

# San Francisco Transportation Plan Update

**PART 2: Needs Assessment**

**Spring 2013**



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# SFTP Needs Assessment

- **Planned Growth**
- **Existing and Future Transportation Conditions**
- **Aspirational Scenarios: “What would it take to...”**
  - Achieve a state of good repair
  - Get to approximately 50% below 1990 greenhouse gas emissions
  - Achieve a non-auto mode share above 50%
  - Accommodate population/employment growth with no change in commute
- **Focused Sector Analyses**
  - Visitor Trips
  - Goods Movement Trips
  - School Trips
- **SoMa Core Circulation Analysis**
- **Institutional Challenges**



# Planned Growth

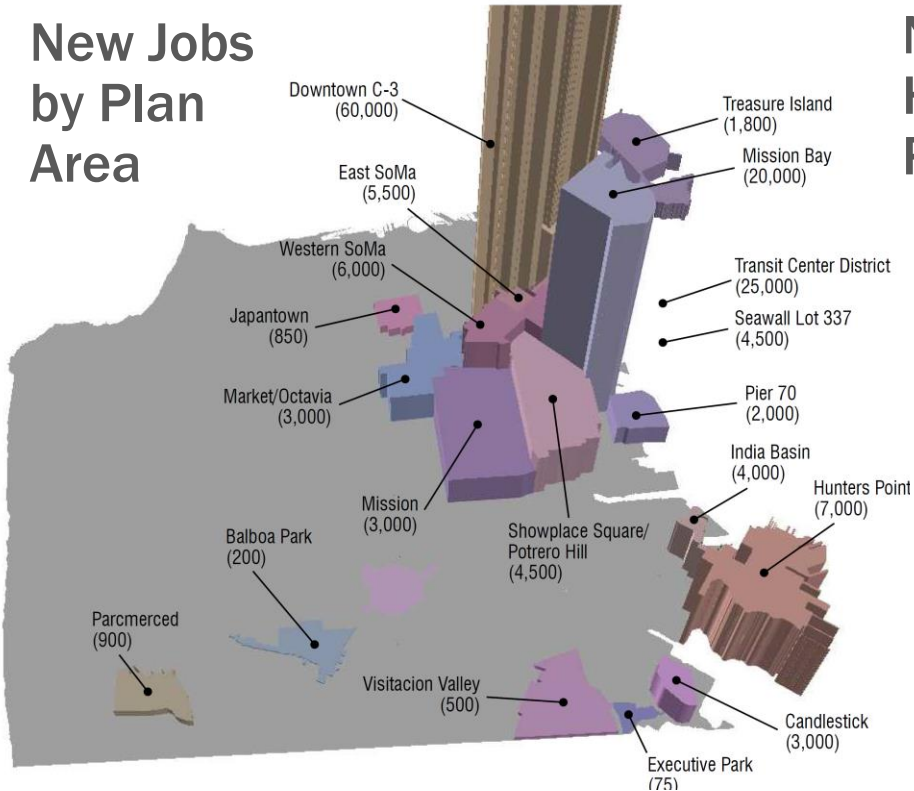


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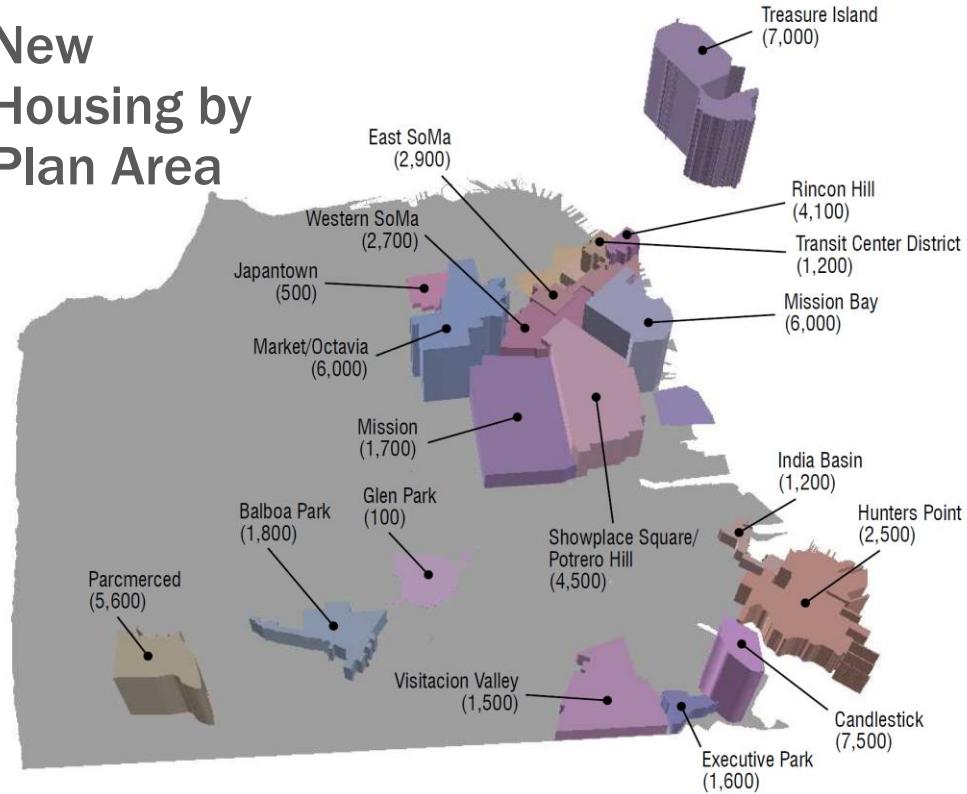
# Our growth and transportation challenge

## Planned growth through 2040

### New Jobs by Plan Area



### New Housing by Plan Area



### San Francisco Growth in Plan Bay Area:

- ▶ 92,000 housing units
- ▶ 101,000 new households
- ▶ 191,000 new workers



# Existing/Future Transportation Conditions



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# Needs Assessment Framework

## Transportation System Performance

- Total tripmaking
- Mode share
- Person miles over vehicle miles traveled (PMT/VMT)
- Transit:Auto Travel Time Ratio

### Economic Competitiveness

- Congested Streets
- Motorized Travel Time
- Peak:Off-peak Drive Travel Time
- Goods movement and visitor trip needs

### Healthy Environment

- Vehicle miles traveled
- Greenhouse gas emissions
- Active Transportation (walking & biking) Trips

### Livability

- Transit trips requiring transfer
- Non-auto mode share
- Average trip-length
- School trip needs

### State of Good Repair

- Crowded Transit Lines
- Pavement Condition Index
- Transit Reliability
- Structural Sufficiency

