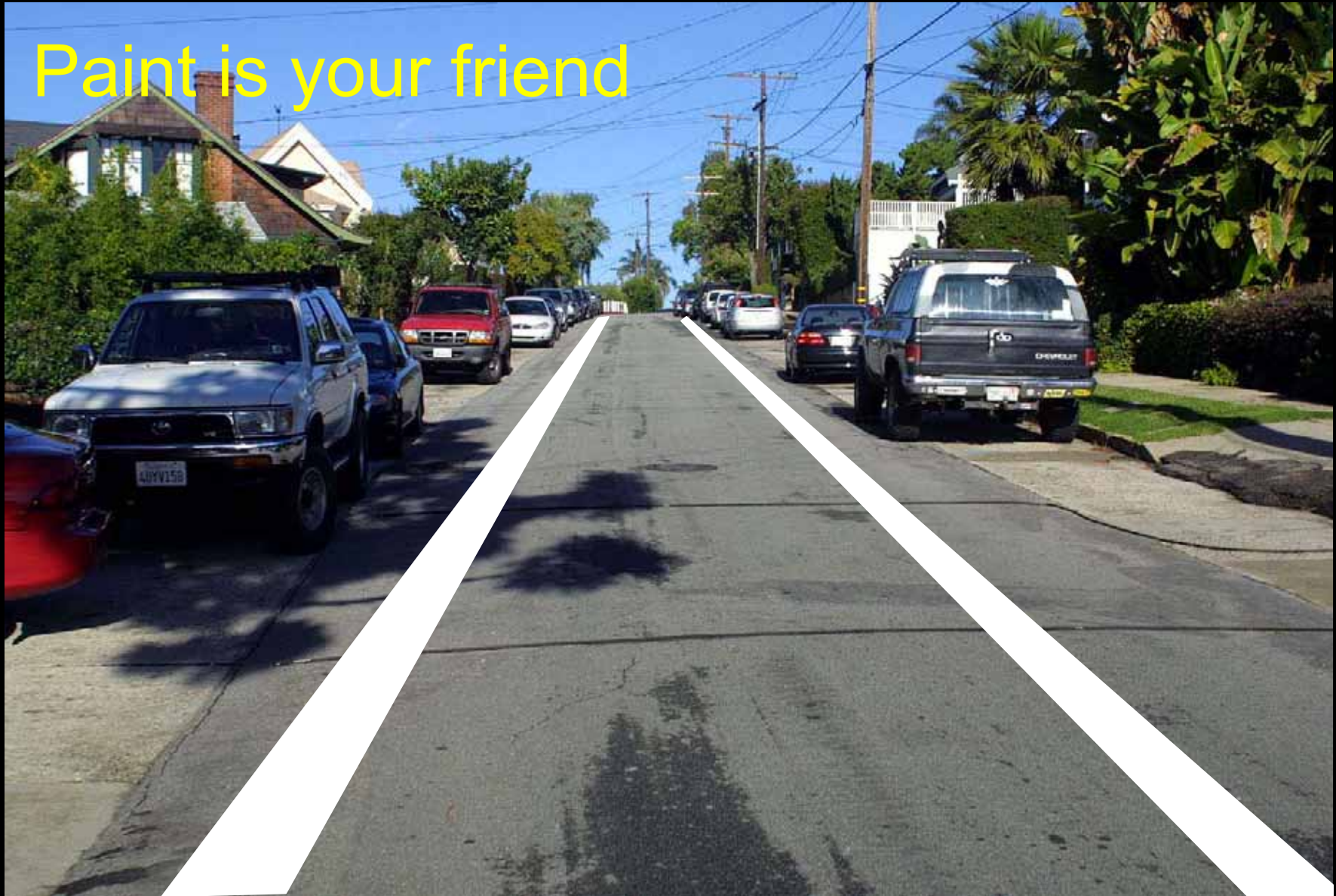
Curb Bulbs Improve
Sight Distance

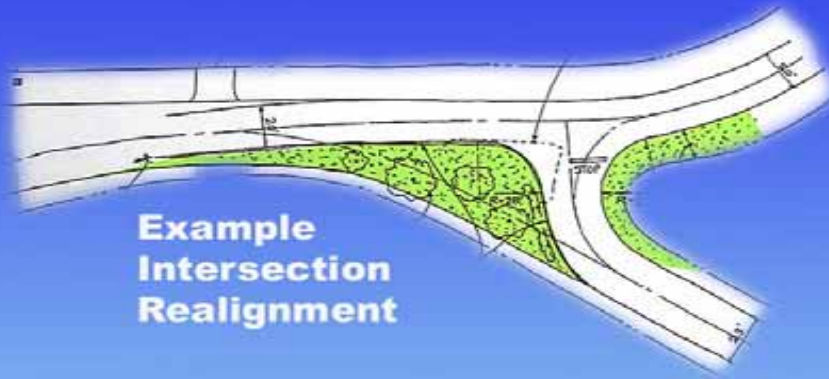


Paint
Is Your
Friend



Paint is your friend





Curb Realignment



Safer for Everyone



Avoid

Double Right Turns
Double Left Turns

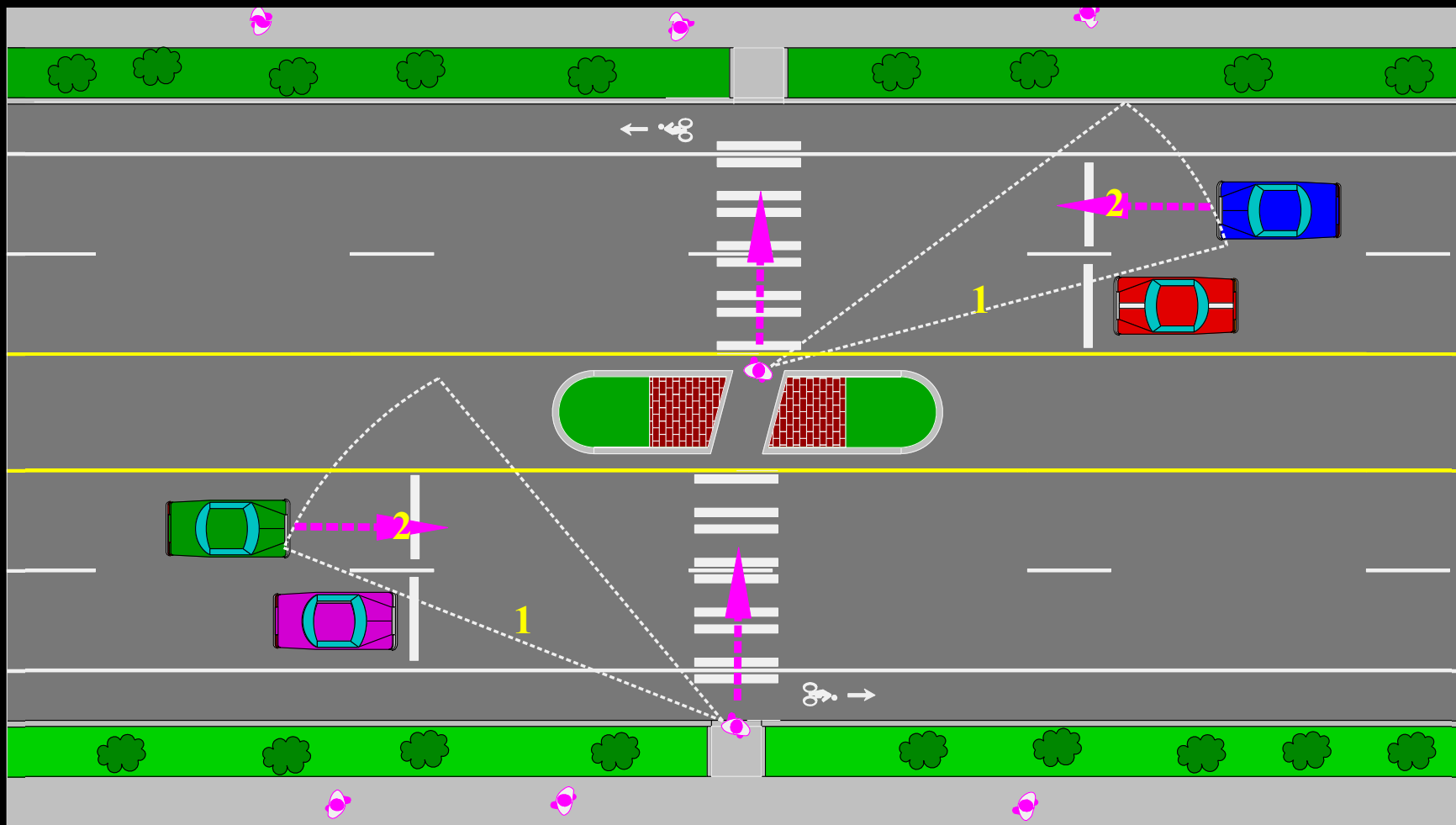
Poor Design Invites
Wrong Behavior





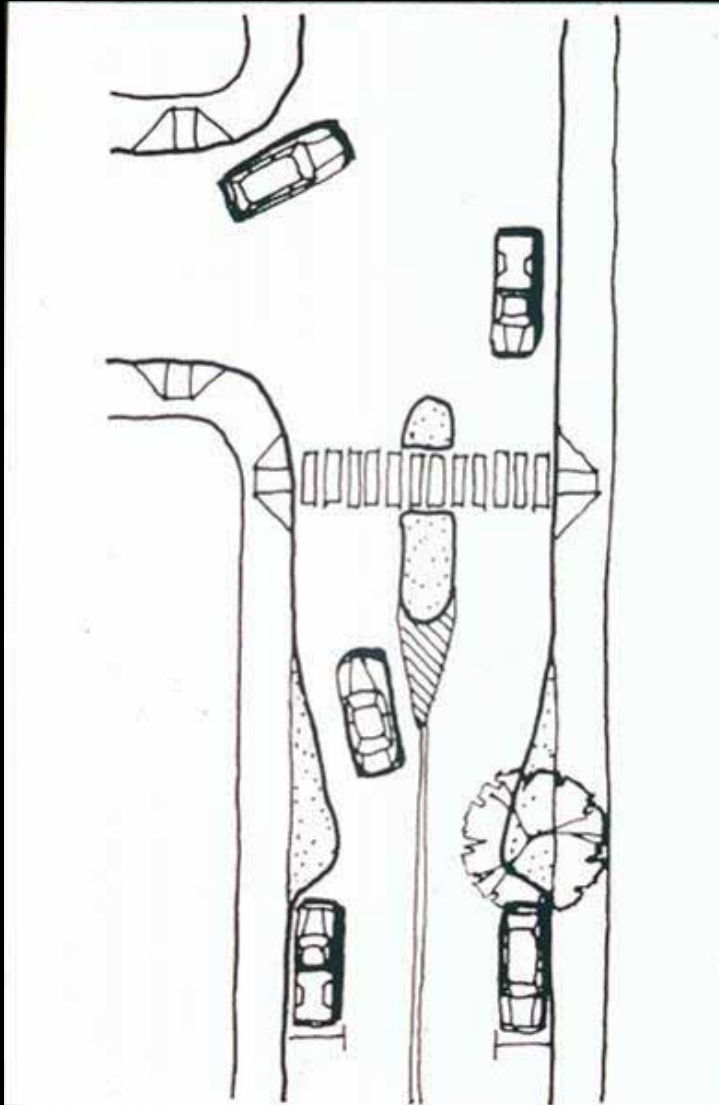
Multiple Lane Threat

Advance Stop Bar – helps prevent “Multiple Threat” crashes



Solution: place advance stop bar, so car 1 stops further back; car 1 no longer masks car 2, which can see and be seen by pedestrian.

