

Presentation on Mobility Issues and Efforts

Topic	Presenter
Introduction, Resource Library, Questions	David Fields
Traffic Congestion Perspectives	Magnus Barber
Local Congestion Management	Hans Larsen
Highway Capacity Projects	Hans Larsen
Transportation Alternatives	Hans Larsen
Traffic Safety	Sheila Marquises
Emerging Technology	Sheila Marquises
Transportation Plans and Funding	Hans Larsen
Concluding Remarks	David Fields

Mobility Task Force
December 7, 2017



Questions to Think About

1. What do I want more information on?
2. What are the priority issues and projects?
3. How can we best communicate existing issues and efforts with the Fremont community?

Traffic Congestion Perspectives

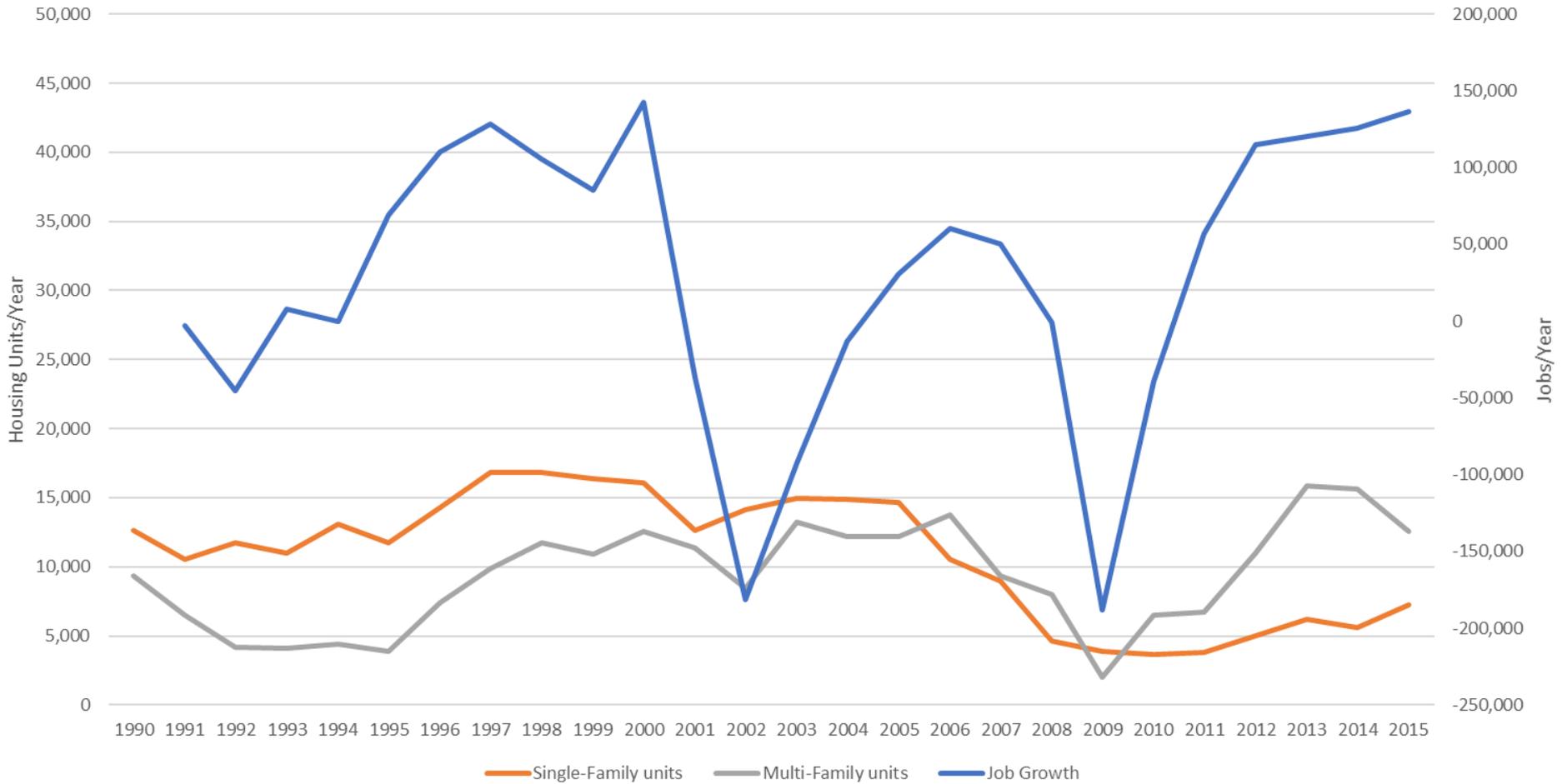


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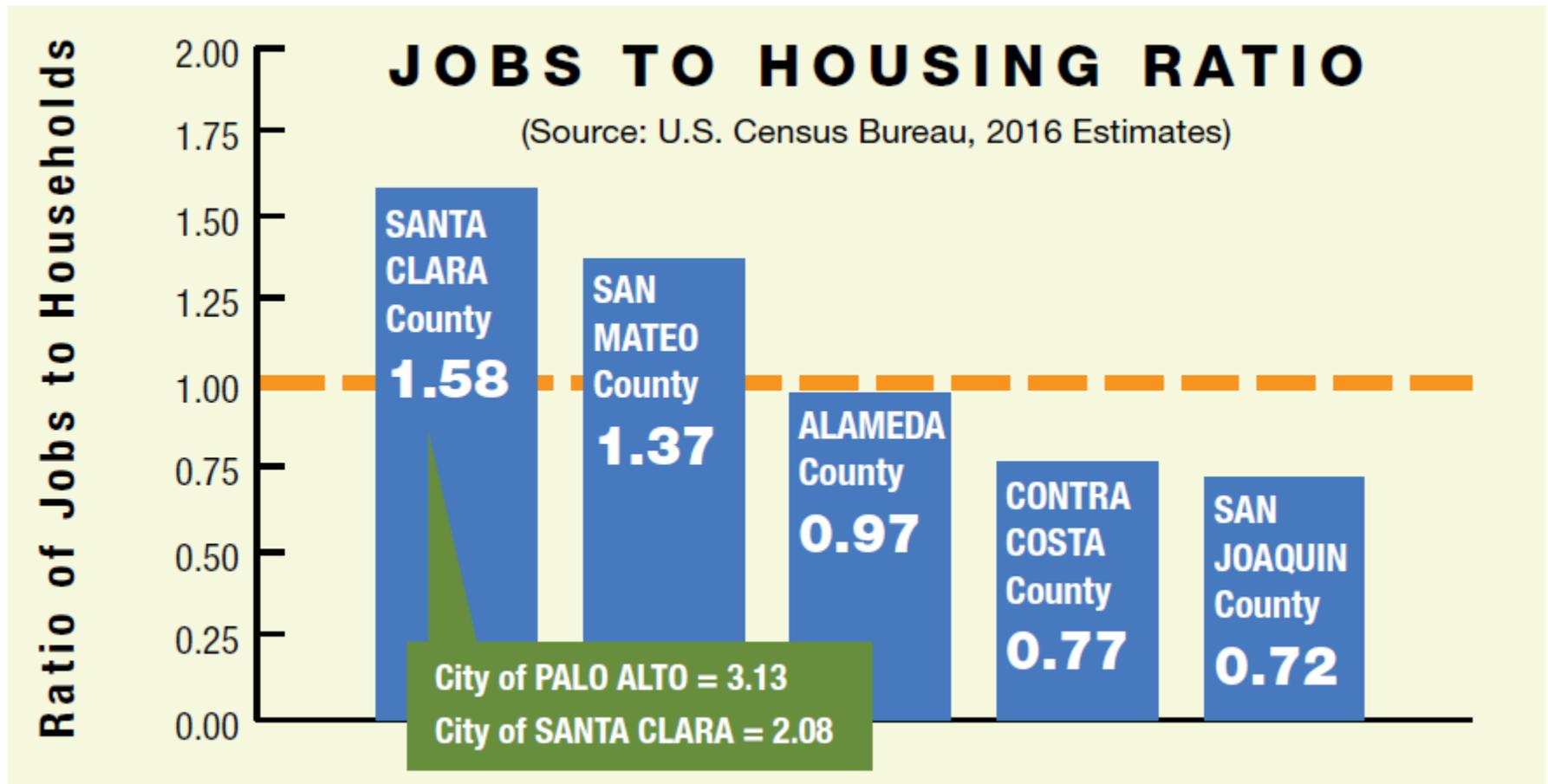
Fremont avg. <400 units/year, 2010-2015

Land Use – Housing vs. Jobs

Bay Area Housing Units Added vs. Job Growth



Jobs/Housing Location Imbalance



Commuting from Beyond Bay Area

DAILY REGIONAL COMMUTERS

With skyrocketing housing prices pushing people farther from the Bay Area, more people than ever are commuting over longer distances to get to job centers in Silicon Valley and San Francisco. The chart shows the flow of commuters coming to the Bay Area from surrounding counties, and vice versa.

