MIT Class
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Transportation Enhancements to Promote Livable Communities (A Lesson in Traffic Calming)

Heidi Richards, PE

Vanasse Hangen Brustlin, Inc., Watertown MA

What is Traffic Calming?

- Neighborhoods
- Municipal Officials
- Downtown or Village District
- State Agency
- Designers and Public Works

Traffic Calming is:

- The use of mainly physical measures to
  - Reduce the negative impacts of motor vehicle use
  - Alter driver behavior
  - Improve conditions for non-motorized street users.

Traffic Calming Goals

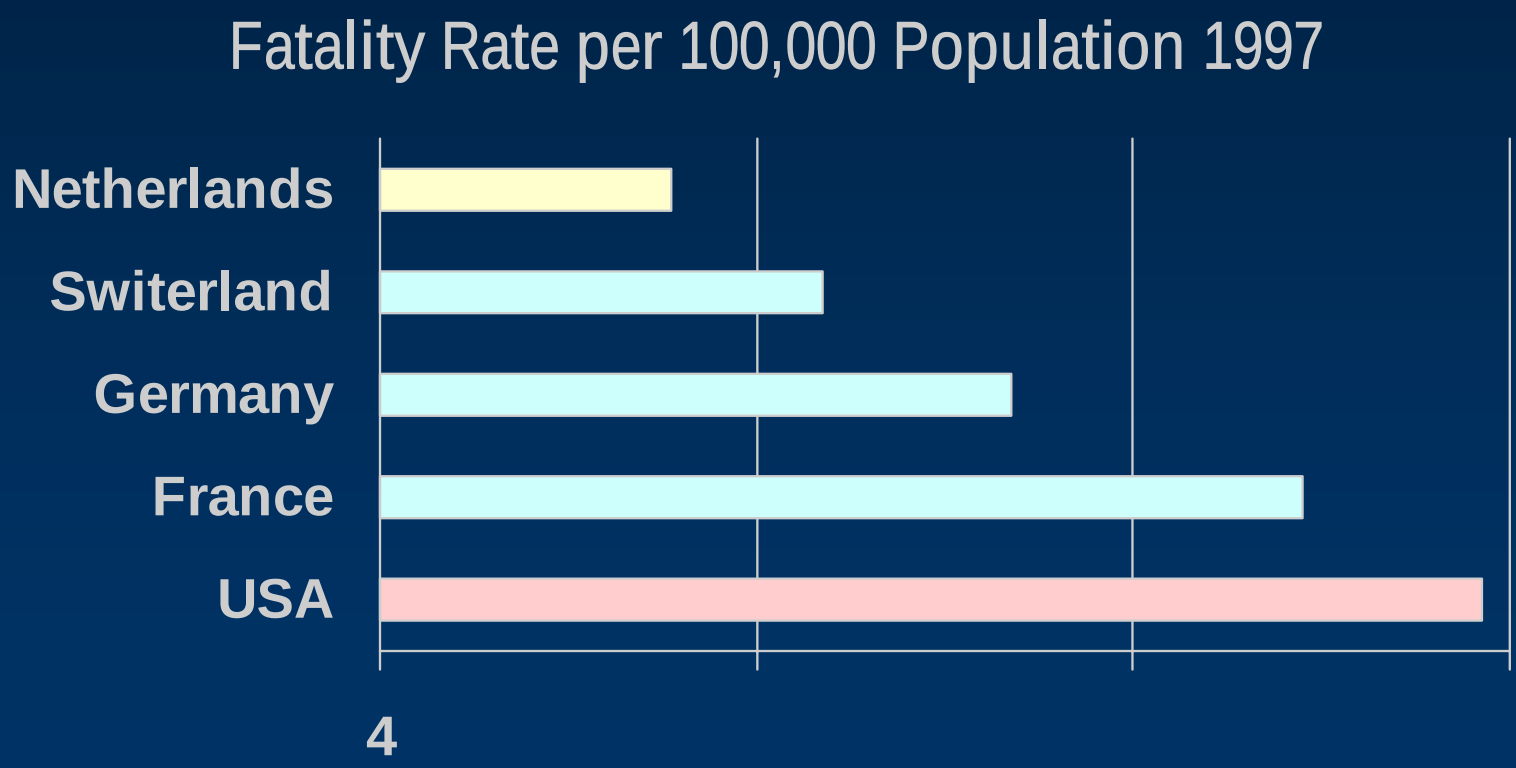
- Increase quality of life
- Incorporate preferences of people using the the area along the street
- Create safe and attractive streets
- Reduce negative effects of motor vehicles
- Promote pedestrian, cycle and transit use

Traffic Calming Objectives

- Slow speeds
- Reduce frequency and severity of collisions
- Increase safety for non-motorized users of the the street
- Reduce need for police enforcement
- Enhance street environment
- Increase access for all modes
- Reduce cut-through motor vehicle travel

