ROAD DIETS

MADE IN South Dakota

Optimizing YOUR Roads

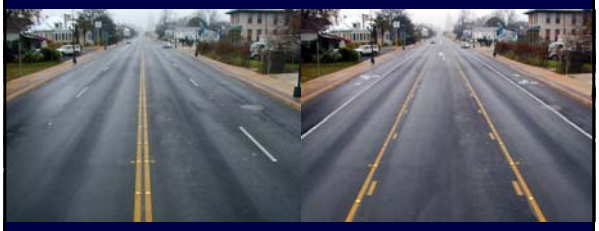
Road Diet 1

Overview

- Describe how crash risk increases with number of travel lanes and speed.
- Explain why reducing # of travel lanes reduces risk, and makes it easier for all users
- Demonstrate how reducing lanes frees space for higher & better use:
  - *Streets exist 24/7; peak traffic may be a concern for as little as 30 minutes a day*

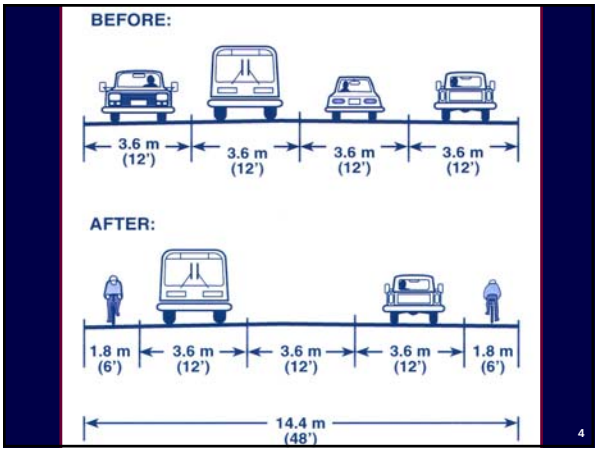
Road Diet 2

"Classic Road Diet"



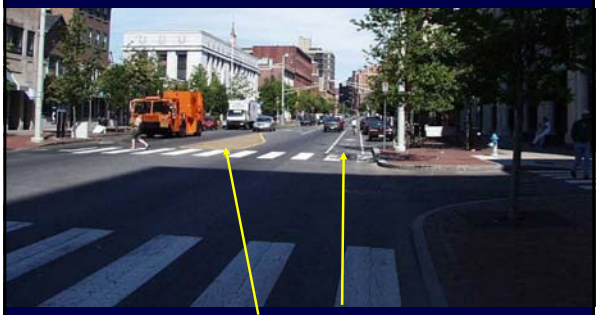
4-3 lanes

San Antonio TX | Road Diet 3



4

Road diets: reclaim street space for other uses



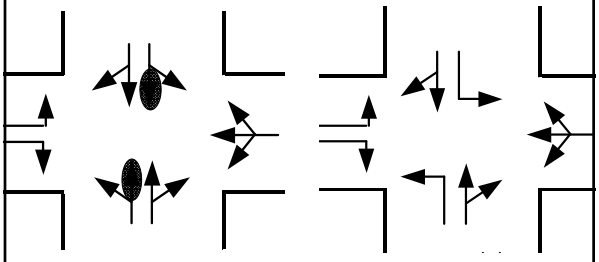
Not just for bike lanes

Cambridge MA | Road Diet 5

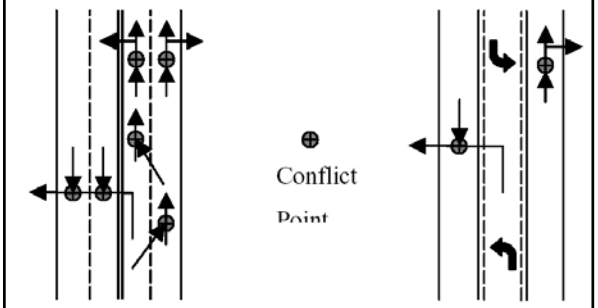
Reclaimed road space creates room for many uses