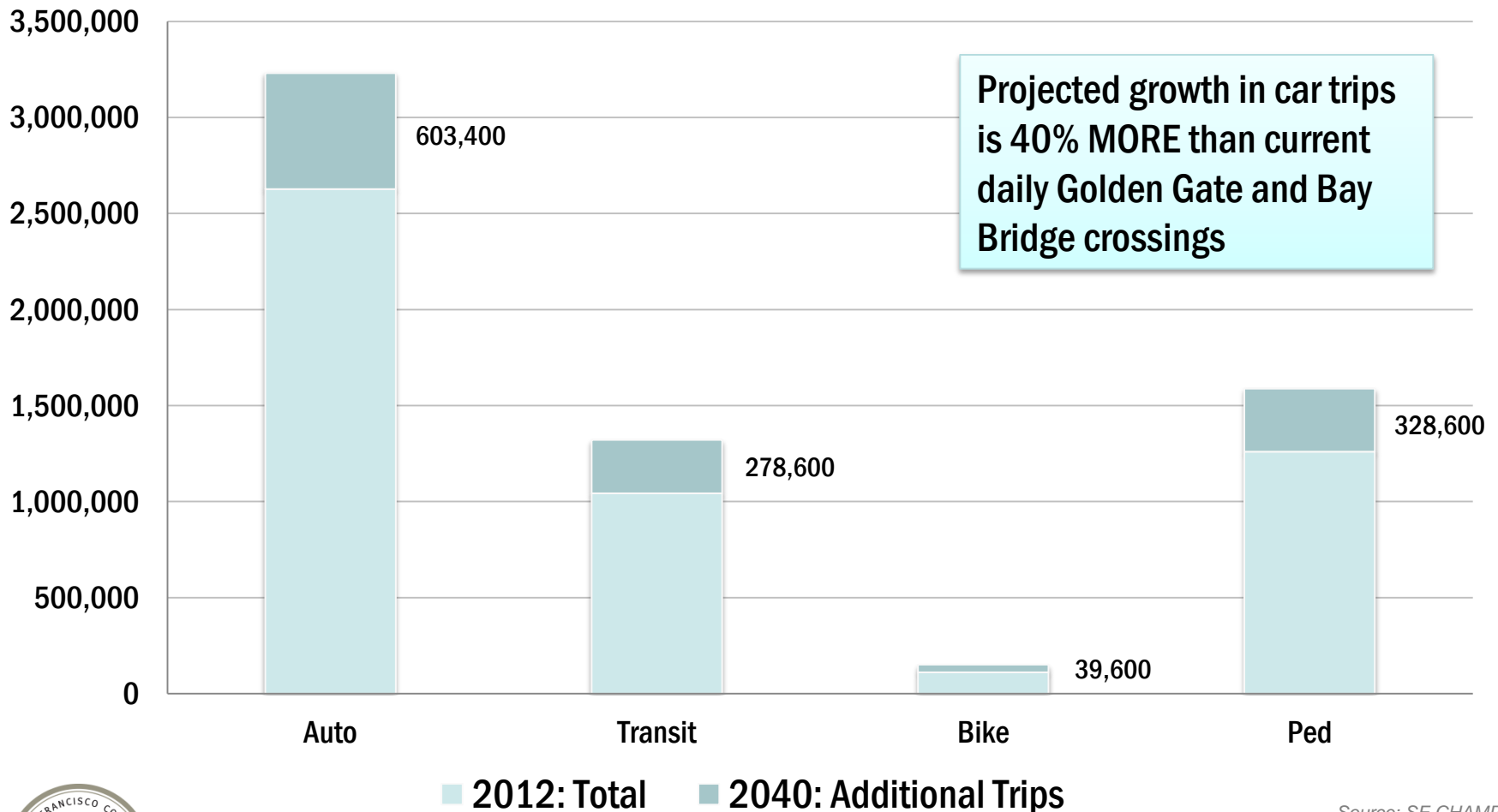
## Equity Public Input



# Expect over 5 million trips to/from/within SF by 2040

## 33% more trips than today

**Total Trips To, From, and Within SF by Mode**



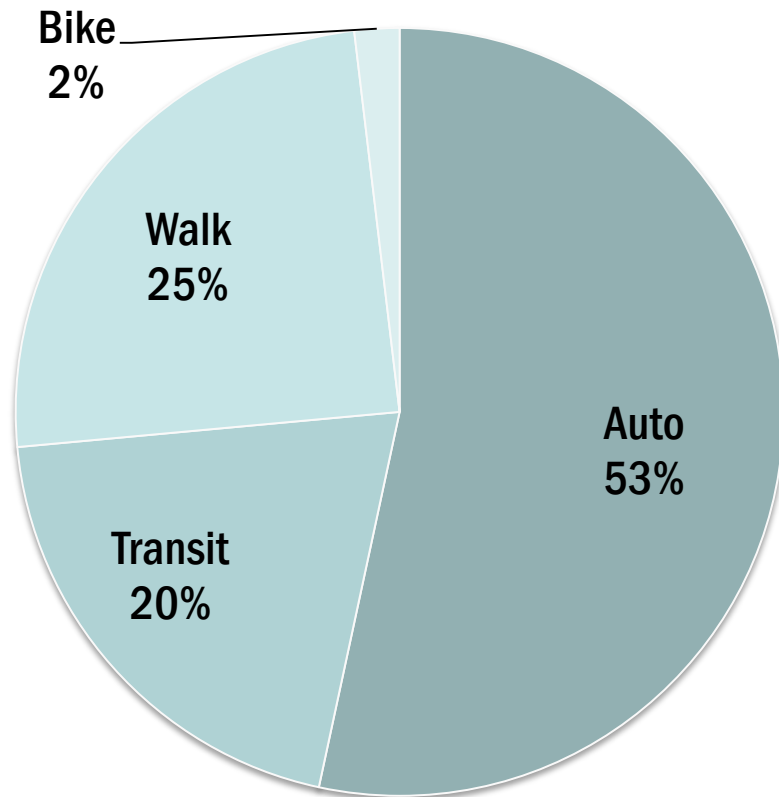
Source: SF-CHAMP 4.3



# Current Conditions: Trips To, From, and Within SF

## Car trips dominate SF's transportation network today

**2012: Distribution of Trips by Mode**  
(2012 Mode Share)<sup>1</sup>



Some promising changes over past 10 yrs

- 50% growth in bike mode share<sup>2</sup>
- Growth in car-sharing, shuttles, other TDM

But similar problems persist

- Pedestrian safety
- Transit reliability
- Transit crowding
- Congestion



1. Source: SF-CHAMP 4.3

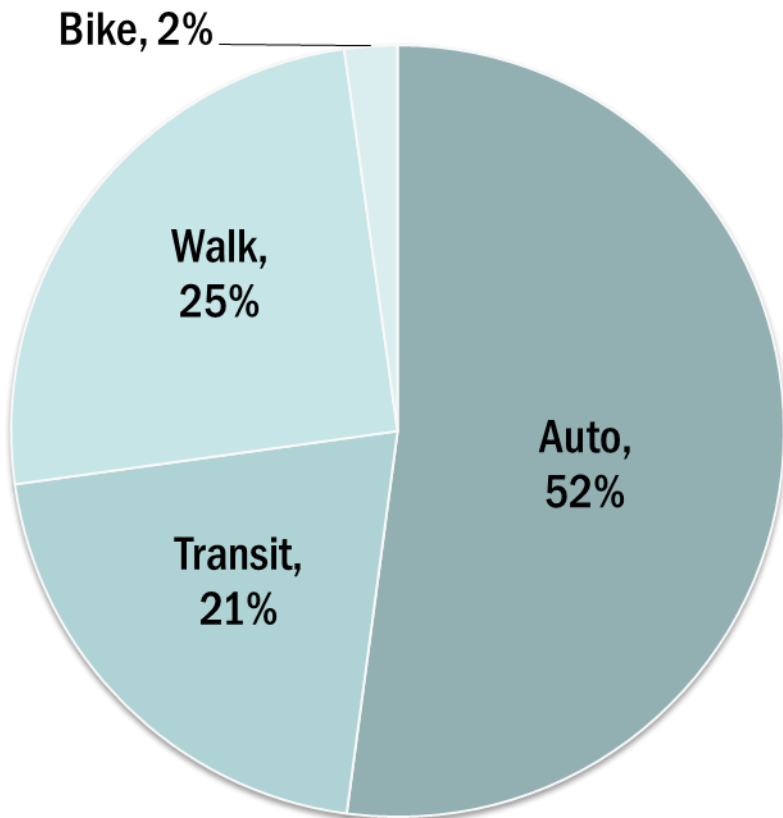
2. Source: Census Transportation Planning Package, 2000-2010



# Projected Tripmaking To, From, and Within SF

## Current trends will bring minor changes overall

**2040 Distribution of Trips by Mode**  
(2040 Mode Share)



**Percent Growth in Total Trips  
by Mode (2012-2040)**

Mode	Percent Change
Auto	30%
Transit	36%
Walk	35%
Bike	55%

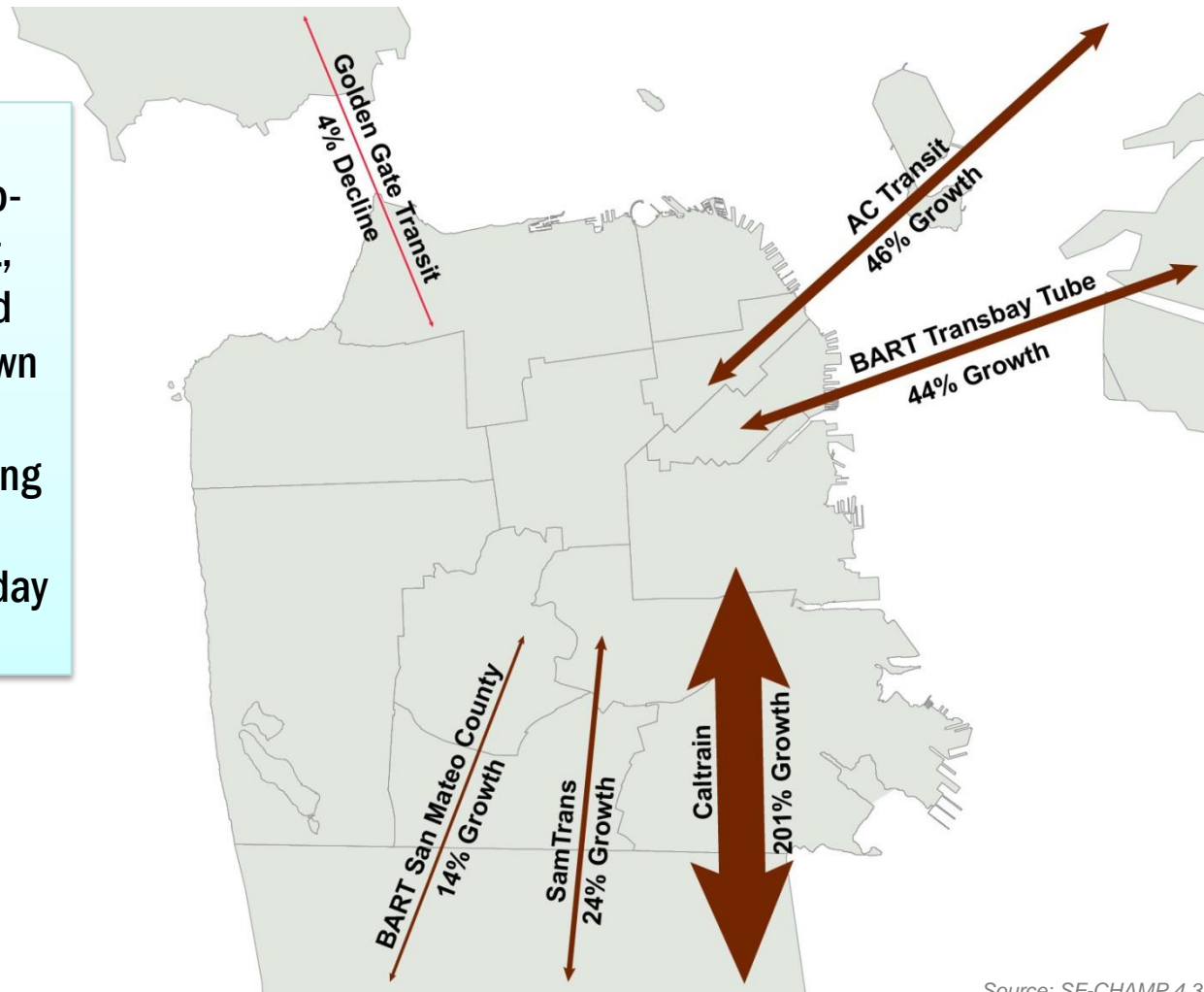


Source: SF-CHAMP 4.3

# Growth in Daily Regional Transit Trips to/from SF

Similar to trends previously seen

- Largest growth in transit trip-making from the Southeast, but not surprising given land use developments, Downtown Extension, etc.
- Growth in East Bay tripmaking still challenging, given crowding we already see today