Road Safety in the USA

An international comparison



Road Safety in the USA

An international comparison

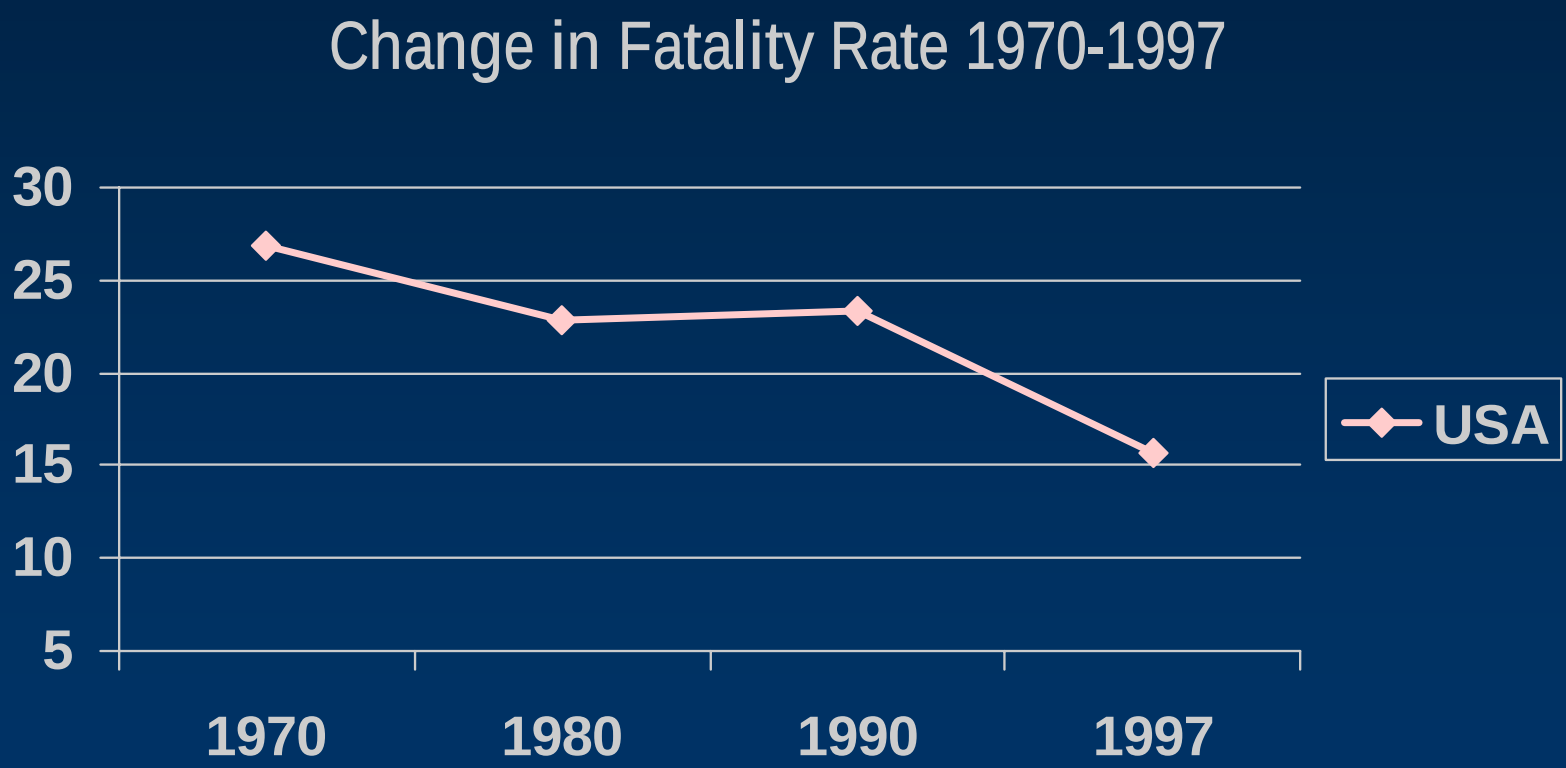
If the USA had the same rate of road fatality fatality as The Netherlands we would have: have:

20,000 fatalities per year instead of

42,000 fatalities per year

Road Safety in the USA

Improvement in road safety over time (fatalities per 100,000 population)