Crossing Islands



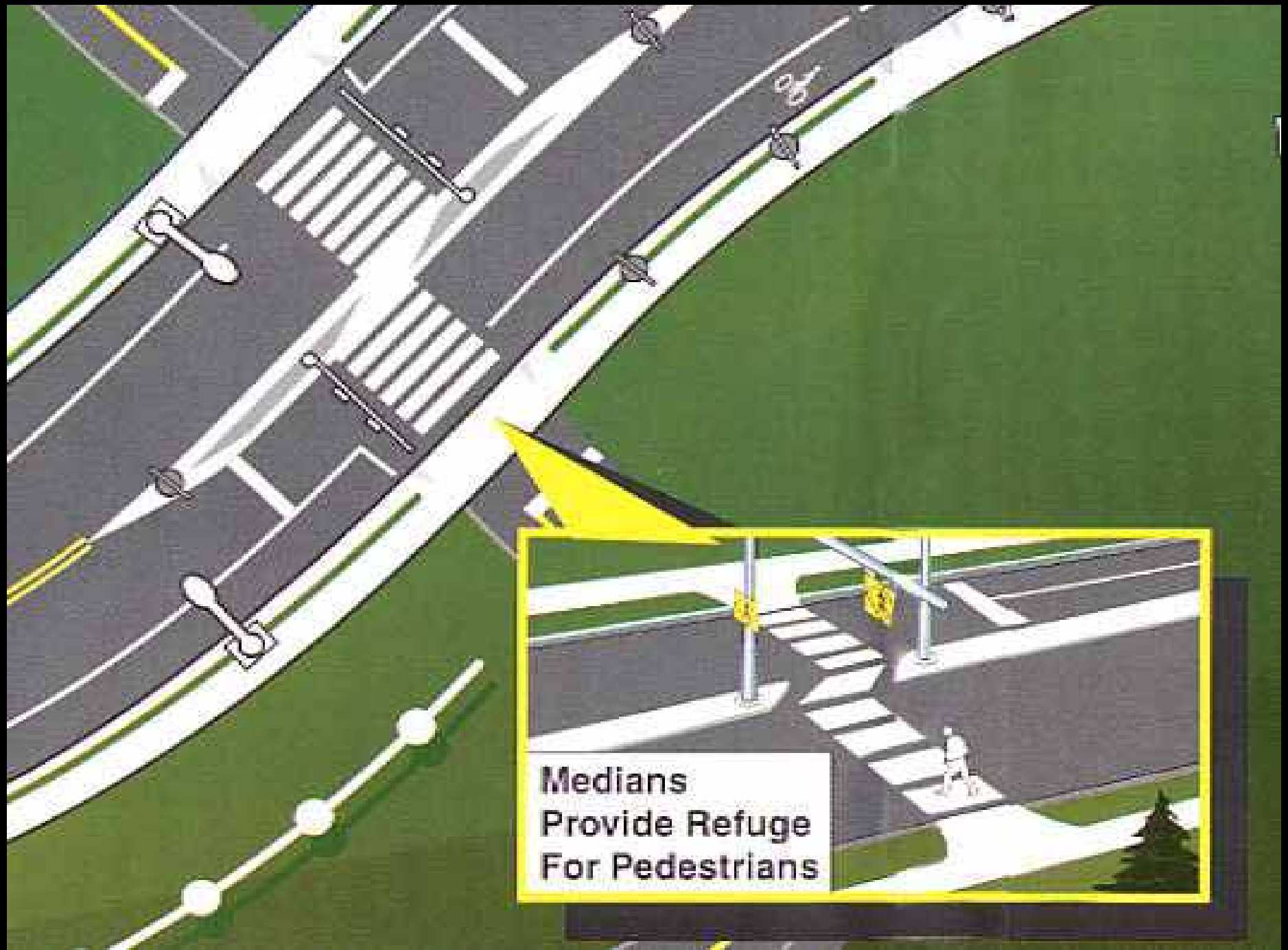


Denmark – Lower Cost Solution



Crossing Islands





**Medians
Provide Refuge
For Pedestrians**

Traffic signal goals

Mark all legs of an intersection where pedestrian crossings are desired

Pedestrian signals in all directions

Landings on all corners

Stop bars for vehicles on all approaches

Two curb ramps per corner;
eight per four-way intersection



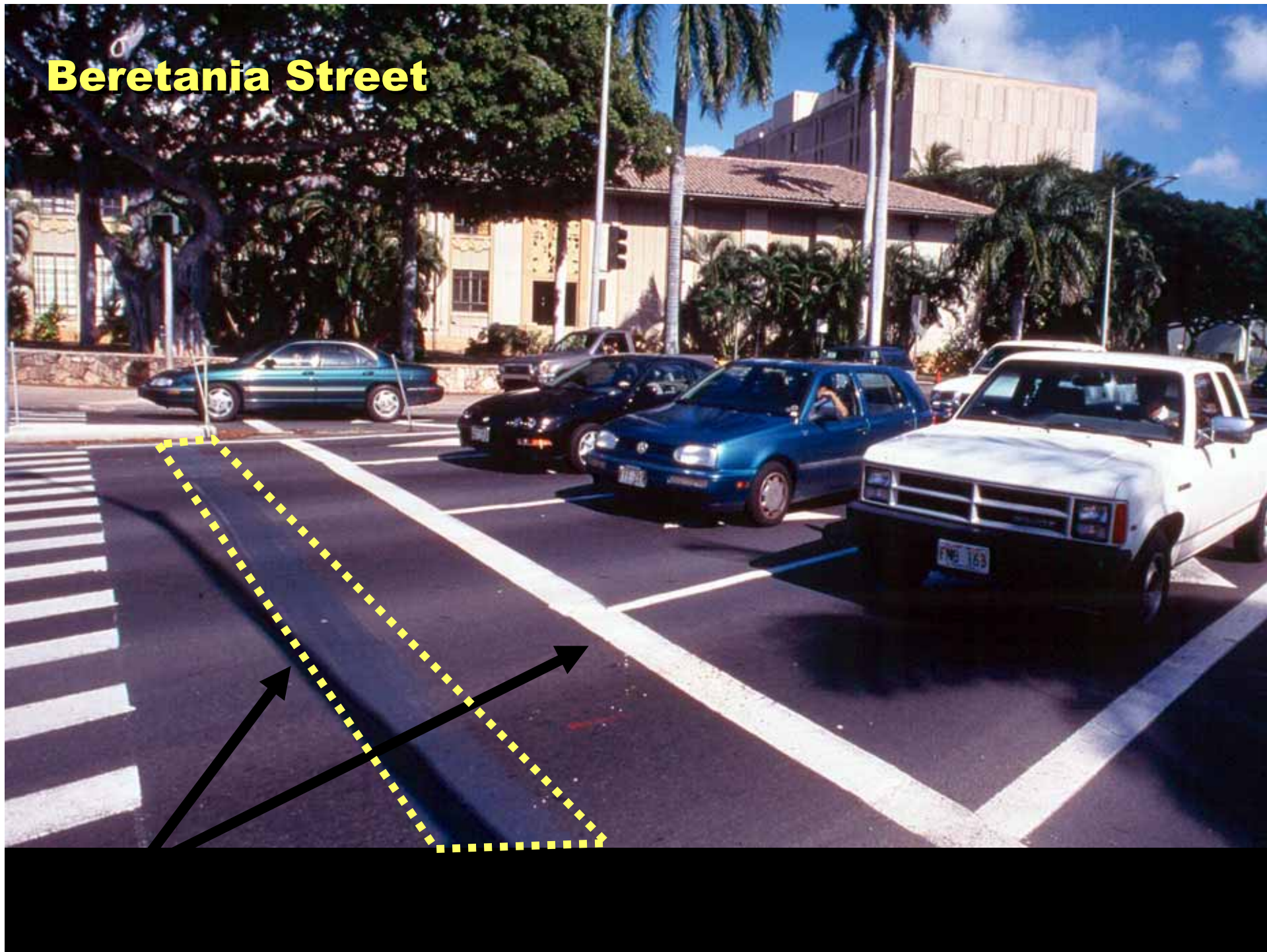
Signalized Intersections



Stop Bar Meets Standards, But Too Close



Beretania Street







Concurrent Signal



Leading Pedestrian Interval



