

Tri Delta Transit Mobility Hub Study: Appendices

Appendix A:

Data Analysis

Presentation

Mobility Hub Assessment for Tri Delta Transit

Existing Conditions Presentation

December 2024

Project Goals

- Enhance transportation and mobility options
- Increase transit mode share and reduce single-occupant vehicle trips and greenhouse gas emissions
- Improve transit connections across modes and EV charging access
- Focus on Equity Priority Communities (EPCs)
- Develop concepts aligned with MTC's *Mobility Hub Implementation Playbook*

Project Overview

Mobility Hub Study



Existing
Conditions



Stakeholder
Engagement
& Outreach



Program
Development



Schematic
Design

Project Overview

Mobility Hub Study



**Existing
Conditions**



**Stakeholder
Engagement
& Outreach**



**Program
Development**

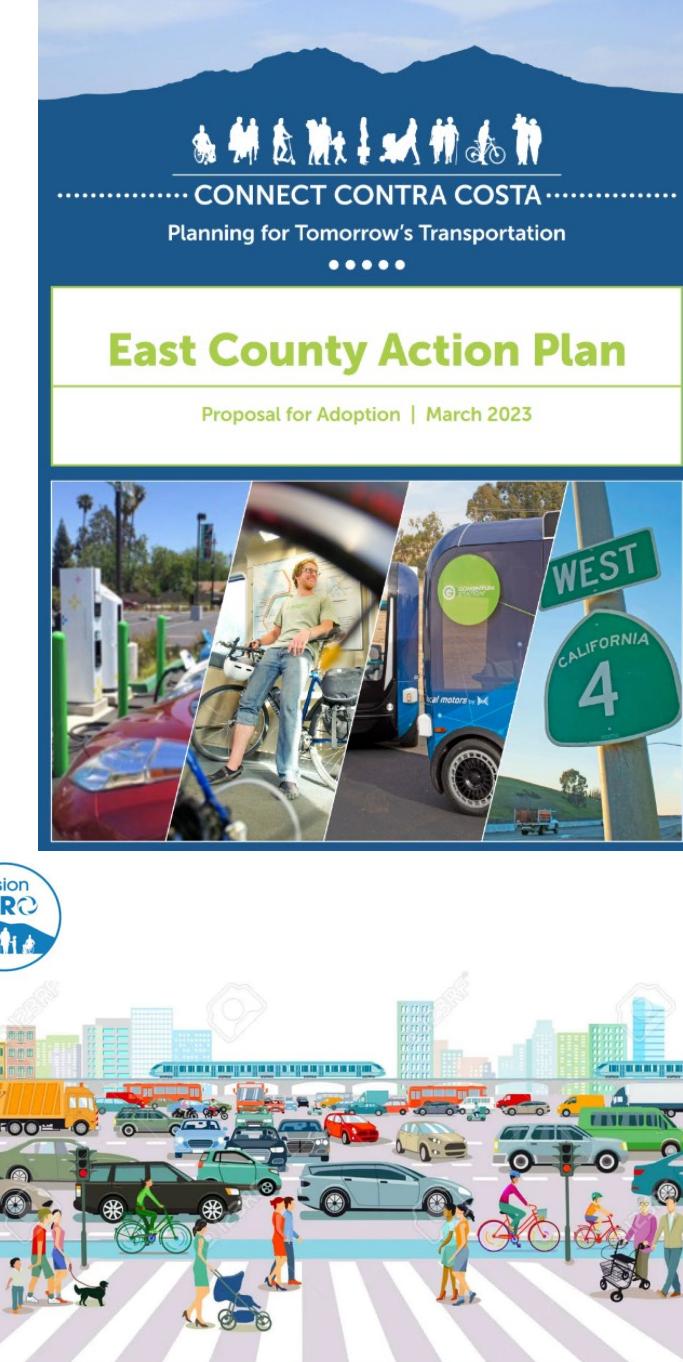


**Schematic
Design**

Existing Conditions Analysis

- Review of reports, projects, and other existing documents
- Use “big data” sources (i.e., Replica, StreetLight) to assess travel patterns within Tri Delta Transit service area
 - Major origin and destination zones
 - Trip length distribution
 - Mode choice
- Better understand potential mode shift (from auto trips to other modes)

Building Off Recent and Relevant Plans and Efforts

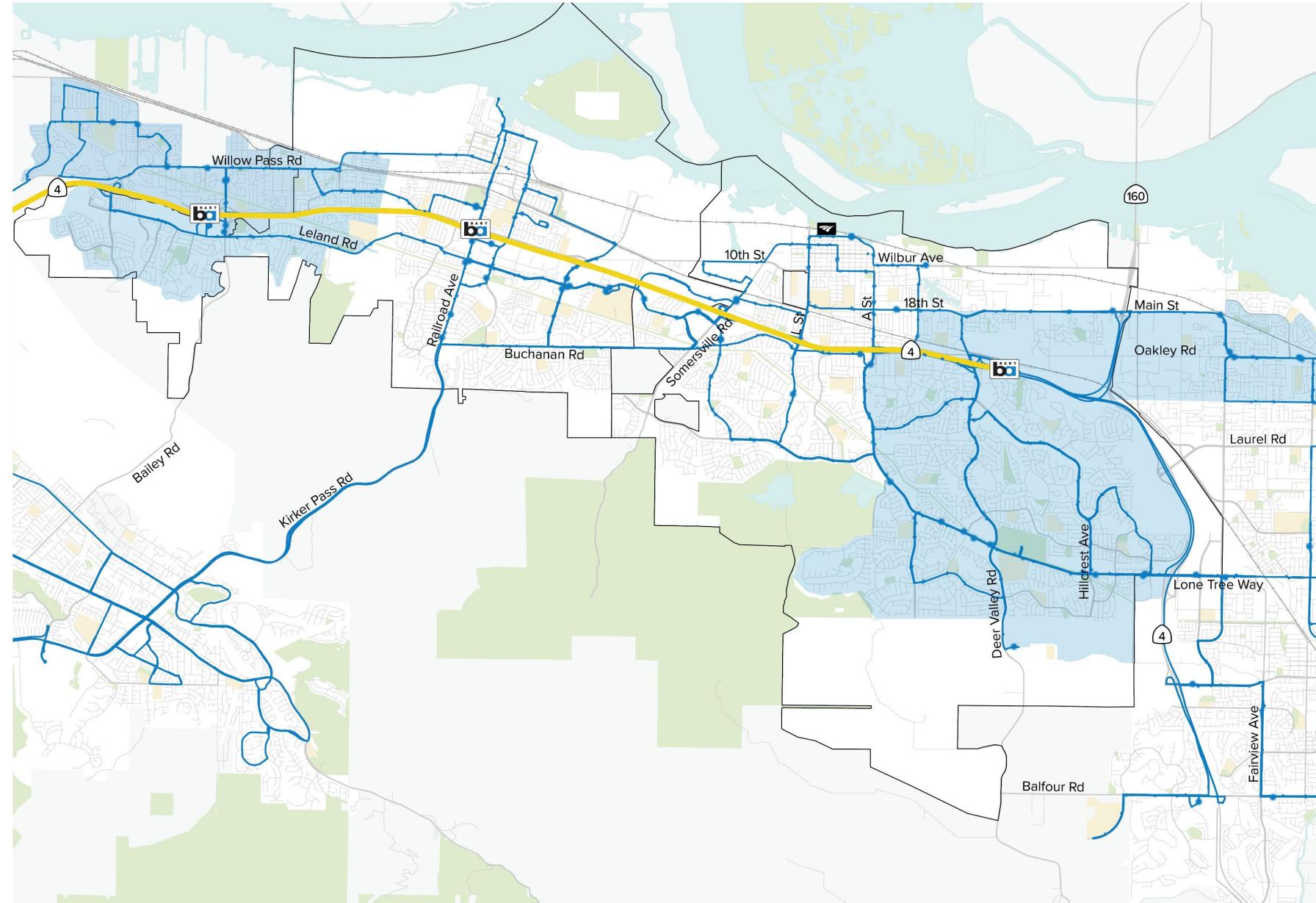


Study Area and Transit Network

Tri Delta Transit's COA will re-shape transit service in East County

- BART Yellow Line
- Other Transit Routes
- MyRide Service Area

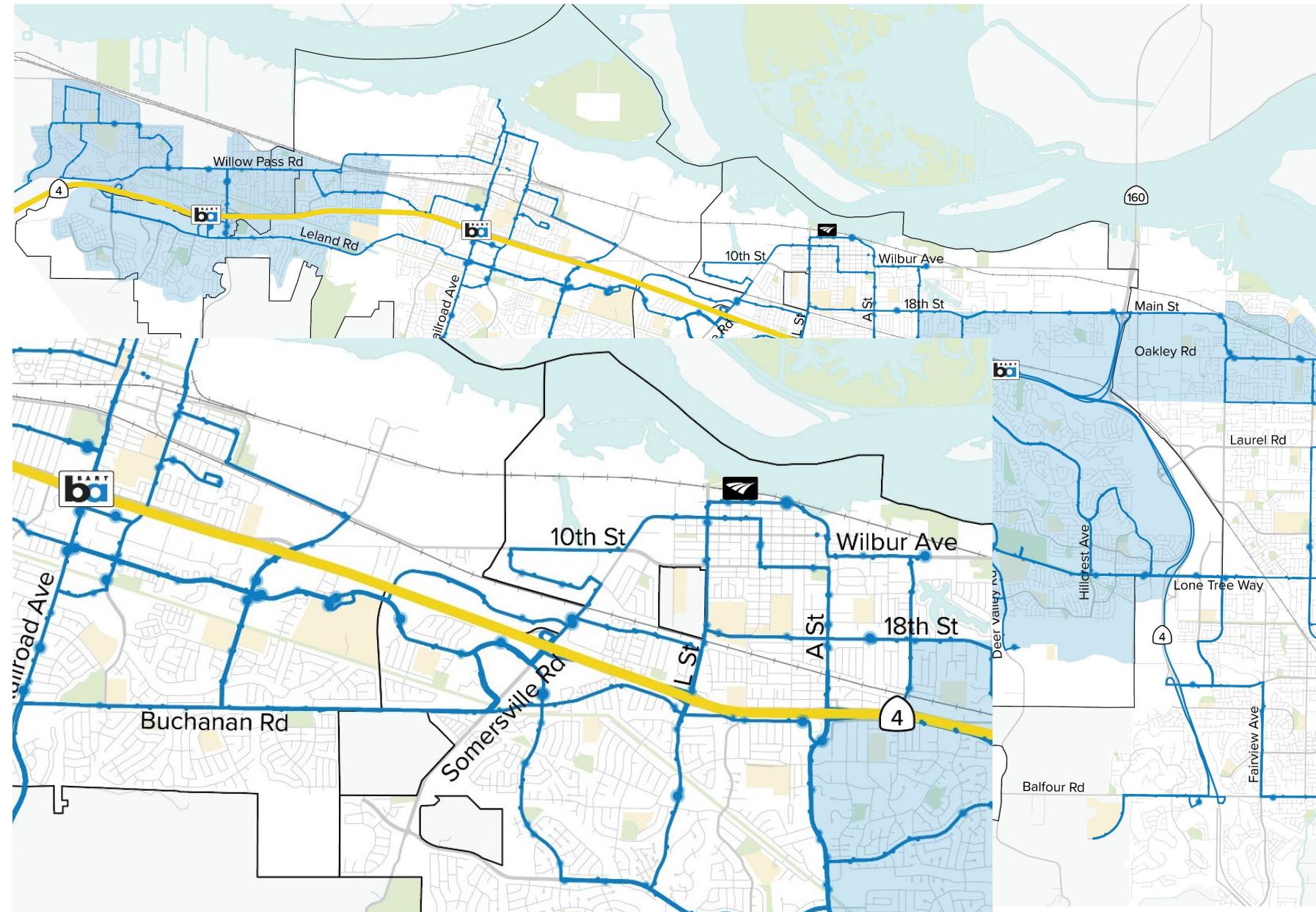
- TriDelta stop
- TriDelta stop with bench
- TriDelta stop with shelter



Study Area and Transit Network

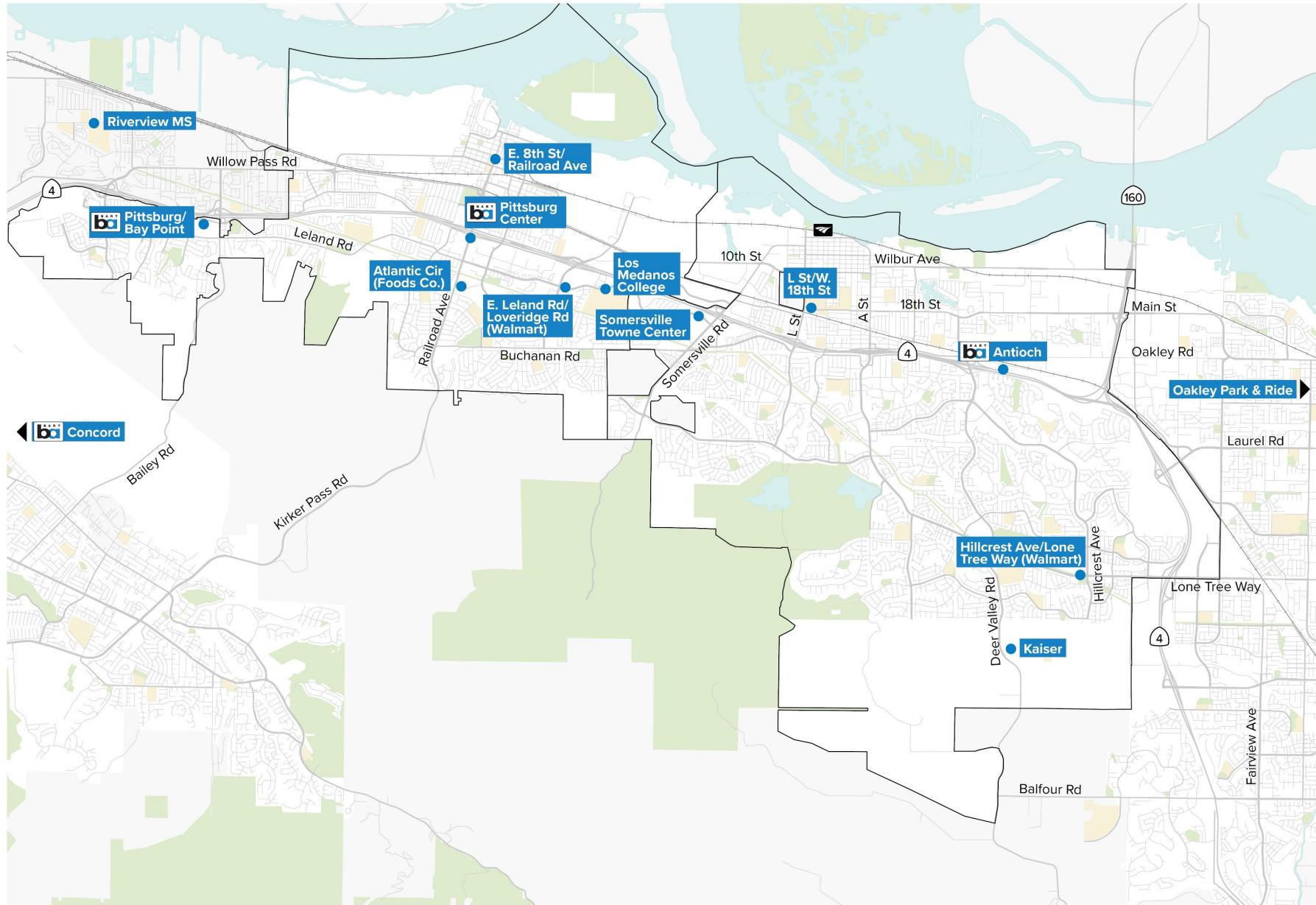
Tri Delta Transit's COA will re-shape transit service in East County

- BART Yellow Line
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Study Area and Transit Network

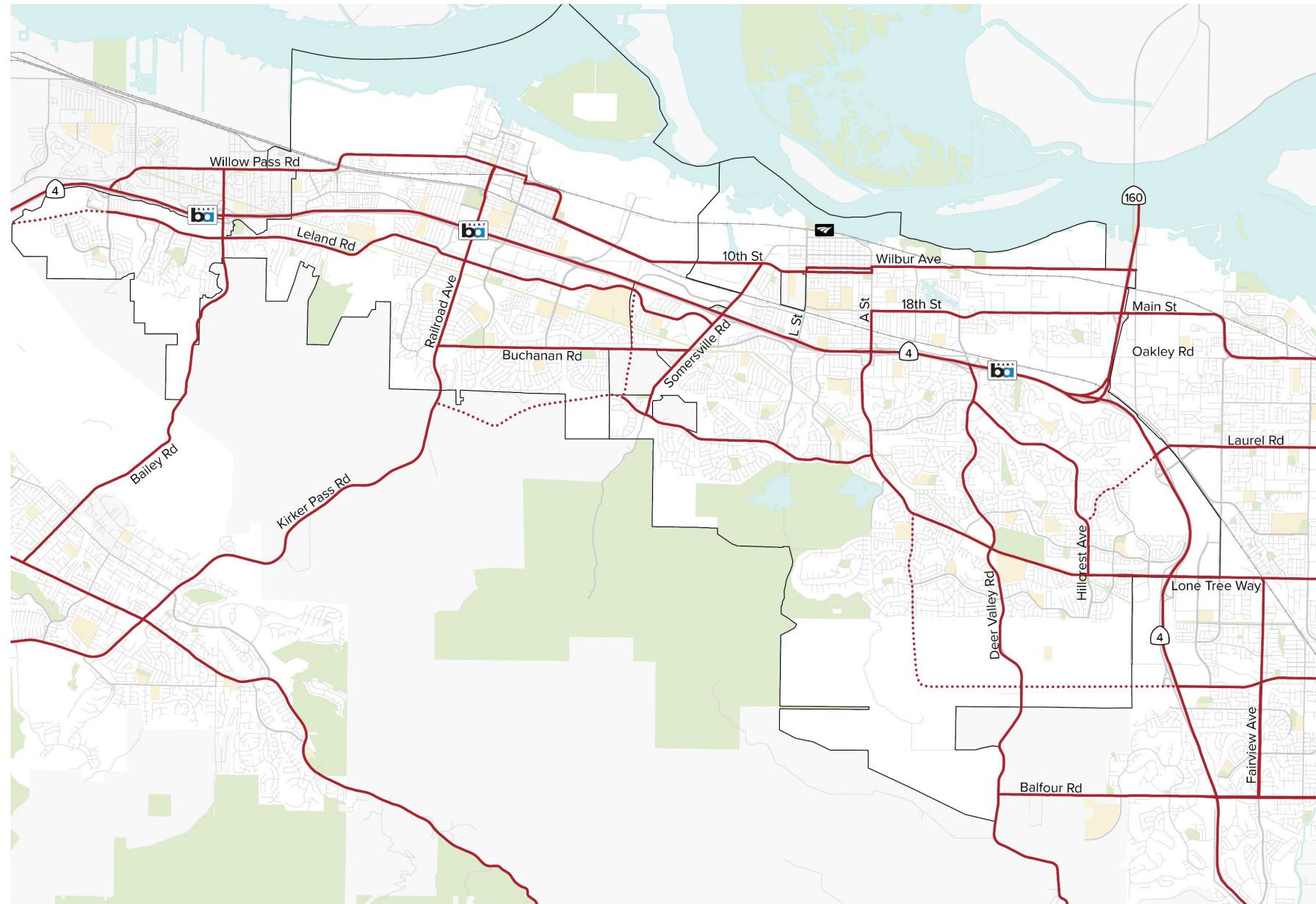
Stops with Highest
Tri-Delta Transit
Ridership



