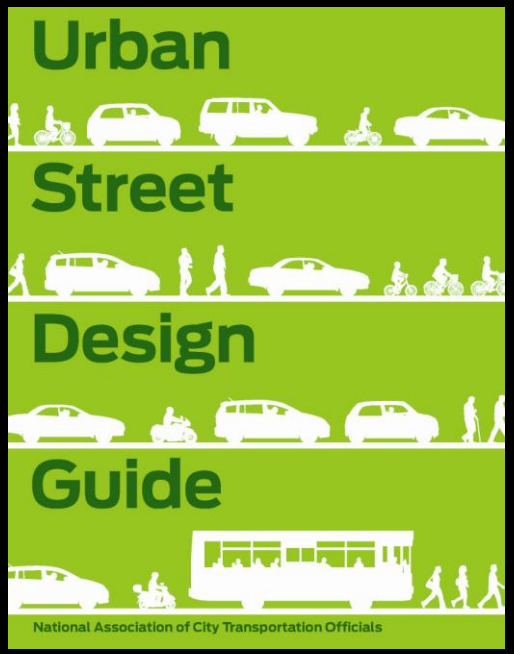
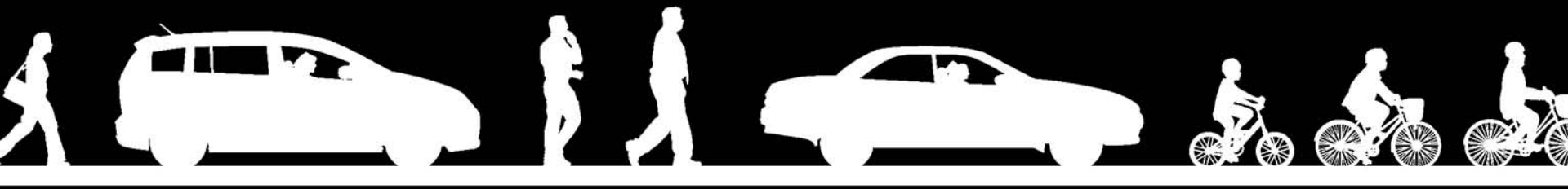


Making the Case for Complete Streets

Using the Urban Street Design Guide

March 13, 2014

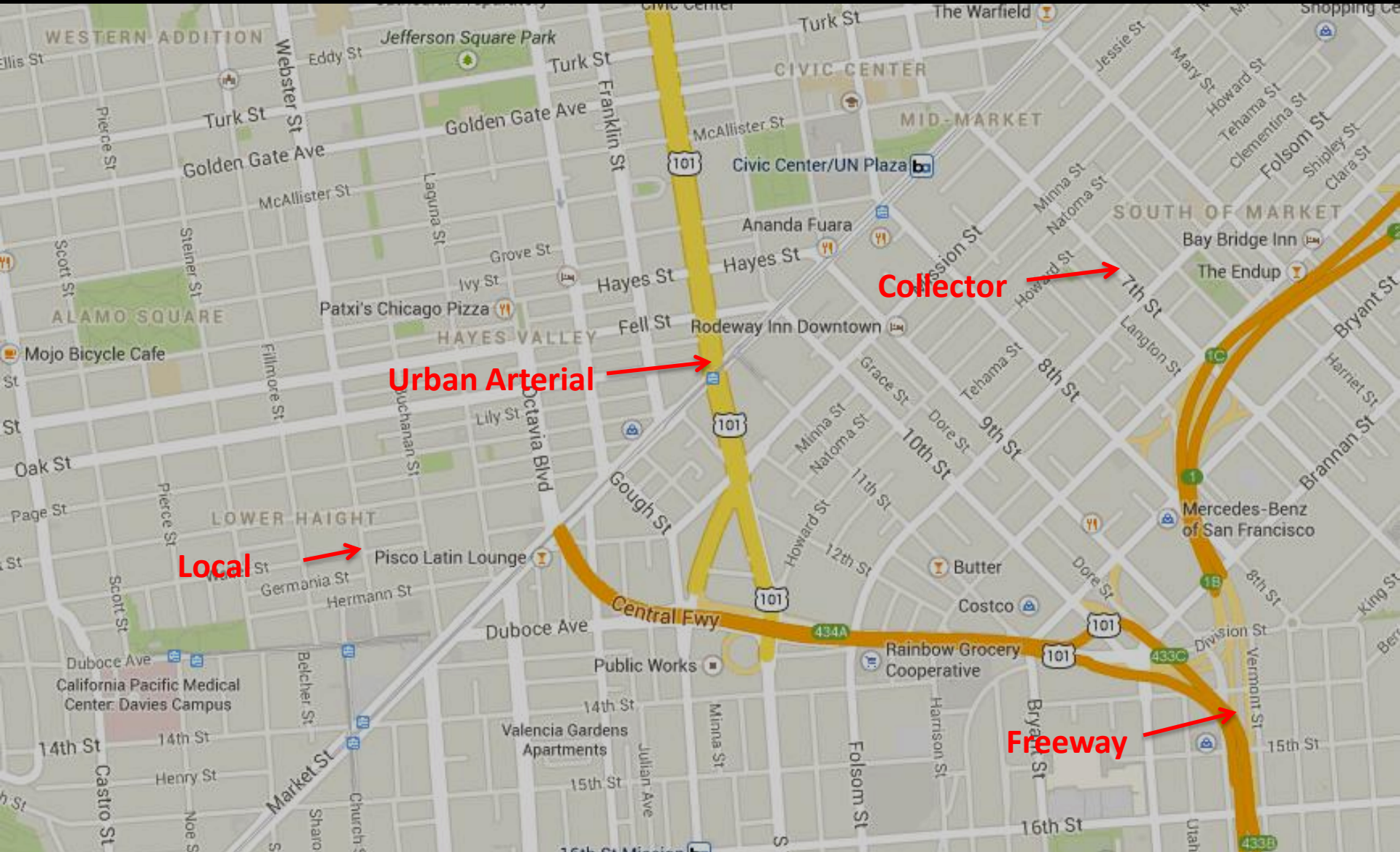


STREETS

Downtown 1-Way Street
Downtown 2-Way Street
Downtown Thoroughfare
Neighborhood Main Street
Neighborhood Street
Yield Street
Boulevard

Residential Boulevard
Transit Corridor
Green Alley
Commercial Alley
Residential Shared Street
Commercial Shared Street

What are Street Types?



Access vs. Mobility

Figure II-4

Relationship of functionally Classified Systems in Serving Traffic Mobility and Land Access

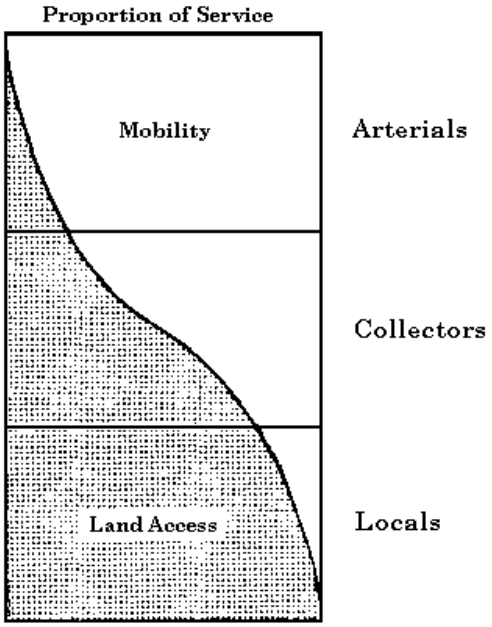
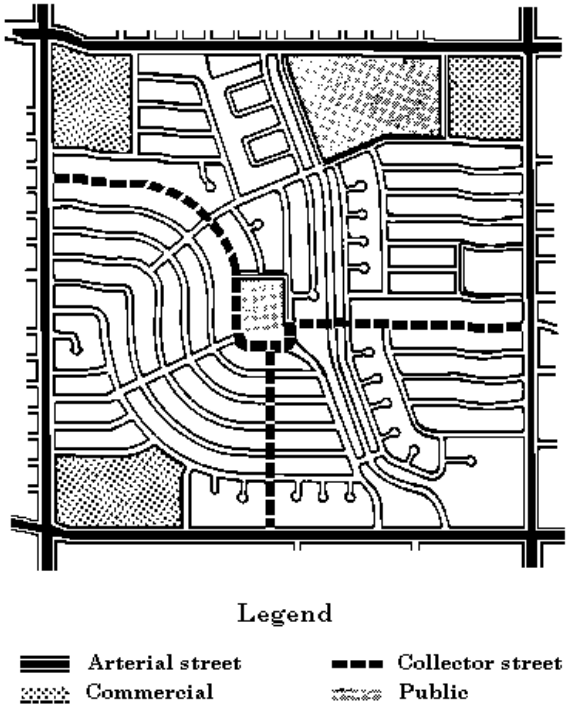


