



ALAMEDA COUNTY TRANSPORTATION COMMISSION

# Alameda County High-injury Network



Active Transportation Safety Workshop  
May 9, 2019

Chris G. Marks, Associate Transportation Planner

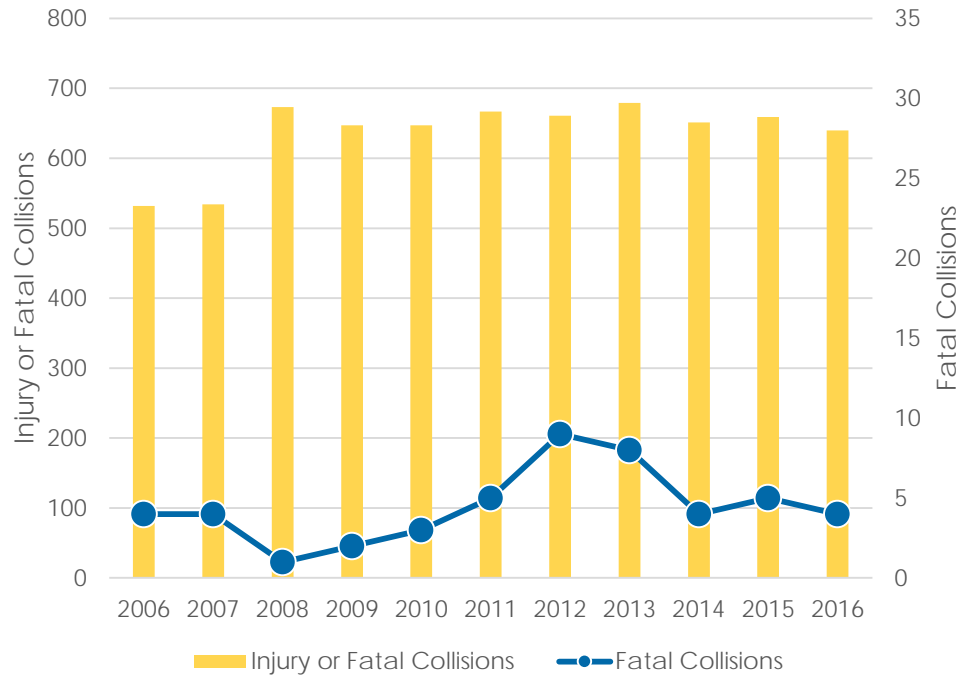
# Overview

- **Origins** of the High-injury Network
- High-injury Network **Methodology**
- Countywide **Pedestrian High-injury Network**
- Countywide **Bicycle High-injury Network**
- **Future Analysis and Uses**

