

An aerial photograph of a city street intersection. A silver car is on the left side of the road, and a white car is on the right. Two pedestrians are crossing the street at a crosswalk. A solar-powered sign is visible on the left side of the road. The text "Pedestrian Crossings in Madison Neighborhoods" is overlaid in yellow on a black background.

Pedestrian Crossings in Madison Neighborhoods

Tom Huber

- Toole Design
- Dudgeon Monroe Neighborhood Association

What I Will Cover

- Crossing the Street – focus on main streets and no traffic lights (signals)
- What is a Crosswalk
- DMNA Efforts
- Six Crossing Measures
- What Neighborhood Associations can do?

DMNA Association Pedestrian Efforts

According to Survey and Neighborhood Plan

- Highly Valued – Walkability of Neighborhood
- Major Concern – Can't cross Monroe Street

Efforts

- Transportation Committee
- Pedestrian Zone
- Coordination with MPD Traffic Enforcement Safety Team
- Pedestrian Flags and Yard Signs
- Speed Board
- Monroe Street Reconstruction
Beacons, Medians, Raised Intersections

An Age Old Question

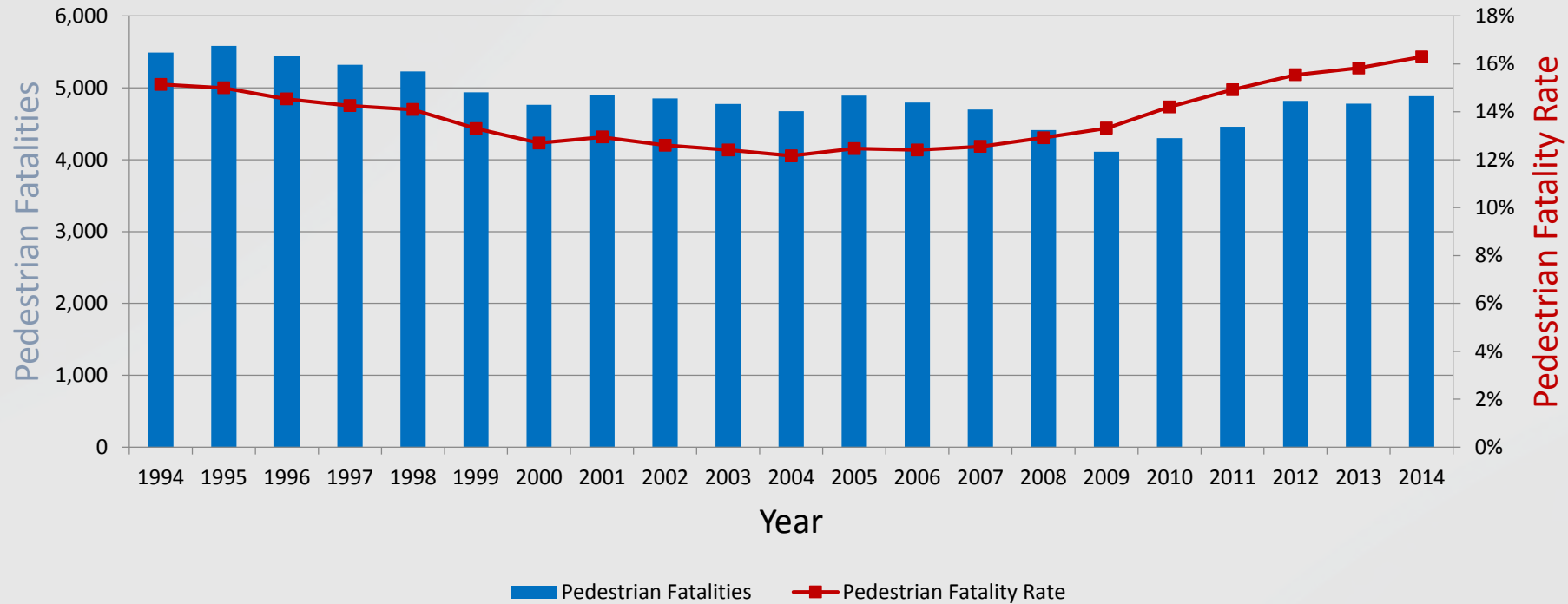
- Why did the pedestrians cross the road?
What is a Crosswalk?