Road Safety in the USA

Improvement in road safety over time

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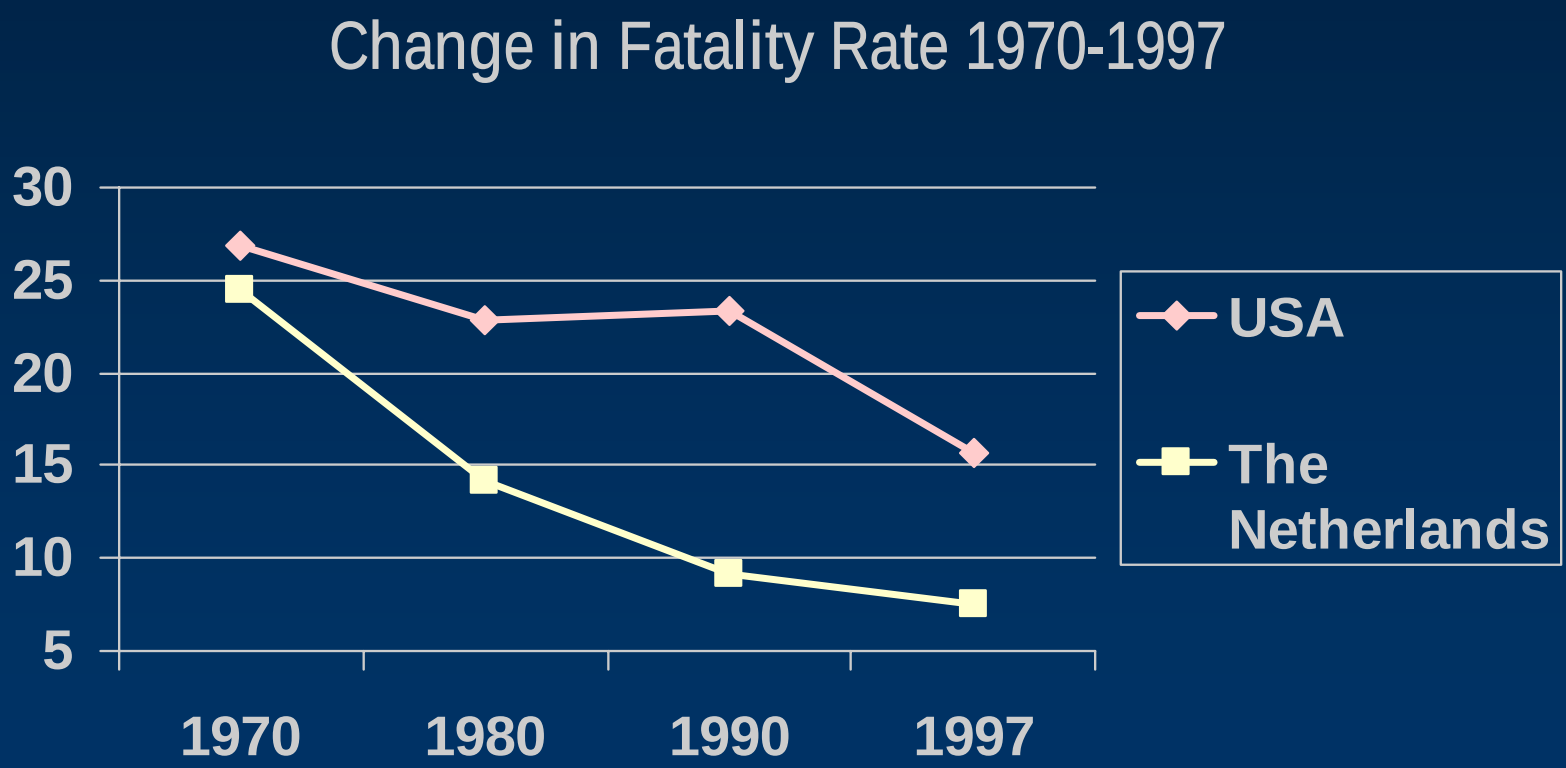
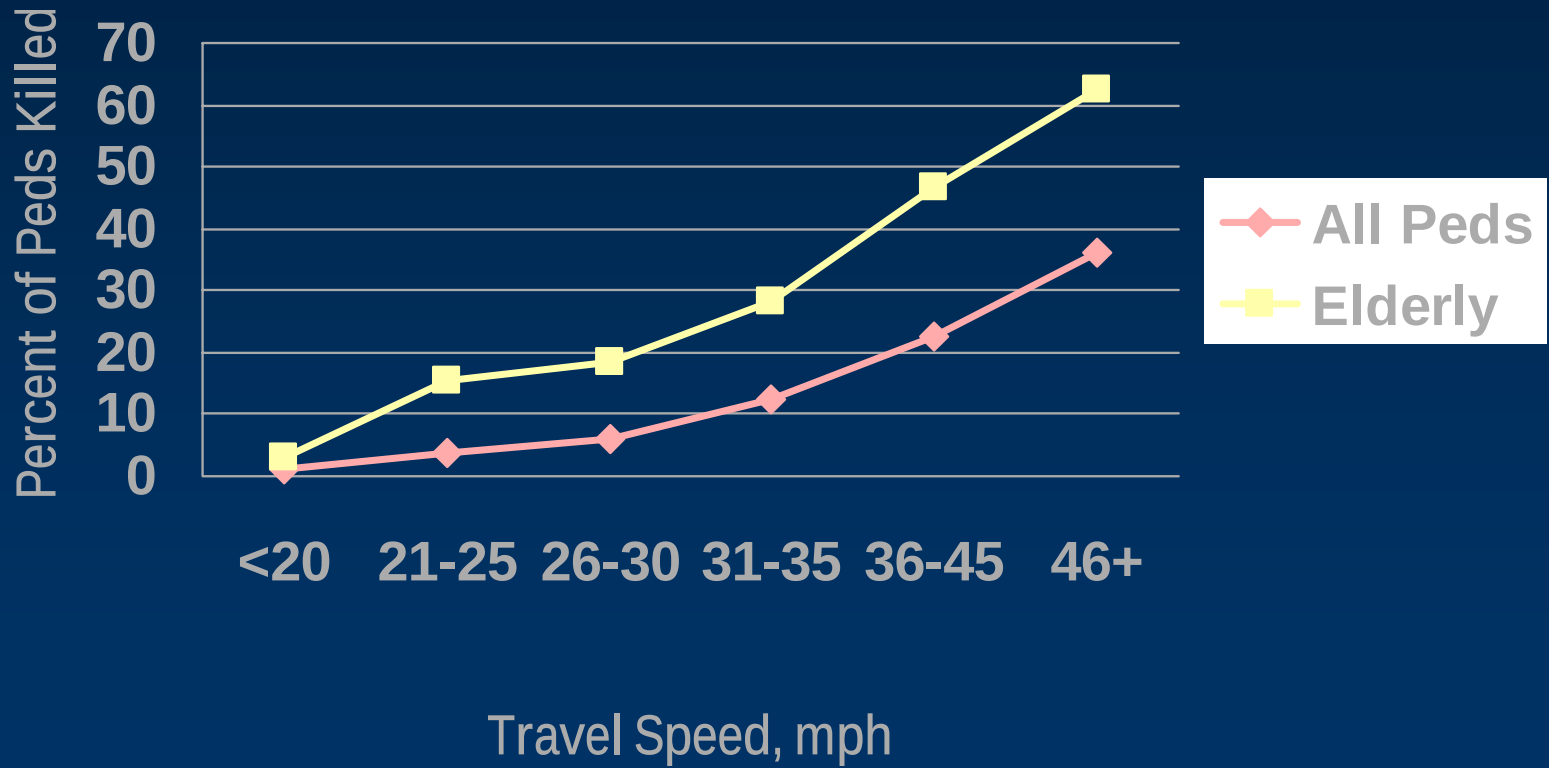