Source: Nelson Nygaard, 2024

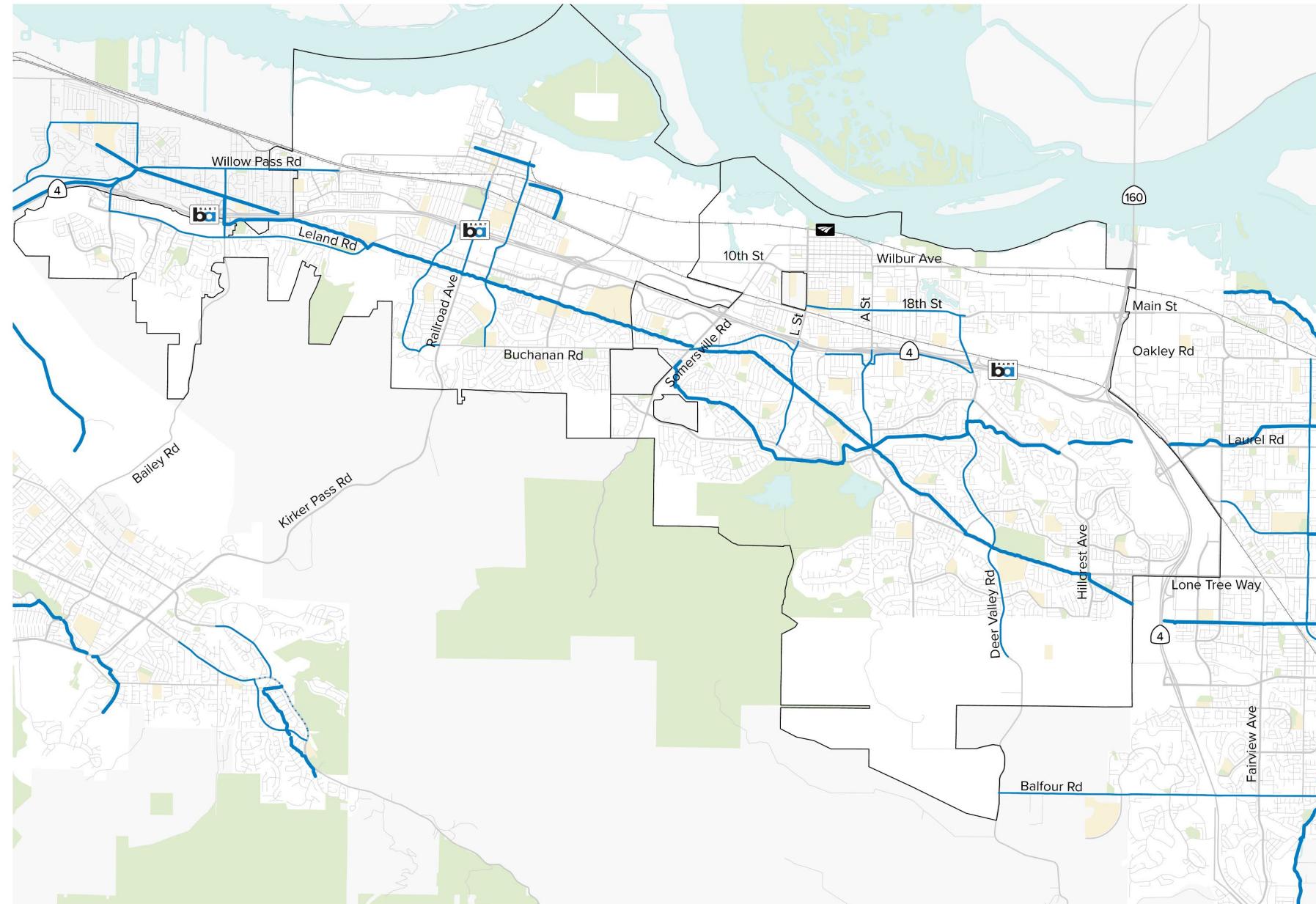
Roadways of Regional Significance

Routes provide access
through East County
and to job centers in
Central County



Bicycle Network

Bicycle infrastructure and access is important for a successful mobility hub

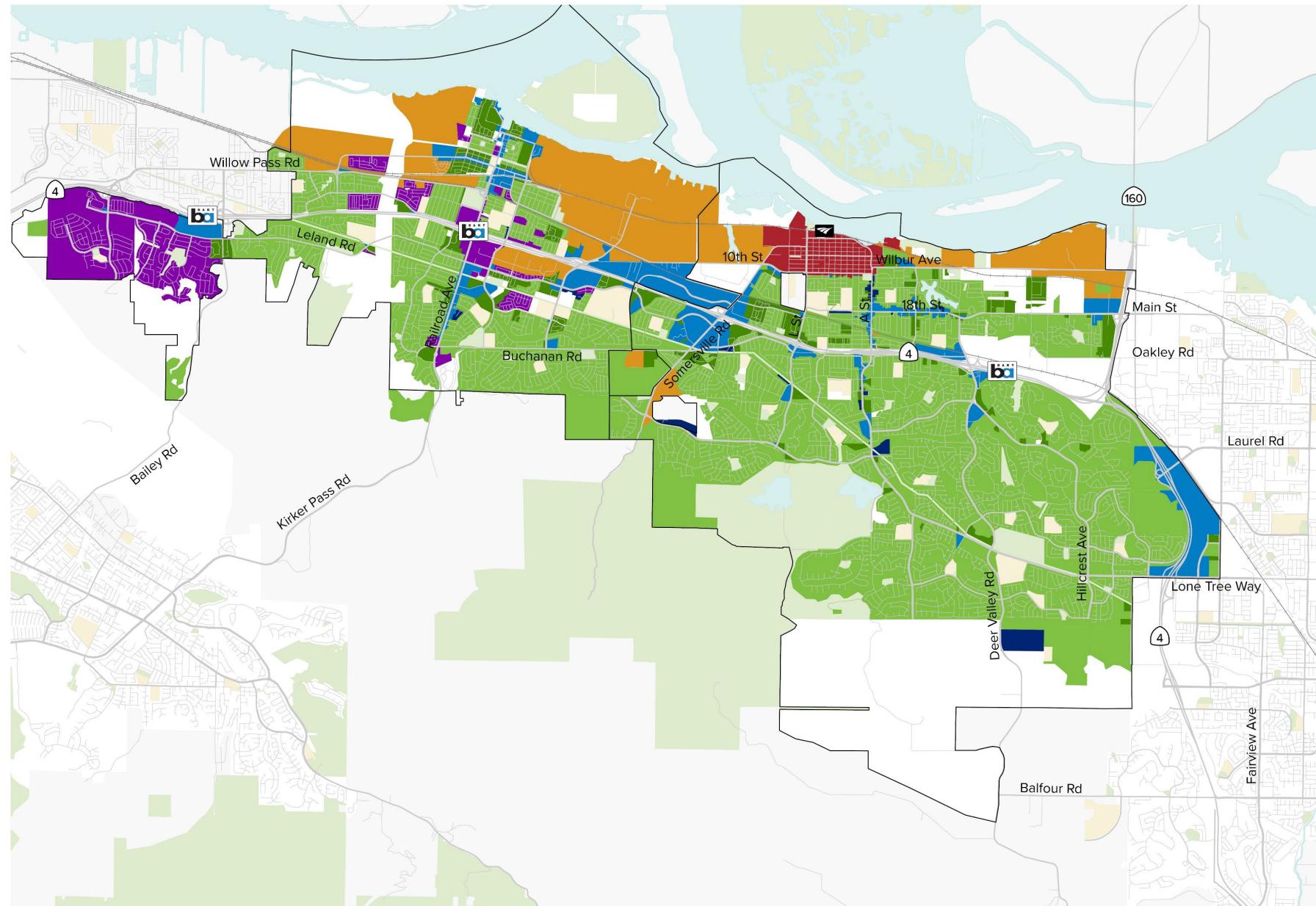


- Class I Shared-Use Paths
- Class II Bike Lanes
- Class III Bike Routes

Pittsburg and Antioch Zoning

Urban sprawl and lack
of land use mix

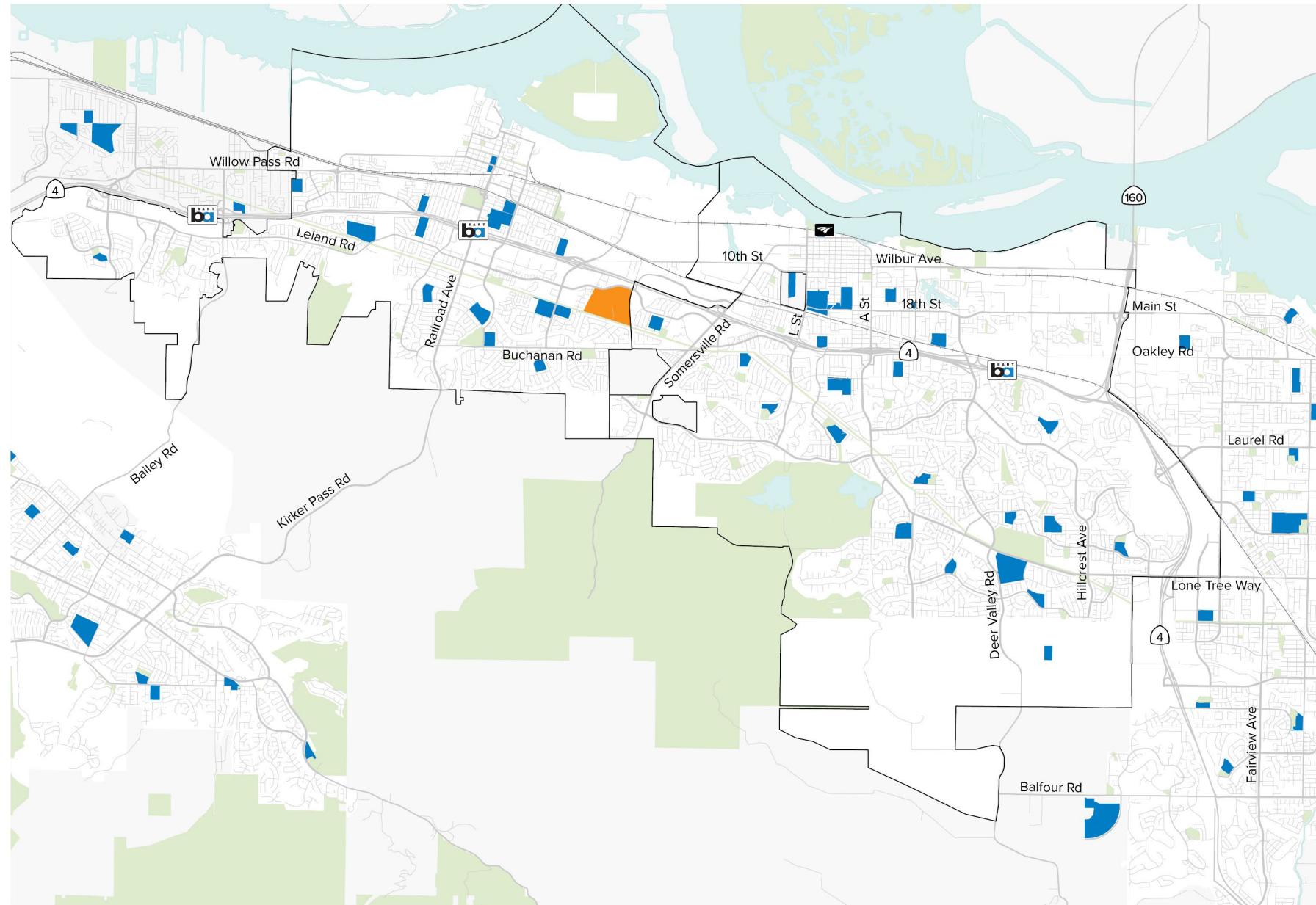
- Single-Family Residential
- Multi-Family Residential
- Downtown & Waterfront
- Industrial
- Office/Institutional
- Commercial
- Schools
- Planned Development (Pittsburg)



Schools and Parks

Community anchors
where people gather

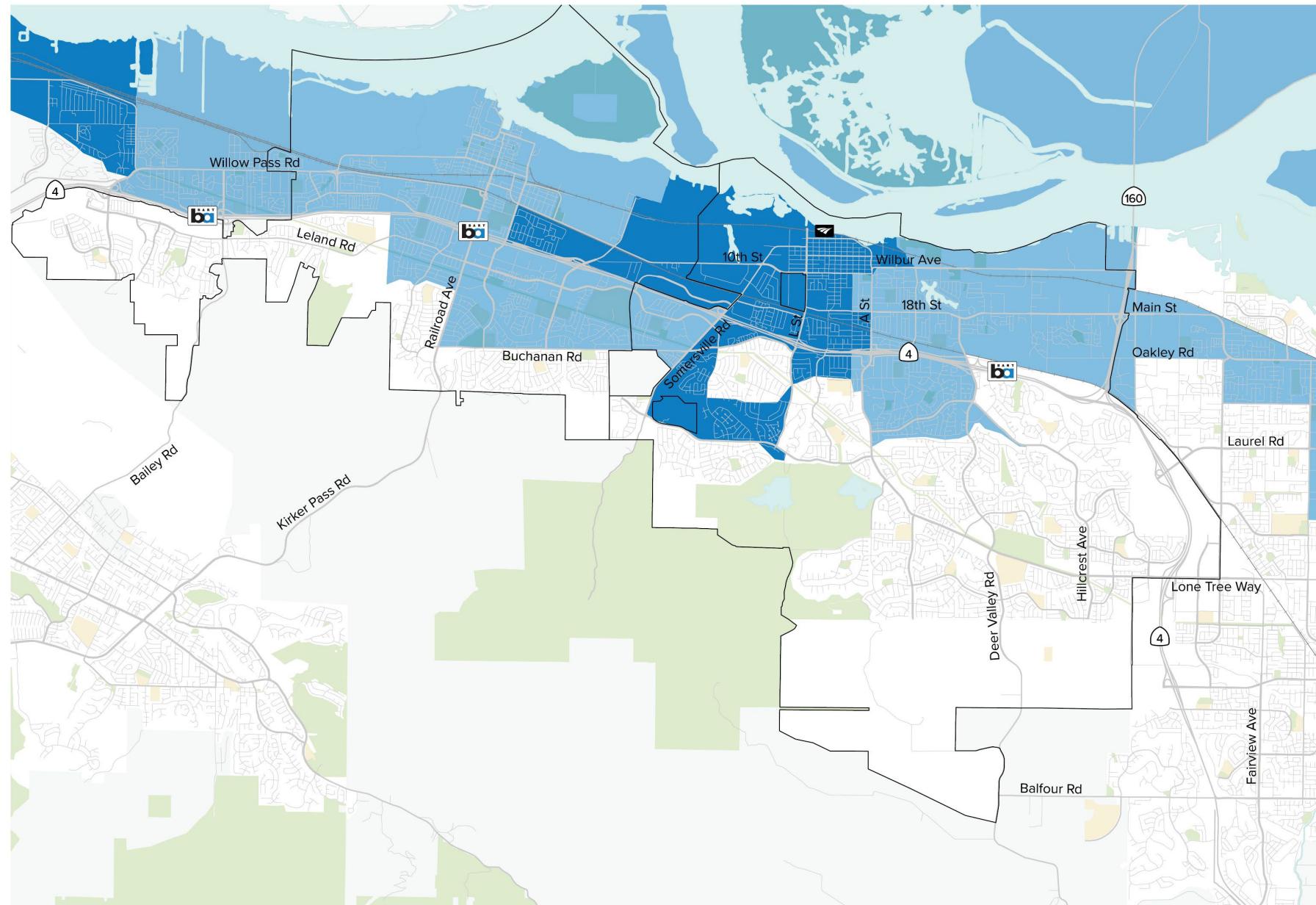
- Schools
- Community colleges (Los Medanos College)
- Parks



Healthy Places Index (HPI)

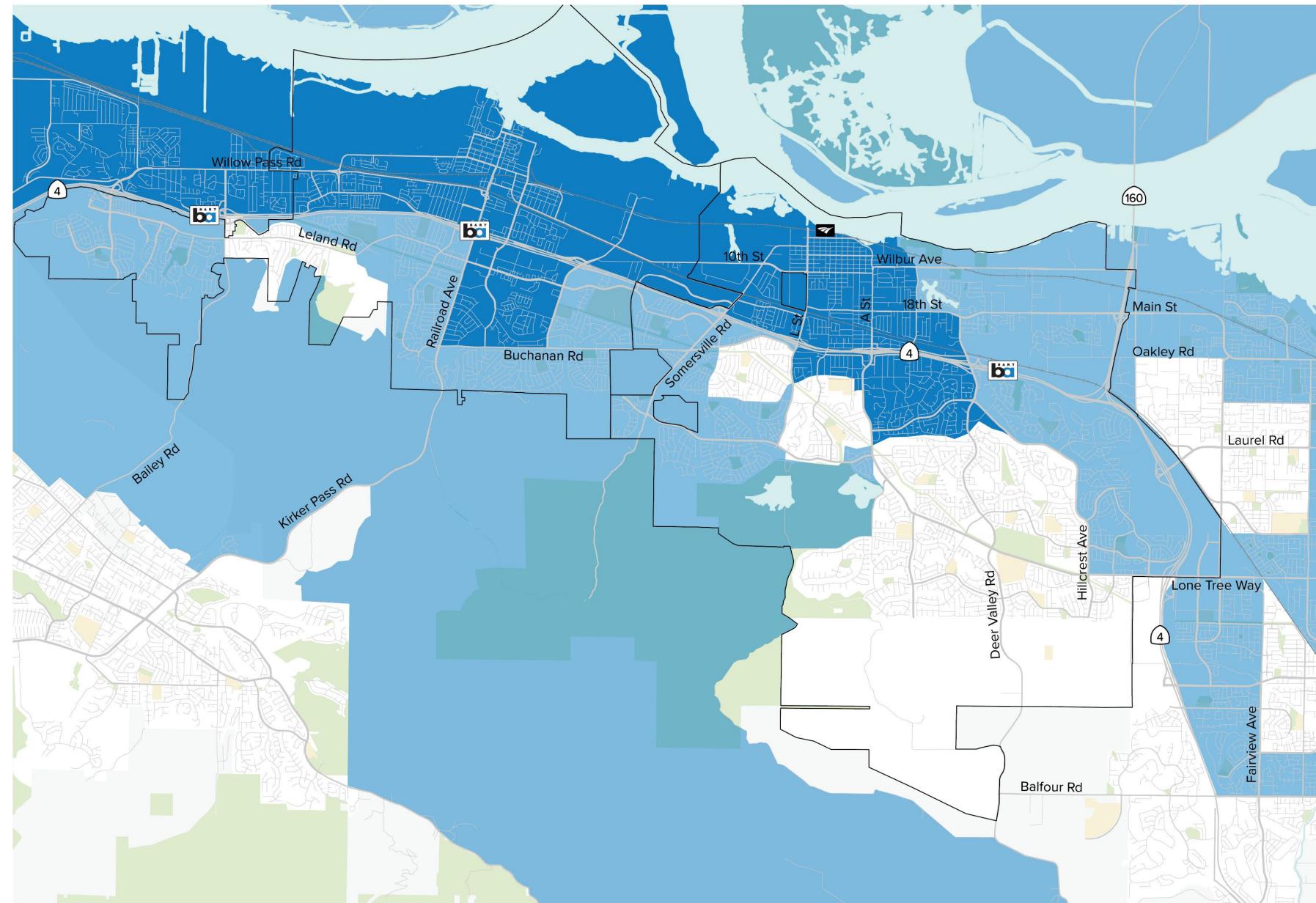
Places with low health-related index exist in most of Pittsburg and north Antioch

- Tracts scoring below the 25th percentile statewide (identified by the state as disadvantaged)
- Tracts scoring between the 25th and 50th percentile statewide



CalEnviro Screen 4.0 Results

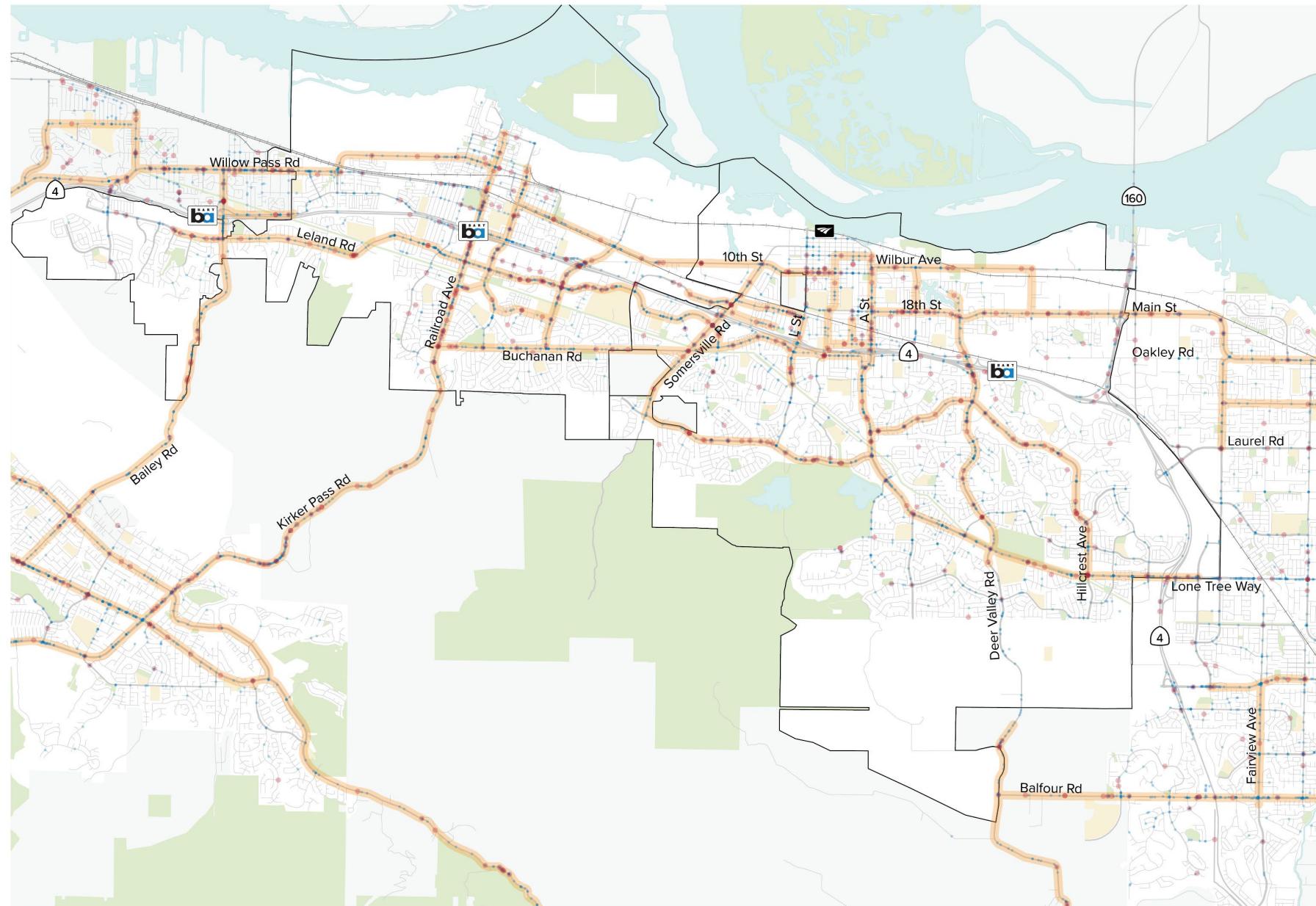
Environmental health is also a concern in the study area