Crosswalk or Not?

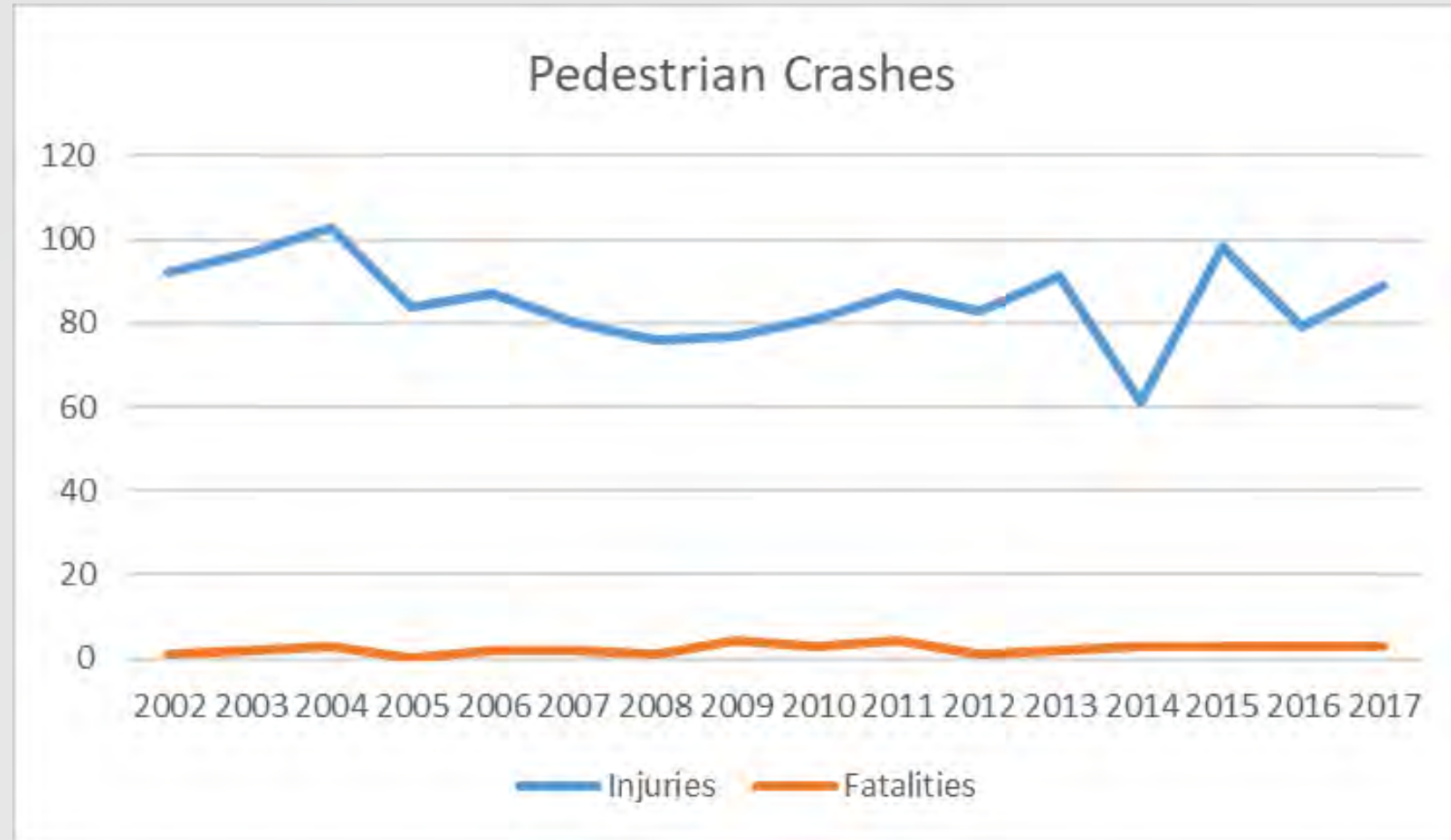


Pedestrian Fatalities and Rate



- How many fatalities are acceptable for the U.S., Wisconsin, Madison?
- How many crashes and fatalities are acceptable in your neighborhood?

