

*Stand by:*

The future is coming...

# Energizing Main Street



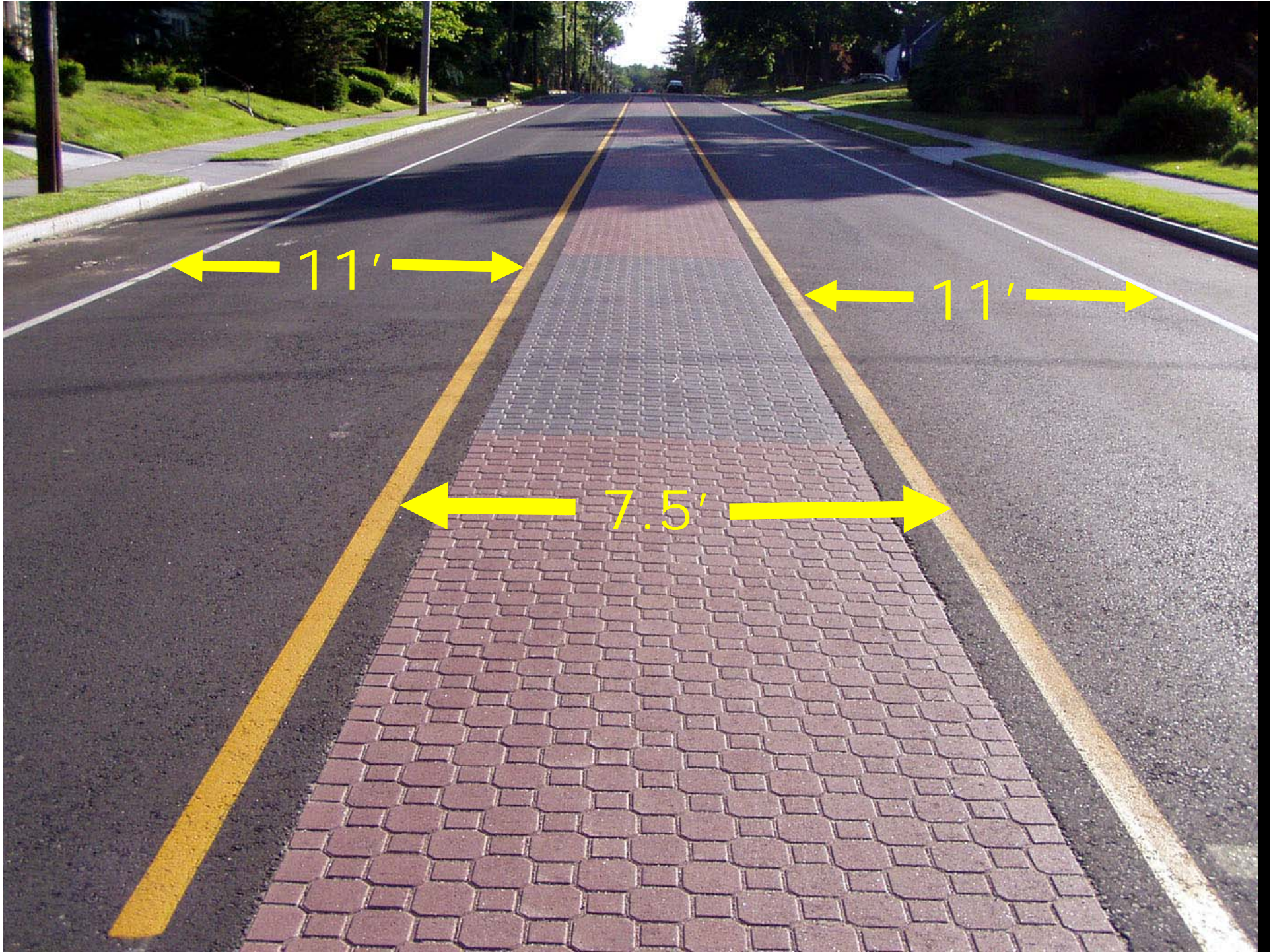
**Sponsors:**

**New Hampshire Main Street Program**

**Dover Main Street Program**

**September, 2003**

**Dan Burden, Walkable Communities, Inc.**

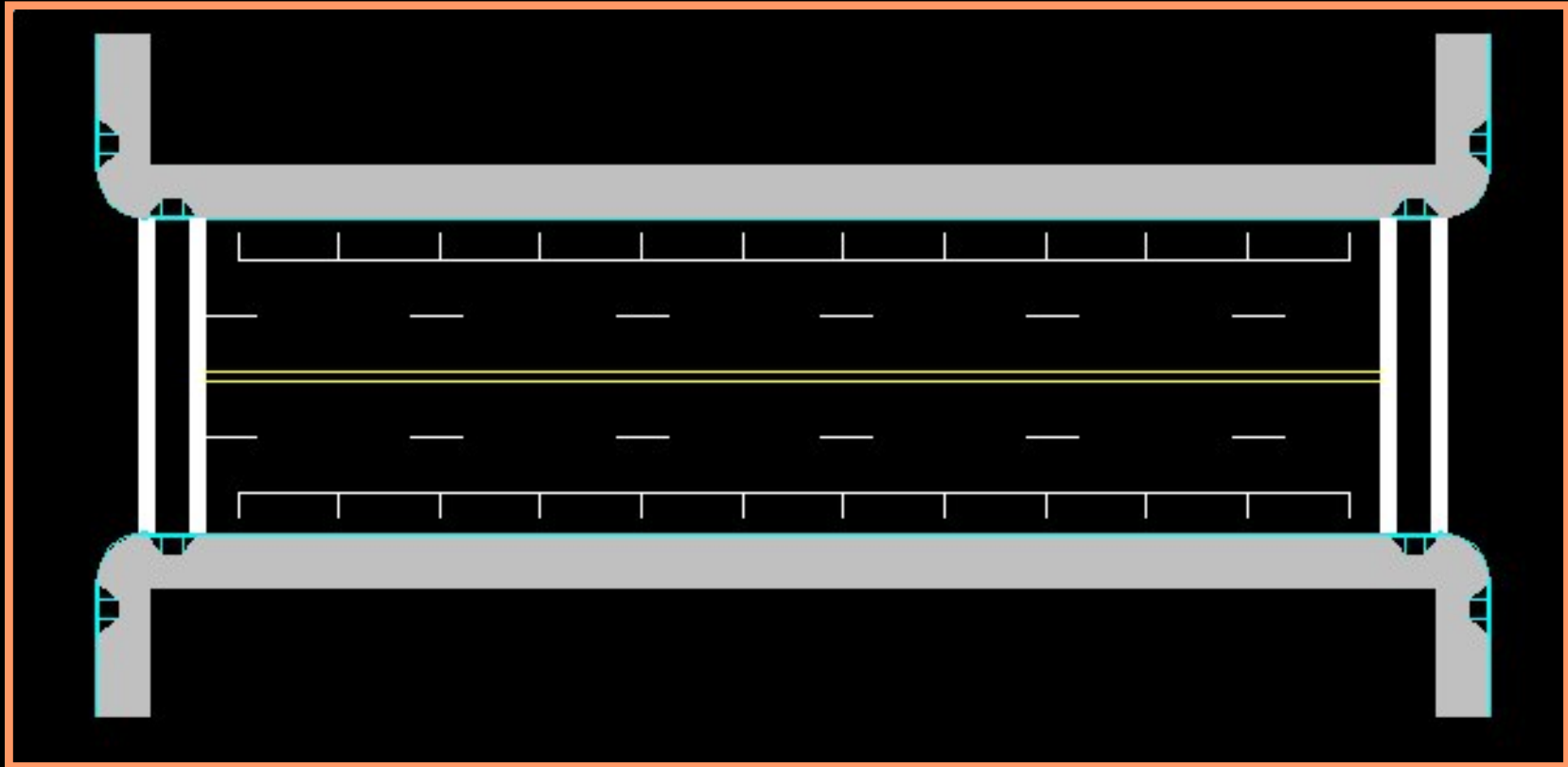


← 11' →

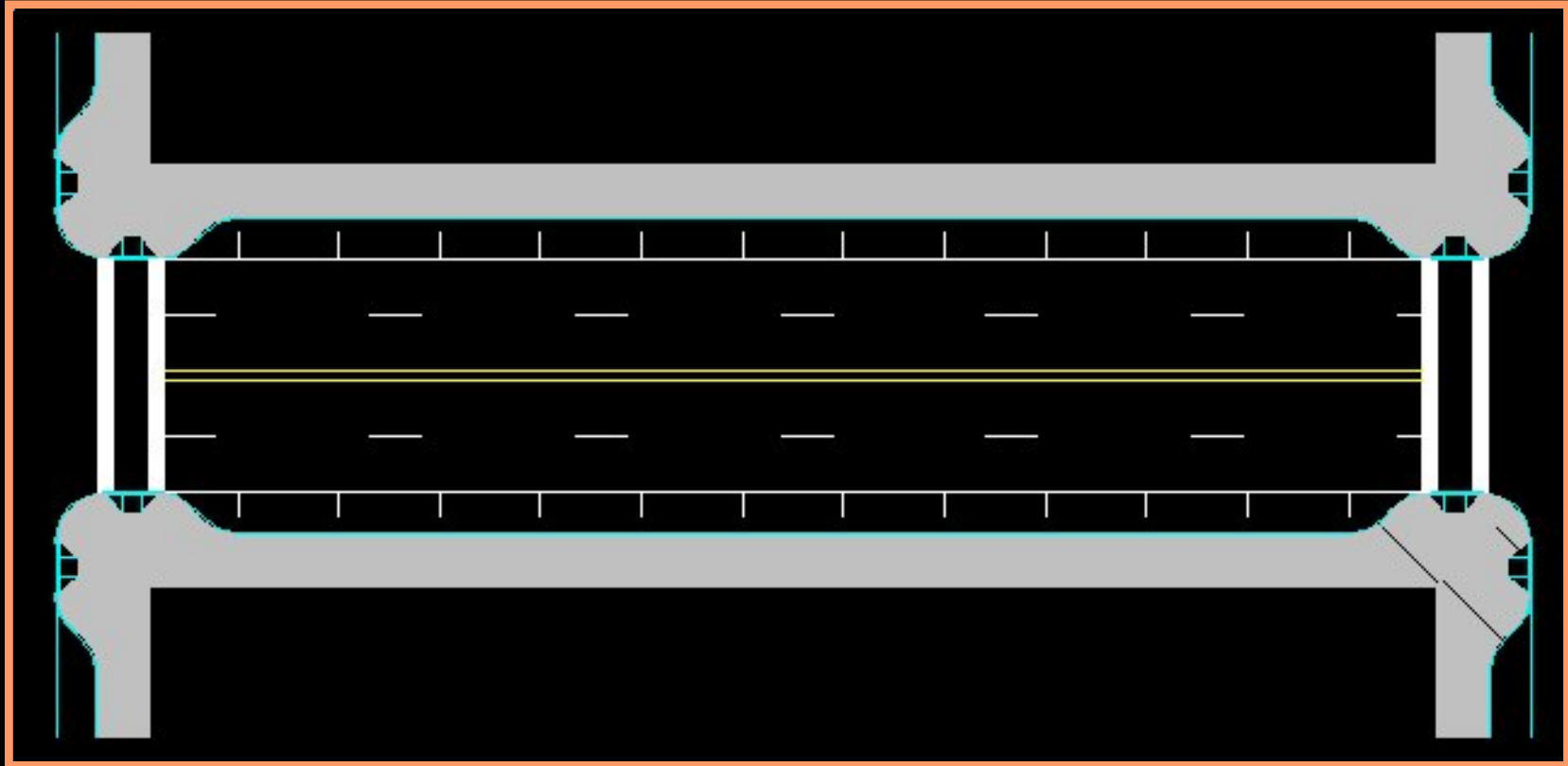
← 11' →

← 7.5' →

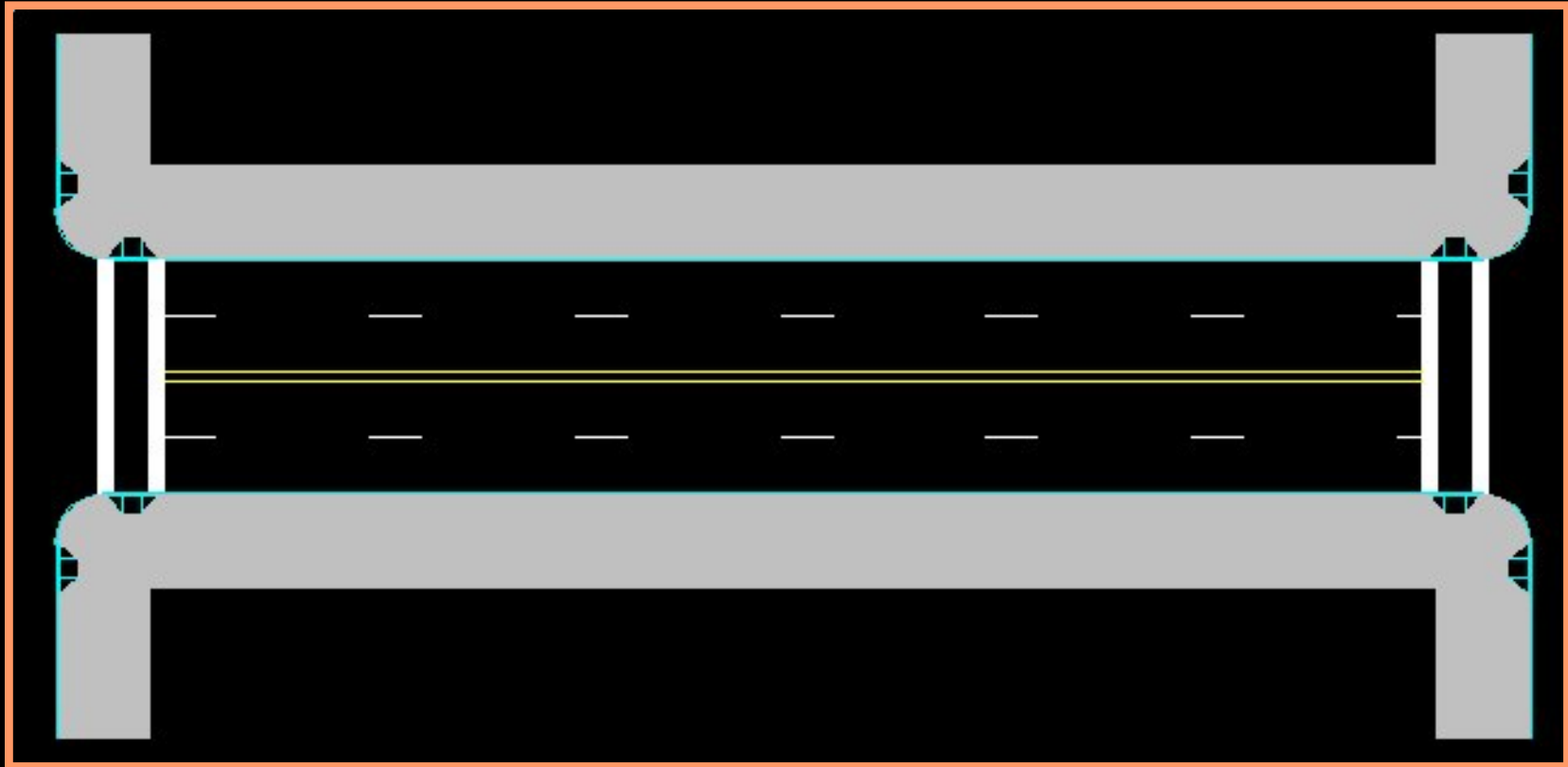
**Consider curb extensions the norm...**