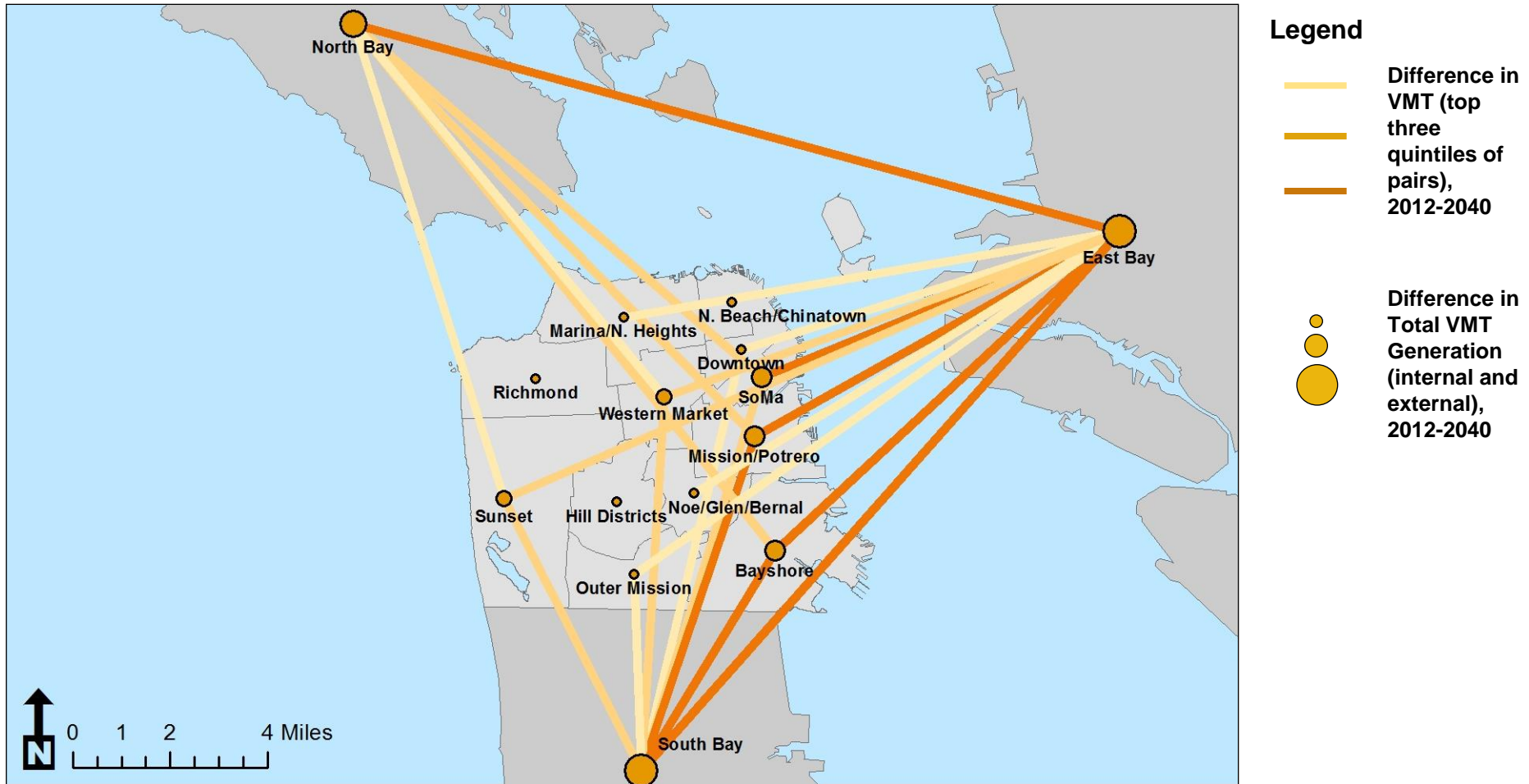


Source: SF-CHAMP 4.3



# Change in Regional Vehicle Miles Traveled (2012-40)

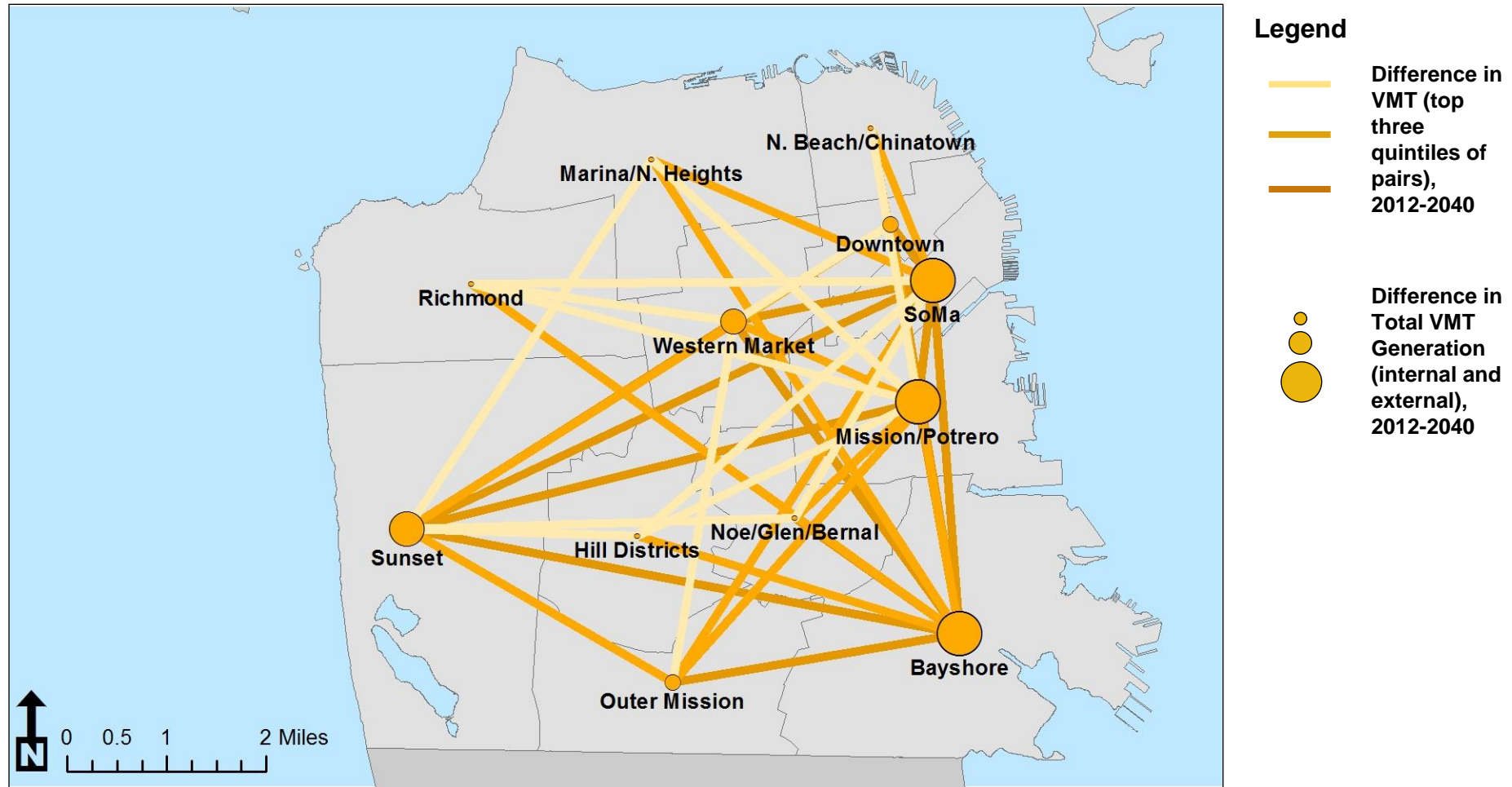
Eastern Neighborhoods Drive VMT To and From SF



Source: SF CHAMP 4.3

# Change in Local Vehicle Miles Traveled (2012-40)

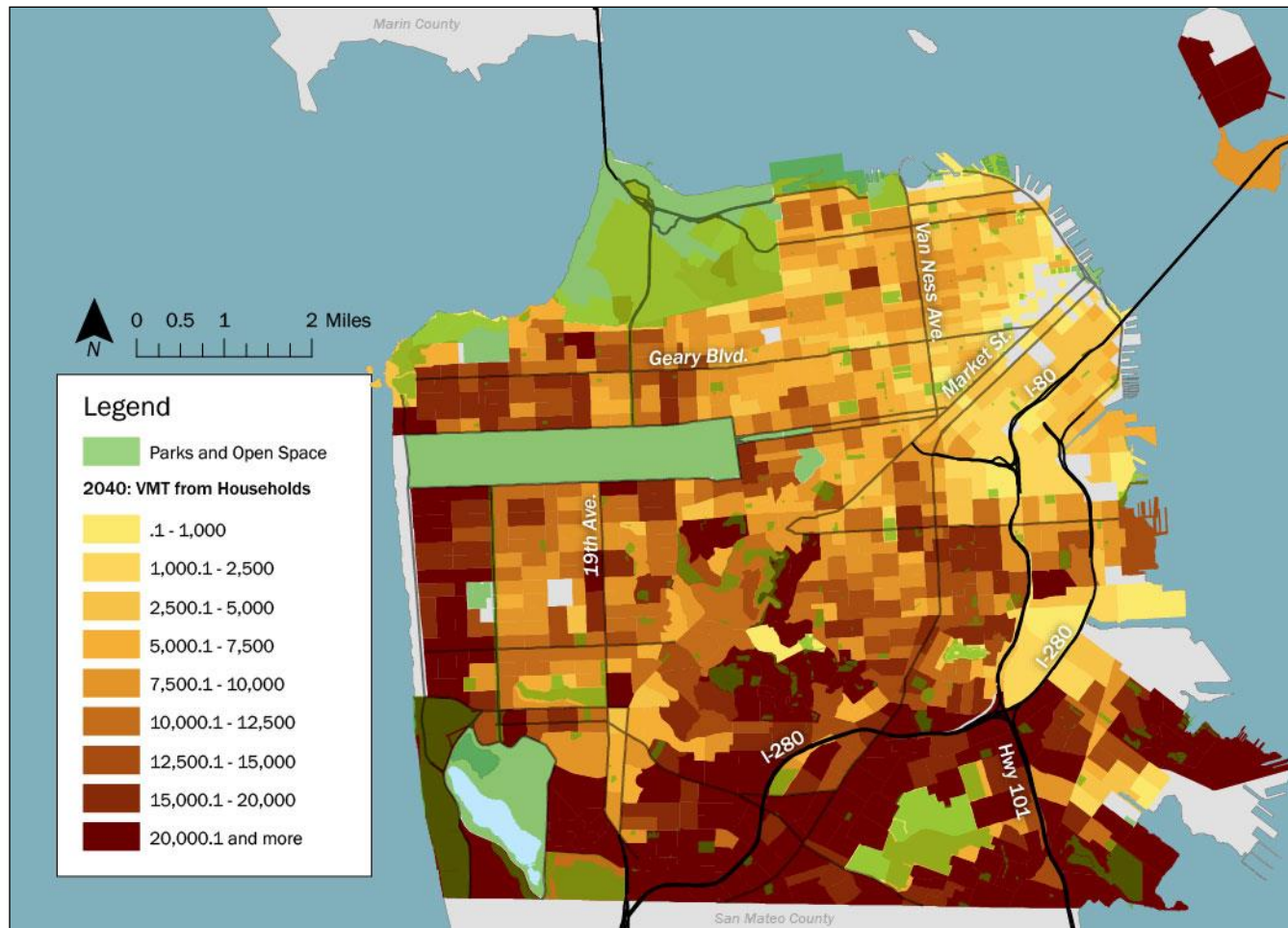
Again, Eastern Neighborhoods Drive Growth in Local VMT