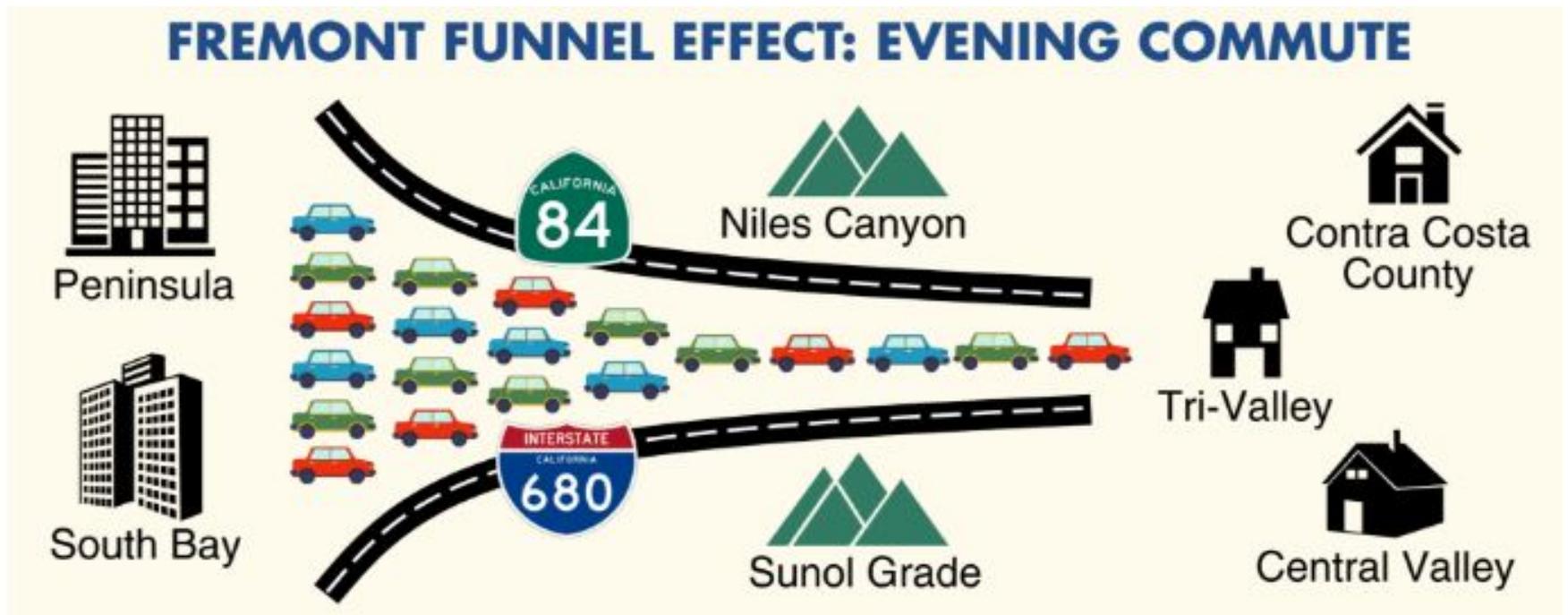


Source: Bay Area Council

BAY AREA NEWS GROUP

Fremont's Geography

Fremont is at the crossroads between jobs and housing



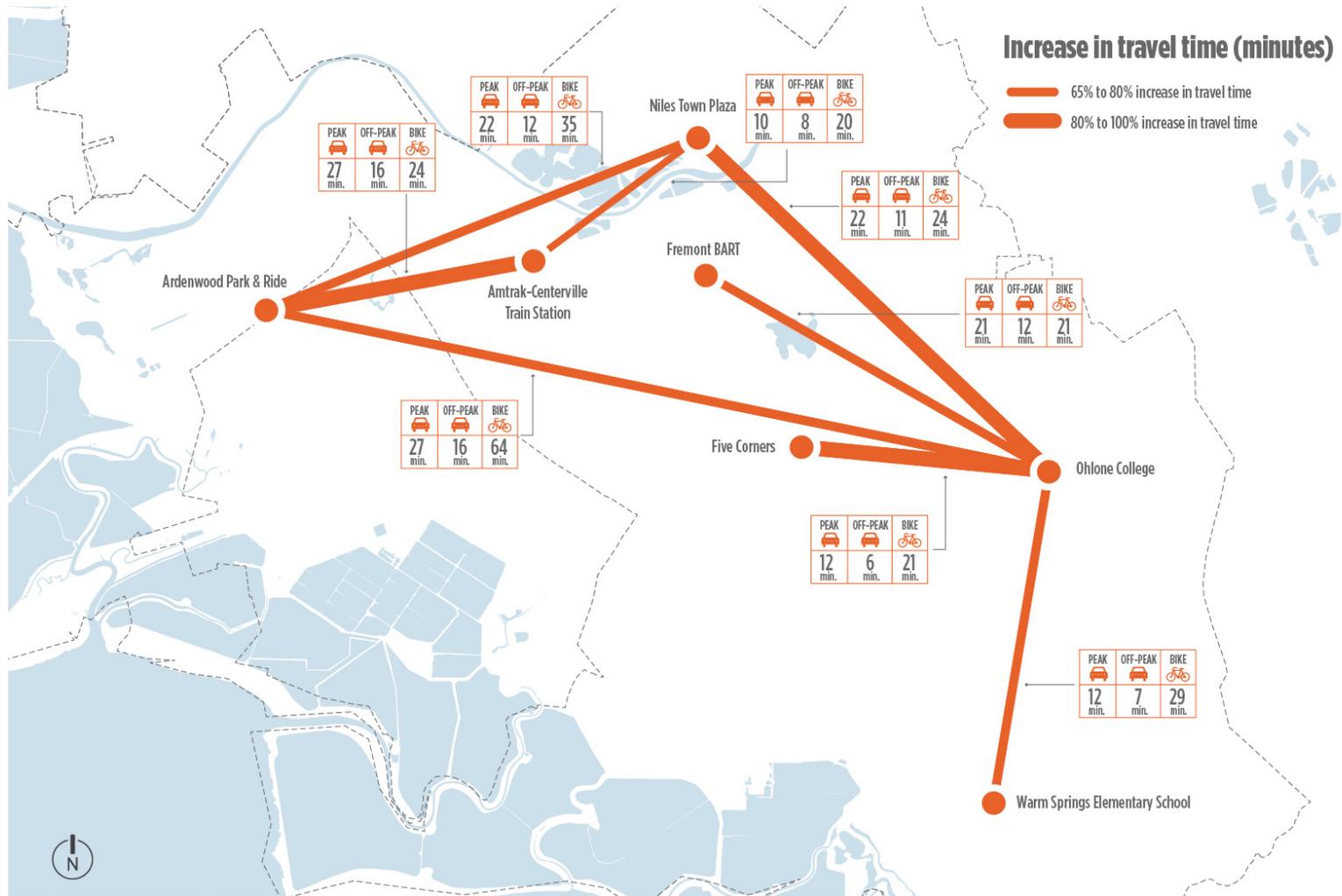
Traffic Congestion Hot Spots



Fremont Travel Times

5PM Travel Time Matrix (min)			Destination									
			Ardenwood Park & Ride	Northgate Park	Centerville Train Station	Fremont BART	Kennedy High School	Five Corners	The Block	Ohlone College	Warm Springs Elementary	Niles Plaza
			A	B	C	D	E	F	G	H	I	J
Origin	Ardenwood Park & Ride	A		9	14	21	14	25	16	27	25	21
	Northgate Park	B	6		7	12	15	18	24	27	29	13
	Centerville Train Station	C	9	8		6	7	11	16	21	22	12
	Fremont BART	D	17	12	7		7	8	14	14	19	8
	Kennedy High School	E	15	17	8	7		5	8	18	14	14
	Five Corners	F	21	20	11	9	7		9	11	12	14
	The Block	G	18	27	19	15	10	8		16	12	23
	Ohlone College	H	26	23	19	21	20	10	13		9	22
	Warm Springs Elementary	I	31	34	27	23	18	15	14	11		27
	Niles Plaza	J	14	10	10	7	14	12	21	16	24	

Fremont Travel Times



Local Congestion Management



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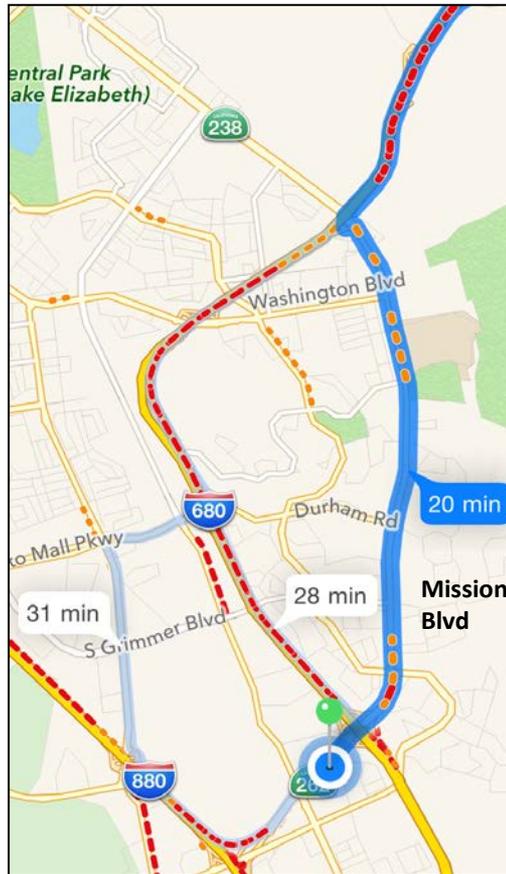


Navigation App Issues

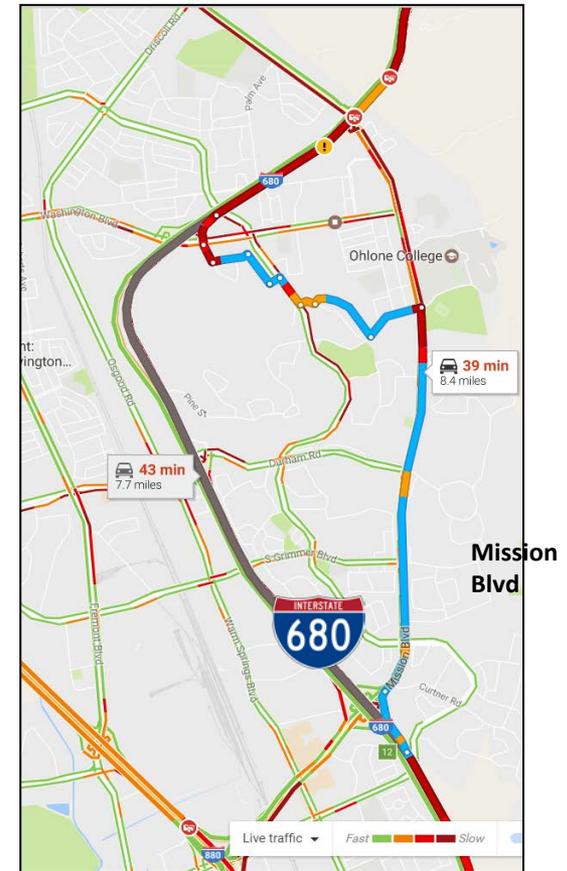
Using Fremont Neighborhoods as a “Short Cut” for Regional Commuters



Waze



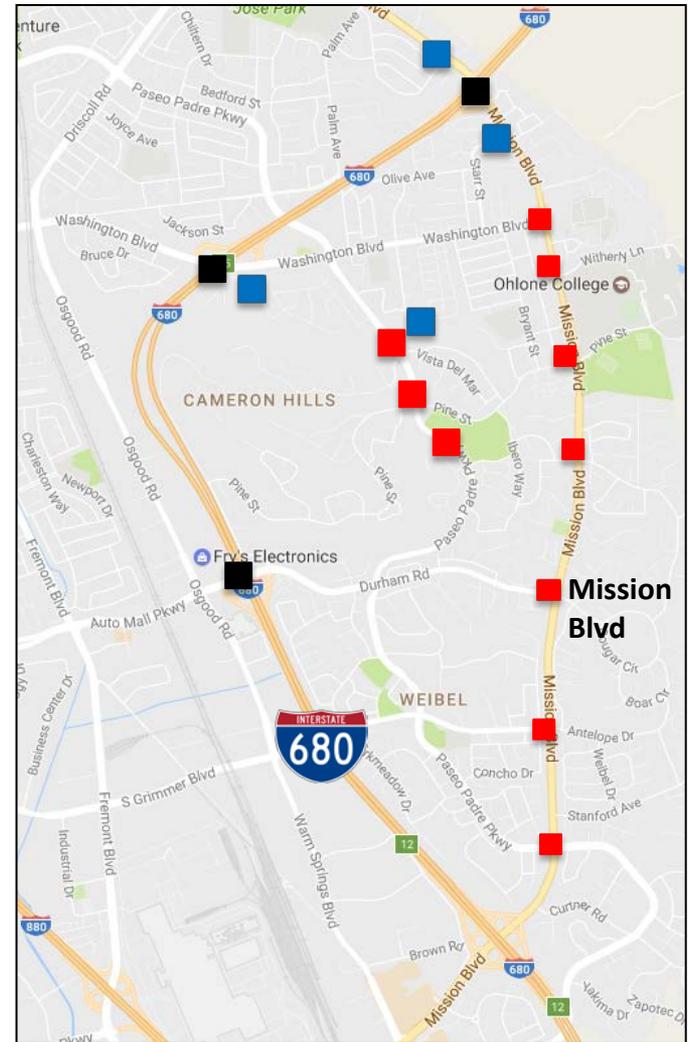
Apple Maps



Google Maps

“Cut-Through” Countermeasures

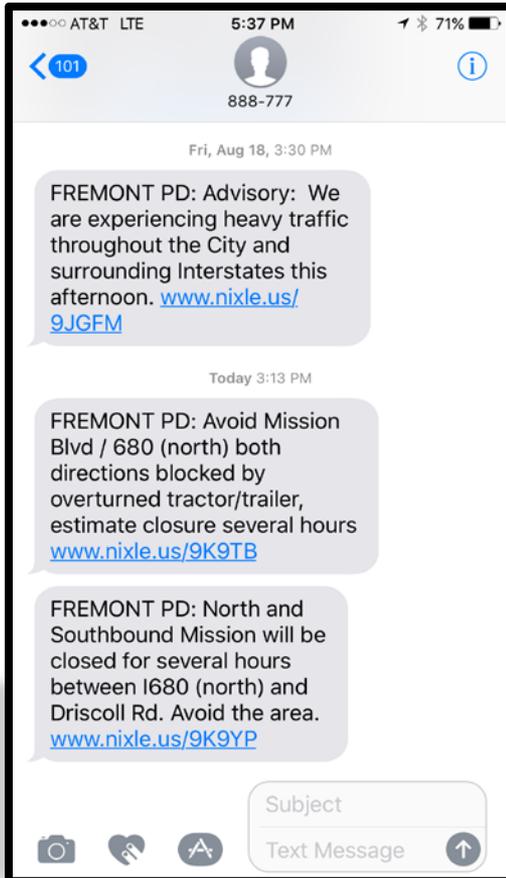
- Signal Timing, Stop Signs
- Ramp Metering
- Turn Restrictions
- Waze Partnership



Turn Restriction Messages



Real-Time Traffic Text Alerts



Subscribers to Nixle in Fremont area can get text alerts about major traffic incidents

Traffic Newsletter

TAMING **TRAFFIC** IN FREMONT

Addressing the Traffic Congestion Dilemma



Photograph of a congested Fremont neighborhood near I-680 taken from a drone camera

Fremont is facing a significant challenge that is impacting the quality of life for our residents and businesses. Regional cut-through traffic is clogging our local roadways with motorists that do not live or work in Fremont. For example, approximately 40% of the cars on Mission San Jose area are just passing through. These drivers use our streets as a freeway bypass to get to a final destination over

the Sunol Grade. There are several factors that have created this rise in traffic congestion: a severe jobs and housing imbalance in Silicon Valley and the Peninsula, Fremont's location at the crossroads between the jobs and the affordable housing over the Sunol Grade, the rise of navigation apps that direct regional commuters to our residential streets to save a few minutes during peak traffic times, not to mention an extreme 2017

winter season that closed or constrained commuter routes like Niles Canyon Road and Interstate 680. Fortunately, there is hope on the horizon: the BART extension to San Jose will start service in 2018, a new northbound express lane on Interstate 680 will open in early 2020, and Fremont is modernizing its traffic signal system to enhance efficiency. Additionally, Fremont has created a Mobility Task Force that plans to further address citywide traffic congestion issues.