Madison Pedestrian Crashes and Fatalities





Why National Effort (EDC and STEP)?

- Over 66% of pedestrian fatalities occur at non-intersection locations
- Roughly 16% of pedestrian fatalities occur at uncontrolled intersections

every day counts 



Goal: Getting People to their Destinations

STEP 3: Which countermeasure(s) should be selected?

STEP 2: What type of roadway are people trying to cross?

STEP 1: Does our agency want to get pedestrians safely across the road?

STEP 2: What Type of Roadway are People trying to Cross?

- Number lanes
- Average Daily Traffic
- Speed limits/Actual speeds
- Median or Pedestrian Refuge Island in place
- Pedestrian volumes
- Roadway Type

STEP 3: Which countermeasure(s) should be installed?

- Crosswalk Visibility Enhancements
- Pedestrian Refuge Islands
- Raised Crosswalks
- Rectangular Rapid Flashing Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)
- Road Diets

CRF = Crash Reduction Factor

1

Enhanced Crosswalks

Crosswalk Enhancements (Visibility)

- High Visibility Markings
- Signing
- Corner Bump-outs
- Turning Radius
- Overhead Illumination

Crosswalk Visibility Enhancements

High Visibility Crosswalk (CRF: 40% & 19%)

What Pedestrians See

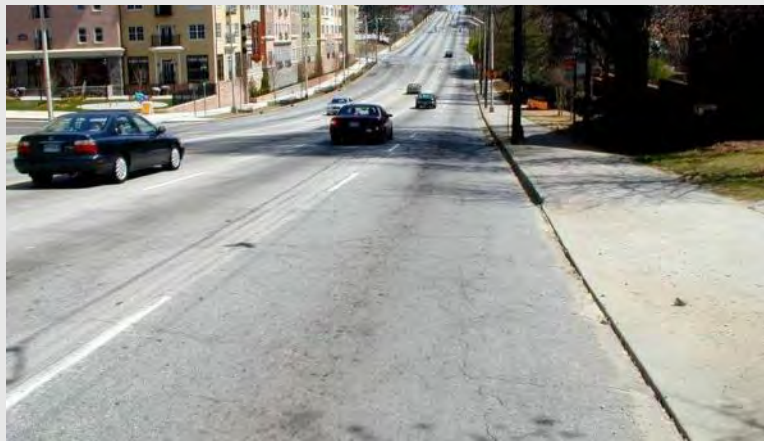


Photo Source all 4: Michael Ronkin

What Drivers See

Pedestrian Warning Signs



Old



New

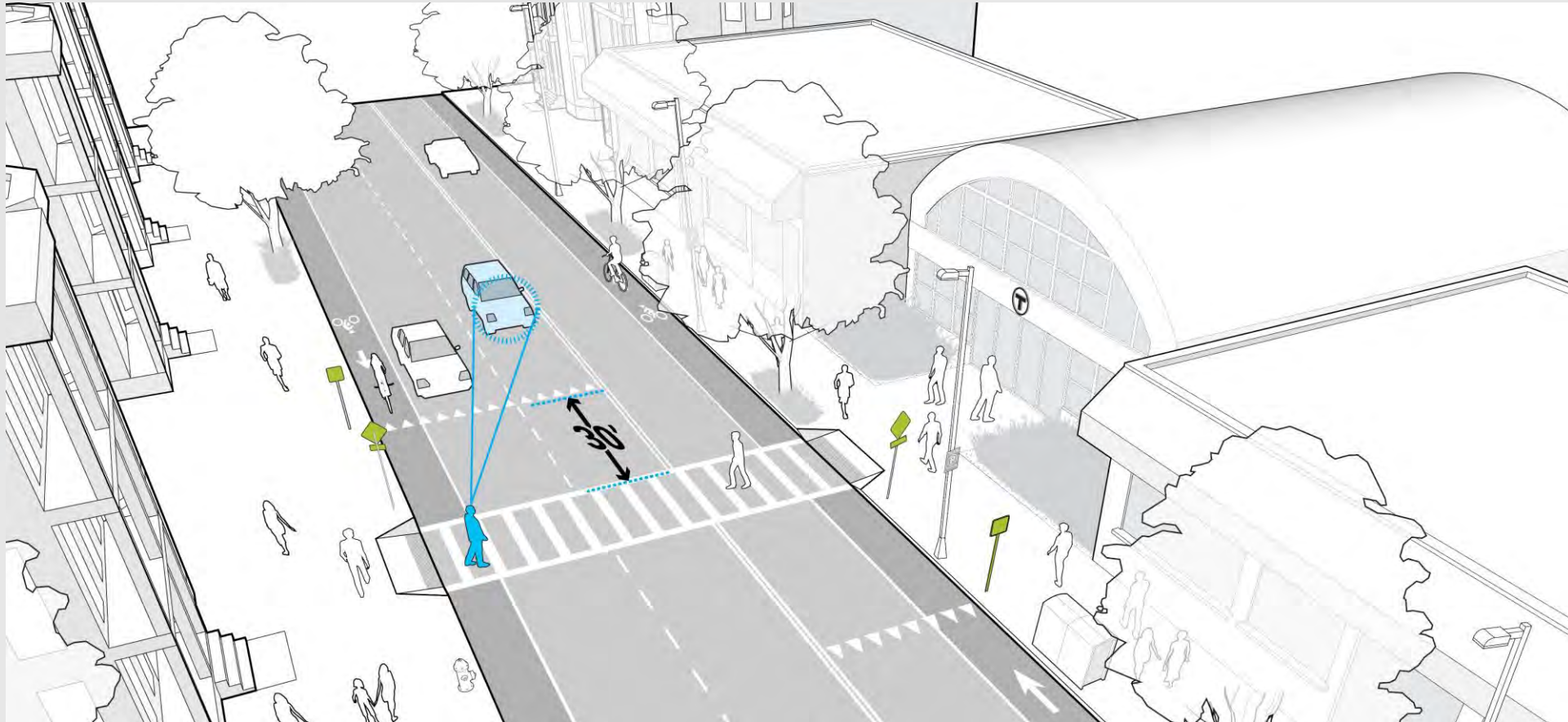
2009 MUTCD Sec.
2C.50 & Fig. 2C-10

Advance crosswalk sign



Supplemental at
crosswalk

Advanced Yield Bars



If 1st car stops too close, masks visibility for driver in 2nd lane

Solution: advance yield bar



R1-5



R1-5a



Milwaukee, WI

Advance yield line (shark's teeth) & sign



Illumination!

Corvallis, OR

Lighting reduces the odds of pedestrian fatalities:
by 42% at midblock locations
by 54% at intersections

2

Raised Crosswalks

Raised Crosswalks (CRF 46%)



Photo Source: SRTS Guide



Photo Source: Seattle.gov Crosswalks

Raised Crosswalks

- Increase pedestrian visibility
For low speed local streets
- Should not be used on
emergency routes, bus
routes, or high speed streets
- Storm water runoff and
snow plowing
considerations
- Require proper ramp grades
for safe bicycle operation



Raised Crosswalks



3

Pedestrian Refuge Island

Pedestrian Refuge Islands (CRF: 39%-46%)