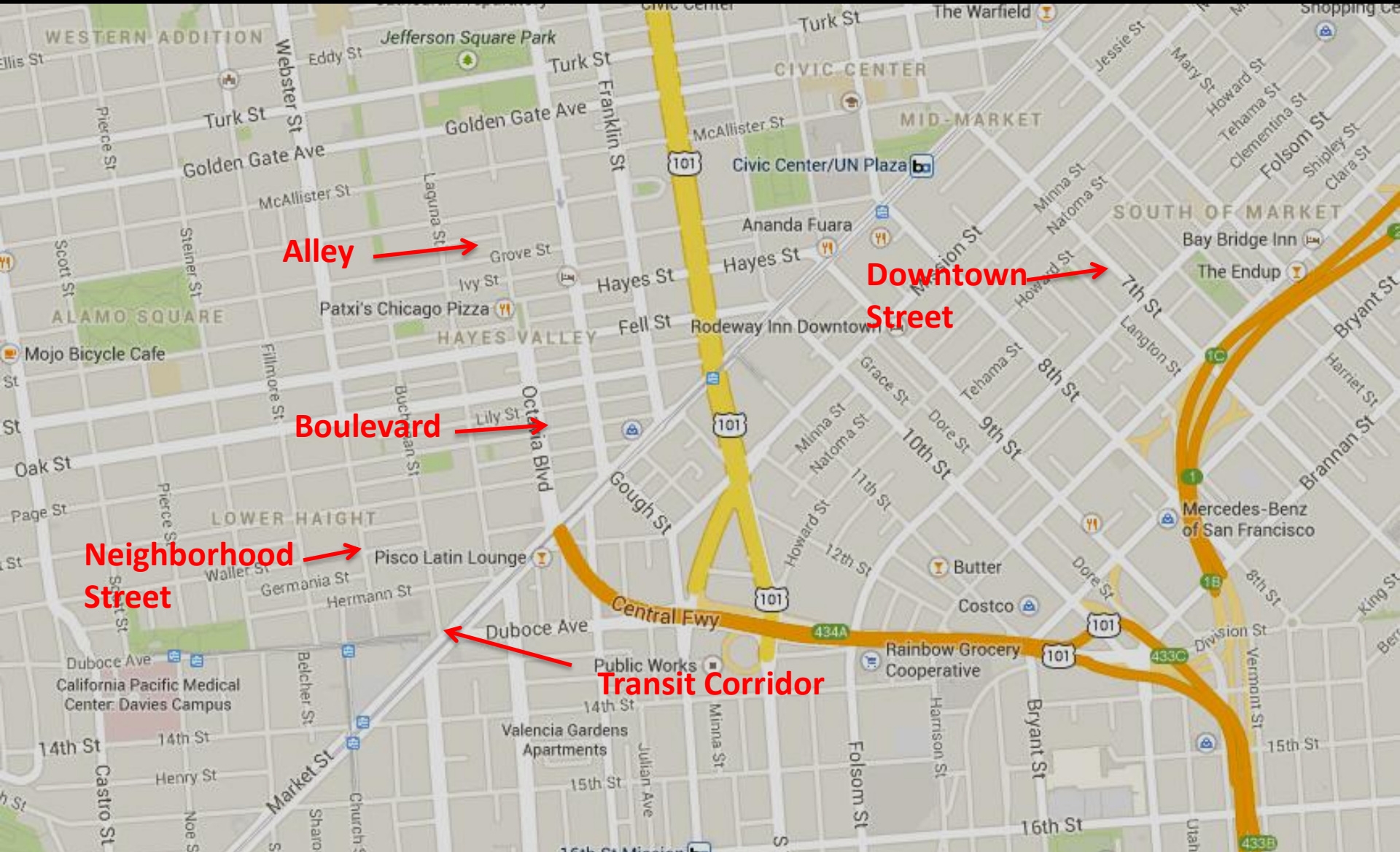
Figure II-3

Schematic of a Portion of an Urban Street Network



The National Highway System

Urban Street Types



Context/Land Use

Downtown 1-Way Street
Downtown 2-Way Street
Downtown Thoroughfare
Neighborhood Main Street
Neighborhood Street
Yield Street
Boulevard

Residential Boulevard
Transit Corridor
Green Alley
Commercial Alley
Residential Shared Street
Commercial Shared Street

Usage Characteristic/Mode

Downtown 1-Way Street
Downtown 2-Way Street
Downtown Thoroughfare
Neighborhood Main Street
Neighborhood Street
Yield Street
Boulevard

Residential Boulevard
Transit Corridor
Green Alley
Commercial Alley
Residential Shared Street
Commercial Shared Street

Size/Class/Configuration

Downtown 1-Way Street
Downtown 2-Way Street
Downtown Thoroughfare
Neighborhood Main Street
Neighborhood Street
Yield Street
Boulevard

Residential Boulevard
Transit Corridor
Green Alley
Commercial Alley
Residential Shared Street
Commercial Shared Street

Context is Critical

Street design should both respond to and influence the desired character of the public realm.

SAN FRANCISCO STREETS
From the Better Streets Plan

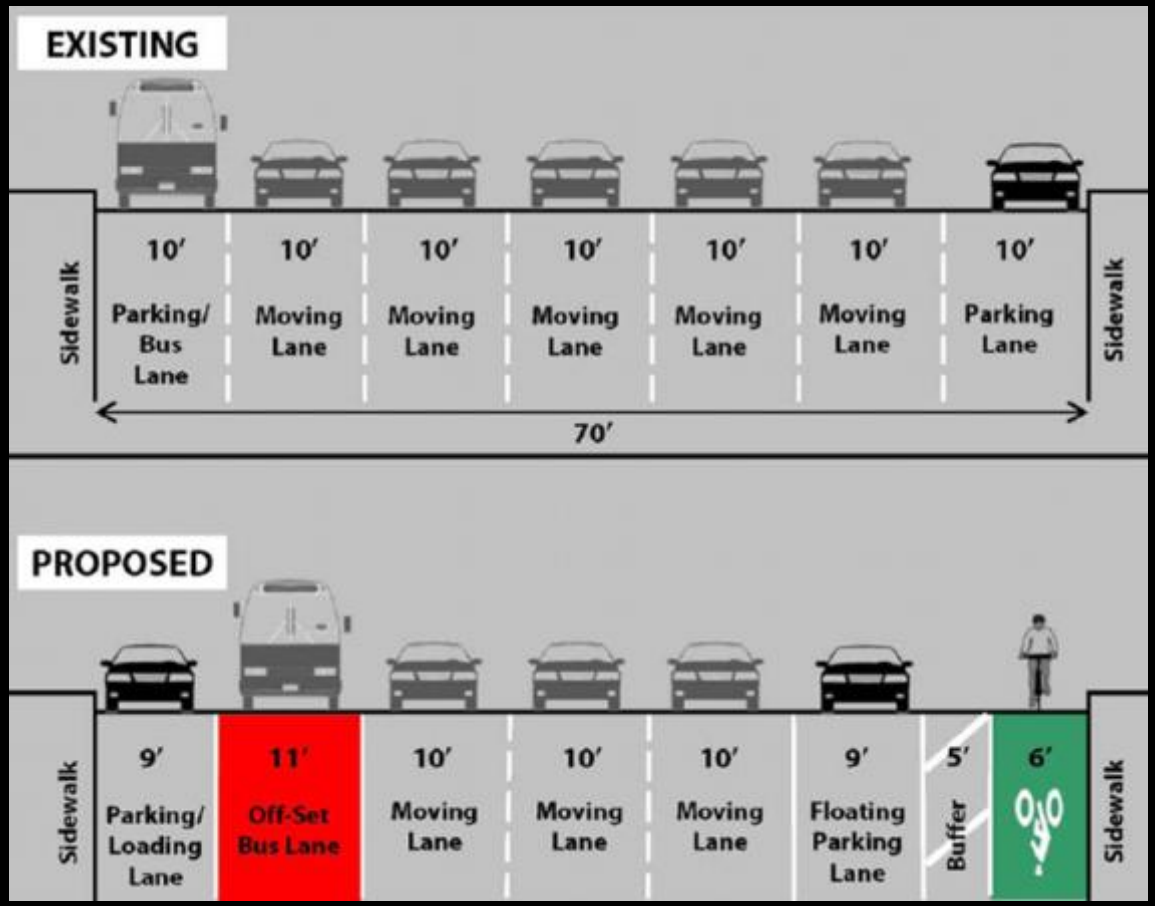
Parkways
Park Edge
Boulevards
Ceremonial (Civic Streets)
Commercial Throughways
Downtown Commercial
Downtown Residential
Neighborhood Commercial
Residential Throughway
Mixed Use
Industrial
Shared Public Ways
Paseo
Alleys

1-way Downtown Street

Credit:
NYC DOT

Elements Used

- Offset Bus Lanes
- 10-foot lanes
- Protected Bike Lanes
- Pedestrian Safety Islands