Seattle WA | Road Diet 6

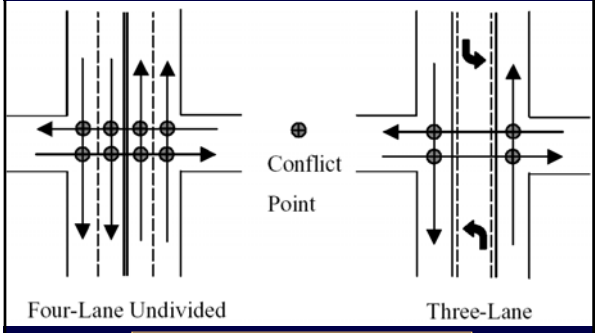
Laneage for 4-lane vs. 3-lane



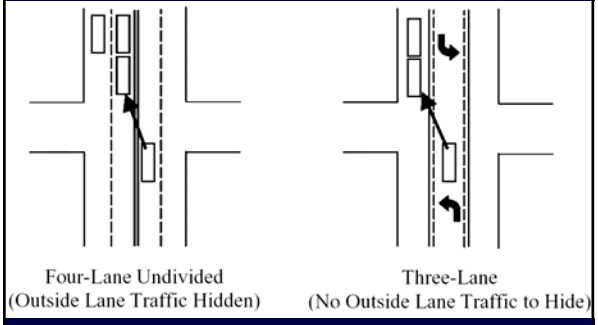
Midblock Conflicts



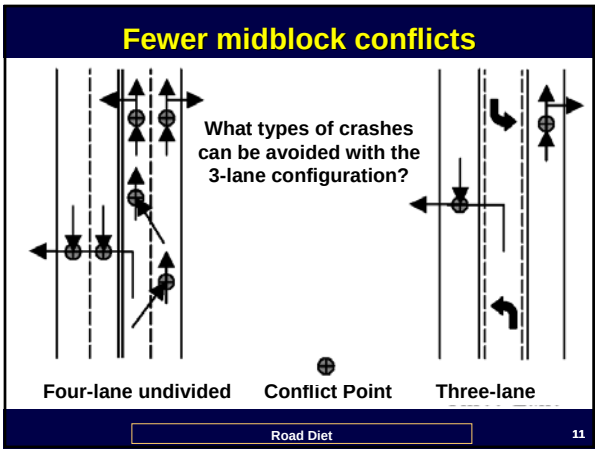
Intersection through conflicts



Left Turn Sight Distance



Fewer midblock conflicts



Volume Data Before and After Road Diets

Charlotte Street – Asheville, NC

(Letters are "Level of Service")	Existing laneage, existing traffic	3-lane section existing traffic	Existing laneage future traffic	3-lane section future traffic
Chestnut eastbound	D	C	F	E
Chestnut Westbound	C	C	D	C
Charlotte northbound	D	C	F	D
Charlotte southbound	B	C	C	D
Intersection overall	C	C	F	D

Road Diet 13

Roadway Section	Change	ADT (Before)	(After)
1. Lake Washington Blvd., Kirkland, Washington South of 83	4 lanes to 2 + TWLTL + bike lanes	23,000	25,913
2. Lake Washington Blvd, Kirkland, Washington Near downtown	4 lanes to 2 + TWLTL + bike lanes	11,000	12,610
3. Electric Avenue, Lewistown, Pennsylvania	4 lanes to 2 + TWLTL + bike lanes	13,000	14,500
4. Burcham Road, East Lansing, Michigan	4 lanes to 2 + TWLTL + bike lanes	11-14,000	11-14,000
5. Grand River Boulevard, East Lansing, Michigan	4 lanes to 2 + TWLTL + bike lanes	23,000	23,000
6. St. George Street, Toronto, Ontario, Canada	4 lanes to 2 + bike lanes + wide sidewalks	15,000	15,000
7. 120th Avenue, NE Bellevue, Washington	4 lanes to 2 + TWLTL	16,900	16,900
8. Montana (commecial street) Bellevue, Washington	4 lanes to 2 lanes + TWLTL 4 lanes to 2 + median + bike lanes	18,500	18,500

Lane Reductions of Select Street Conversions-- Volume Ch

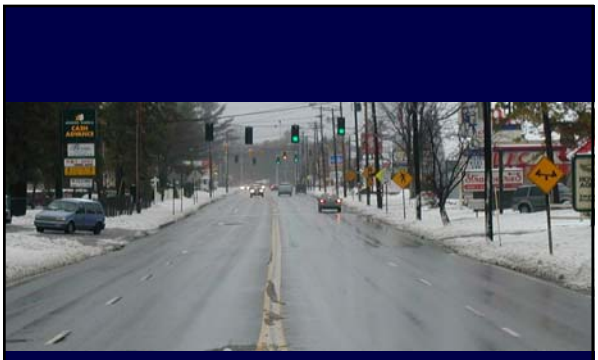
Roadway Section	Change and Date	ADT (Before)	ADT (After)
9. Danforth Toronto, Ontario, Canada	4 lanes to 2 + bike lanes 4 lanes to 2+ turning pockets+ bike lanes	22,000	22,000
Seattle, Washington			
10. Greenwood Avenue N, from N. 80th St to N 50th	4 lanes to 2, plus TWLTL Plus Bike lanes April, 1995	11,872	11,2427
11. N 45th Street in Wallingford Area Seattle, Washington	4 lanes to 2 lanes plus TWLTL December, 1972	19,421	20,274
12. 8th Ave. NW in Ballard Area Seattle, Washington	4 lanes to 2 lanes plus planted median with turn pockets January, 1994	10,549	11,858
13. Martin Luther King Jr. Way,	4 lanes to 2 lanes plus TWLTL, plus	12,336	13,161