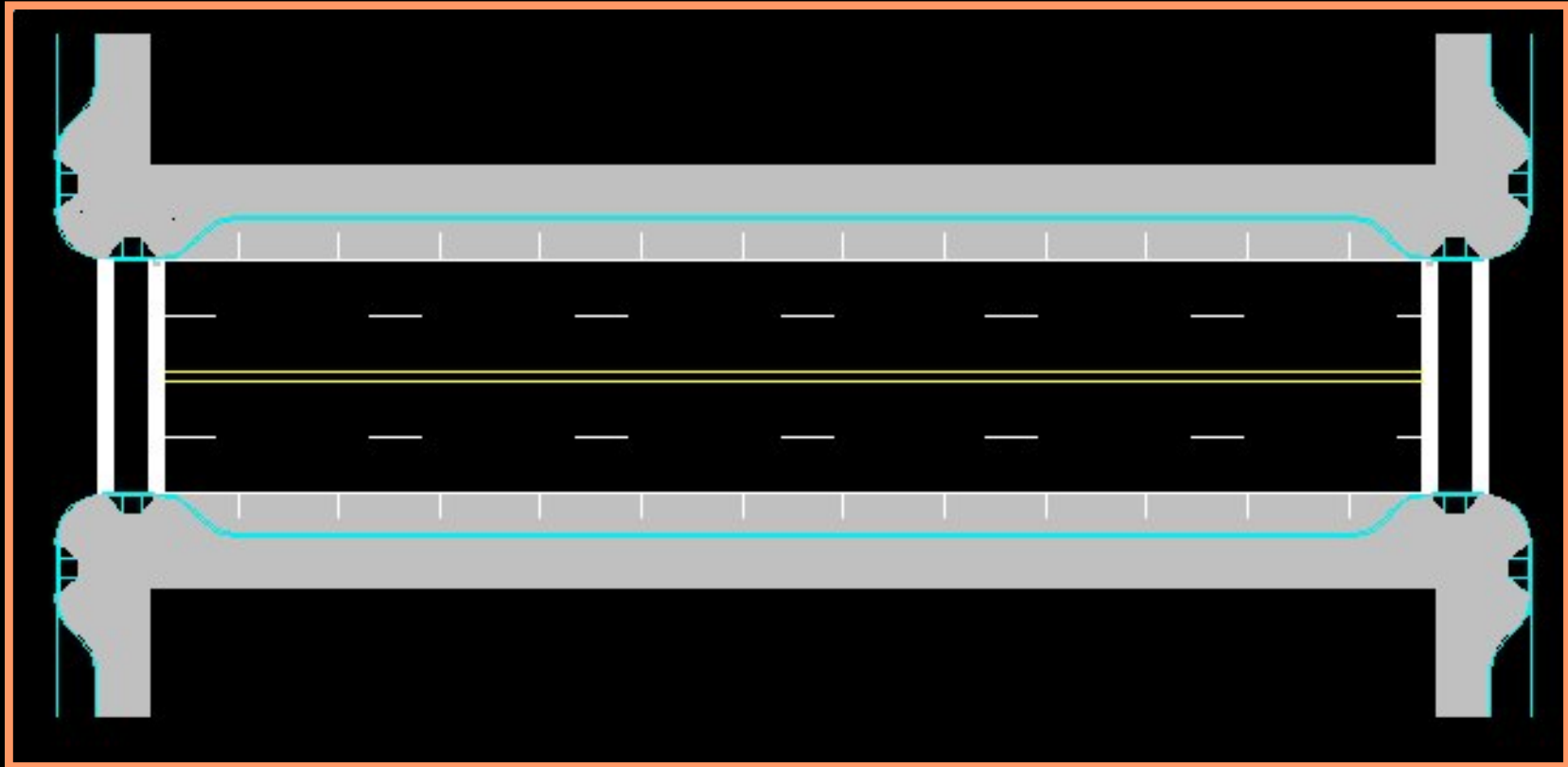
**... not something you add to a street**



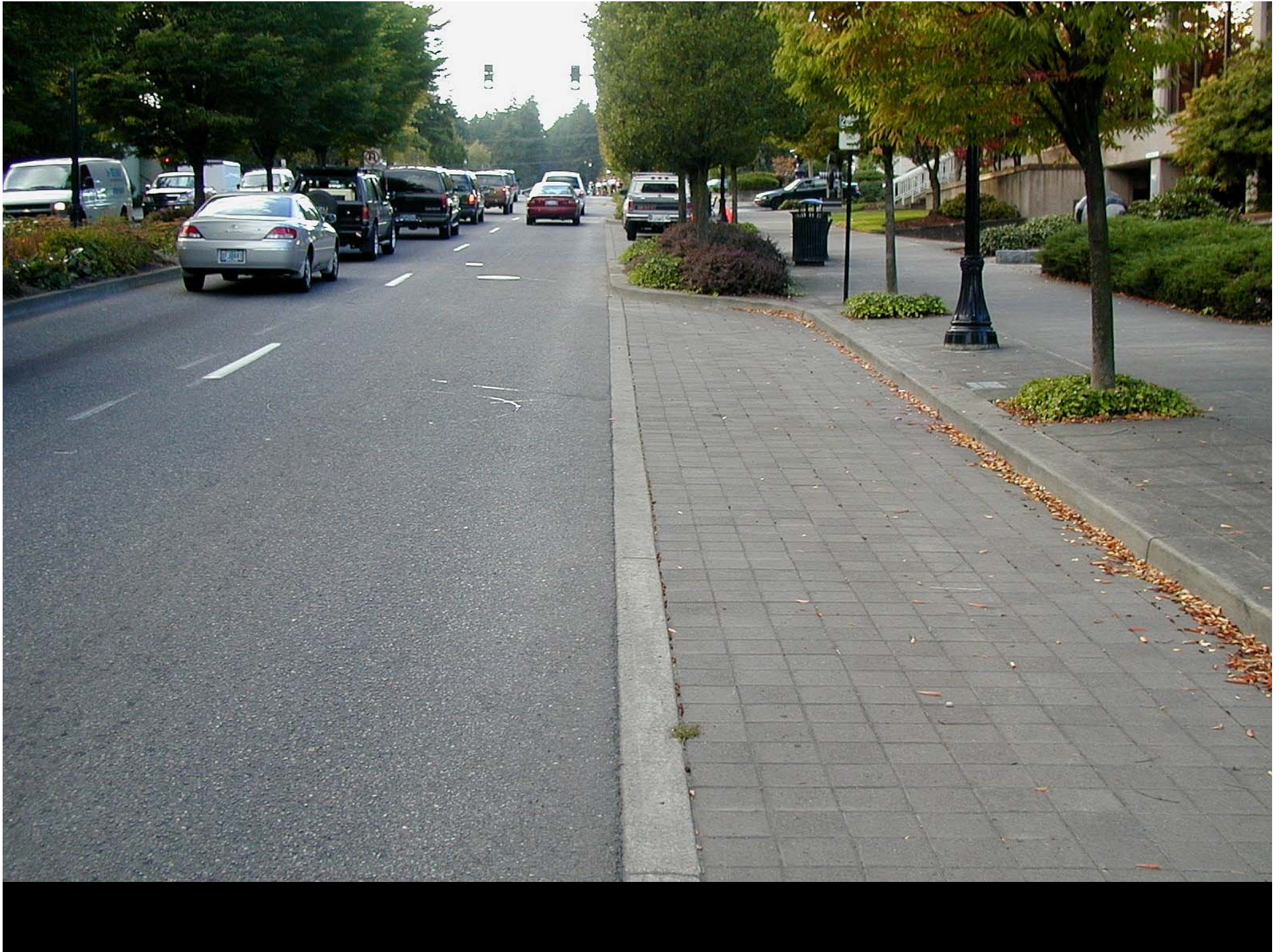
**What would the street look like  
without on-street parking?**