Breaks up complex crossing task into 2 simpler crossings



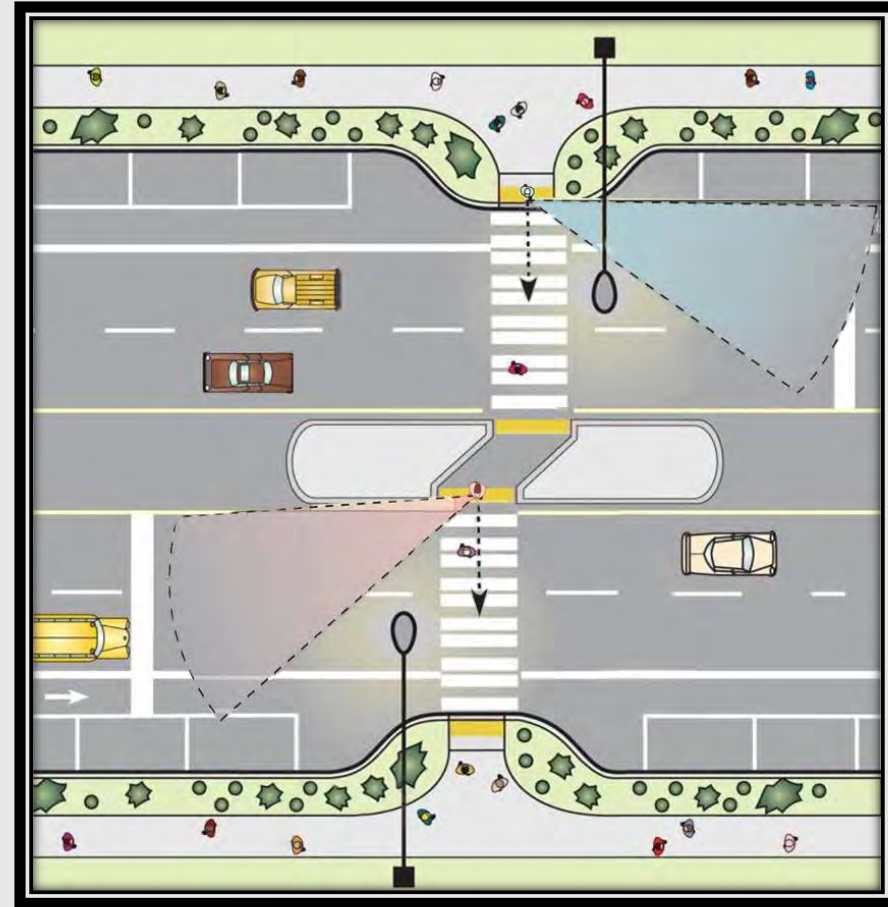
Photo Source: Google Street view



Photo Source: Google Street view

Pedestrian Refuge Island

- Breaks up a complex crossing into two simpler ones
- Cuts ADT in half
- Reduces crossing distance in half
- Reduces crossing time