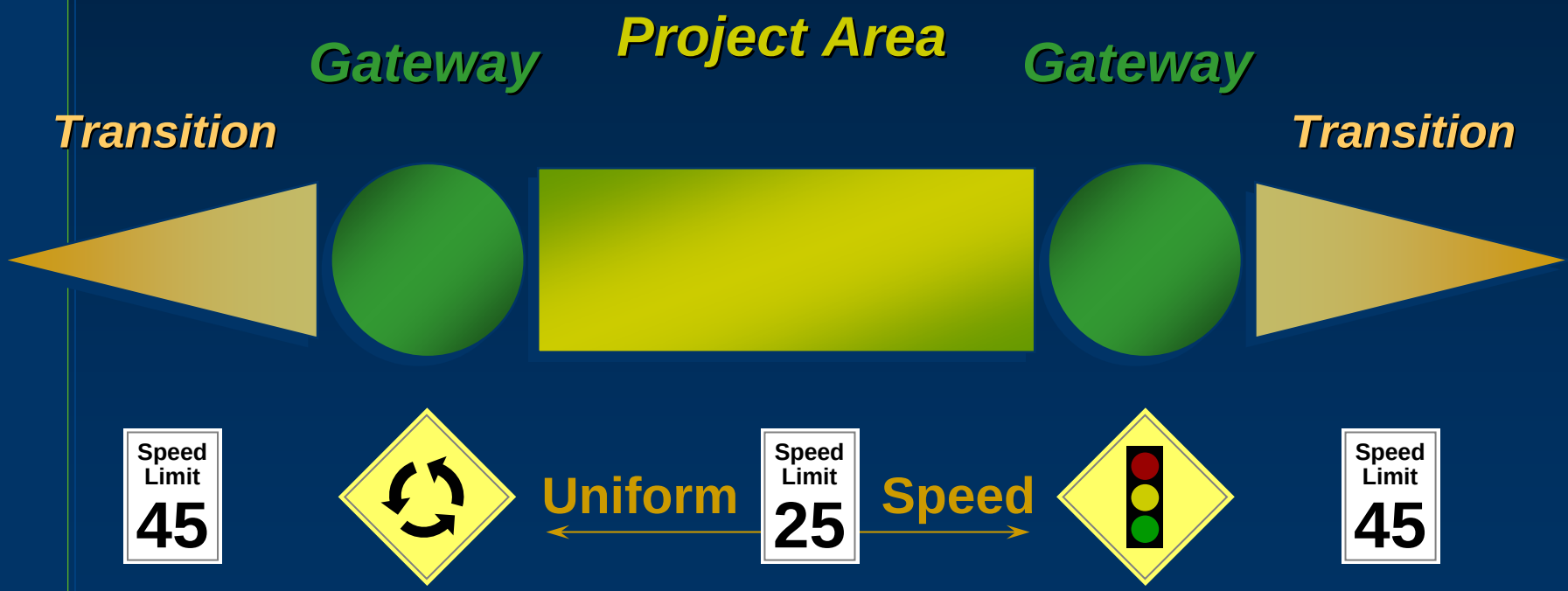
Pedestrian Safety and Traffic Calming

Percentage of Pedestrians Killed Doubles for Each 5 mph Increase in Speed

(USDOT – National Highway Safety Administration,1999)