CCTA Safety Priority Locations

Future safety enhancements that can improve access to mobility hub

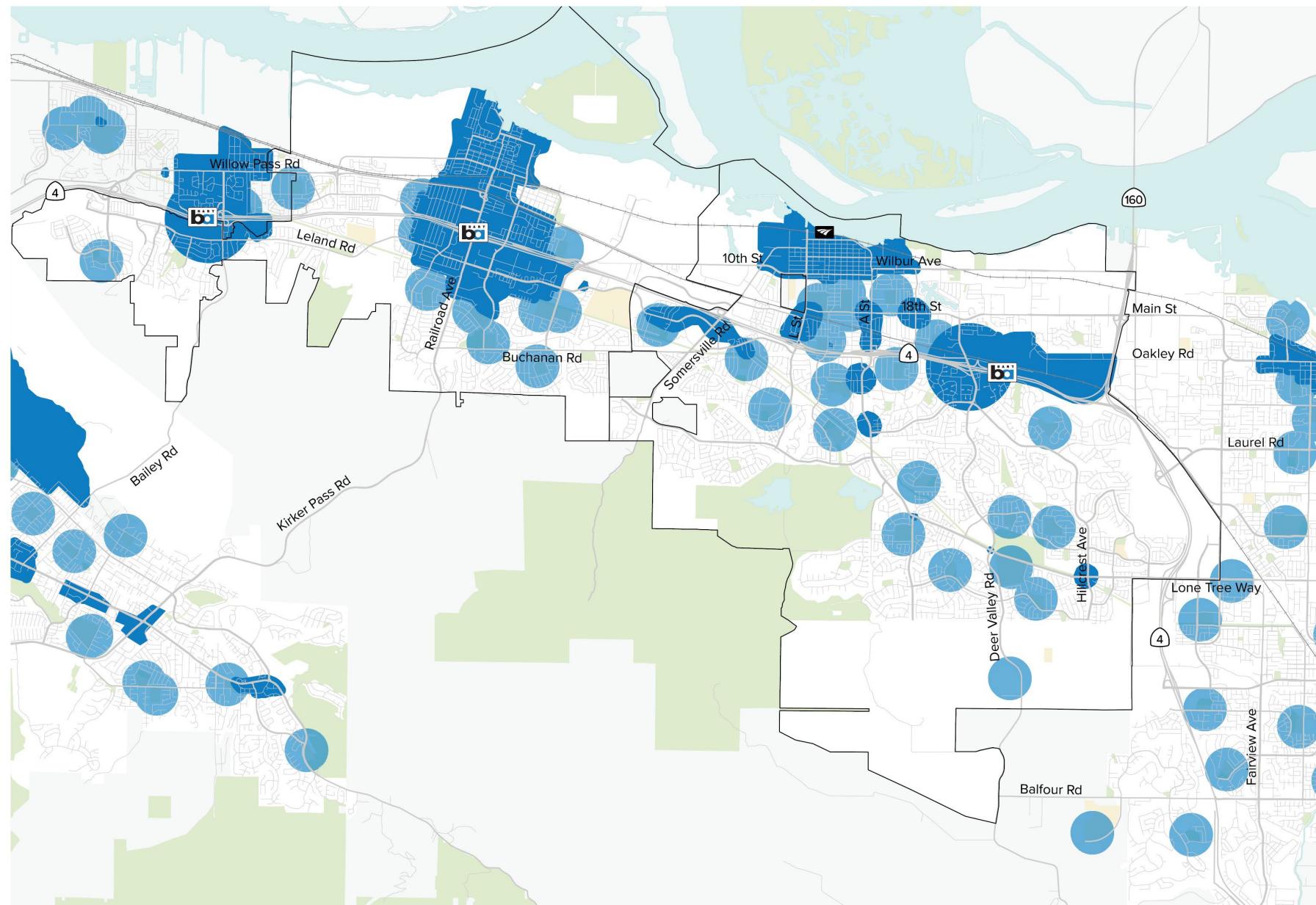
- Safety Priority Locations (High-Injury Network)
- Collisions leading to fatality or severe injury
- Other injury collisions



Pedestrian Priority Areas

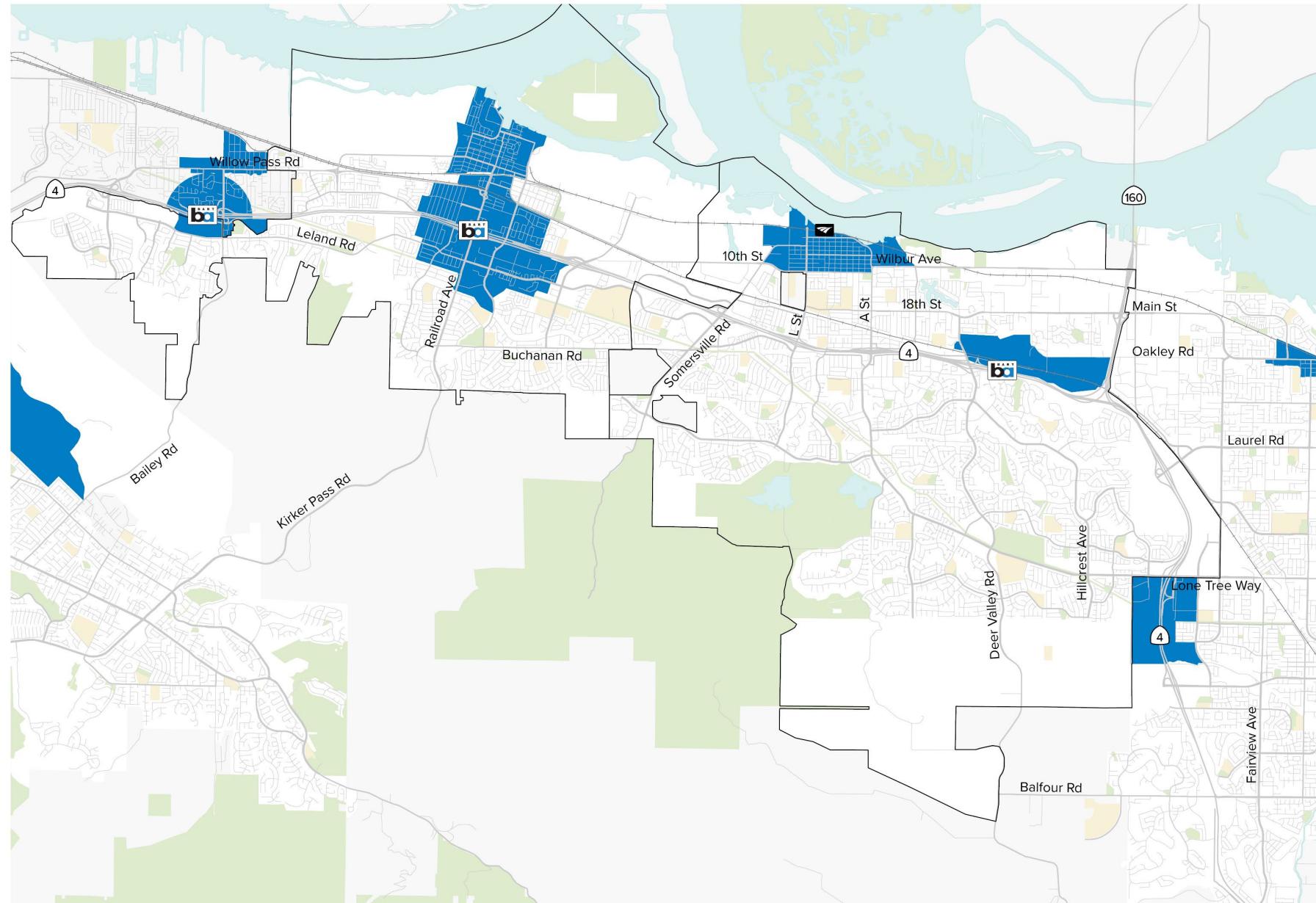
Areas of future development and public investment

■ Core PPA
■ Areas within 0.25 mi of schools



MTC Priority Development Areas (PDAs)

Areas of future development and public investment



MTC Transit Oriented Communities (TOCs)

Areas that prioritizes bus transit, active transportation and shared mobility particularly to EPCs

■ MTC Transit-Oriented Communities (Tier 3 Transit Service)

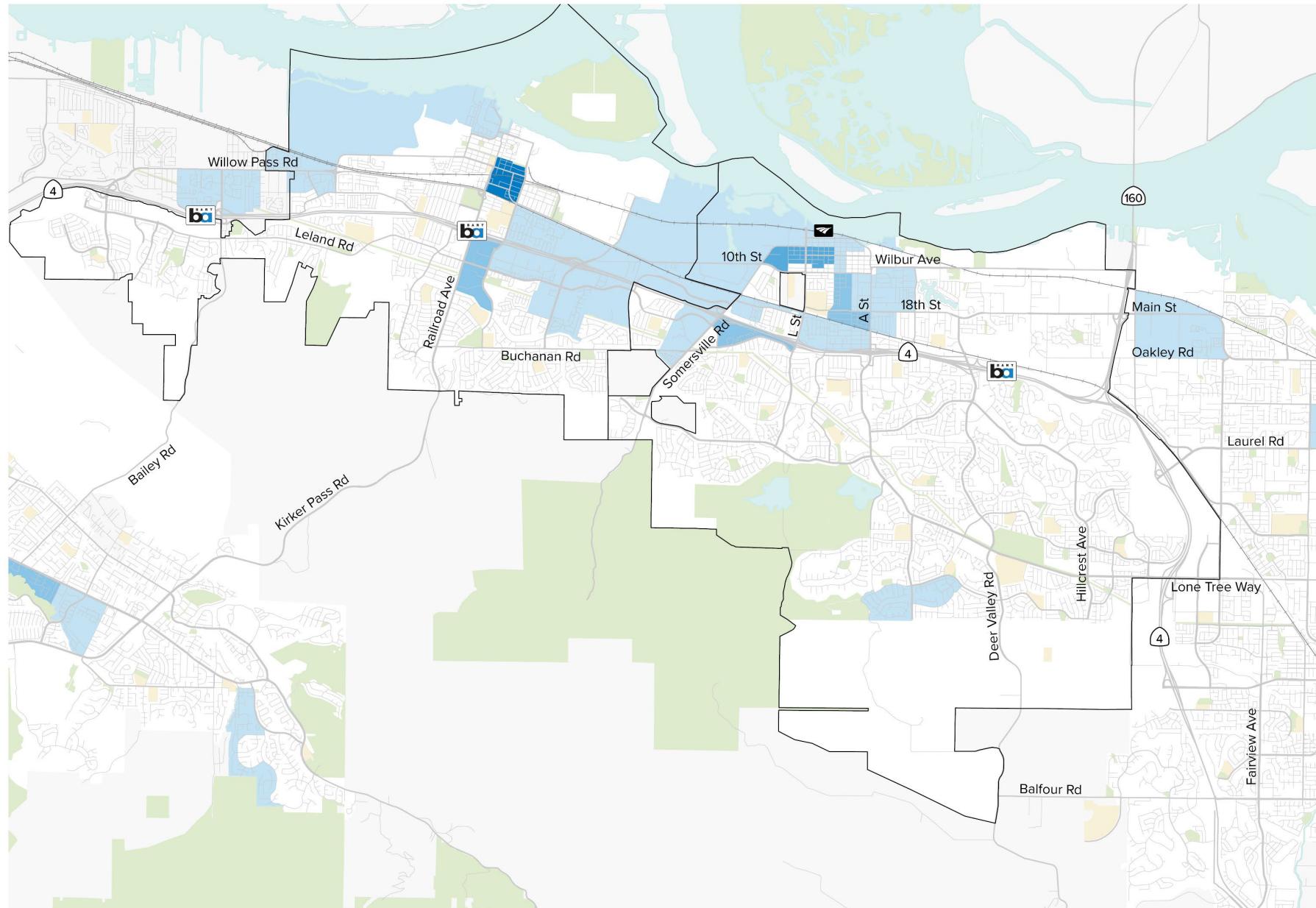
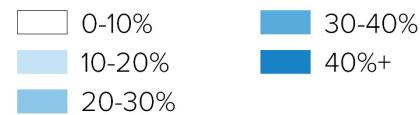


Share of Households with No Vehicles

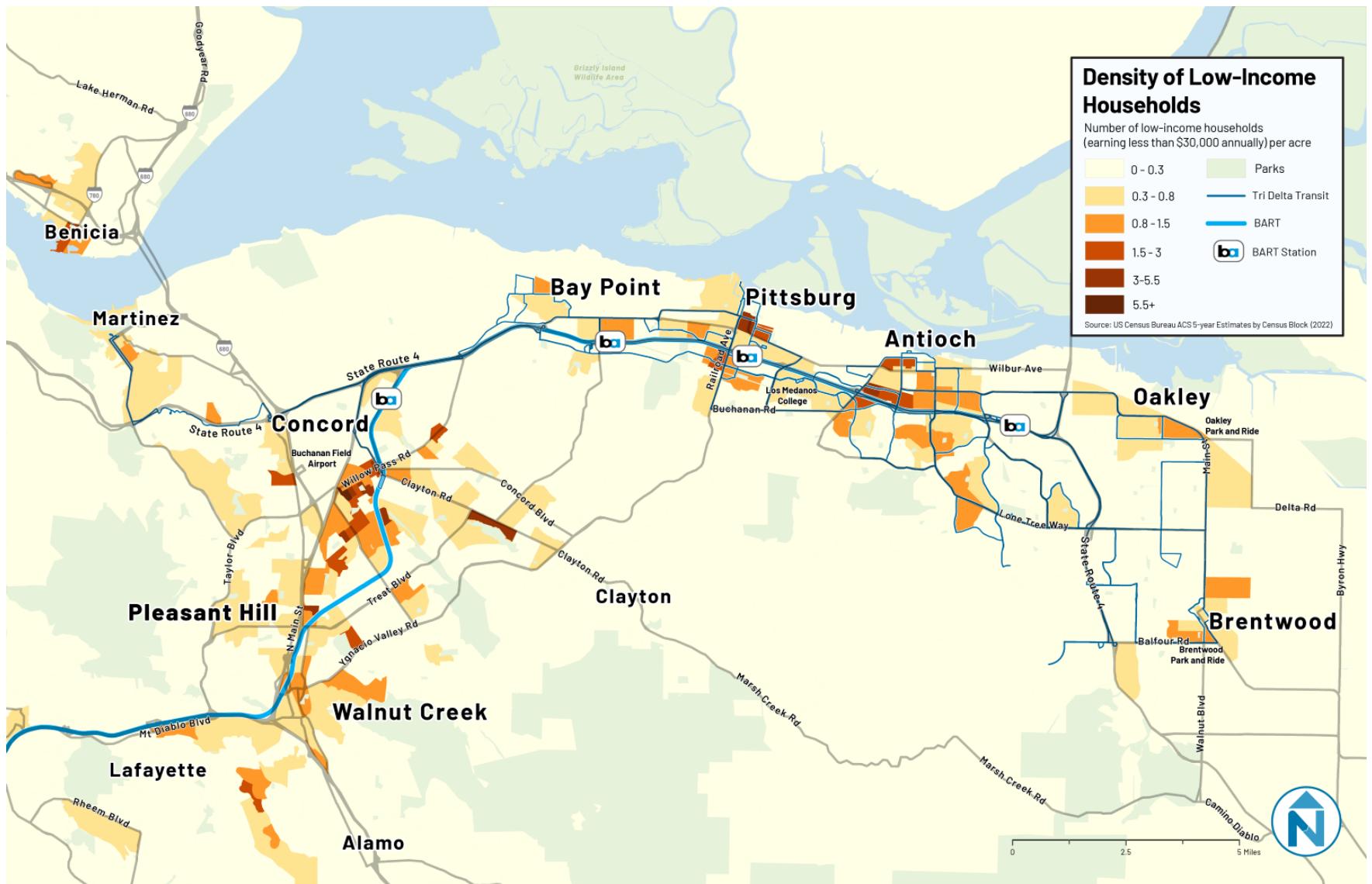
Households with a higher dependency on transit

Zero-Vehicle Households

Source: 2018-2022 American Community Survey (ACS)

