



Colorado
Healthy Living Summit
March 30, 2007

Complete Streets: Creating Walkable Healthy Communities

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Understanding The Task

- Personal Level
 - Community Level
 - Metro Level
-
- Walking in Context
 - Place Types

Health

A Personal Issue

Health Statistics

- 1 in 10 American adults have diabetes
 - 66.3% of adults are either overweight or obese, with 32.2% of adults obese
 - Among children aged 2 through 19 years, 33.6% are overweight or at risk of overweight, with 17.1% overweight
 - 8 of the 15 leading causes of death are significantly related to or exacerbated by obesity
-



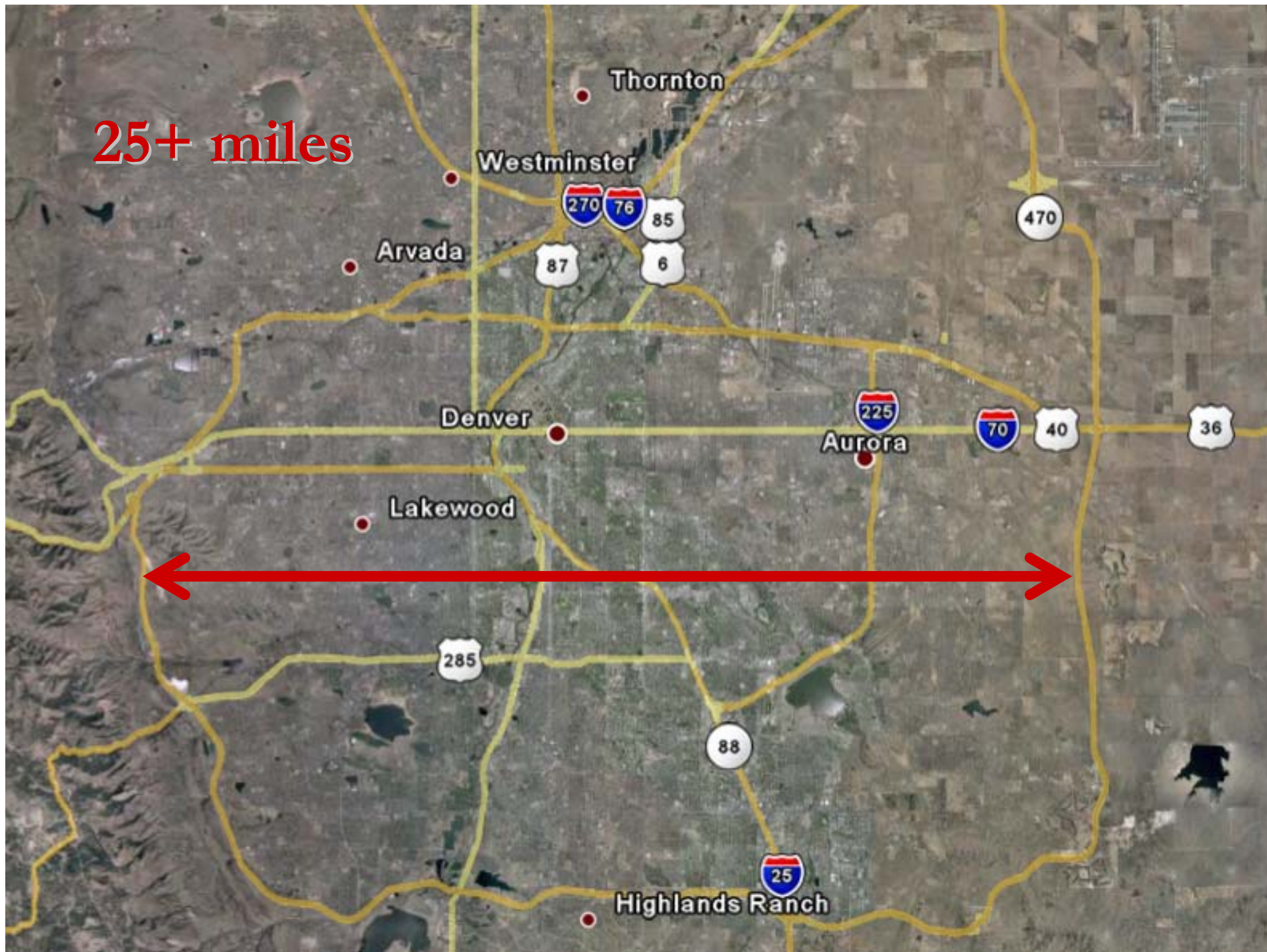
Walking


A Personal Activity

Walking Statistics


- Personal Mode of Transportation
 - National average trip length = $\frac{1}{4}$ mile
 - Personal Fitness Activity
 - 4.5 mph stride for 30 minutes = $2\frac{1}{4}$ miles
-

25+ miles





Different Types of Walking and Different of Walking Environments



Types of Walking

- Rambling
- Utilitarian Walking
- Strolling, Lingerling
- Promenading
- Special Events

Rambling



Rambling



Rambling



Utilitarian Walking



Utilitarian Walking



Strolling, Linger



Strolling, Lingerin



Promenade



Special Events



Types of Pedestrian Environments

- Pedestrian Place / District
- Pedestrian Supportive Environment
- Pedestrian Tolerant Environment
- Pedestrian Intolerant Environment