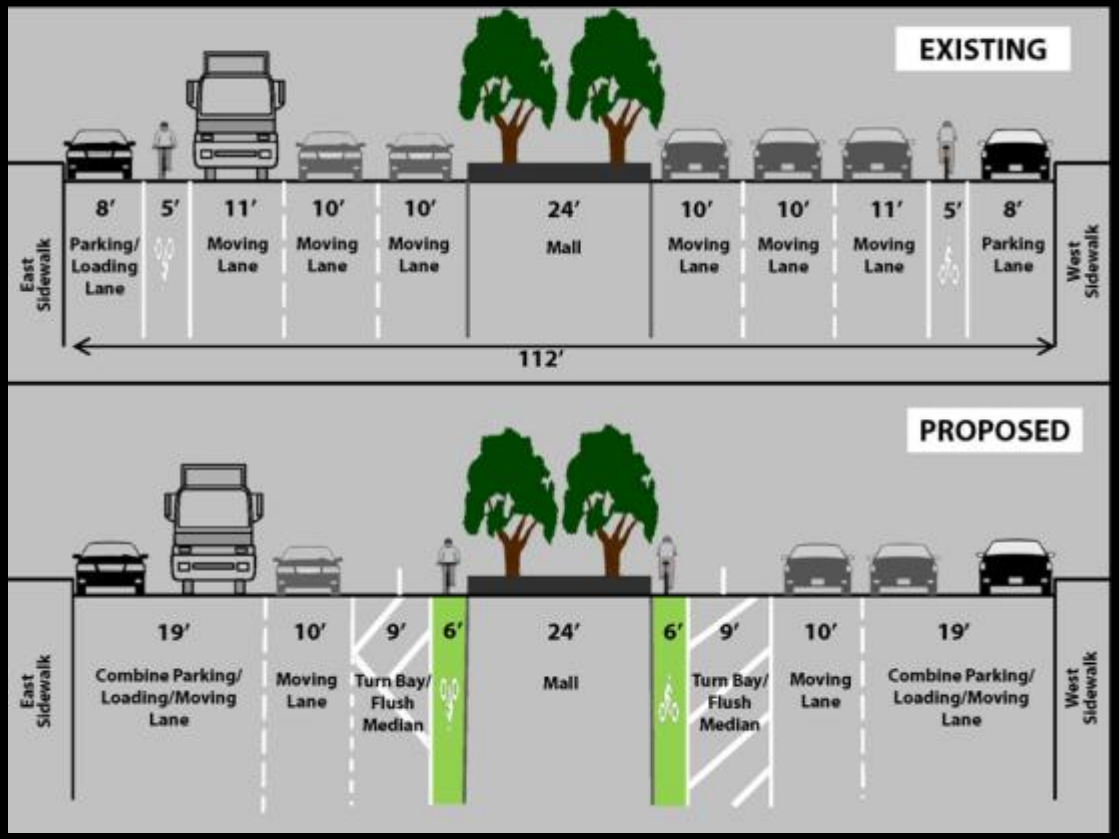


Credit:
NYC DOT

Residential Boulevard

Elements Used

- Protected Bike Lanes (Median)
- 10-ft. lanes
- Interim Public Plazas

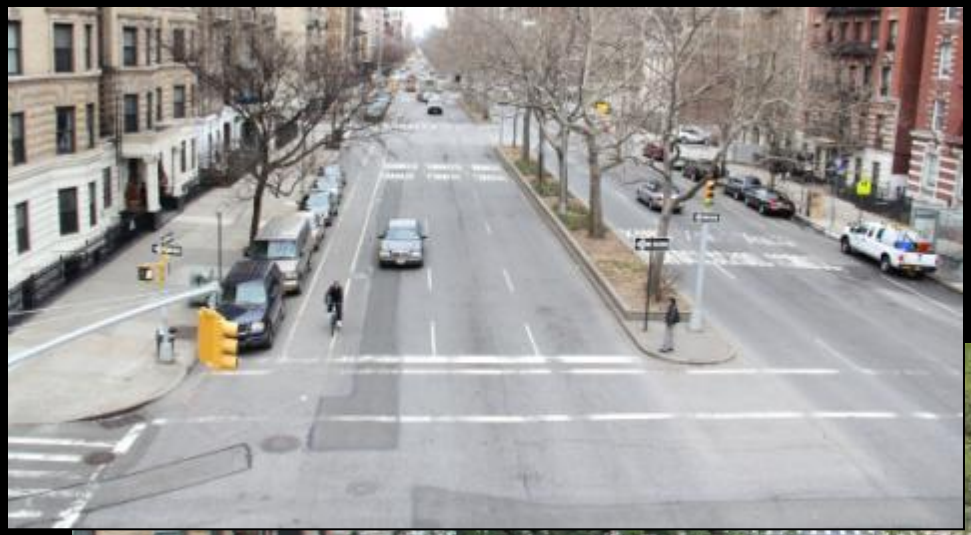


Credit:
NYC DOT

Downtown Thoroughfare *Before*

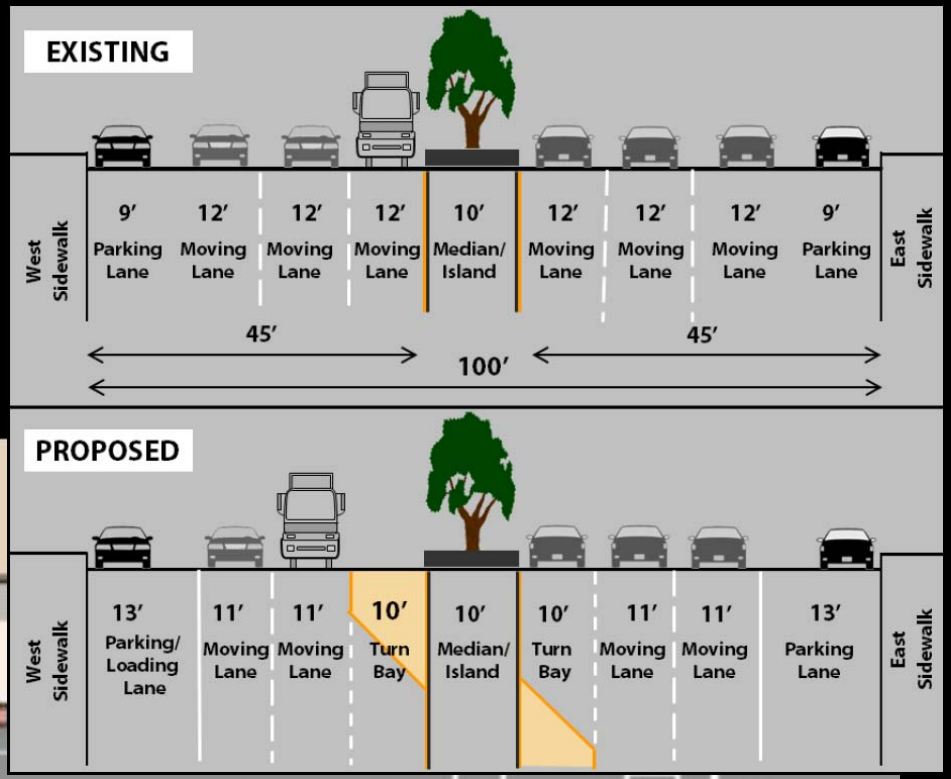
Downtown Thoroughfare *After*

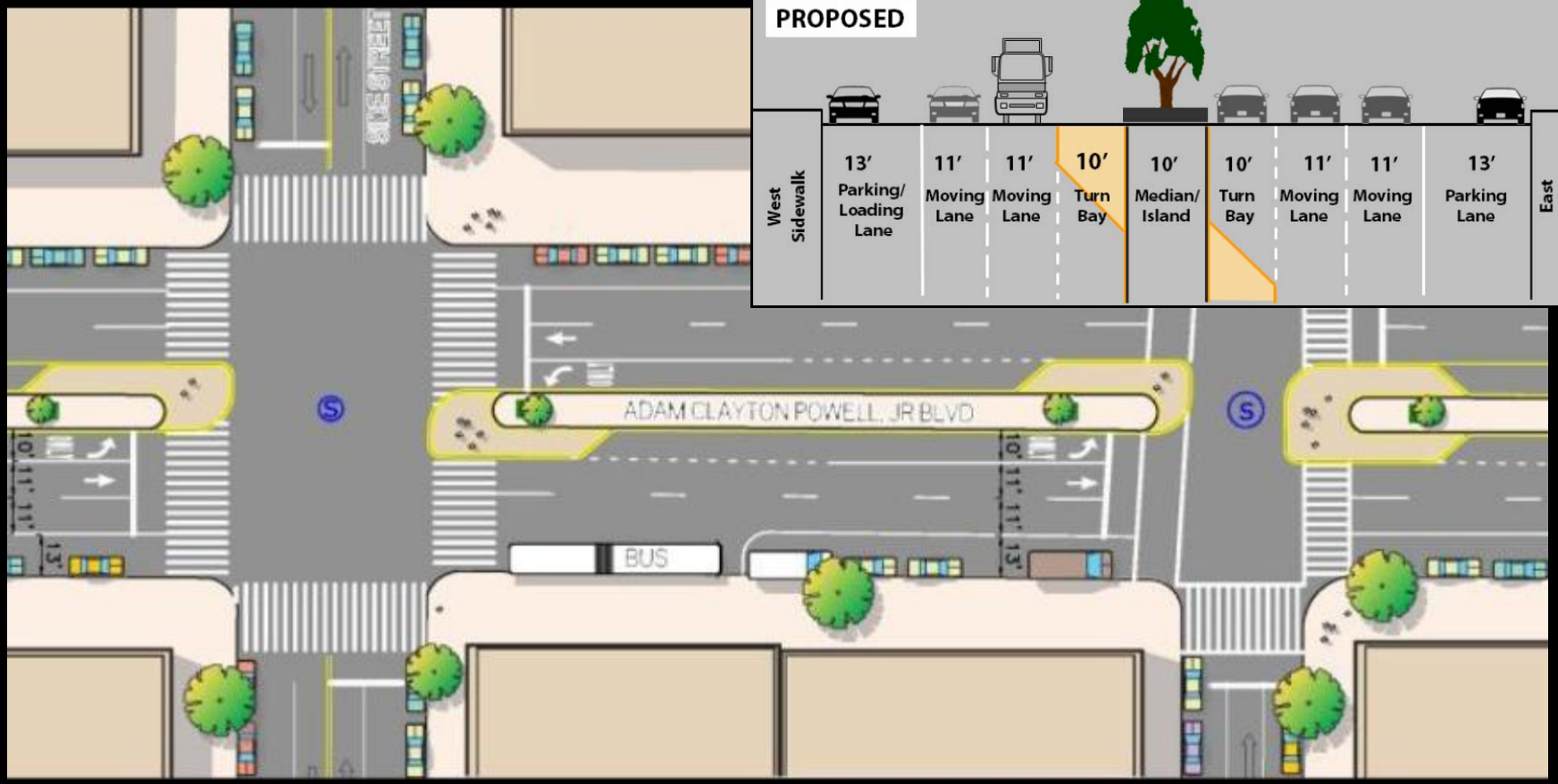
Downtown Thoroughfare
Transit Corridor Option