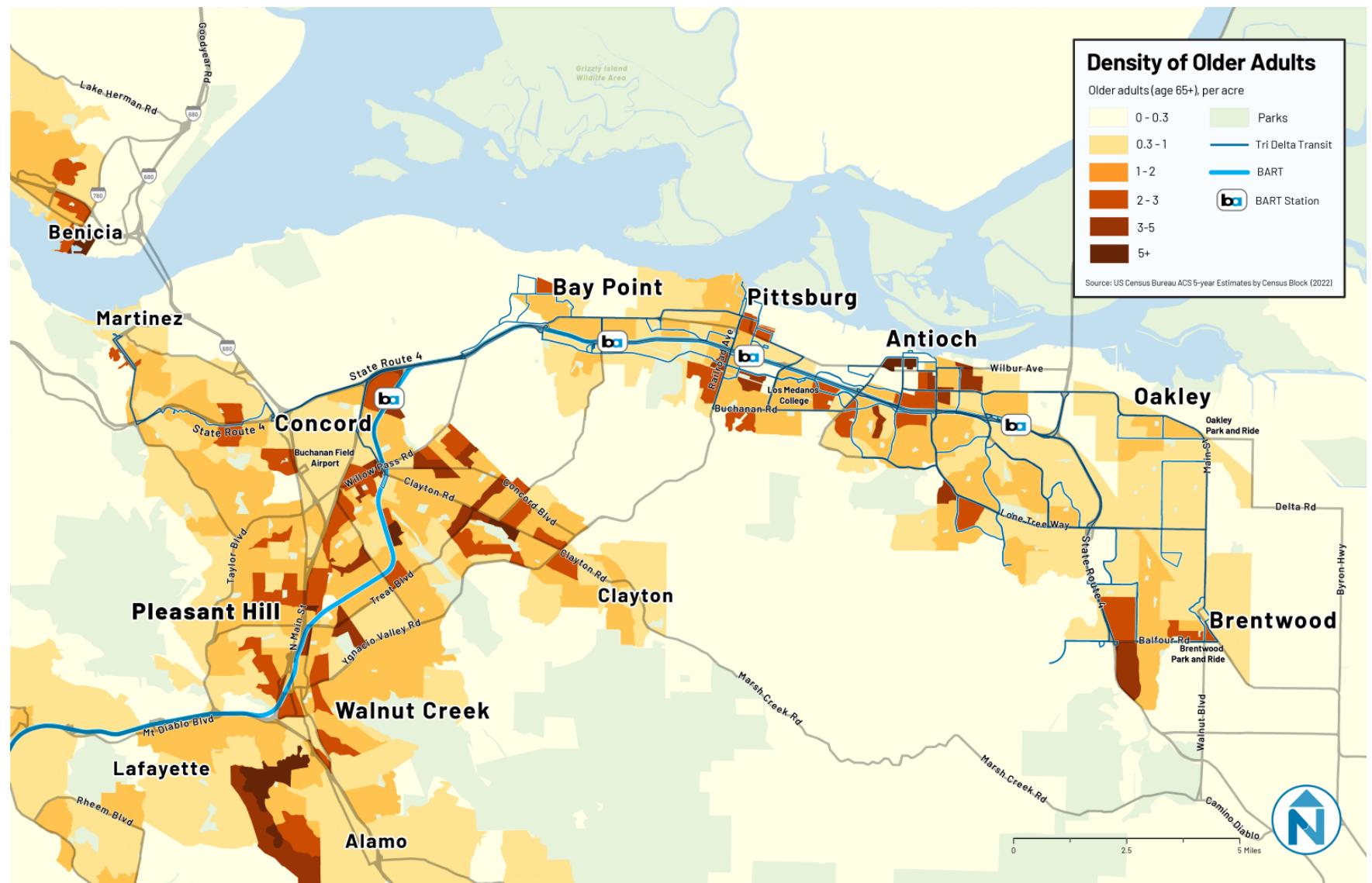


Density of Low-Income Households



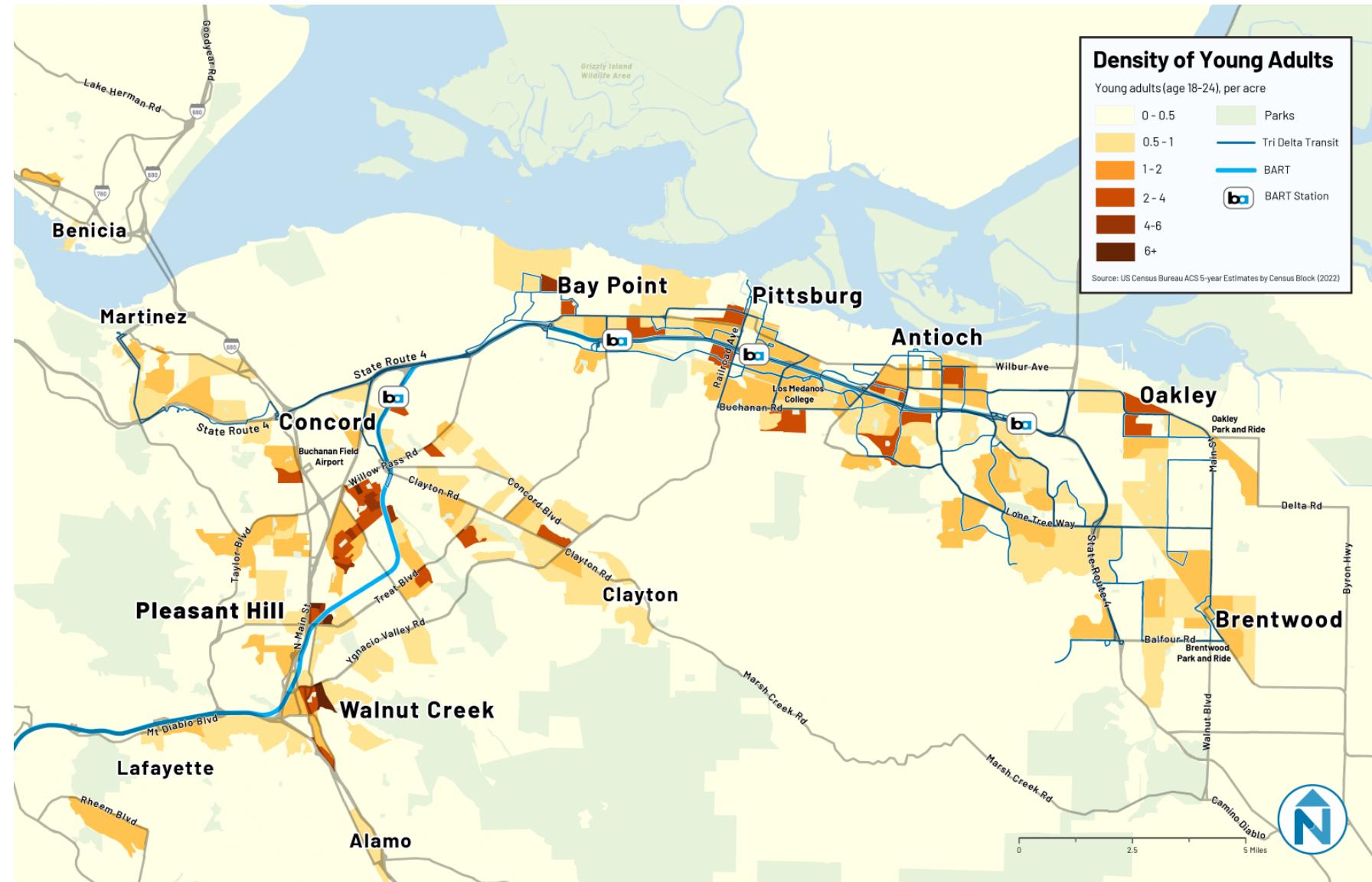
Source: Nelson Nygaard, 2024

Density of Older Adults



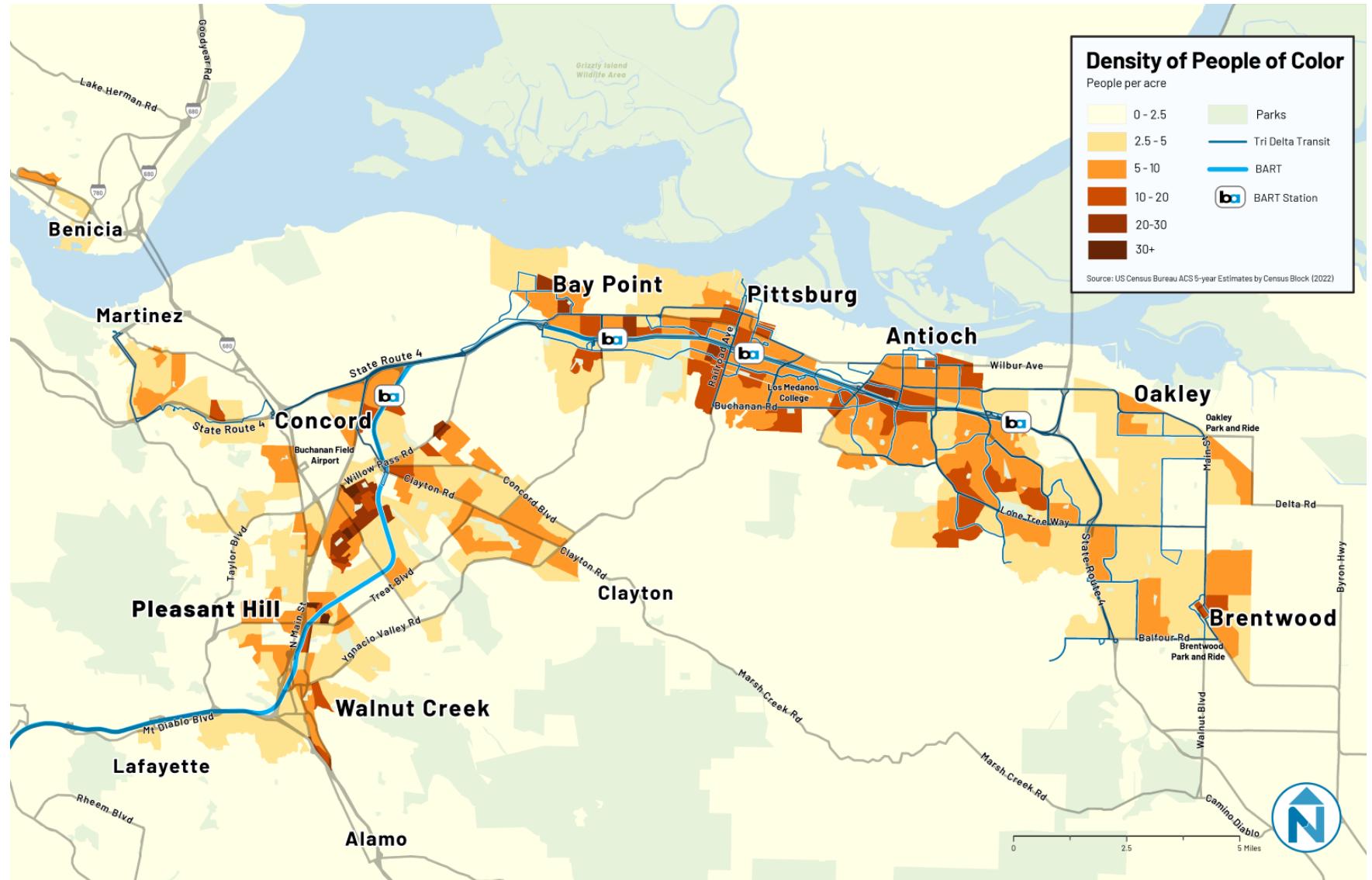
Source: Nelson Nygaard, 2024

Density of Youth



Source: Nelson Nygaard, 2024

Density of People of Color



Source: Nelson Nygaard, 2024

Travel Patterns Assessment

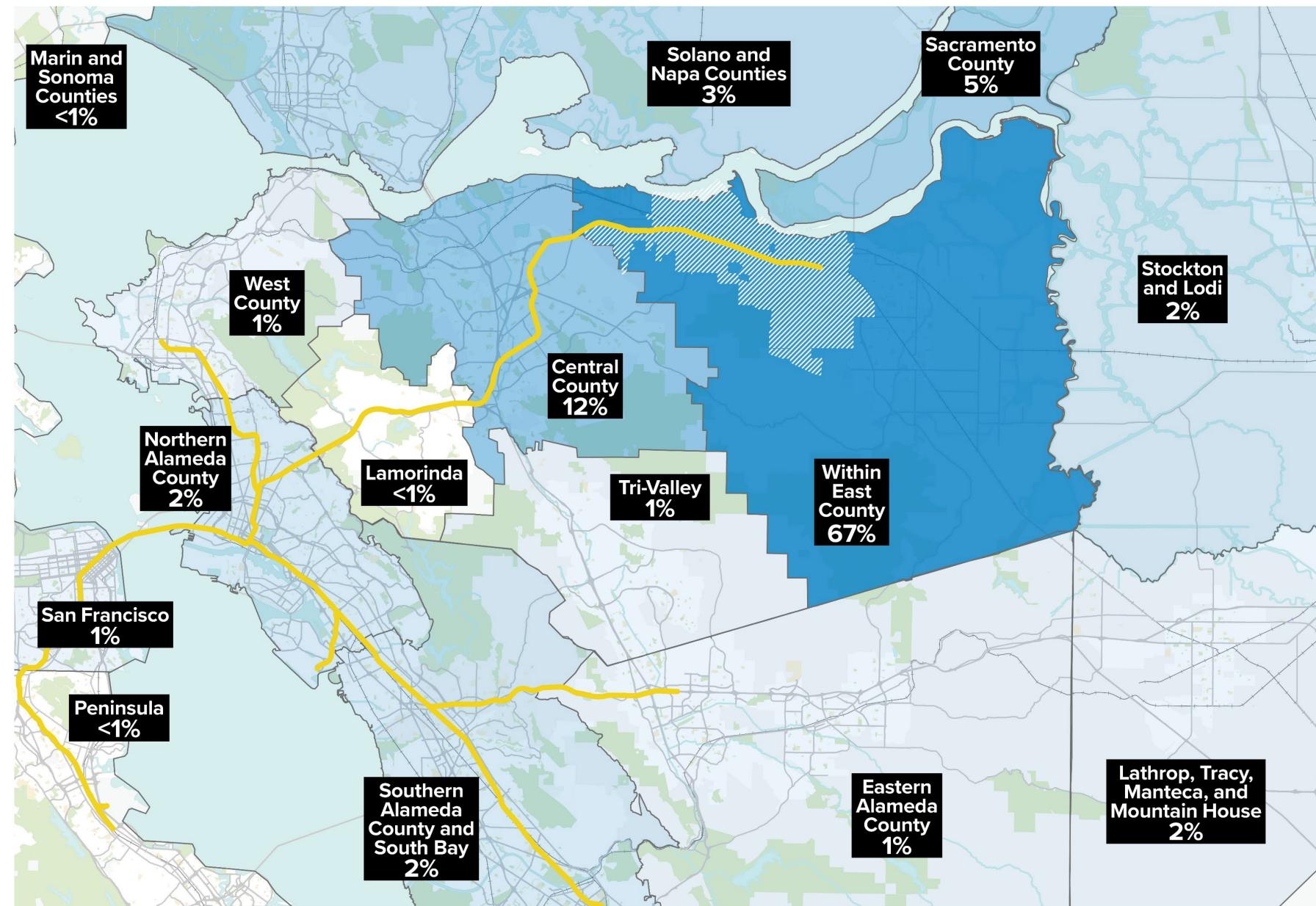
- Use of “big data” sources (i.e., Replica, StreetLight) to assess travel patterns within Tri Delta Transit service area
 - Major origin and destination zones
 - Trip length distribution
 - Mode choice



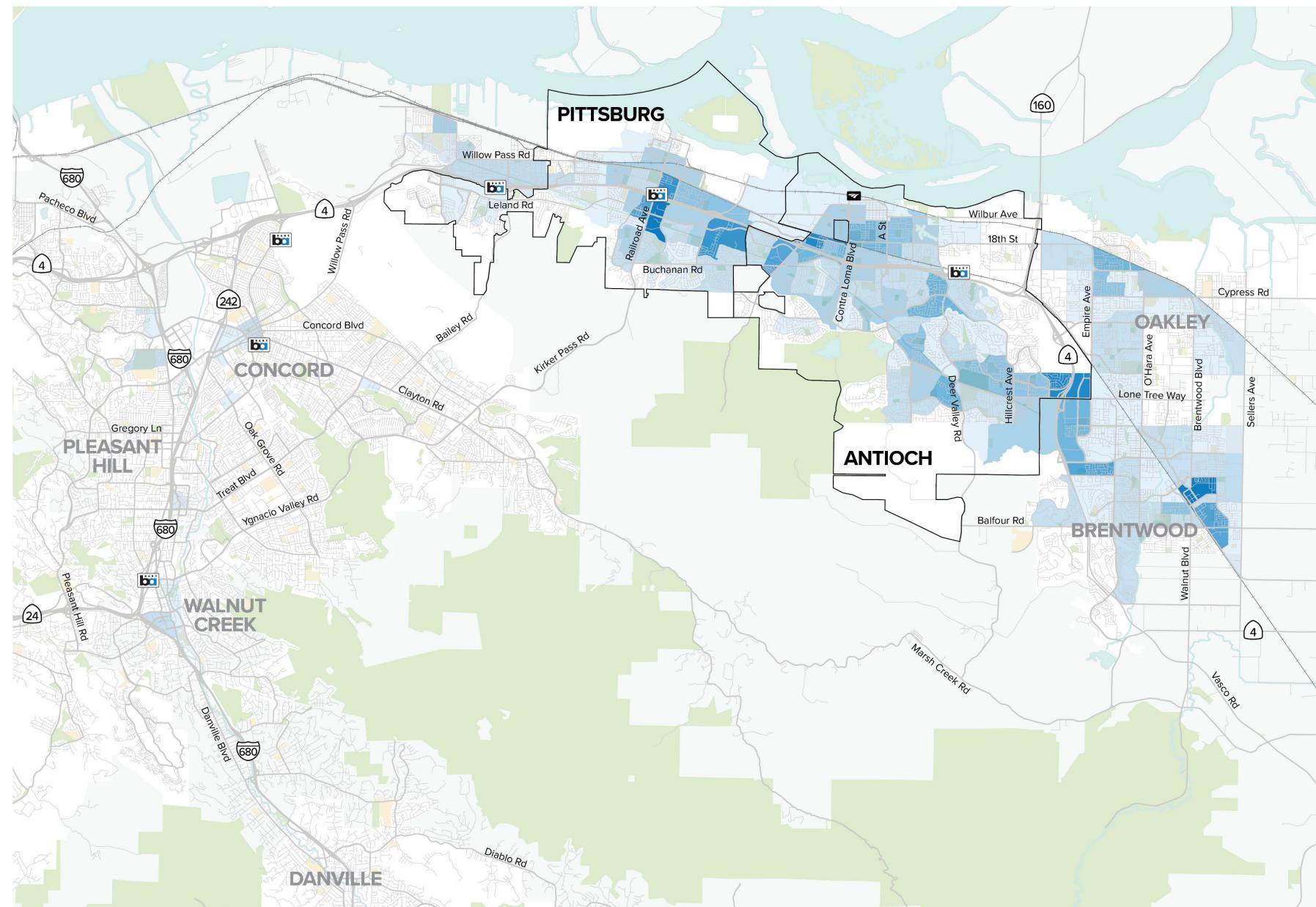
Trips Starting or Ending in East County by Region