Pedestrian Intolerant



Pedestrian Tolerant



Pedestrian Supportive



Pedestrian Place



Types of Pedestrian Environments

Pedestrian Friendliness



Pedestrian Place / District



Pedestrian Supportive Environment

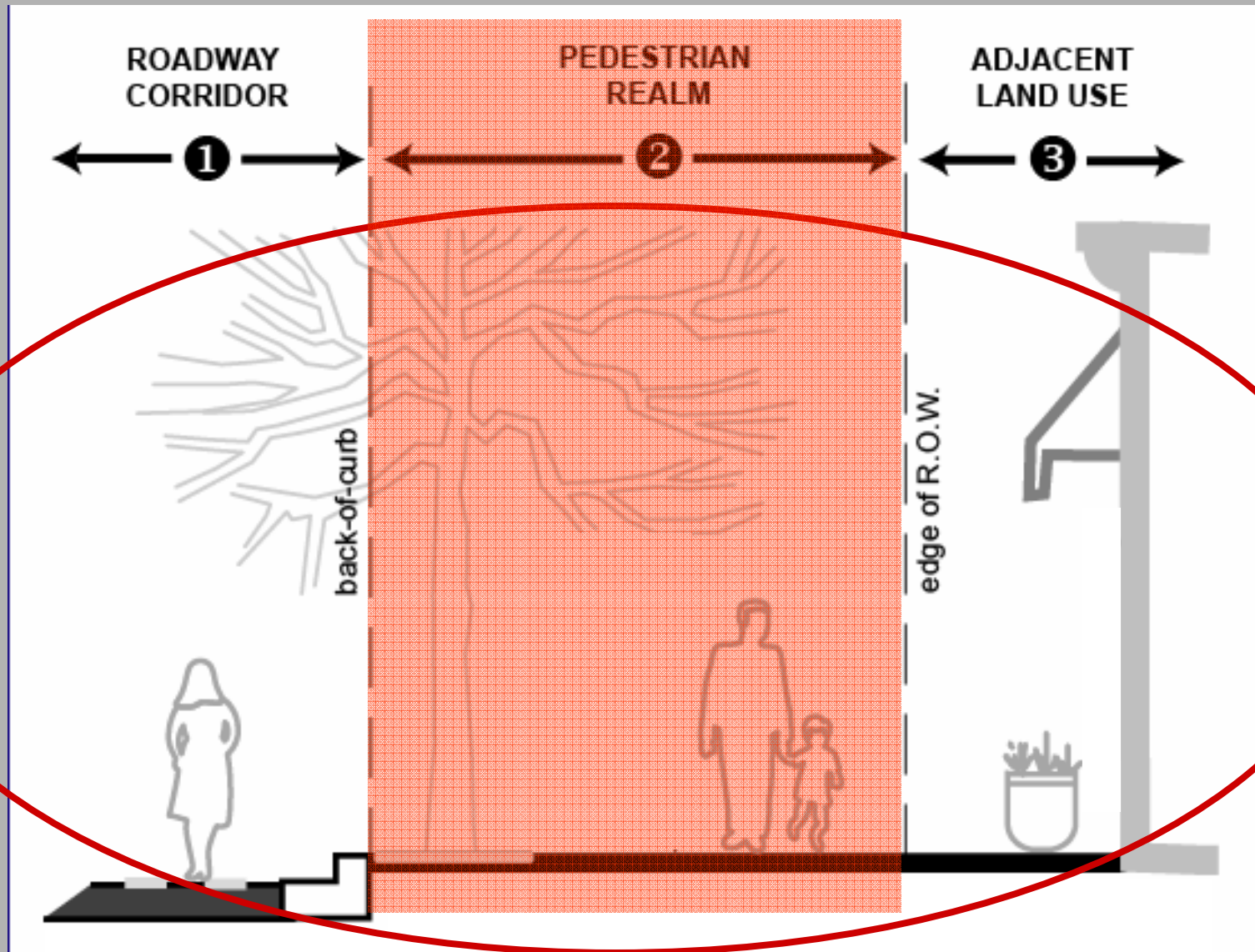


Pedestrian Tolerant Environment



Pedestrian Intolerant Environment

Components of Pedestrian Environments



Components of Pedestrian Environments

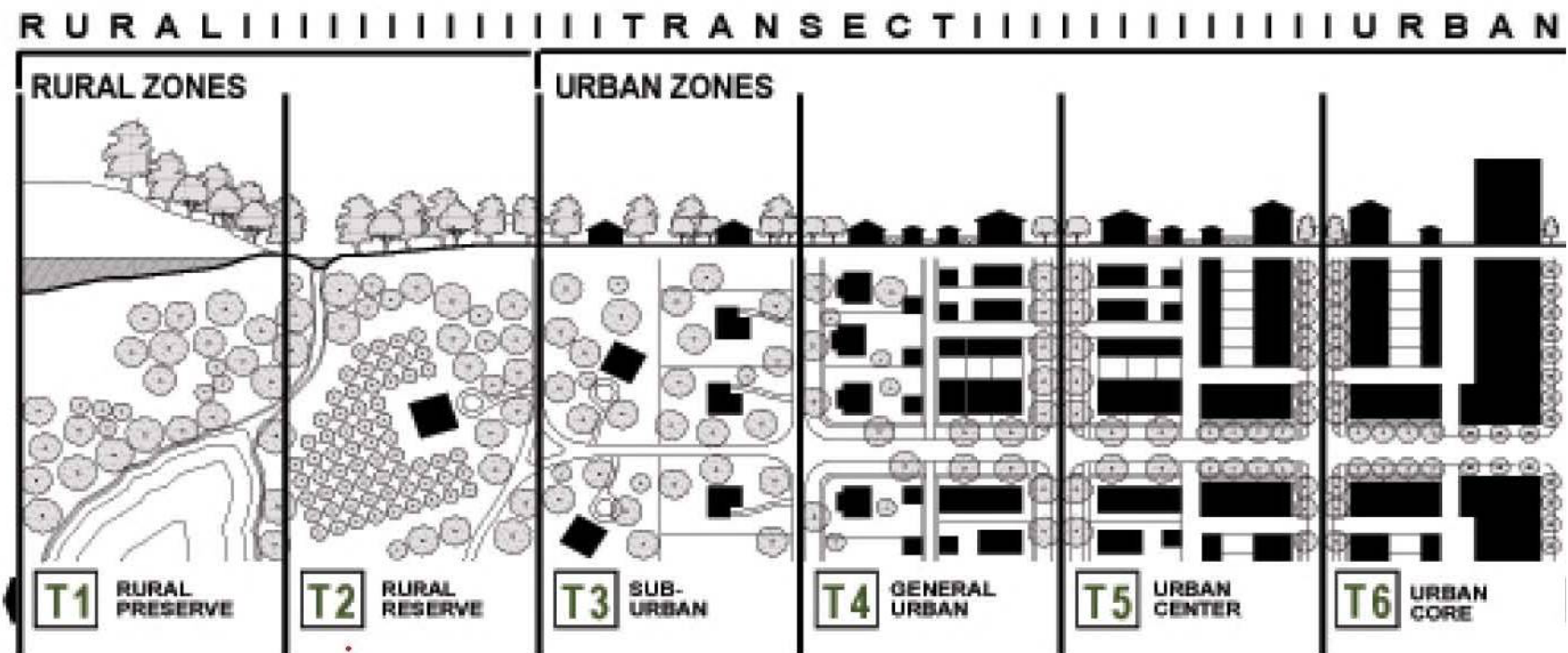
Crossing Treatment Guidelines		
	Pedestrian Tolerant Design	Pedestrian Supportive Design
Marked Crossings	Crossings are typically marked, but legal crossing also exist at unmarked intersections.	Marked crosswalks should be required, particularly in the following locations: > at all open legs of signalized intersections with adjoining sidewalks > at all arterial intersections in Downtown and mixed-use centers, or when connecting to significant retail activity > at multi-use trail crossings > along school walking routes > at or near important transit connections > near housing for the elderly
Spacing	Crossings shall be spaced a max. of 1320' apart. (1/4 mile)	Crossings shall be spaced a max. of 528' apart (1/10 mile) and a min. of 330' (traditional city block length)
Crosswalk Pattern	Standard crosswalks (two parallel, horizontal lines)	Highly-visible Ladder Bar or Piano Bar crosswalks (with perpendicular bars spaced so that wheels of motor vehicles pass on either side of the markings to minimize maintenance). Or use colored and textured surfaces to improve aesthetics in mixed-use areas, potentially in conjunction with raised speed table crossing treatments.
Signalization Timing	Use average walking speed of 3.5 - 4.0 feet/second	Use a slower walking speed of 2.5 - 3.0 feet/second to accommodate older pedestrians and people with disabilities
Curb Radius	25' curb radius standard 30' curb radius on major streets with truck/bus traffic	5'-15' max. curb radius Smaller curb radii (up to 5' min.) may be used if on-street parking or bike lanes
Curb Ramps	Diagonal curb ramps may be permitted in the following locations if curb radii are >20' and a landing at the bottom of the ramp is positioned within the crosswalk area for both directions of travel: > Where utilities prevent the installation of paired curb ramps	Paired curb ramps recommended Diagonal ramps to be avoided whenever curb radii are <20' since moving traffic can encroach upon the landing area