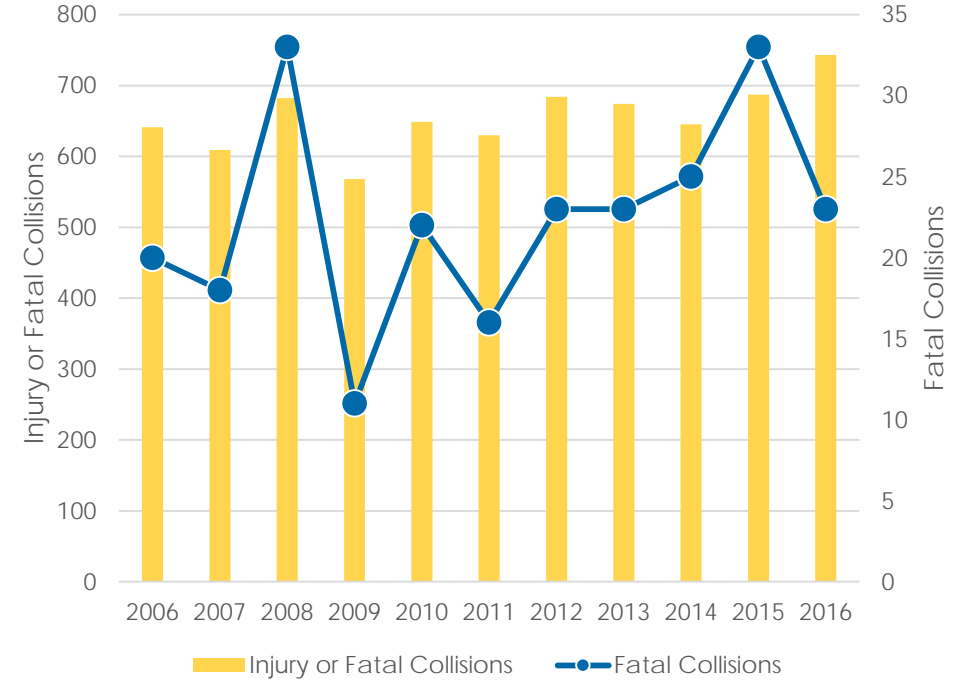


# Origins: Collision History

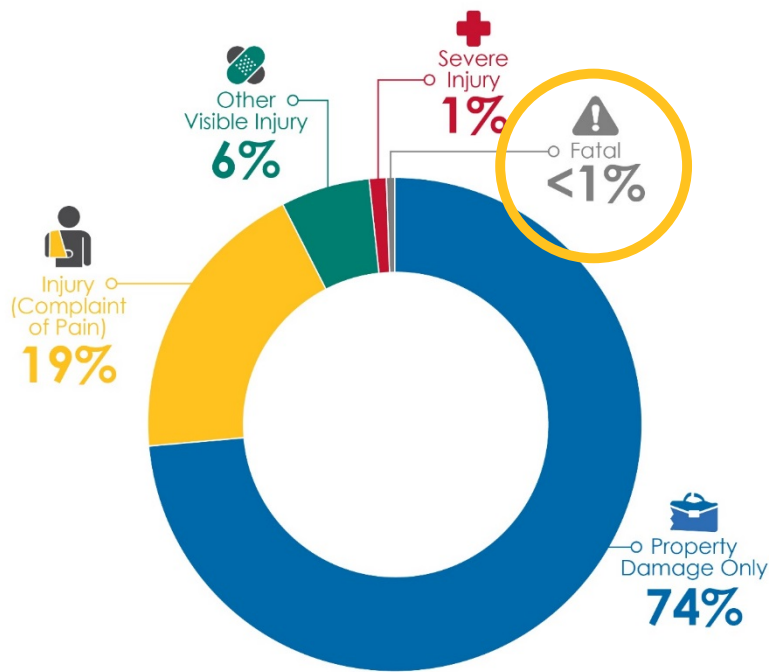
## Bike Collisions



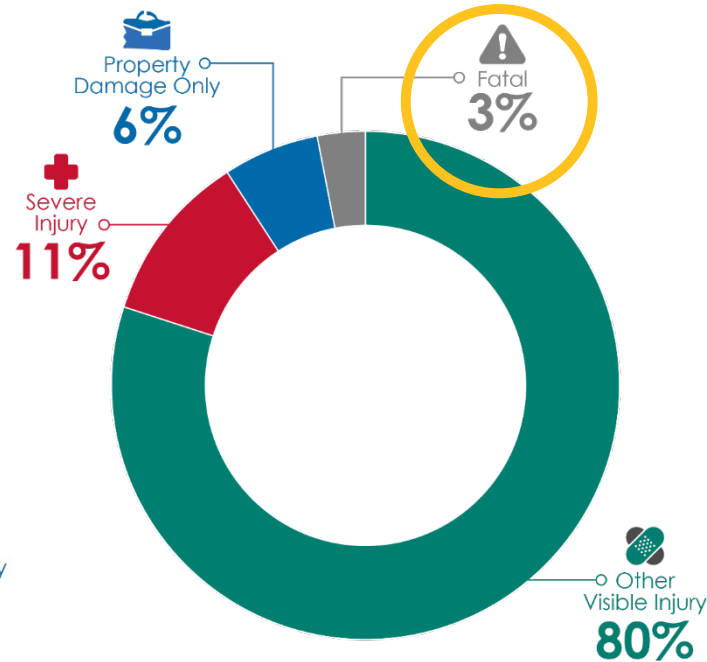
## Pedestrian Collisions



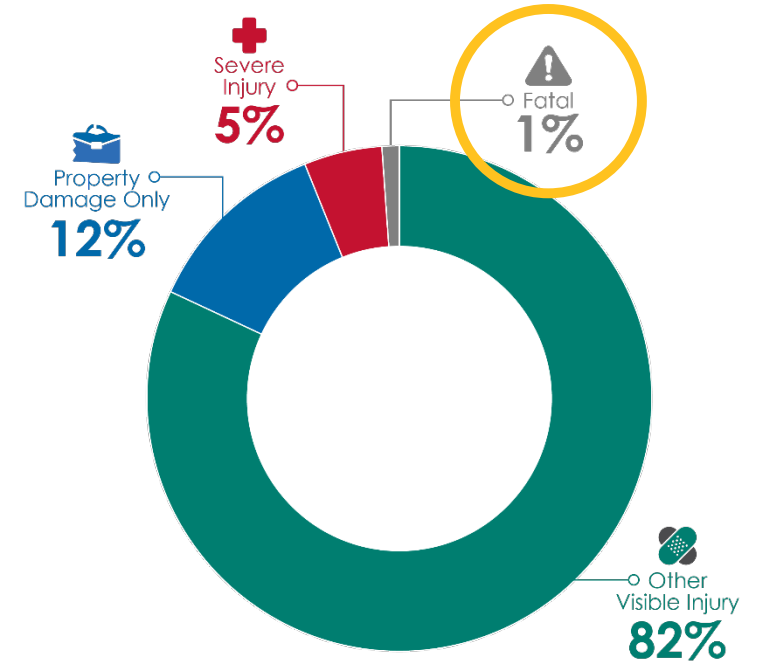
# Origins: Bikes/Peds Most Vulnerable



Auto



Pedestrian



Bicycle

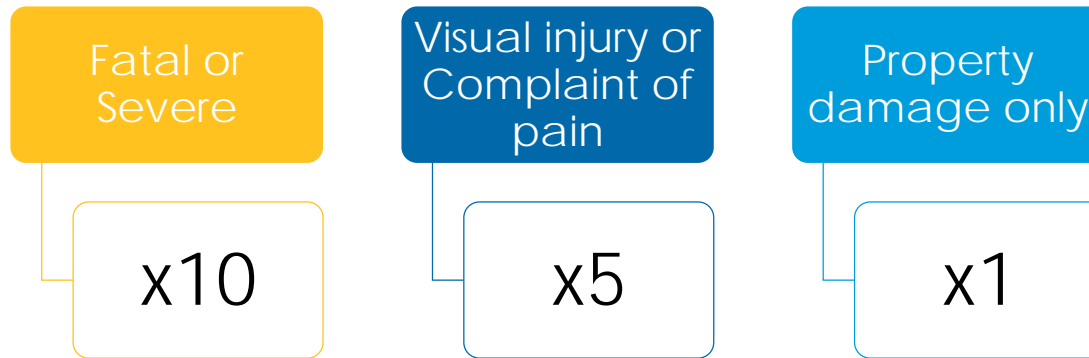
# Origins: Countywide Active Transportation Plan



# High-injury Network Methodology

1) Collect & Map Data: Collisions from TIMS and SWITRS (2012-2016)

2) Weight Data:



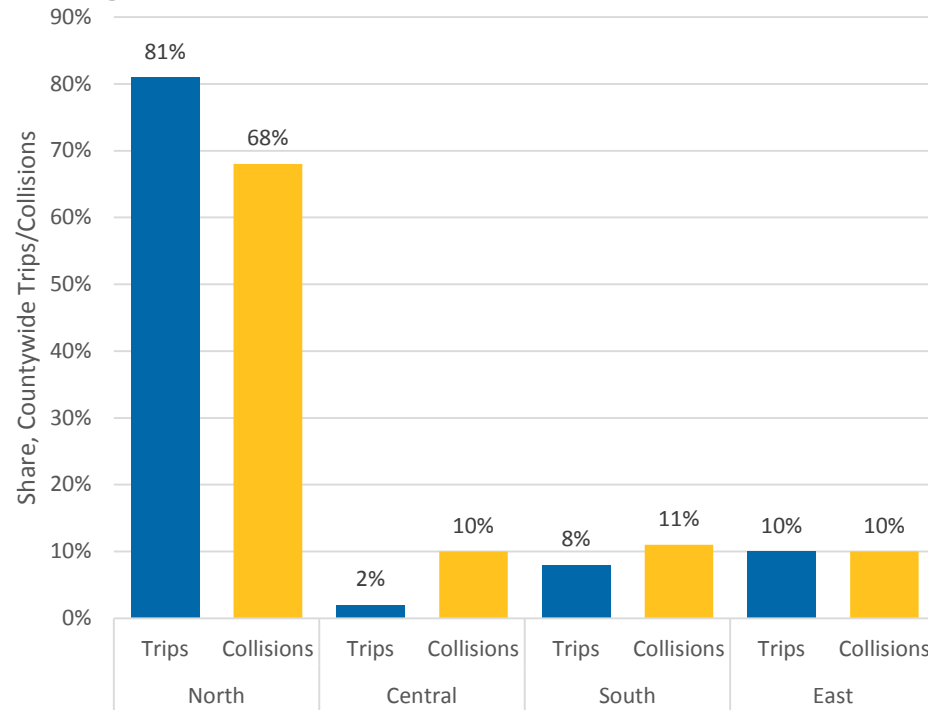
3) Aggregate into corridors: (1/2-mile sliding window)

4) Weight for Exposure: (high, medium, low by city)