It's **Working!**

The map below shows the reduction in traffic congestion as a result of the City's local efforts. Congestion in the area highlighted in orange is down 33%.



Causes of Congestion
Pages 2-3



Regional Projects
Page 4



Subscribe to Alerts
Page 6



Mission Blvd/SR 262
Page 7

Highway Capacity Projects



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Planned Highway Projects

Project	Planned Completion
I-880 Express Lanes (Dixon Landing to Hegenberger)	2019
I-680 NB Express Lane (Milpitas to Sunol)	2020
East-West Connector in North Fremont and Union City (I-880 to Mission)	2021
SR262/Mission Blvd Cross-Connector (I-880 to I-680)	2028
Fremont Traffic Signal Modernization	Ongoing through 2025

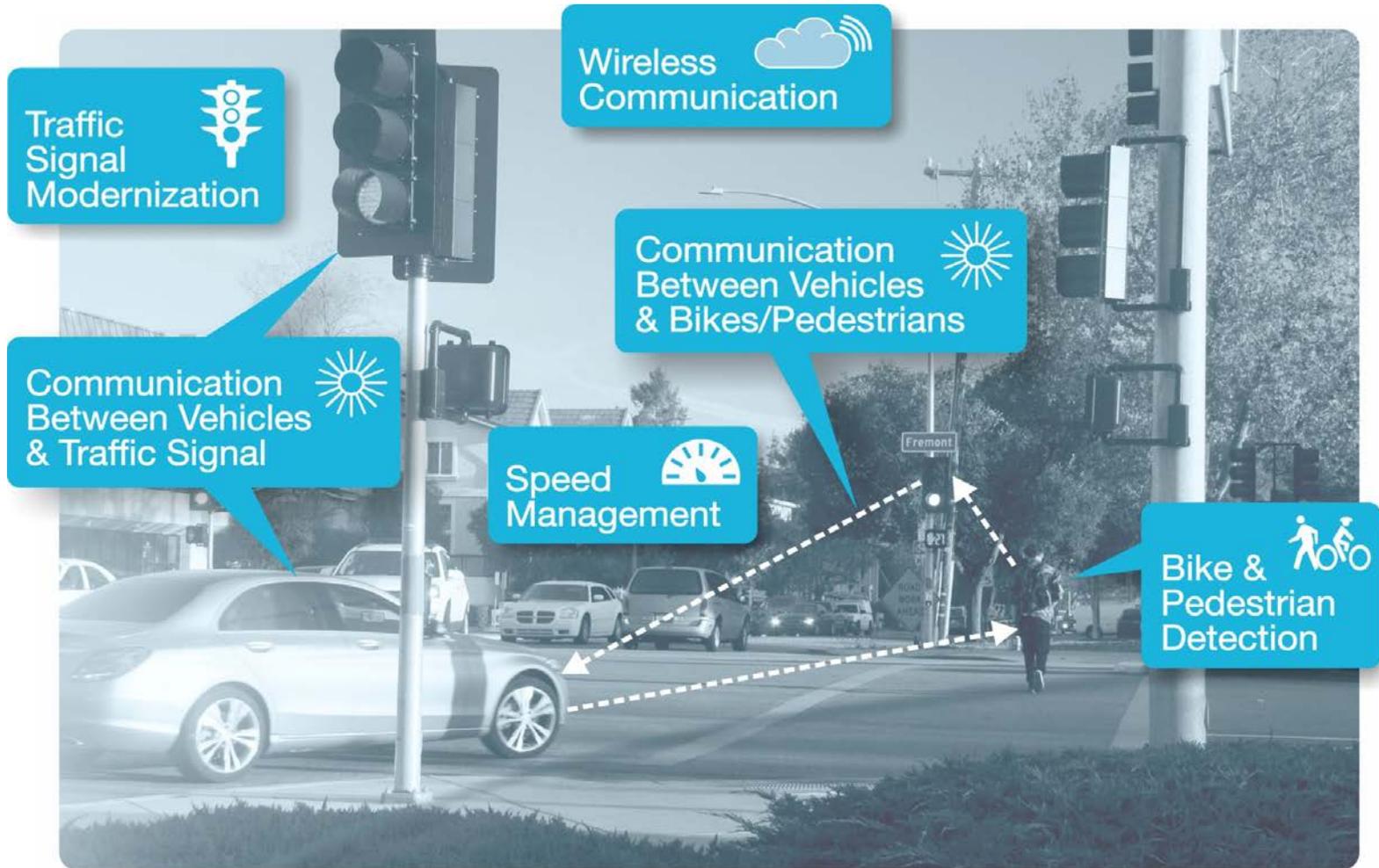
East-West Connector Project



Mission Boulevard/SR262 Upgrade



Traffic Signal Modernization



Transportation Alternatives

Transit, Walking, and Biking

Mode	2010	2015
Drive Alone	86.1%	83.7%
Carpool	10.7%	10.3%
Public Transit	7.3%	9.0%
Walking	1.1%	1.3%
Biking	0.4%	0.6%

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December 7, 2017



Regional Transit Projects



Mobility Task Force
November 16, 2017

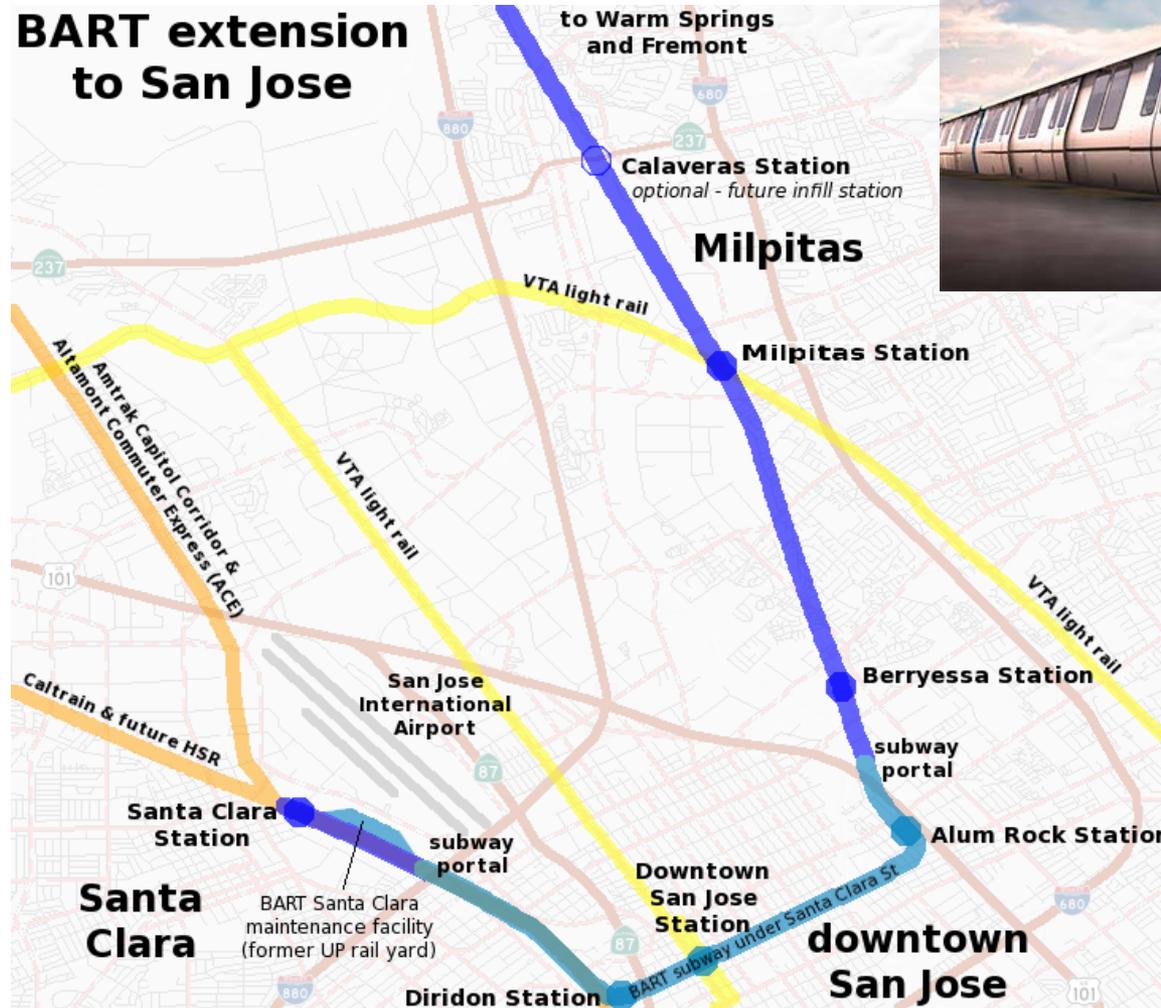


Planned Transit Projects

Project	Proposed Schedule
BART Extensions to Berryessa and Santa Clara	2018, 2025
Irvington BART Station	2024
ACE Service Expansion from 4 to 6 to 10 daily trains	2020, 2025
Amtrak Capitols Enhancements	TBD
AC Transit Rapid Bus on Fremont Blvd	TBD
AC Transit FLEX Service in Fremont	TBD
Dumbarton Corridor Transit Enhancements (Bus, Rail)	TBD

BART to San Jose

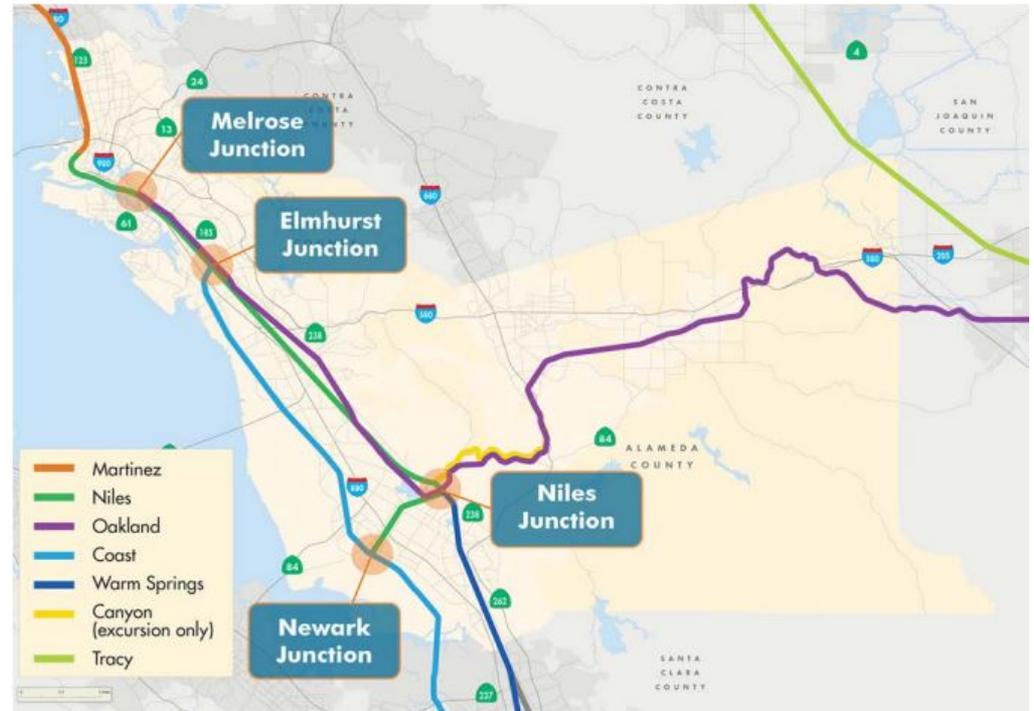
BART extension to San Jose



Alameda CTC Regional Rail Study

Addressing:

- Capacity
- Efficiency
- Safety
- Noise

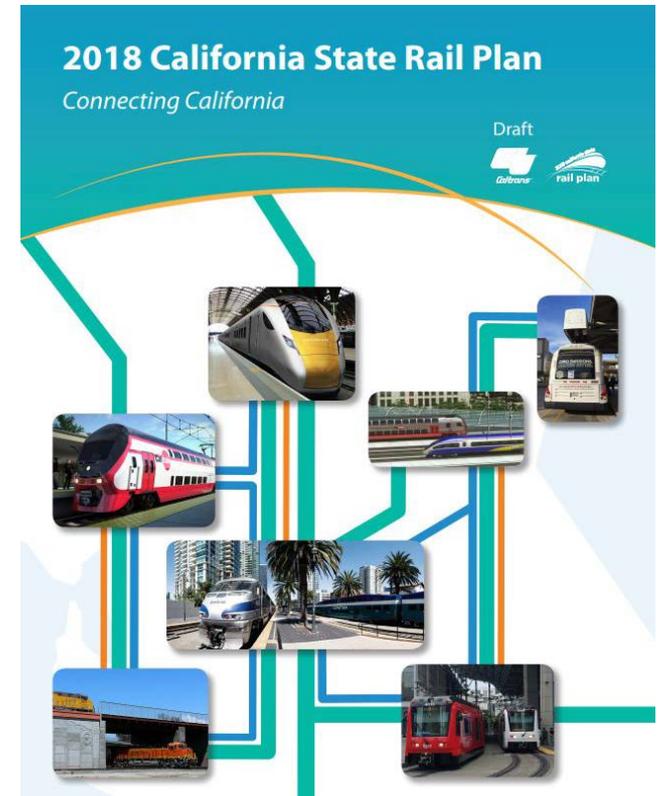
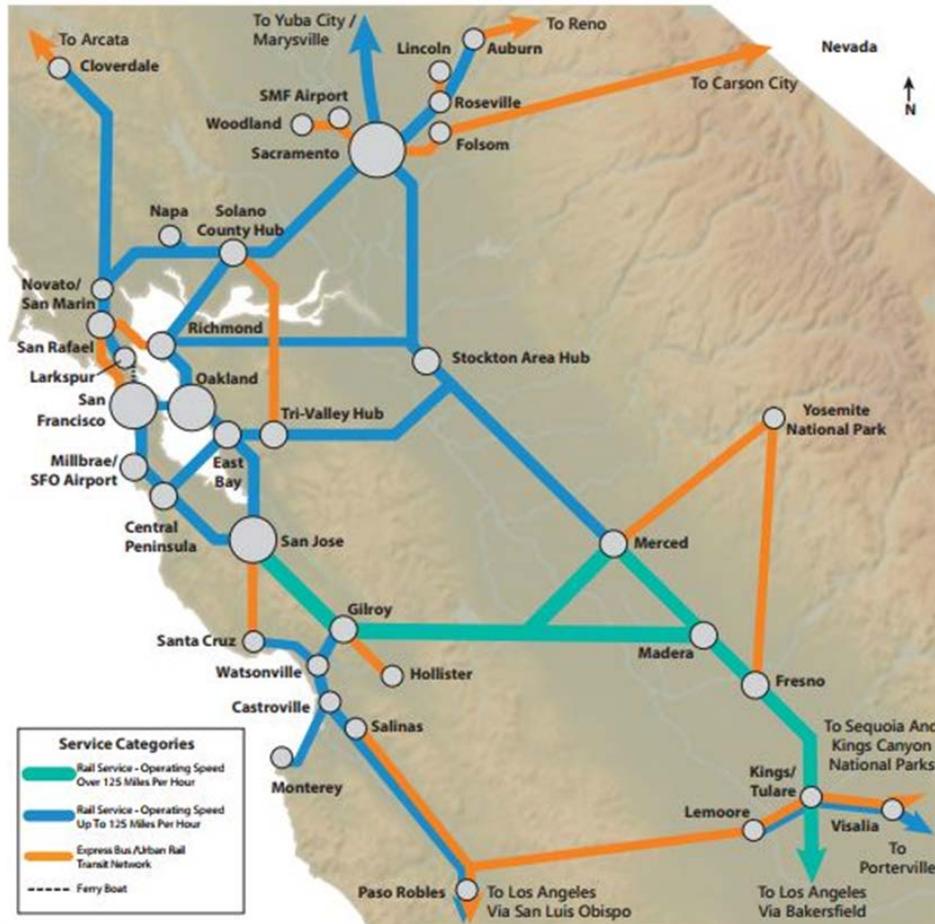


Supports direction to relocate Amtrak Capitols to Coast line and UP Freight to Niles/Oakland line

- Significantly reduces rail traffic, vehicle delay, and noise through Centerville
- Consistent with Fremont position regarding ACEforward project
- Capitol station in Fremont planned for relocation from Centerville to Ardenwood

Draft State Rail Plan

Northern California Service Vision (2040)



Dumbarton Corridor Study

Recommends

- \$ 931M for enhanced busway
- \$1,270M for new rail line



Pedestrian and Bicycle Master Plans

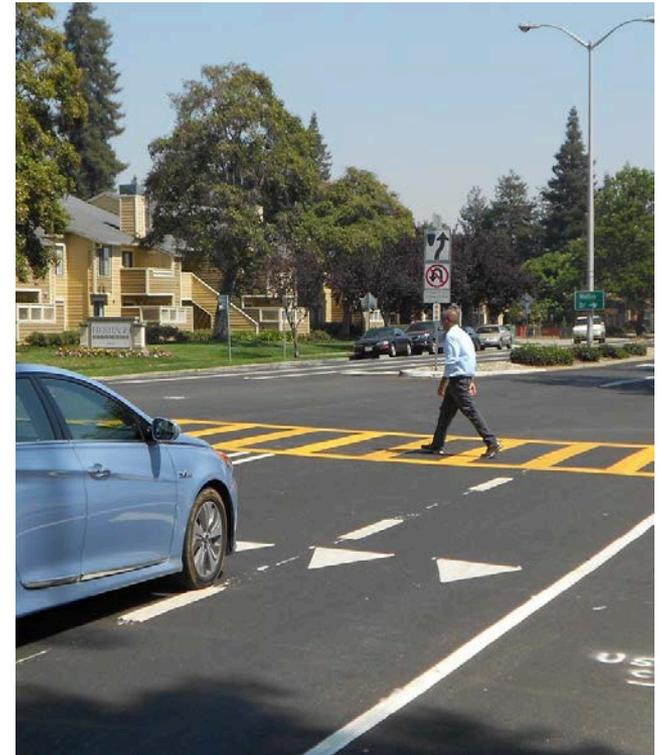


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December 7, 2017

Highlights of Pedestrian Master Plan

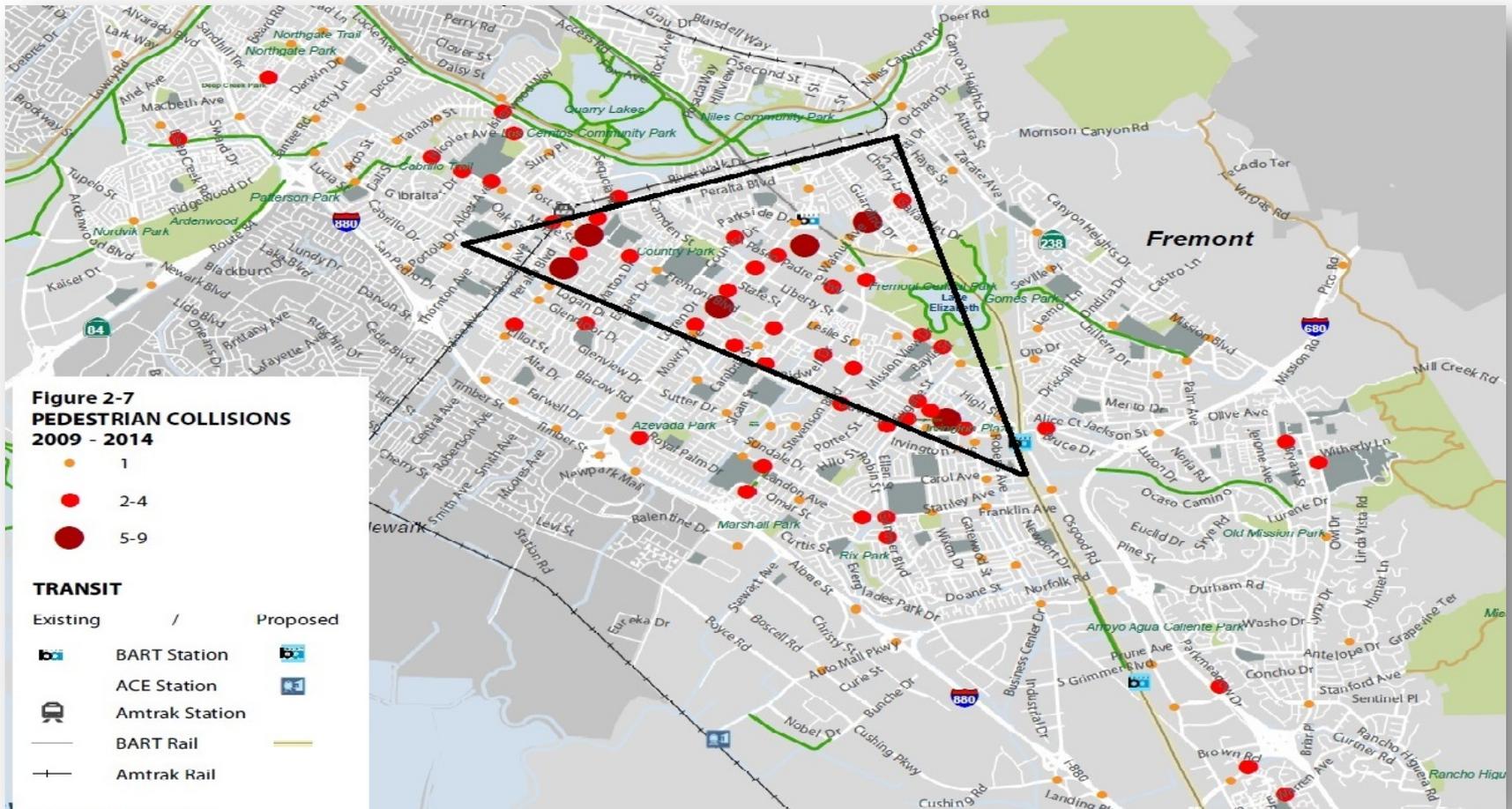
Approved in December 2016

- Public Input & Crash Analysis
- Project Identification & Prioritization
 - Street Crossings and Design Guidelines
 - Street Corridors
 - Sidewalk Gaps
 - Trails
 - Programs



Pedestrian Safety Analysis

“Fremont’s Urban Triangle”