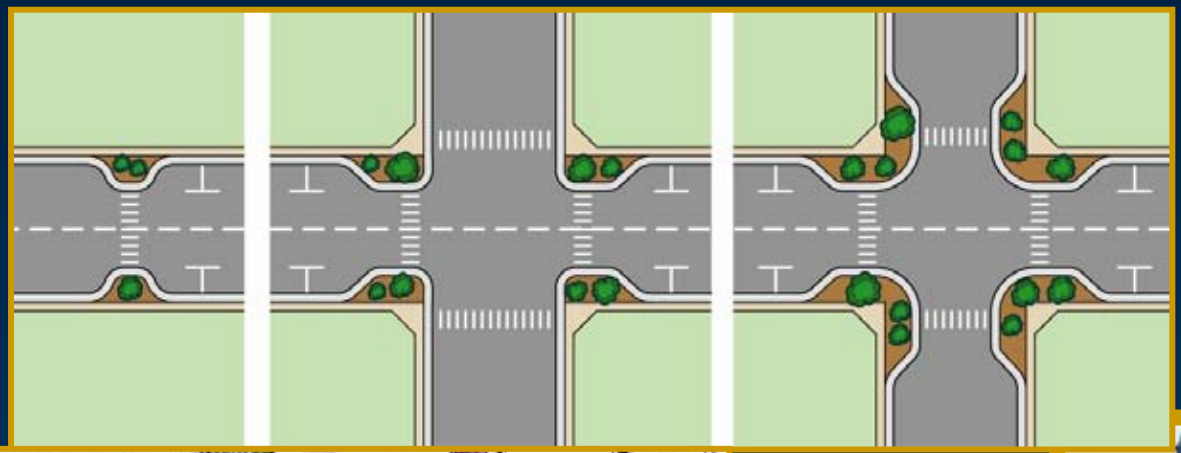
Traffic Calming Design Issues



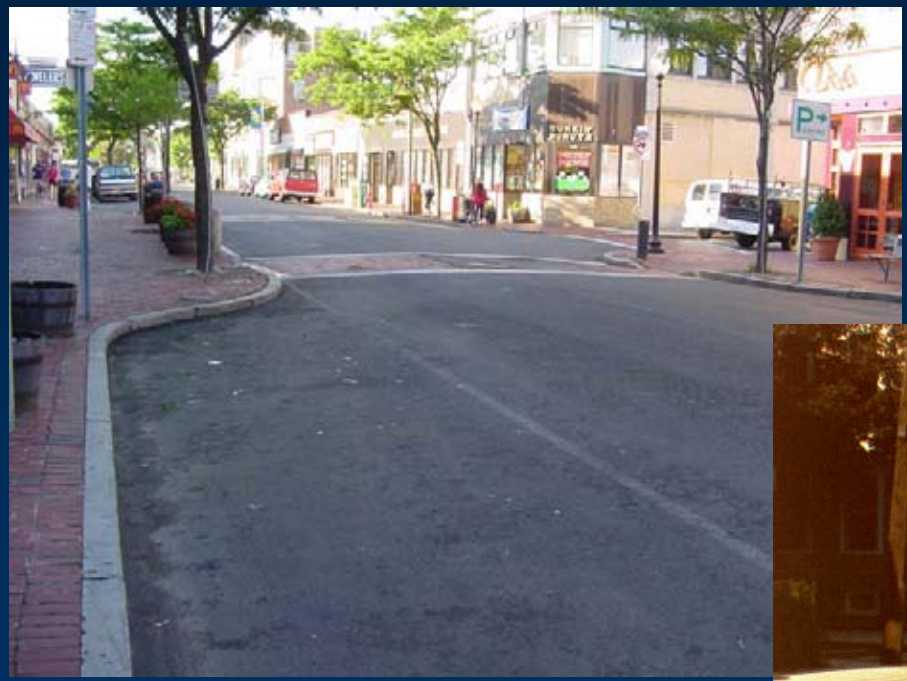
Traffic Calming Toolbox

- Speed Humps
- Raised Intersections
- Raised/Textured Crosswalks
- Median Barriers
- Neckdowns
- Chicanes
- Closures
- Semi & Diagonal Diverters
- Corner Radii
- Parking
- Roundabouts
- Traffic Circles
- Edge Treatment
- Streetscaping
- Transition Zones
- Land Treatments
- Enforcement