**Now think of parking as the bonus!**



*Tada! Look like curb extensions...*









**Abacoa Downtown**



22  
Feet



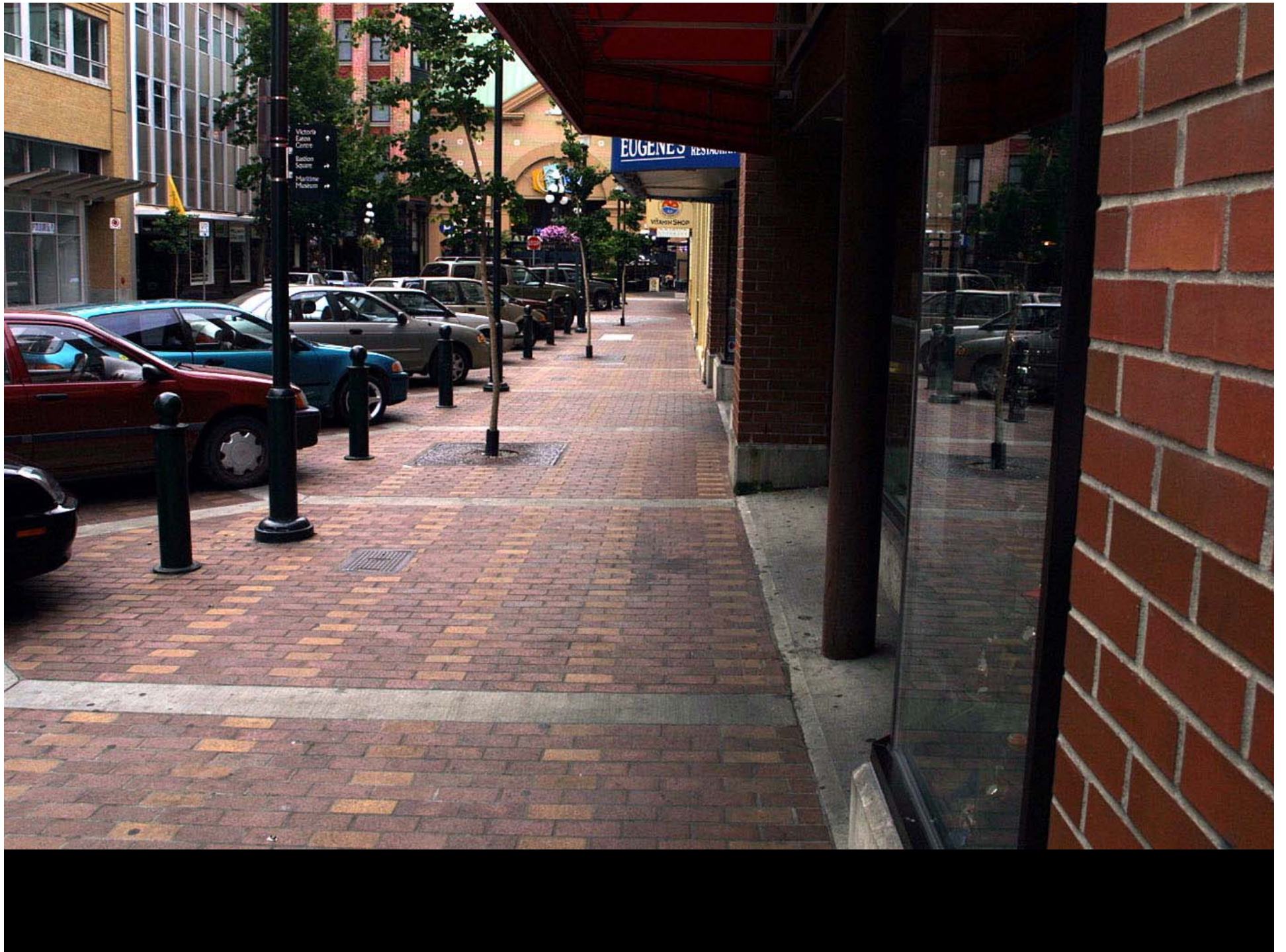
7 Feet

10 Feet

16 Feet



Victoria, British Columbia

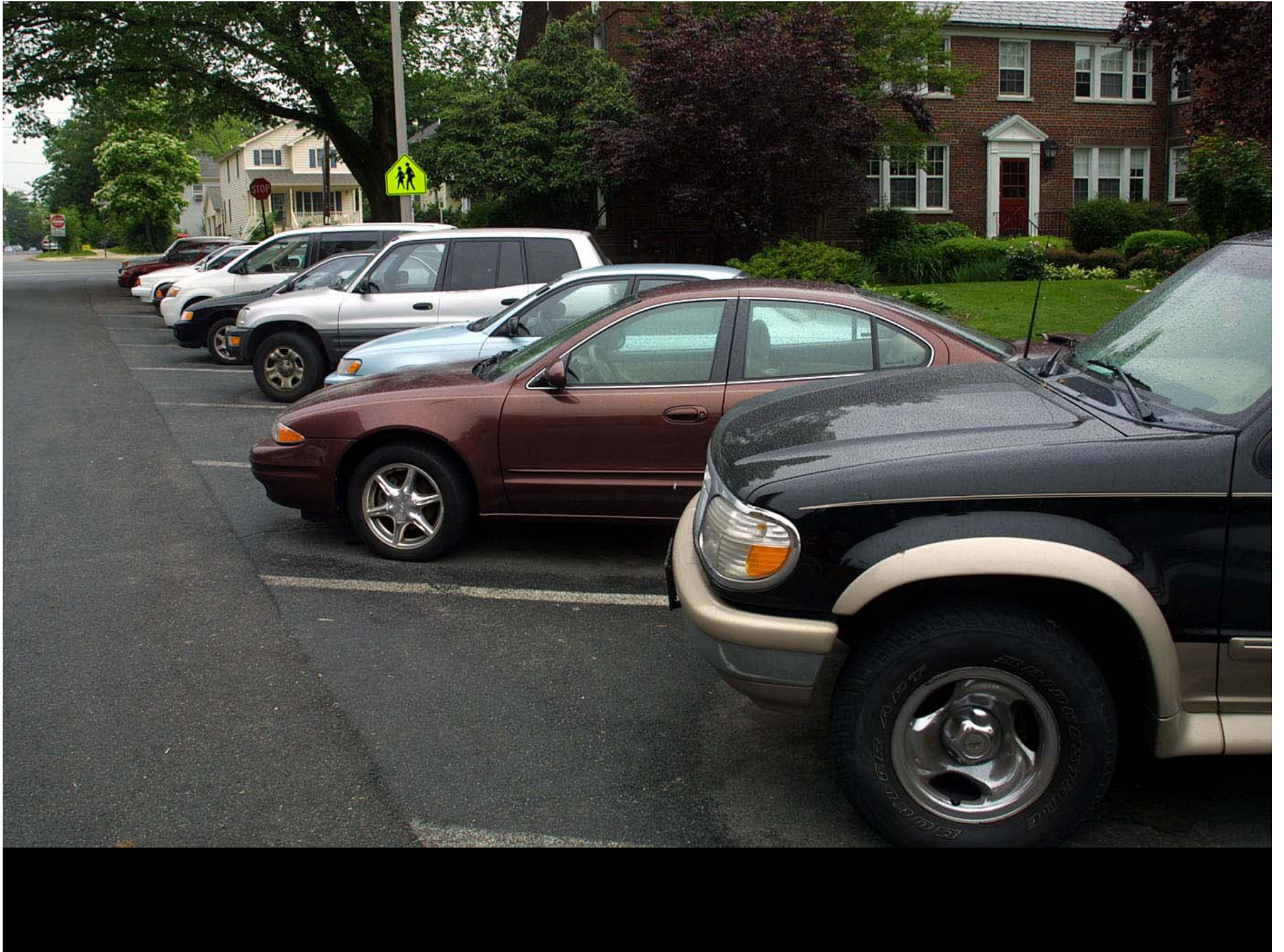




San Francisco, California







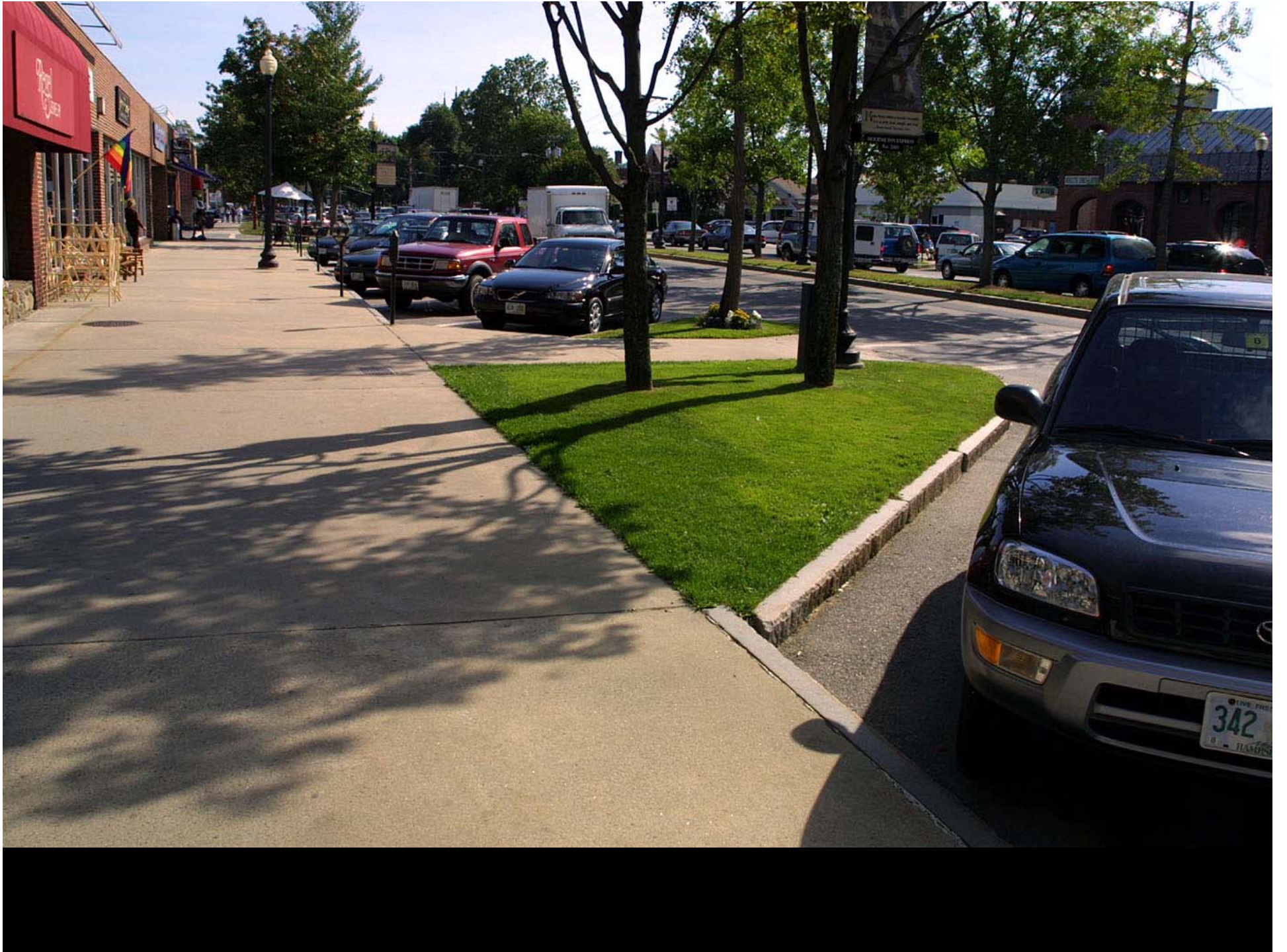


















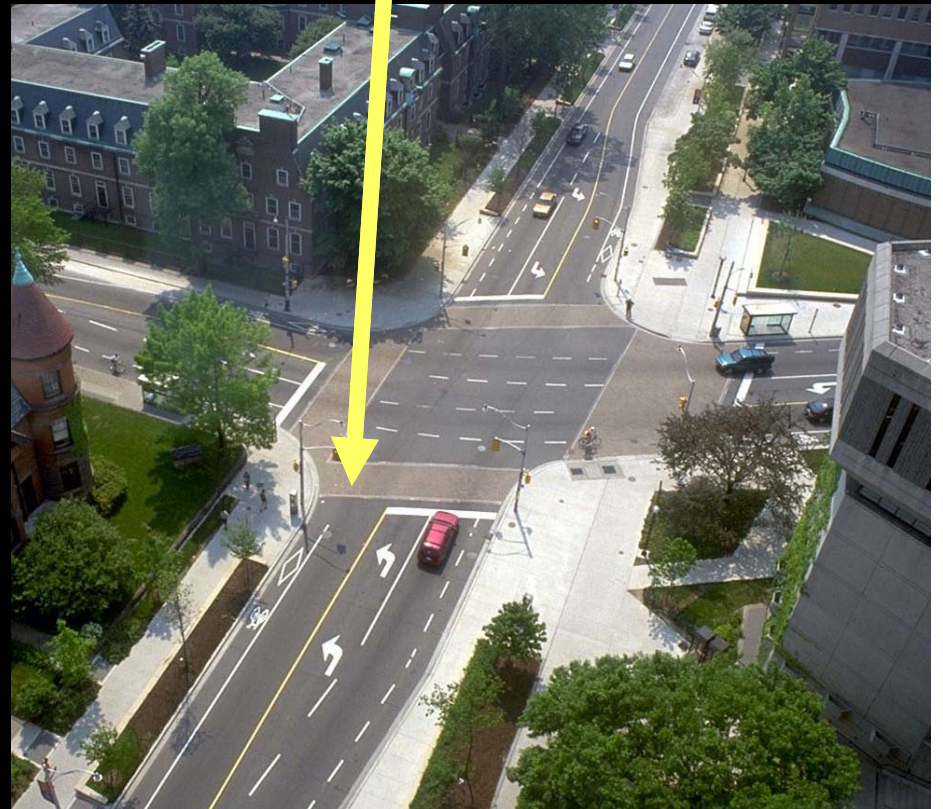


# Road Diets



**1800 vehicles  
per hour  
per lane**

**800 vehicles per hour  
Per lane**

















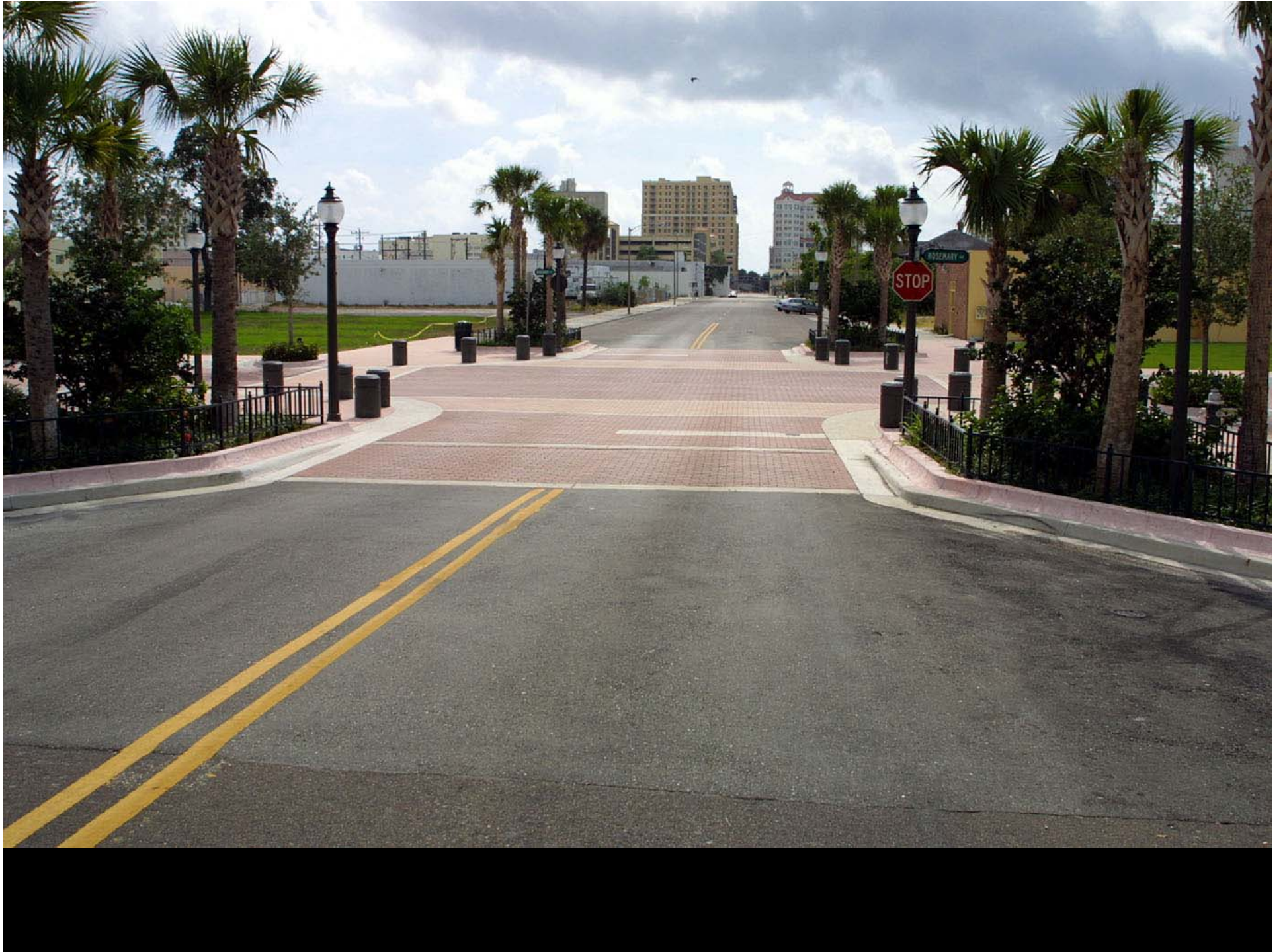
Asylum Avenue Near Prospect

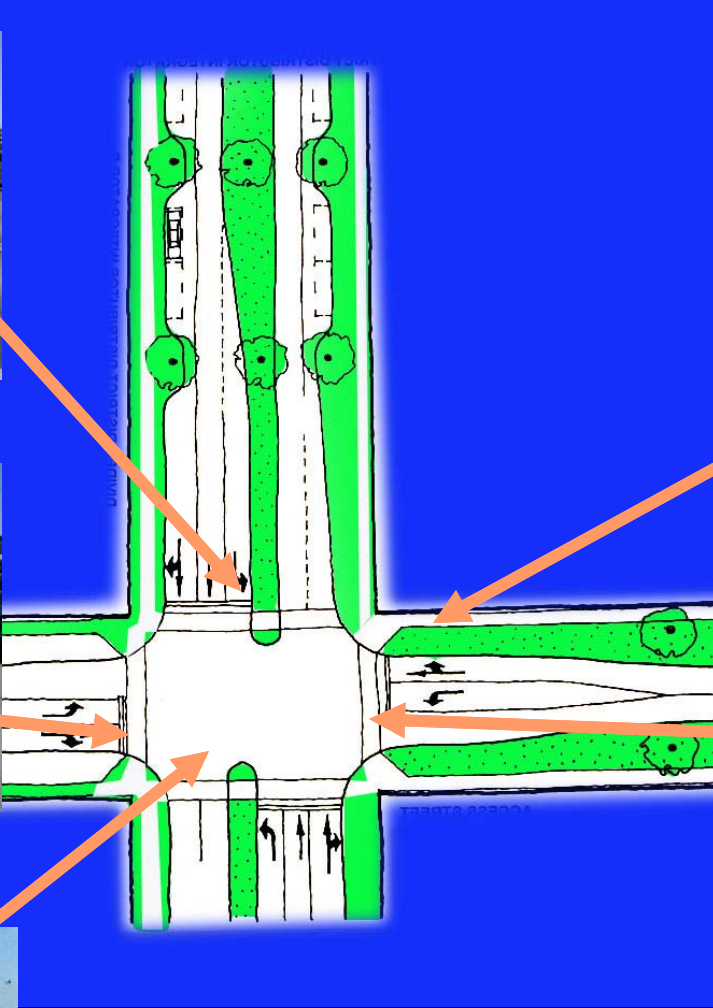
**Intersections**





**Mountain View, California**





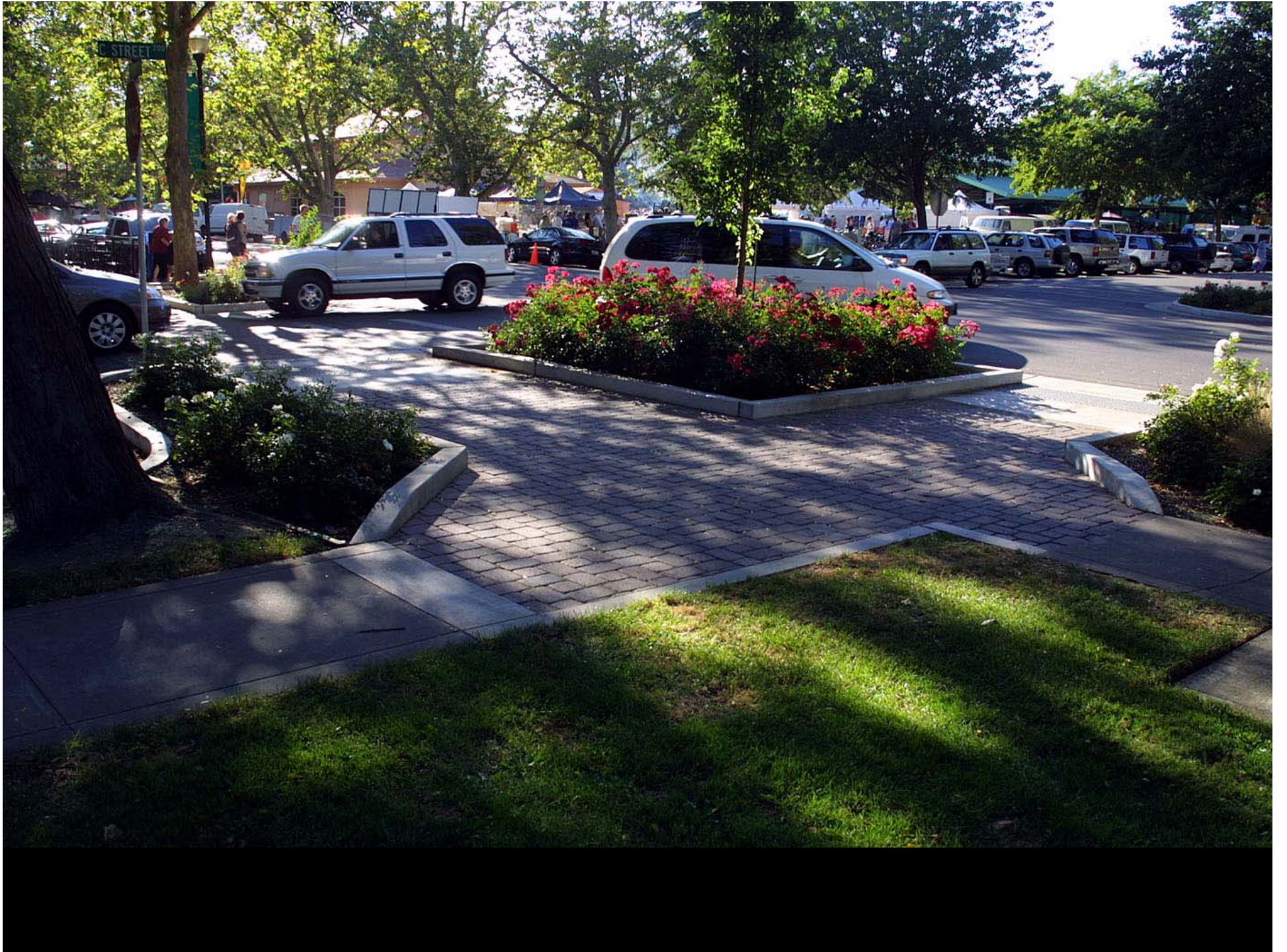
Speeds dropped from low  
30s to 15-20 mph  
Older people came back  
Disabled came back  
Store occupancy rate 100%