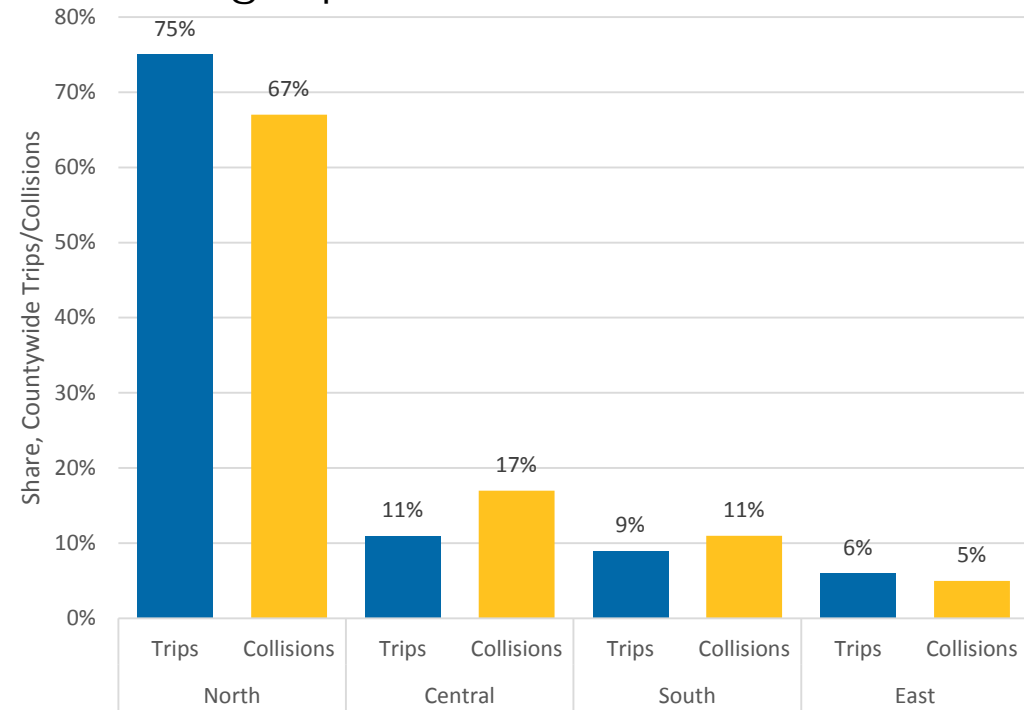
5) Set Threshold: Top 20%

# High-Injury Network Methodology: Exposure

## Biking Trips and Collisions

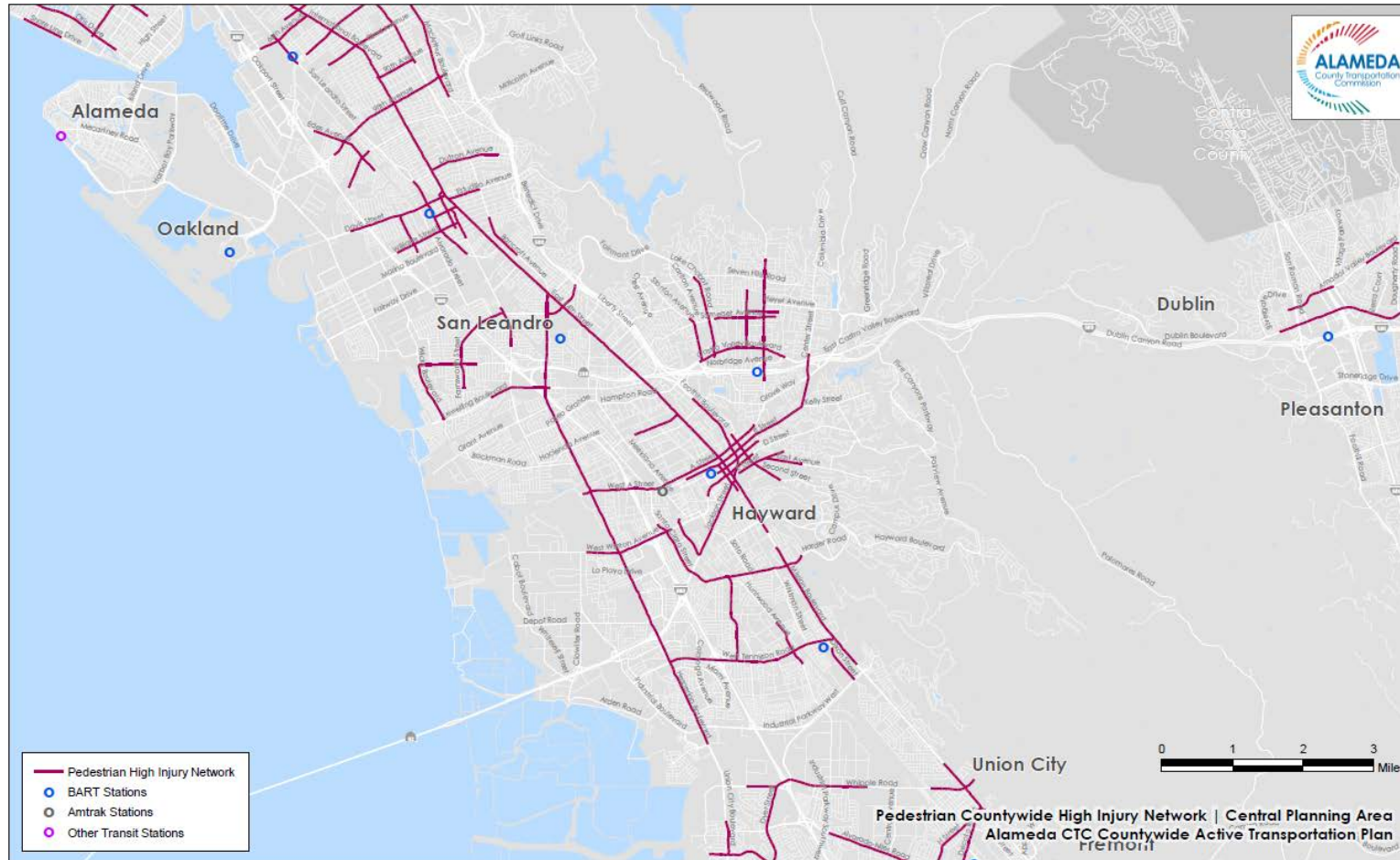


## Walking Trips and Collisions





# Pedestrian High-injury Network

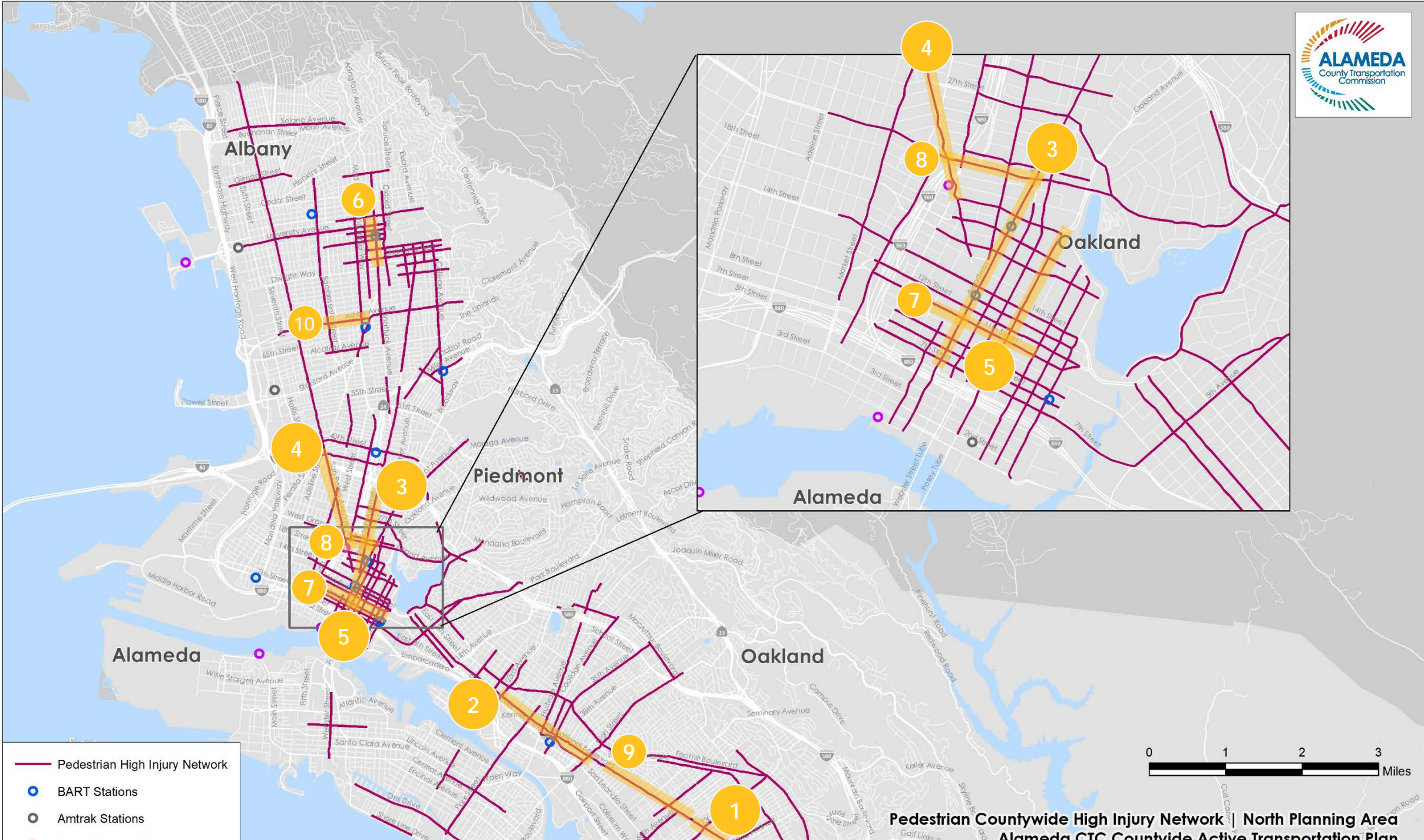


65% of pedestrian collisions occur on just **4% of roads** (243 miles)