Source: SF CHAMP 4.3

# Total Household Vehicle Miles Traveled (2040)

Outlying Neighborhoods Show Highest VMT



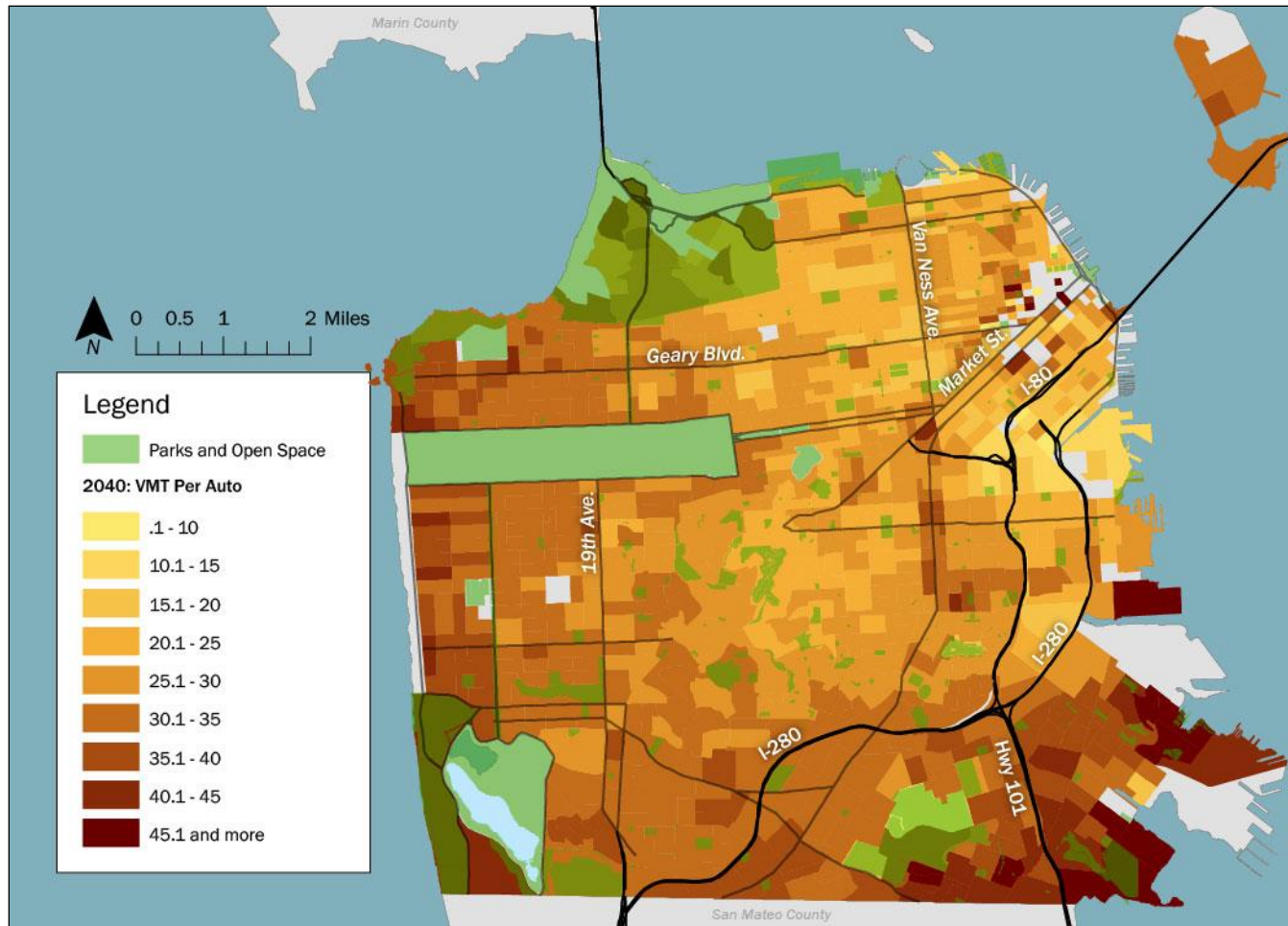
Source: SF-CHAMP 4.3





# Vehicle Miles Traveled Per Household Auto (2040)

Generally, Outlying Neighborhoods, Particularly in the Southeast, Have Highest VMT