Credit:
NYC DOT

Credit:
NYC DOT





Credit:
NYC DOT

STREET DESIGN ELEMENTS

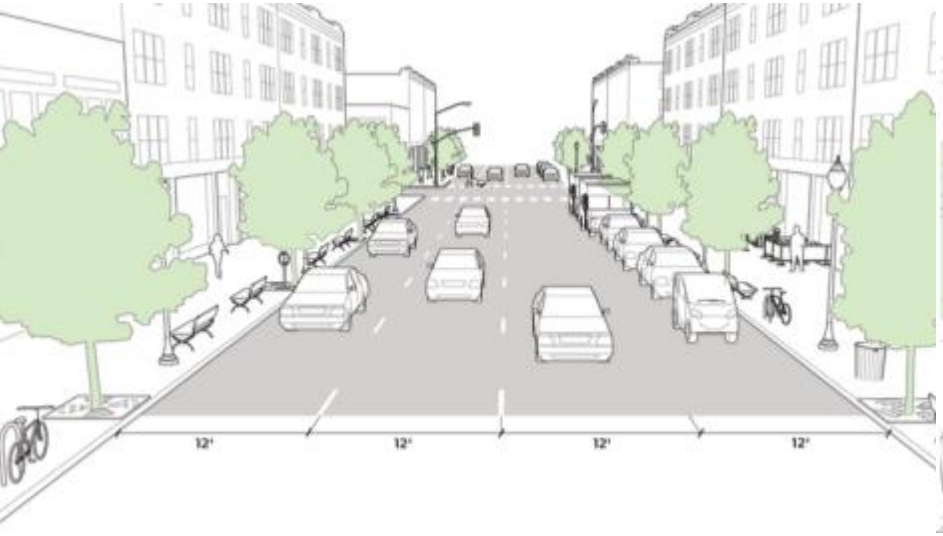
Lane Width
Sidewalks
Curb Extensions
- Gateway
- Pinchpoint
- Chicane
- Bus Bulbs

Vertical Speed Control Elements
- Speed Hump
- Speed Table
- Speed Cushion

Transit Streets
- Dedicated Curbside/Offset Bus Lanes
- Dedicated Median Bus Lanes
- Contra-Flow Bus Lanes
- Bus Stops

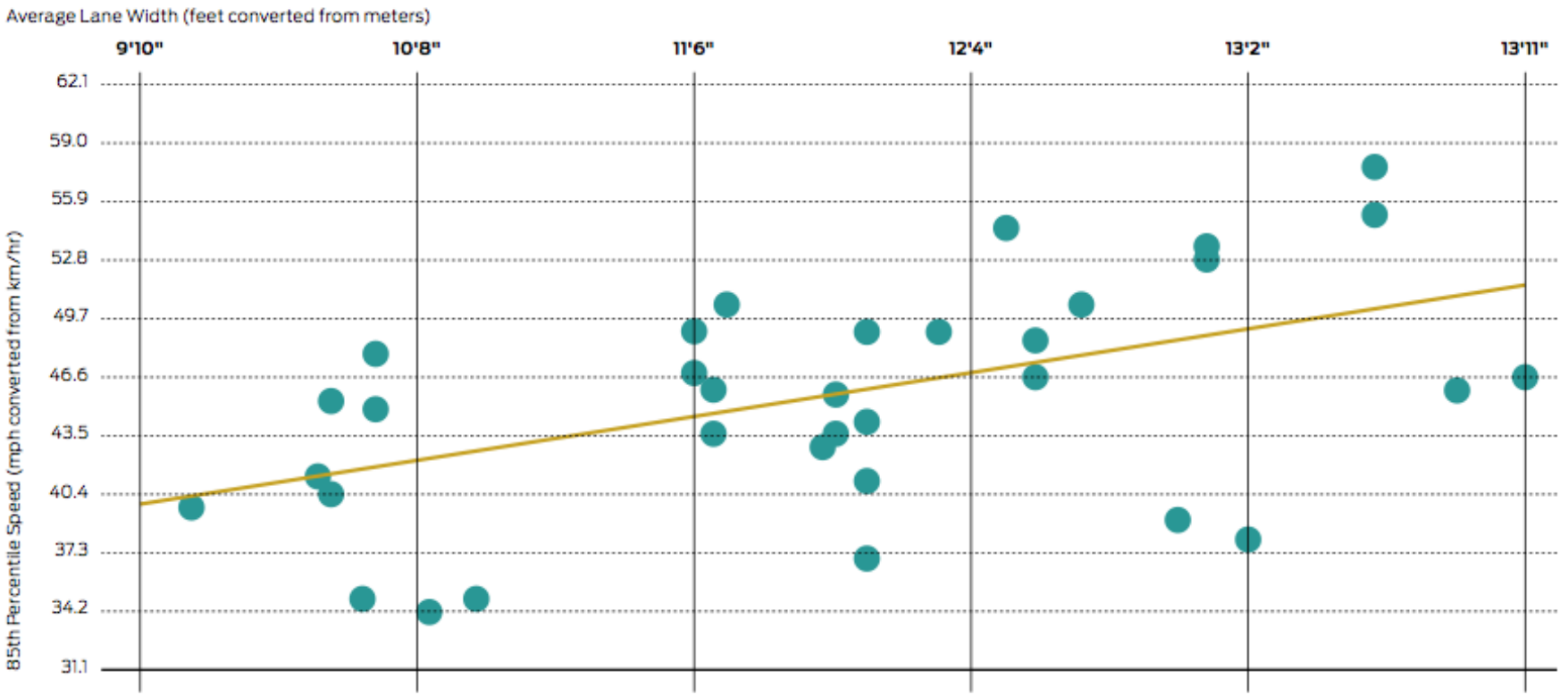
Stormwater Management
- Bioswales
- Flow-Through Planters
- Pervious Strips
- Pervious Pavement

Lane Width



Lane width should be evaluated within the overall assemblage of the street.

Wider travel lanes are correlated with higher vehicle speeds.



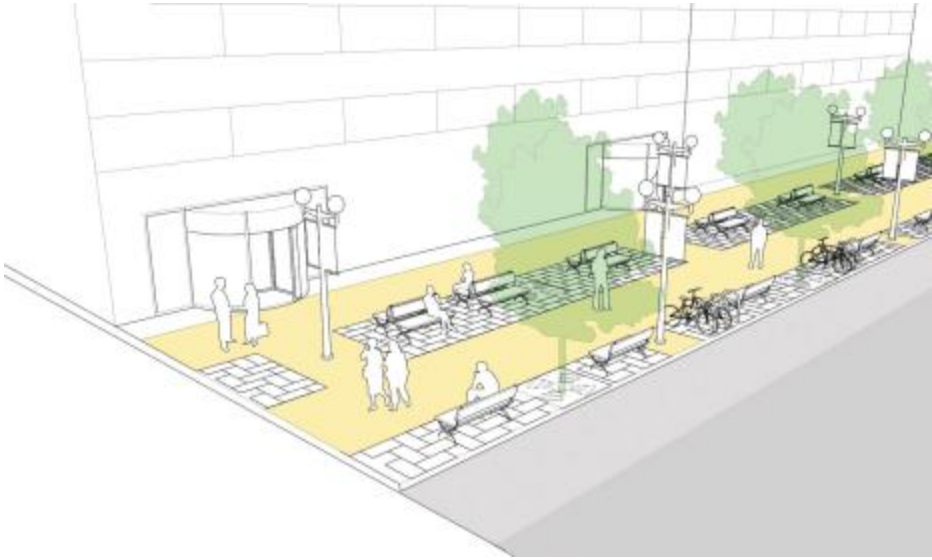
"As the width of the lane increased, the speed on the roadway increased... When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster."

Chart source: Fitzpatrick, Kay, Paul Carlson, Marcus Brewer, and Mark Wooldridge. 2000. "Design Factors That Affect Driver Speed on Suburban Streets." *Transportation Research Record* 1751: 18–25.

Sidewalks: The City at Eye-Level


MENU
ALL MEALS UNDER $4

Credit: Mike King



INTERIM DESIGN STRATEGIES

Activating the curb
Parklets
Temporary Street Closures
Interim Public Plazas


TOSHIBA
TDK
Kodak
Bank of America
AMERICAN EAGLE OUTFITTERS
TOSHIBA
Kodak

INTERIM DESIGN STRATEGIES

	CONVENTIONAL PROJECT DEVELOPMENT	PHASED / INTERIM DESIGN STRATEGY
Year 1	Concept	Concept
	Plan/Outreach	Plan/Outreach
Year 2		**Interim Installation**
		Impacts Analysis
Year 3	Design	Design
Year 4		
Year 5	Construction	Construction