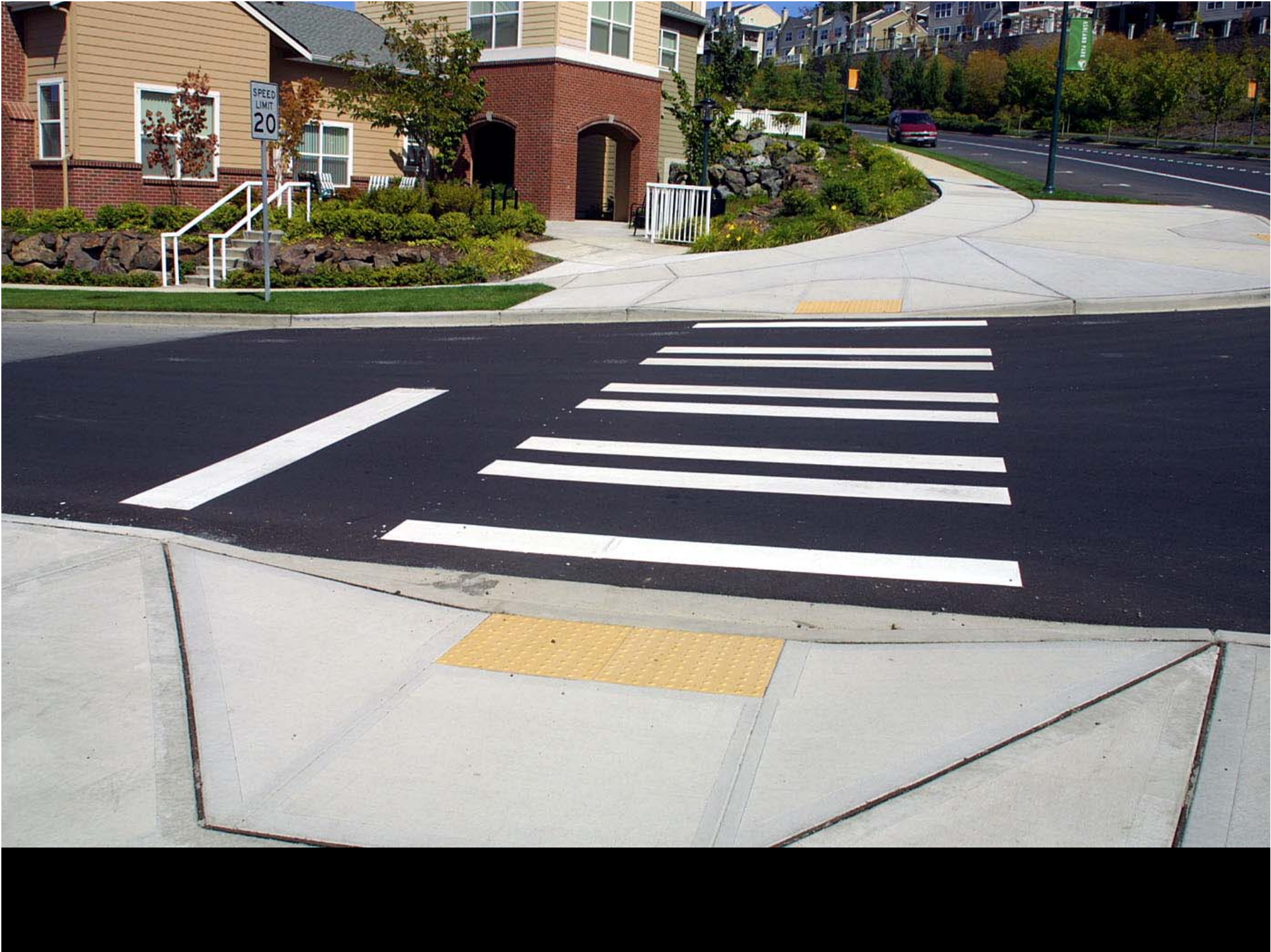
***Venice, Florida***  
**1990**





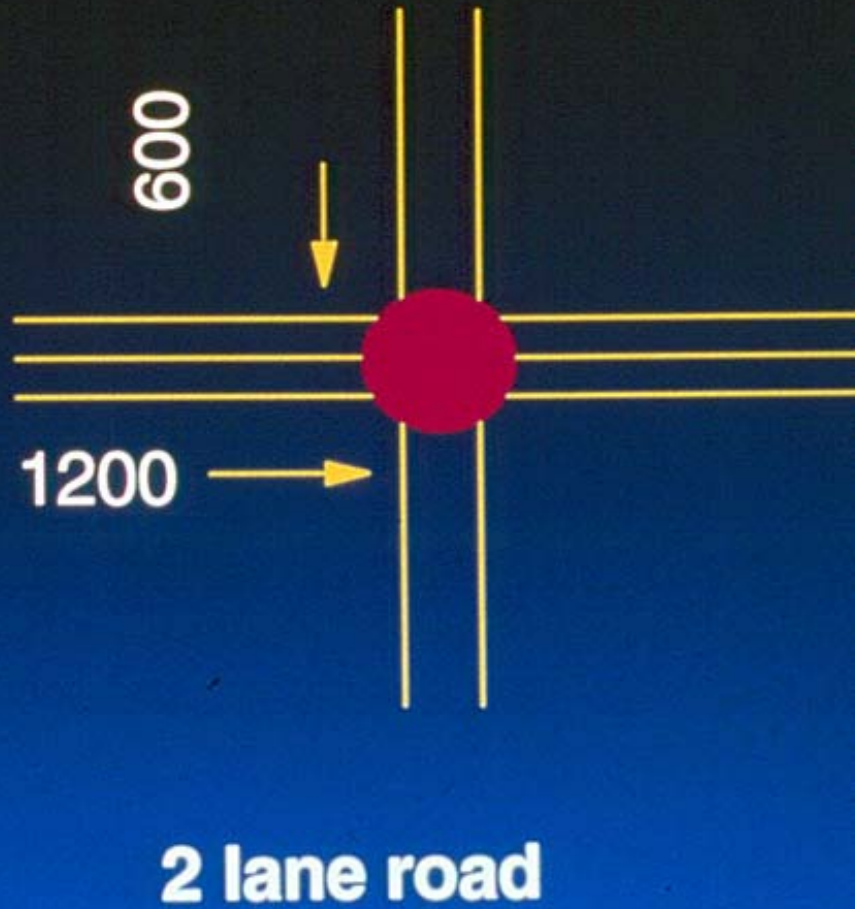
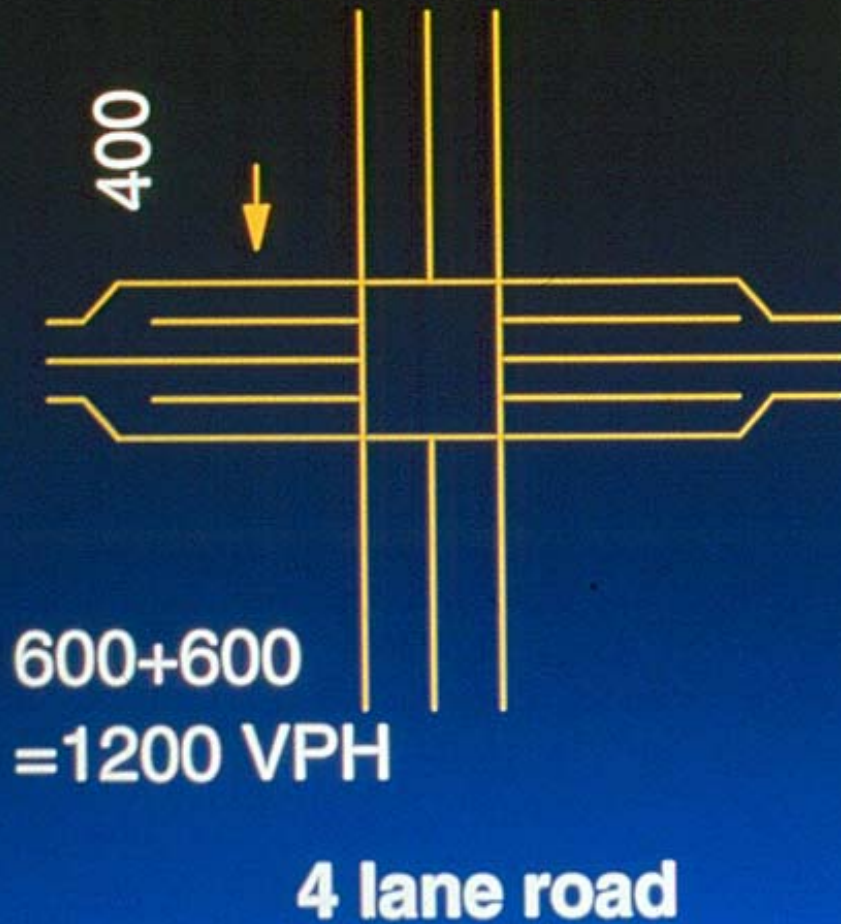






**Roundabouts**

# Narrow Streets / Wide Nodes







Cotati, California:  
Old Redwood Highway looking north





**Gridley, California:**  
State Highway 99 looking north



# Example Roundabout

## Benefits:

Injuries reduced 90%

30% more traffic capacity

Gateway entry

Pedestrian friendly

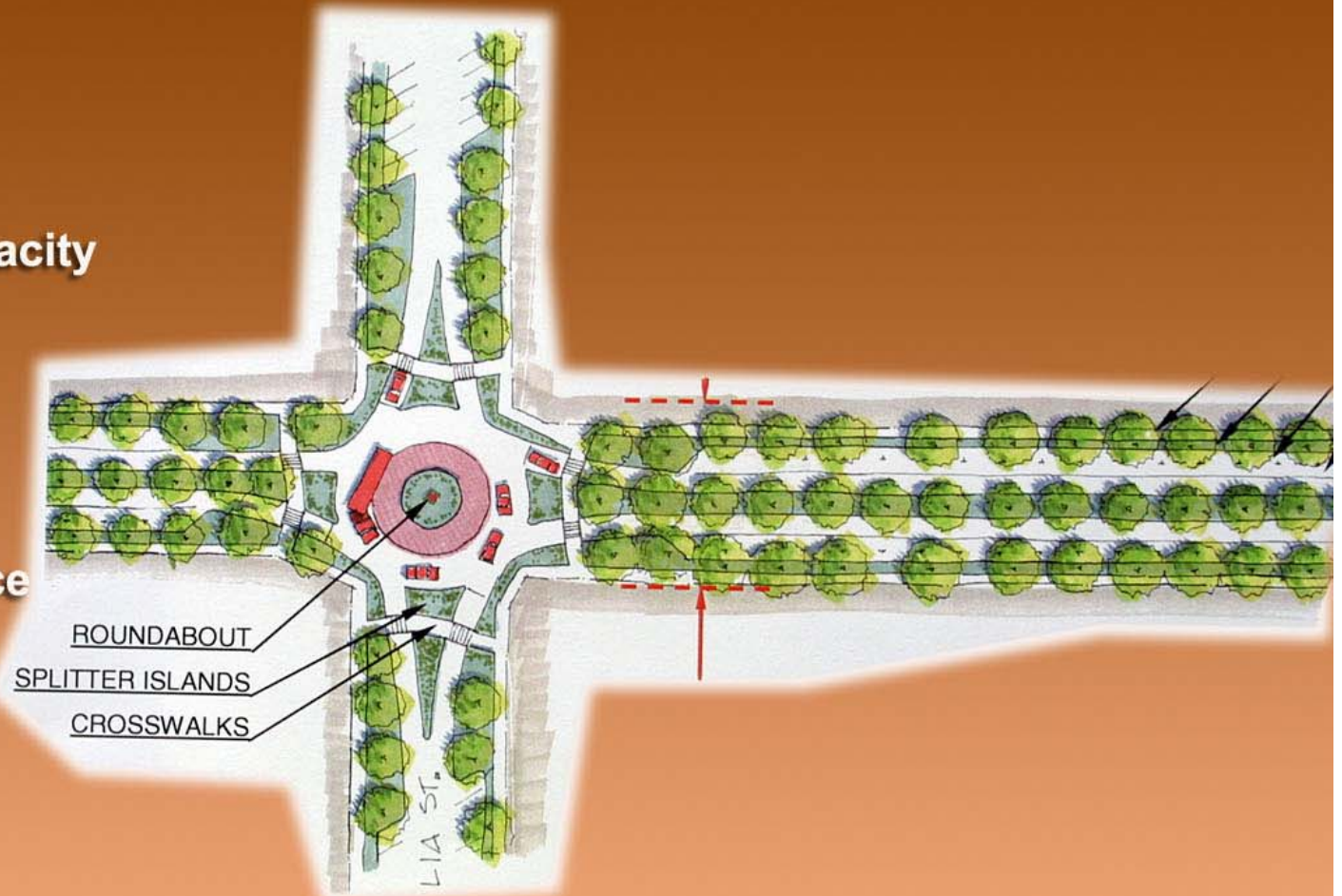
Speeds controlled

Reduced noise

Reduced pollution

Reduced maintenance

Business friendly





*Modesto Roundabout  
Laloma and "G" Streets  
20,000 vehicles per day*





**Roundabouts work in Snow Country**

**Our  
Place**

**Our  
People**











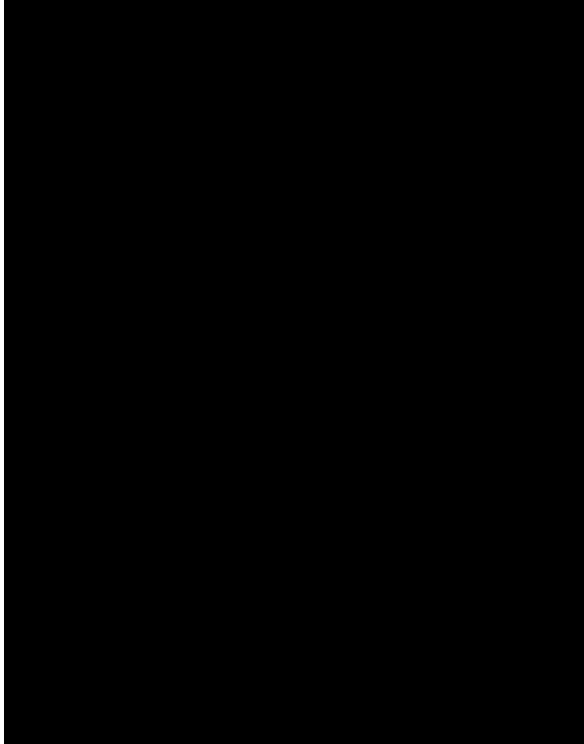
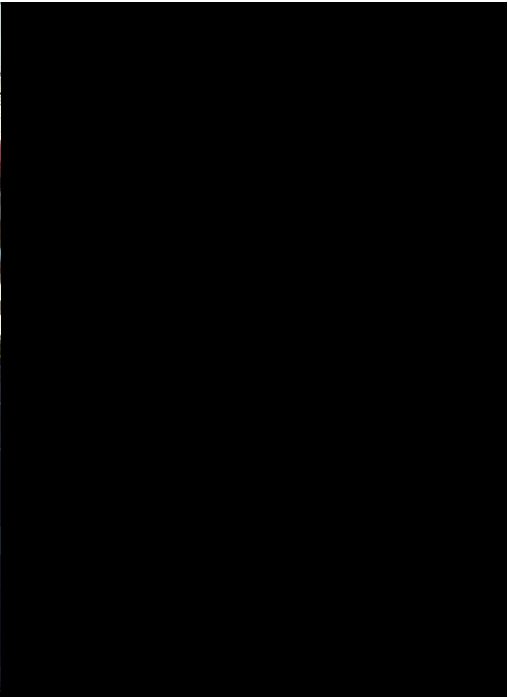