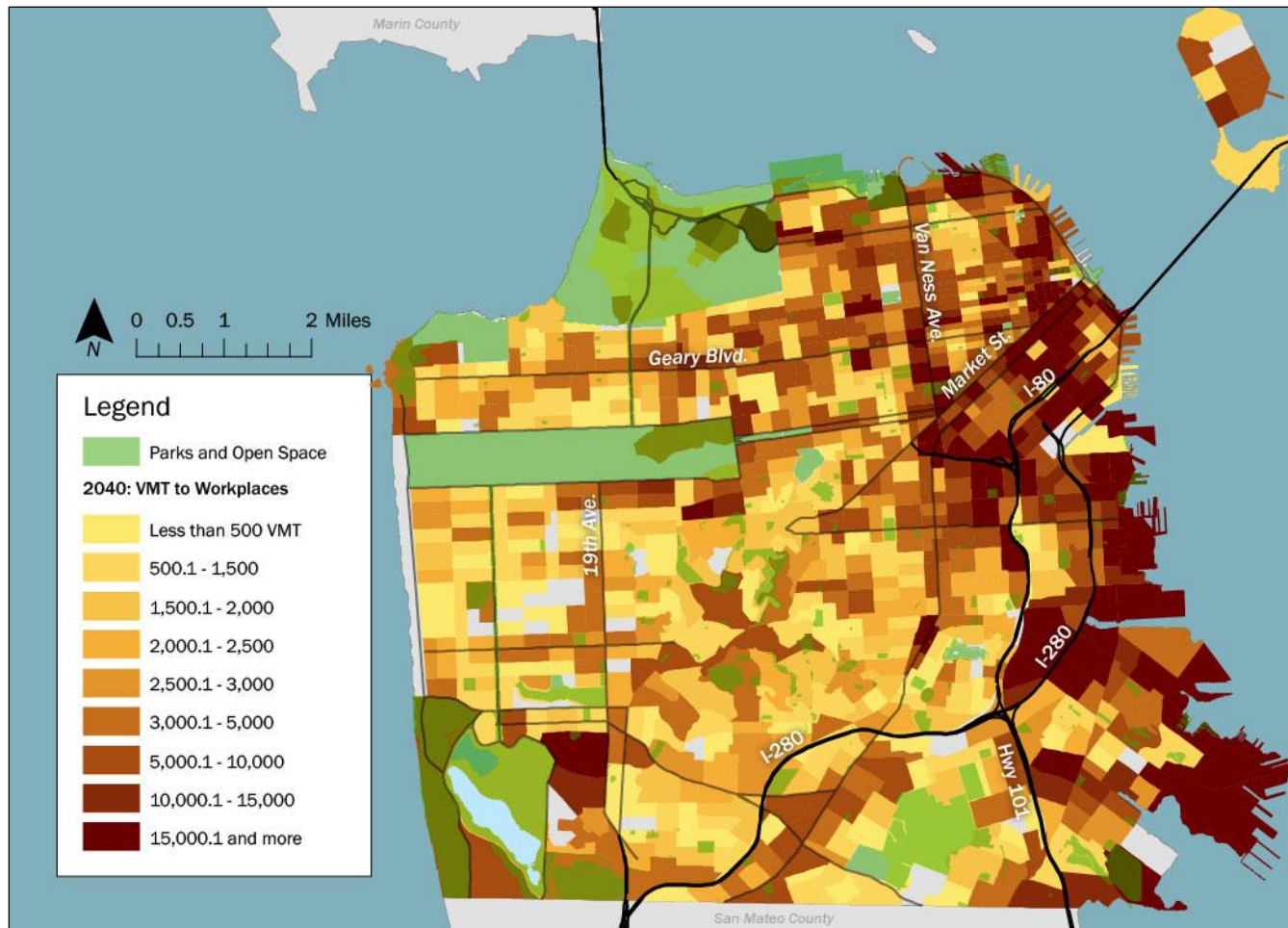


Source: SF-CHAMP 4.3



# Vehicle Miles Traveled to Workplaces (2040)

## Eastern Neighborhoods See Most Commute VMT



Source: SF-CHAMP 4.3



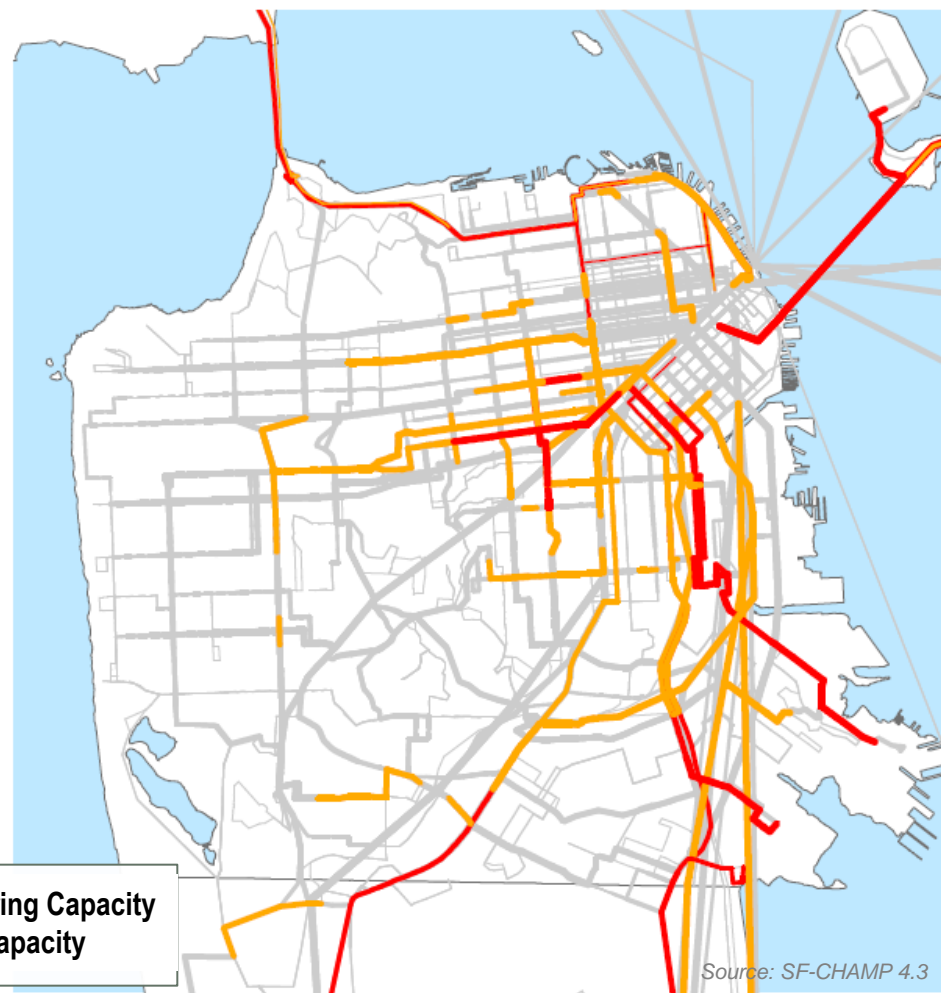
# Transit Crowding

with 40% more trips, expect more crowding by 2040

Transit Routes at or over Capacity, 2012



Transit Routes at or over Capacity, 2040



Source: SF-CHAMP 4.3

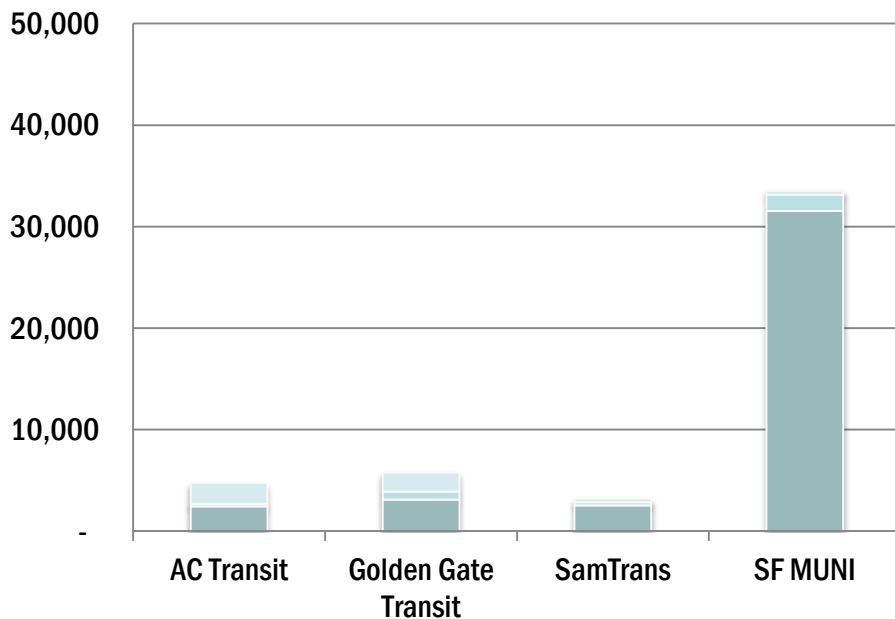




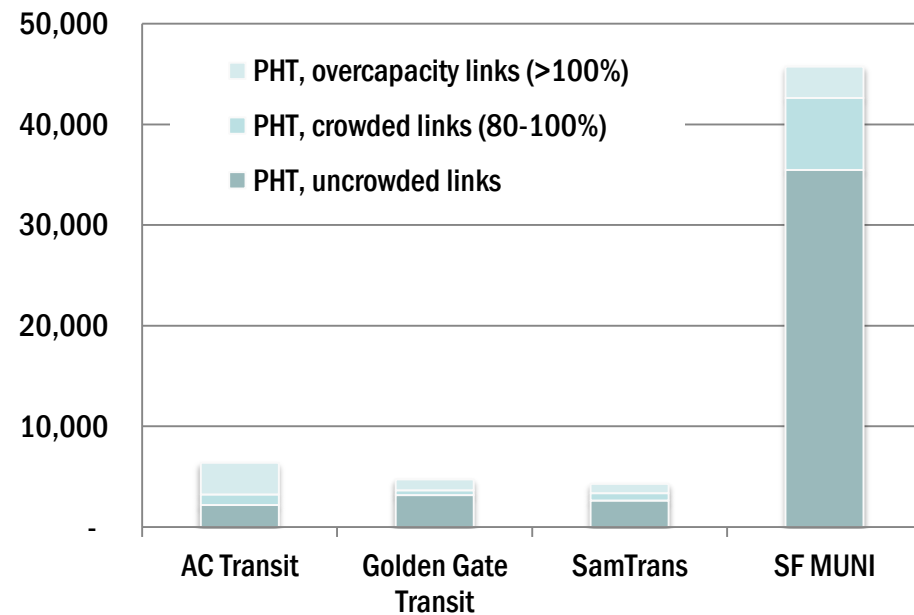
# Transit Crowding by Operator

Muni is largest operator, and experiences greatest increase → 5x more!!

Person Hours Travelled in Crowded Conditions (2012, a.m.)



Person Hours Travelled in Crowded Conditions (2040, a.m.)



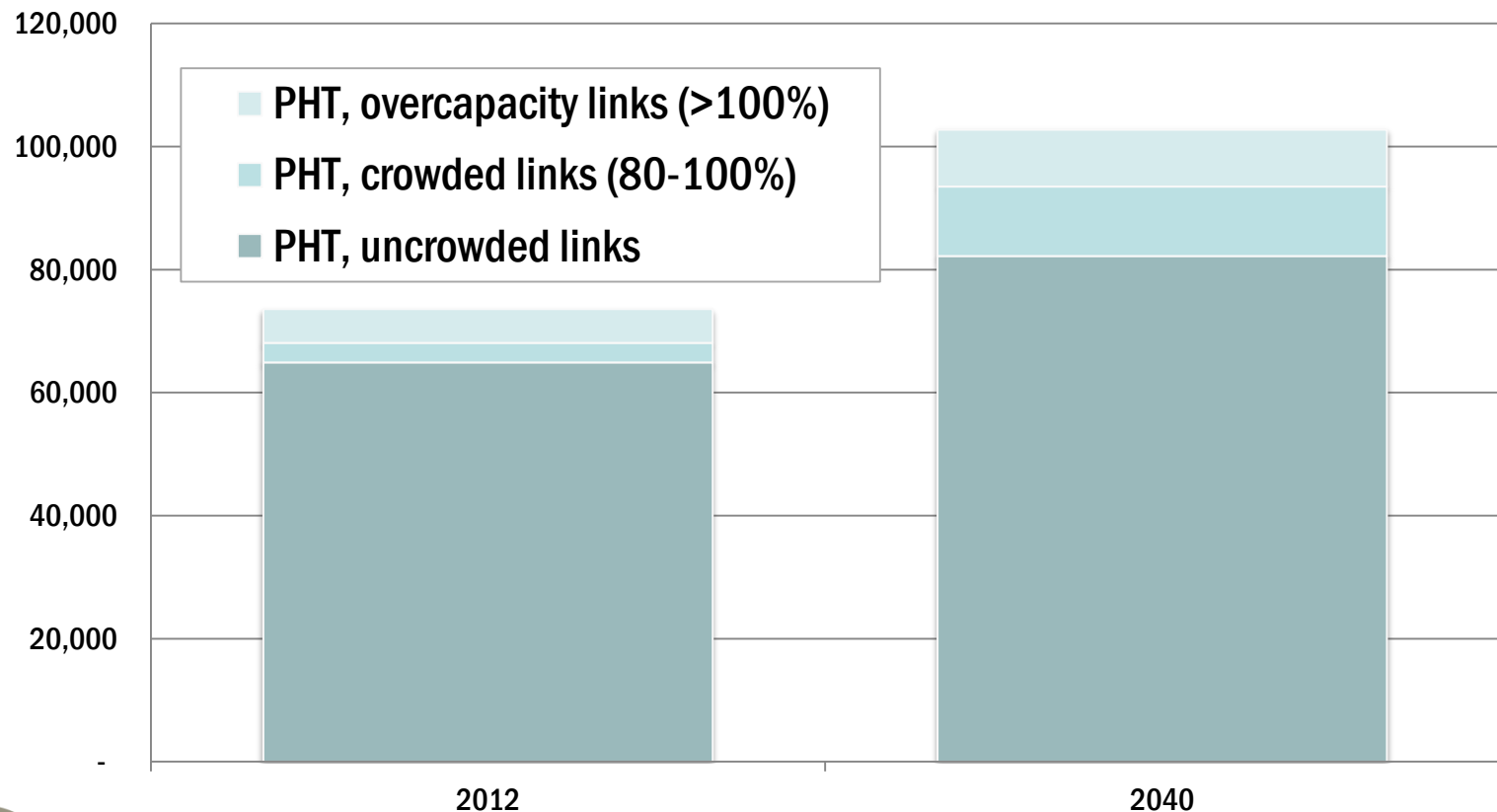
Source: SF-CHAMP 4.3



# Transit Crowding: expect large increases

66% more time spent in overcrowded lines, 3.5x more time in crowded lines

## AM Transit Crowding: Person Hours Travelled in Crowded Conditions on All Transit Lines touching SF



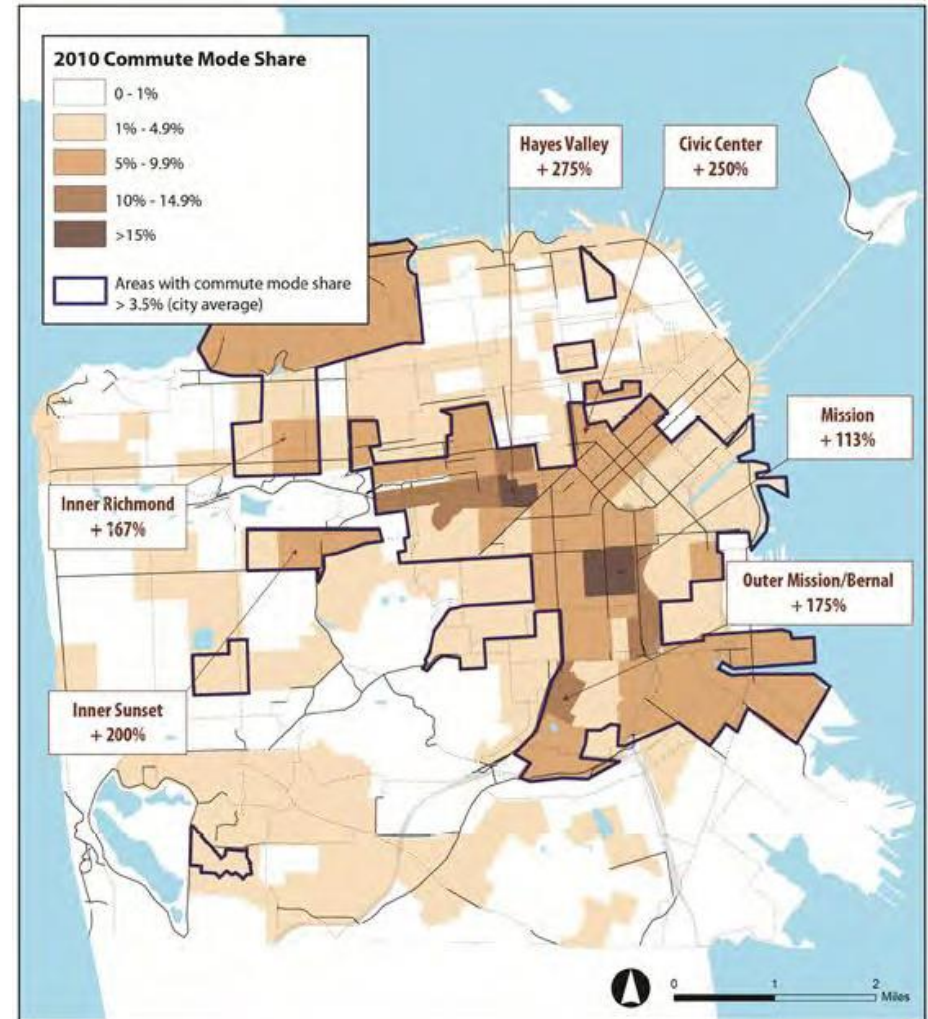
Source: SF-CHAMP 4.3



# Bicycle tripmaking demand and projected growth

❖ 2.5 % of all trips are made by bike today

- ❖ 75,000 daily bike trips
- ❖ 77% of bike trips 3 miles or less today
- ❖ While 34% of San Franciscans report biking at least once/week, roughly 2/3 never bike



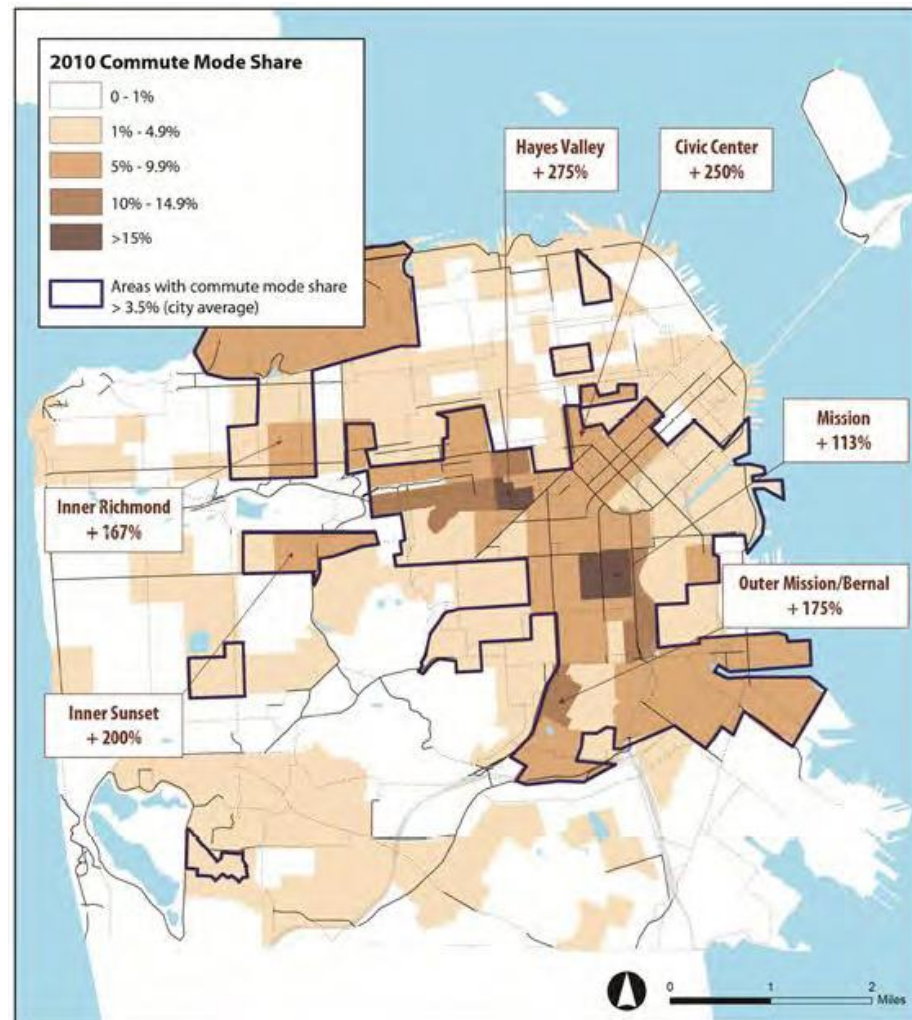
Source: SFMTA 2012



# Bicycle trip-making demand and projected growth

## ❖ Bike trip-making goals

- ❖ Core Bicycle Areas in 2010 already have a 7% bike mode share
- ❖ In the future, 58% of automobile trips < 3 miles, suggesting how we might reach SFMTA bicycle goals:
  - ❖ 9% mode share: requires converting  $\frac{1}{4}$  of all short auto trips to biking