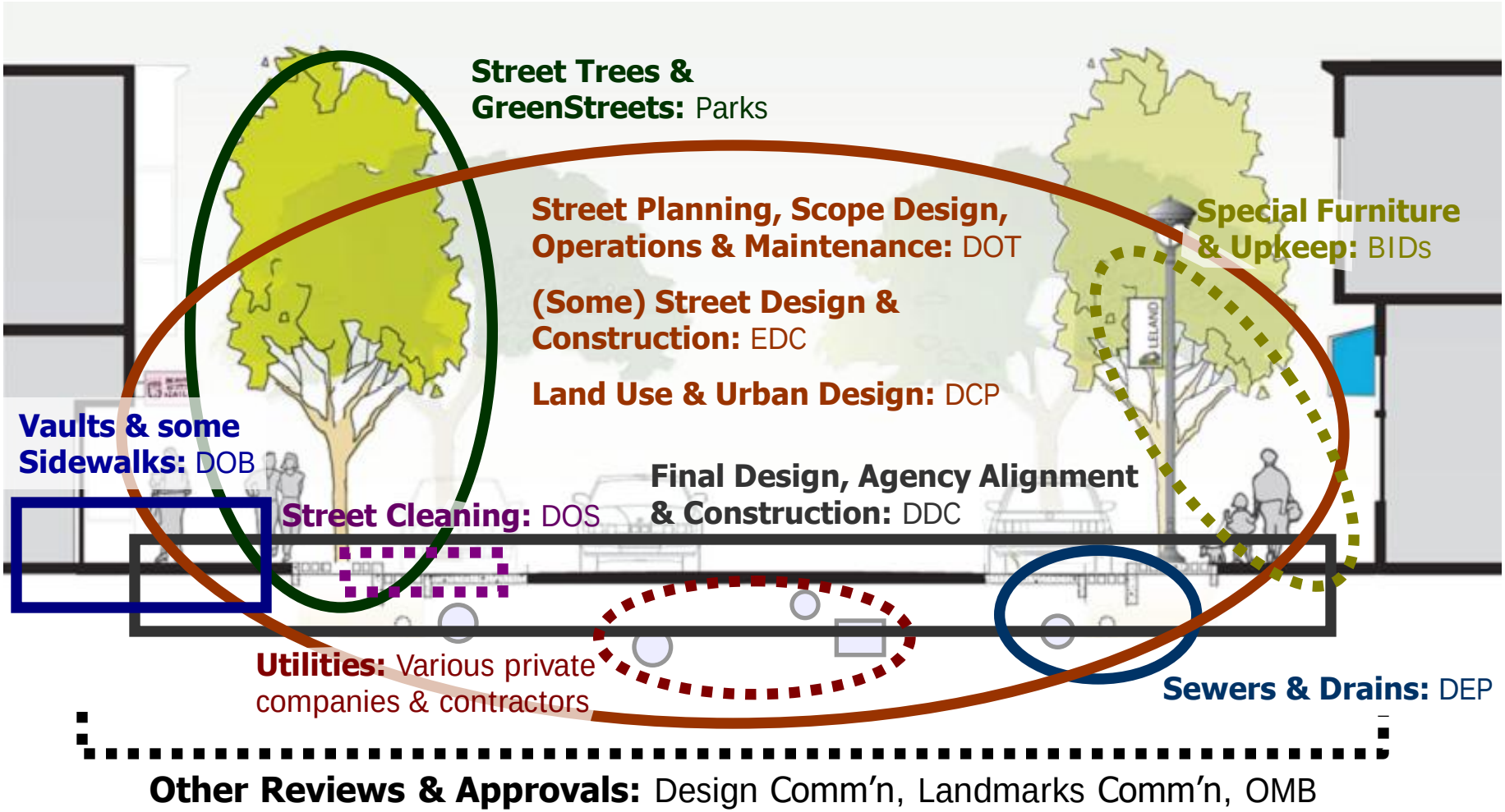


Image: SF Better Streets Plan


AT&T Wireless Center

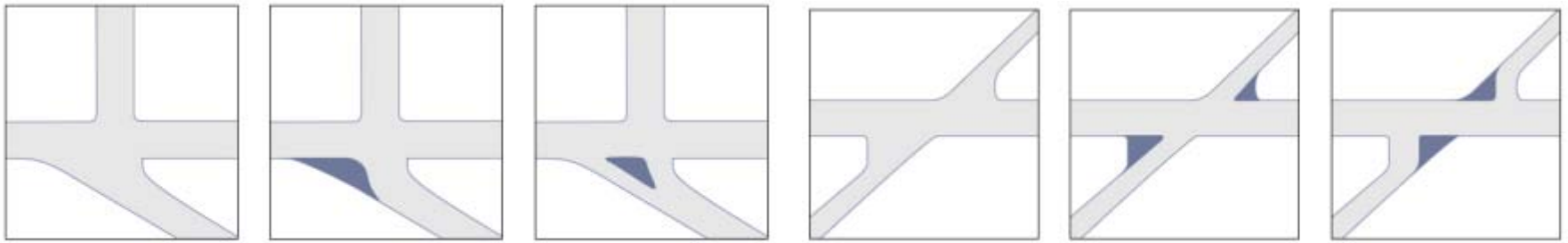
Pros & Cons

Pros

- Design in real time
- Realize project benefits now
- Evaluate and improve rather than spend then correct
- Build a constituency
- Build more, cheaper, faster

Cons

- Pilot projects can be removed
- Aesthetic quality often lower
- Potential absence of capital funds for improvement.
- Can look shabby if poorly maintained




STOP

Credit: University City District


Sunset Triangle
Sunset Triangle

Credit: Mike King

David Vega-Barachowitz

Director
Designing Cities Initiative
NACTO

david@nacto.org
646.628.3337

SFMTA
Municipal
Transportation
Agency

Making the Case

May 13, 2013

More Streetscape Projects Citywide

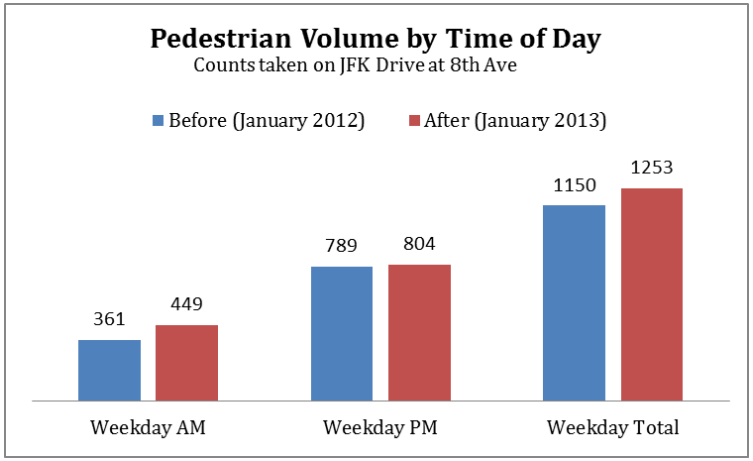
Jane Warner Plaza – 2008

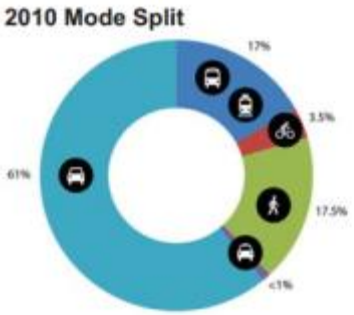
Jane Warner Plaza - 2010

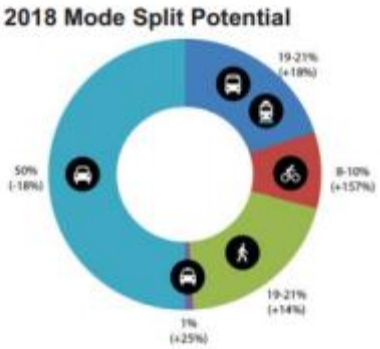
Elements of Streetscape Improvements

Typical SFMTA Project Metrics

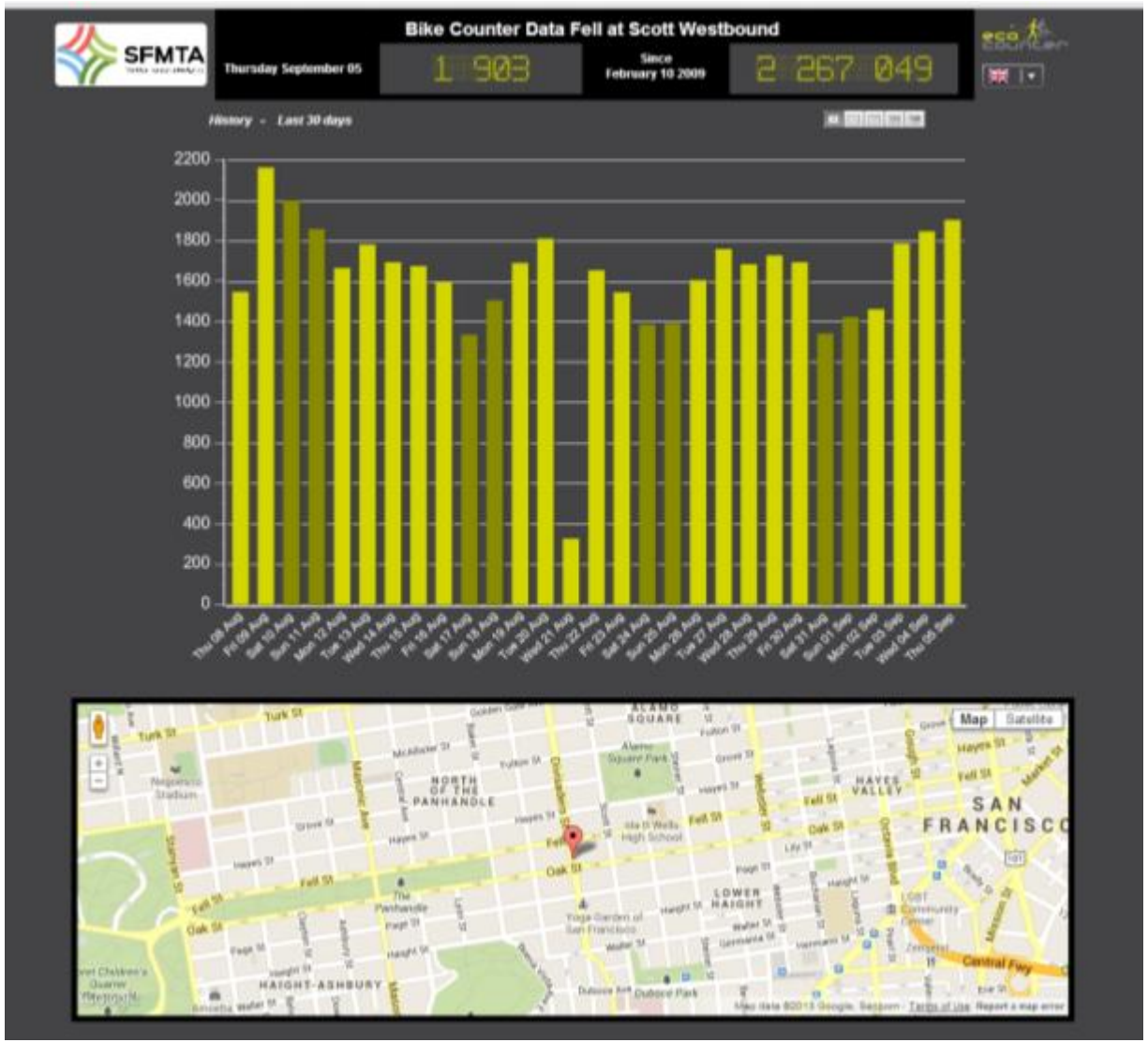
- Collisions
- Vehicle Speeds
- Mode Share/Volumes
- Transit Delay
- Intercept Surveys
- …and more…