Taking Action

- Context Sensitive Design
- Reforming Urban Arterials
- Complete Street Policies
- Citizen-Based Efforts

Context Sensitive Design



Transect Zones or Context Zones

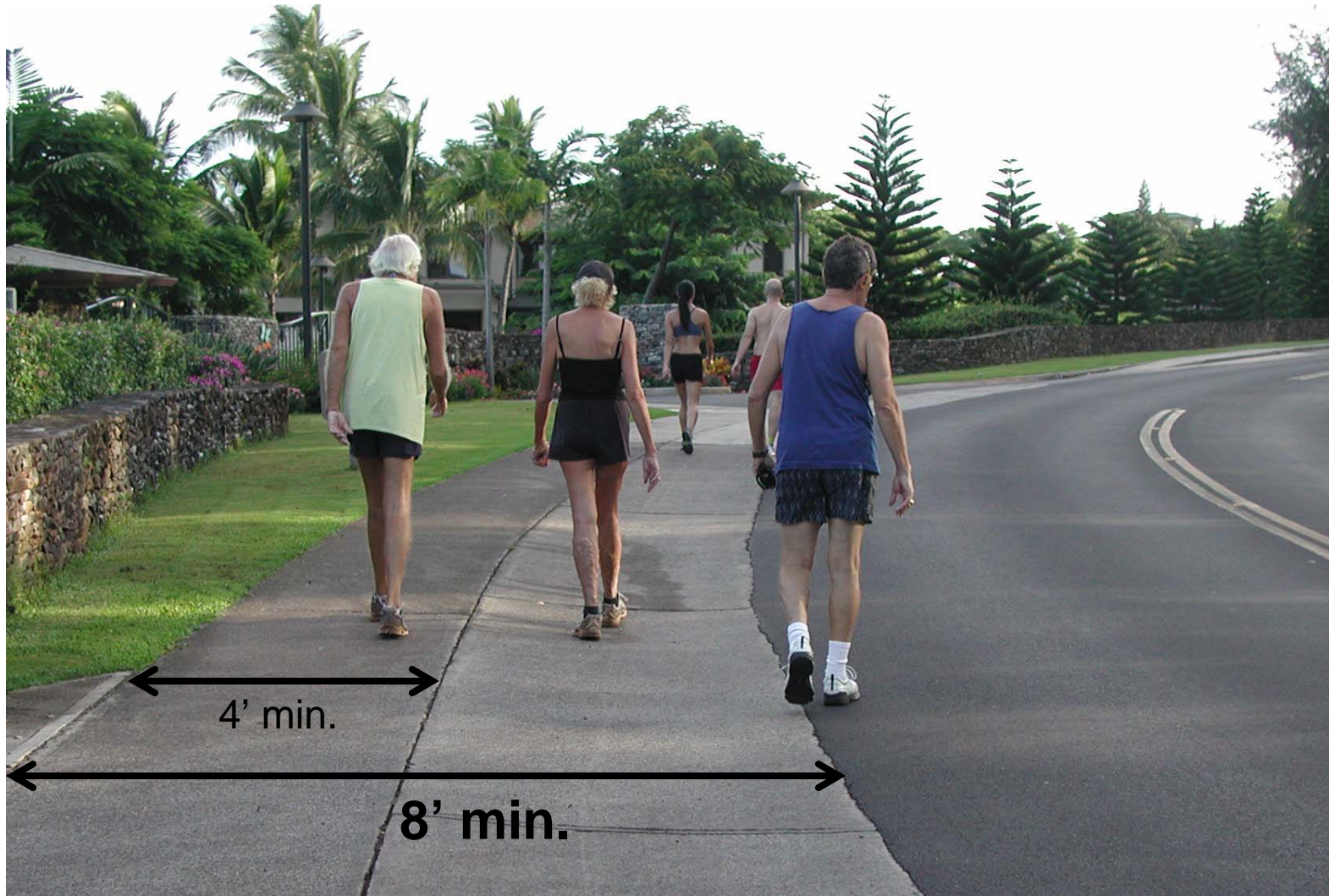
Context Sensitive Design

R U R A L I I I I I I I I I I I I I I I I T R A N S E C T I I I I I I I I I I I I I I I I U R B A N



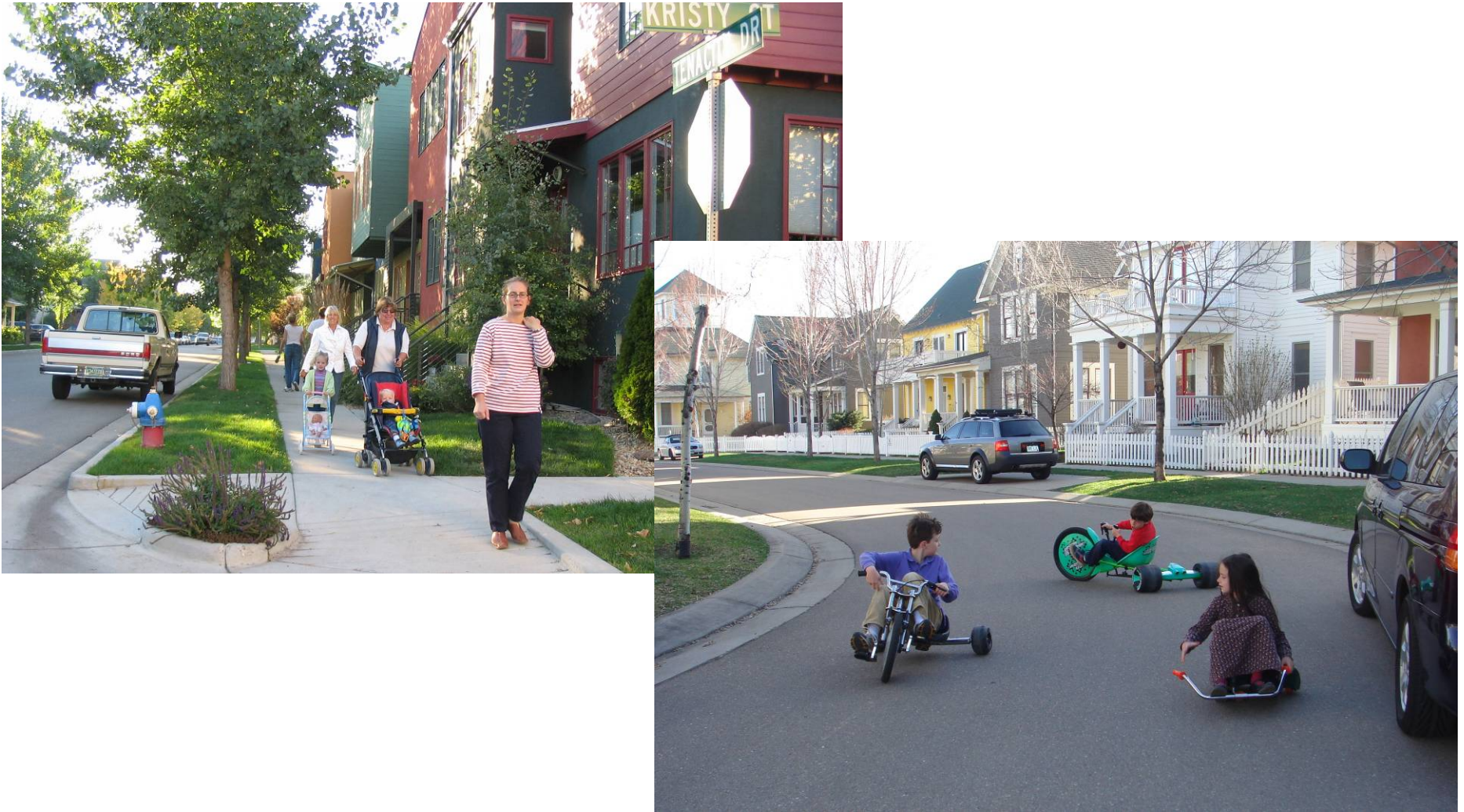
Vary Treatments by Context Zone