## Planning Area Breakdown:

North	51%
Central	26%
South	16%
East	8%



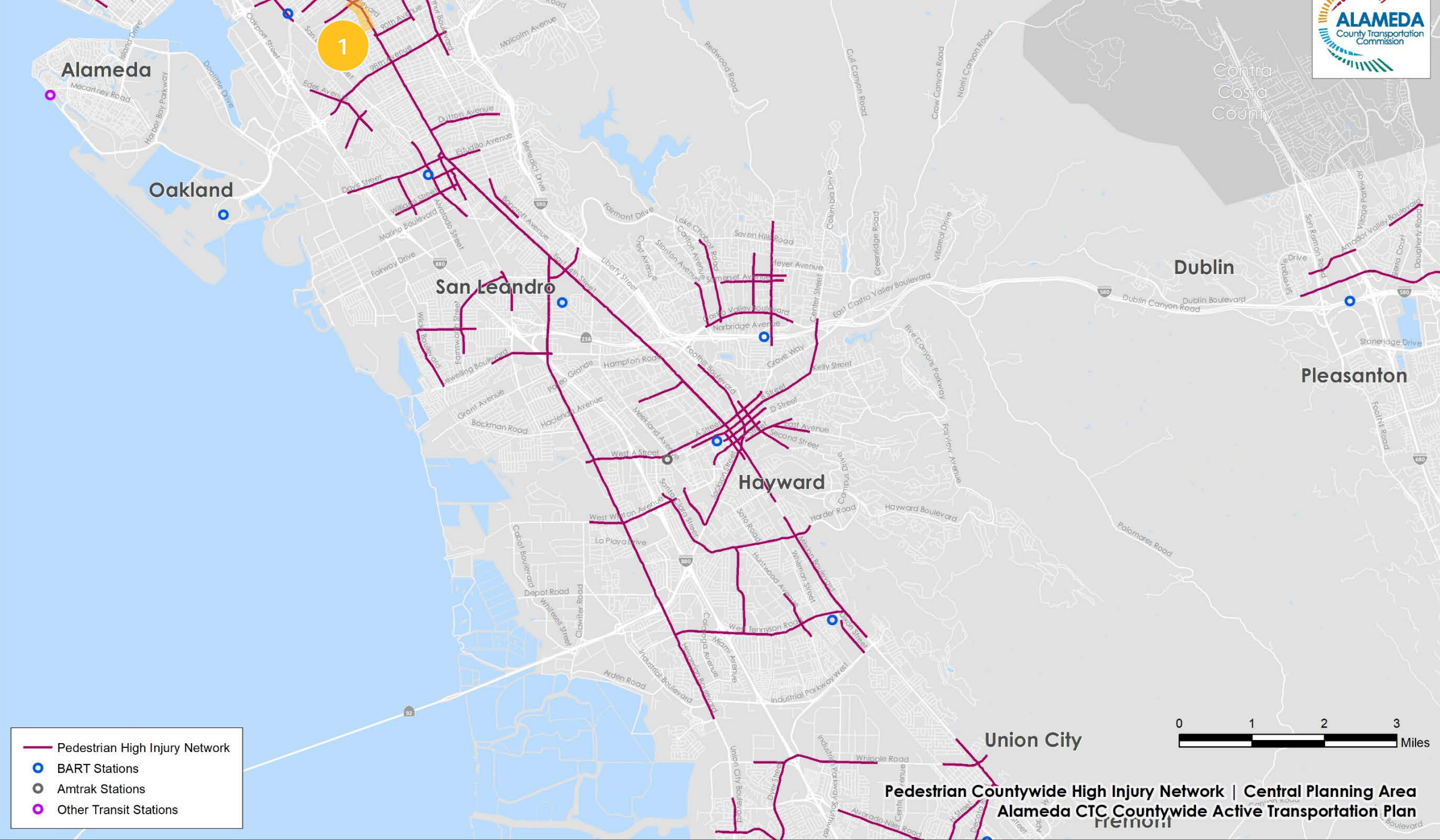


- Pedestrian High Injury Network
- BART Stations
- Amtrak Stations



**Pedestrian Countywide High Injury Network | North Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

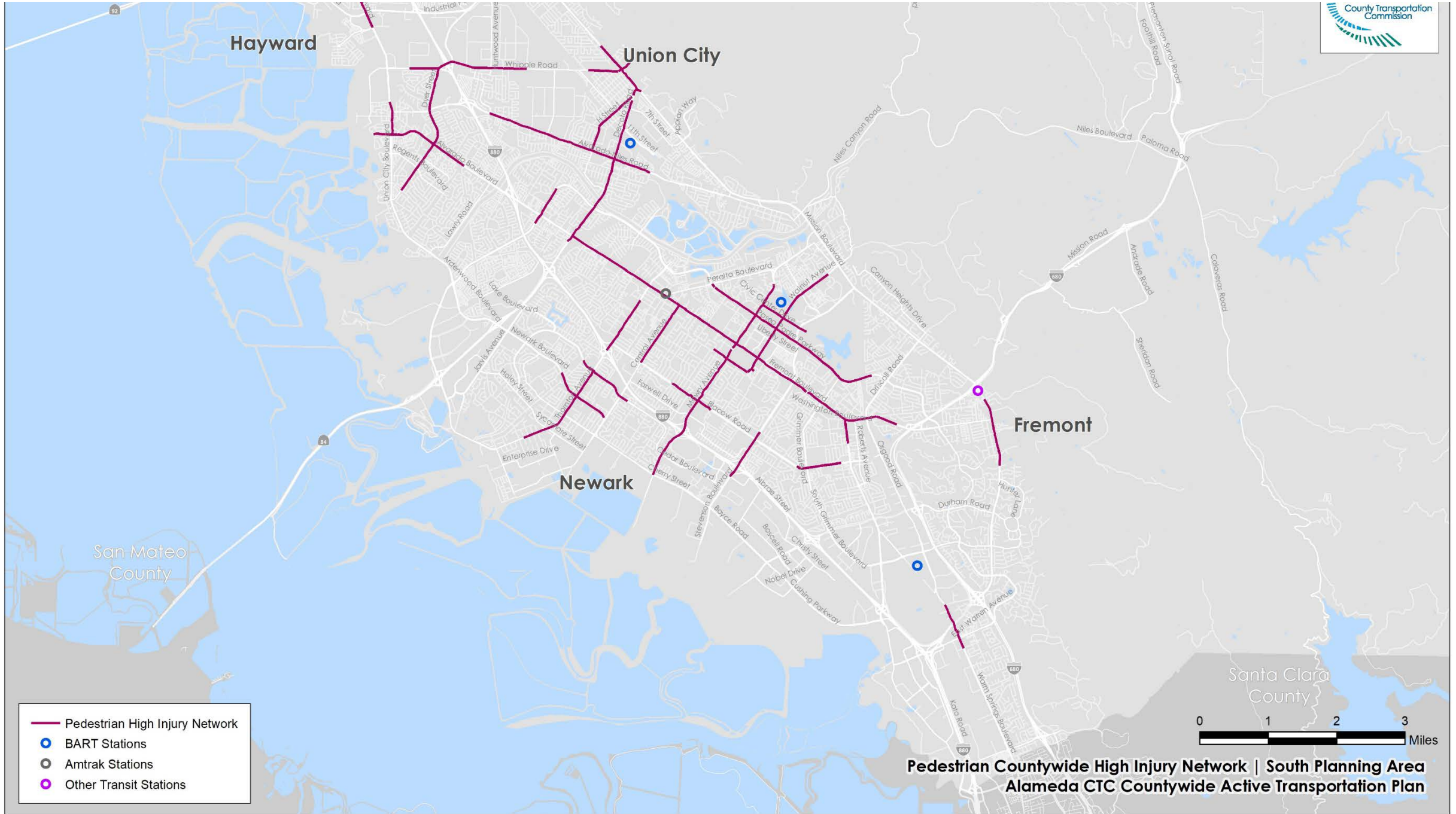




- Pedestrian High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations



**Pedestrian Countywide High Injury Network | Central Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

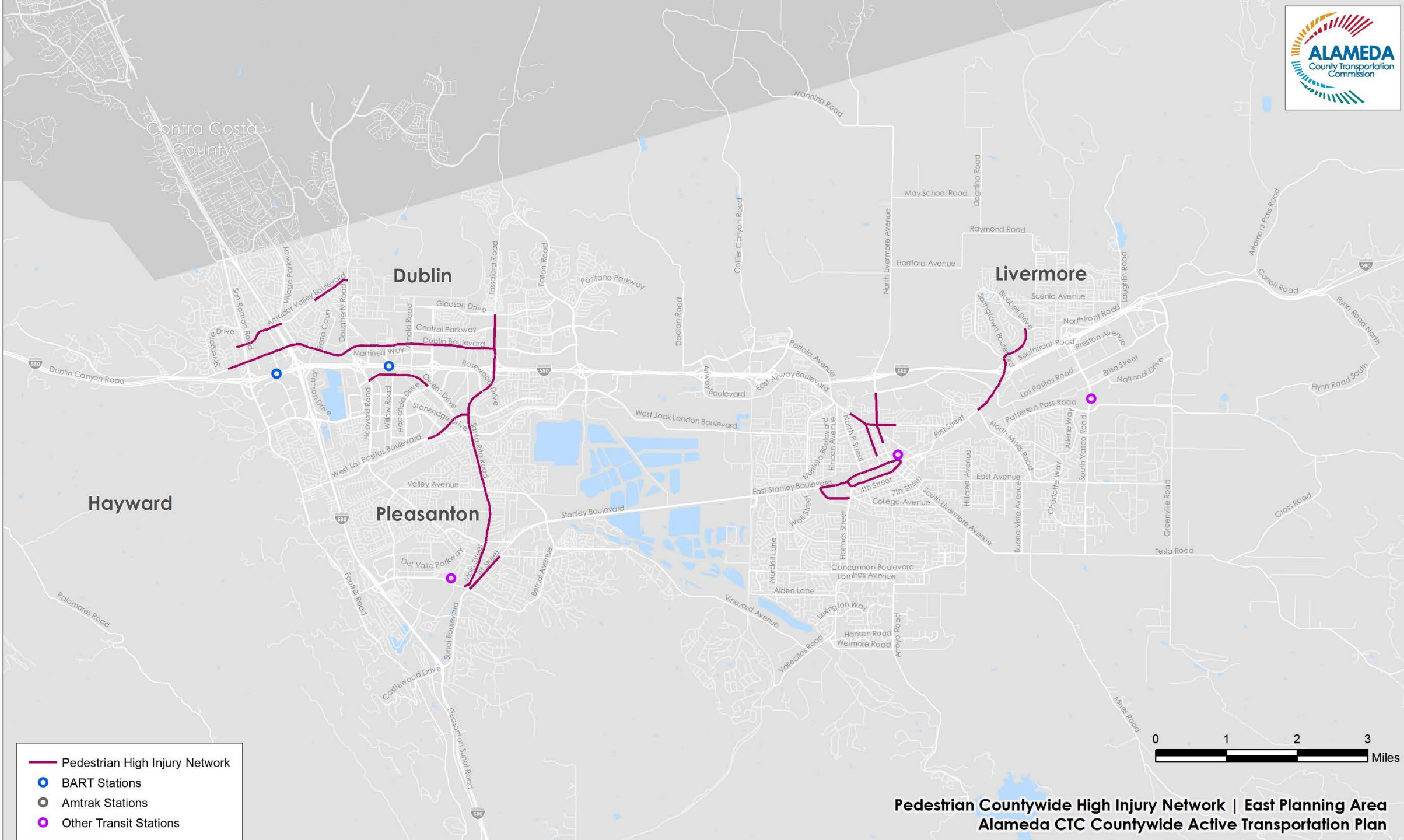