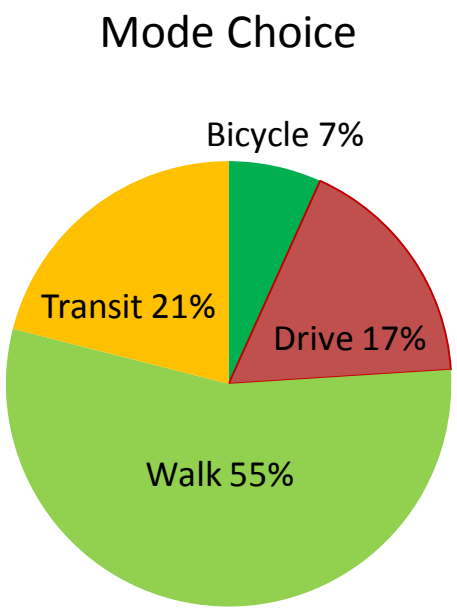


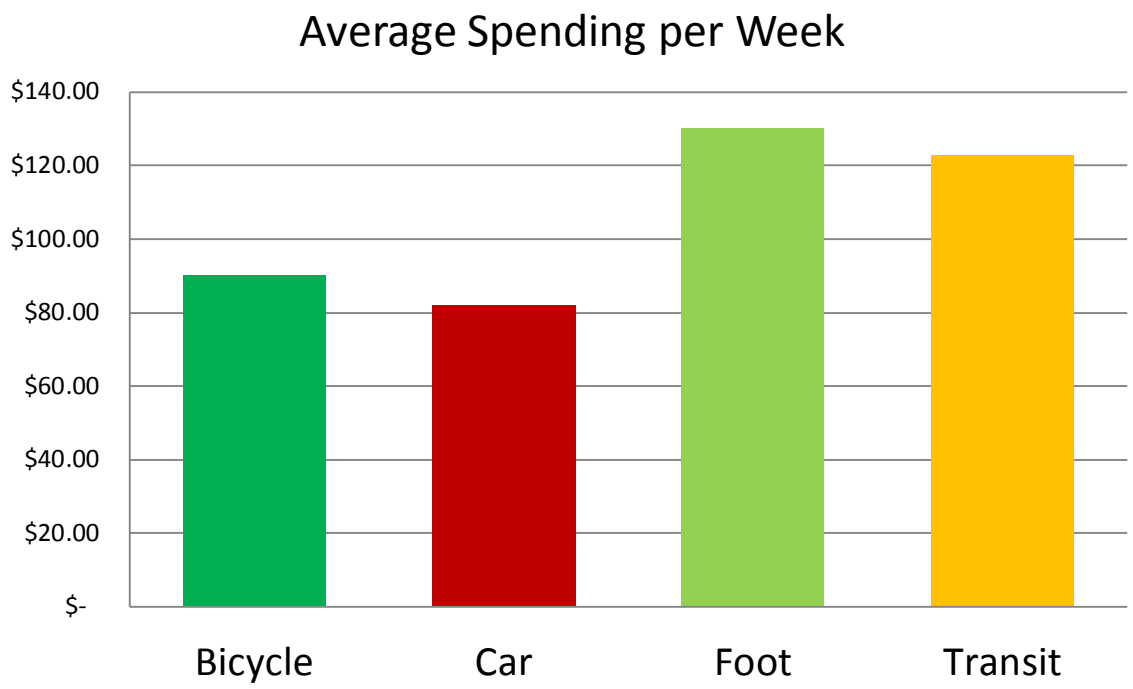
Promote the numbers



1. Do these projects affect business?

Intercept Surveys

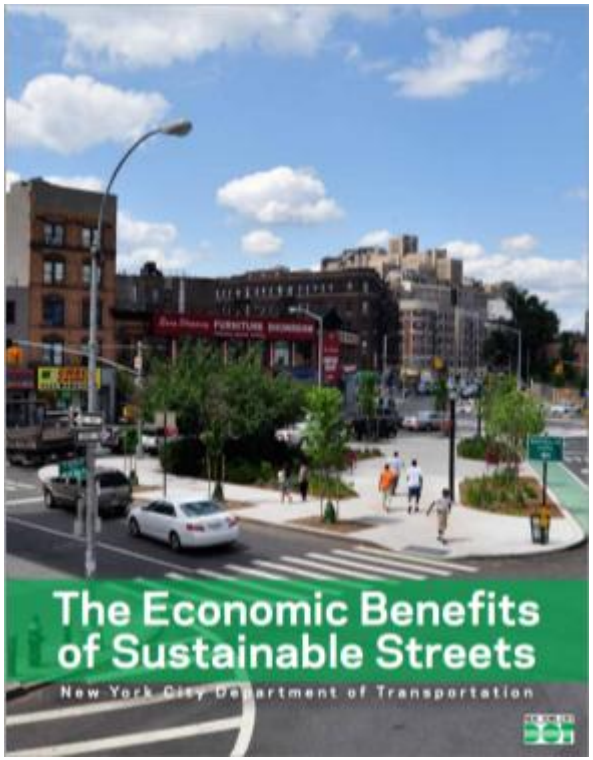




Economic Study

Background:

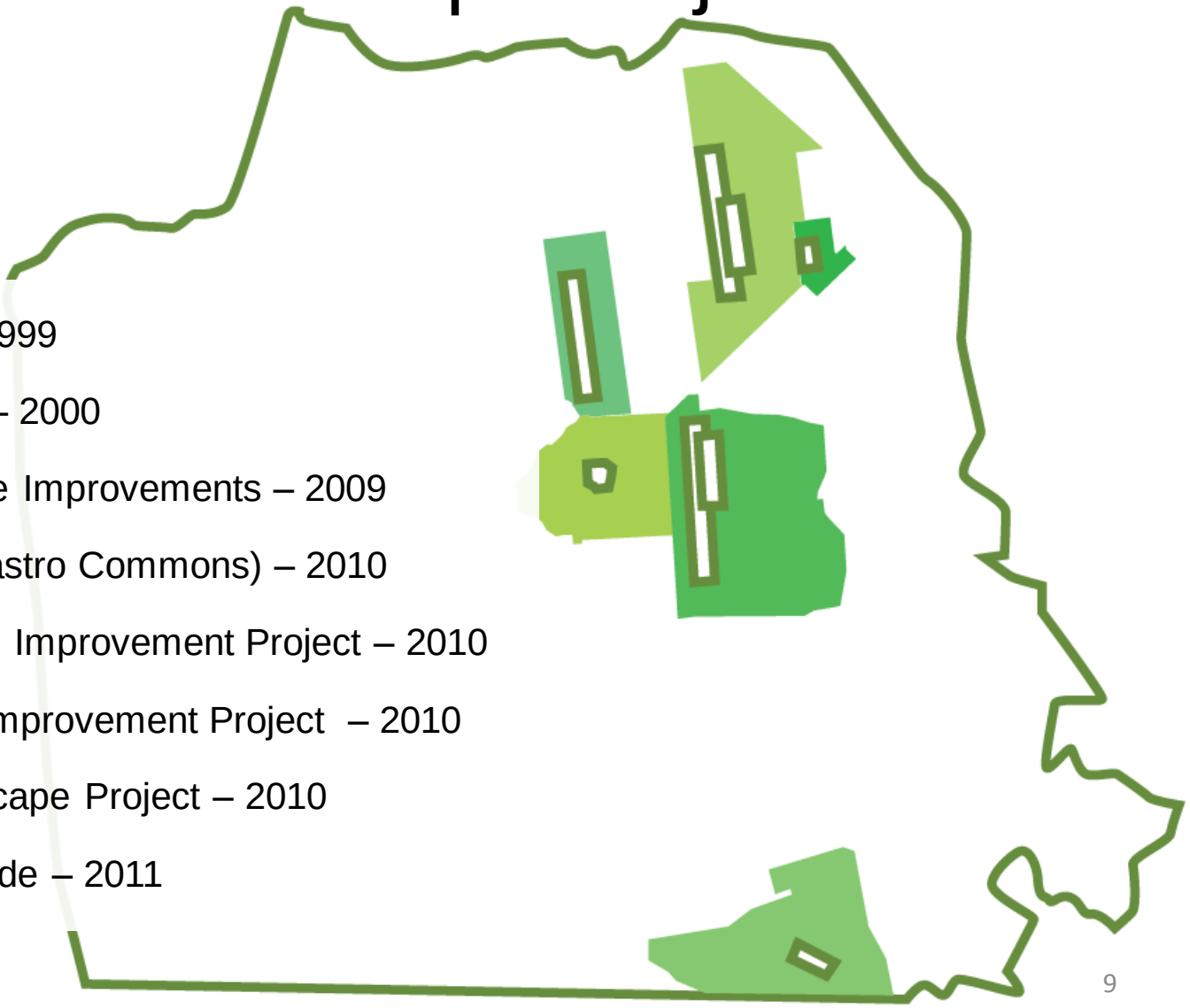
- Commissioned by SFMTA in 2013
- Conducted by Fall Line Analytics/David Latterman
- Recent NYC Study



Purpose:

- Evaluate Past Projects
- Establish Methodology

Eight Streetscape Projects



- Valencia Road Diet – 1999
- Polk Street Road Diet – 2000
- Lower Polk Streetscape Improvements – 2009
- Jane Warner Plaza (Castro Commons) – 2010
- Divisadero Streetscape Improvement Project – 2010
- Valencia Streetscape Improvement Project – 2010
- Leland Avenue Streetscape Project – 2010
- Powell Street Promenade – 2011

Data Source: Retail Sales Tax Data

8 streetscape projects

6 neighborhoods

1 city

13 comparison streets

4 years (1 before, 3 after)

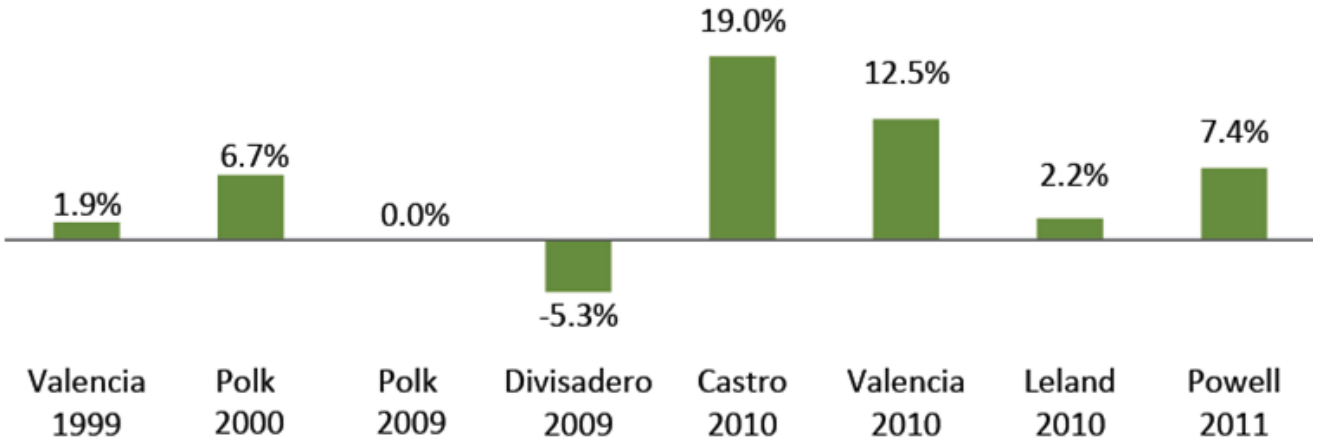
$5 billion

worth of tax receipts reviewed!

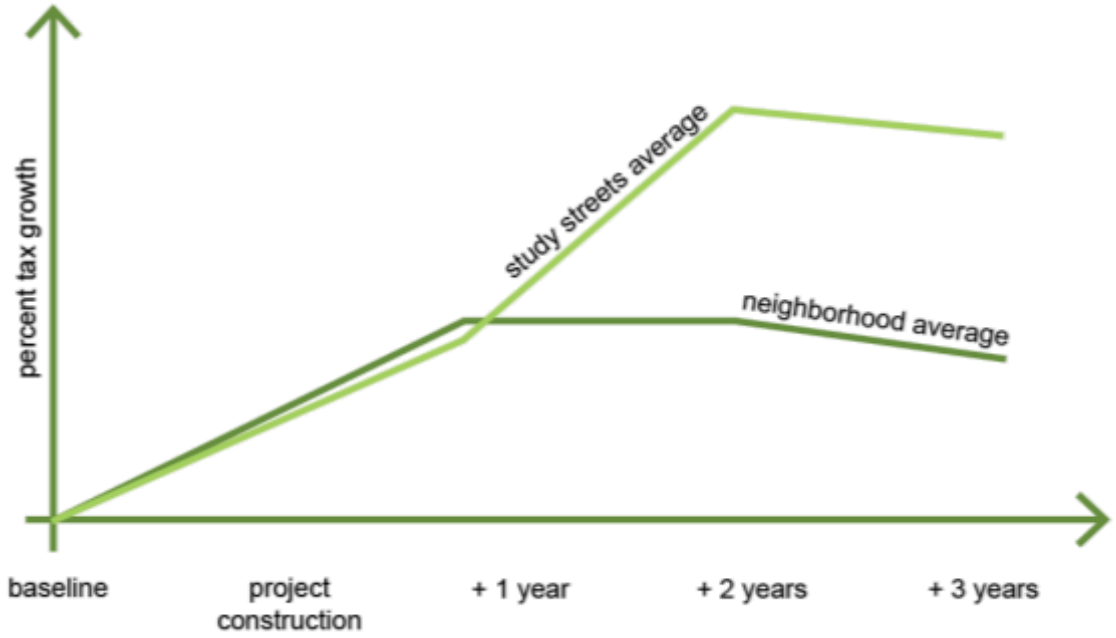
Key Findings

Seven of the eight study streets performed as well as or better than the surrounding neighborhood for the three years after construction

Difference in rate of growth of retail sales taxes between Study Street and Neighborhood (3 year average)



Key Findings

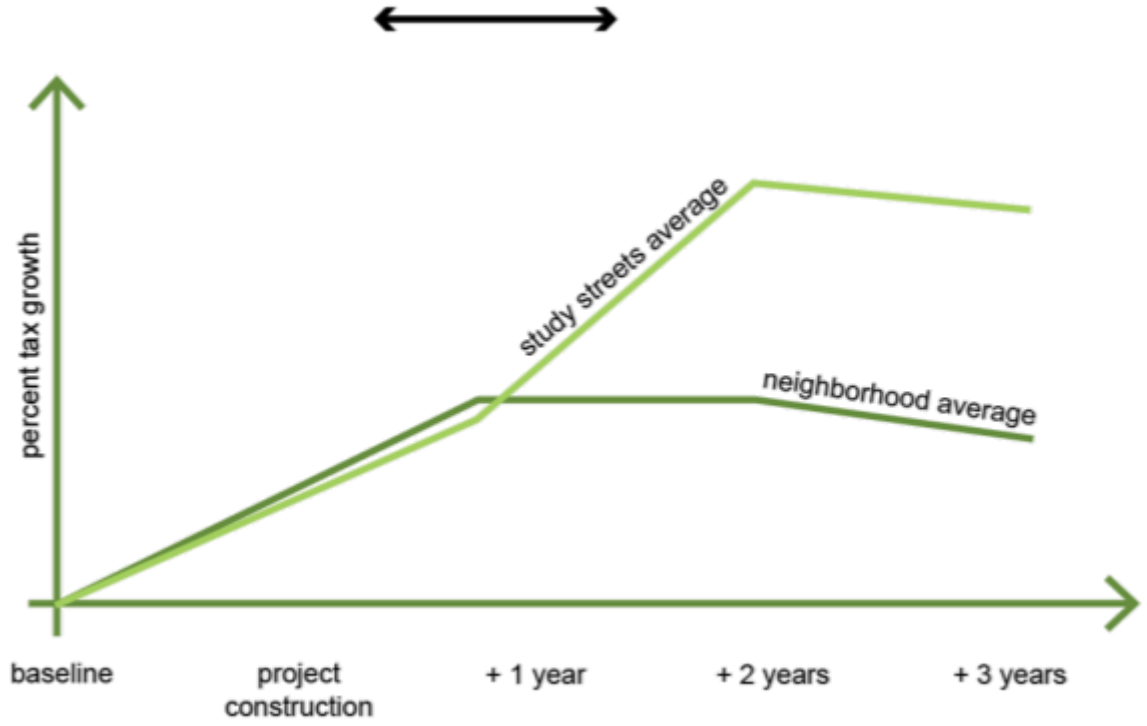


4.8%

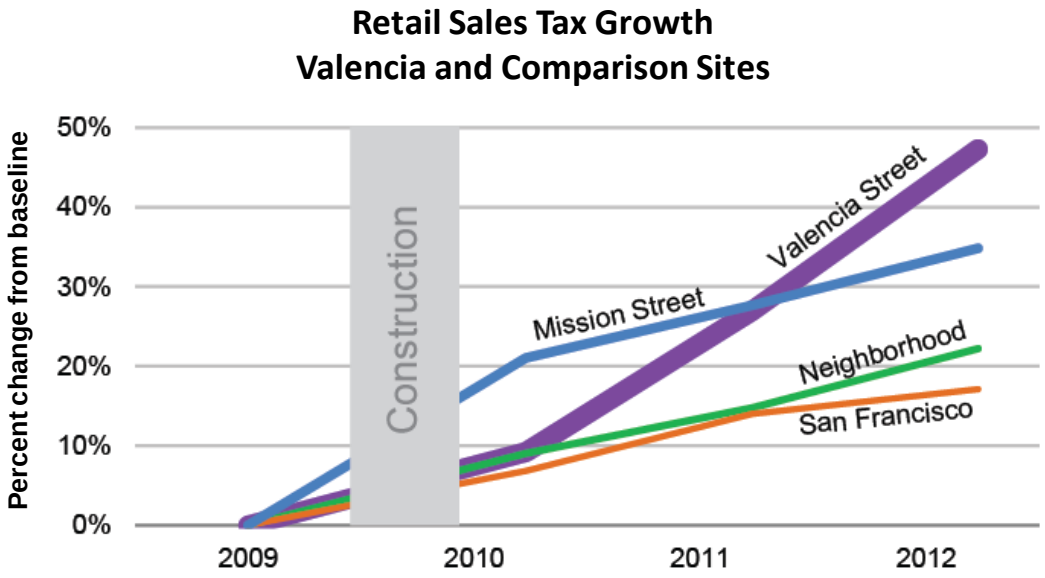
Average growth of retail sales tax receipts on study streets relative to their surrounding neighborhoods