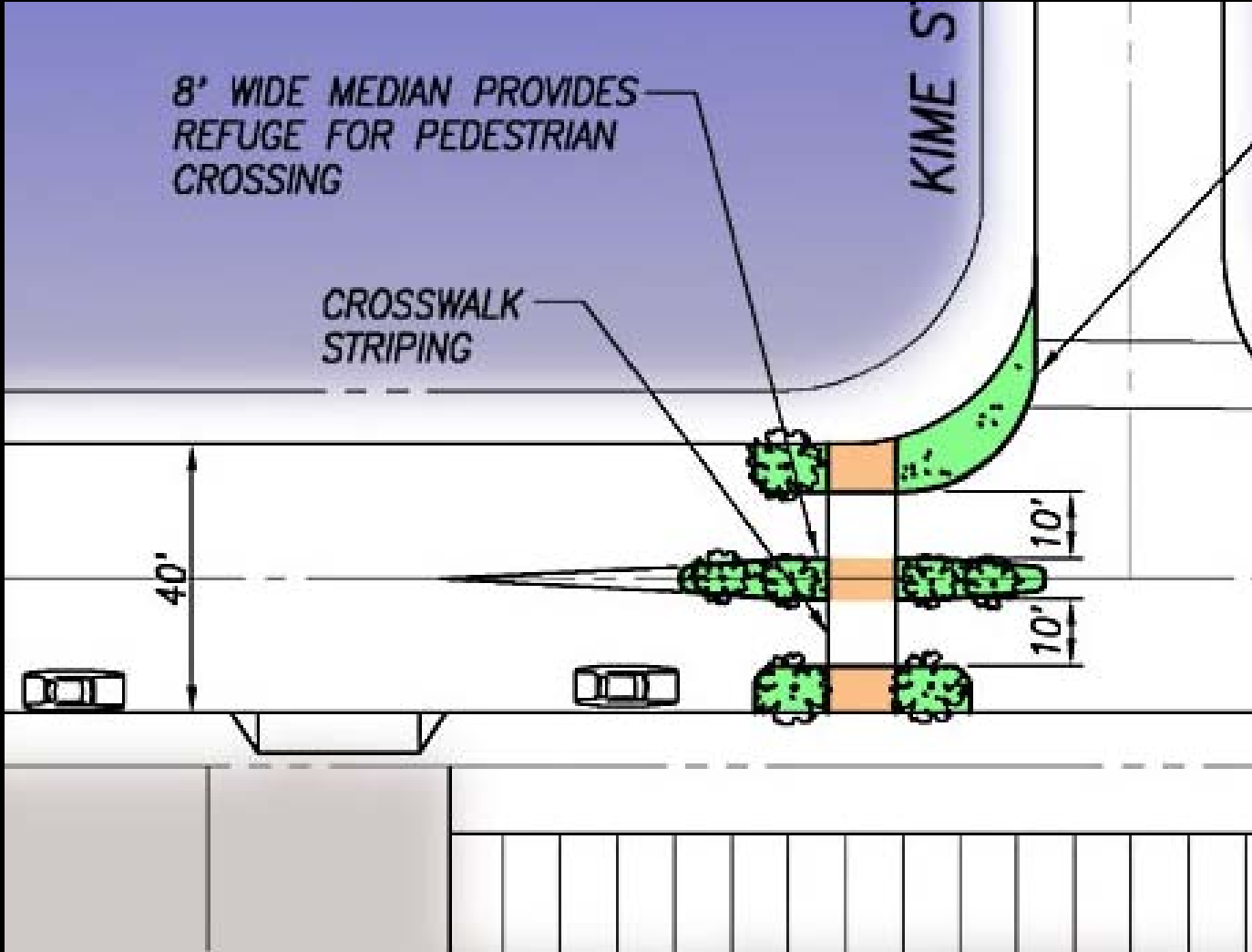






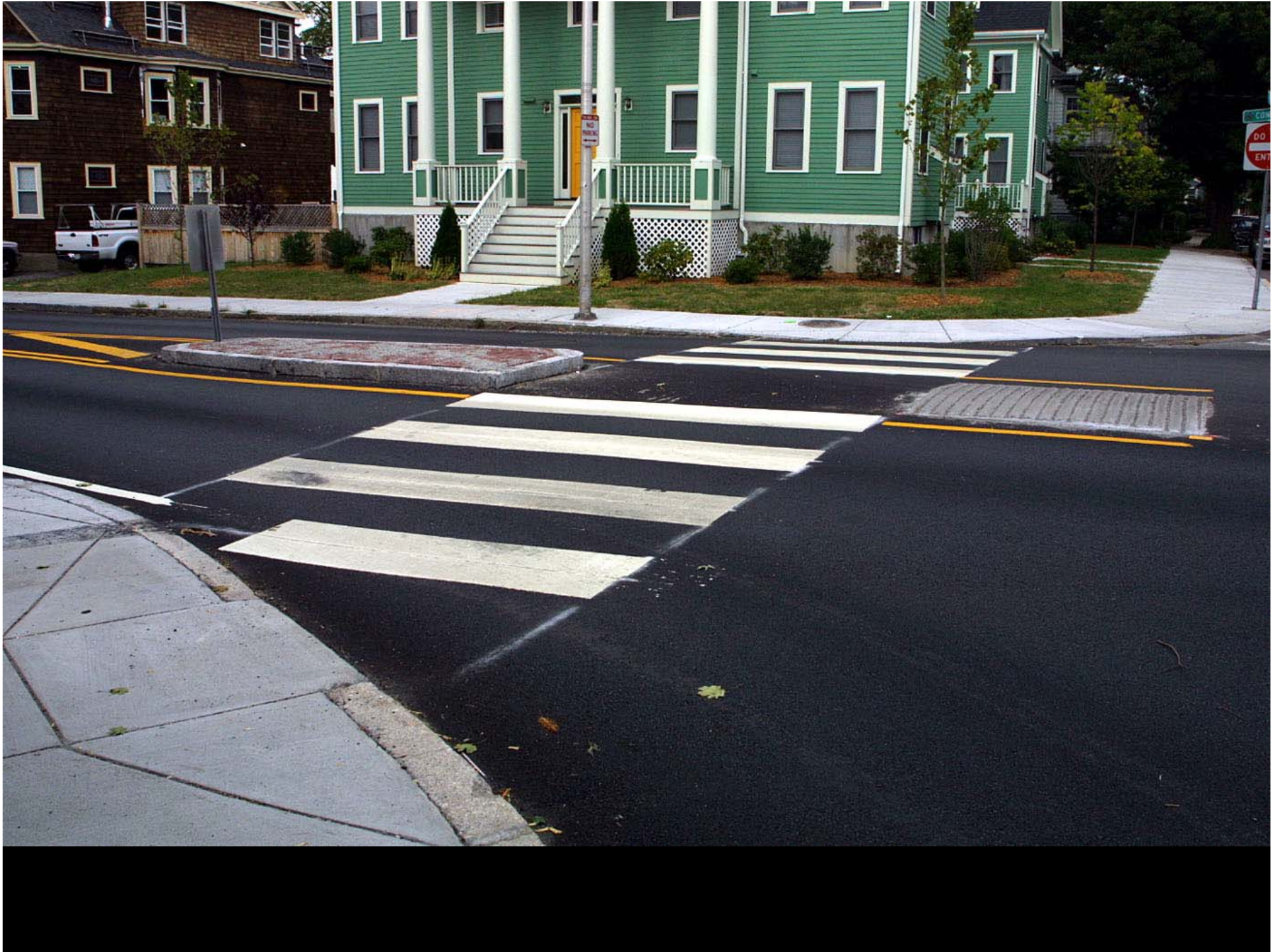
**PUSH  
BUTTON  
FOR  
WALK  
SIGNAL**



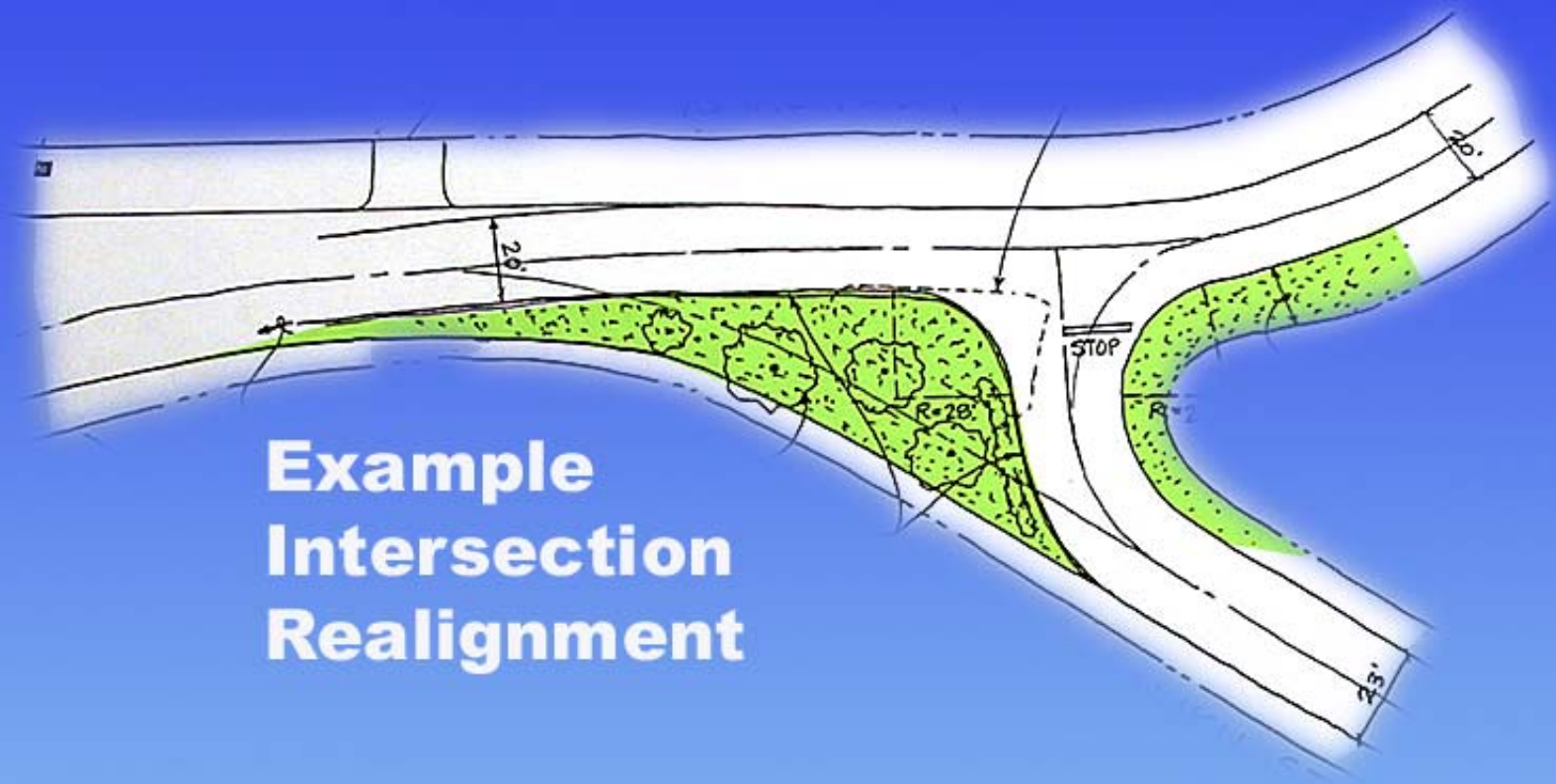












**Example  
Intersection  
Realignment**



**Curb  
Radius  
Reduction**





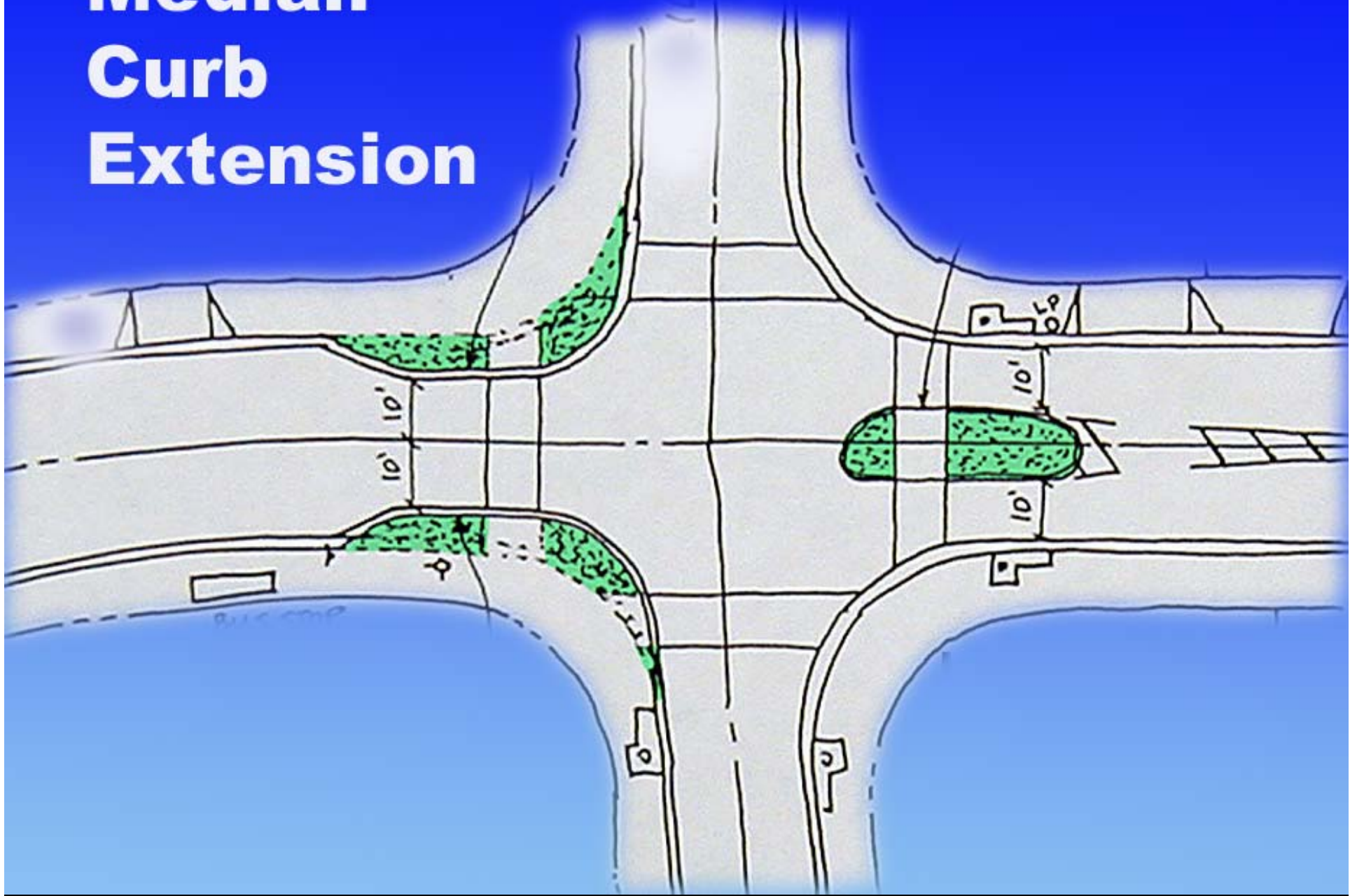




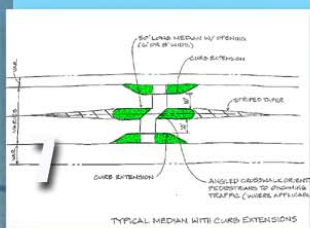
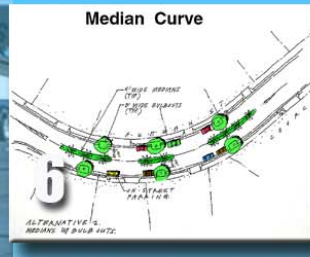
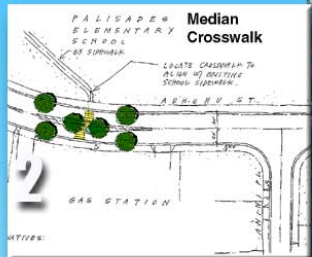




# Median Curb Extension



# MidBlock Crossings



# Mid Block Applications

Needed on long blocks

School locations

Trail crossings

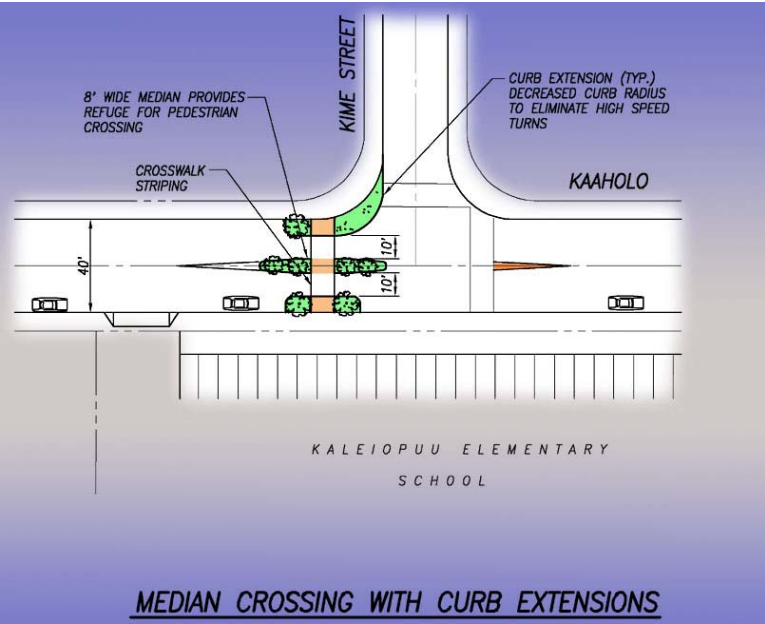
Effective on curves

Many tools

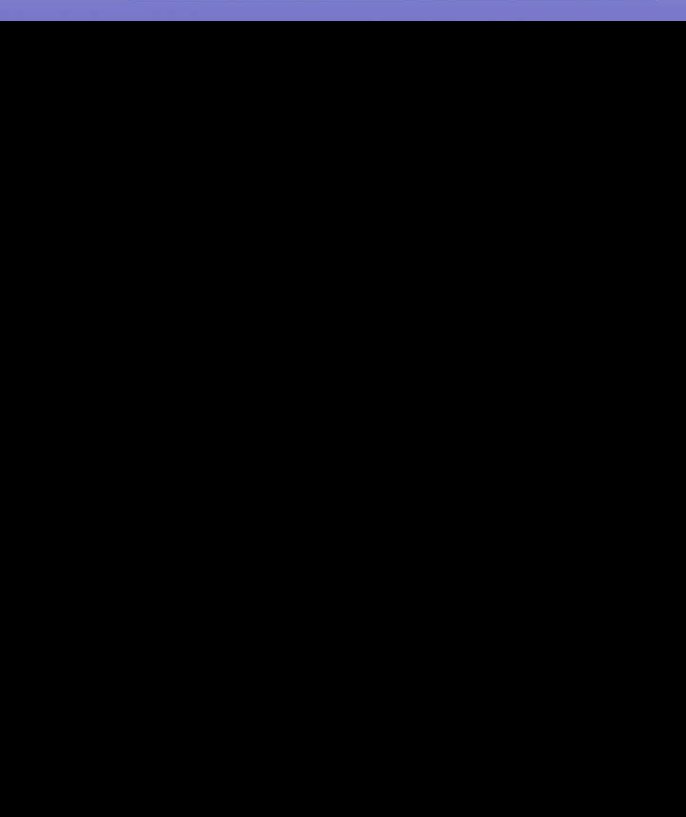
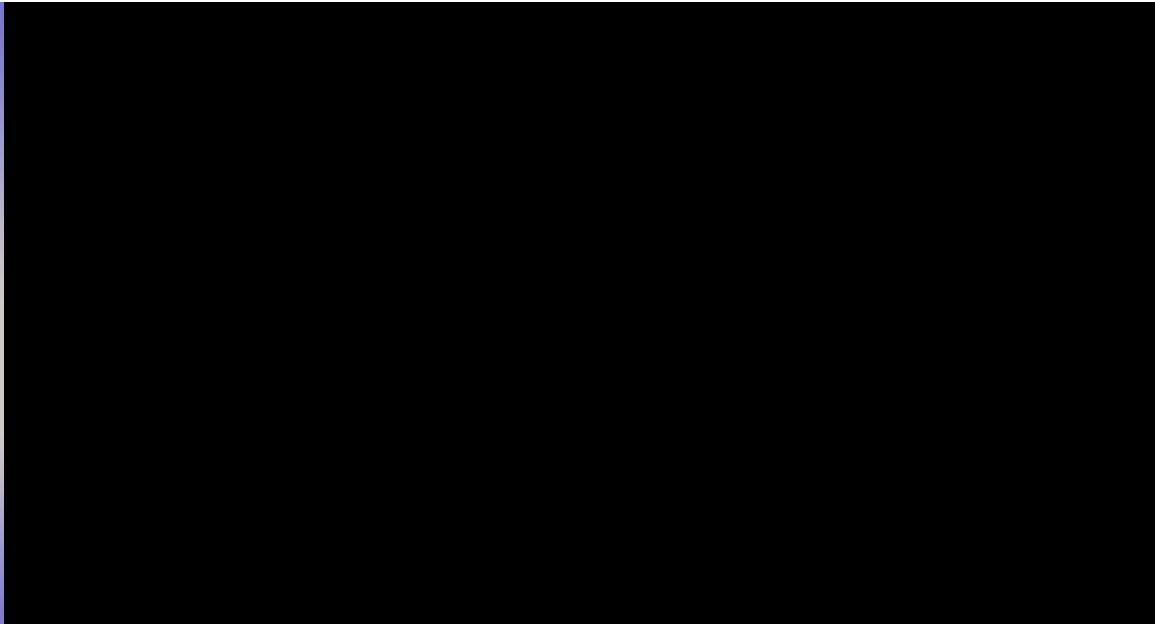
Harder to fit

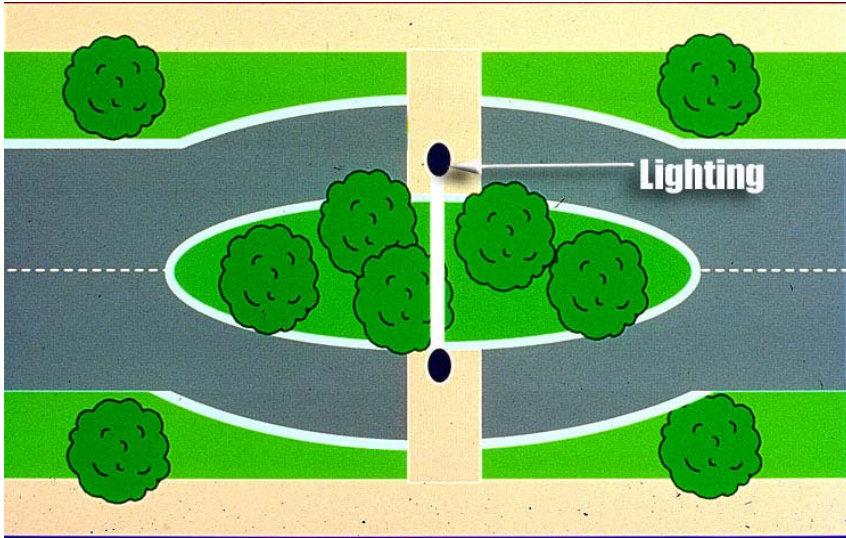
Personal property issues

For more than forty years, while suburban outer rings have been built we have failed to develop guidance for crossings midblock. Signals on busy roads are rarely placed at frequencies greater than 1/2 mile. This leaves the engineer with little to go on. Fortunately, today many communities are learning the skills to place effective crossings on two-lane and some multi-lane roadways. One or two features are used for 2-lane roads, while 4 or more devices, including signals in some locations,