- Pedestrian High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations



**Pedestrian Countywide High Injury Network | South Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

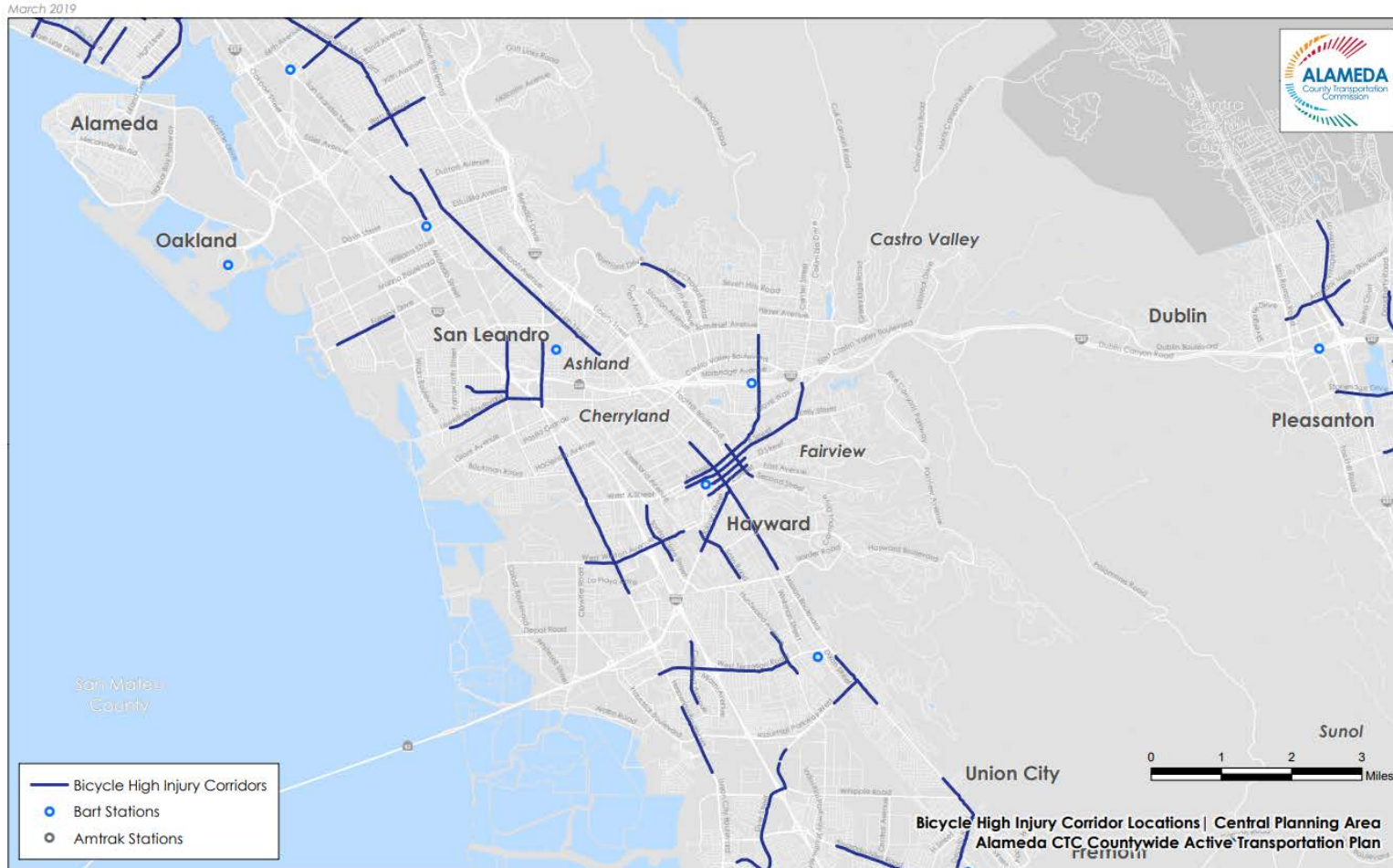




- Pedestrian High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations

**Pedestrian Countywide High Injury Network | East Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

# Bicycle High-injury Network

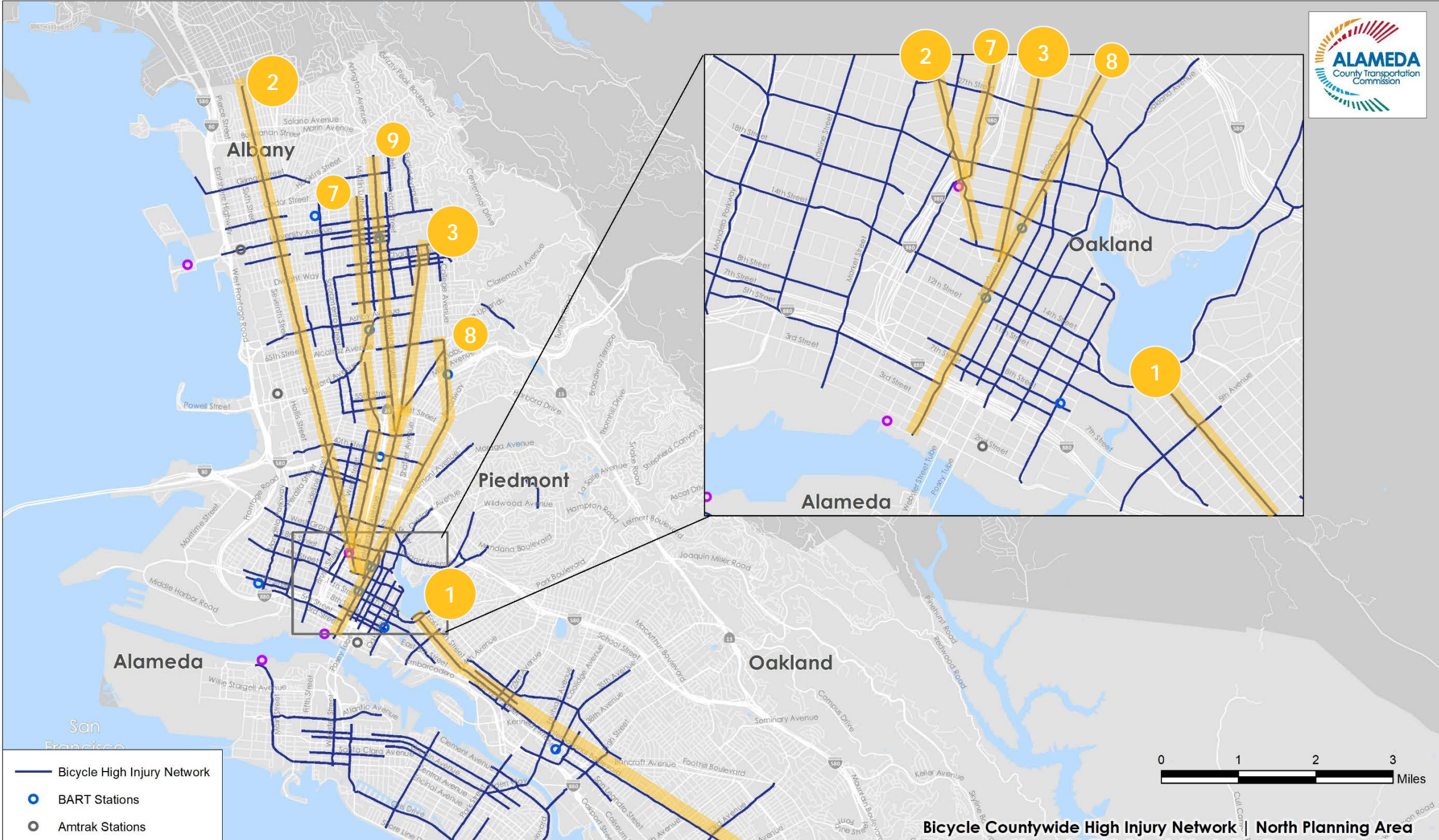


59% of bike collisions occur on just **4% of roads** (254 miles)