Context Sensitive Design



Vary Treatments by Type of User

Context Sensitive Design



Vary Treatments by Street Type

Context Sensitive Design



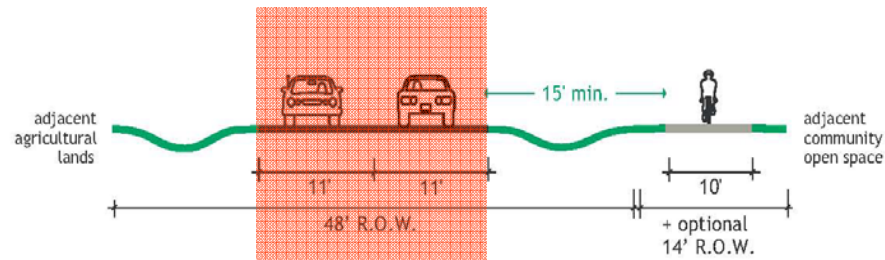
Vary Treatments by Street Type

Context Sensitive Design

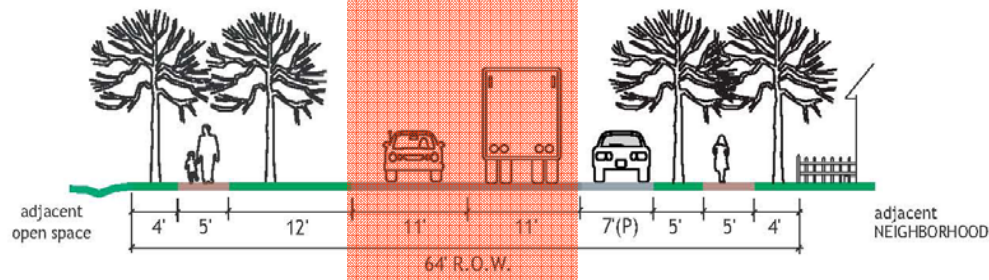
	Collector Roadway	Avenue	Connector Street	Local Street
T1 preserve		N/A		
T2 edge		N/A		
T3 general				
T4 core		N/A	N/A	