Too many instructions means something isn't working



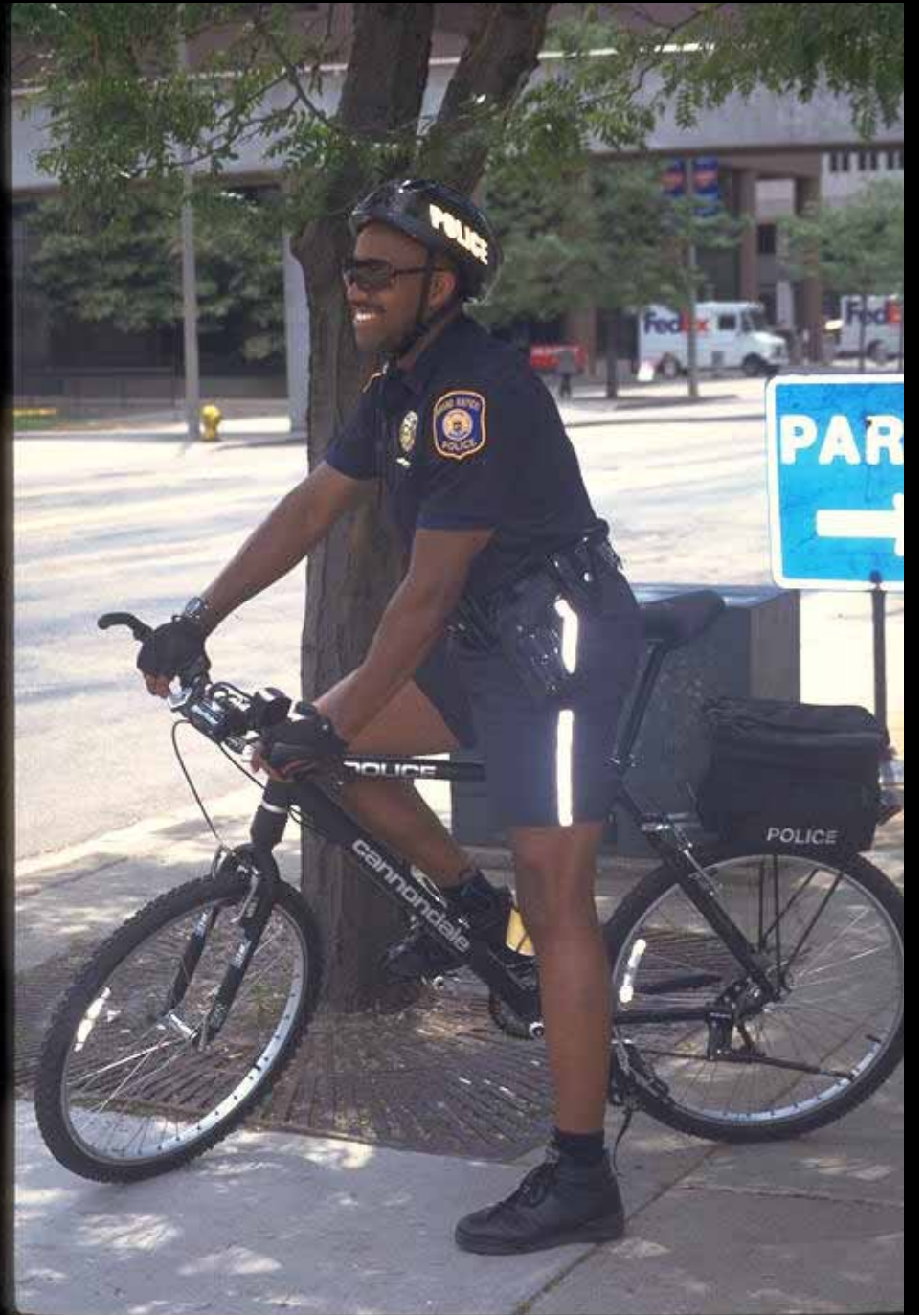
No right--turn-on-red



Countdown Signal



Countdown Signal



Blocked Intersections

The Overlooked Pedestrian Safety Issue





Pavers and bricks are hard on wheelchair users



Smooth
Center for
Wheelchairs
and Strollers





What the pedestrian sees

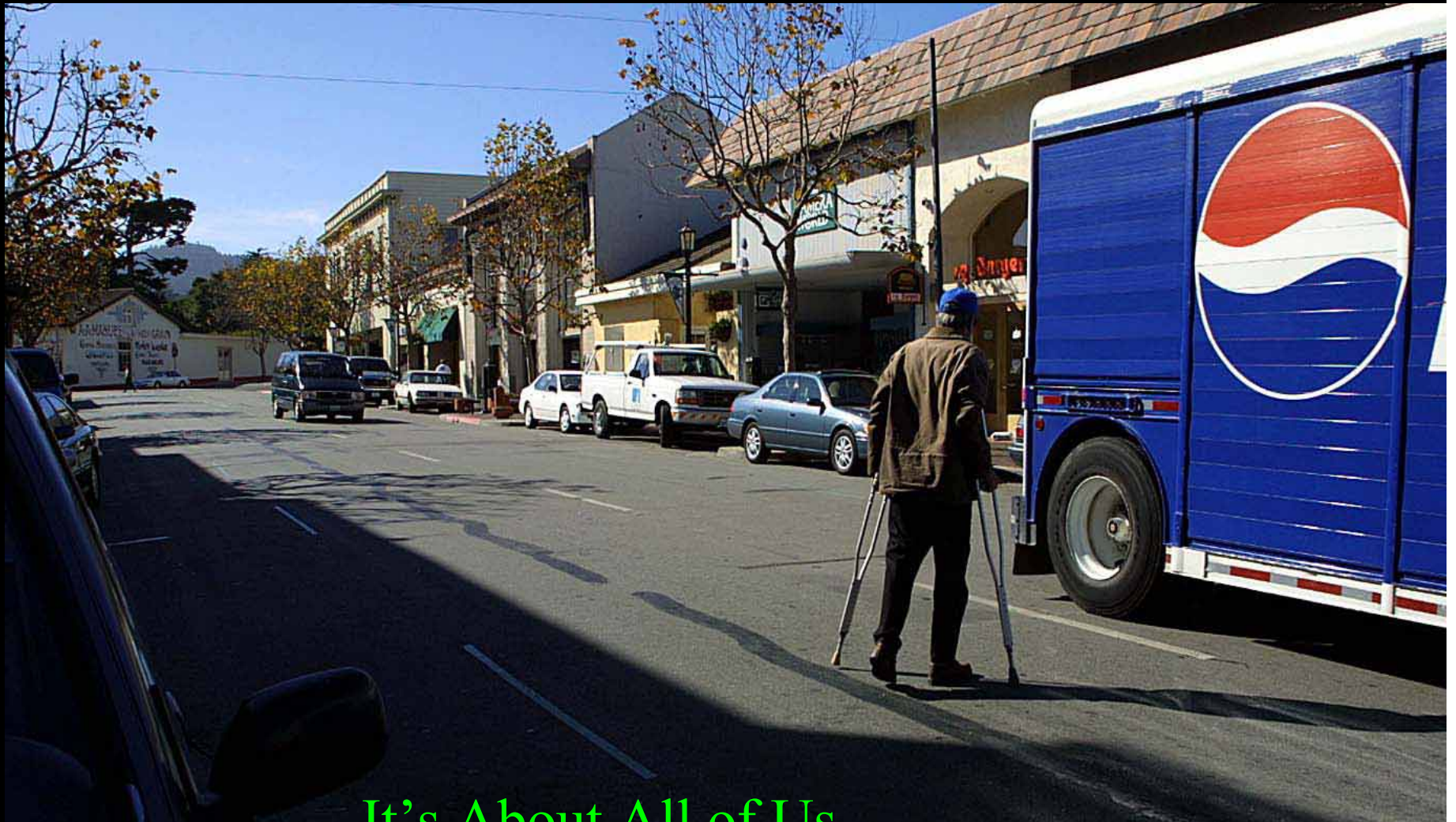


What the driver sees



How colored crosswalks can be enhanced

ADA - Universal Design



It's About All of Us

ADA - Universal Design



It's About All of Us

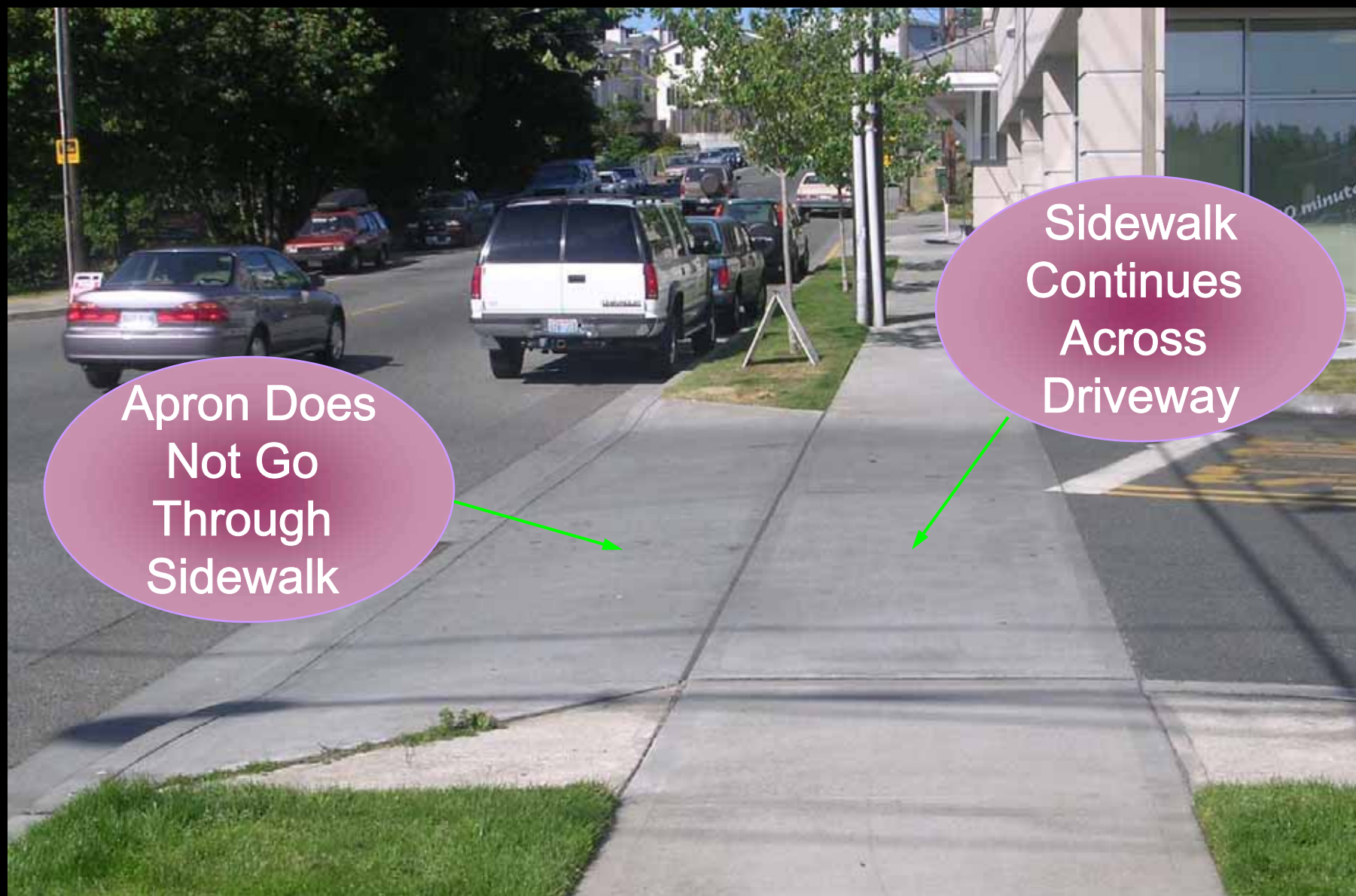
ADA Requirements



Wheelchair Accessible?