## Planning Area Breakdown:

North	53%
Central	13%
South	20%
East	14%

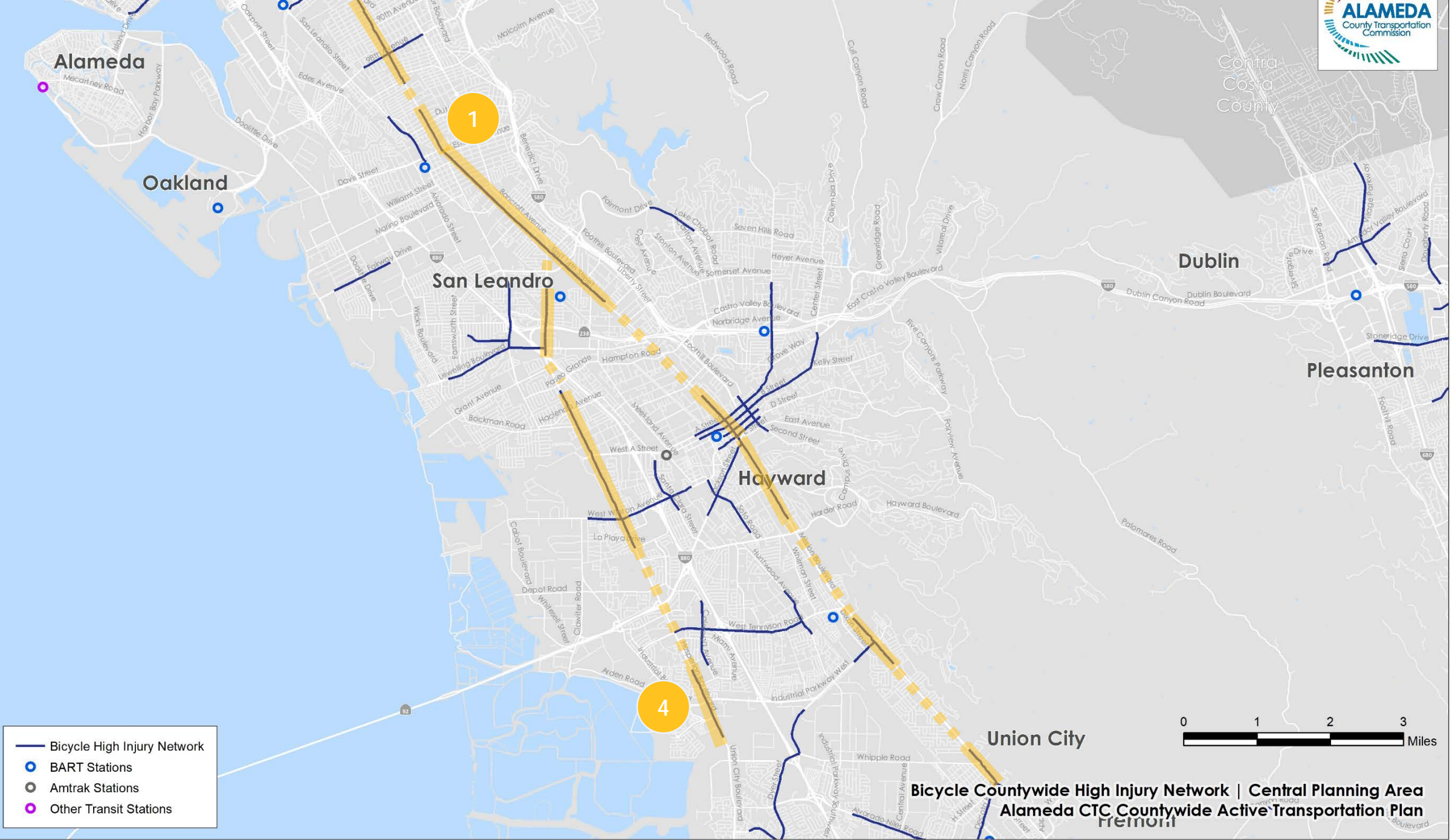




- Bicycle High Injury Network
- BART Stations
- Amtrak Stations

0 1 2 3  
Miles

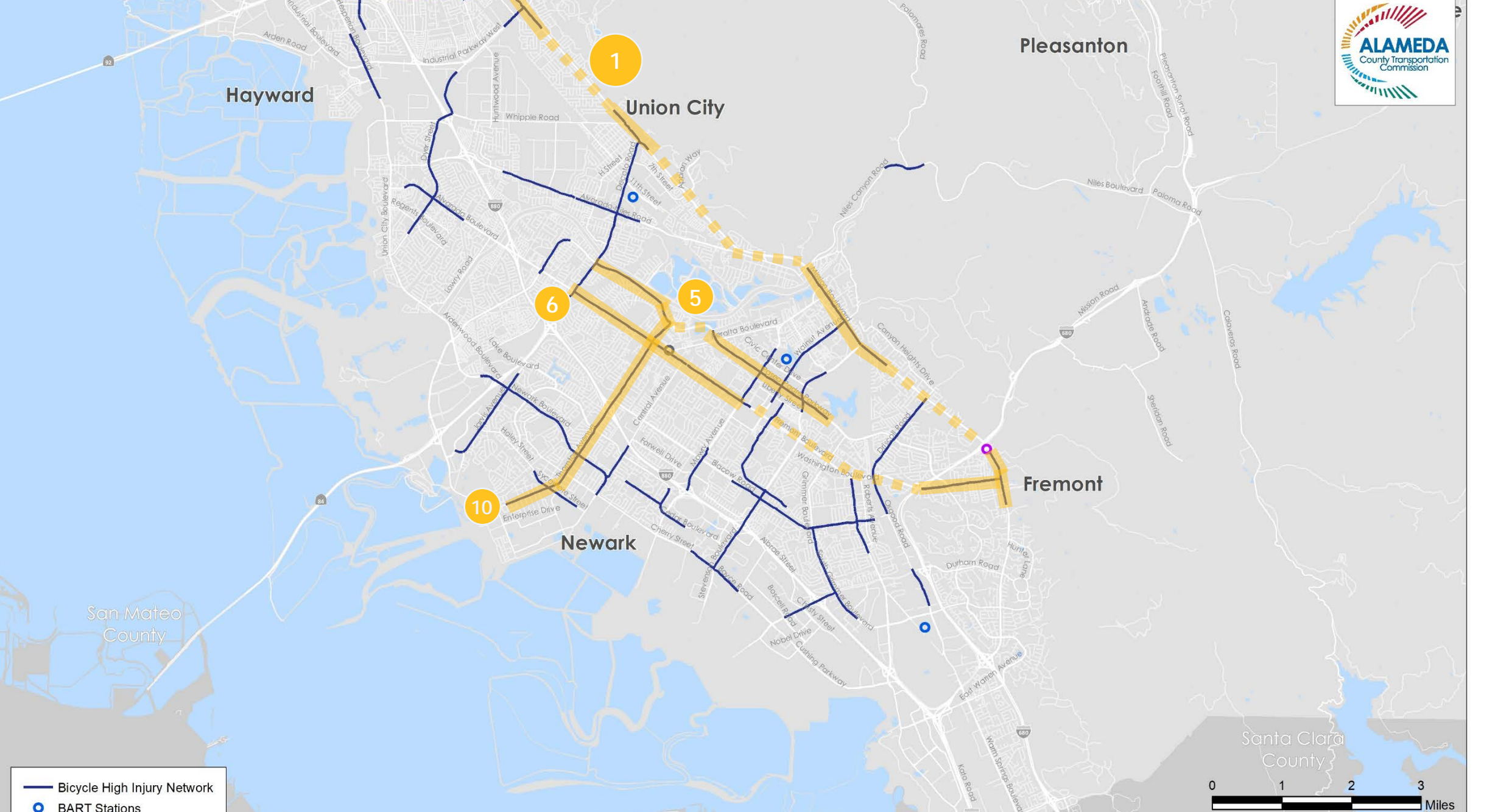
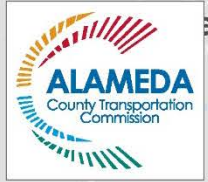