Street Corridor Projects/Priorities

ID	Location	Score	Rank
8	Country Drive Complete Street	230	1
7	Dusterberry Way Complete Street	199	2
9	Civic Center Drive Streetscape	199	3
18	Citywide: Uncontrolled Crosswalks on 4+ Lane Roadways	198	4
4	Niles Neighborhood Sidewalks, Mission Boulevard Path	146	5
6	Fremont Boulevard and Decoto Road Sidewalks	139	6
17	Citywide Freeway Interchanges	137	7
11	Stevenson Boulevard Shared Use Path	130	8
16	Citywide Major Arterial Frontage Road Pathways	103	9
1	I-880 Bike/Ped Overcrossing N of Warren	88	10
3	Ellsworth Street Sidewalks	88	11
5	Mission Boulevard Sidewalks (Walnut to Stevenson)	79	12
10	Palm Avenue Sidewalks	53	13
12	Mission Boulevard Tunnel Under Trestle	28	14
19	Citywide: Bus Stop Sidewalk Landing Pads	26	15
15	Citywide At-Grade Railway Crossing Projects	22	16

Highlights of Bicycle Master Plan

Draft Plan Completed in Spring 2017

- Recent Accomplishments
- Public Outreach
- Goals and Vision
 - All Ages and Abilities Network
- Bike Facility Types
- Implementation Plan



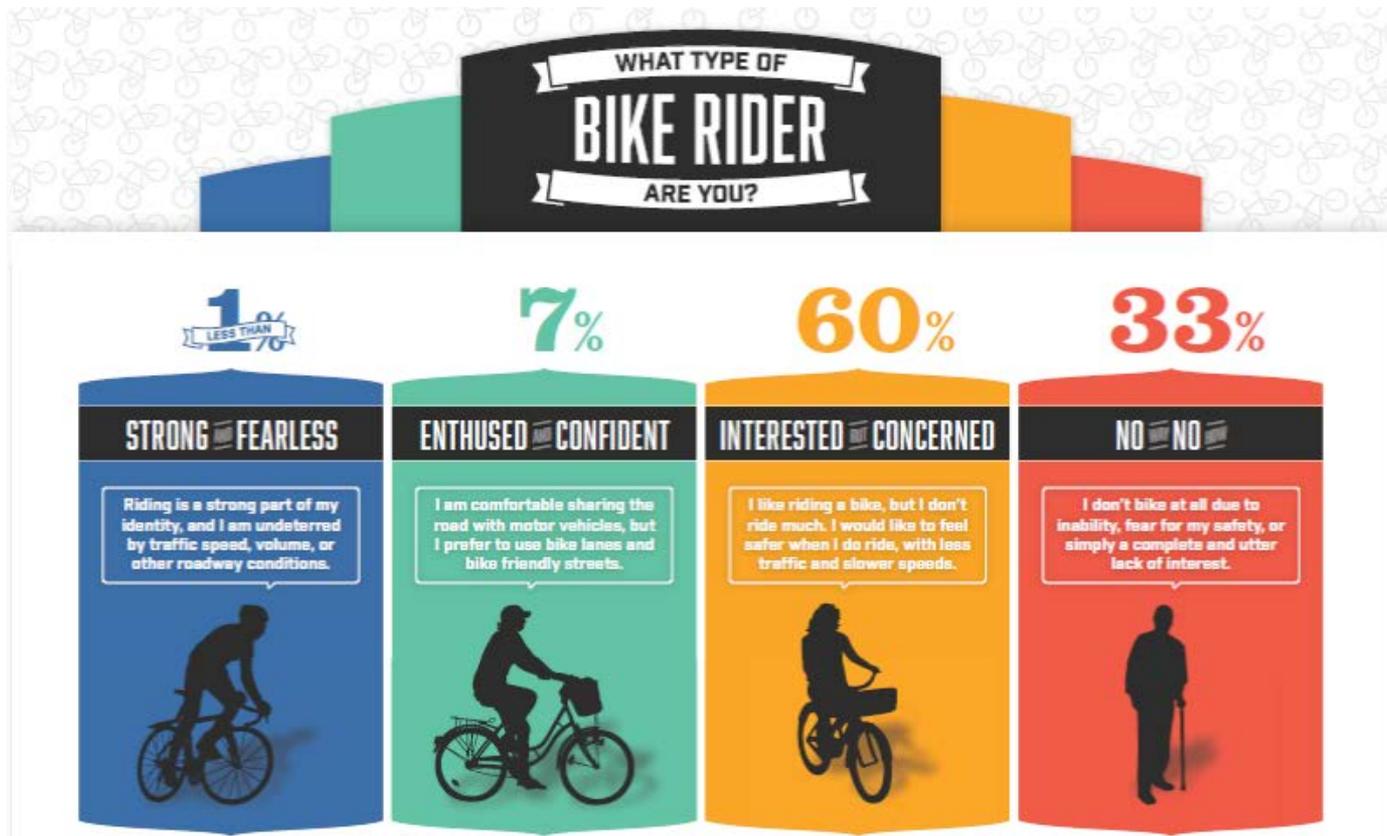
Recent Accomplishments

- Buffered Bike Lanes
- Bike Detection @ Signals
- Green Lanes
- Physical Separation
- Educational Videos



Vision

Implement a *safe, convenient, connected, and comfortable citywide bicycling network* for people of all ages and abilities who live, work, and visit Fremont.



Buffered Bike Lanes



Separated Bikeways



Protected Intersections



Trails



School Area Traffic Safety Plans



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December 7, 2017



Collaboration

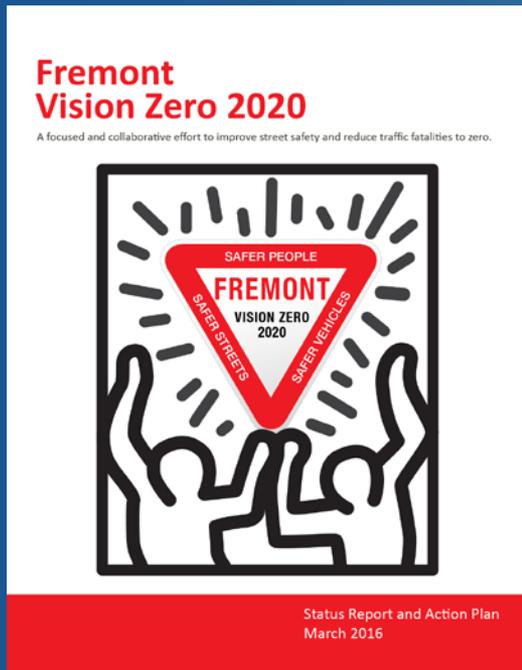
	FUSD	Public Works	Police	Alameda CTC
Operations/Enforcement <ul style="list-style-type: none"> - Teacher/Parent Volunteers - Student Safety Patrol, Valet - Crossing Guards - Saturation Patrols 	X		X	
Education/Encouragement <ul style="list-style-type: none"> - Safety Training - Walking/Biking/Carpool 	X	X	X	X
Engineering <ul style="list-style-type: none"> - Traffic Calming - Signs, Markings, Signals 		X		
Evaluation/Planning <ul style="list-style-type: none"> - Safety Audits 	X	X	X	

Fremont School Traffic Safety Assessments

All 40 schools in 5 seasons; Jointly funded by City and FUSD

Schools			Season
<ul style="list-style-type: none"> Chadbourne Elementary American High Cabrillo Elementary 	<ul style="list-style-type: none"> Oliveira Elementary Thornton Jr. High 		Spring 2016
<ul style="list-style-type: none"> Warwick Elementary Patterson Elementary Warm Springs Elementary 	<ul style="list-style-type: none"> Ardenwood Elementary Mission San Jose High Mission San Jose Elementary 	<ul style="list-style-type: none"> Brier Elementary 	Fall 2016
<ul style="list-style-type: none"> Hopkins Junior High Weibel Elementary Glenmoor Elementary 	<ul style="list-style-type: none"> Azevada Elementary Mattos Elementary Vallejo Mill Elementary 	<ul style="list-style-type: none"> Hirsch Elementary Gomes Elementary 	Spring 2017
<ul style="list-style-type: none"> Blacow Elementary Brookvale Elementary Centerville Junior High 	<ul style="list-style-type: none"> Green Elementary Grimmer Elementary Forest Park Elementary 	<ul style="list-style-type: none"> Horner Junior High Irvington High Kennedy High Durham Elementary 	Fall 2017
<ul style="list-style-type: none"> Leitch Elementary Maloney Elementary Mission Valley Elementary 	<ul style="list-style-type: none"> Niles Elementary Parkmont Elementary Mattos Elementary 	<ul style="list-style-type: none"> Robertson High Walters Junior High Washington High Millard Elementary 	Spring 2018

Traffic Safety

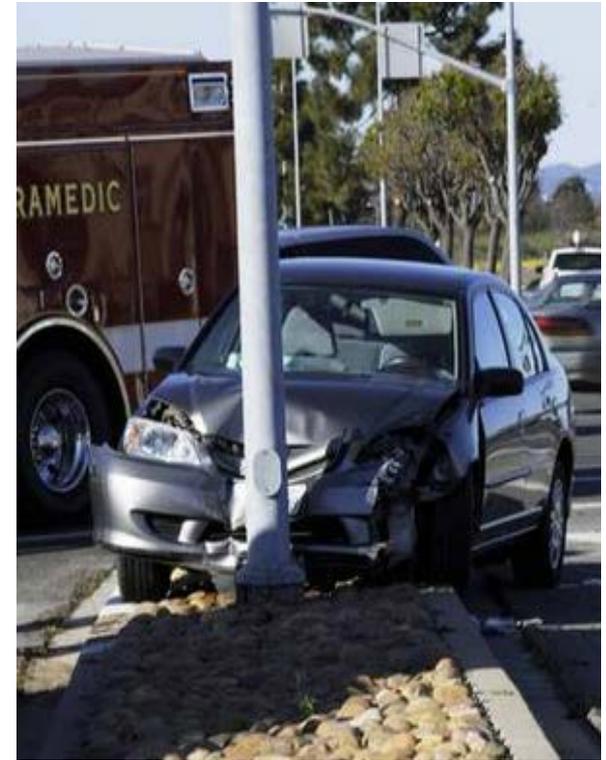


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Introduction to Vision Zero

- **Traffic Safety Context**
 - Over 40,000 annual U.S. traffic deaths
 - Up from 35,000 in 2014
 - Increasing pedestrian/bike fatalities
- **“Vision Zero” Description**
 - Comprehensive “safety first” transportation policy initiated by Sweden (1997)
- **Growing US Movement**
 - Over 40 cities participating



Vision Zero in Fremont

Initiated by Fremont City Council in September 2015

■ Vision Zero Action Plan

(Adopted March 2016)

- **Safer People** — “Enforcement, Education”
- **Safer Streets** — “Engineering”
- **Safer Vehicles**