High proportion of local trips

- BART
- Pittsburg and Antioch City Limits



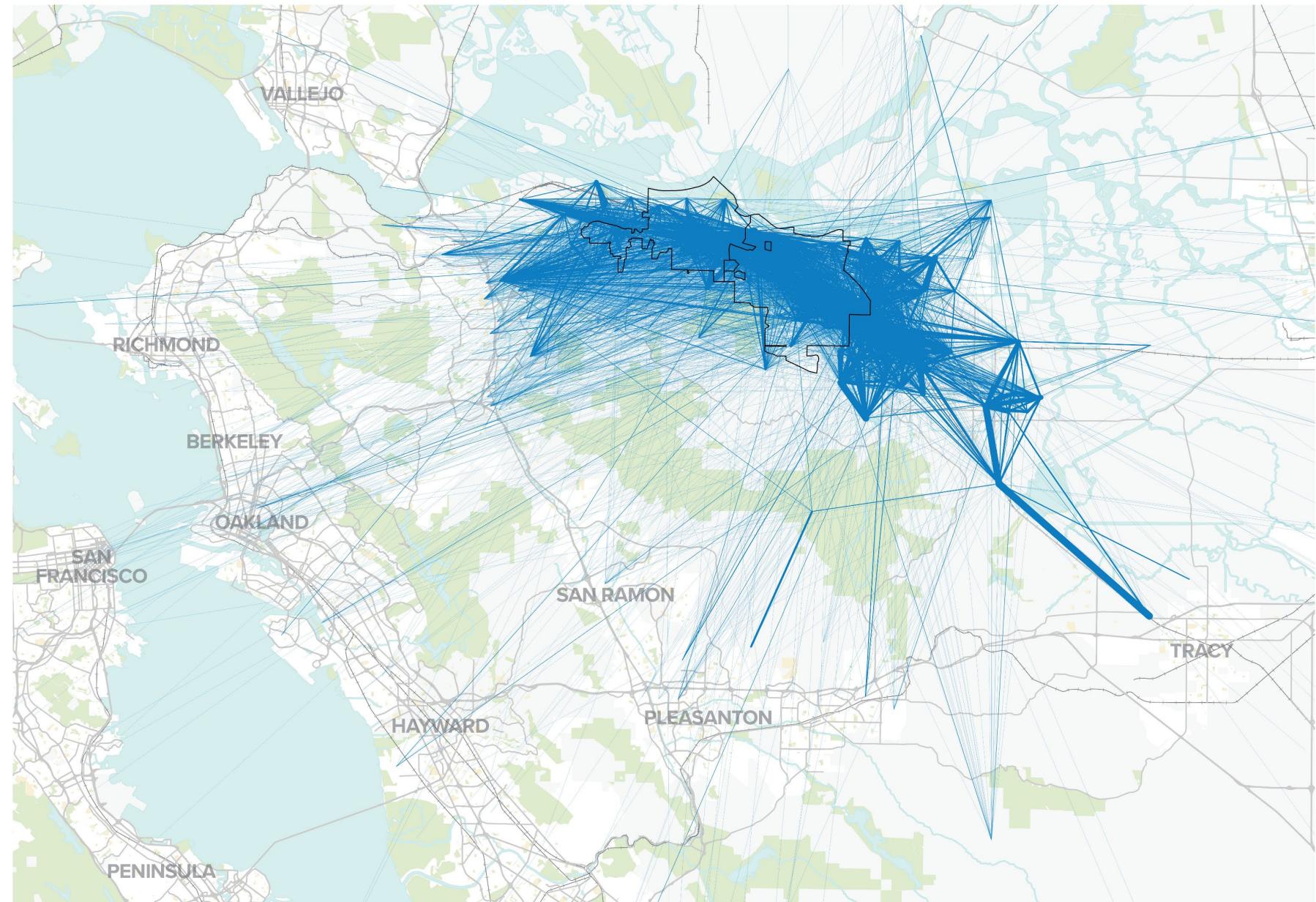
East County Trips by Block Group



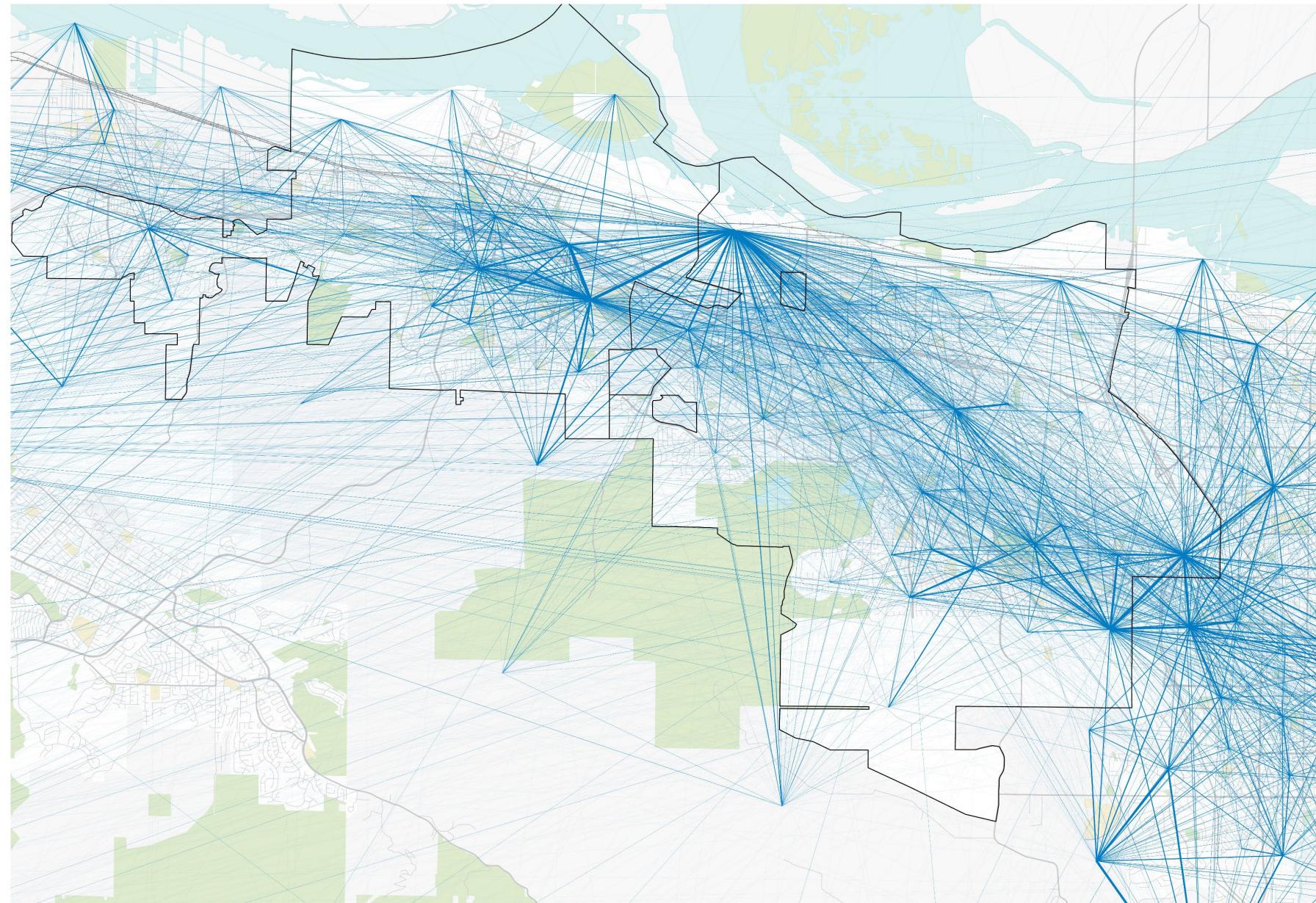
Share of Total Trips: 0%

5%+

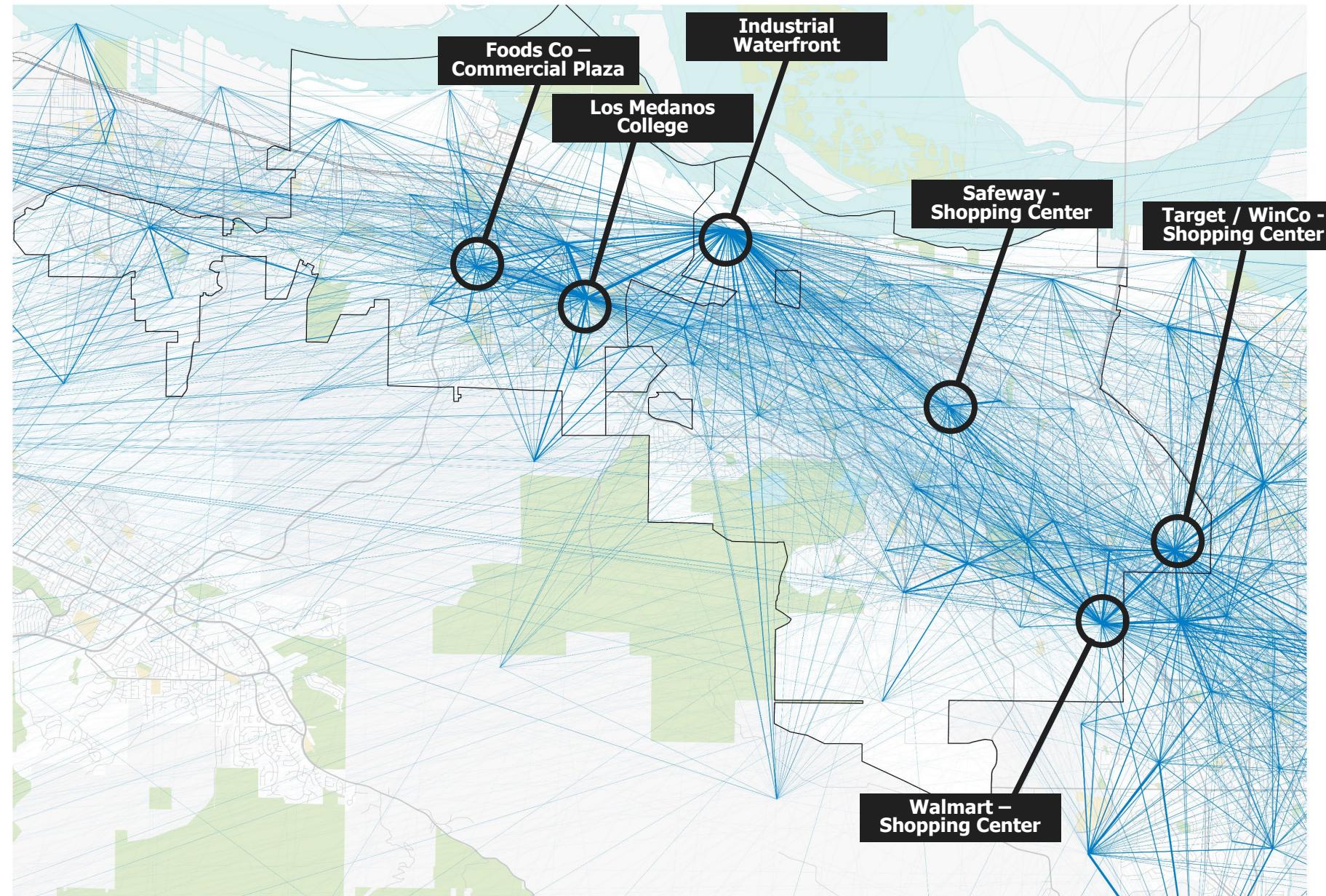
Origins and Destinations of East County Trips



Origins and Destinations of East County Trips

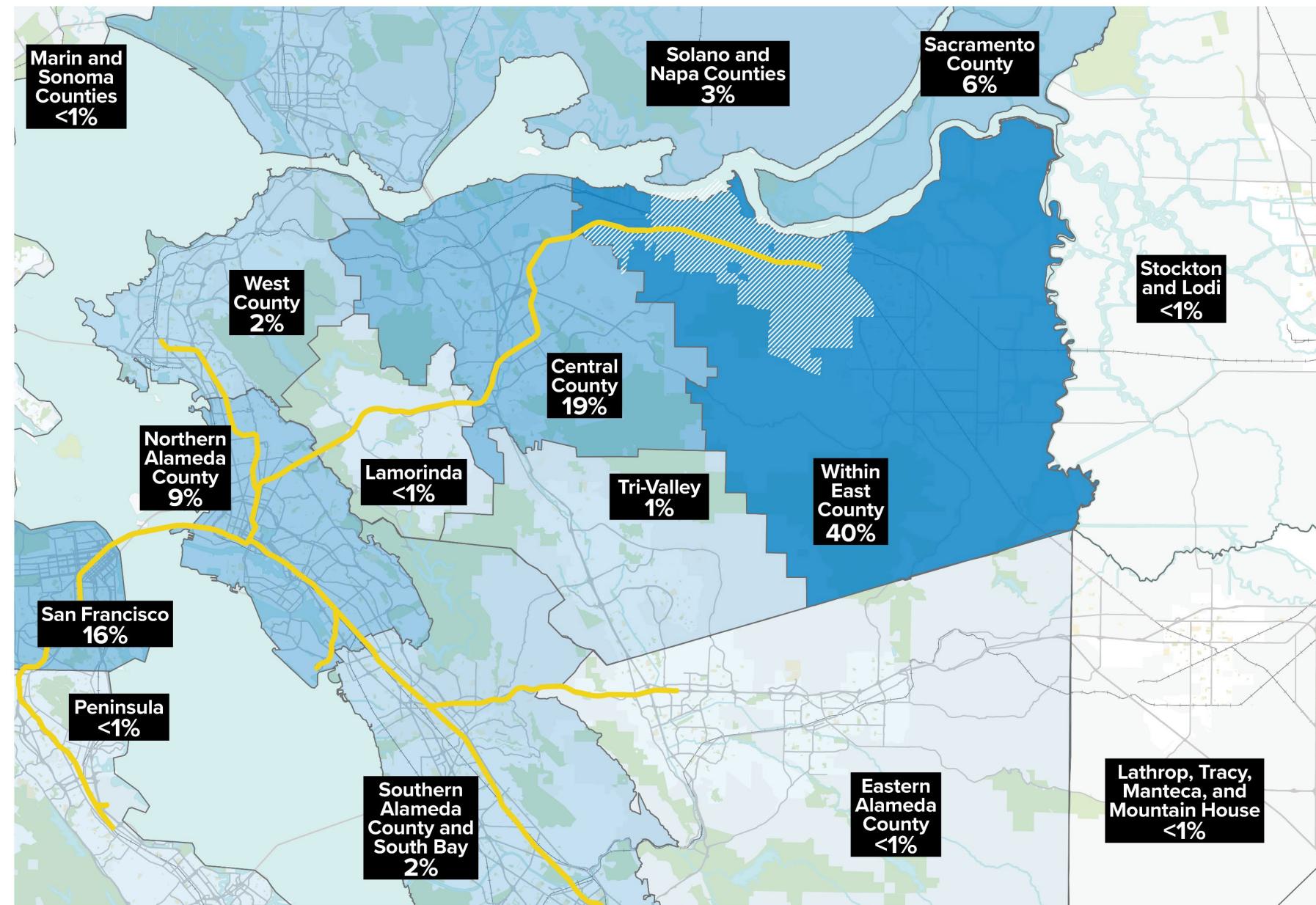


Origins and Destinations of East County Trips



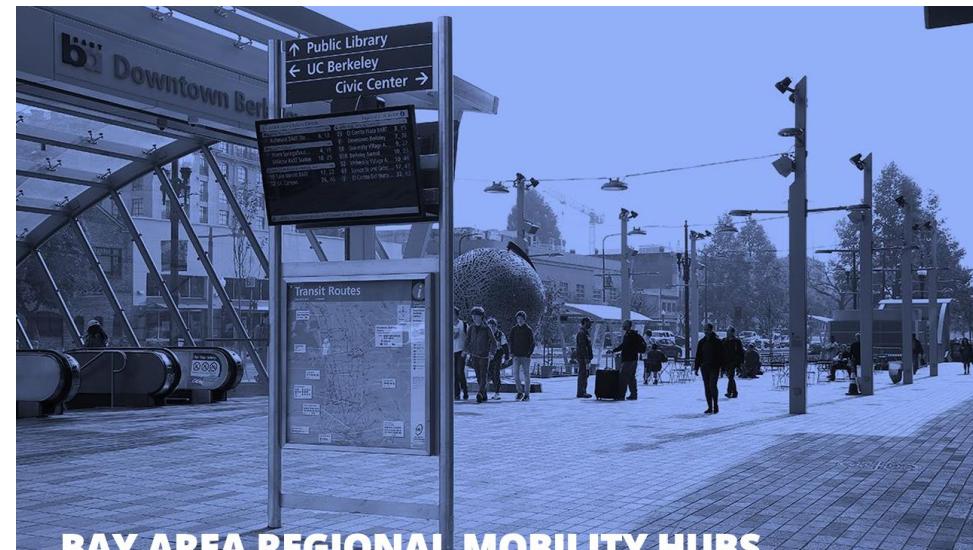
Transit Trips Starting or Ending in East County by Region

— BART
■ Pittsburg and Antioch City Limits



Mobility Hub Typologies Based on Context

- MTC's MTC Mobility Hub Implementation Playbook defines six mobility hub typologies:
 - Regional Downtown Hubs
 - Urban District Hubs
 - Emerging Urban District Hubs
 - **Suburban/Rural Hubs**
 - Pulse Hubs
 - **Opportunity Hubs**



**BAY AREA REGIONAL MOBILITY HUBS
MOBILITY HUB
IMPLEMENTATION PLAYBOOK**



Suburban and Rural Hubs

- Main characteristics:
 - Located in auto-oriented suburban and rural areas.
 - Low residential and employment densities
 - Access to regional rail and local bus services
- Likely features and services:
 - Park-and-Ride access connected to BART or regional rail
 - Frequent and infrequent local feeder bus services
 - Within car share and/or bike share service areas
 - Moderate demand for TNCs

Opportunity Hubs

- Main characteristics:
 - Located in outlying town center areas and/or at Equity Priority Communities
 - Lack of high quality, frequent transit service
- Likely features and services:
 - Areas with concentrated mobility demand, but no proximate access to multiple frequent transit routes or other shared mobility services
 - Bike and car share parking

Next Steps

Mobility Hub Study



Existing
Conditions



Stakeholder
Engagement
& Outreach



**Program
Development**



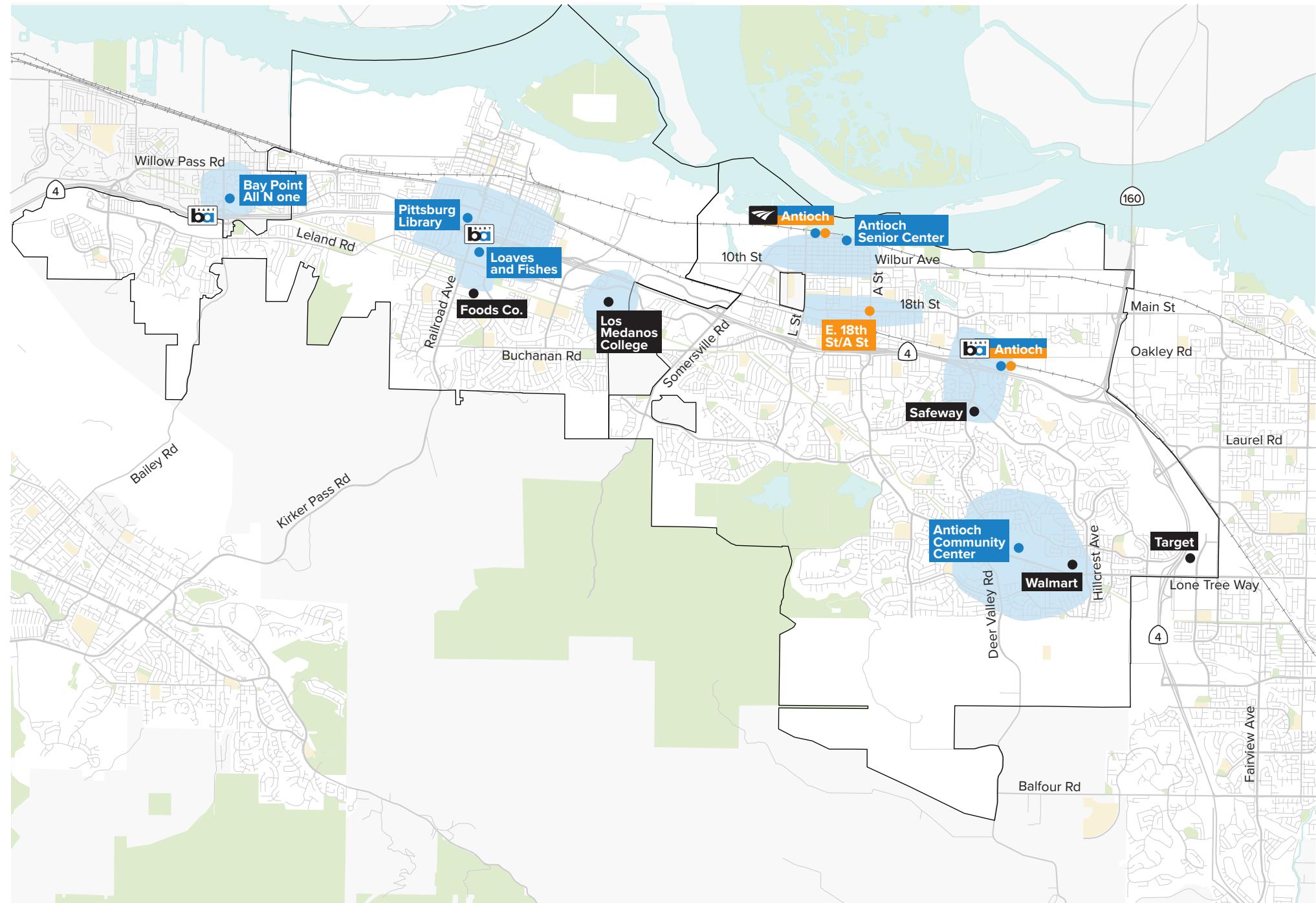
Schematic
Design

Next Steps

- Using the Existing Conditions maps and the program objectives identify up to 10 potential mobility hub locations.
- Factors to be considered when selecting potential locations:
 - Proximity to key transportation infrastructure and services
 - Easily accessible on foot or bicycle
 - Presence of disadvantaged communities
 - Travel density
 - Potential for future growth.
- Categorize locations by mobility hub typology
 - Suburban/Rural Hubs
 - Opportunity Hubs

Appendix B:

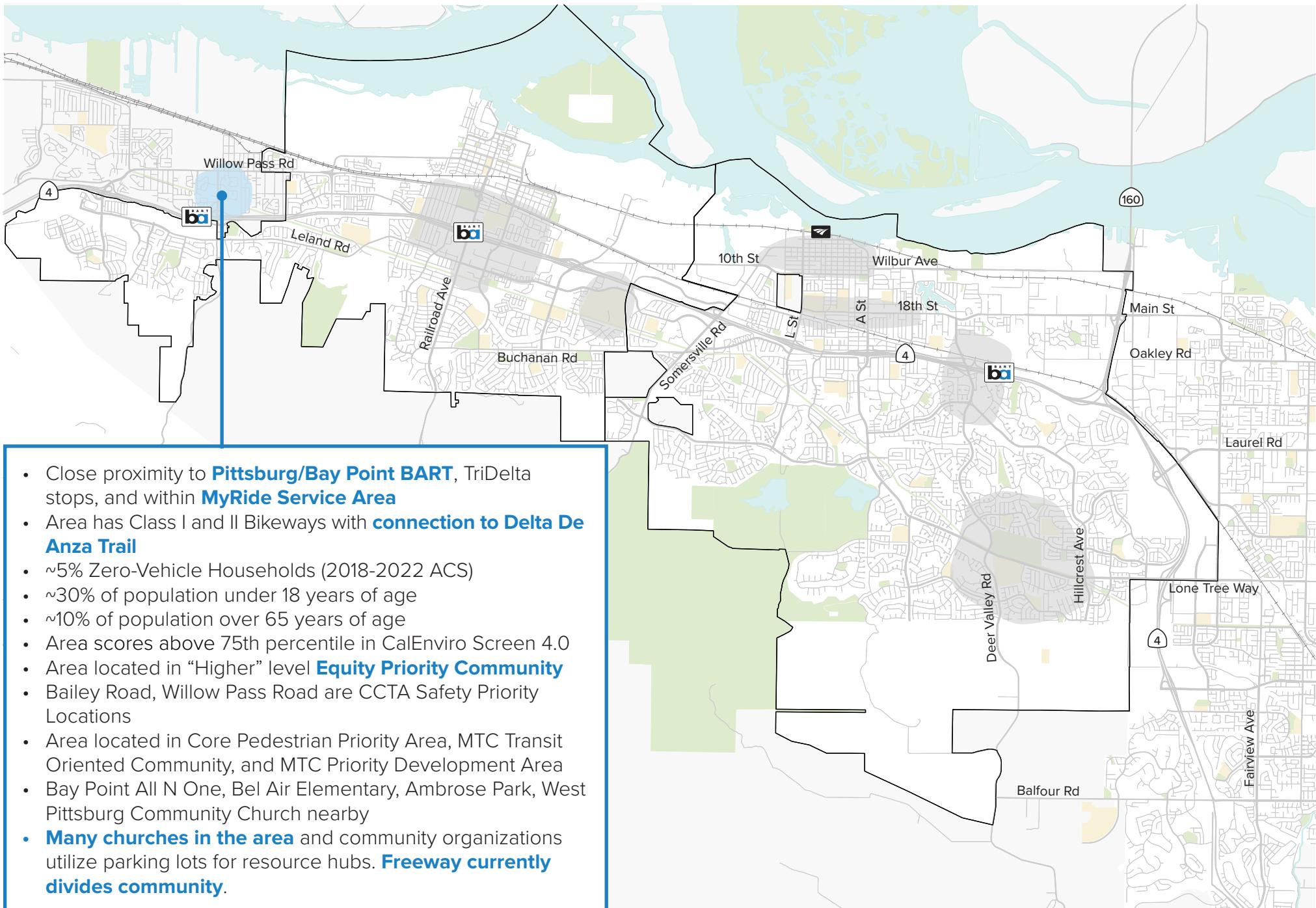
Key Candidate Areas



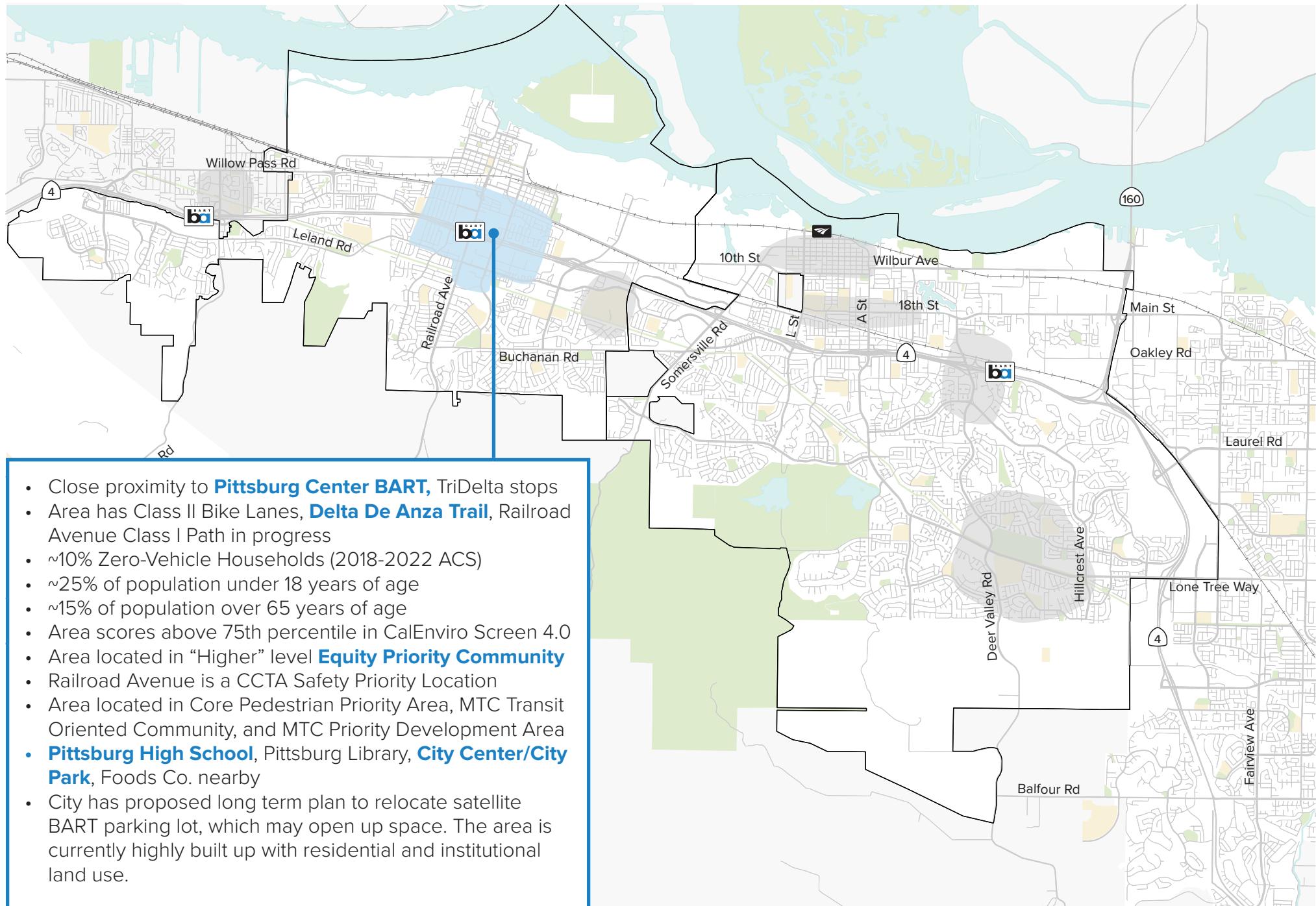
Mobility Hub Candidate Locations

- Locations identified by stakeholders
- Locations identified during outreach
- Locations identified using Replica data