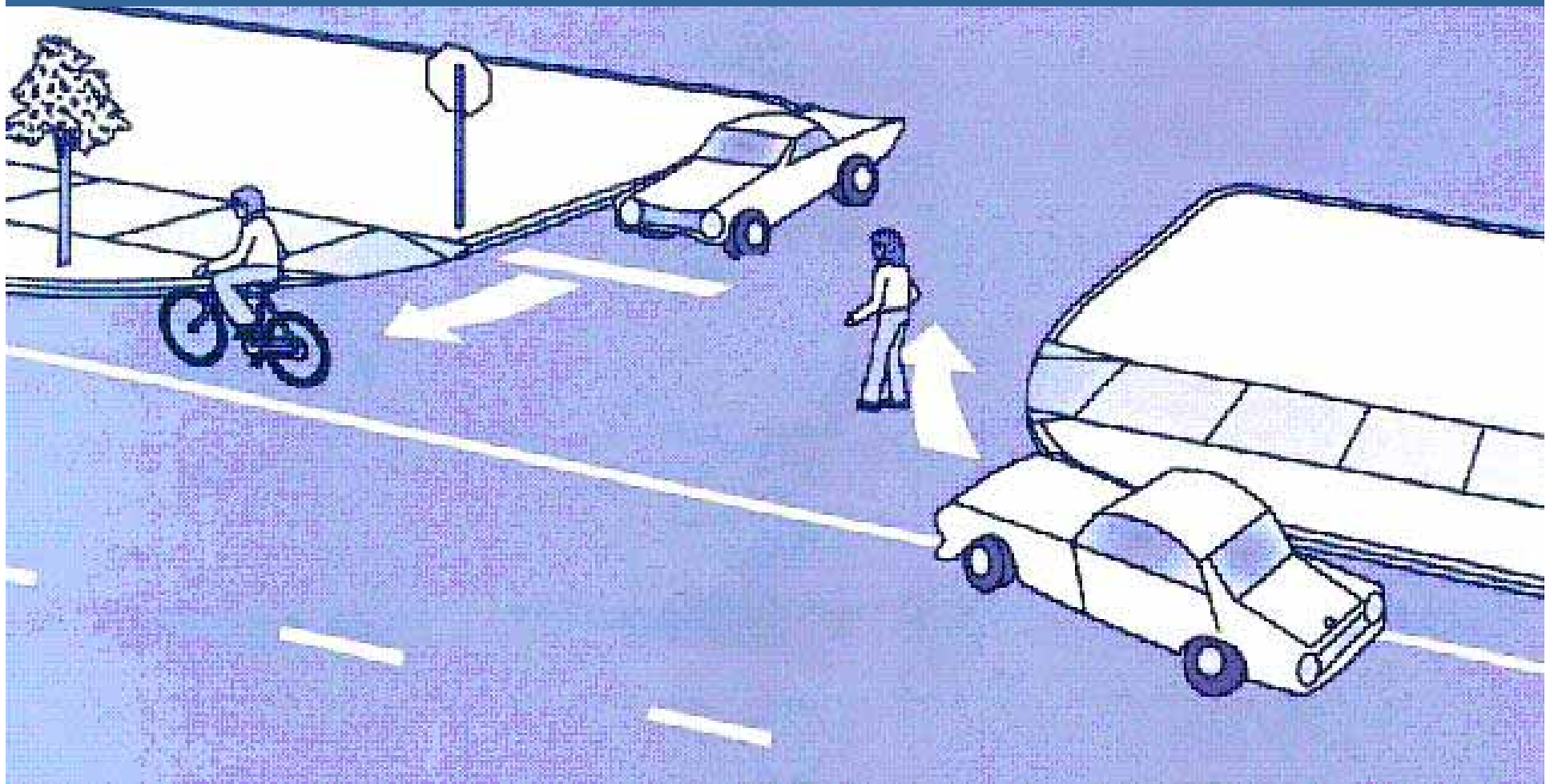


Apron Goes
Through
Sidewalk

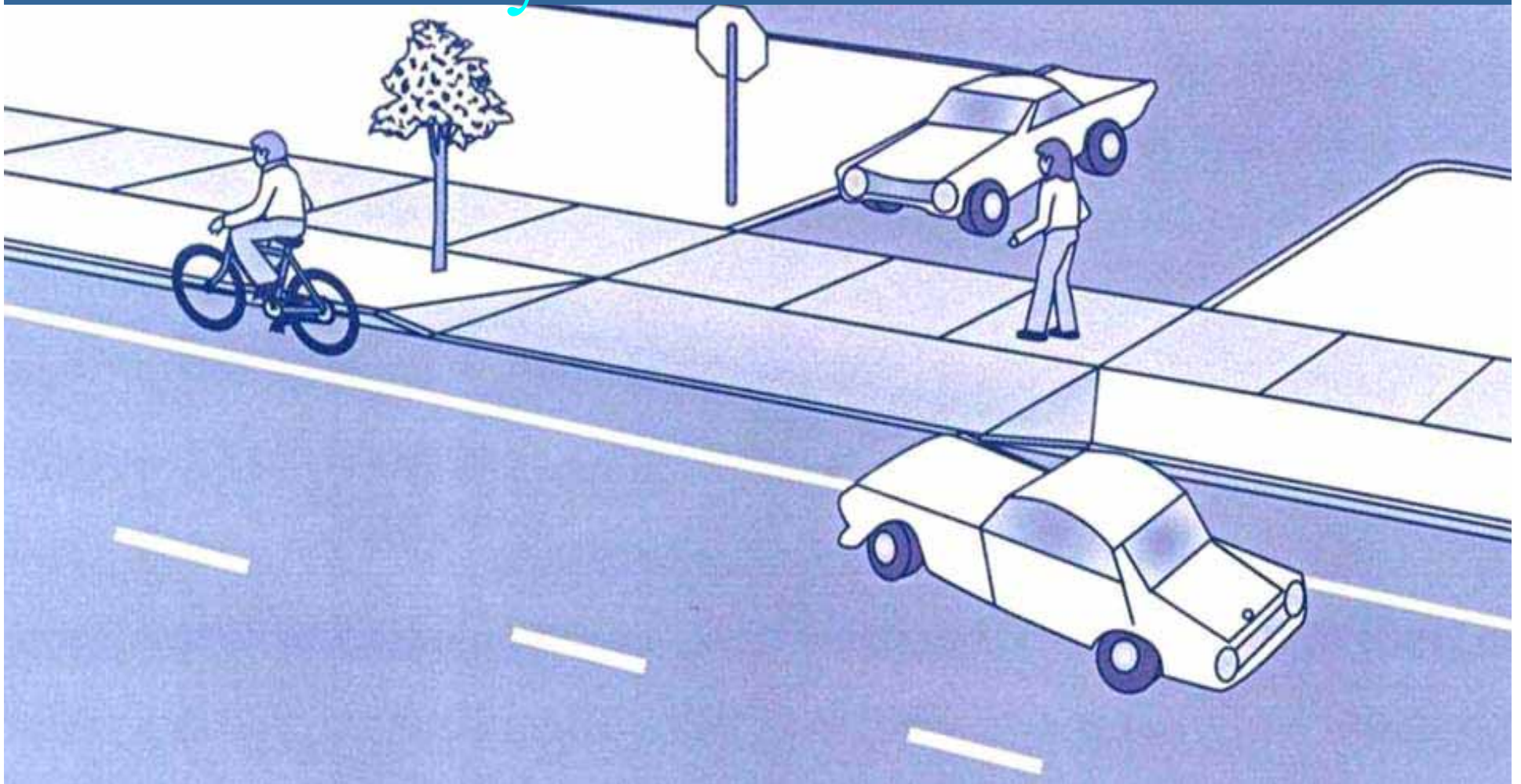


Good Engineering Invites Right Use

Don't build driveways like intersections

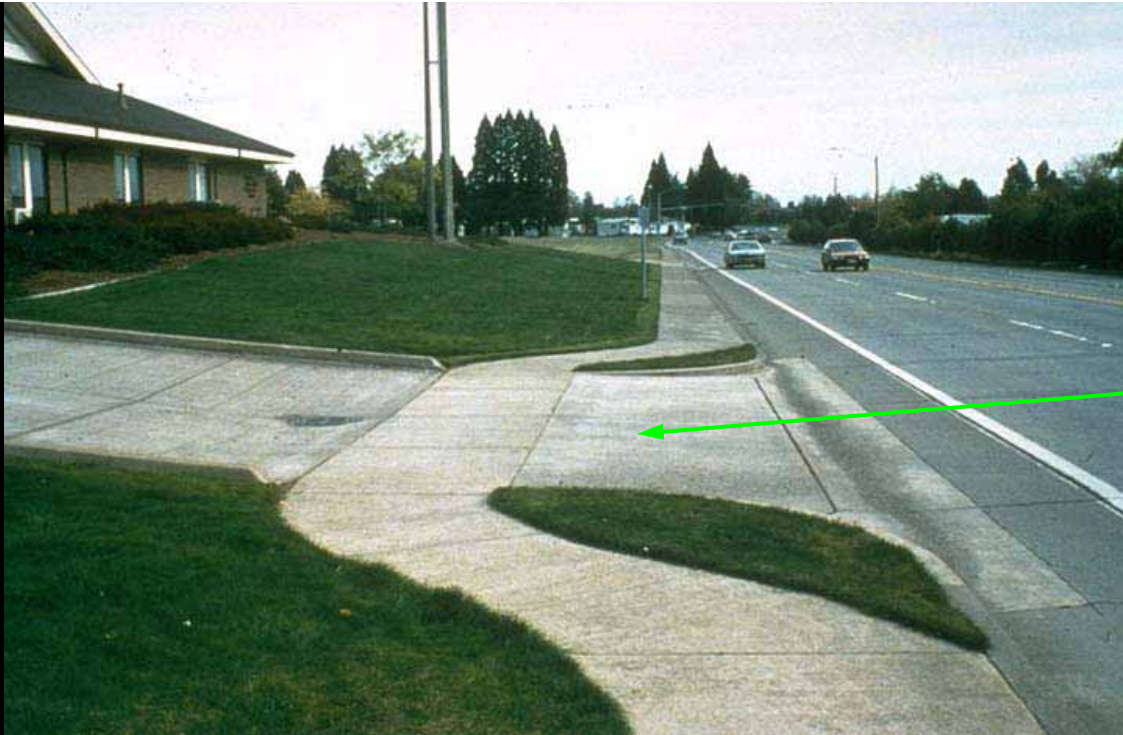


Build driveways like driveways



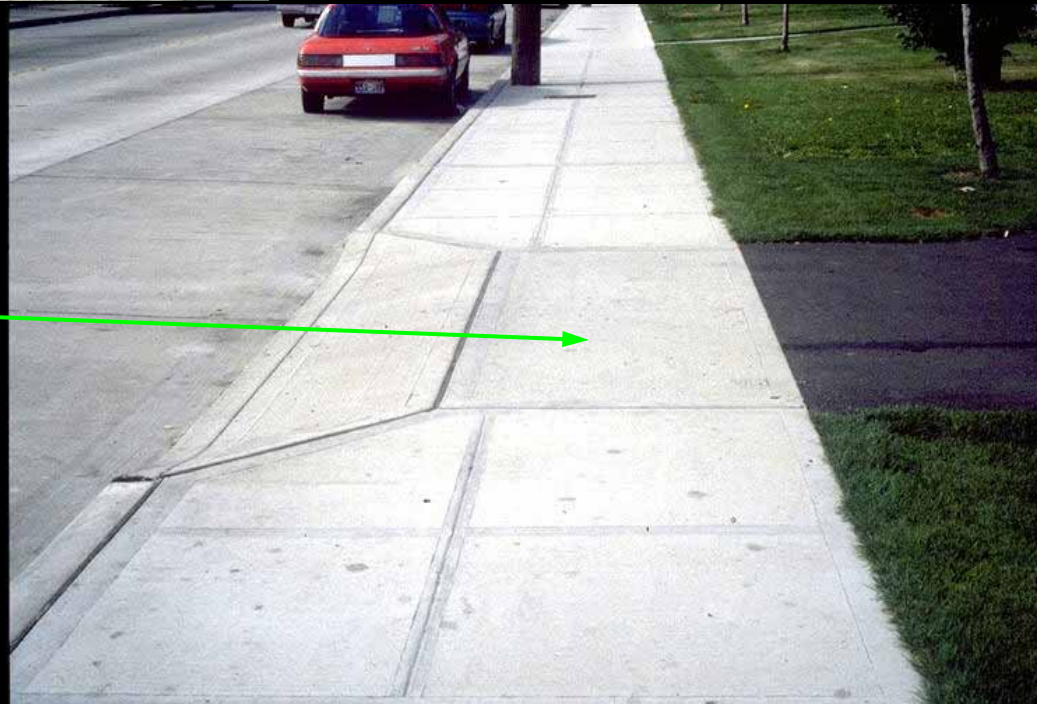


Bad Engineering Invites Wrong Behavior



Apron
Does Not
Go Through
Sidewalk

Sidewalk
Continues
Across the
Driveway