■ 7th U.S. City to Adopt Vision Zero Plan

1. New York City (2014), 2. San Francisco, 3. Seattle,
4. San Jose, 5. Boston, 6. Washington DC, 7. Fremont



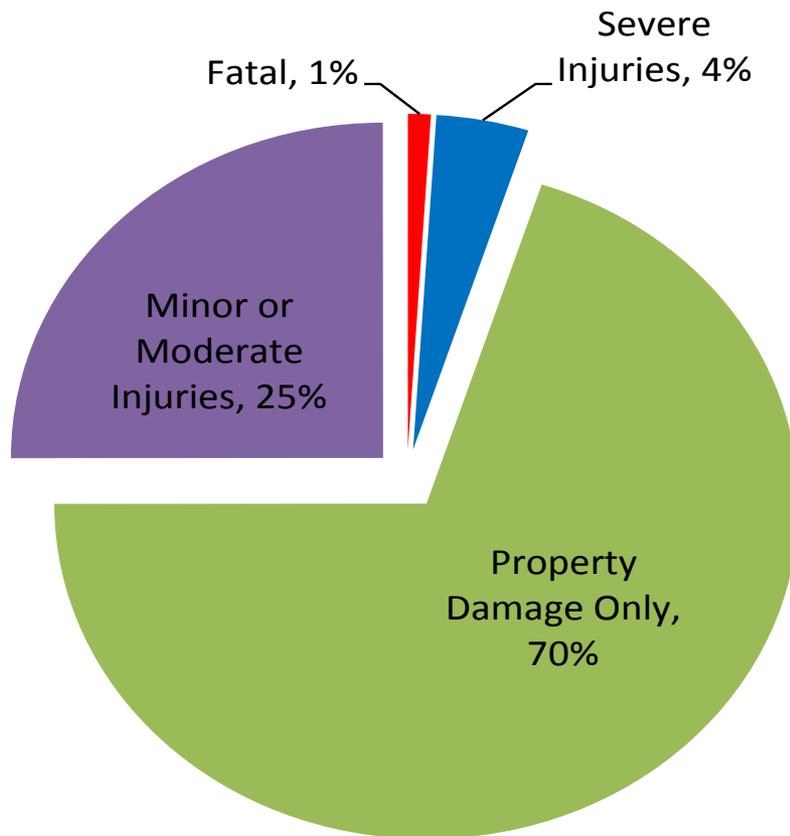
US/Sweden Safety Comparison

Fatality Crash Rates - Annual fatalities per 100,000 population

	United States	Sweden
National Average	10.3 4.9 Massachusetts 7.8 California 22.6 Montana	2.7
Large Cities	3.1 New York City 4.9 Los Angeles 11.5 Phoenix	0.65 Stockholm
Fremont, CA	3.5 in 2015	

Evaluation: Crash Type/Frequency

Focus on Major Crashes (Fatal and Severe Injury)



Evaluation: Safety Priority Streets

10% of Streets Have 90% of Fatalities

- 2013 to 2015
Major Crash Locations
- Fatalities (Red)
 - Severe Injury (Blue)



Major Crash Summary (2015)

- 37 major traffic crashes;
8 fatalities, 31 severe injuries
- 62% of fatalities involved persons walking or bicycling
- Ages of persons killed
19, 35, 46, 57, 57, 61, 69, 78
- All fatalities occurred on high speed streets (40 mph+)
- Major crashes occurred most frequently between 6 p.m. and 10 p.m.
- 5 major crashes involved DUI



Enhanced Crosswalks



Increased pedestrian countdown signals from 50 locations to all 220 traffic signal locations Citywide

Safer Street Design

Road Diets, 10-Foot Vehicle Travel Lanes, Buffered Bike Lanes



Fremont now has over 25 miles of streets with buffered bike lanes

Brighter Street Lighting



Fully converted all Fremont streetlights to brighter LED lights (16,000 lights)

Enforcement

- Focused on High Risk Locations/Behaviors
 - Safety Priority Streets
 - Speeding and DUI
- Expanded Resources by Crossing-Training
 - 11 traffic officers; 93 patrol officers
 - Purchased more speed detection equipment
- Tripled Number of Speeding Citations
 - From 1,231 (2015) to 4,258 (2016)
- Saturation Patrols for DUI
 - 2 officers dedicated to DUI patrol 20 days a year



Education and Engagement

Stickers, Newsletters, Events, Social Media



Three, Two, One ... Fremont is Set to Launch 'Vision Zero'

A Plan to Improve Traffic Safety and Reduce Traffic Fatalities to Zero

In September 2015, the City Council approved "Vision Zero" as the City's traffic safety policy with the bold direction to eliminate traffic fatalities, reduce injury crashes, and improve safety for all modes of travel. The Vision Zero concept, started by Sweden in 1997, was subsequently adopted by many European countries and is credited with reducing traffic fatalities by over 50 percent in the past decade. The core principle of Vision Zero is making traffic safety the highest priority for the design and operations of the transportation

[Continued on Page 3](#)



Upcoming Traffic Safety Campaigns

- April:** National Distracted Driving Month
- May:** National Bicycle Safety Month
- May:** Click It or Ticket Mobilization Period