- Bicycle High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations



**Bicycle Countywide High Injury Network | Central Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

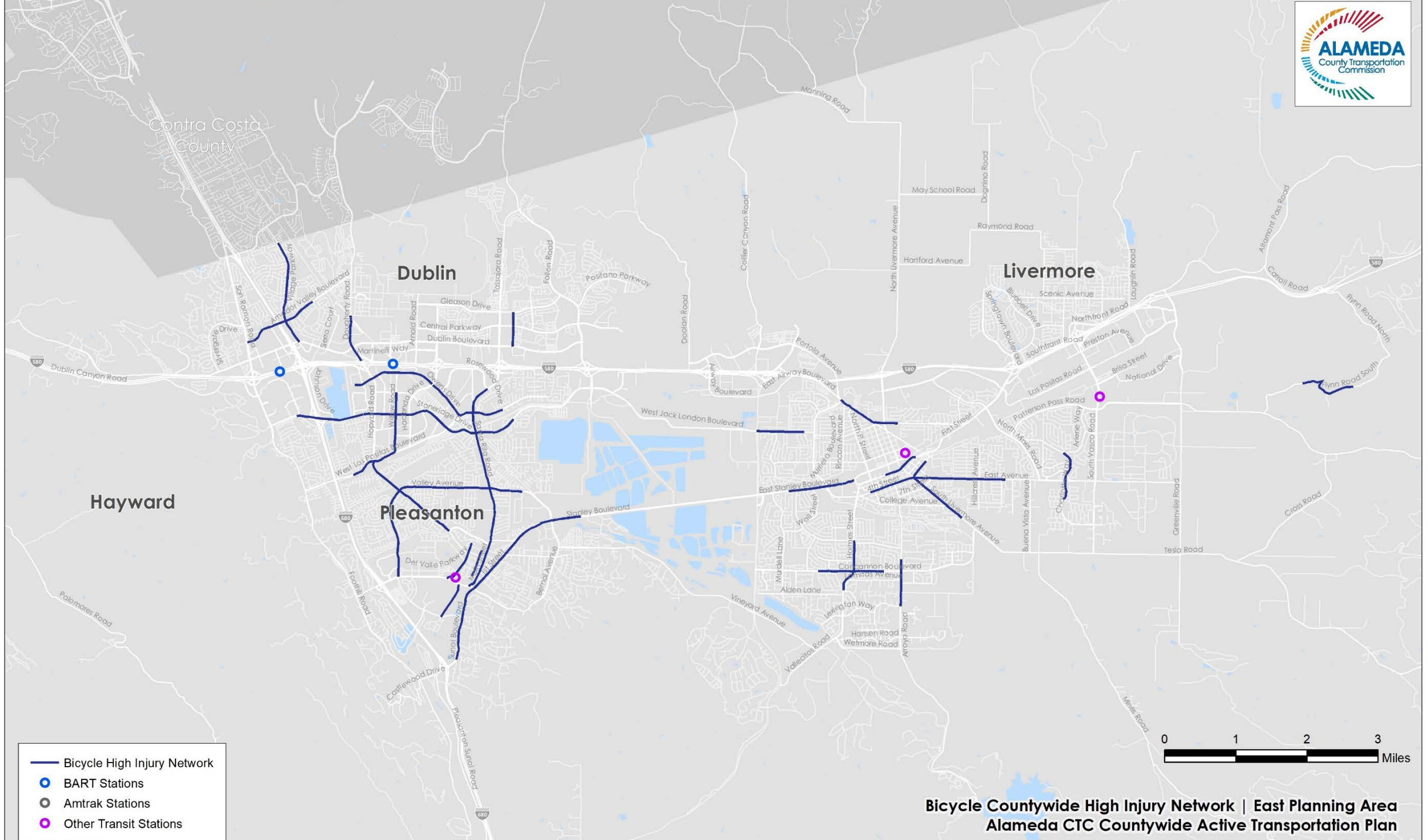


- Bicycle High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations



**Bicycle Countywide High Injury Network | South Planning Area**  
**Alameda CTC Countywide Active Transportation Plan**

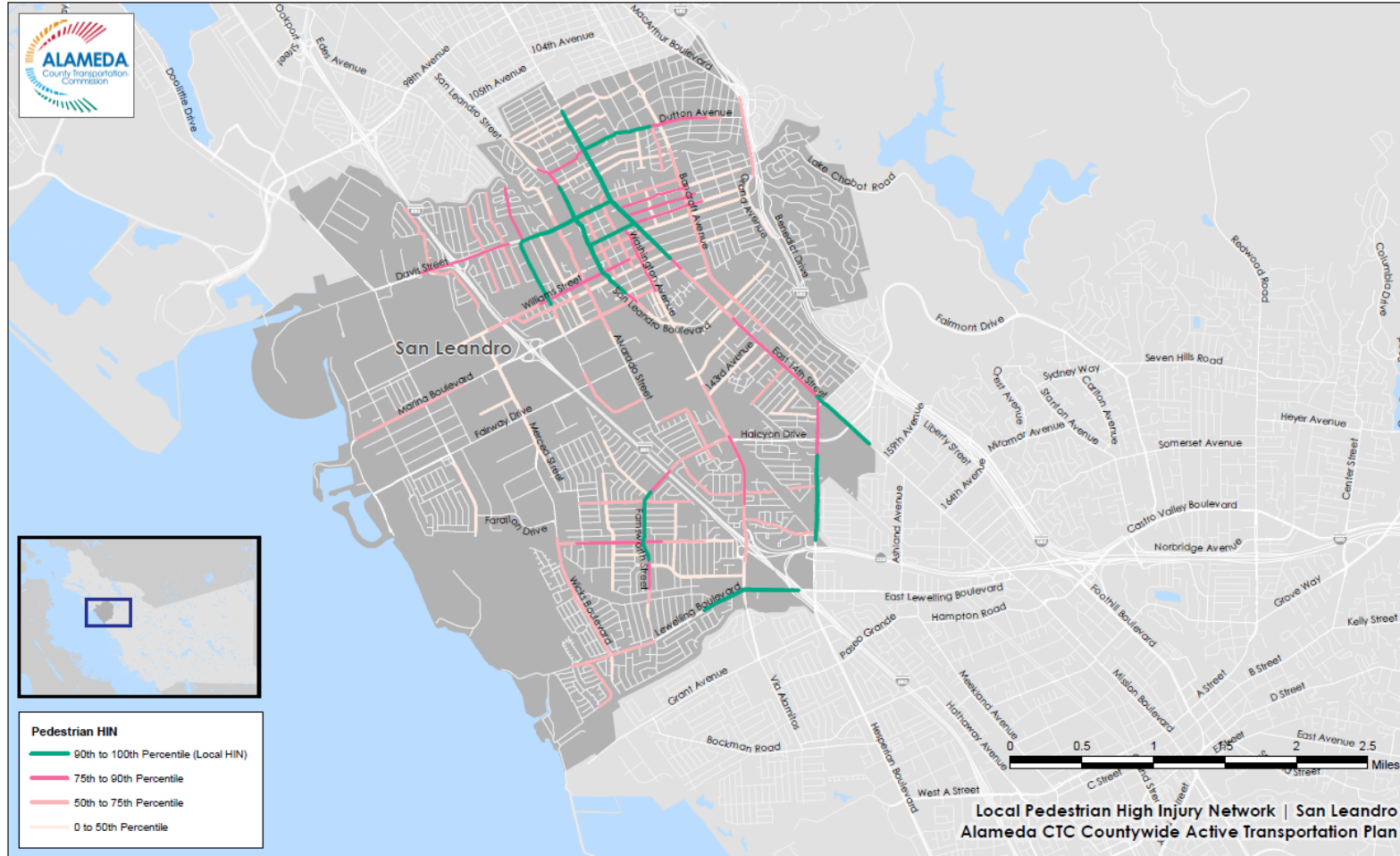




- Bicycle High Injury Network
- BART Stations
- Amtrak Stations
- Other Transit Stations