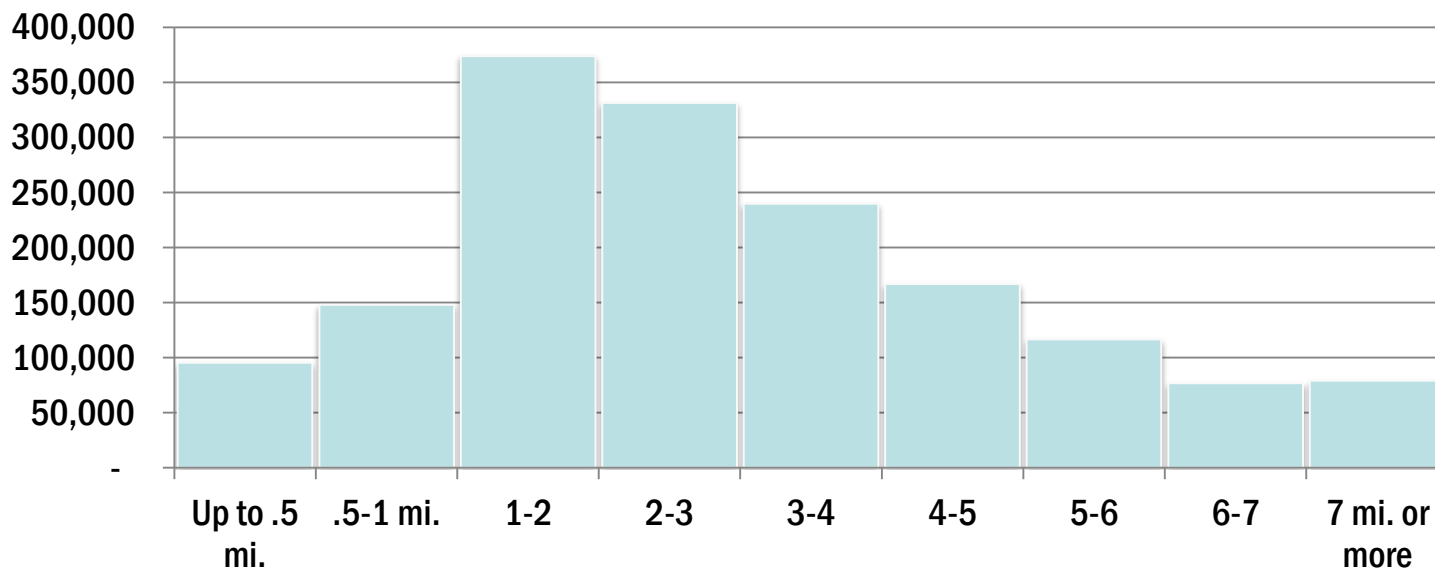


Source: SFMTA 2012



# Projected: Auto Trip Lengths (2040)

## Number of Auto Trips Within SF, By Length



~950,000 auto trips  
within comfortable  
biking distance

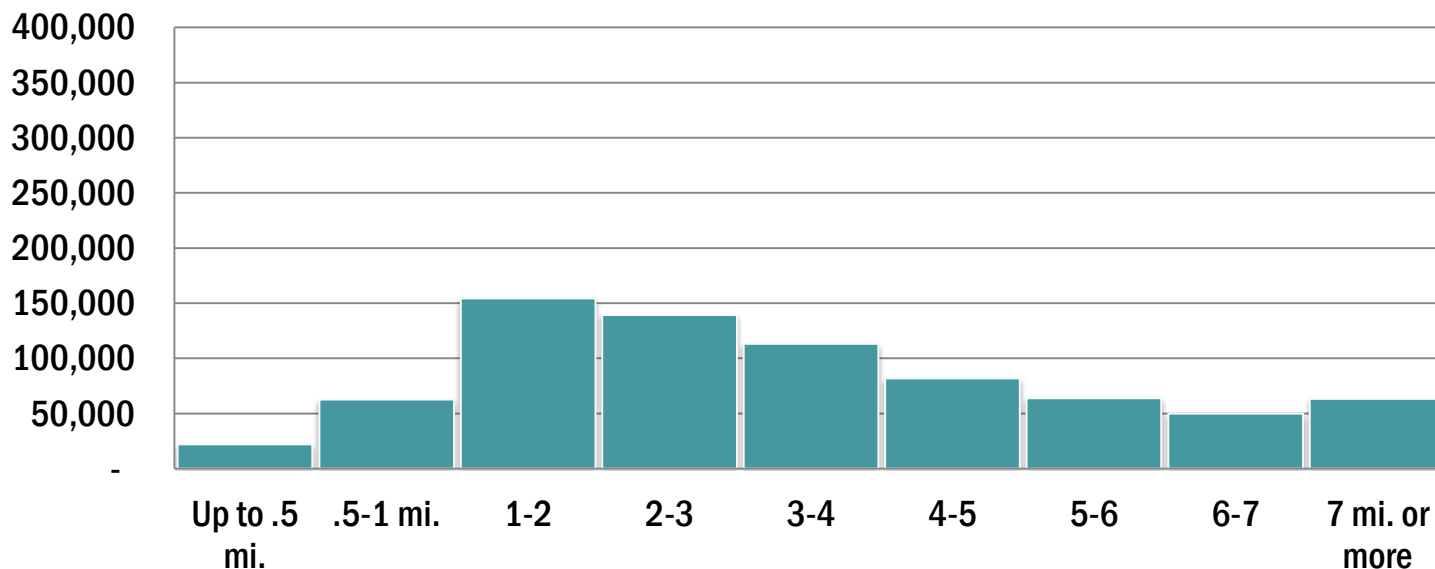
- 58% of all local auto trips are 3 miles or shorter



Source: SF-CHAMP 4.3

# Projected: Transit Trip Lengths (2040)

## Number of Transit Trips Within SF, By Length



~380,000 transit trips  
within comfortable  
biking distance

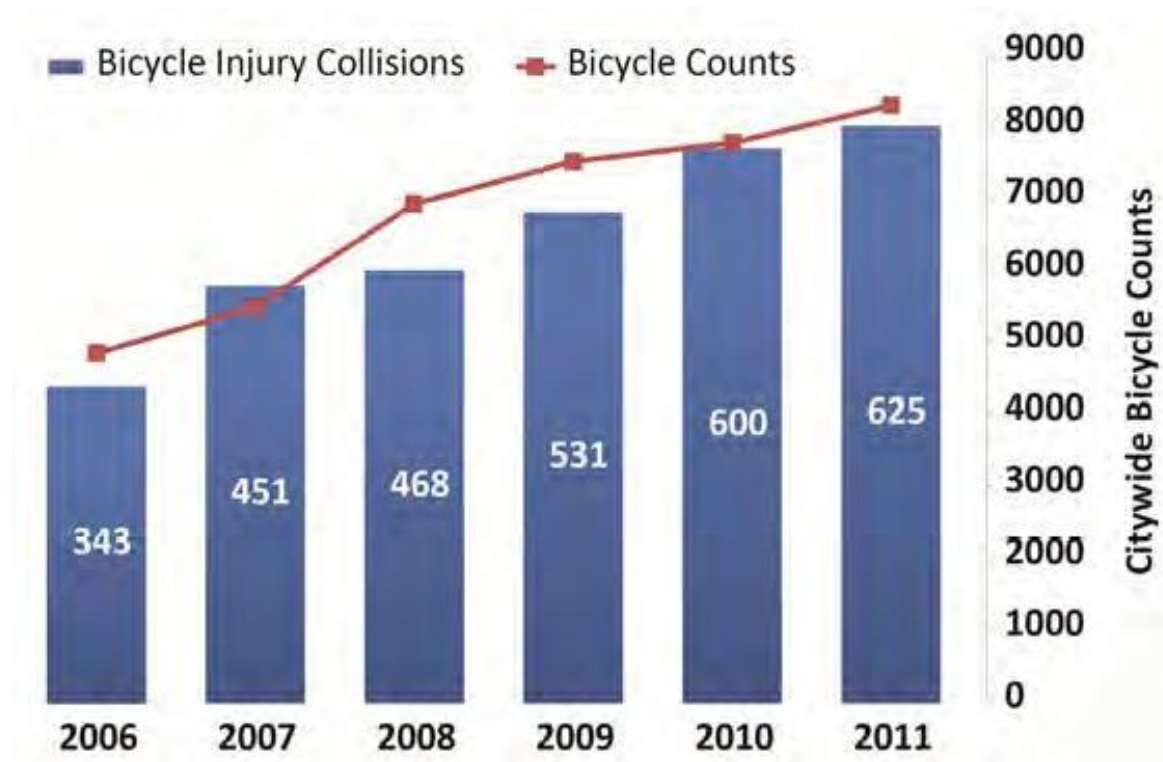
- 50% of all local transit trips are 3 miles or shorter



Source: SF-CHAMP 4.3

# Bike sector Issues

- ❖ Instances of bike crashes rising in proportion to increase in bike activity
- ❖ Consistent collision rate since 2006



Source: SFMTA 2012





# Bike network needs – network fragmentation



Source: SFMTA 2013



# Bike network needs – SFMTA Bicycle Strategy

- ❖ **Improve quality and density of system, including**
  - ❖ Enhance connections along the waterfront and coast
  - ❖ Close network gaps
  - ❖ Provide comfortable bike facilities in all neighborhoods
- ❖ **More widespread bike parking facilities**
  - ❖ Innovative uses of space to provide additional parking in the core
  - ❖ Achieve minimum bike parking coverage rates
- ❖ **Programmatic supporting measures**
  - ❖ Signal program can reduce conflicts, manage speeds
  - ❖ Promote and grow bikesharing
  - ❖ Continued education and outreach