Youth Engagement

Safety Education Projects with Fremont Youth Service Corps and Girl Scouts



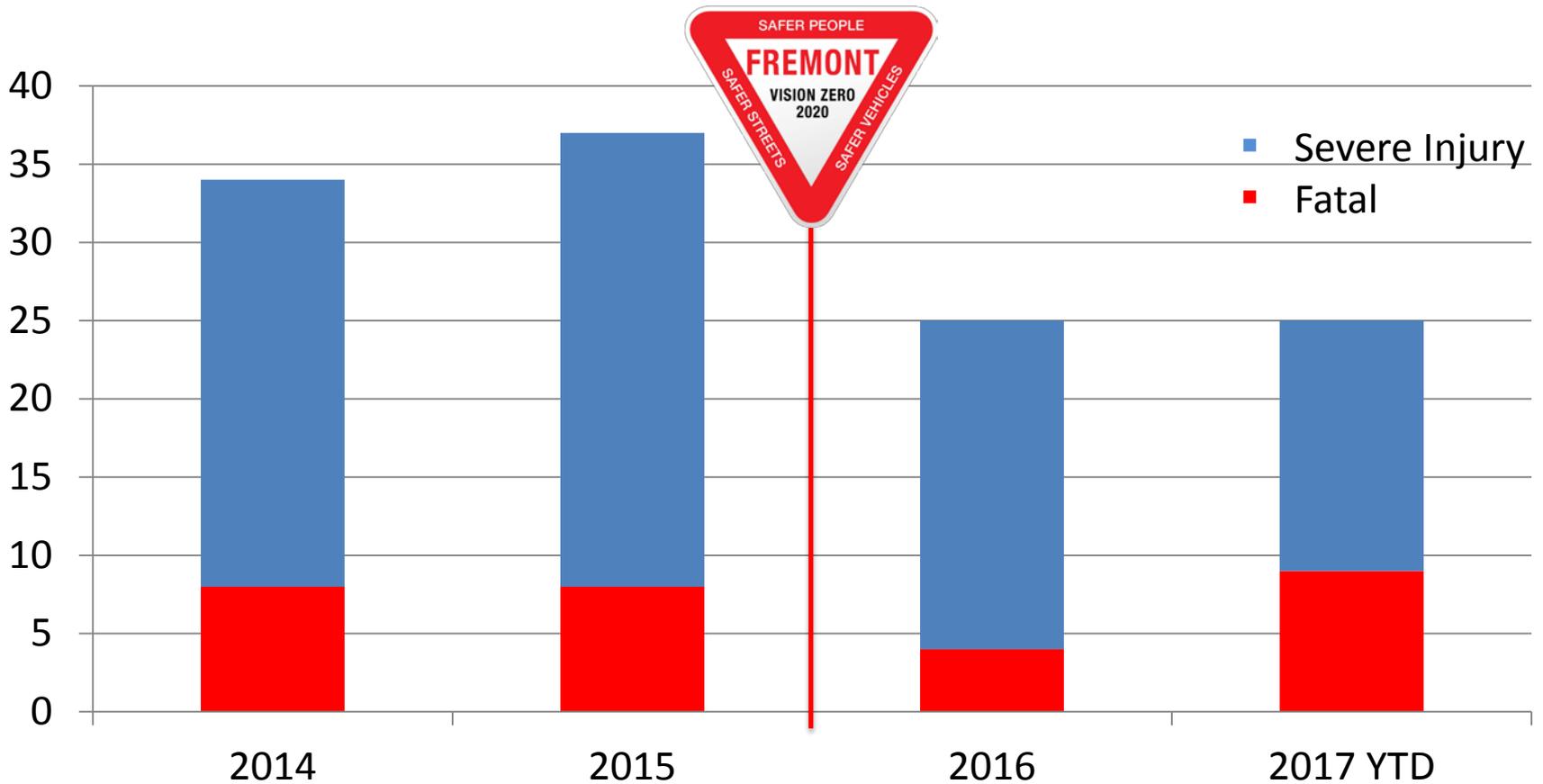
Safer Vehicles

New Crash Avoidance Technology Can Offset Human Errors/Limitations



Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down 25%



Emerging Technology

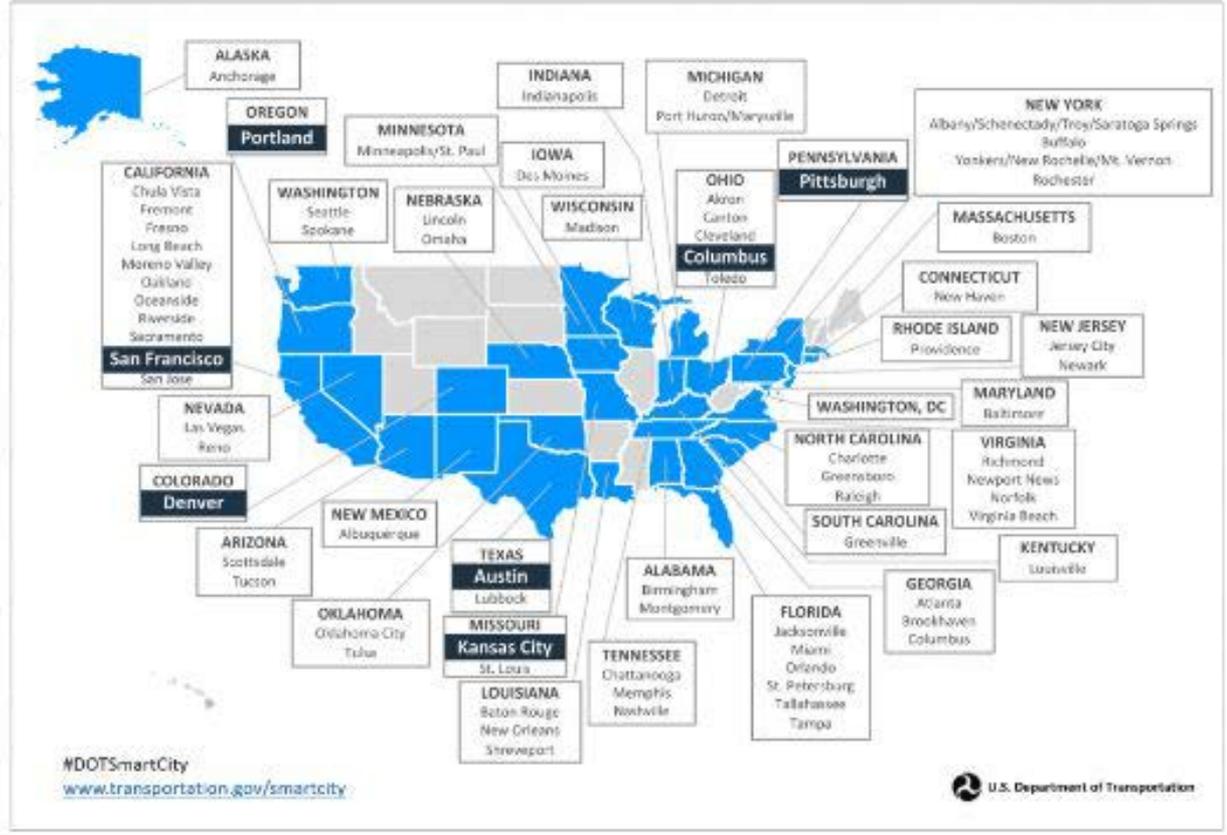


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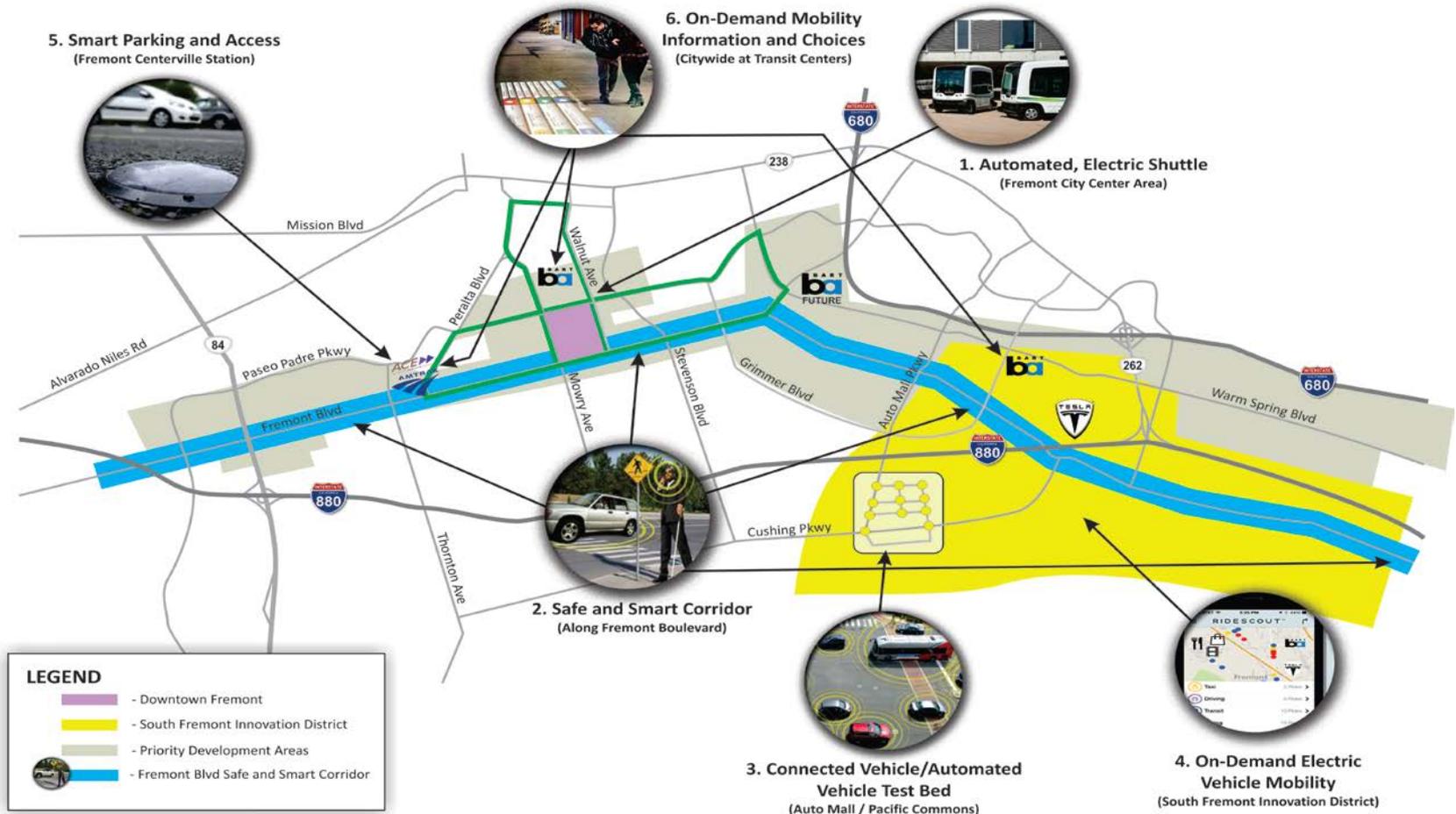
US DOT Smart City Challenge

- 1,400** local officials, companies, academics and non-profits joined our webinars
- 800** people participated in our Smart City Forum
- 300** companies have expressed interest in partnering
- 78** applications received for the Smart City Challenge
- 7** Smart City Challenge Finalists announced in March at SXSW
- 1** Smart City Challenge Winner announced in June



Fremont Boulevard

Safe and Smart Innovation Corridor



Advanced Traffic Signals

Fremont Boulevard Corridor

- Adaptive and interconnected
- Central management center
- Emergency vehicle pre-emption
- Transit priority
- Pedestrian and bike detection
- Multimodal counting



Smart Parking and Choices

Fremont Centerville Train Station

- Real-time parking availability info
- Demand pricing
- Electric vehicle charging
- Car share
- Bike share
- Transit, shuttle and TNC info



Safety Management

Fremont Boulevard Corridor

- Automated speed enforcement
 - provides data for targeted enforcement
 - issues warning letters
 - issues tickets (when authorized in CA)
- Automated red light running enforcement
- Smart lighting



Signal to Vehicle Communications

Fremont Partnership with TTS and Audi



Provides traffic signal information on vehicle dashboard

On-Demand Shuttles

Autonomous, Connected, Electric, and Shared (ACES)

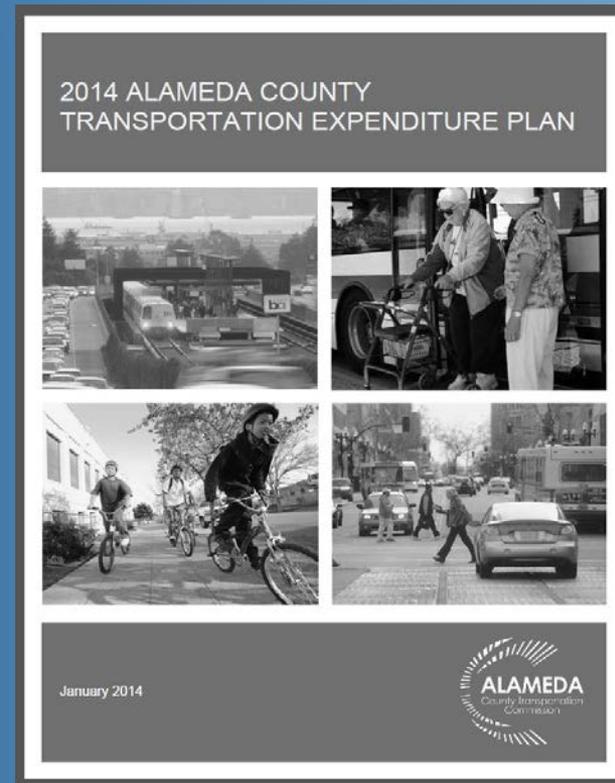
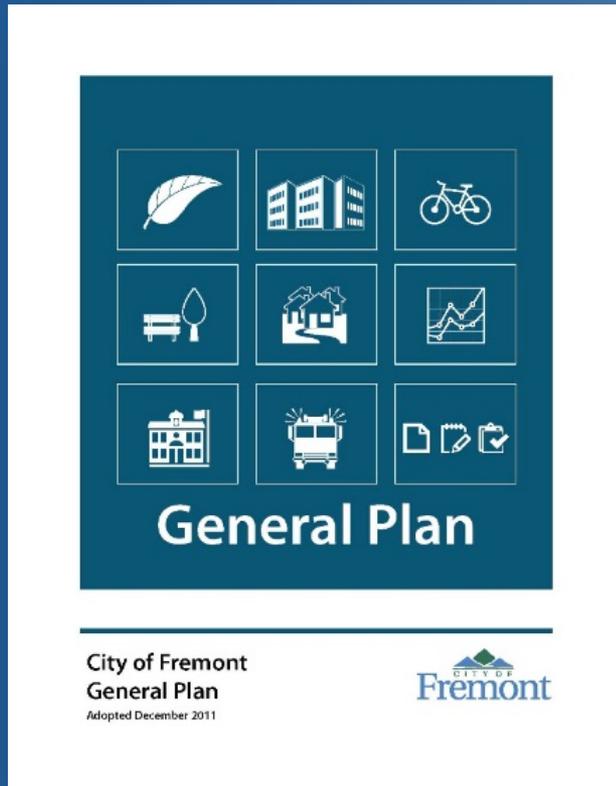


Local Motors, USA



Easy Mile, France

Transportation Plans and Funding



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December 7, 2017



Fremont General Plan Vision

“Fremont will serve as a national model of how an auto-oriented suburb can evolve into a sustainable, strategically urban, modern city”



Fremont General Plan Policies

Mobility – It's Not Just About Cars

Fremont will offer a high quality and efficient circulation system that balances the needs of automobile drivers with those of public transit, bicyclists, and pedestrians. The City's circulation system will encompass attractively-designed complete streets, transit, trails, paths and sidewalks that link multiple destinations.

Goal 3-1: Complete Streets

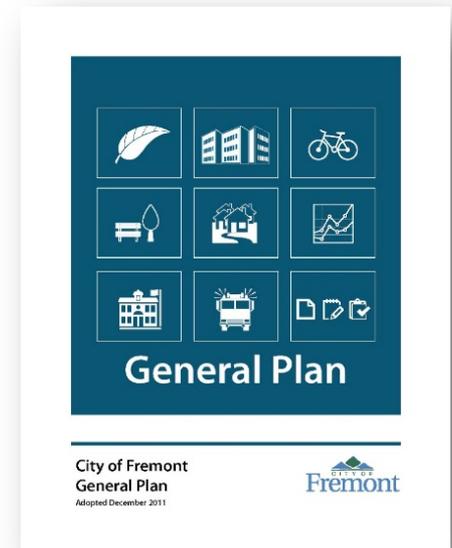
City streets that serve multiple modes of transportation while enhancing Fremont's appearance and character.

Goal 3-2: Reducing Vehicle Miles Traveled

Improve mobility in Fremont while reducing the growth of vehicle miles traveled.

Goal 3-3: Accessibility, Efficiency and Connectivity

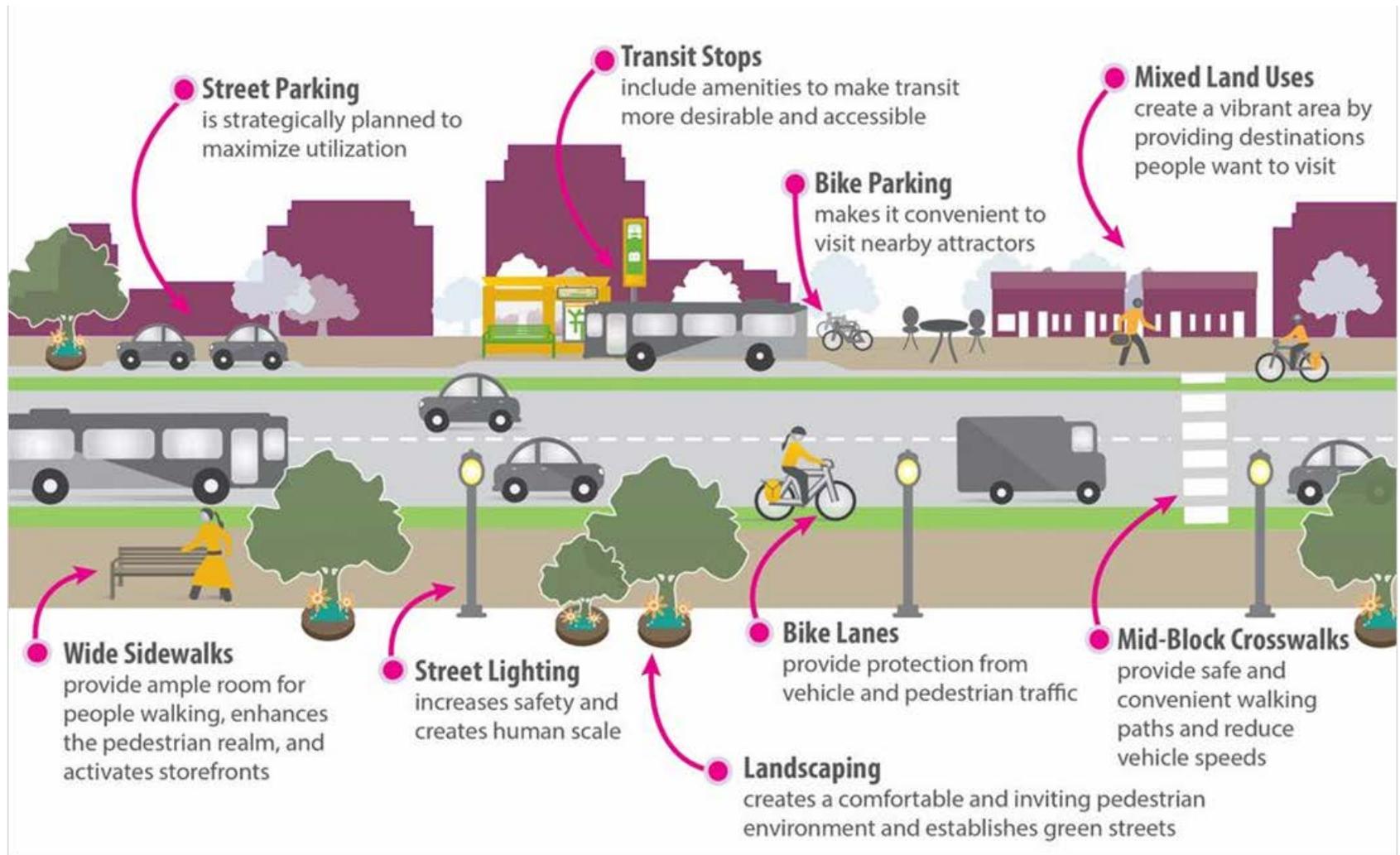
Maximize the efficiency of the transportation network, and its ability to connect the city, minimize travel distances, and increase mobility for all residents.