Road Diets and Traffic Operations

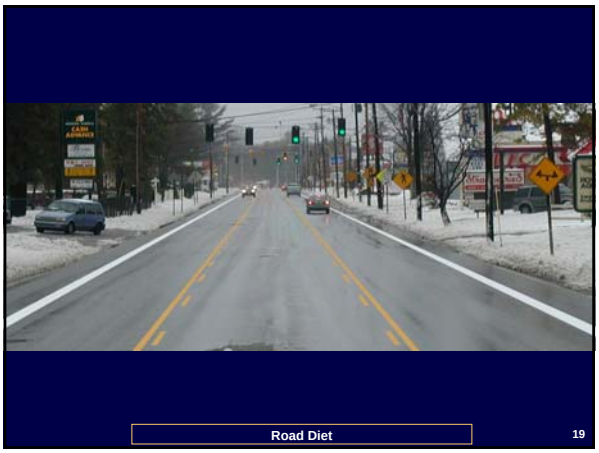
Road Diet 16

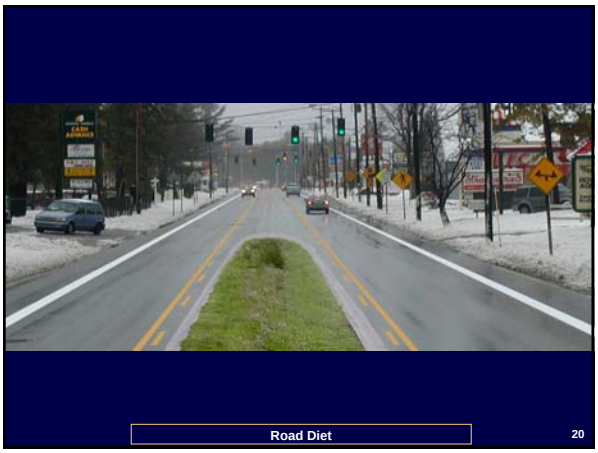
- Which road carries the most traffic?
- Which road produces the highest speed?
  - ✓ With a 4-lane road a fast driver can pass others
  - ✓ With a 2-lane road the slower driver sets the speed
- Which road produces the highest crash rate?
- Which is better for bicyclists, pedestrians, businesses?