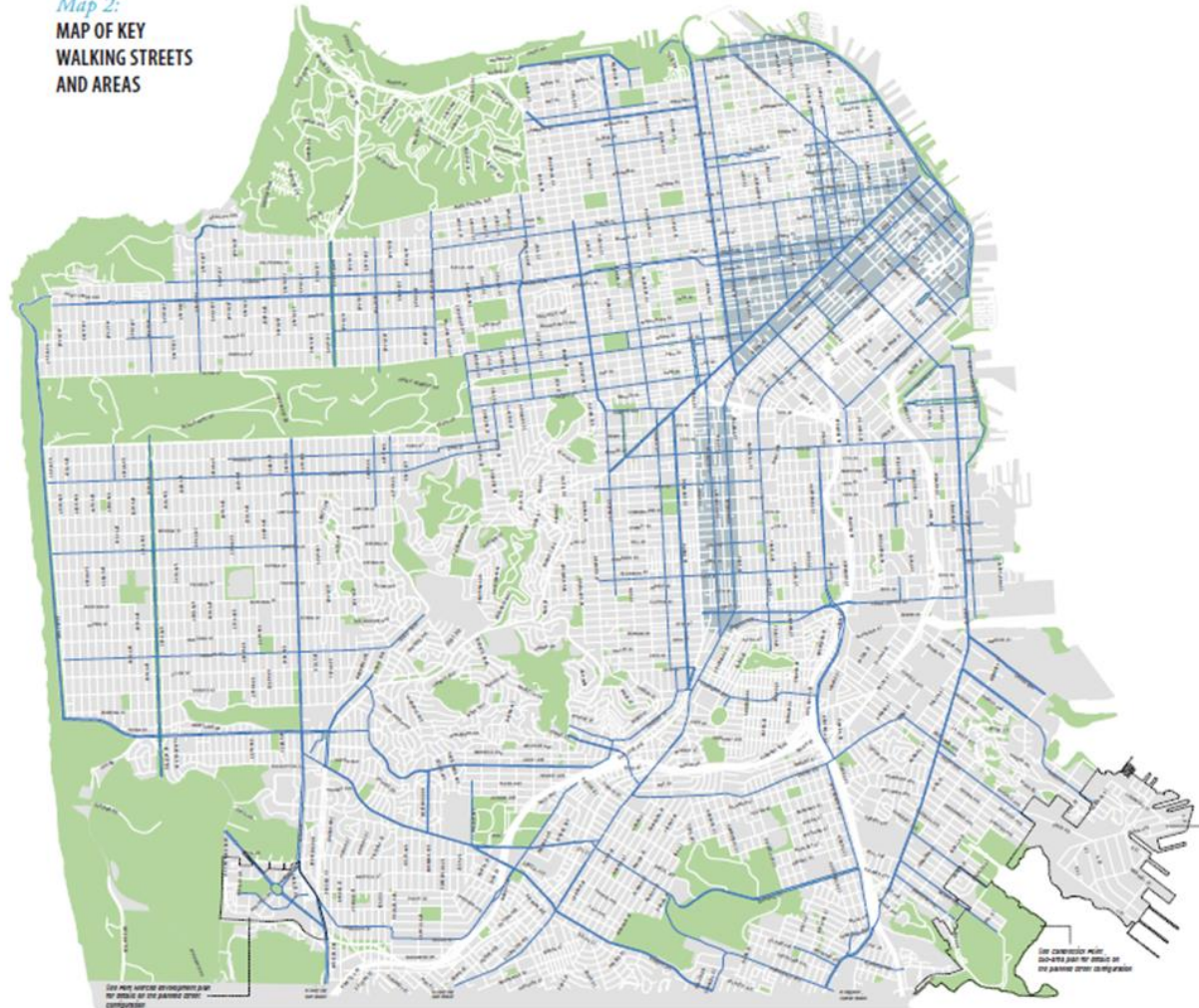


Source: SFMTA 2012

# Walking – Key walking streets

- Latest data indicates ped mode share today is 25%: meets MTA goal of 23%<sup>1</sup>
- Average trip length: 1 mi.<sup>2</sup>

Map 2:  
MAP OF KEY  
WALKING STREETS  
AND AREAS



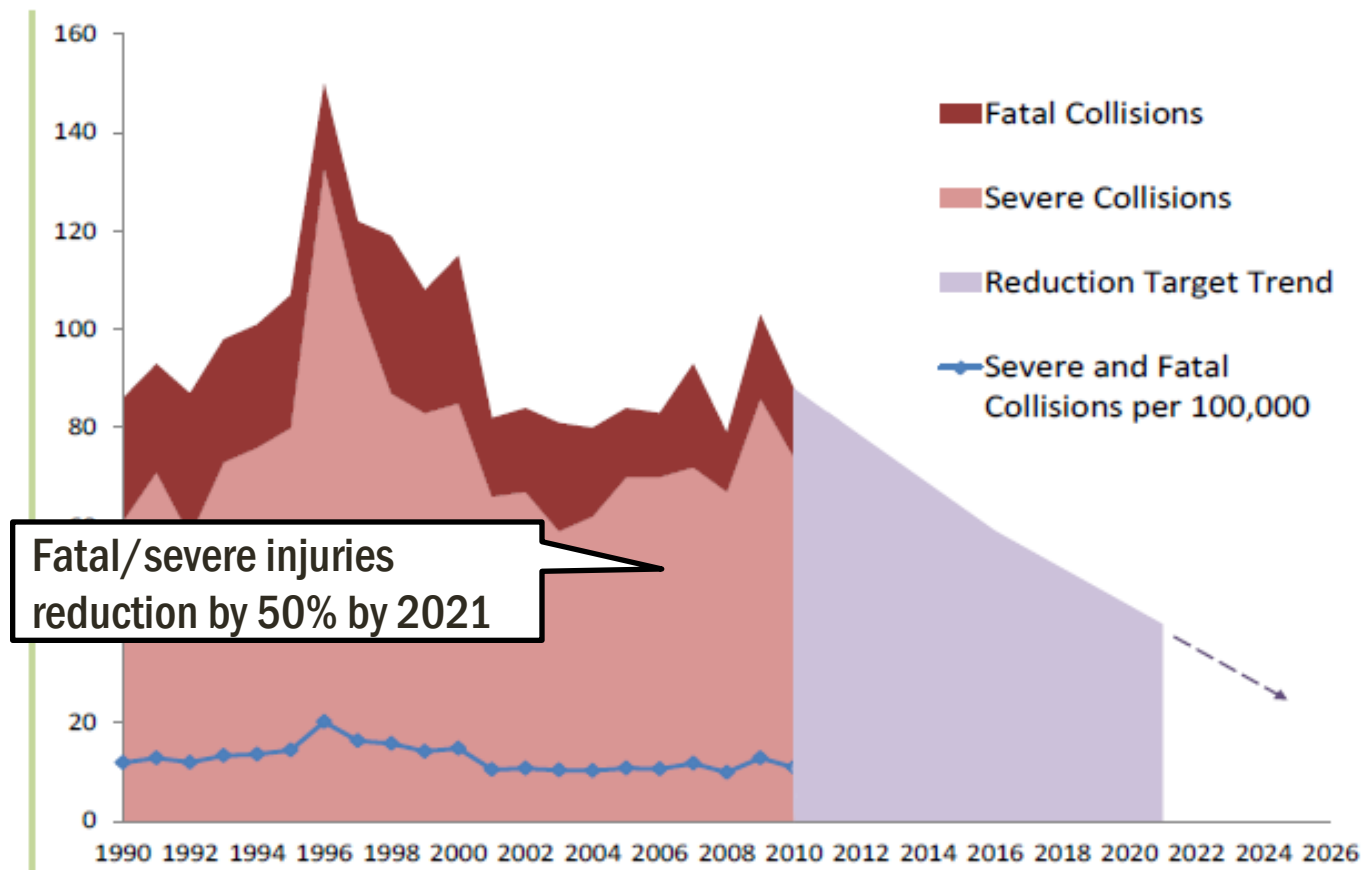
1 and 2: Source: SF-CHAMP 4.3. Map source: Walk First report, 2011.



# Walking – Safety

## Historical Trend and Target

### ❖ Consistent collision rate since 1990



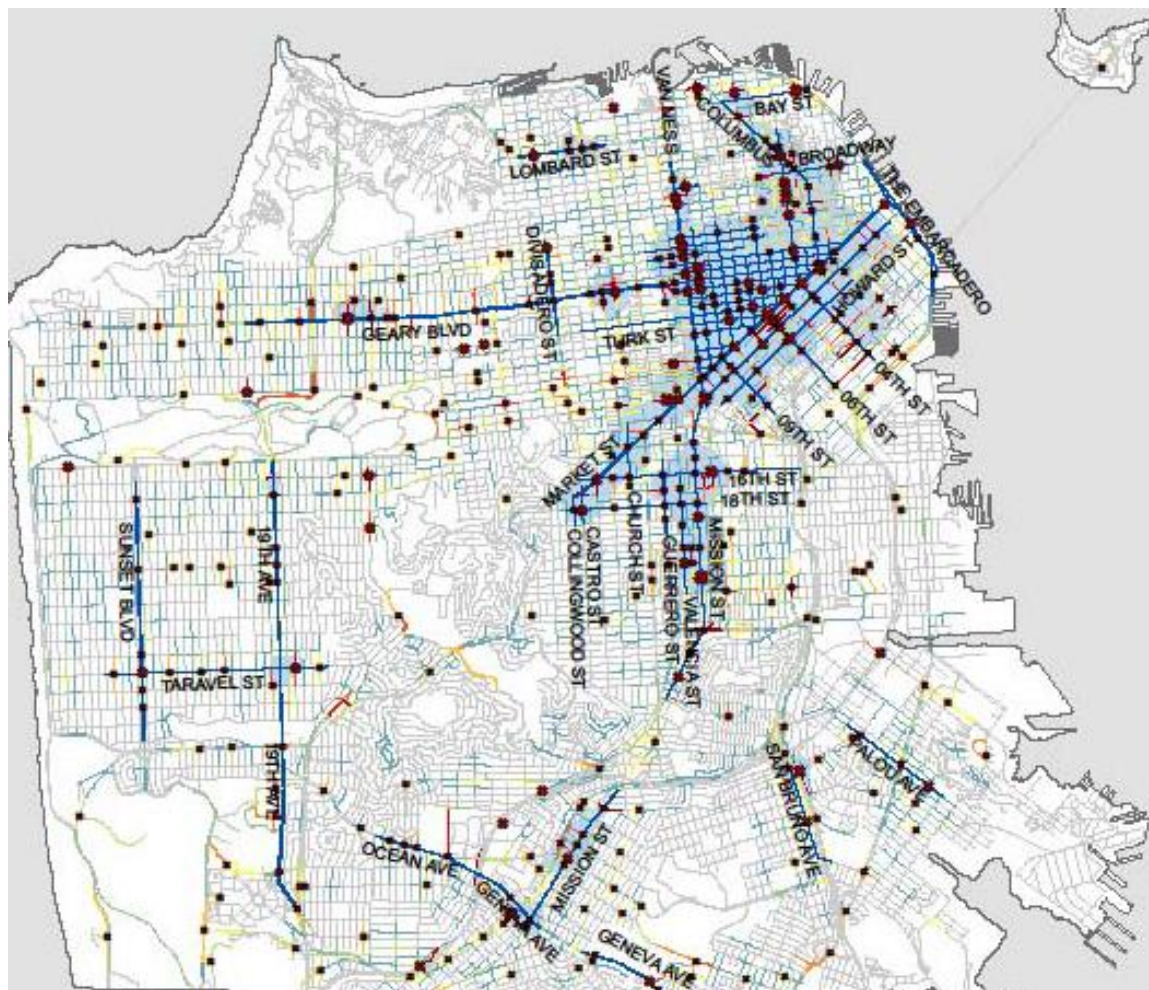
Sources: Draft Pedestrian Strategy, 2010-2011 SFMTA Collision Report



# Walking – Safety

## Injury Density and Crossing Risk

- ❖ **High-Injury Density Corridors:** 5% of SF's street miles bear 55% of all severe and fatal injuries and 51% of total pedestrian injuries



Source: San Francisco Department of Public Health, 2012.