Okay When
Other Options
Don't Work





Two Ramps Per
Corner

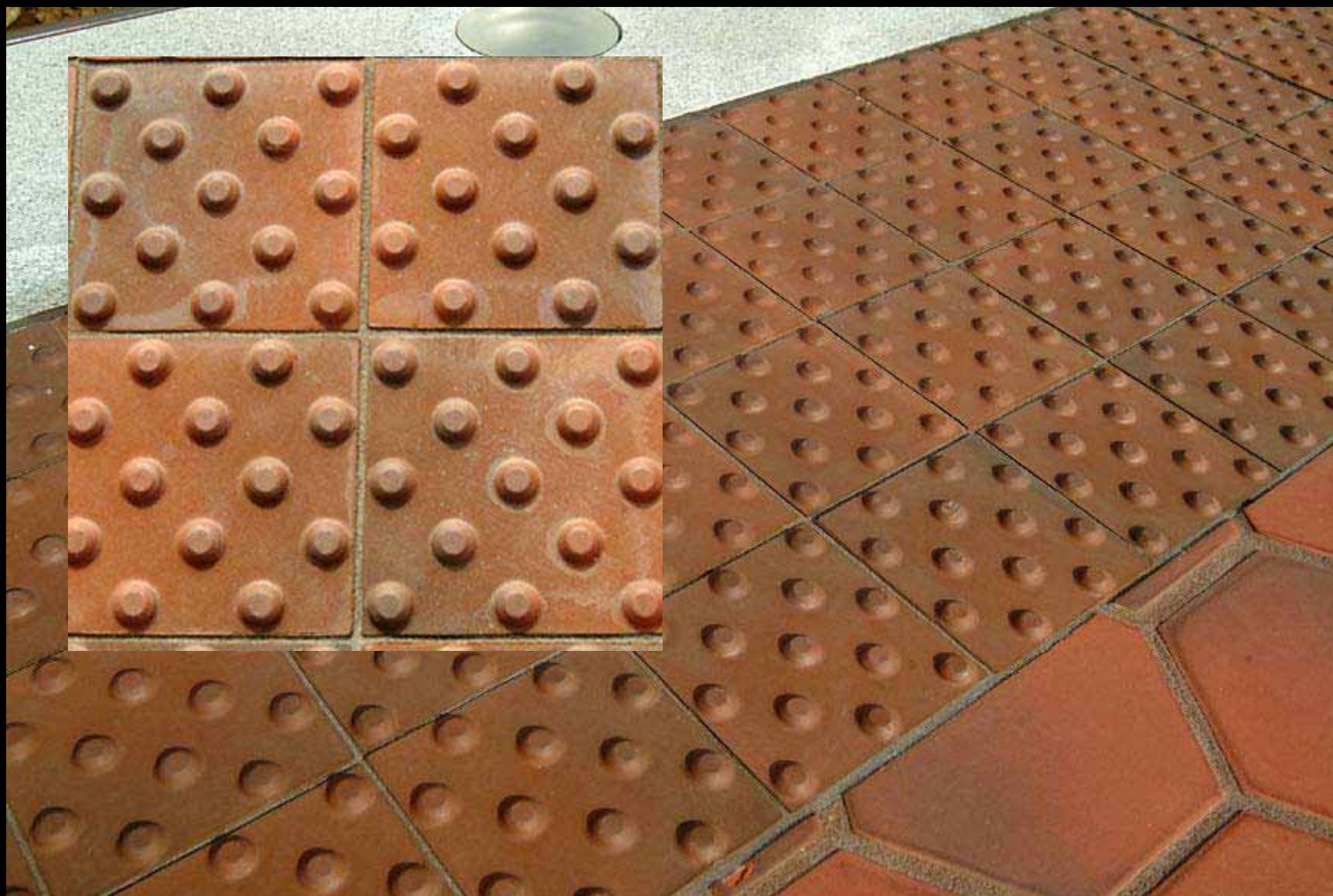
Eight Ramps Per
Intersection



Truncated Domes – 4' x 2'



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S-t-r-e-t-c-h



Oops!



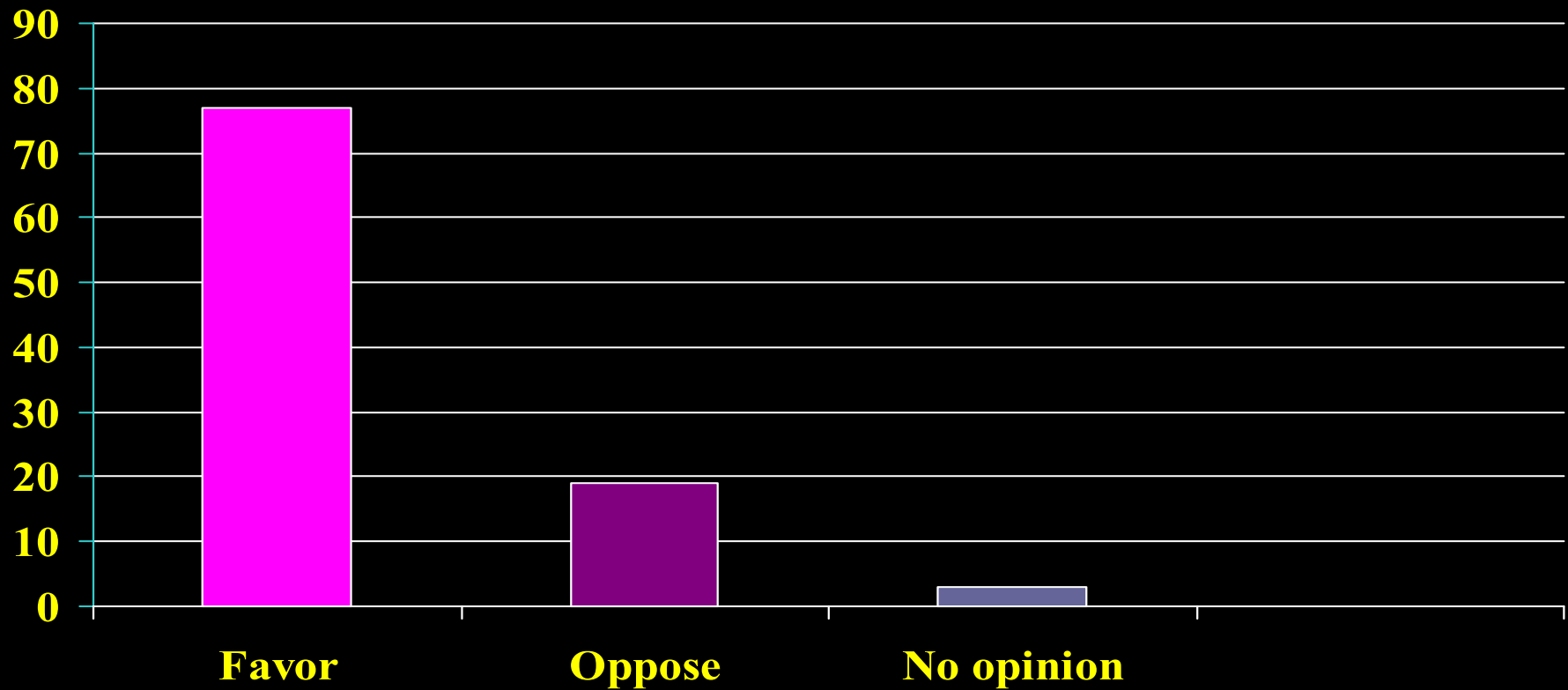
Curbs Okay
Next to
Landscaping



Obstacle Course



Americans favor spending more on sidewalks even if it means spending less on highways