MEDIAN CROSSING WITH CURB EXTENSIONS







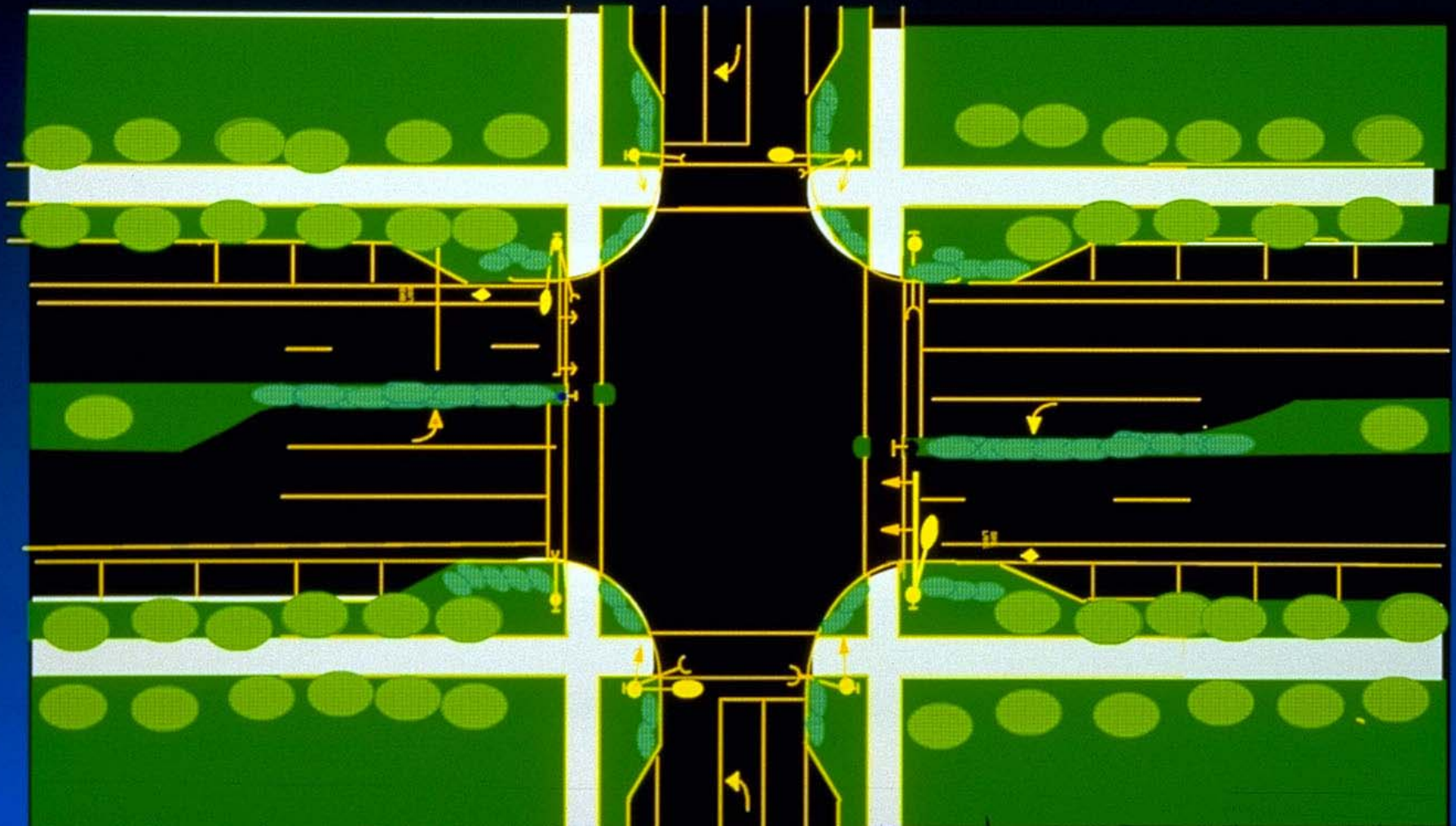
# 8

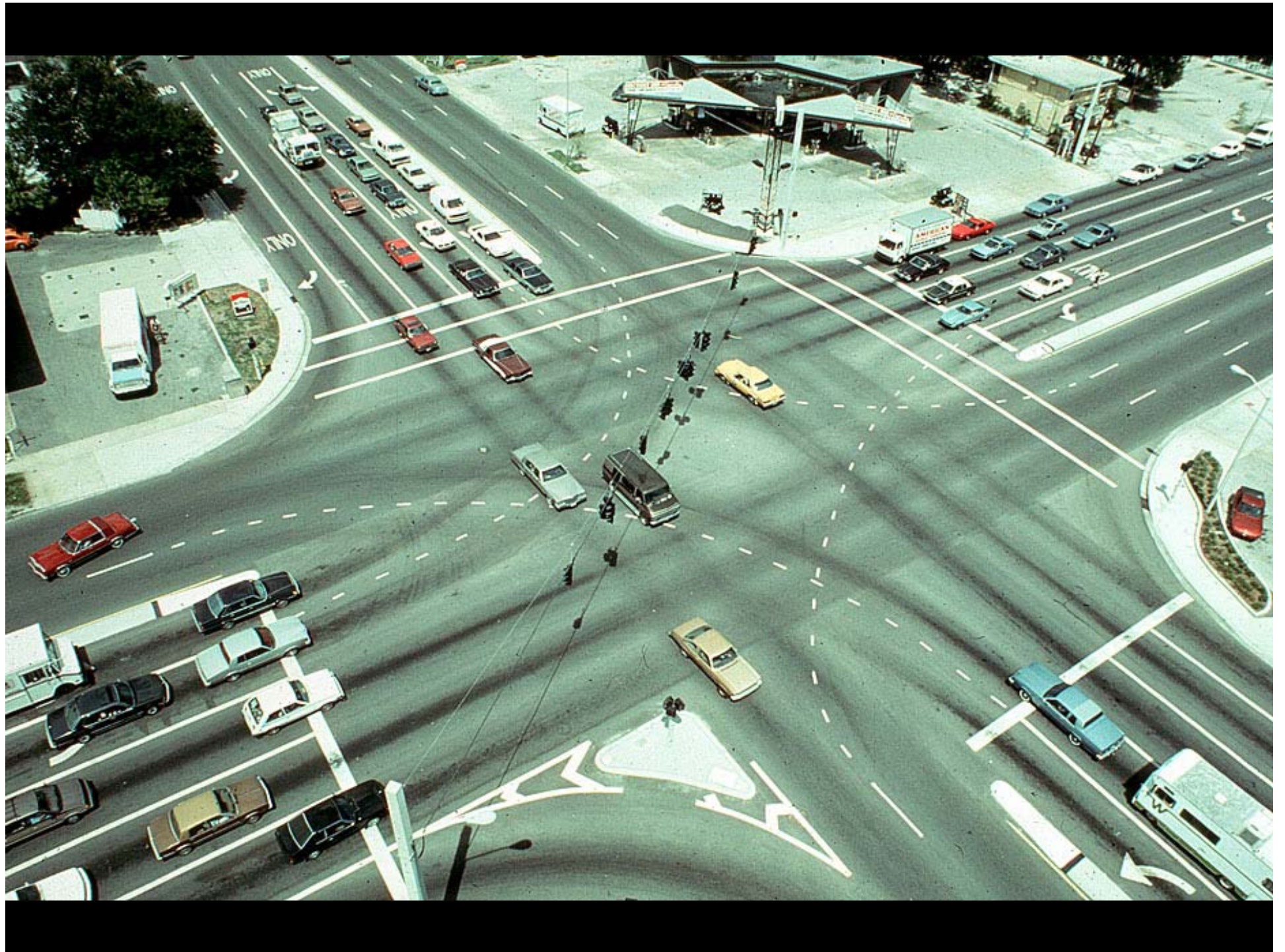
## Intersections And Midblock Crossings



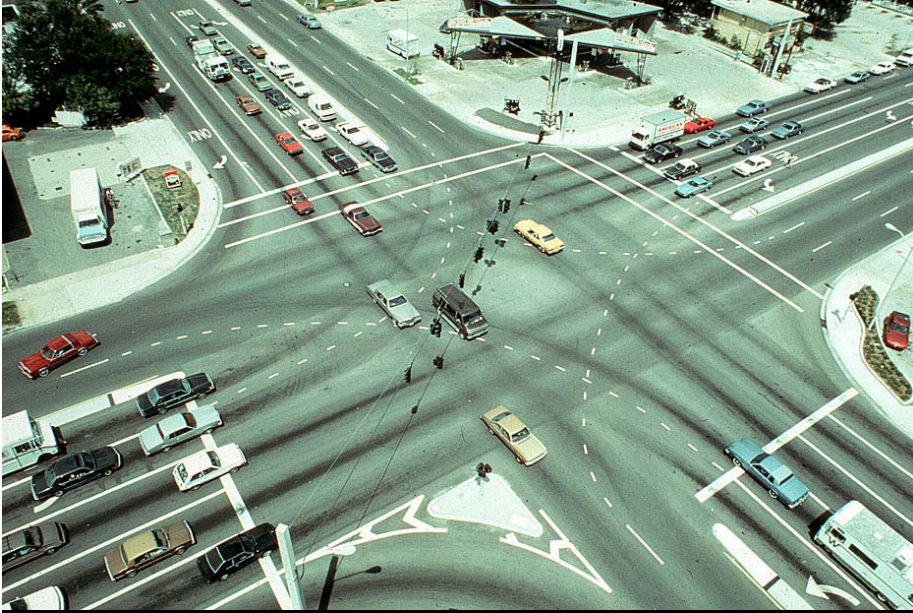
**Geometries**

# ONE EXCELLENT INTERSECTION (Dan's Version)





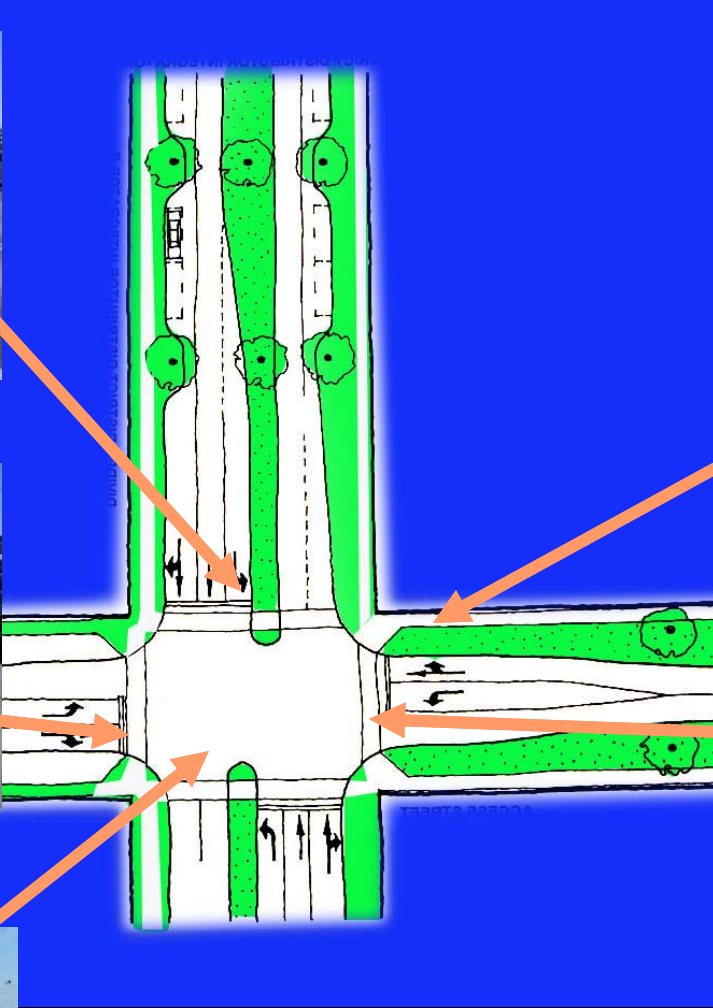




Level of Service F



Level of Service  
B

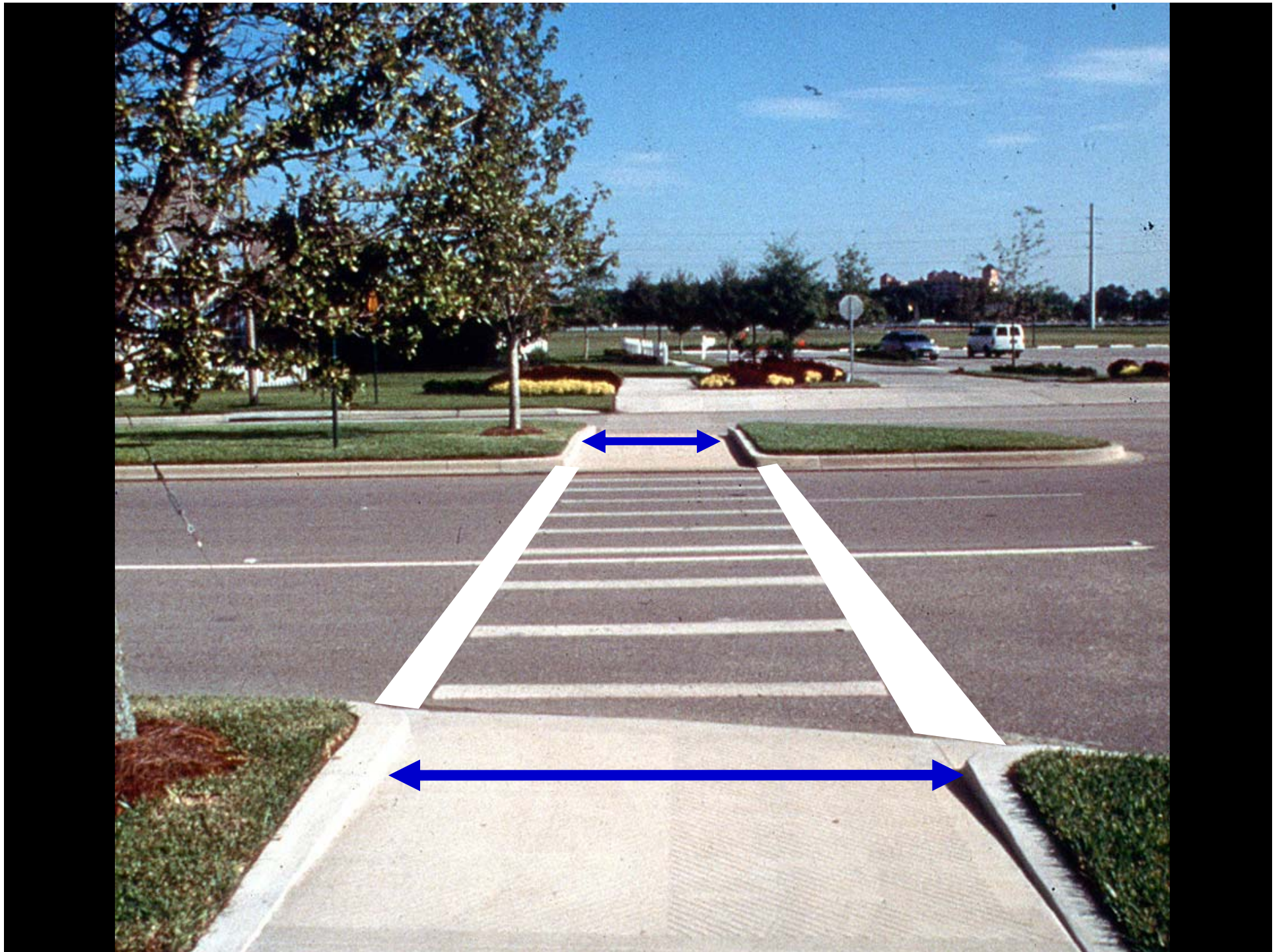








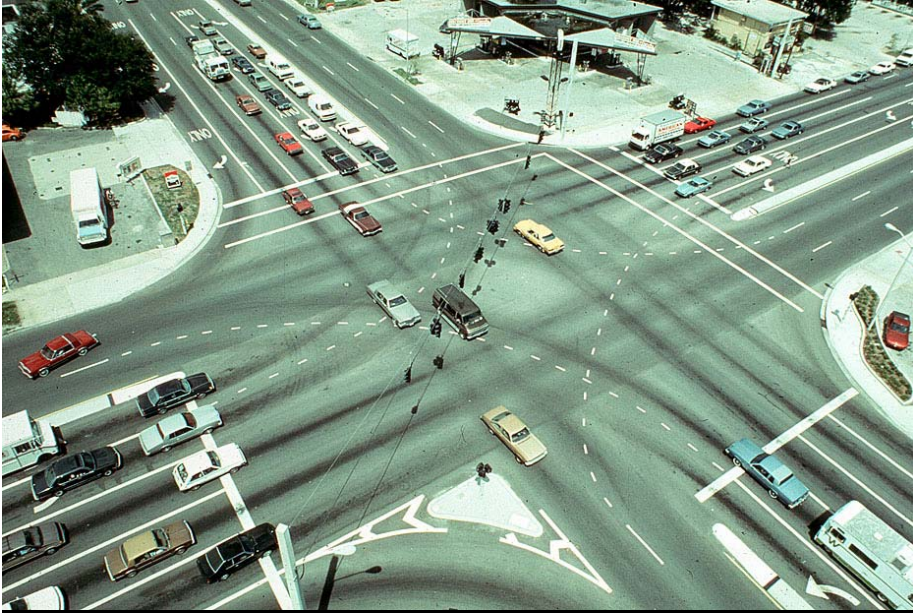












Level of Service F



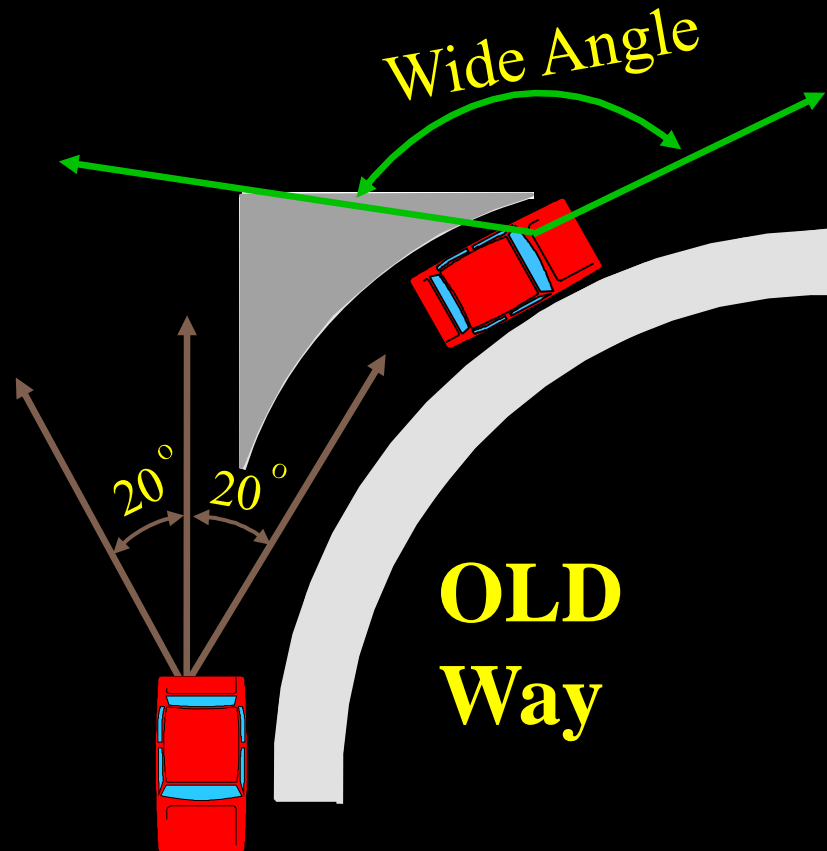