Hali'imaile, Maui

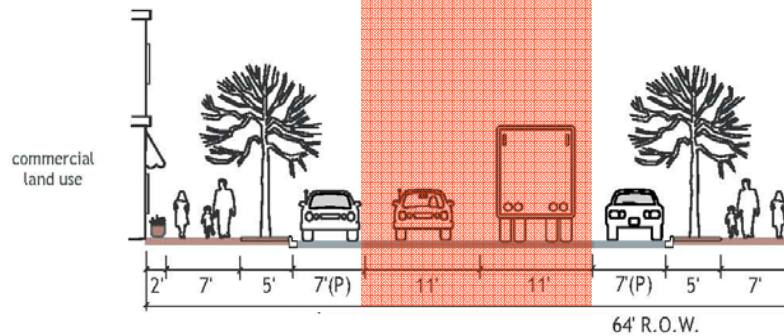
T2 edge



T3 general



T4 core



Collector Roadways

Reforming Urban Arterials



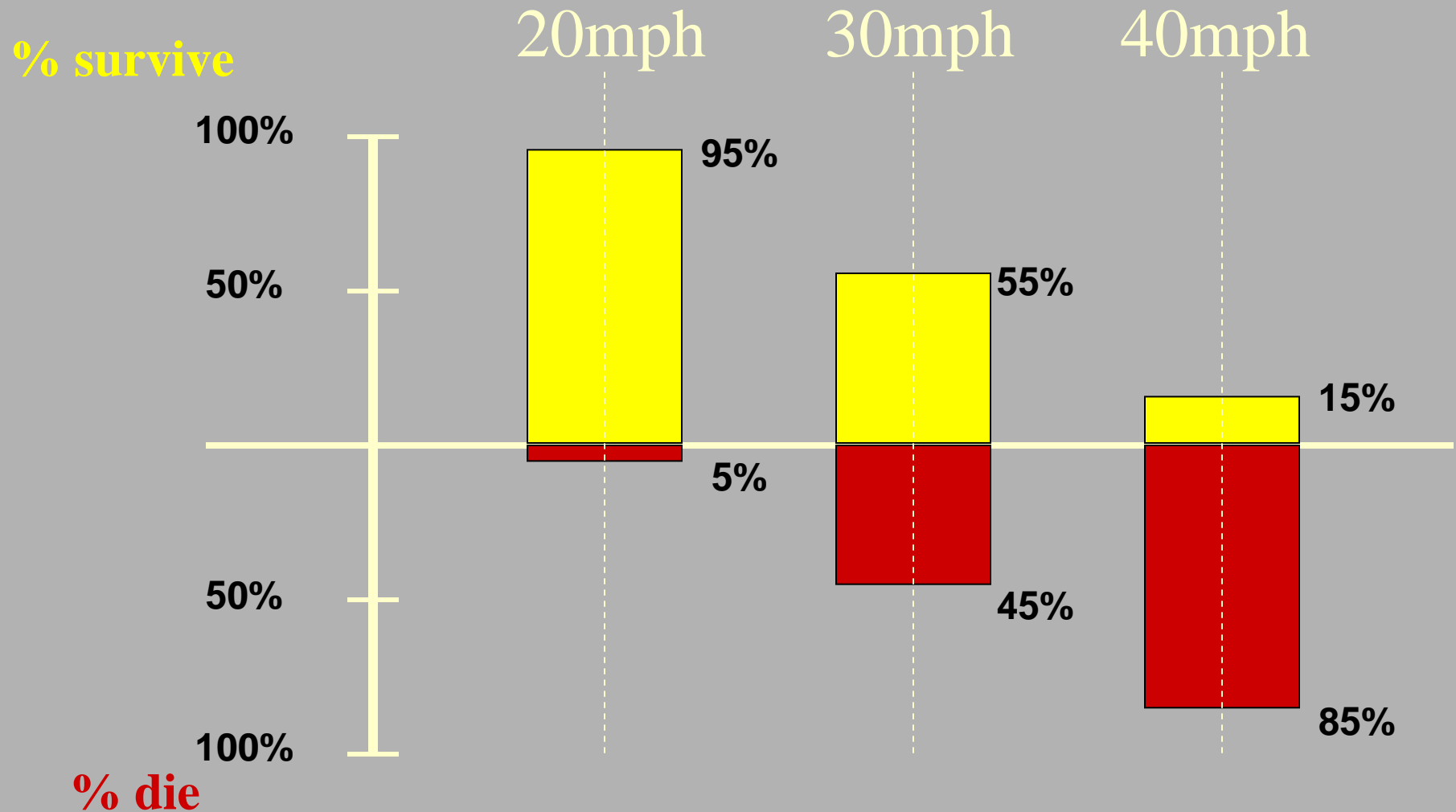
Transect Zones: T3, T4, T5

Reforming Urban Arterials

Existing Policies

- Over-emphasize accommodating travel
 - Vehicular focus
 - Prioritize long-distance commute time
 - Do not accommodate circulation and access
 - Benefits all modes
 - Medium and short-distance trips
-

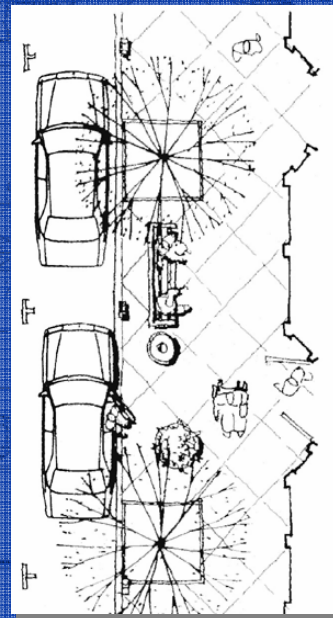
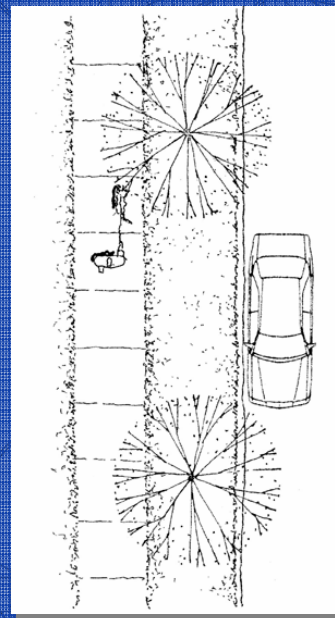
Reforming Urban Arterials



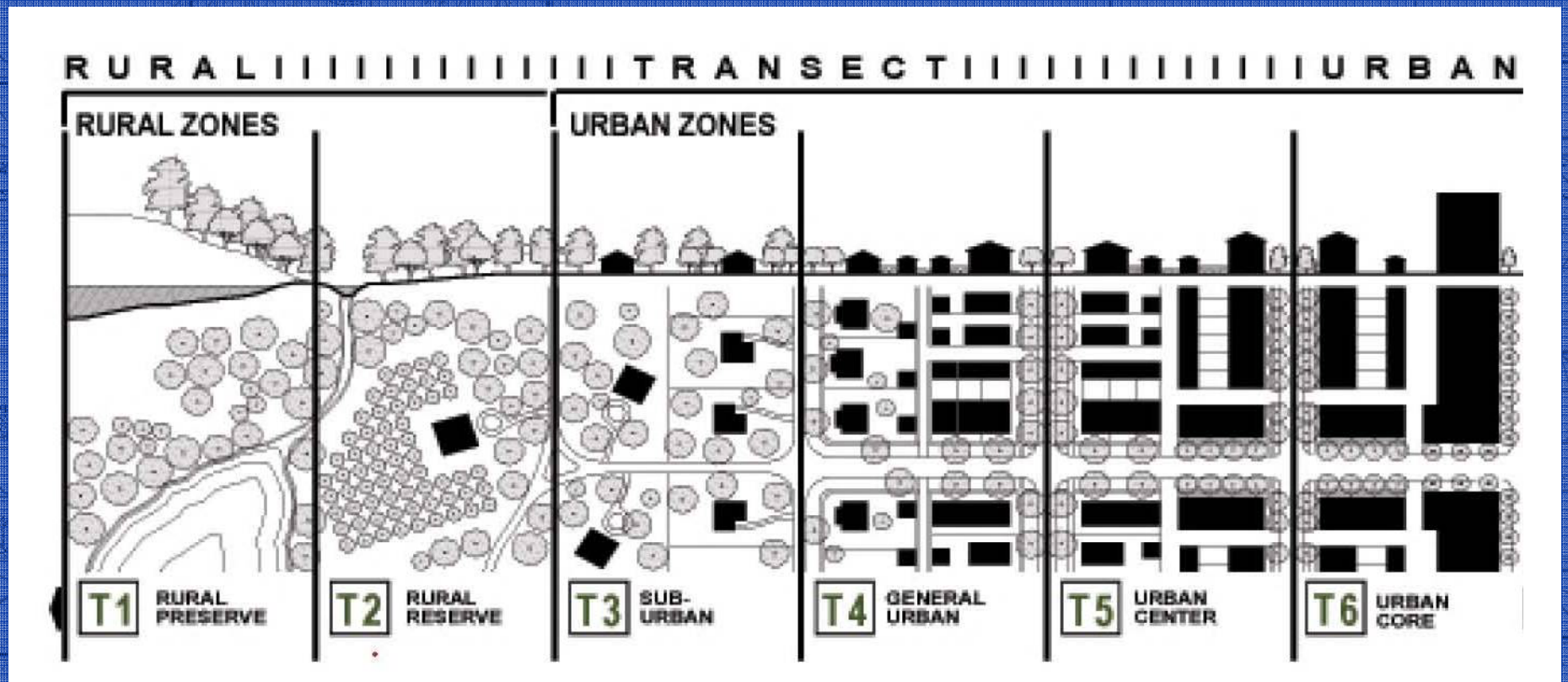
Pedestrian Survival Rates – Vehicle Speeds

Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities

ITE Proposed Recommended Practice



Transect or Context Zones

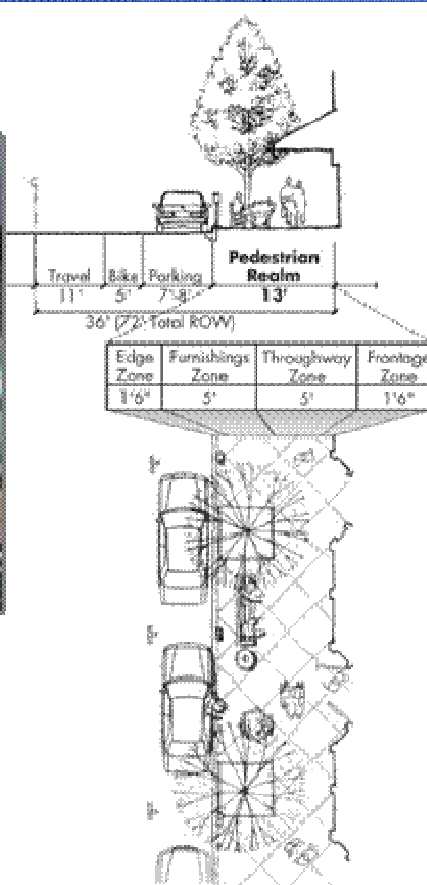


Roadside Design

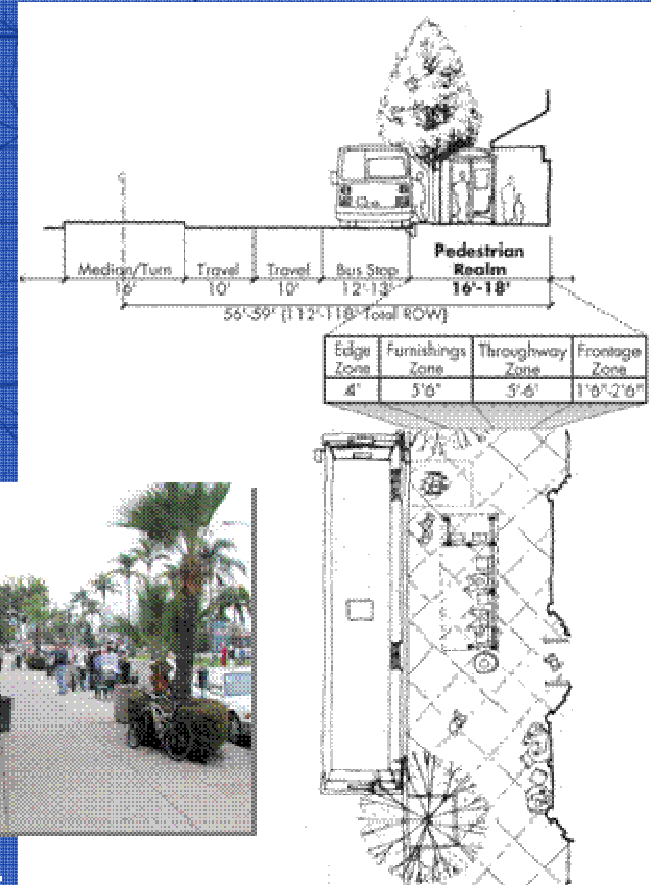
- Zones - Vary based on Context & Thoroughfare Type