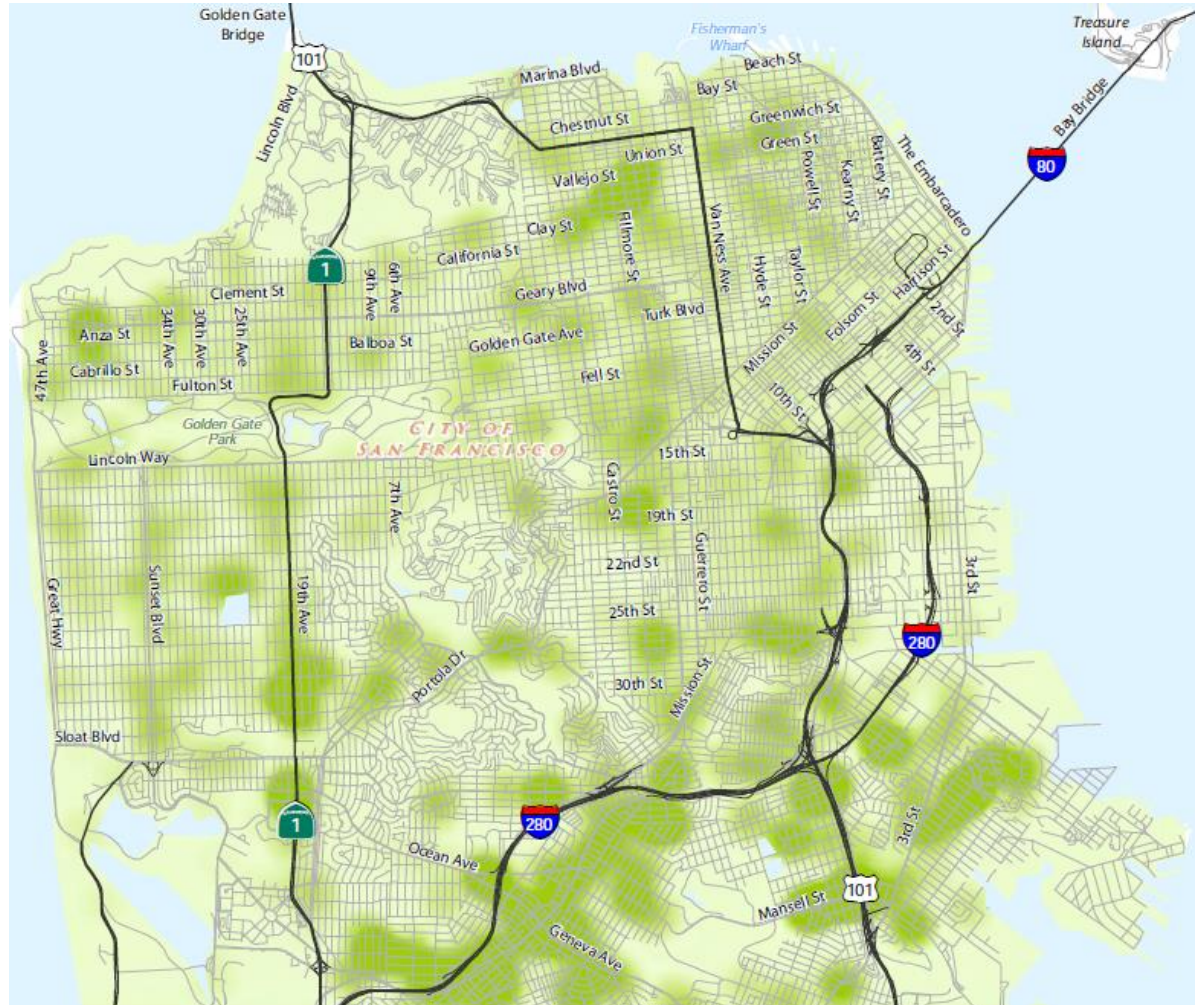




# Walking – Safety

## Injury Density and Crossing Risk

- ❖ **Pedestrian Crossing Risk by Intersection:** Highlights SE part of San Francisco where the pedestrian volumes are low



Source: San Francisco Pedestrian Volume Model.



# Walking – Needs Infrastructure

- ❖ 44 miles in urgent need of safety and walking comfort treatments
- ❖ 800 intersections need additional pedestrian crossing time
- ❖ 13,000 curb ramps need to be upgraded in the next 10 years
- ❖ 85 closed crosswalks
- ❖ 184 signalized intersections need pedestrian signals at all four corners
- ❖ 44 schools ineligible for 15 mph speed signs, located on arterials; need alternate treatment



*Sources: Draft Pedestrian Strategy, 2010-2011 SFMTA Collision Report*

# Walking – Needs

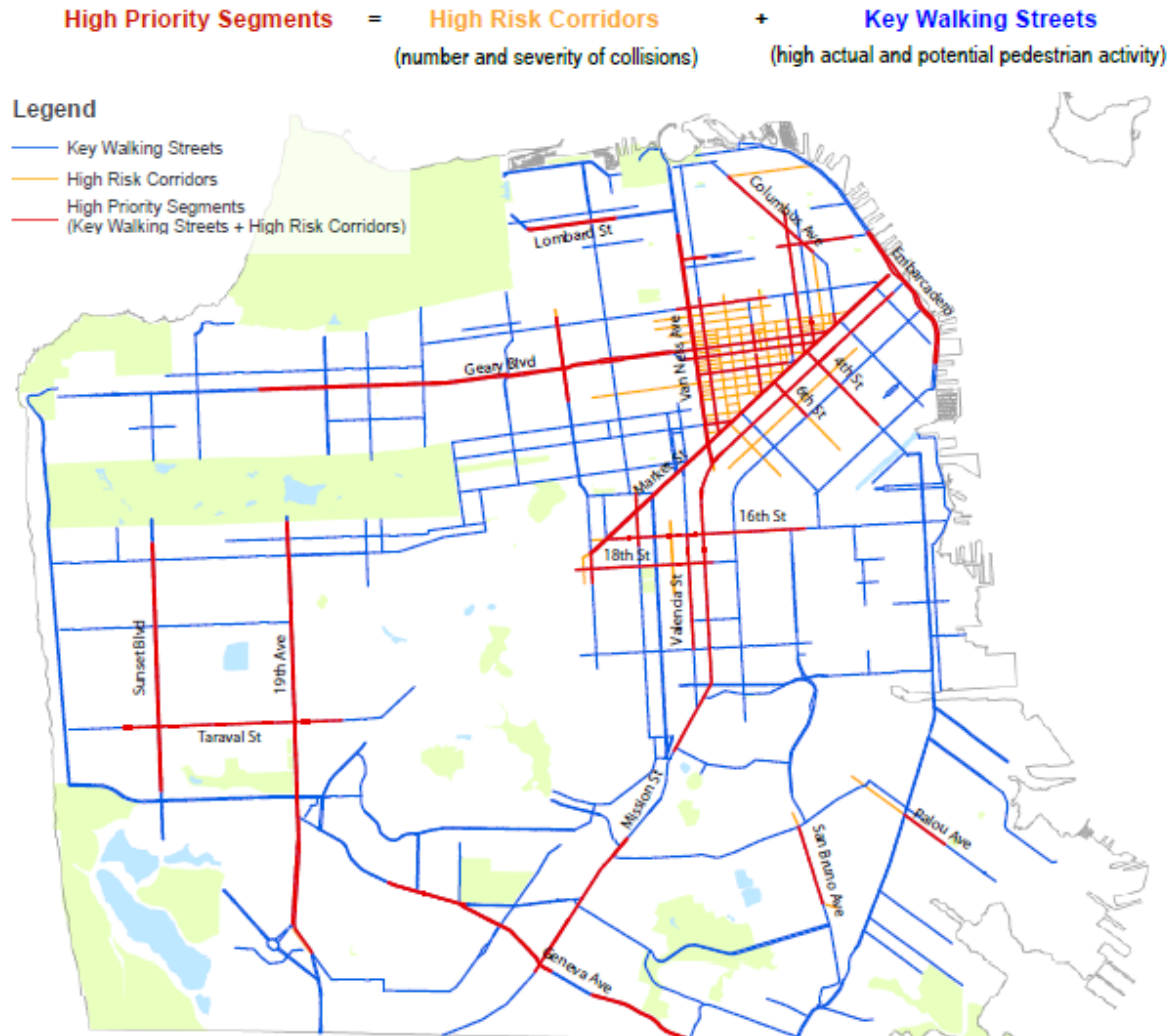
## Non-Infrastructure

- ❖ **Expand education /outreach:**
  - ❖ MTA to start comprehensive marketing program this year
  - ❖ Expand school education program
- ❖ **Increase enforcement hours (MTA aims to increase by 30% by FY 2021)**
- ❖ **Enhance evaluation/monitoring**
- ❖ **Better institutionalize pedestrian needs**
  - ❖ Citywide pedestrian capital project list
  - ❖ Implement the Better Streets Plan, develop “complete streets”
  - ❖ Improve project delivery process



*Sources: Draft Pedestrian Strategy, 2010-2011 SFMTA Collision Report*

# Walking – Needs High Priority Segments



Source: Draft Pedestrian Strategy.





# Public perception of transportation system needs

**"City Hall Must Tackle Muni's Problems."**

San Francisco Chronicle, December 27, 2012

**"Muni fixes will be painful, but they are necessary."**

San Francisco Examiner, April 6, 2012

**"Should this culture of inefficiency be tolerated where improvements can be made?"**

Adrienne Jan, SFSU student

San Francisco Chronicle, December 30, 2012

**"I was waiting for it to be terrible," he said of Muni. "And it wasn't."**

– transit rider on the busiest weekend of the year in San Francisco

San Francisco Chronicle,  
October 6, 2012

**"When Muni melts down and people can't get where they're going in a timely manner, our entire city suffers."**

Sup. Scott Wiener  
San Francisco Chronicle,  
January 14, 2013



# Public perception of transportation system needs

- ▶ Support for projects to improve transit efficiency
- ▶ Demand for improvements to pedestrian safety, traffic calming
- ▶ Get back to the basics: O&M, Muni reliability
- ▶ Strong desire to improve cycling and walking conditions, traffic calming
- ▶ Desire for cost savings, faster project delivery