*Source: Belden Russonello &
Stewart Poll, September 2000*



Poor Design - Safety Compromised

II. Getting Across the Street Intersections & Crosswalks





Up to 30% of
Residents in Your
Community Do
Not Have Direct
Access to an
Automobile

Speed feedback signs



Would you want
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Crossing Major Streets



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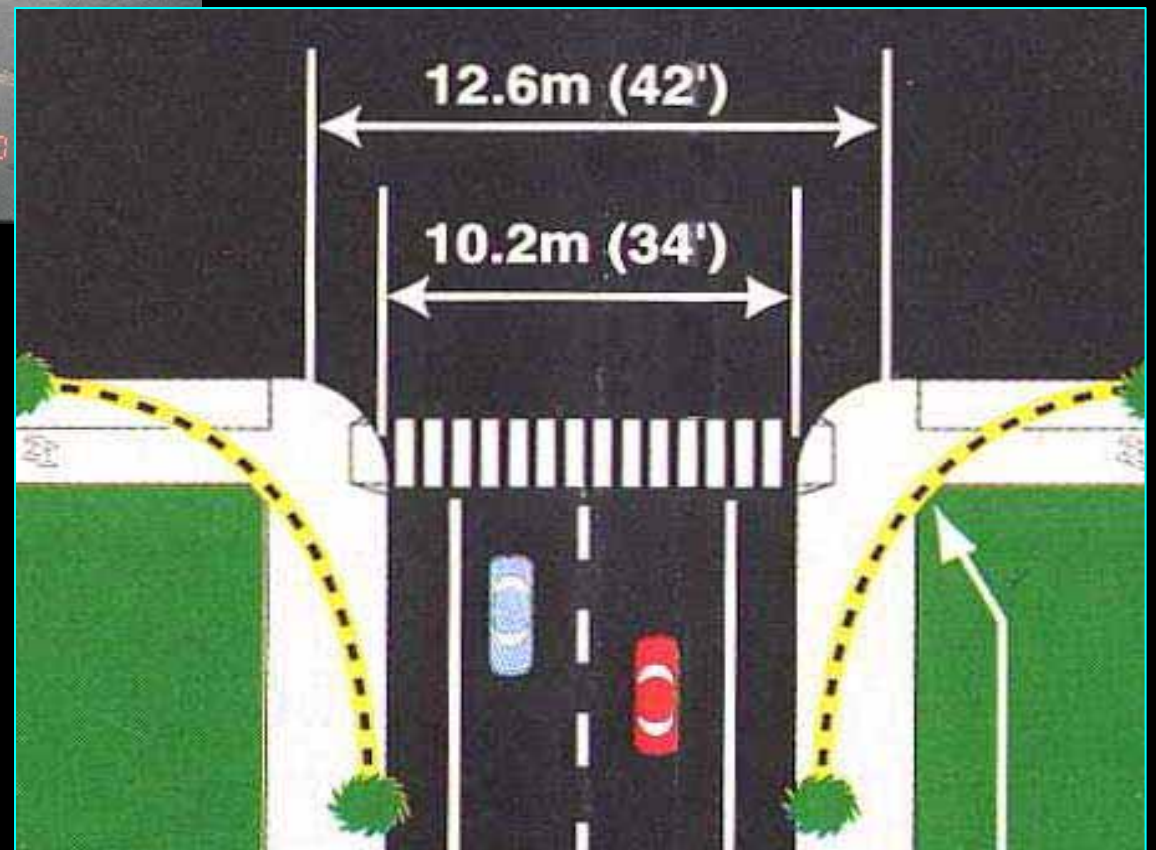
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Pedestrian crossing signs

Old way:



Advance

At the xwalk

Pedestrian crossing signs

New way:



Advance



At the xwalk

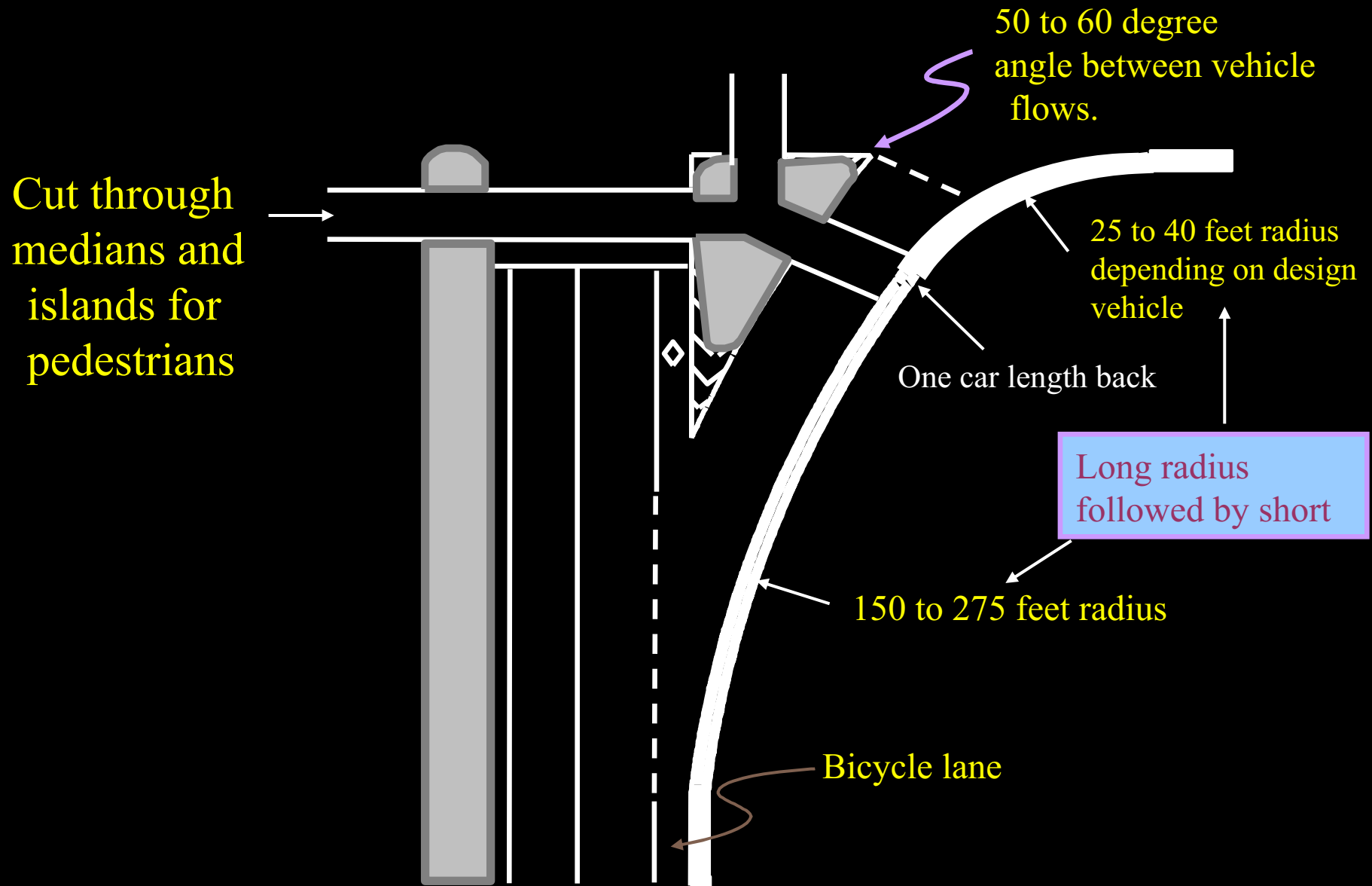


New way

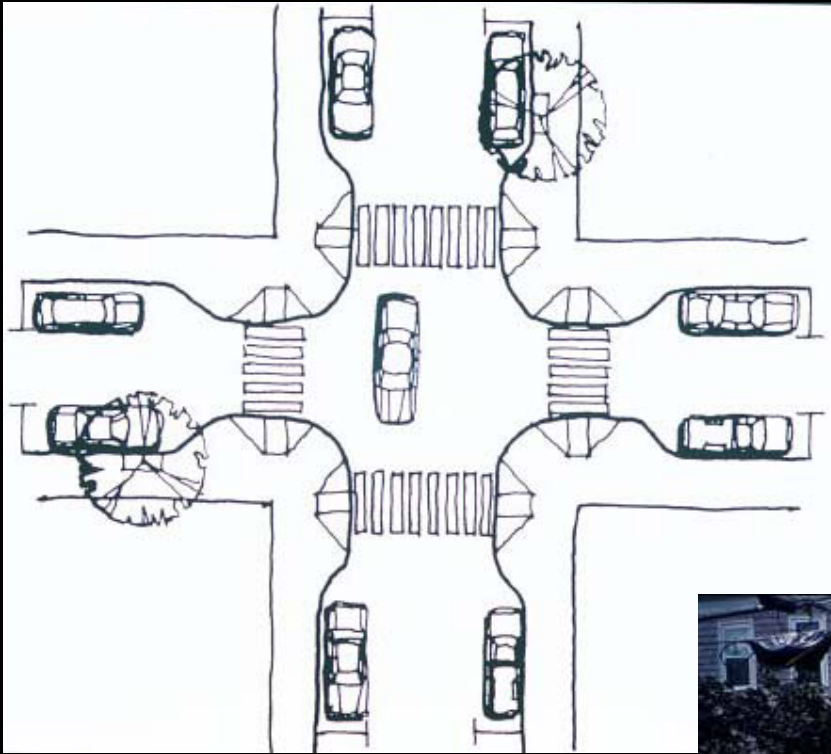
School crossing signs: new color increases visibility



RIGHT-TURN SLIP LANE



Curb Extensions





Seattle, Wa.

Kalamazoo, Mi.