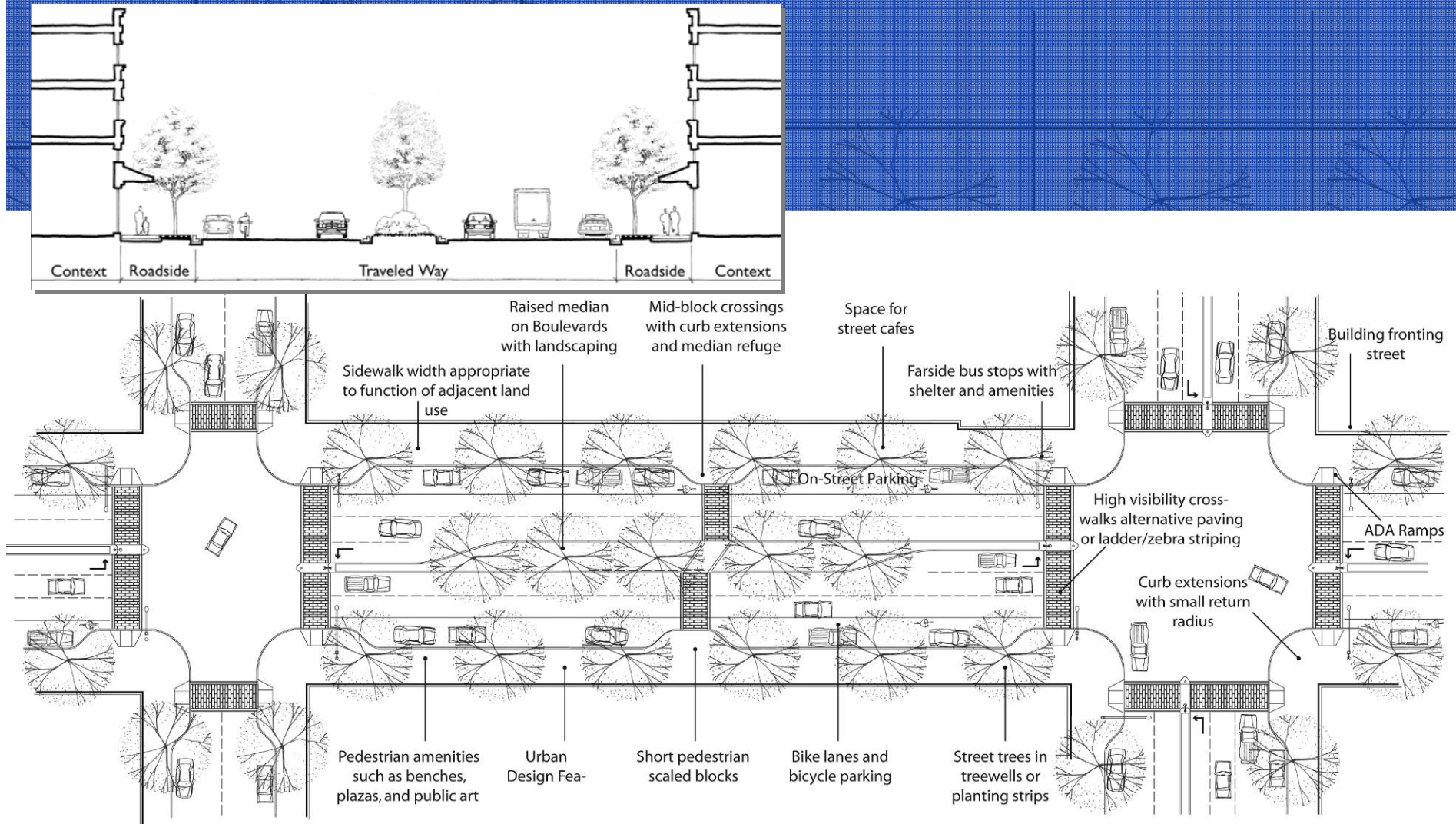
Berkeley, CA

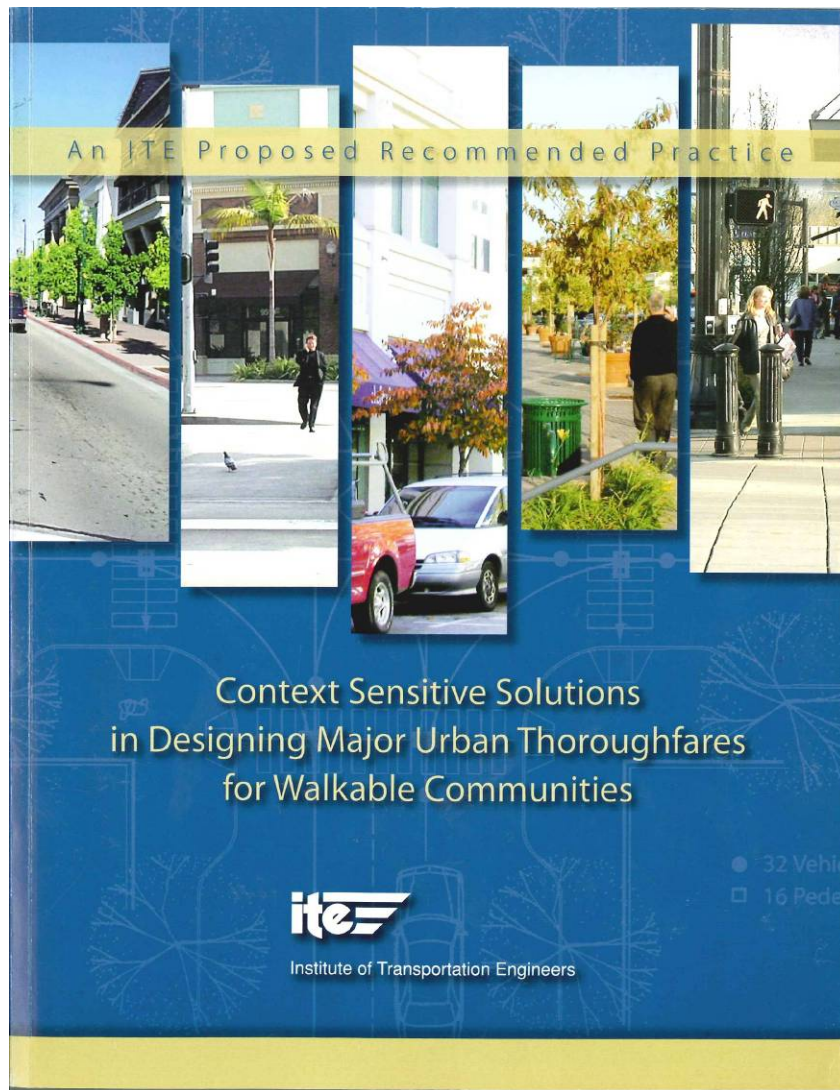


Coronado, CA



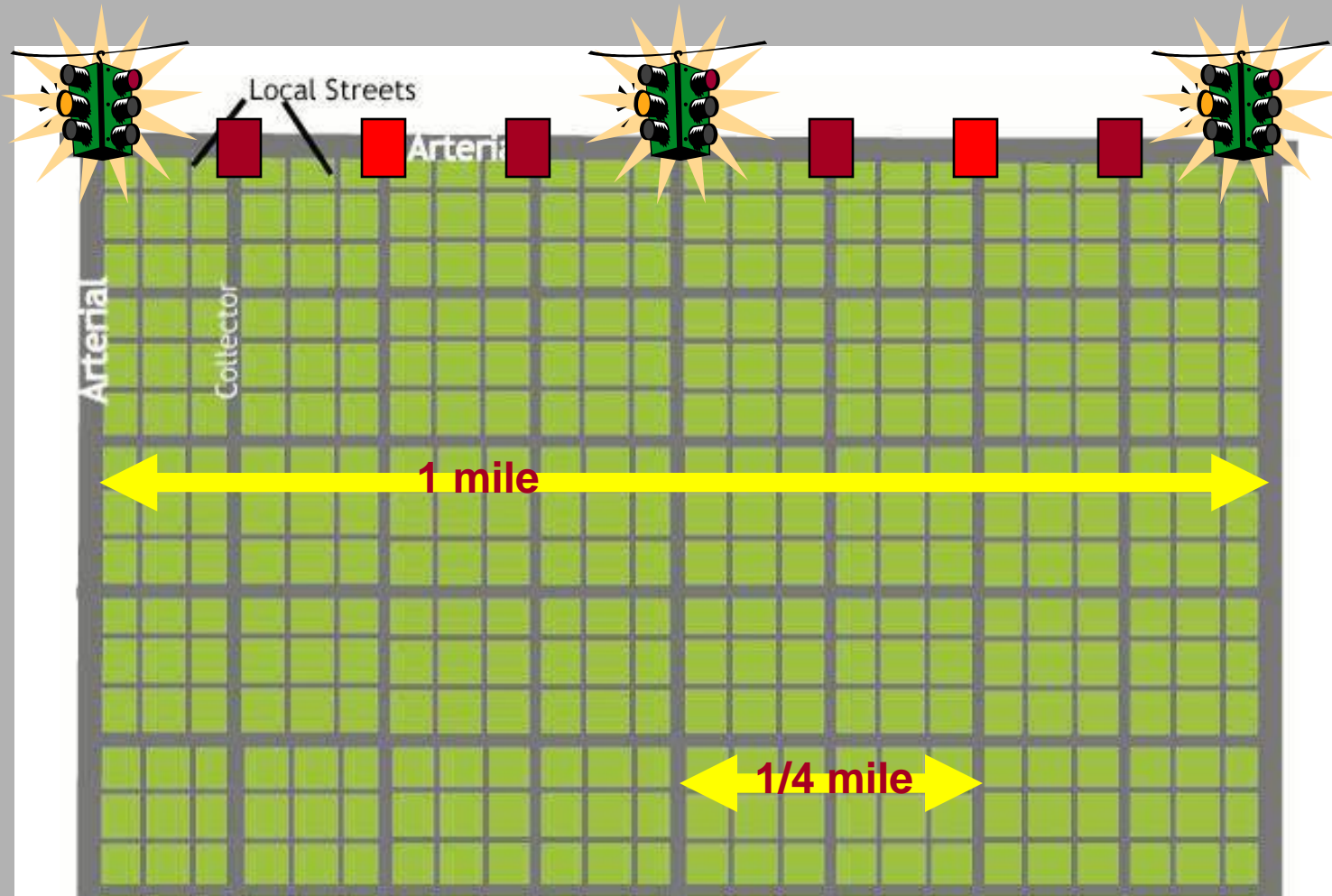
CSS Elements in Urban Contexts



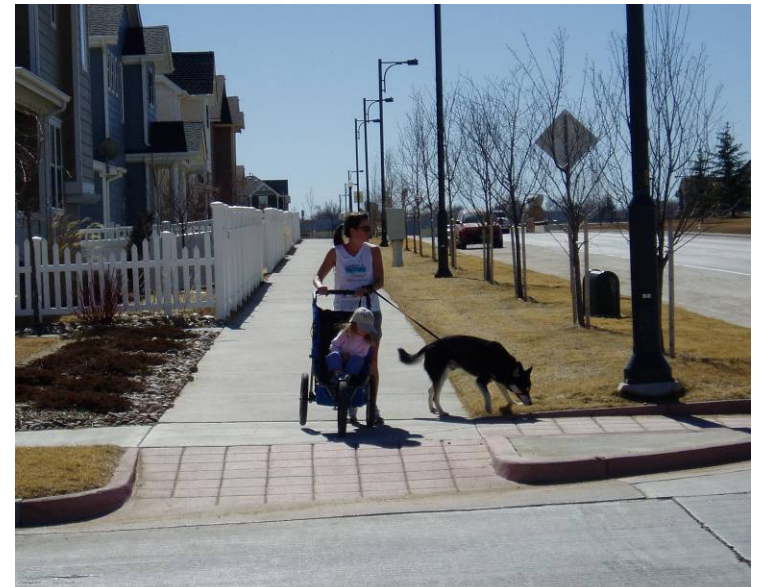


- www.ite.org
- \$25/\$30
- Item #**RP-036**
- or download at <http://ite.org/bookstore/RP036.pdf>

Reforming Arterials: Crossing Spacing



Reforming Arterials: Crossing Details



Reforming Arterials: Crossing Details



Complete Street Policies



Complete Street Policies

- A complete street is defined as a street that works for motorists, for bus riders, for bicyclists, and for pedestrians, including people with disabilities.
- Goal is to **routinely** produce roads that are safe and convenient for all users.

www.completestreets.org
www.thunderheadalliance.org

Complete Street Policies

- Basalt, CO
 - Bay Area MPO (MTC)
 - Boulder, CO
 - Charlotte, NC
 - Chicago, IL
 - Cleveland MPO (NOACA)
 - Columbus MPO (MORPC)
 - Colorado Springs, CO
 - Columbia, MO
 - DuPage County, IL
 - Fort Collins, CO
 - Iowa City, IA
 - Jackson, MI
 - Kirkland, WA
 - Louisville, KY
 - Madison, WI
 - San Diego County, CA
 - Sacramento, CA
 - San Francisco, CA
 - Santa Barbara, CA
 - Spartanburg, SC
 - St. Joseph, MO
 - St. Louis MPO (East-West Gateway)
 - West Palm Beach, FL
-

Complete Street Policies

Boulder, CO

- Transportation Master Plan
 - Four Policy Focus Areas
 - Funding
 - Regional Travel
 - Multimodal Corridors aka “Complete Streets”
 - Transportation Demand Management (TDM)