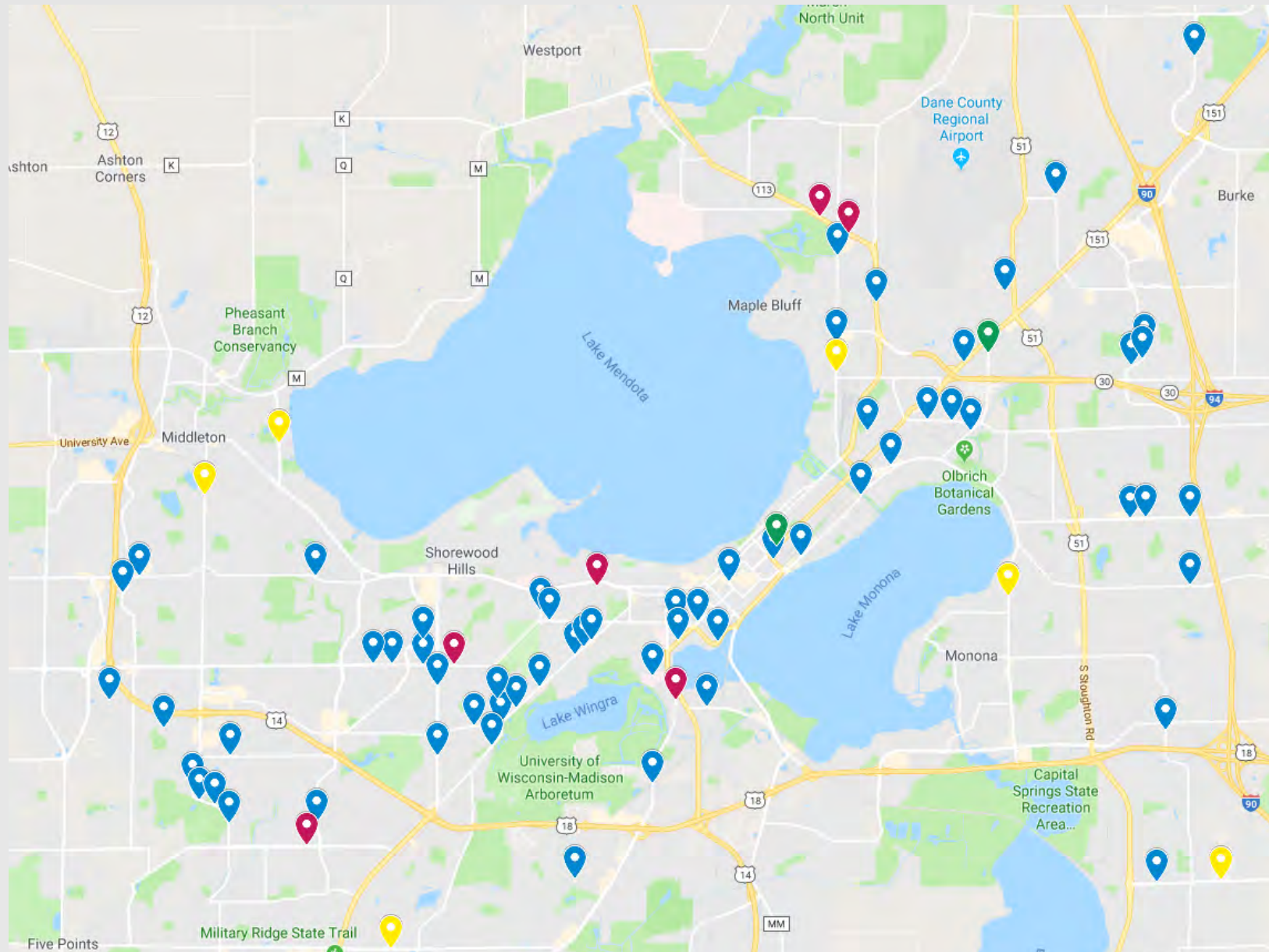
4 and 5 Beacons

Rectangular Rapid Flashing Beacon

CRF of up to 47%



Installations in Madison



Pedestrian Hybrid Beacons (PHB) CRF 69%



1
Blank for
drivers



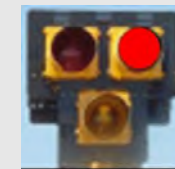
2
Flashing
yellow



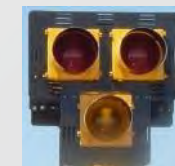
3
Steady yellow



4
Steady red



5
Wig-Wag



Return
to 1



Pedestrian Hybrid Beacon Effectiveness

➤ Compliance - 97%

- Almost identical to a mid-block signal
- Much better than an overhead Flashing Beacon – 47%

➤ MUTCD Requirements easier to meet

- Pedestrian Volume; traffic speeds; Traffic volumes; crosswalk length



5

Road Diets

“Classic Lane Reconfiguration”



4 to 3 lanes

Road Diet (Classic 4 to 3) CRF 19%-47%



Photo Source: Complete Streets

- Evaluate when ADT less than 20K

What Can Neighborhood Associations Do?

- Engineering vs. Behavior Changes
- Work with City on Engineering Changes – Traffic Management and Crossings
- Education and Enforcement – City Assistance
- Changing Behavior Campaigns – Signs, Flags, and Pledges
- Safe Communities Coalition