Level of Service  
B



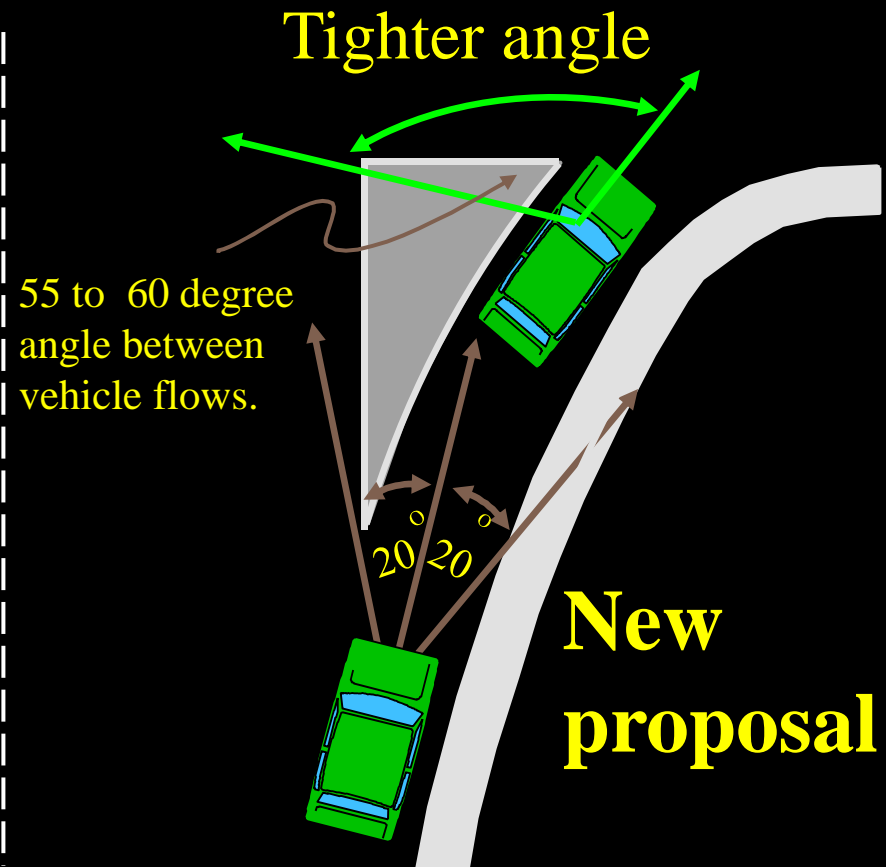




# RIGHT-TURN SLIP LANE DESIGN

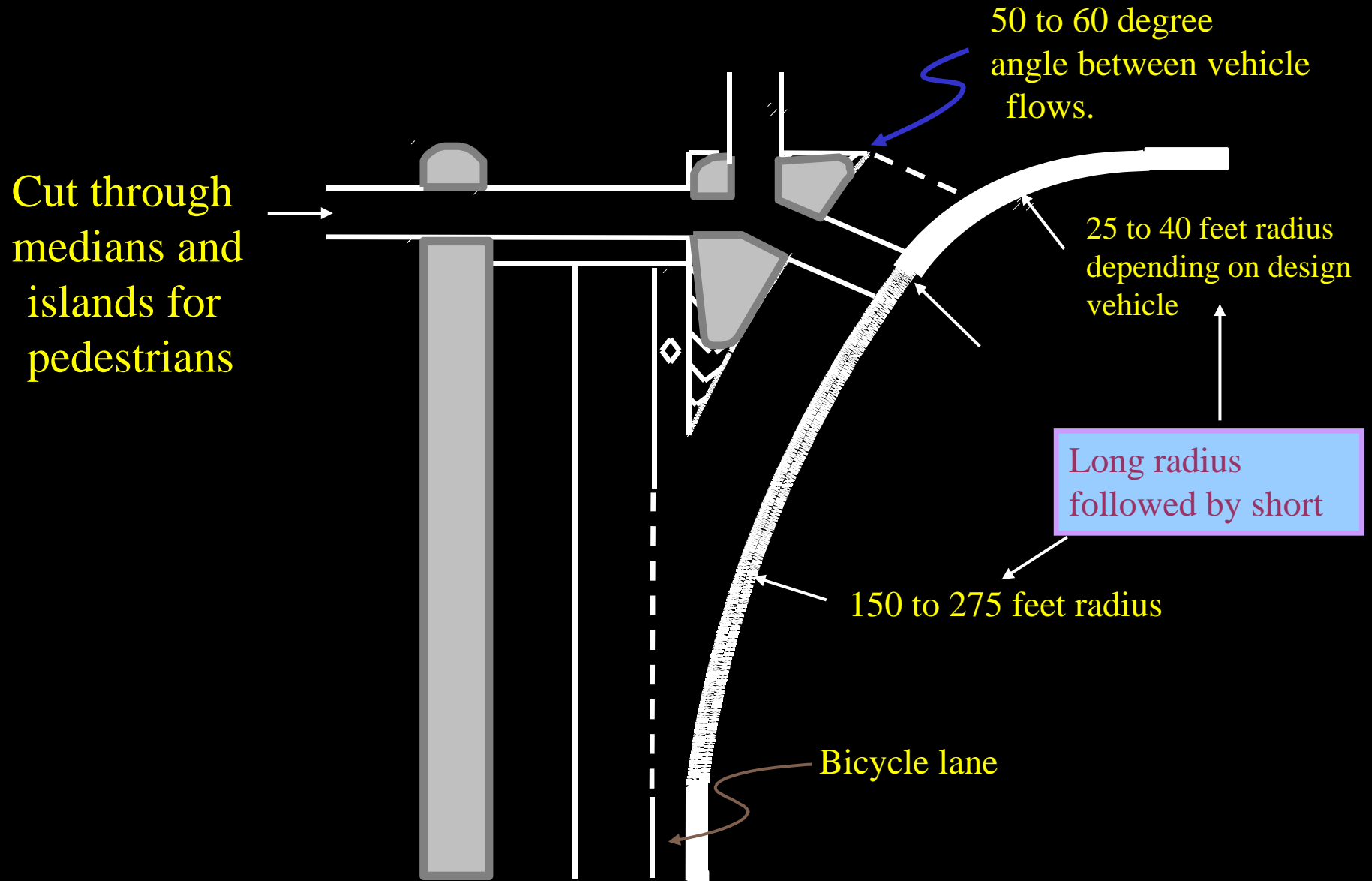


High speed, low visibility of pedestrians, a real head turner

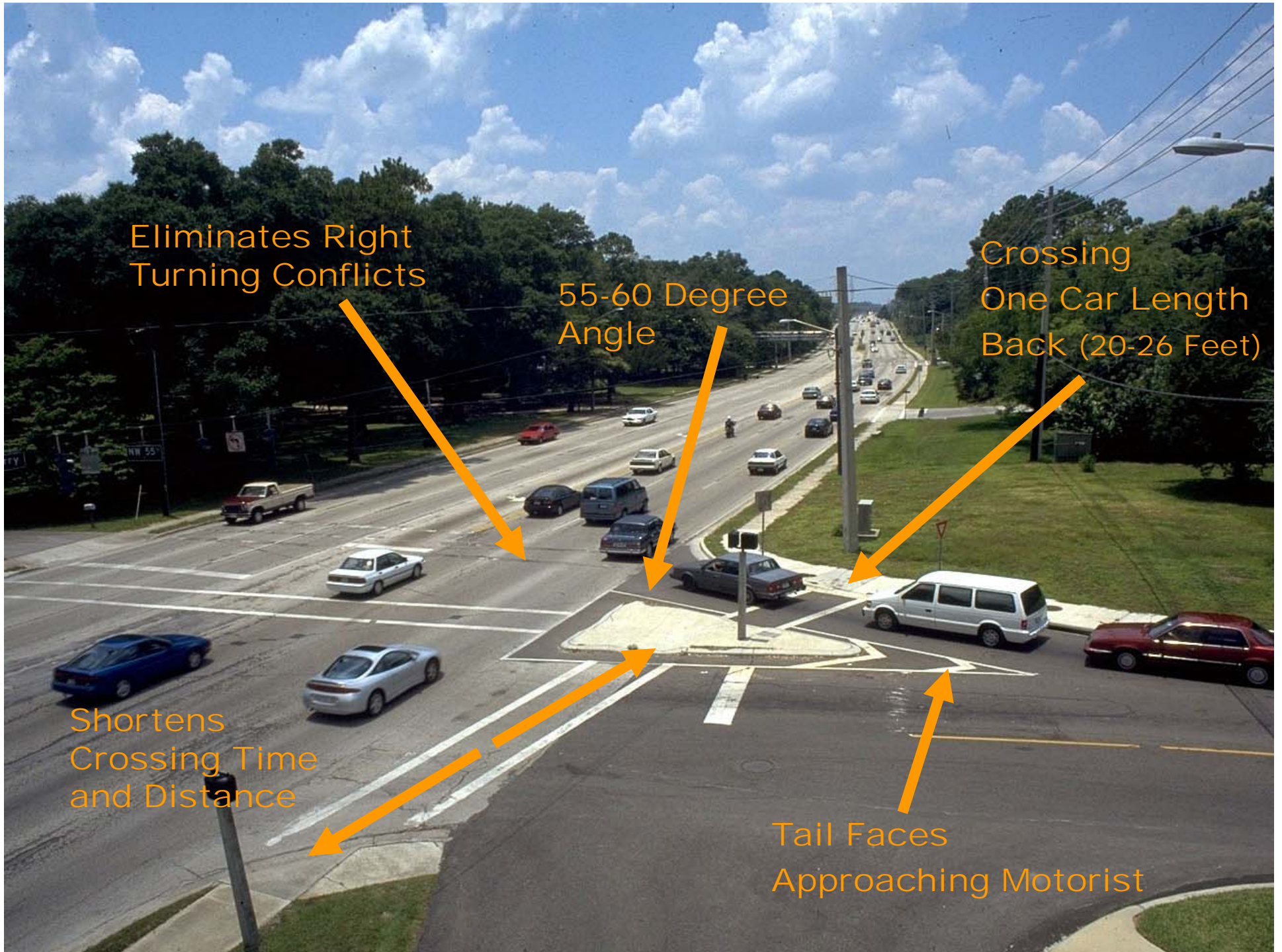


Vehicle speeds 14 to 18 mph, good visibility of pedestrians

# RIGHT-TURN SLIP LANE







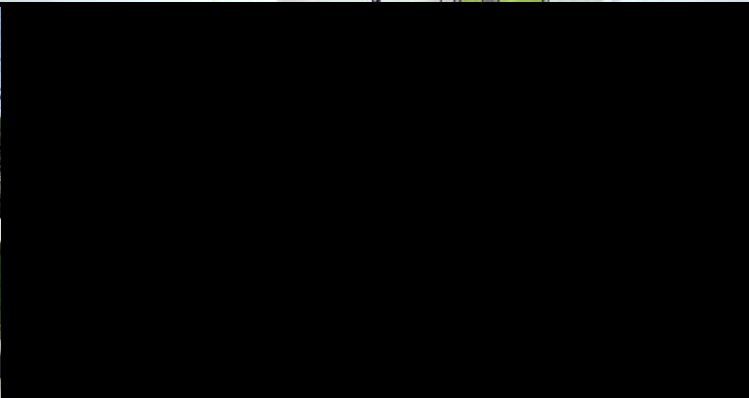
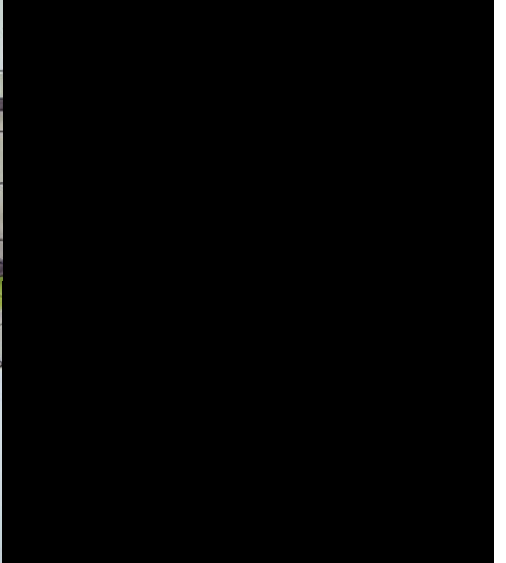
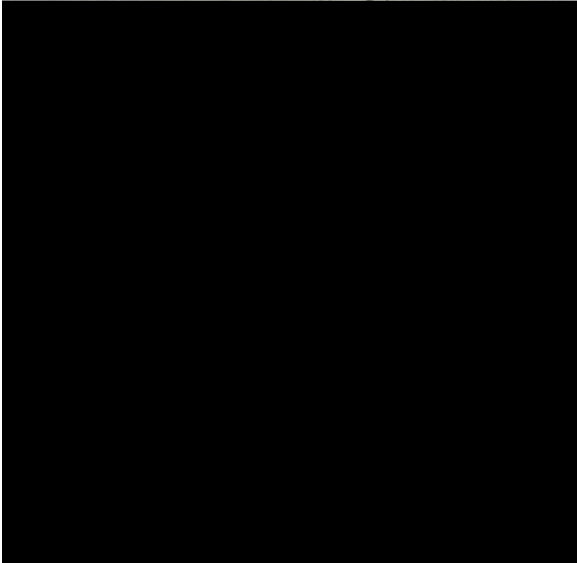
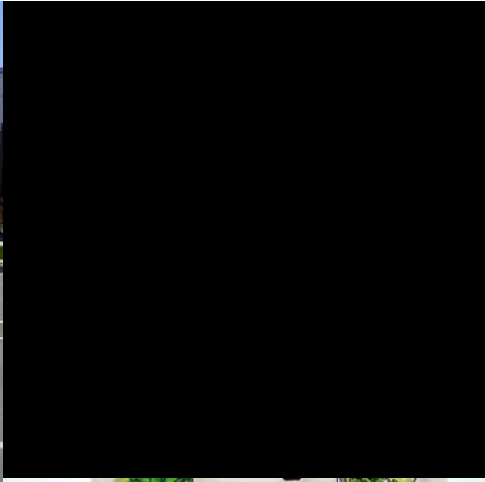
Eliminates Right  
Turning Conflicts