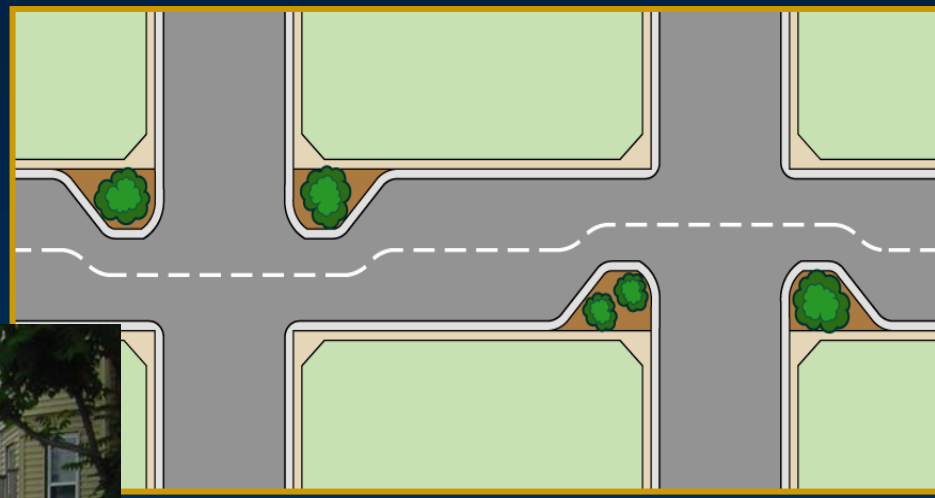
Neckdowns



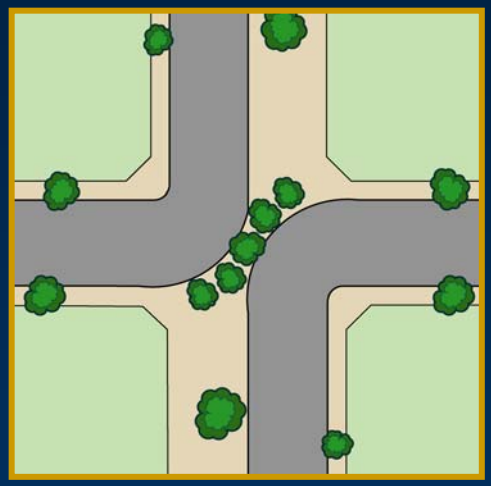
Neckdowns



Chicane

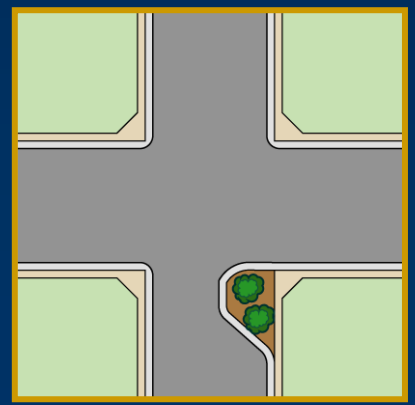


Traffic Calming Techniques

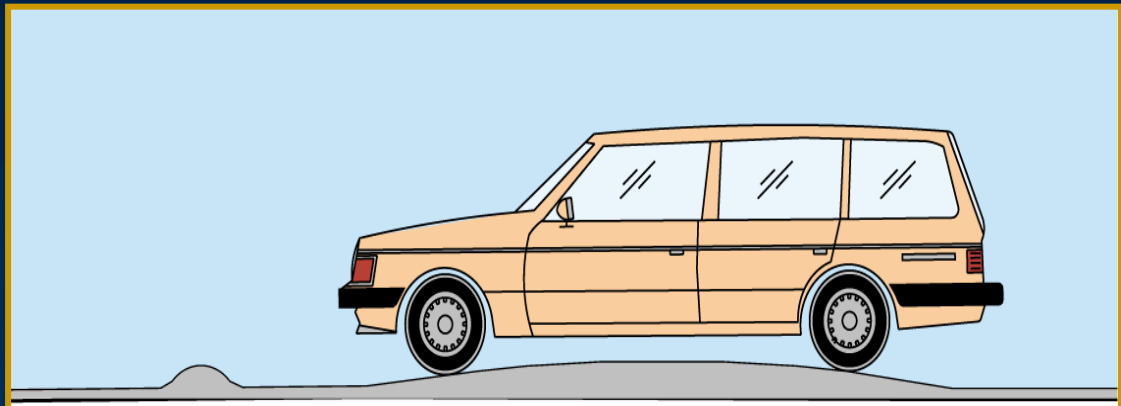


Diagonal Diverter