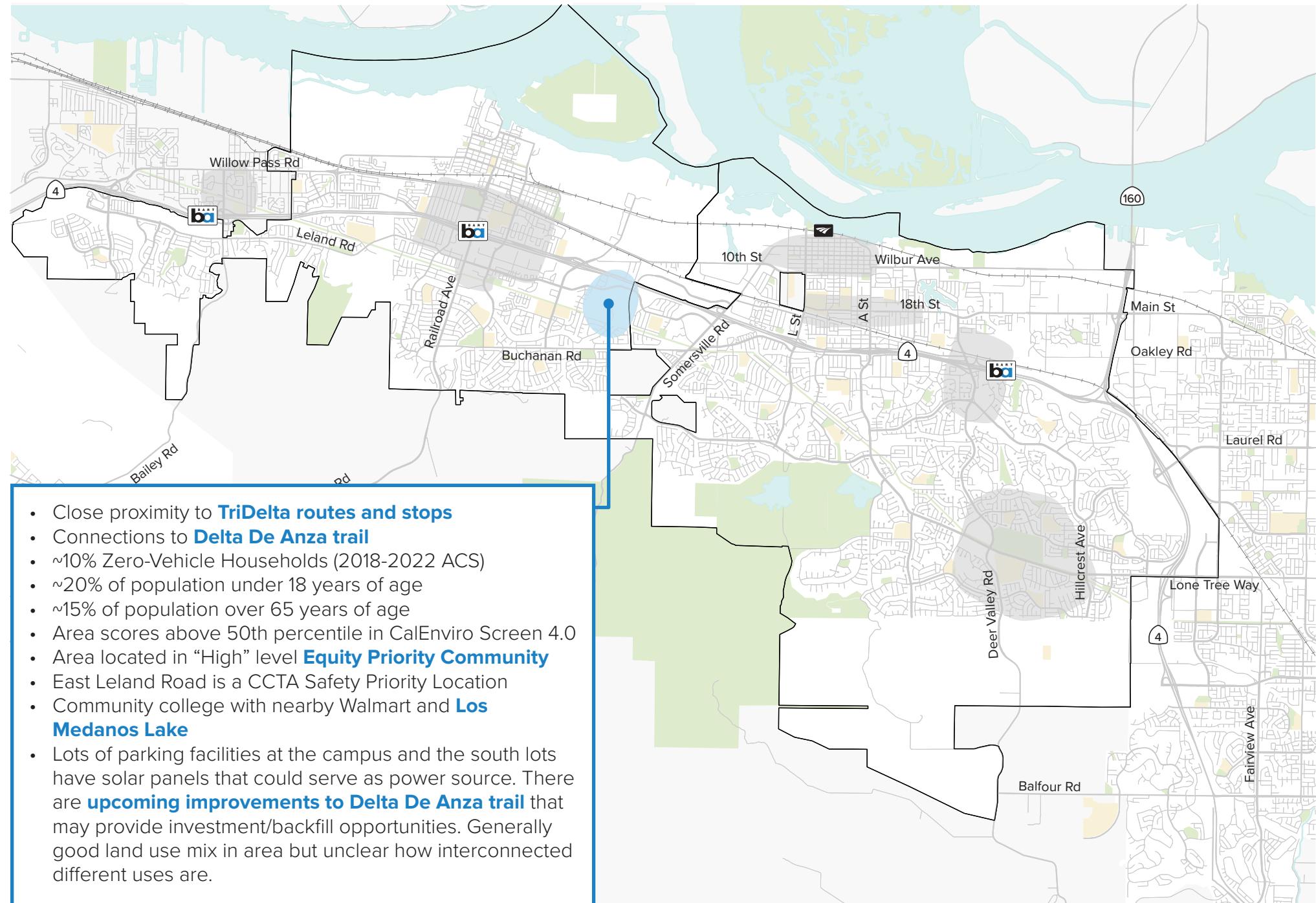
Key Candidate Areas



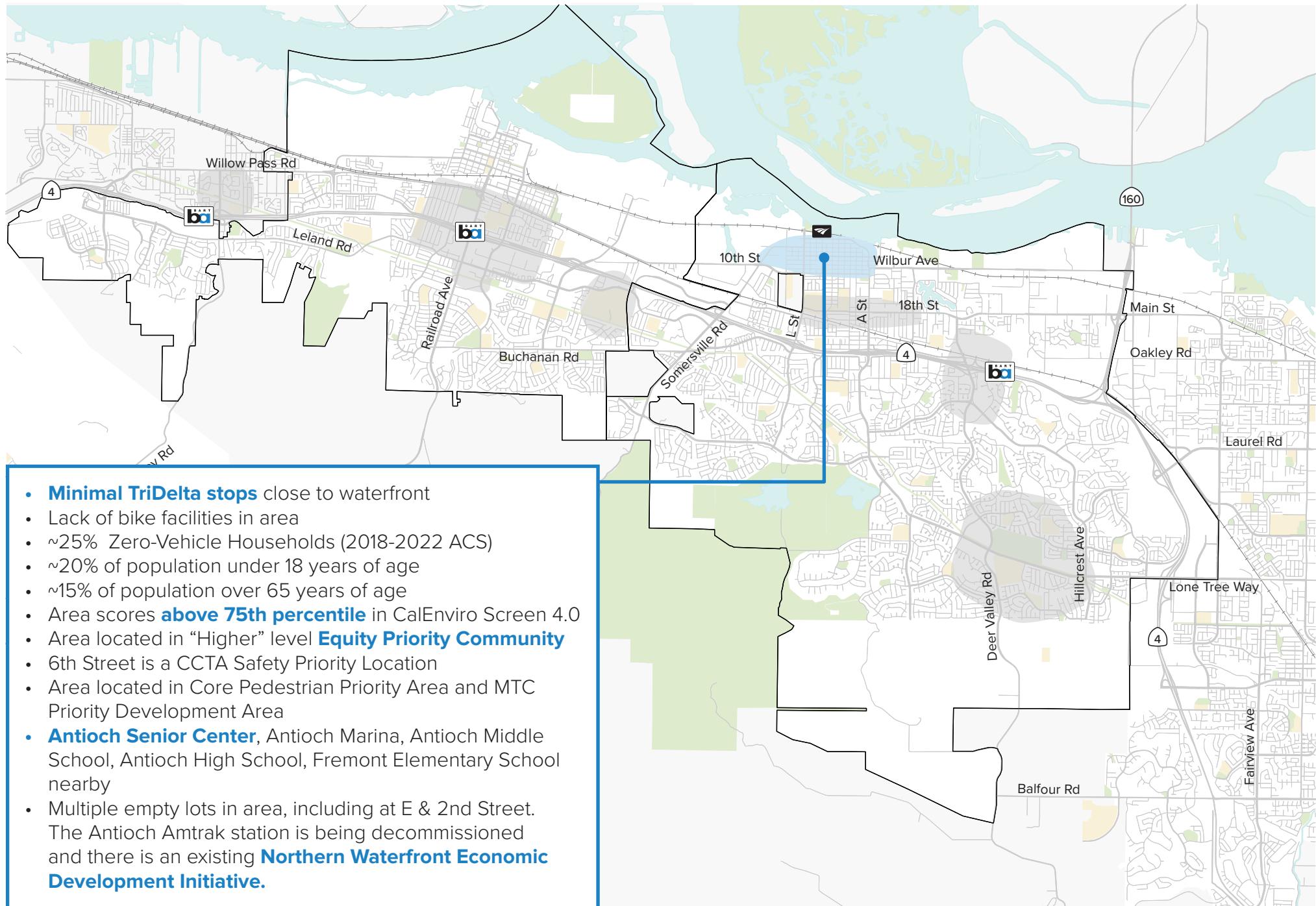
Key Candidate Area:
Pittsburg/Bay Point BART and Surrounding Area



Key Candidate Area:
Pittsburg Center BART and Surrounding Area



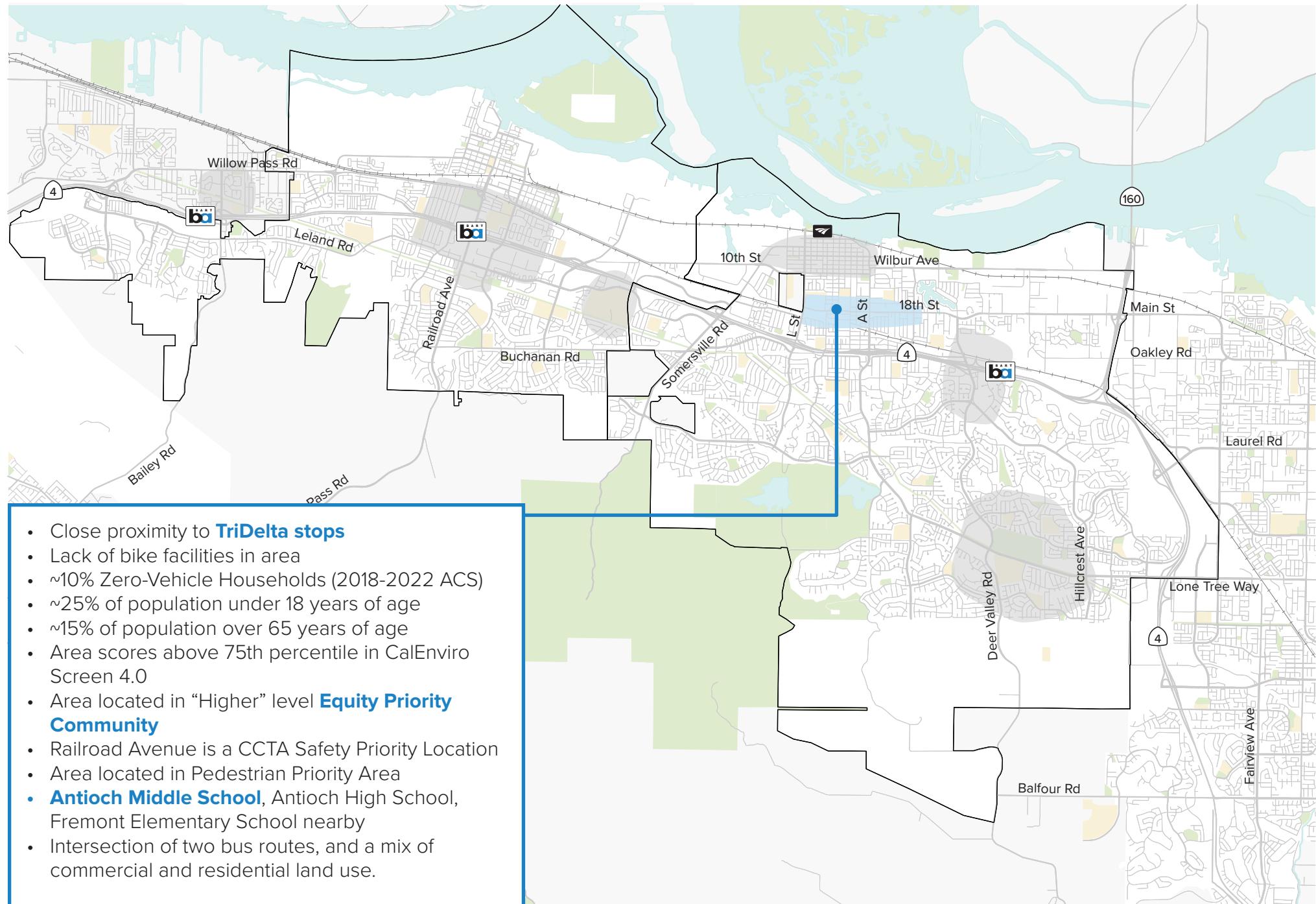
Key Candidate Area:
Los Medanos Community College



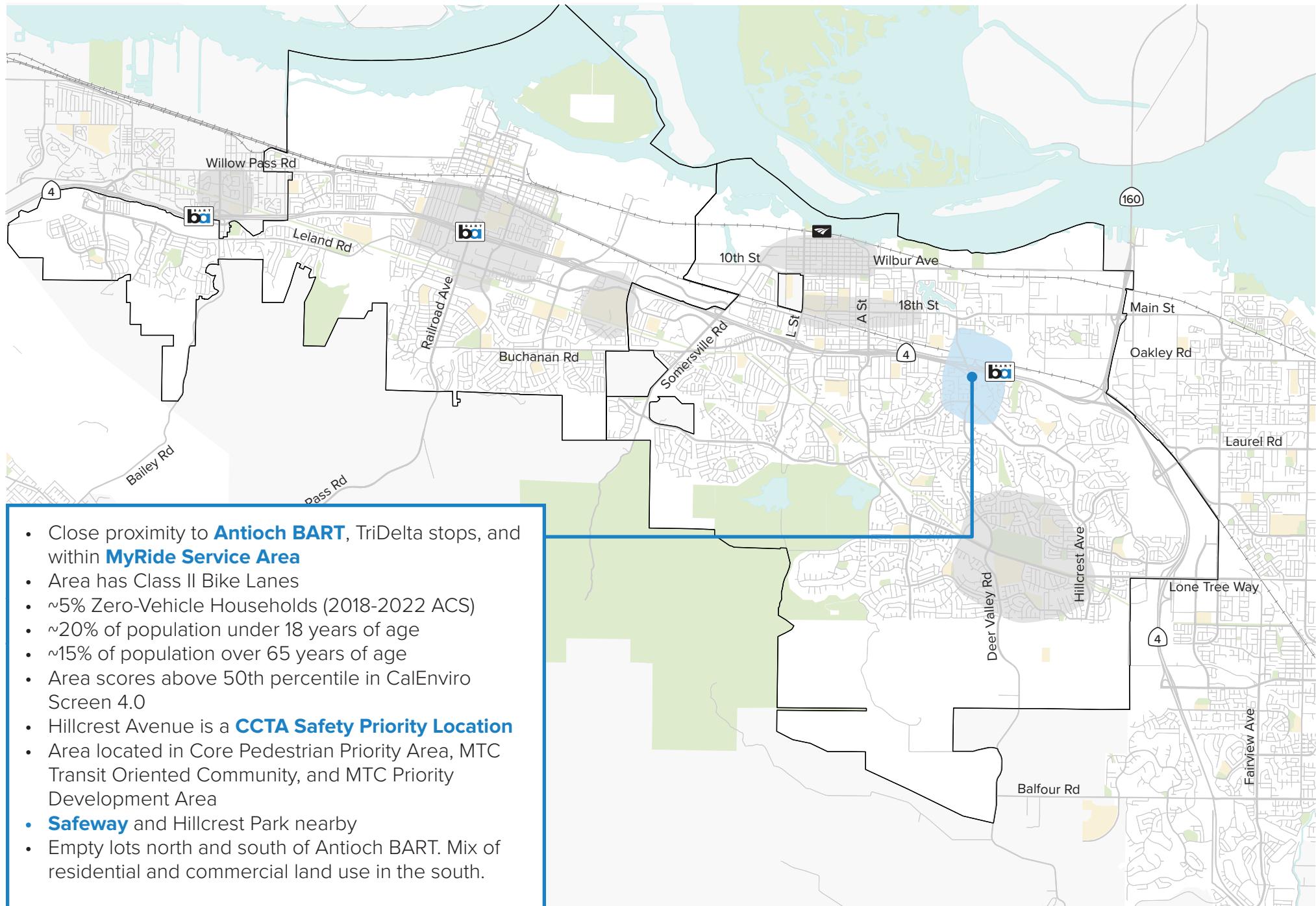
Key Candidate Area: Downtown Antioch



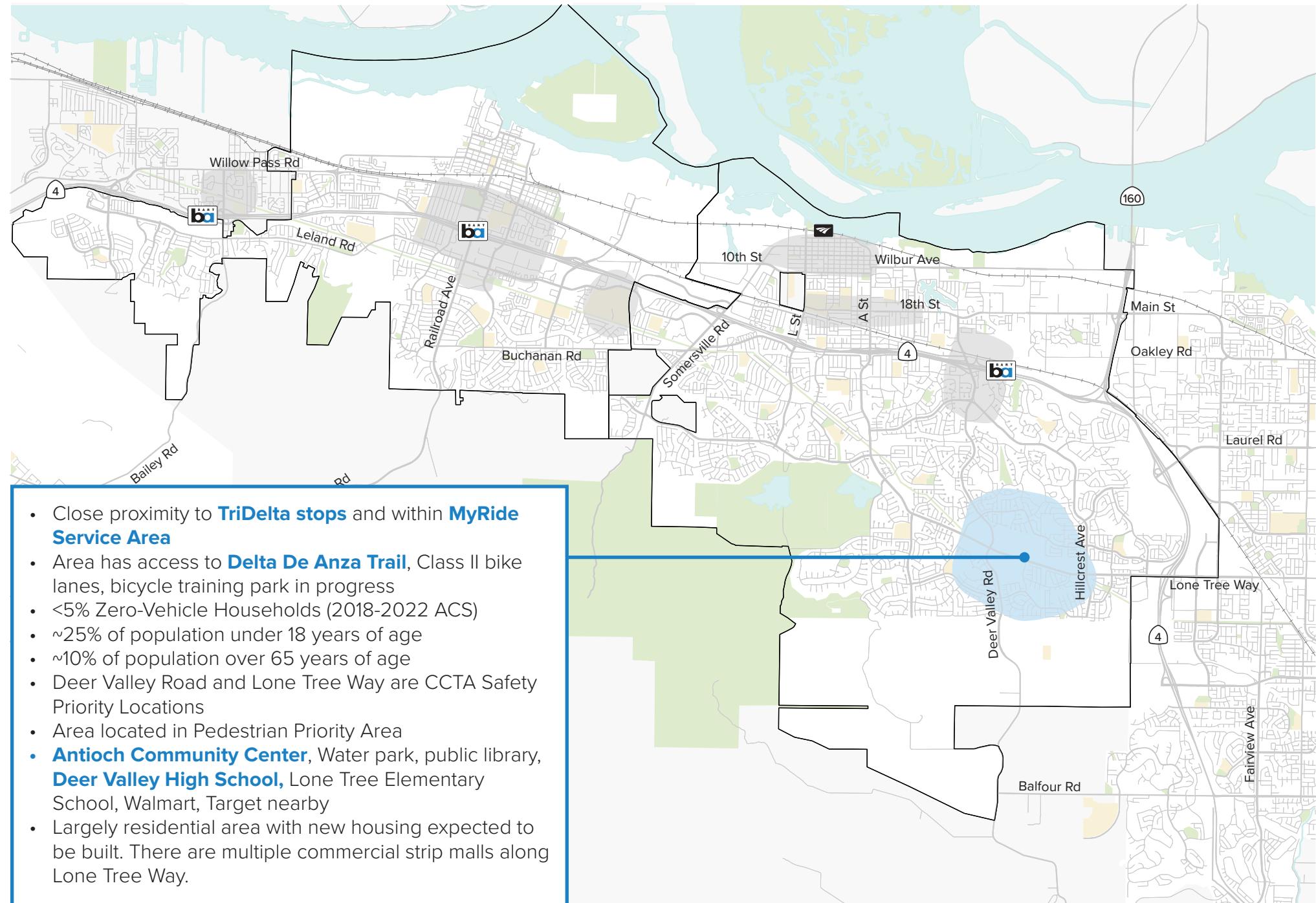
TRI DELTA TRANSIT



Key Candidate Area: 18th Street



Key Candidate Area:
Antioch BART and Surrounding Area



Key Candidate Area:
Southeast Antioch

Appendix C:

Draft Potential Sites

Fehr&Peers

Tri Delta Transit Mobility Hub Potential Sites

June 23rd, 2025

Focus Zones

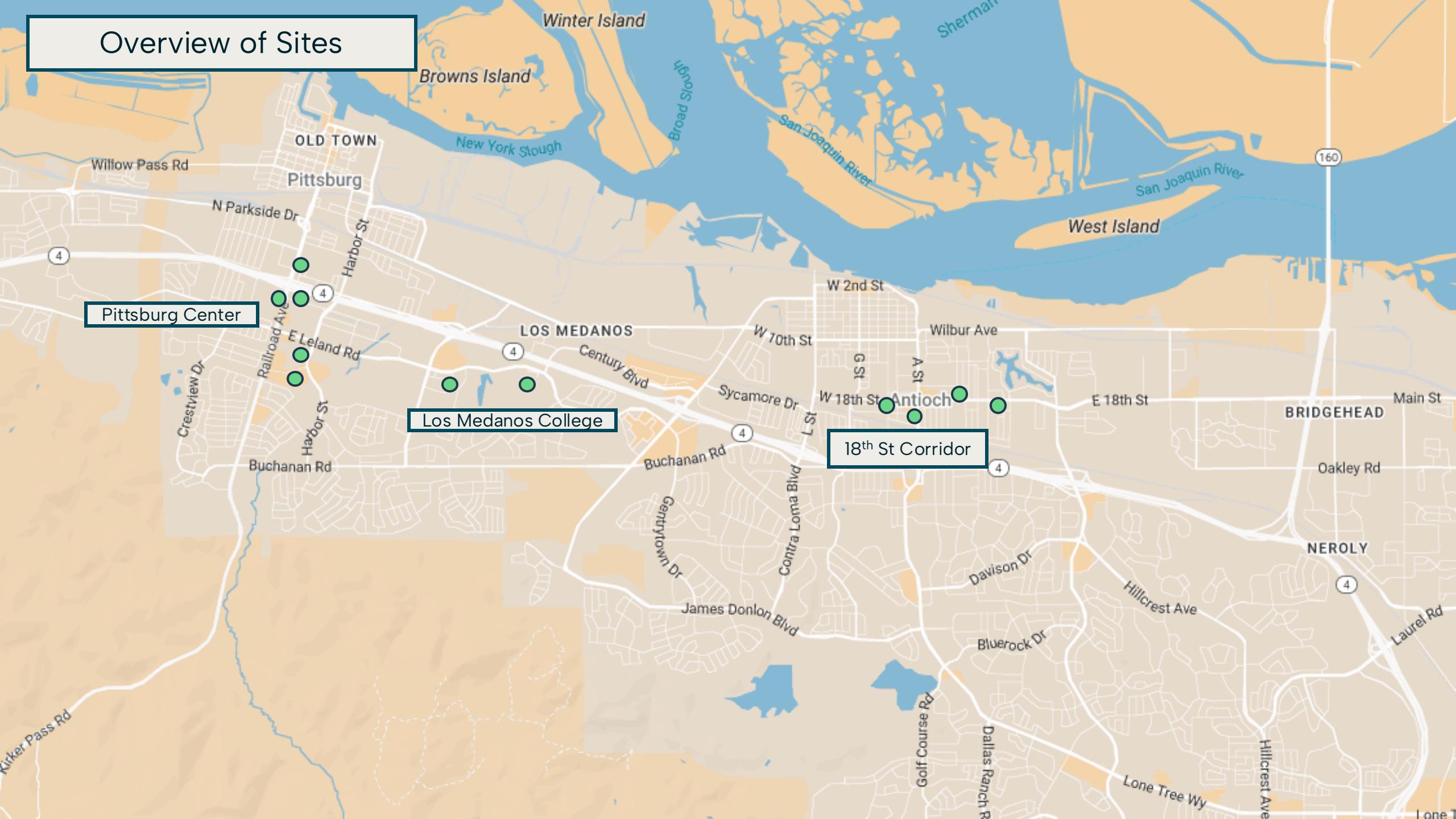
01 18th Street Corridor

02 Los Medanos College

03 Pittsburg Center

Map: [Site Webmap](#)

Overview of Sites

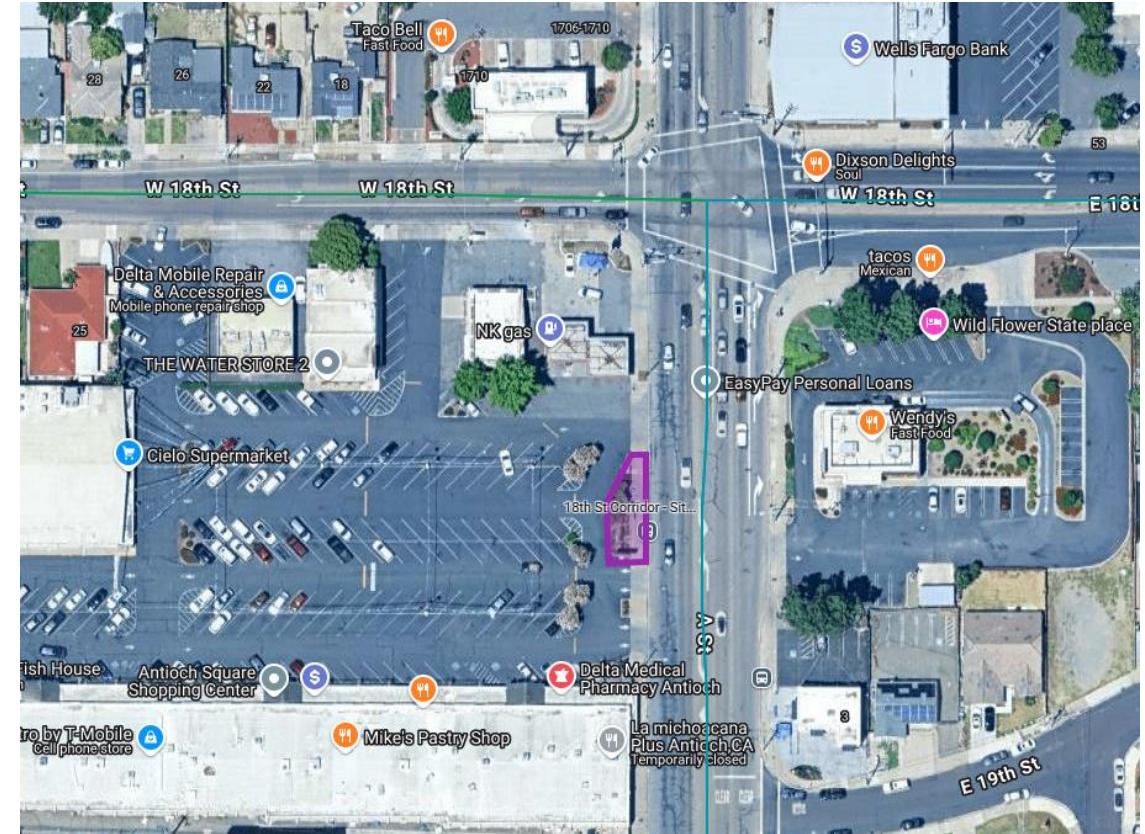


Focus Zone 1

18th Street Corridor

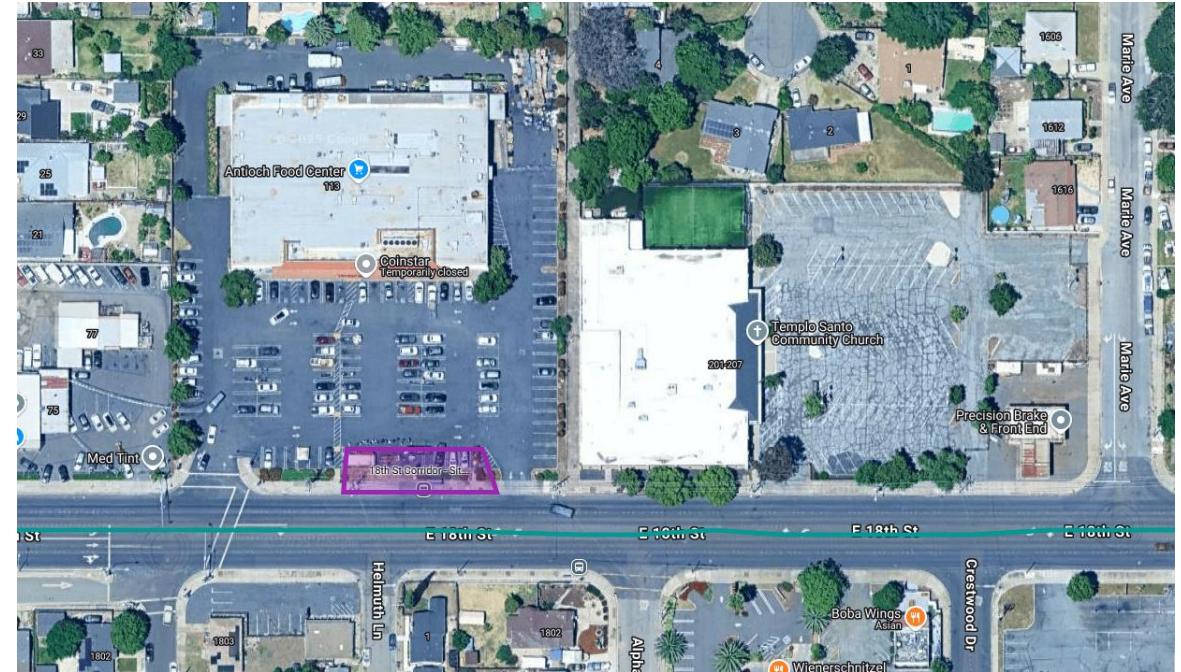
18th St Corridor – 18th & A St

- **Tri Delta Transit:** 375 route runs on A St and 18th (30 min frequency), 370 route runs on 18th Street (19 min frequency)
- **Bike Facilities:** CCTA proposed bikeway on A Street connecting to Wilbur Ave
- **Community Assets:** Antioch Square Shopping Center, Cielo Supermarket, single- and multi-family housing
- **Land Use:** Tri Delta Transit bus stop and Antioch city sidewalk adjacent to Antioch Square Shopping Center parking lot.
- **Existing Planning Efforts:** With 18th Street becoming a high-frequency transit corridor, looking for opportunities for development



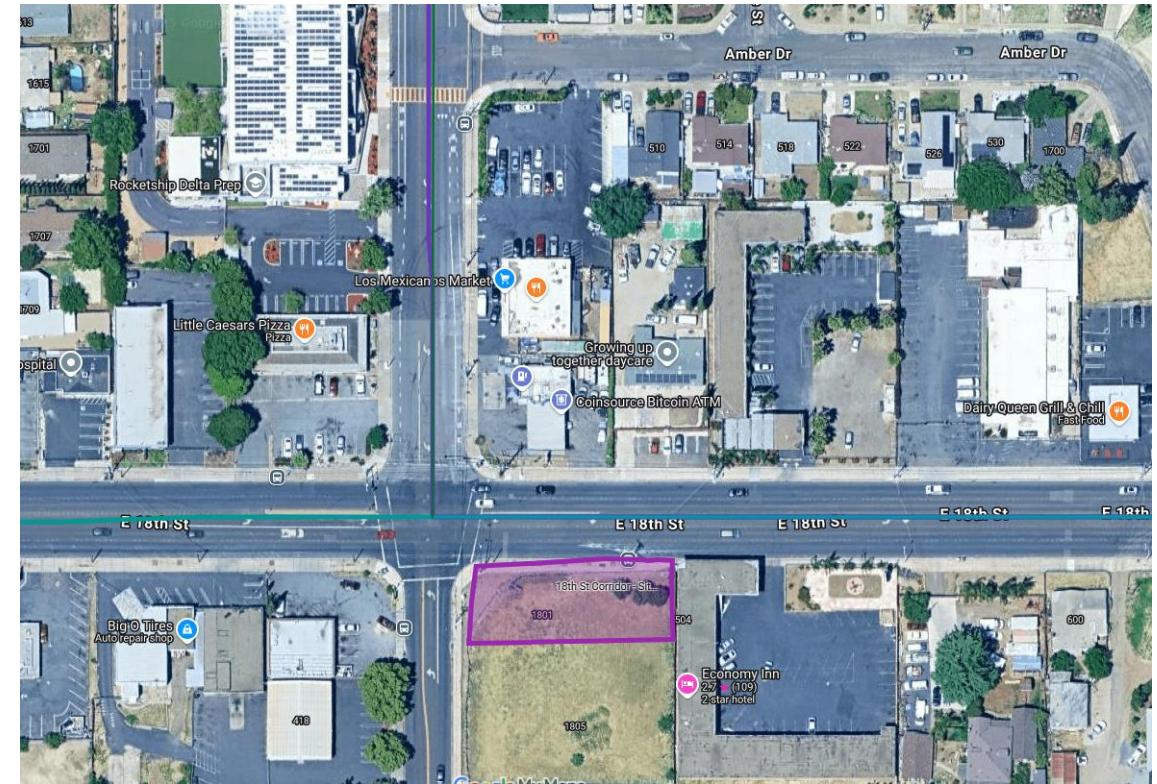
18th St Corridor – Food Center/Templo Santo

- **Tri Delta Transit:** 370 and 375 routes run on 18th Street (19 & 33 min frequency),
- **Bike Facilities:** CCTA proposed bikeway on A Street connecting to Wilbur Ave, Existing Class II on Carvallo Rd
- **Community Assets:** Antioch Food Center, Templo Santo Church (hosts food bank and other services), single- and multi-family housing
- **Land Use :** Tri Delta Transit bus stop and Antioch city sidewalk adjacent to Antioch Food Center parking lot.
- **Existing Planning Efforts:** With 18th Street becoming a high-frequency transit corridor, looking for opportunities for development



18th St Corridor – 18th St & Carvallo Rd

- **Tri Delta Transit:** 370 and 375 routes run on 18th Street (19 & 33 min frequency), 371 route runs on 18th and turns onto Carvallo (34 min frequency)
- **Bike Facilities:** CCTA proposed bikeway on A Street connecting to Wilbur Ave, Existing Class II on Carvallo Rd
- **Community Assets:** Rocketship Delta Prep Elementary School, Friendship Manor Senior Center, Los Mexicanos Market
- **Land Use:** Tri Delta Transit bus stop and Antioch city sidewalk adjacent to empty private parcel
- **Existing Planning Efforts:** With 18th Street becoming a high-frequency transit corridor, looking for opportunities for development



18th St Corridor – Antioch Library

- **Tri Delta Transit: 370** route runs on 18th (19 min frequency), **360** route runs on 18th beginning at Antioch Middle School
- **Bike Facilities:** Existing Class II on 18th Street from D St to L St
- **Community Assets:** Antioch Library, Live Oak High School, Antioch Middle School, Antioch High School, Fremont Elementary School
- **Land Use:** Antioch city sidewalk adjacent to library parking lot
- **Existing Planning Efforts:** With 18th Street becoming a high-frequency transit corridor, looking for opportunities for development



-  Tri Delta Transit Stops
-  Schools
-  Community Asset
-  Grocery/Retail
-  Site

18th Street

Antioch
Library

18th St &
A St

A Street

 Food Center/
Templo Santo

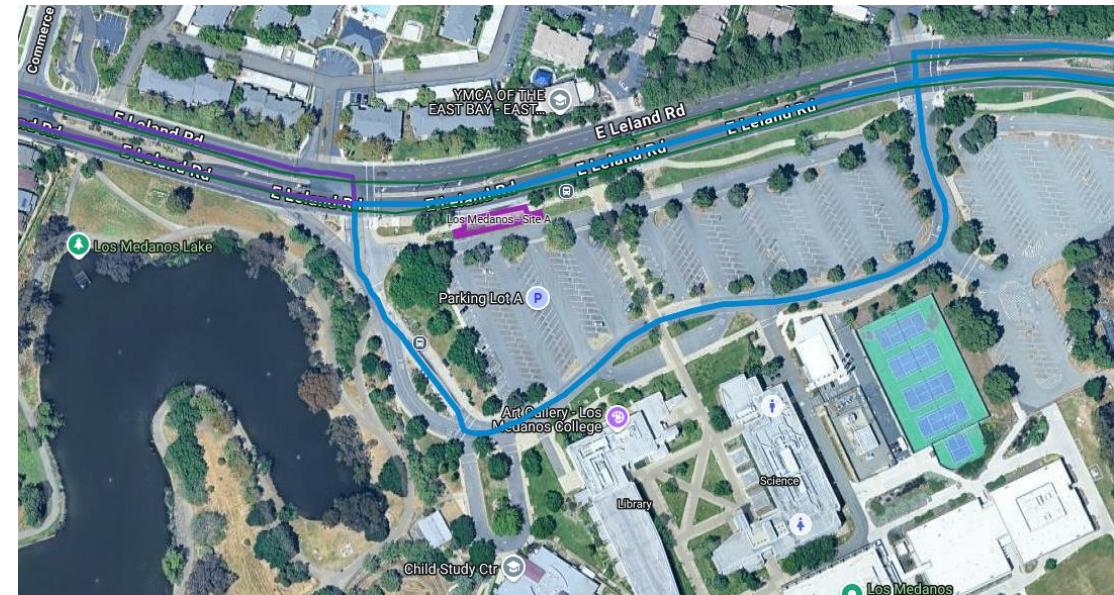


Focus Zone 2

Los Medanos College

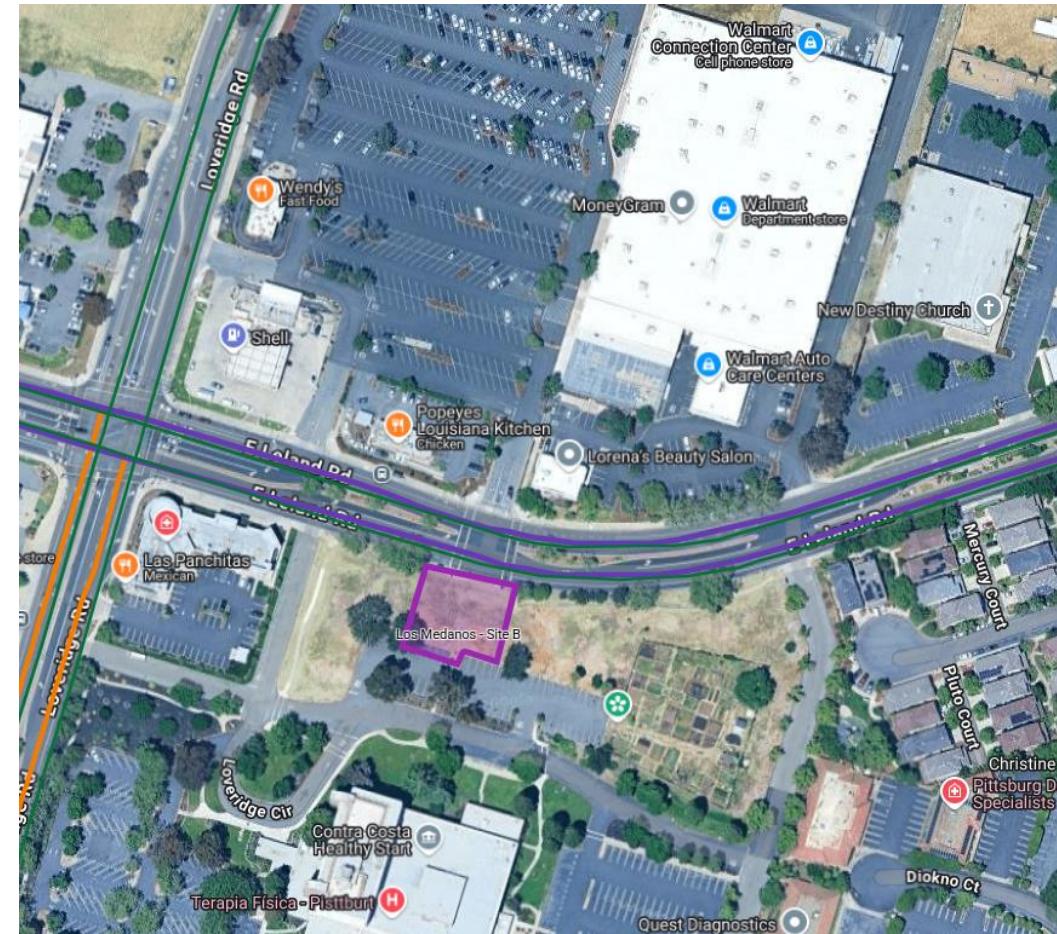
Los Medanos College– College Parking Lot

- **Tri Delta Transit:** **360** route, **370** route (19 min frequency), **371** route (34 min frequency), **372** route (33 min frequency) all serve the site
- **Bike Facilities:** Existing class II on E Leland Rd, ~1/4 mile to Delta de Anza Trail
- **Community Assets:** Los Medanos College, Los Medanos Lake/Trail, Mercy Housing
- **Land Use:** Tri Delta Transit bus stop adjacent to Los Medanos College owned parking lot.
- **Existing Planning Efforts:** Los Medanos College is interested in enhancing transportation options for their students. State Architect is involved in public university projects