Key Findings

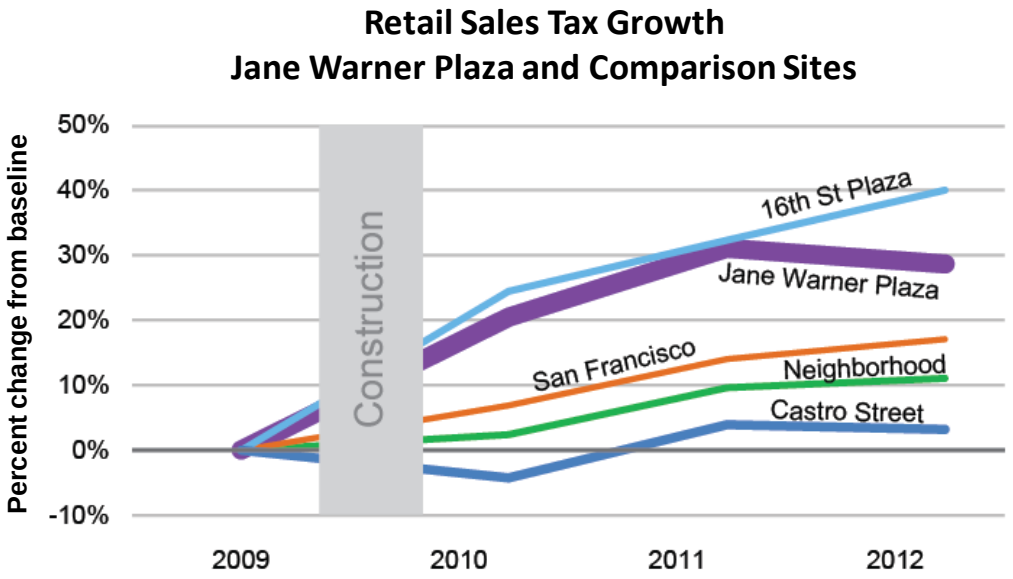
1 year time from project completion before study streets begin to outpace neighborhoods



Valencia Streetscape Project - 2010



Jane Warner Plaza - 2010



2. What messages resonate?


1


2

3

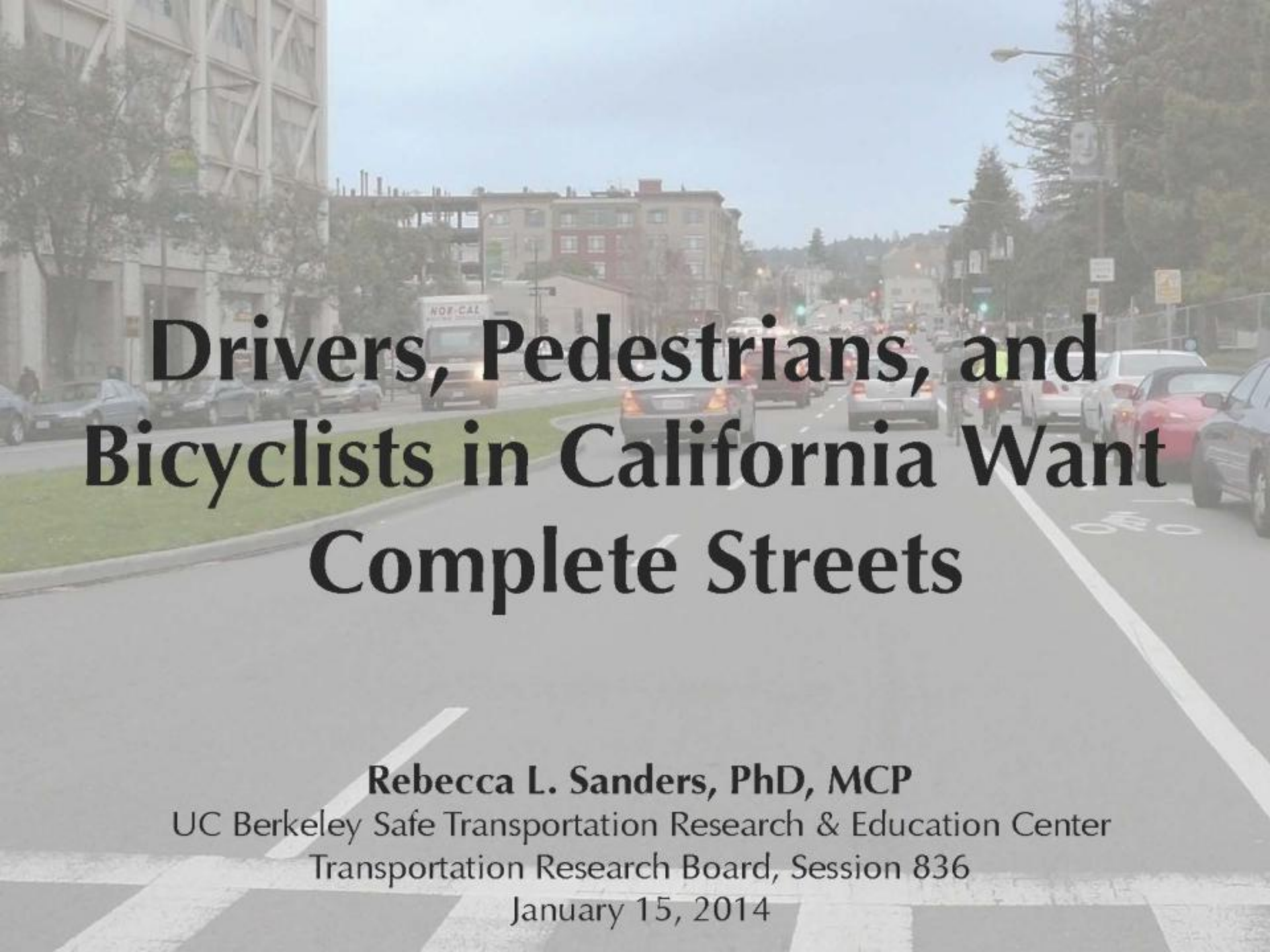

4


5


6


7


8



Drivers, Pedestrians, and Bicyclists in California Want Complete Streets

Rebecca L. Sanders, PhD, MCP
UC Berkeley Safe Transportation Research & Education Center
Transportation Research Board, Session 836
January 15, 2014

Healthier + Wealthier

Riders say they feel better physically and mentally even if they only ride instead of drive every now and then. The added exercise has a multitude of health benefits – better weight, blood pressure, and insulin levels; decreased risk of obesity and breast cancer. The stats bear out that the **health benefits of cycling outweigh the risks by a factor of 20 to one**. It's a social activity. All that, and it can save you and your family a lot of money. It's a simple way to transform your life.

Break Free From Congestion

The rate at which the number of cars on the road is increasing is not sustainable. If we do nothing, we'll have **a million more cars in our city in the next 10 years** – which will not only affect our roads and commute time, but parking within the city as well. Whether you ride or not, helping more people cycle is critical because it will affect us all sooner than later. Supporting bikes and bike infrastructure is simply better for us all.

See More, Do More

Bicycling gives you a different perspective on your city. Riders say they enjoy seeing more, experiencing more, stopping more to 'smell the roses'. It shrinks the city while simultaneously expanding it (if you bike, you get a better understanding of how to maneuver the city, while seeing things you never would have in a car). It creates a more connected city which is an intangible benefit to biking around town that doesn't often get talked about, but is one of the key reasons bicyclists love it.

3. What about safety?

We're a Walkable City.
All trips in San Francisco begin and end with walking.

17%

And walking is the primary mode for 17% of all trips.

Each year in San Francisco,

100
Severely Injured or Killed

At least
800
Injured

5x
Seniors have a higher fatal injury rate than younger adults

Seniors are particularly vulnerable.

6% = 60%
Streets — Severe and fatal Injuries

Pedestrian injuries/death are concentrated in specific areas.

64%
motorists at fault

Motorists often are not yielding to pedestrians, Failure to yield accounts for 41% of the 64% total.

Left turns disproportionately contribute to injuries.

28%

Left turns were the movement preceding collision in 28% of injuries

High vehicle speeds kill.

50% vs. **10%**
fatalities at **40** mph — fatalities at **25** mph

$15M
annual medical costs related to ped injuries

Medical costs alone are very high.

$564M

Total annual health- related economic costs are much higher.

SFMTA
Municipal Transportation Agency

What We Heard from San Franciscans

San Franciscans told us to prioritize:

Leading Pedestrian Intervals

Pedestrian Countdown Signals

Automated Speed Enforcement

The vast majority of all WalkFirst participants want SFMTA to act quickly and implement temporary measures that are cost effective.

In general, San Franciscans want:

- Locations with seniors, children, and people with disabilities to be prioritized for safety improvements
- Solutions that recognize the diversity of neighborhoods and have community support
- Complex intersections to be made safer and less confusing for people who walk

80%

of respondents wanted SFMTA to first fix the intersections and corridors where the most collisions occurred

85%

of respondents think pedestrian safety is getting worse in the City

75%

of respondents would support a ballot measure if it included increased funding for pedestrian safety

SFMTA
Municipal Transportation Agency

EFFECTIVENESS: 68%
of severe/fatal injuries on High Injury Network targeted by WalkFirst Pedestrian Safety CIP

COST: $50M
for implementation of WalkFirst Pedestrian Safety CIP

TIMEFRAME: Years 1–5
for implementation of WalkFirst Pedestrian Safety CIP

Quick / Cost-Effective Improvements

Advance Stop or Yield Lines / Red Visibility Curbs

Continental Crosswalks

Leading Pedestrian Intervals

Turn Prohibitions

Reduced Lane Widths

Temporary Corner Bulbs & Chokers

Pedestrian Scrambles

Speed Humps

Signal Timing Changes

Protected Left Turns

Temporary Pedestrian Refuge Islands

6th/Howard Before

SFMTA
Municipal
Transportation
Agency

6th/Howard After

6th/Market Before

SFMTA
Municipal
Transportation
Agency

6th/Market After