-

Complete Street Results



Broadway, Boulder, CO



Complete Street Results



28th Street, Boulder, CO





**Administrative
and
Political Level**

Change

**Grassroots
Citizen Level**

Safe Routes to School



SRTS: Colorado Projects

- City of Aurora
 - City of Boulder/Go Boulder
 - Boulder Valley School District
 - Town of Carbondale
 - City of Colorado Springs
 - City of Commerce City
 - Delta County School District
 - City of Denver
 - Children's Hospital, Denver
 - Denver Osteopathic Foundation
 - Douglas County Public Works
 - Town of Erie
 - City of Evans
 - City of Fort Collins
 - City of Fort Morgan
 - Livable Communities Support Center
 - Jeffco Public Schools
 - Jefferson County DOT
 - City of Longmont
 - City of Pueblo
 - City of Salida
 - University of Colorado at Denver
-

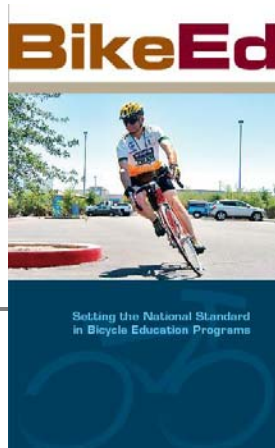
SRTS: Infrastructure Solutions



SRTS: Non-Infrastructure Programs

Longmont, CO

- Volunteer-based, pilot program in 2005
- \$74,625 SRTS grant for 2006-2008
- “Walk and Roll to School” program
- Expanding to 5 schools



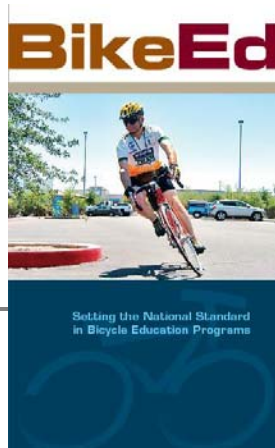
GUIDEBOOK
Version 1. 2006-07



SRTS: Non-Infrastructure Programs

Components:

- Posters and banners in art classes
- Safety program in PE classes
- Incentives, parties and raffles for participants
- After-school Bike Clubs
- Pay PE teachers to participate



GUIDEBOOK
Version 1. 2006-07



Development Review Processes





Thank You

for additional
information:

Charlier Associates
www.charlier.org