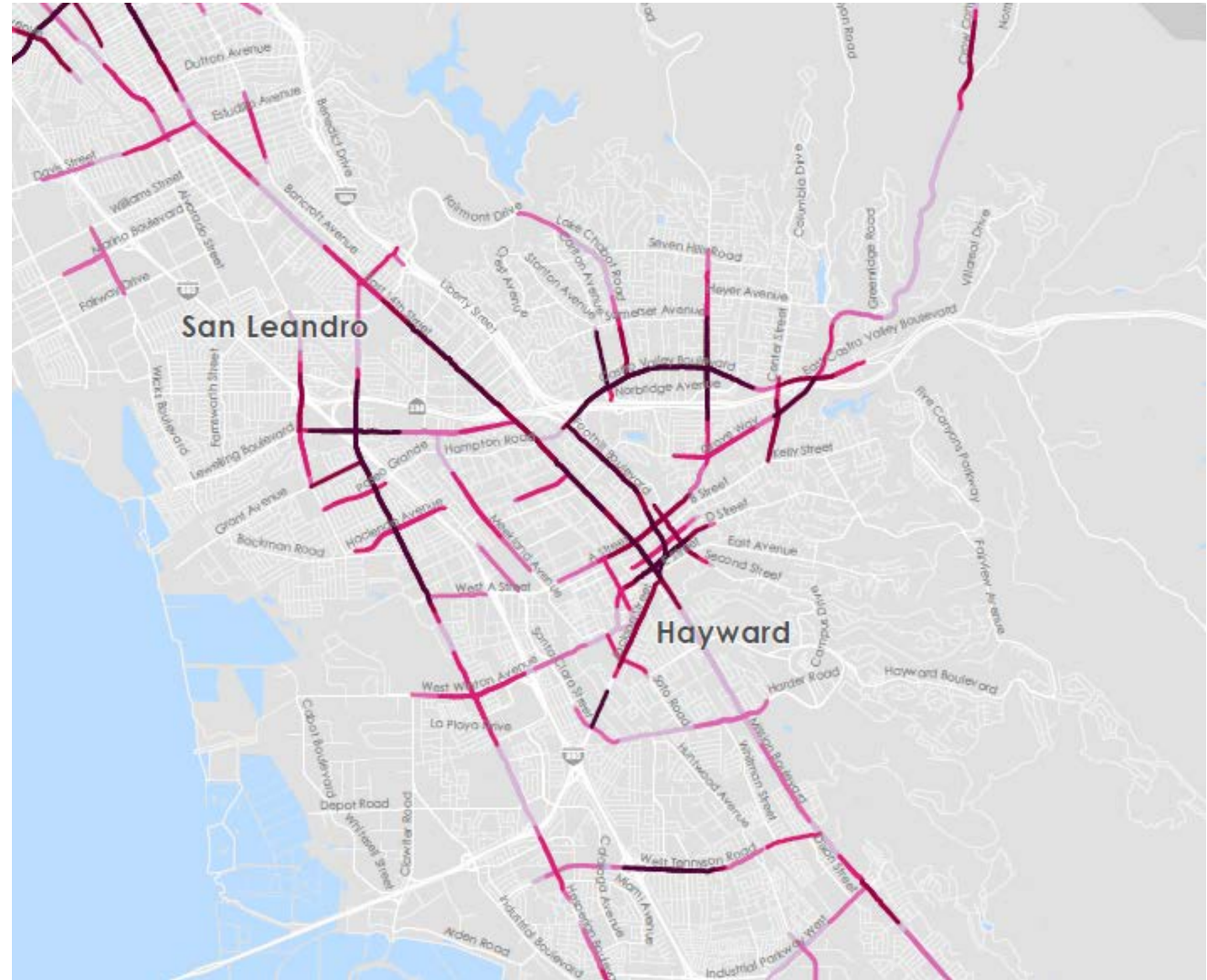


# Local High Injury Networks



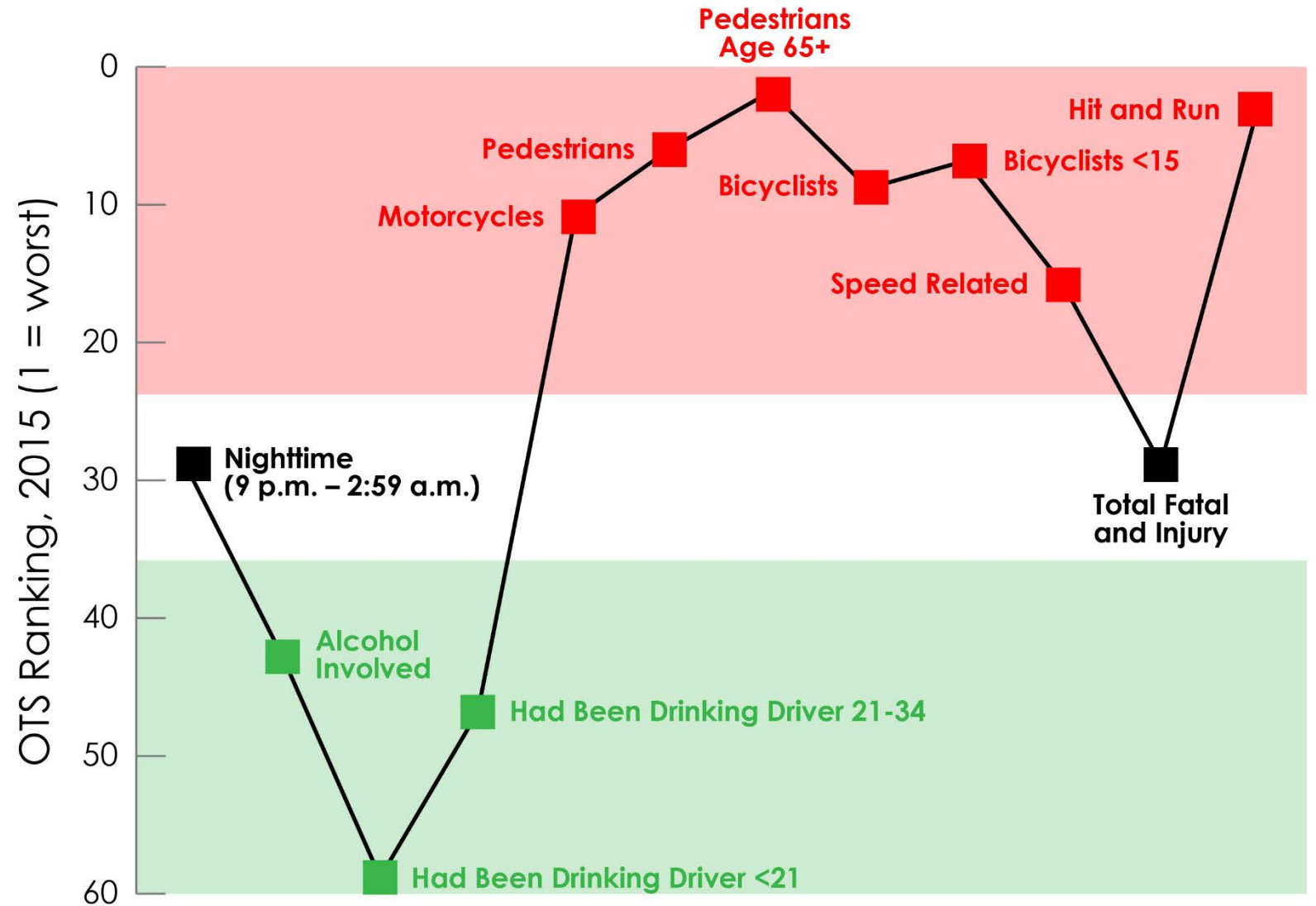
- Expanded Network:
  - Captures high-risk and low use segments
- Tool for local jurisdiction
- Secondary prioritization criteria

# Future Analysis Auto HIN





# Future Analysis Types of Collisions



Green indicates highest-performing third of counties.

Red indicates lowest-performing third of counties.

Source: California Office of Traffic Safety.



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# Potential Uses

- CW HIN and Local HINs used as prioritization criteria in the CATP
- Jurisdiction-specific information available as part of the CATP Community Profiles Chapter
  - Local HINs
  - Major Barriers
- Staff available to present to local BPACs

# Thank You

## Countywide Active Transportation Plan Team

Cathleen Sullivan, Principal  
Aleida Andrino-Chavez, Project Manager  
Chris G. Marks, Deputy Project Manager

Alameda County Transportation Commission • 1111 Broadway, Suite 800  
Oakland, CA 94607 • 510.208.7400