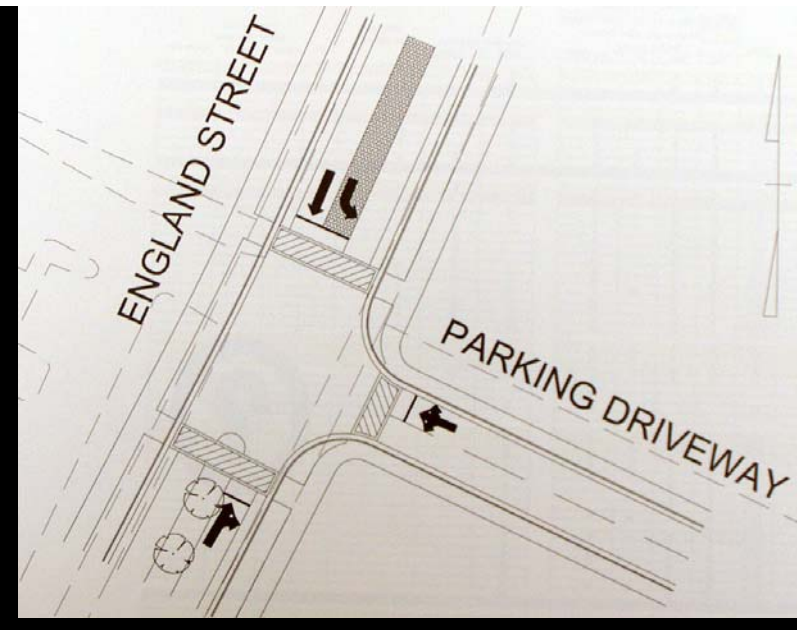
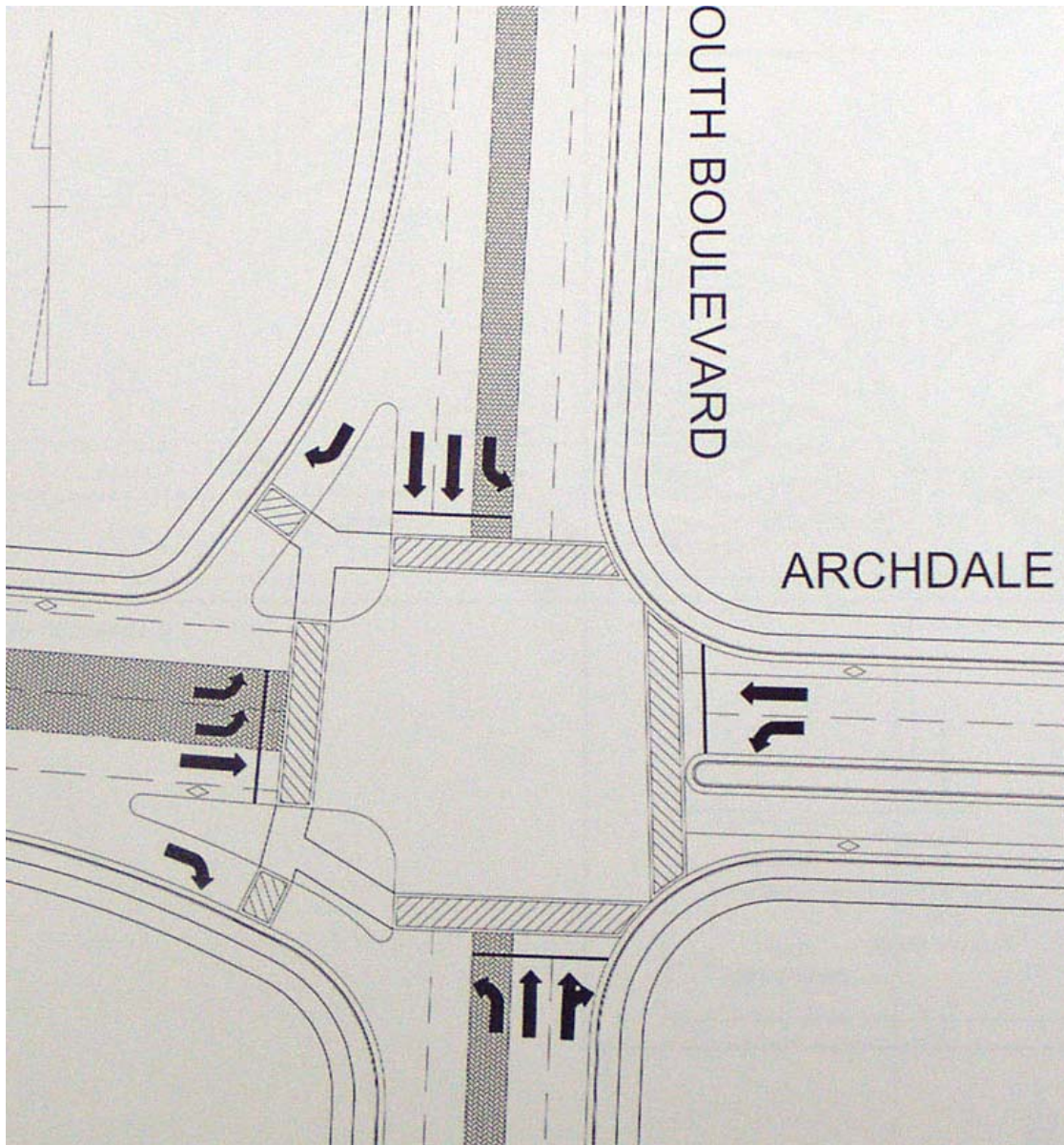
55-60 Degree  
Angle

Crossing  
One Car Length  
Back (20-26 Feet)

Shortens  
Crossing Time  
and Distance

Tail Faces  
Approaching Motorist





Compact Intersections

# Traffic Operations

# Stop Bar Meets Standards, But Too Close





Beretania Street

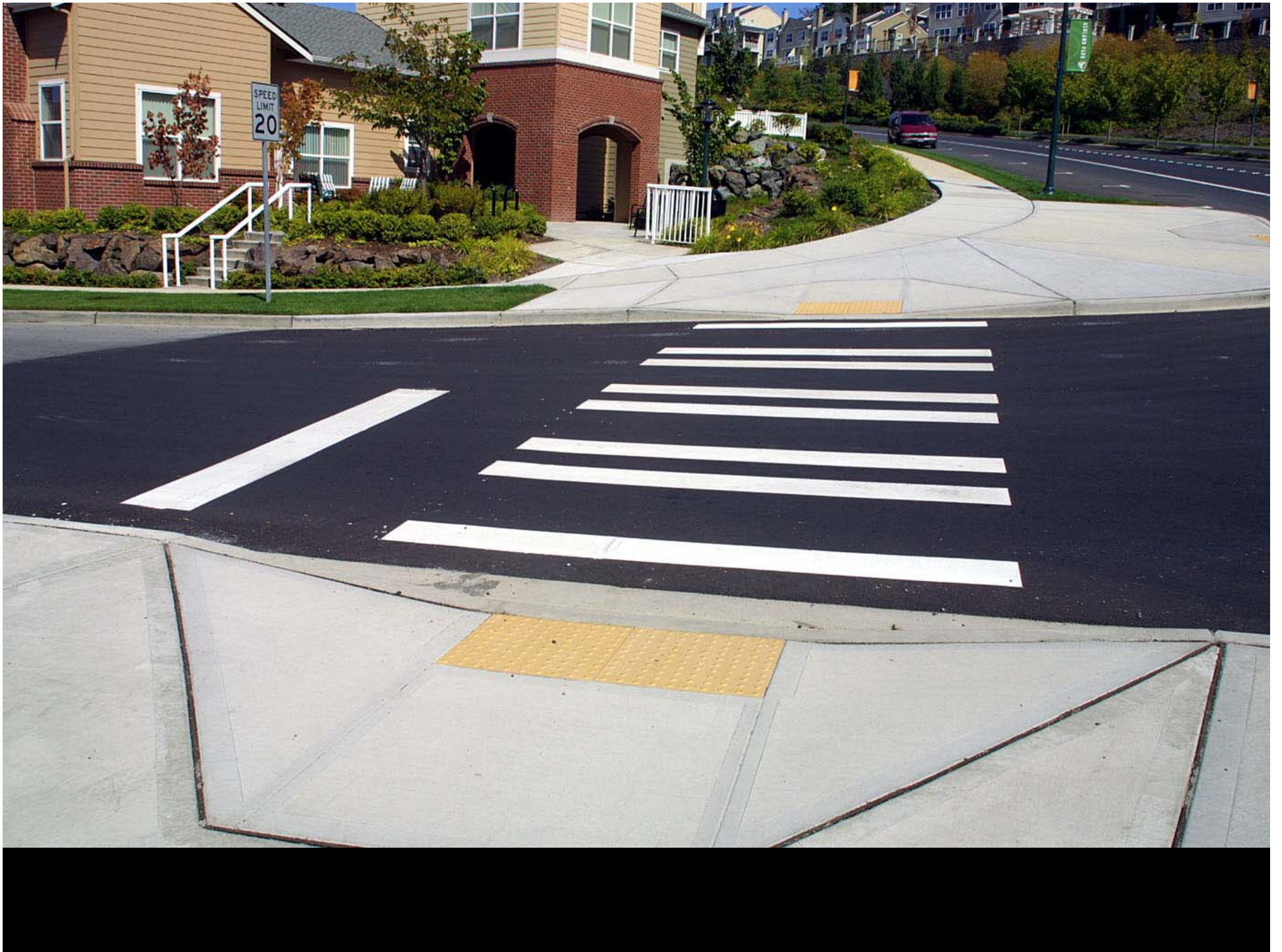


Stop Bar pulled back. Breaks Guidelines









**Roundabouts**

Cotati, California:  
Old Redwood Highway looking north



**Gridley, California:**  
State Highway 99 looking north













18 mph

18 mph





**Roundabouts work in Snow Country**





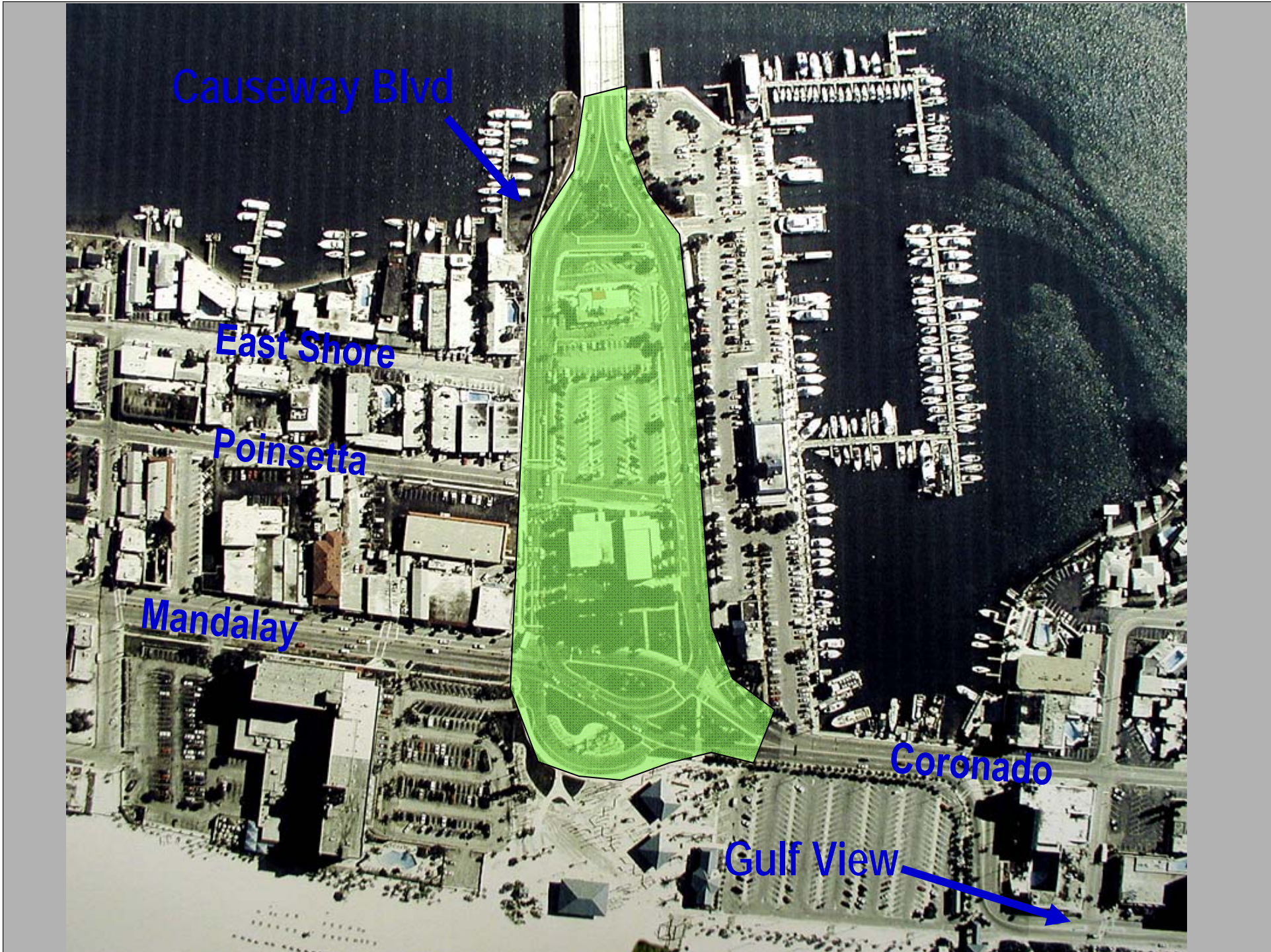


Before



After





Causeway Blvd

East Shore

Poinsetta

Mandalay

Coronado

Gulf View



Coronado

Mandalay

Poinsetta

Marina

East Shore

Causeway Blvd





Car entering from signal typically waits 10-60 seconds

Car during off peak enters without delay

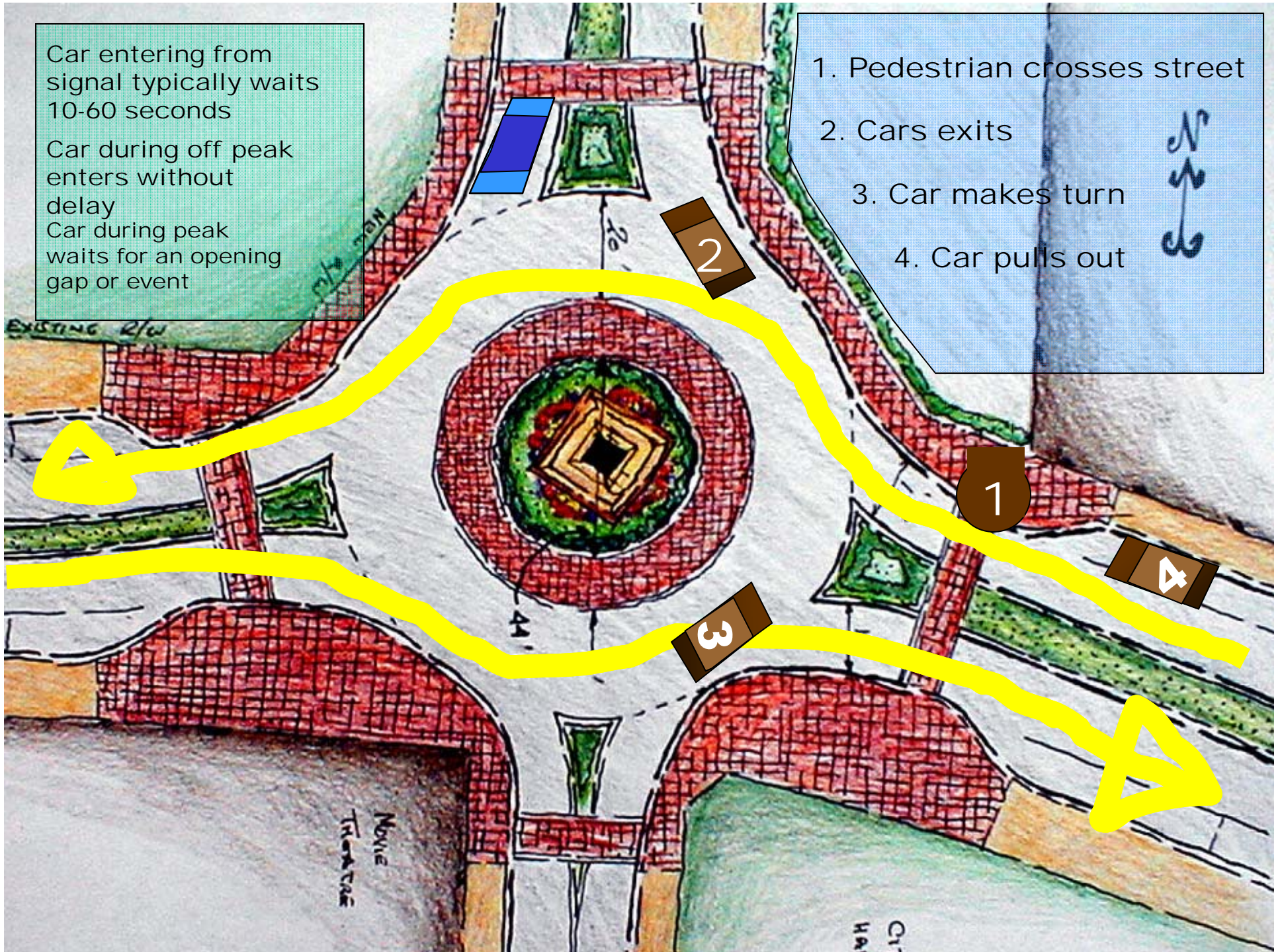
Car during peak waits for an opening gap or event

1. Pedestrian crosses street

2. Cars exits

3. Car makes turn

4. Car pulls out



Scale 1 in to 30ft  
 Central Island 46'D  
 Truck Apron 8' wide  
 ICD 84'D  
 Crosswalks 8'



# Bird Rock Avenue Roundabout

New ROW 2  
 14' + 12'

BIRD ROCK AVENUE

Existing Curb

La Jolla Blvd