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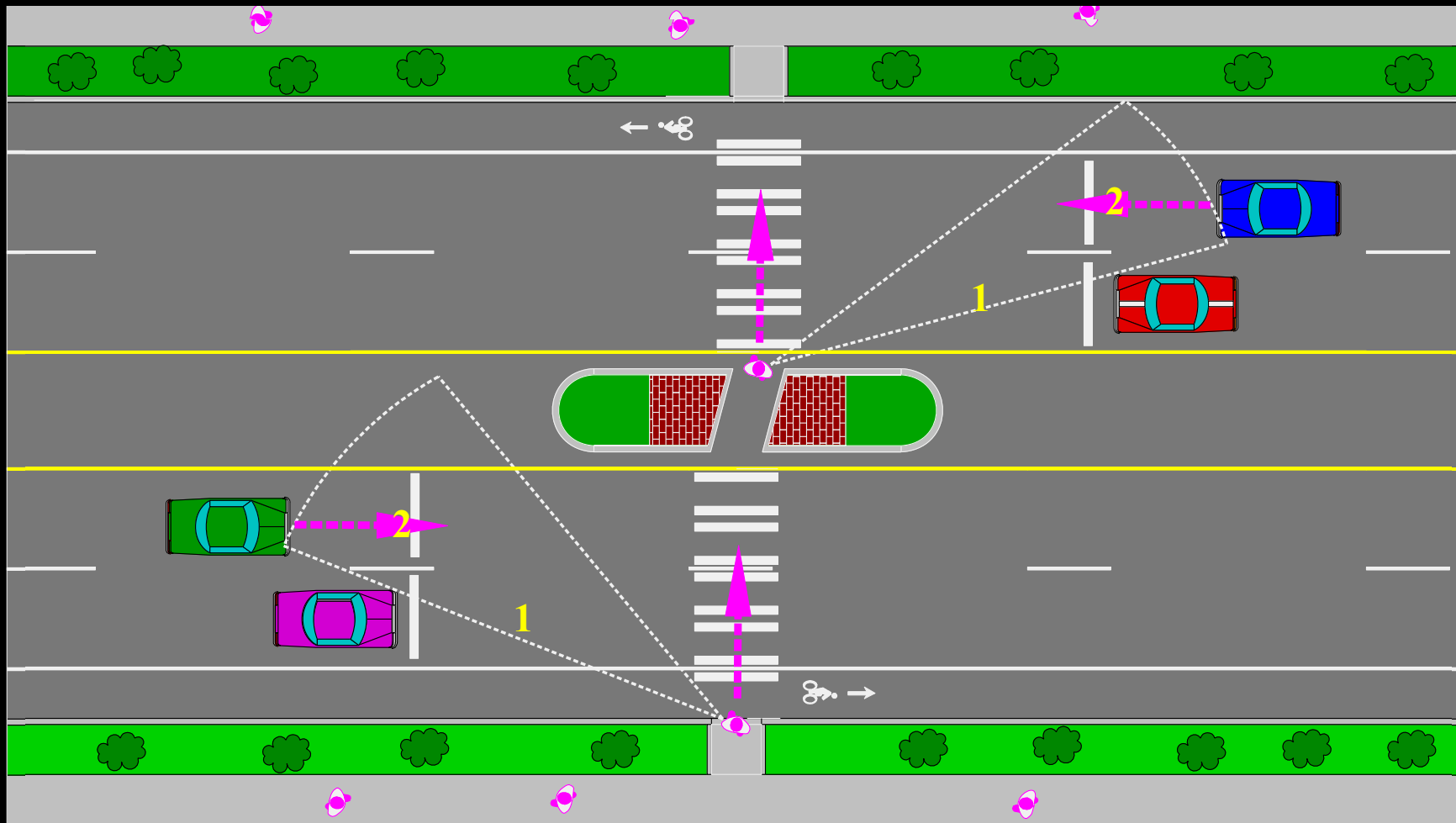
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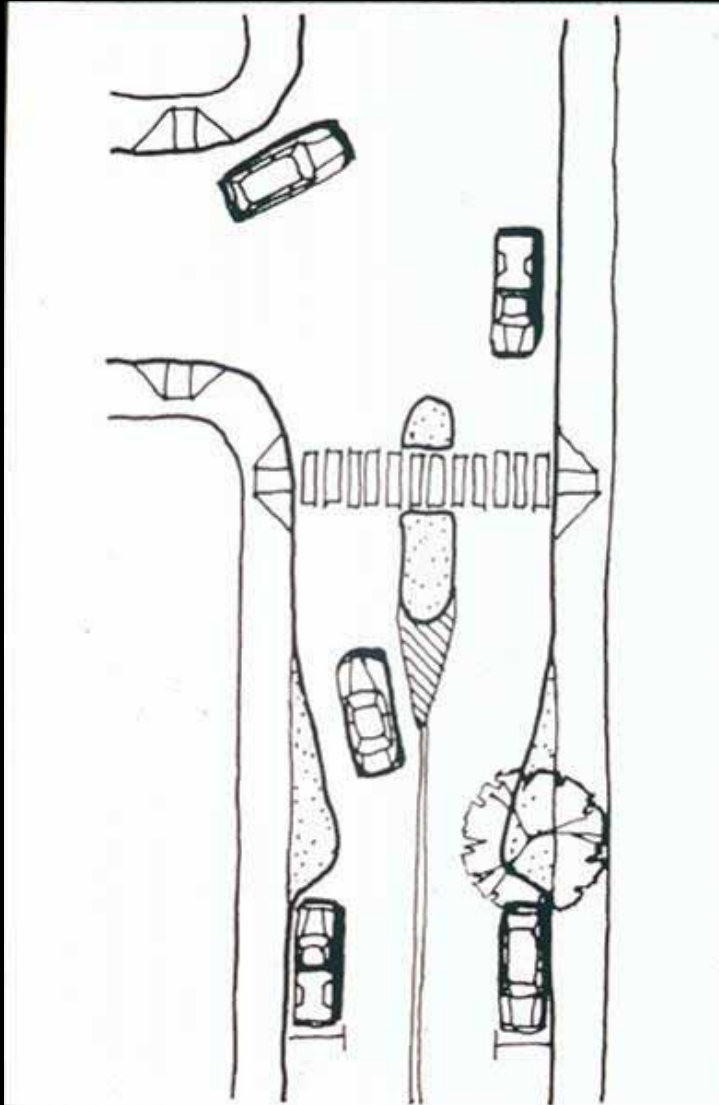
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