ROAD DIETS

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Designing Streets for Pedestrians and Bicyclists

New Partners for Smart Growth

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“Classic Road Diet”
Two-way street: 4 travel lanes → 2 + CTL
- Which road carries the most traffic?
- Which road has the higher 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 has the higher crash rate?
- Which is better for bicyclists, pedestrians, businesses?
Road Diets
Safety & Traffic Operations

Several studies have shown crash reduction:
From 7% (Zegeer et al) to 40% (Iowa)
Fewer midblock conflicts

Two types of crashes can be avoided with the 3-lane configuration

Four-lane undivided  Conflict Point  Three-lane
Fewer intersection conflicts

Four-lane undivided  Conflict Point  Three-lane
Better left-turn sight distance

Four-Lane Undivided
(Outside Lane Traffic Hidden)

Three-Lane
(No Outside Lane Traffic to Hide)
Valencia Street (SF) - before road diet

San Francisco CA

Total width = 62’ 6”
Valencia Street (SF) - after road diet
Mission District, San Francisco
North-South ADTs

- 1998 - before bike lanes
- 2000 - after bike lanes
Valencia Street Bicycle Volumes
PM peak hour counts

Valencia St

before bike lanes  after bike lanes

88 bikes/hr
215 bikes/hr
Road diets: reclaim street space for other uses

Not just for bike lanes
What are some benefits of road diets for pedestrians?

- Reduce crossing distance
- Eliminate or reduce “multiple threat” crash types
- Install medians or crossing island to break crossing into 2 simpler crossings
- Reduce top end travel speeds
- Add sidewalk buffer from travel lanes (parking or bike lane)
- Reclaim street space for “higher and better use” than moving peak hour traffic
Room for crossing island
Separation from traffic
Reclaiming road space creates room for islands
Restriping benefits all users

Prolong pavement life (*motor vehicles no longer travel in the same well-worn ruts*)
Keep right-turn radius tight

R1 = Actual Curb Radius
R2 = Effective Radius
Better sight distance

Easier to exit from driveways (improved sight distance)

Corvallis OR
Restriping benefits transit
A buffer to trees
ROAD DIETS

Other configurations
On-street parking

Median

Bike lanes

Center turn-lane

It’s not one-size fits all: reclaimed road space creates room for many uses
NARROW TRAVEL LANES

BEFORE:

@ 25 MPH: 10’-10.5’ travel lanes

@ 30-40 MPH: 11’ travel lanes

@ 45 MPH or more (if high truck volumes): 12’ outside travel lane

Dimensions acceptable to OR State Traffic Engineer

AFTER:
Potential

As is – pretty wide CTL

Spartanburg SC
Restriped for bike lanes
Unbalanced traffic flows
Old lane line

Take advantage of uneven a.m./p.m. peaks
This 5-lane Main Street was converted to...
Name 4 things that changed

Fewer travel lanes; added bike lanes; parallel to back-in diagonal parking on one side; new pavement
We don’t like 5-lane streets; What about 7-lane streets?
One-way streets

HUGE untapped potential
Is this street operating at capacity?
This area was recaptured from a 4th travel lane; the street took on a whole new life.
Typical one-way cross-section: Four 12’ travel lanes
Why? Because the space was there
Possible scenario #1: Three travel lanes and...
Bike lane and parking on one side
Possible scenario #2: Three travel lanes and…
Parking on both sides
Possible scenario #3: Two travel lanes and…
Bike lane and parking on both sides
Nor radical enough for you?
How about we reduce 2 travel lanes to one bi-directional lane and two bike lanes?
Old Centerline

Single two-way travel lane with bike lanes
Old Centerline
Can’t be done here?

US Example
Computer rendering
Why quote Albert Einstein or Mahatma Gandhi, when you can quote yourself?

The best way to prove something can be done is to demonstrate it has been done.

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