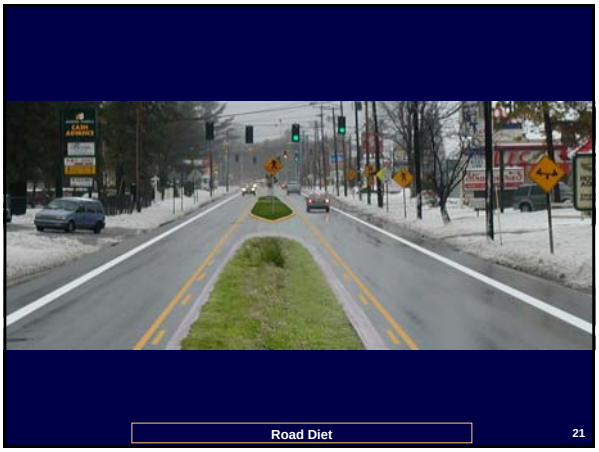
San Antonio TX Road Diet 17

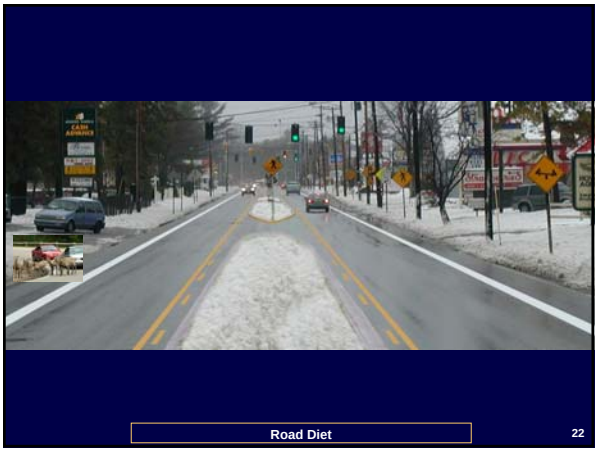


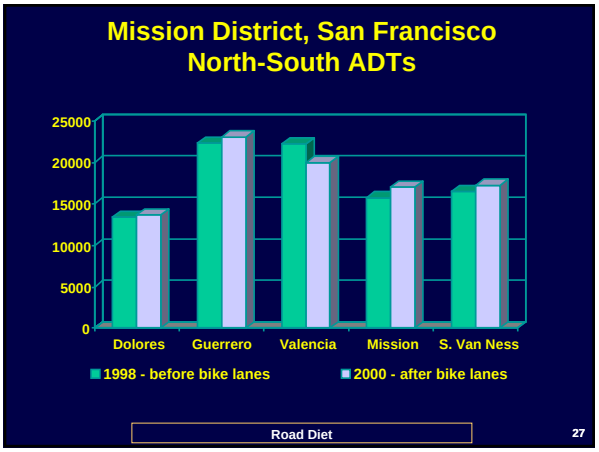
Road Diet 18


Road Diet
19


Road Diet
20

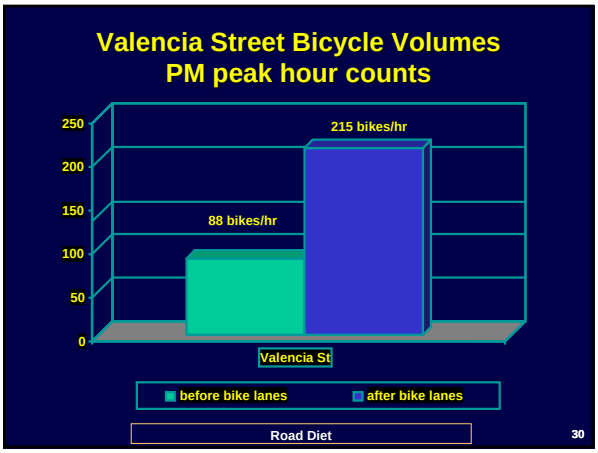

Road Diet
21


Road Diet
22


Mission District, San Francisco
North-South ADTs
25000
20000
15000
10000
5000
0
Dolores
Guerrero
Valencia
Mission
S. Van Ness
1998 - before bike lanes
2000 - after bike lanes
Road Diet
27


21'
10' 3"
10' 3"
21'
Total width = 62' 6"
Valencia Street (SF) - before road diet
San Francisco CA
Road Diet
28

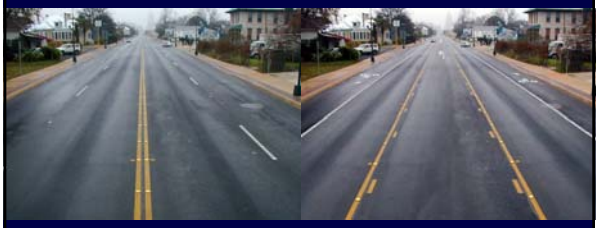

8'
5' 9"
10' 6"
10' + 4'
10' 6"
5' 9"
8'
Valencia Street (SF) - after road diet
San Francisco CA
Road Diet
29


Valencia Street Bicycle Volumes
PM peak hour counts
250
200
150
100
50
0
215 bikes/hr
88 bikes/hr
Valencia St
before bike lanes
after bike lanes
Road Diet
30

Road Diet CRF: Iowa DOT study results

25% reduction in total crashes/mile

19% reduction in crash rate



Based on 15 road diet projects with 15 control sites over 23 years

San Antonio TX | Road Diet | 31

What are some benefits of road diets?

- Reduce crossing distance
- Eliminate or reduce "multiple threat" crash types
- Install crossing island to cross in 2 simple steps
- Reduce top end travel speeds
- Buffer sidewalk from travel lanes (parking/bike)
- Reclaim street space for "higher and better use" than moving peak hour traffic

Road Diet | 32

Reclaiming road space creates room for ped islands

Road Diet | 33

Reclaiming road space creates room for ped islands

Road Diet | 34

Reclaiming road space creates room for ped islands

Road Diet | 35

This 5-lane Main Street was converted to…

Pottstown PA | Road Diet | 36

Summary

- Describe how crash risk increases with number of travel lanes and speed.
- Explain why reducing # of travel lanes reduces risk, and makes it easier to cross the street
- Demonstrate how reducing lanes frees space for higher & better use:
  - *Streets exist 24/7; peak traffic may be a concern for as little as 30 minutes a day*

Road Diet 40