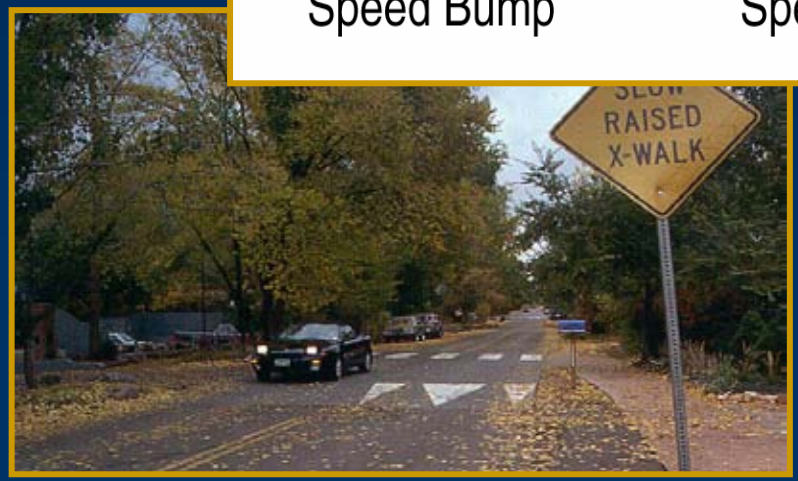
Semi-Diverter



Speed Hump



Speed Bump Speed Hump

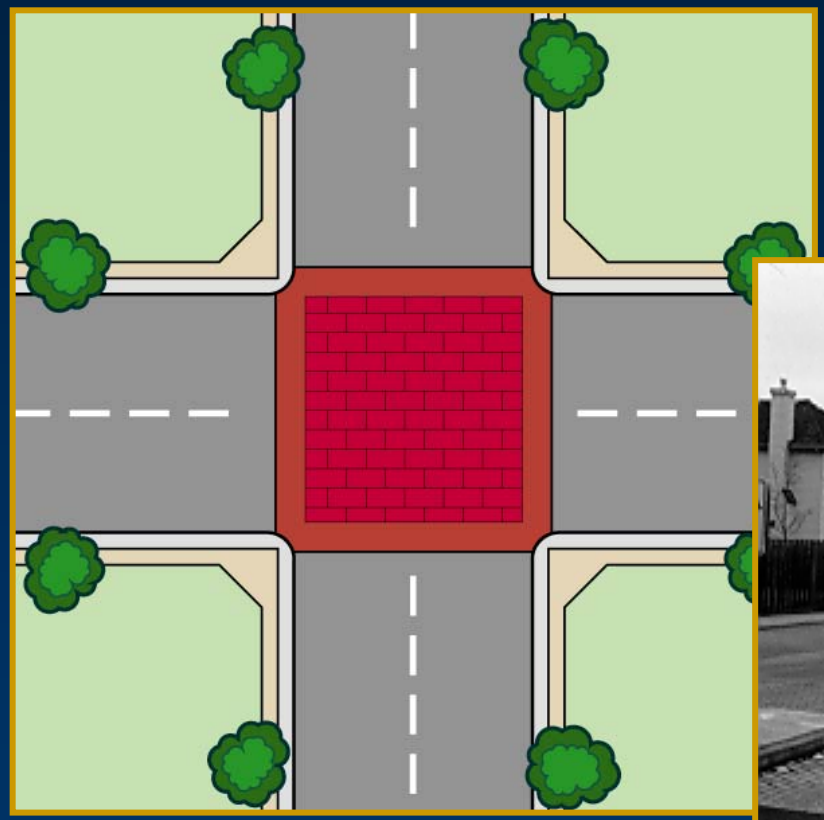


Raised Crosswalk

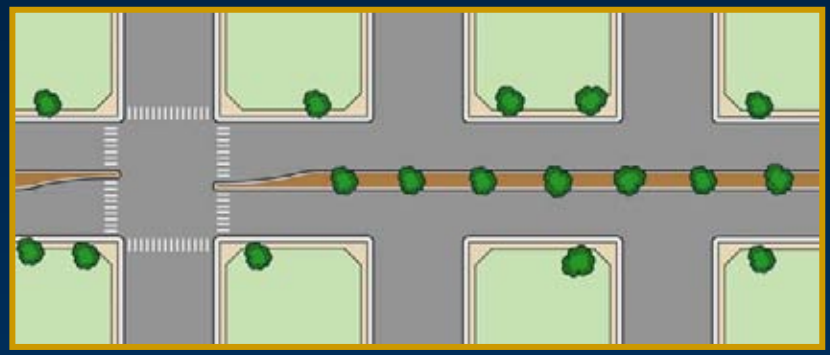
Raised Crosswalk

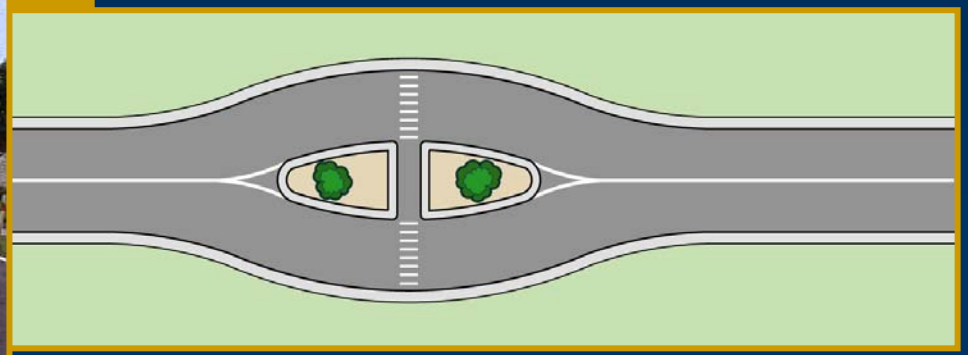
(Driver's Eye View)