Complete Streets

- AB1358: General Plan Circulation Element must meet needs of all users
 - “...plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways...”
- Required by County and Regional Policies
- Complete Streets are:
 - designed for everyone!
 - Context sensitive, not “one design fits all”

Complete Streets



Bay Area Transportation Plan

The screenshot shows a web browser window with the title "Plan Bay Area 2040 Final Plan". The browser's address bar shows "Plan Bay Area 2040". The main content area has a purple header with the text "Action Plan" and a sub-header "The Bay Area must make more progress on key regional priorities, especially housing." Below this, a sidebar on the left lists "Action Plan", "Housing Production, Preservation and Protection", "Economic Development", and "Resilience". The main text area contains a paragraph about the housing and transportation crisis in the Bay Area.

Plan Bay Area 2040 Final Plan

Action Plan

The Bay Area must make more progress on key regional priorities, especially housing.

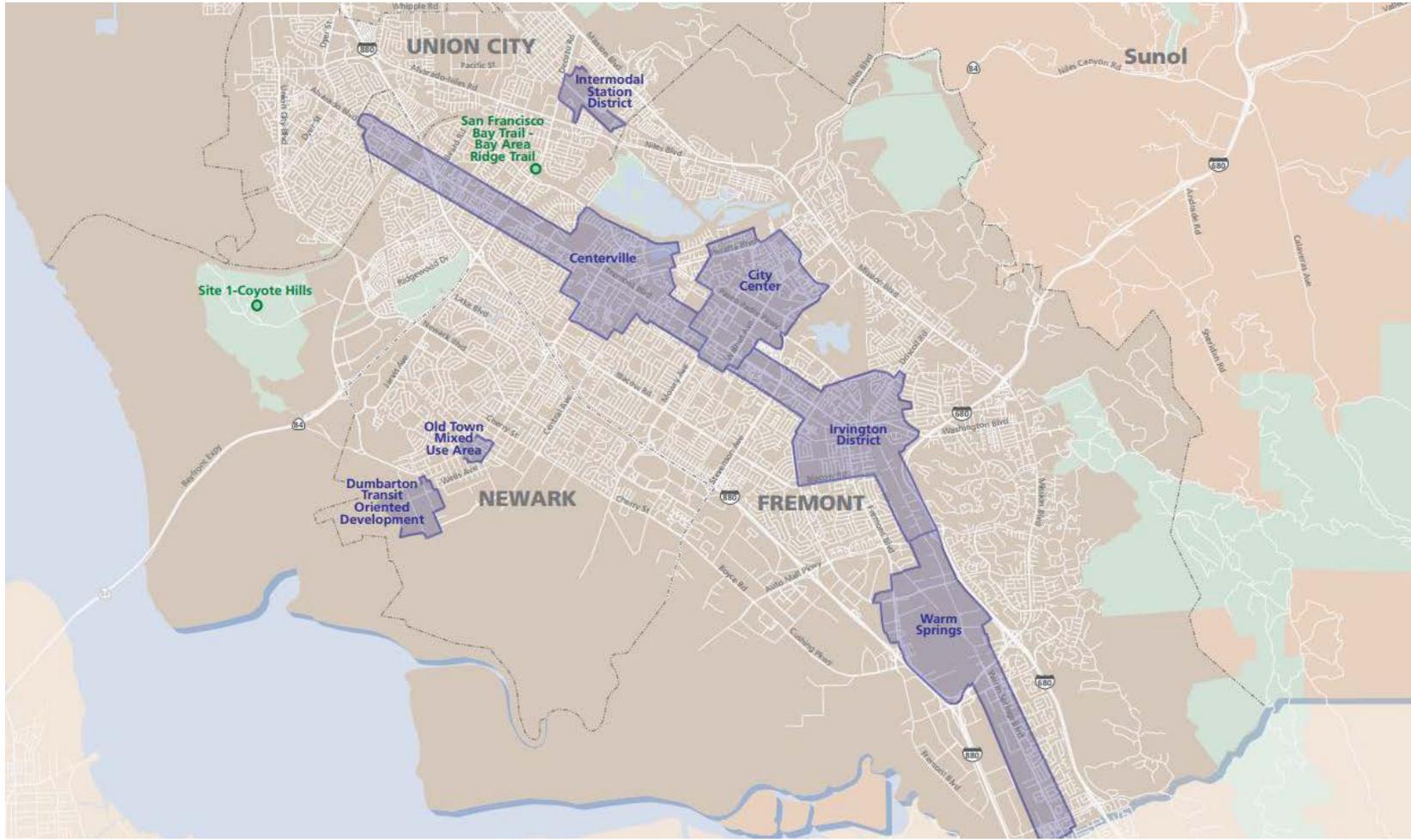
The Bay Area's housing and transportation crisis reflects the cumulative impacts of the region's robust job market and its acute failure to keep pace with housing need, especially near growing job centers. Plan Bay Area 2040 projects these problems will intensify if the region does not take significant corrective steps. As a path forward, MTC and ABAG developed an "Action Plan" to focus on performance targets where the plan is moving in the wrong direction, as well as emerging issues that require proactive regional policy solutions.

MTC Plan Bay Area Goals



Goal	#	Performance Target
Climate Protection	1	Reduce per-capita CO ₂ emissions from cars and light-duty trucks by 15%
Adequate Housing	2	House 100% of the region's projected growth by income level without displacing current low-income residents and with no increase in in-commuters over the Plan baseline year*
Healthy and Safe Communities	3	Reduce adverse health impacts associated with air quality, road safety, and physical inactivity by 10%
Open Space and Agricultural Preservation	4	Direct all non-agricultural development within the urban footprint (existing urban development and UGBs)
Equitable Access	5	Decrease the share of lower-income residents' household income consumed by transportation and housing by 10%
Equitable Access	6	Increase the share of affordable housing in PDAs, TPAs, or high-opportunity areas by 15%
Equitable Access	7	<i>Do not increase the share of low- and moderate-income renter households in PDAs, TPAs, or high-opportunity areas that are at risk of displacement</i>
Economic Vitality	8	Increase by 20% the share of jobs accessible within 30 minutes by auto or within 45 minutes by transit in congested conditions
Economic Vitality	9	<i>Increase by 35%** the number of jobs in predominantly middle-wage industries</i>
Economic Vitality	10	<i>Reduce per-capita delay on the Regional Freight Network by 20%</i>
Transportation System Effectiveness	11	Increase non-auto mode share by 10%
Transportation System Effectiveness	12	Reduce vehicle operating and maintenance costs due to pavement conditions by 100%
Transportation System Effectiveness	13	Reduce per-rider transit delay due to aged infrastructure by 100%

Tri-City Priority Development Areas



Alameda County Transportation Plan

Goals

The Alameda County transportation system will be:



**ACCESSIBLE,
AFFORDABLE
AND EQUITABLE**
for people of all ages,
incomes, abilities and
geographies



INTEGRATED
with land use
patterns and local
decision-making



CONNECTED
across the county, within
and across the network of
streets, highways and
transit, bicycle and
pedestrian routes



MULTIMODAL



COST EFFECTIVE



SAFE



**RELIABLE AND
EFFICIENT**



WELL MAINTAINED

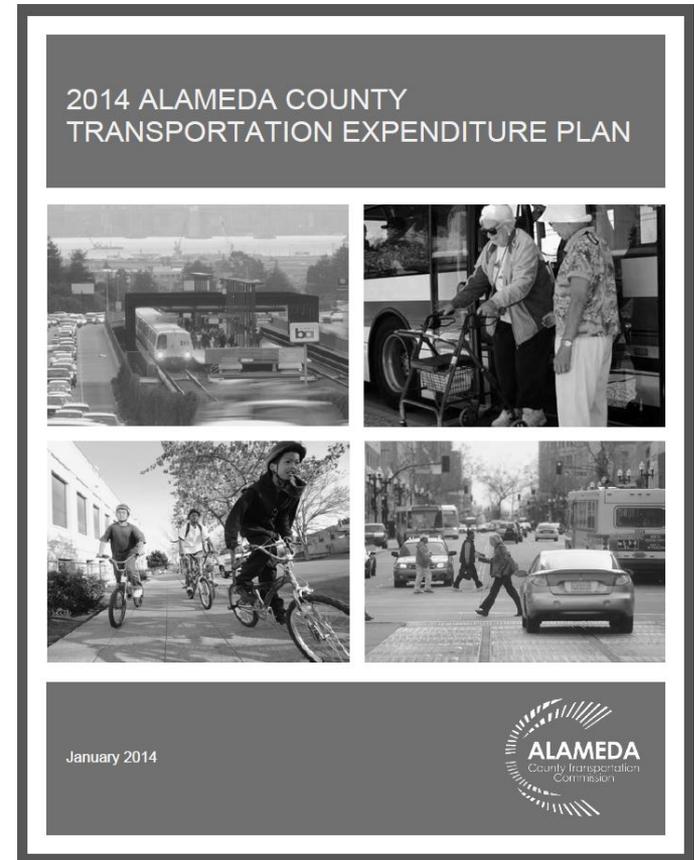


**SUPPORTIVE OF A
HEALTHY AND CLEAN
ENVIRONMENT**

Alameda County Measure BB

Measure BB - Comprehensive Countywide Transportation Investment

- \$8B, Approved November 2014
- Transit, Highways, Pavement
- Bikeways, Walkways, Trails
- Managed by ACTC



California SB1

Increase to State Gas Tax and Vehicle Registration Fees (Approved April 2017)

STATEWIDE INVESTMENT PROGRAMS (50%)	
Fix-it-First Highways	\$15 billion
Bridge and Culvert Repair	\$4 billion
Trade Corridor Investments	\$3 billion
Solutions for Congested Commute Corridors	\$2.5 billion
Parks Funding for Ag, Off-Highway Vehicle & Boating	\$800 million
STIP (State Share)	\$275 million
Freeway Service Patrol	\$250 million
California Public Universities Transportation Research	\$70 million
Local or Regional Investment Programs (50%)	
Fix-it-First Local Roads	\$15 billion
Transit Capital and Operations	\$7.5 billion
Local Partnership Funds	\$2 billion
Active Transportation Program Bicycle and Pedestrian Investments	\$1 billion
STIP (Local Share)	\$825 million
Local Planning Grants	\$250 million
TOTAL	\$52.4 billion



Proposed Regional Measure 3

Authorizes \$3 bridge toll increase; generates \$4.4B



Projects of Interest to Fremont	Amount
BART Expansion Cars	\$500 M
Ped and Bikeway Access Improvements at Bridge Approaches	\$150 M
Dumbarton Corridor Improvements	\$130 M
Route 262 Connector (680 to 880)	\$ 15 M

Questions to Think About

1. What do I want more information on?
2. What are the priority issues and projects?
3. How can we best communicate existing issues and efforts with the Fremont community?

Presentation on Mobility Issues and Efforts

Topic	Presenter
Traffic Congestion Perspectives	Magnus Barber
Local Congestion Management	Hans Larsen
Highway Capacity Projects	Hans Larsen
Transportation Alternatives	Hans Larsen
Traffic Safety	Sheila Marquises
Emerging Technology	Sheila Marquises
Transportation Plans and Funding	Hans Larsen
Concluding Remarks	David Fields

Mobility Task Force
December 7, 2017