Raised Intersection

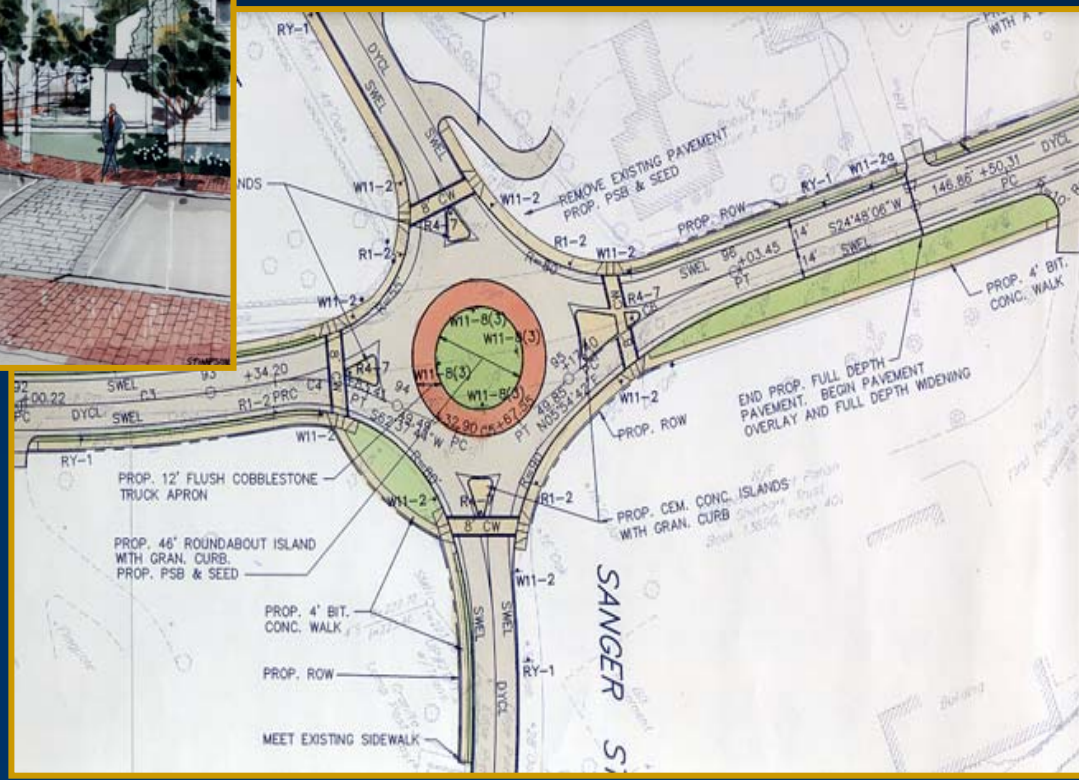


Median Treatment & Traffic Island





Roundabout


PROP. 12' FLUSH COBBLESTONE TRUCK APRON
PROP. 46' ROUNDABOUT ISLAND WITH GRAN. CURB. PROP. PSB & SEED
PROP. 4' BIT. CONC. WALK
PROP. ROW
MEET EXISTING SIDEWALK
REMOVE EXISTING PAVEMENT PROP. PSB & SEED
PROP. ROW
END PROP. FULL DEPTH PAVEMENT, BEGIN PAVEMENT OVERLAY AND FULL DEPTH WIDENING
PROP. CEM. CONC. ISLANDS WITH GRAN. CURB
PROP. 4' BIT. CONC. WALK
SANGER

Roundabout/Traffic Circle

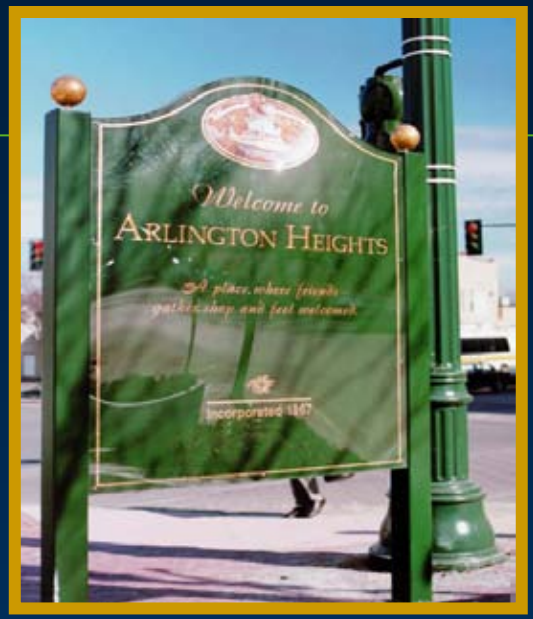
Textured Treatments

Amesbury, MA (VHB Design)

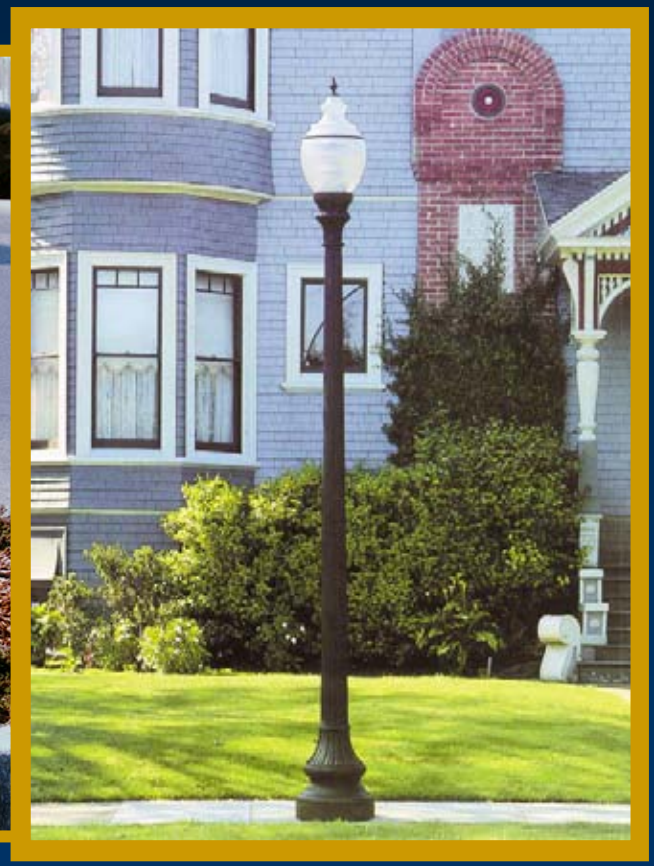
Miami Lakes, Florida

Enhanced Crosswalk Treatment

Gateways



Lighting



What is Basis for Successful Project

- Understanding the issue to address
- Consensus on need to and means to address address
- Creating a sensitive design
- Public outreach program
  (No surprises)
- Supporting authority - Regulations
- Measuring and monitoring

Conclusions

From the design perspective

- Clearly identify problem before defining defining countermeasure
- Plan for public involvement
- Learn from the implementation

Resources:

- *Traffic Calming, State of the Practice*, ITE, U.S. DOT, FHWA
- *Traffic Calming in Practice*, County Surveyors Society, etc.
- *Traditional Neighborhood Development – Street Design Guidelines*, ITE
- *Take Back Your Streets*, CLF
- *Speed Hump Design Guidelines*, ITE
- *Traffic Calming:Devices, Applications & Program Management*, SWRPA

Resources for Roundabouts:

- *Roundabouts: An Informational Guide*, U.S. DOT, DOT, FHWA
- *Roundabout Design Guidelines*, Ourston & Doctors
- *Florida Roundabout Guide*
- *Roundabout Design Guidelines*, State of Maryland Maryland
- *Roundabouts, Guide to Engineering Practice*, AUSTROADS