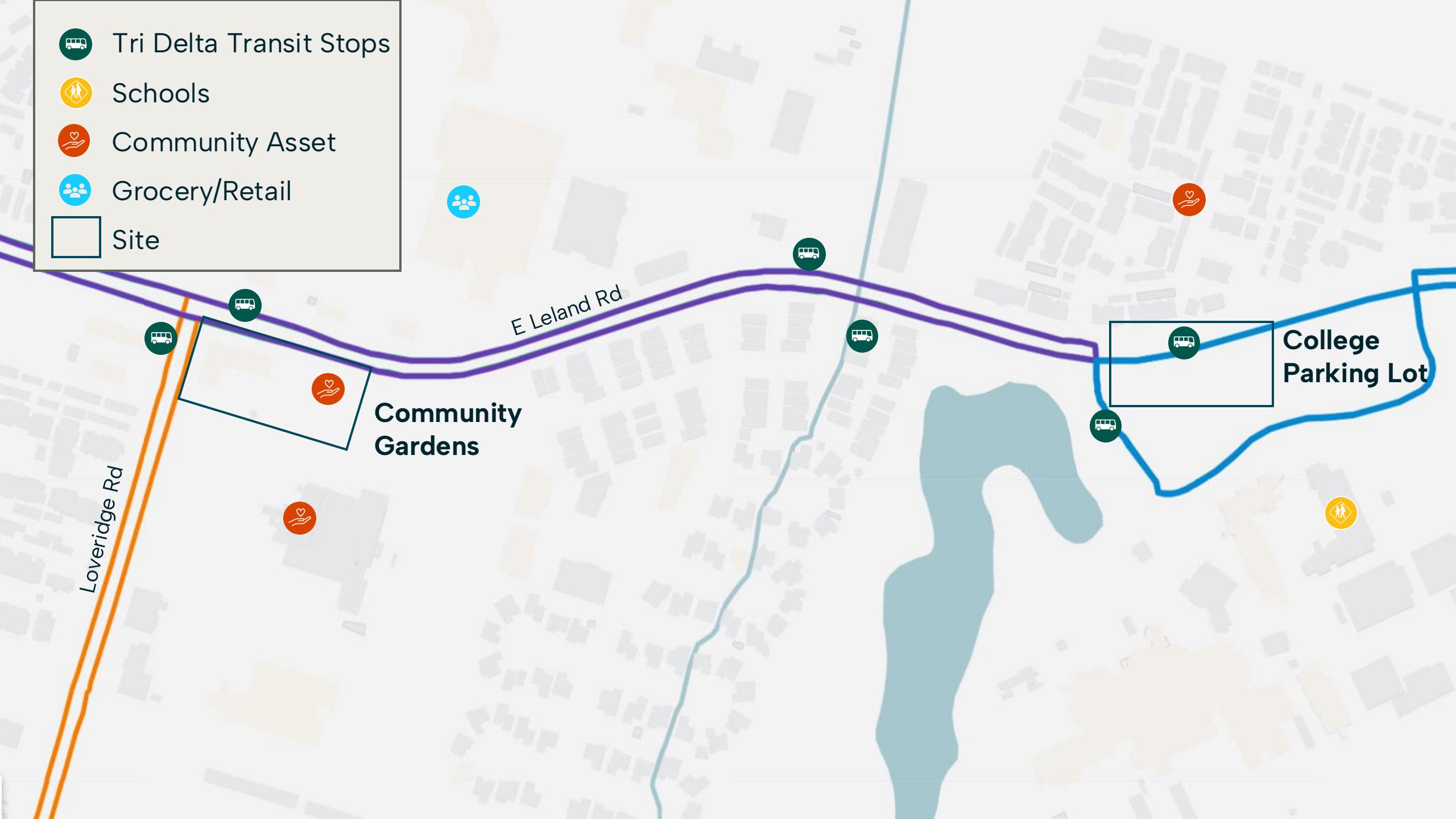


Los Medanos College– Community Gardens

- **Tri Delta Transit:** **370** route (19 min frequency), **371** route (34 min frequency), **372** route (33 min frequency) all serve the site on E Leland Rd
- **Bike Facilities:** Existing class II on E Leland Rd and Loveridge Rd, <1/4 mile to Delta de Anza Trail
- **Community Assets:** Los Medanos College Community Gardens, Walmart, medical services
- **Land Use:** Empty lot of Los Medanos College Community Gardens
- **Existing Planning Efforts:** Los Medanos College is interested in enhancing transportation options for their students.



-  Tri Delta Transit Stops
-  Schools
-  Community Asset
-  Grocery/Retail
-  Site

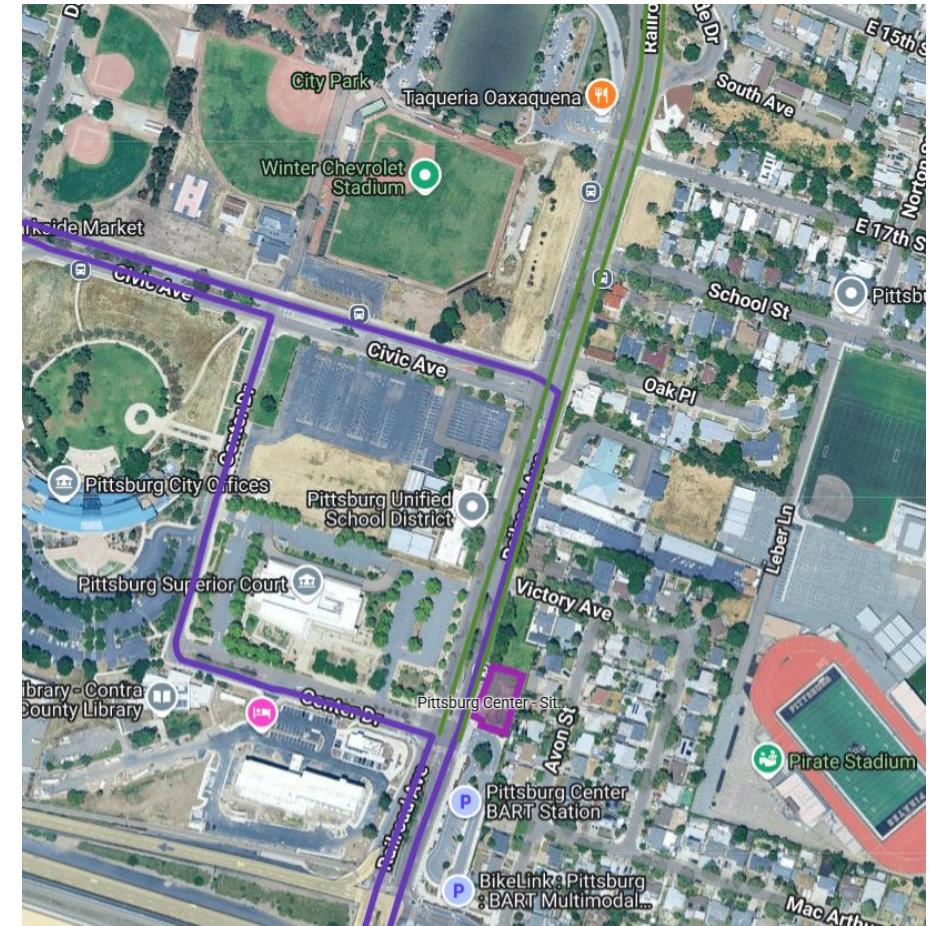


Focus Zone 3

Pittsburg Center

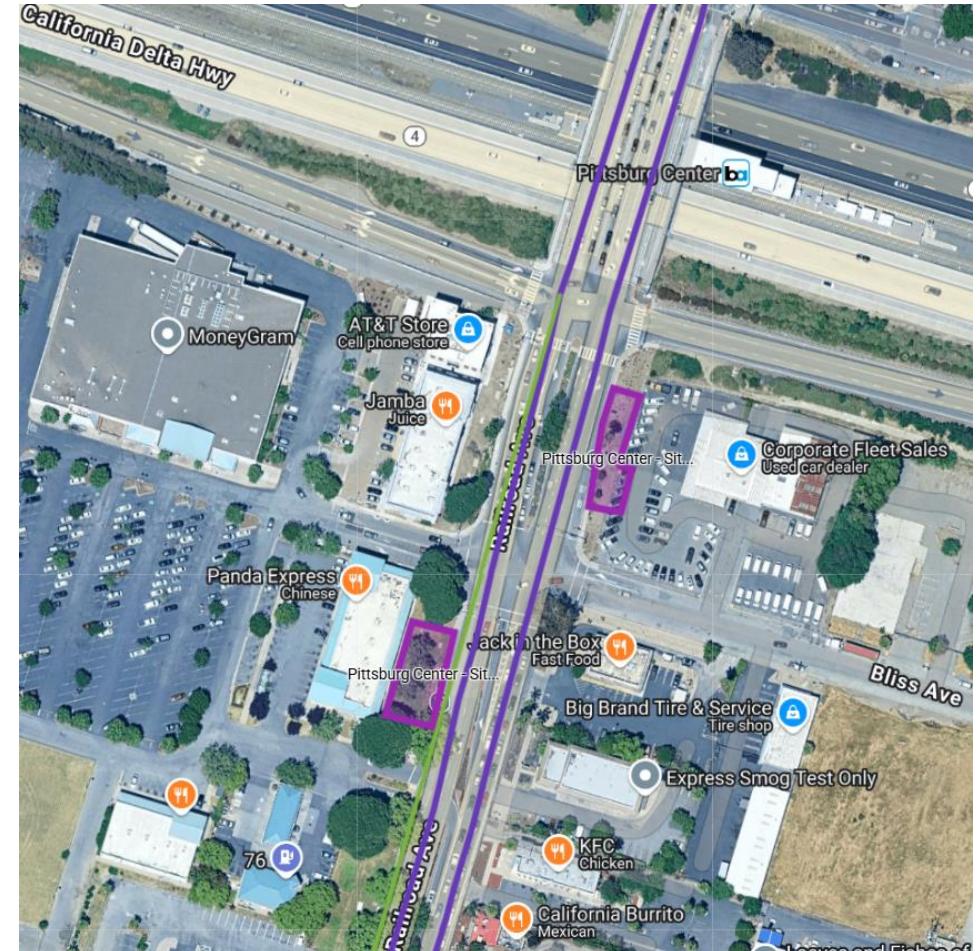
Pittsburg Center– BART Parking

- **Tri Delta Transit:** **371** route (34 min frequency)
- **Bike Facilities:** Existing class II on Railroad Ave North of BART, existing class I on Railroad Ave South of BART connecting to Delta de Anza trail. Bike lockers at BART parking lot
- **Community Assets:** City Park, Pittsburg High School, Pittsburg Library, single-family housing, BART
- **Land Use:** Tri Delta Transit bus stop and Pittsburg city sidewalk adjacent to empty lot adjacent to BART parking lot
- **Existing Planning Efforts:** Railroad Ave Specific Plan includes working to create more transit-oriented development surrounding Pittsburg Center BART



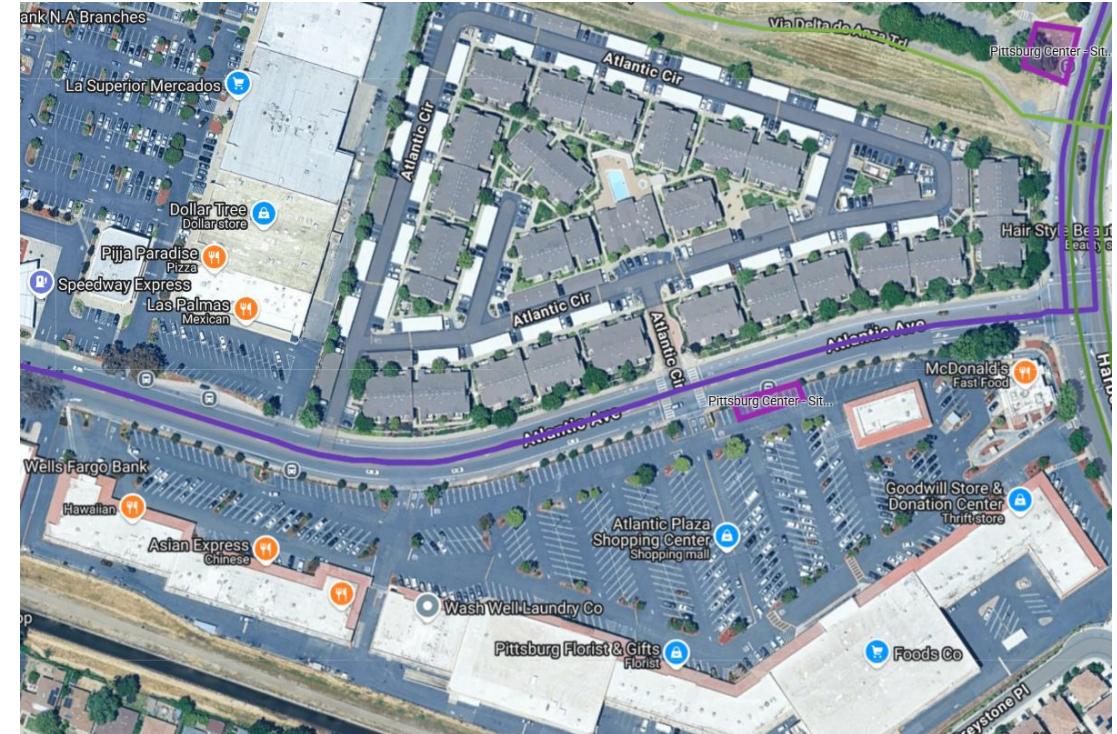
Pittsburg Center— Railroad Ave & Bliss Ave (East & West)

- **Tri Delta Transit: 371** route (34 min frequency)
- **Bike Facilities:** Existing class II on Railroad Ave North of BART, existing class I on Railroad Ave South of BART connecting to Delta de Anza trail. Bike lockers at BART parking lot
- **Community Assets:** Cardenas Market, various retail and restaurants, BART
- **Land Use:** Tri Delta Transit bus stops and Pittsburg city sidewalks adjacent to retail parking lots
- **Existing Planning Efforts:** Railroad Ave Specific Plan includes working to create more transit-oriented development surrounding Pittsburg Center BART



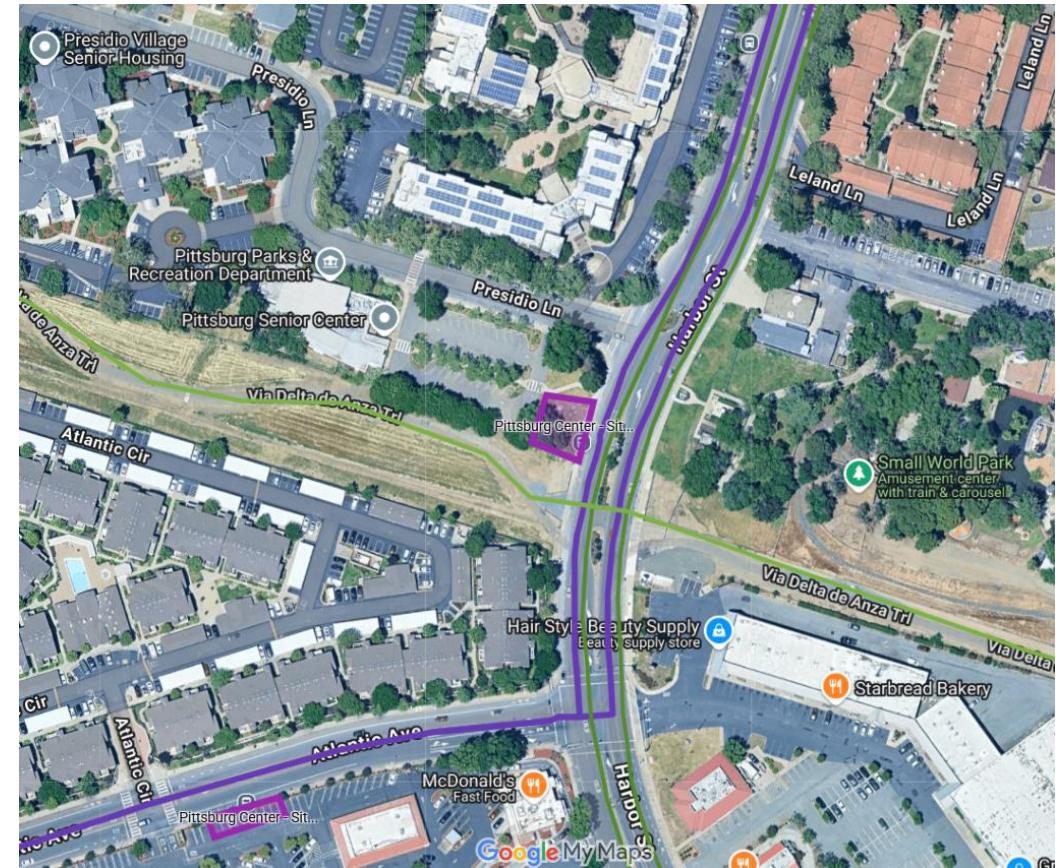
Pittsburg Center– Atlantic Plaza

- **Tri Delta Transit:** **371** route (34 min frequency) and **372** route (33 min frequency) along Atlantic Ave
- **Bike Facilities:** Existing class II on Atlantic Ave and Harbor Street, connection to Delta de Anza Trail
- **Community Assets:** Foods Co, La Superior Mercados, Dollar Tree, multi-family housing
- **Land Use:** Tri Delta Transit bus stop/Pittsburg city sidewalk adjacent to Atlantic Plaza parking lot
- **Existing Planning Efforts:** Railroad Ave Specific Plan includes working to create more transit-oriented development surrounding Pittsburg Center BART

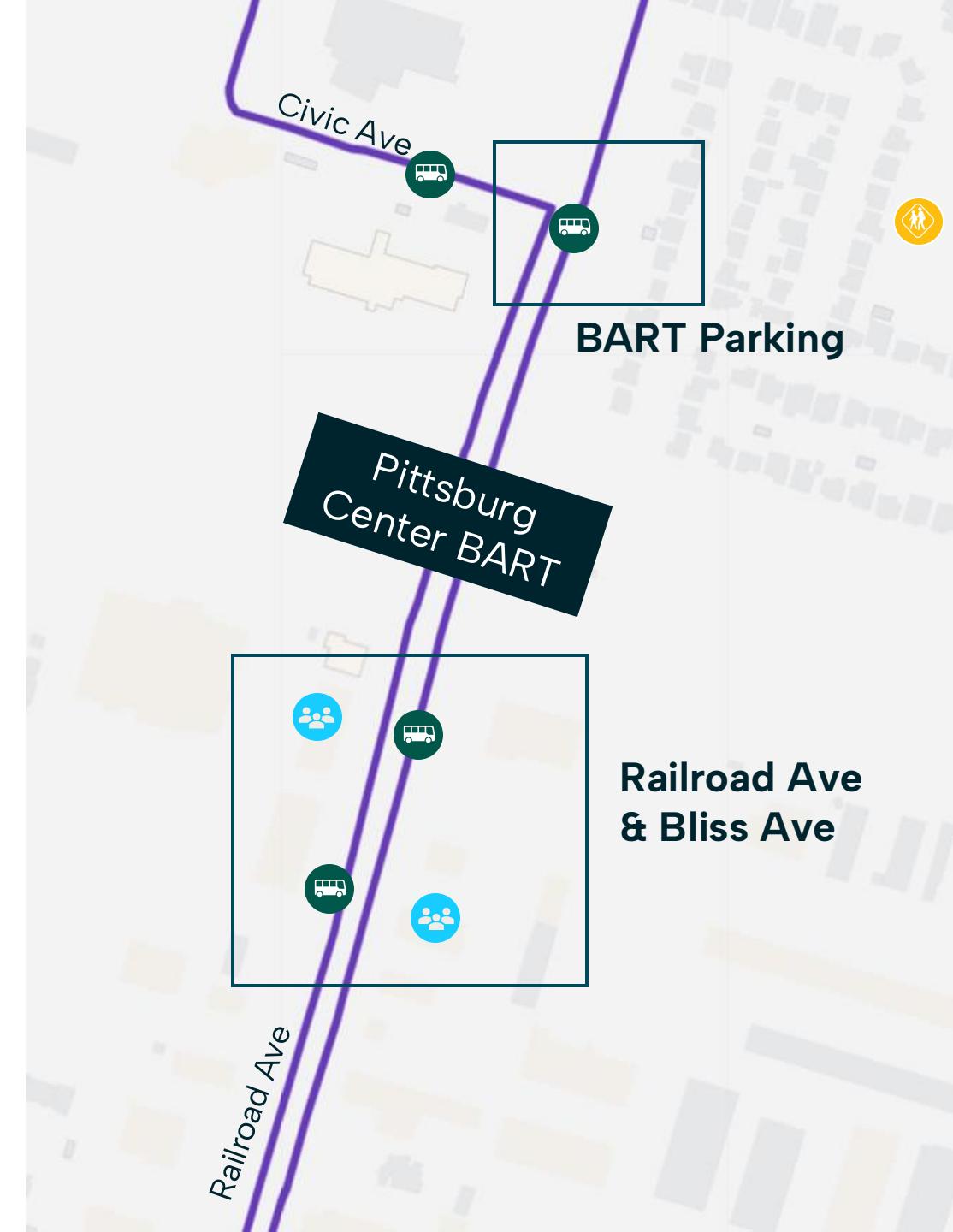
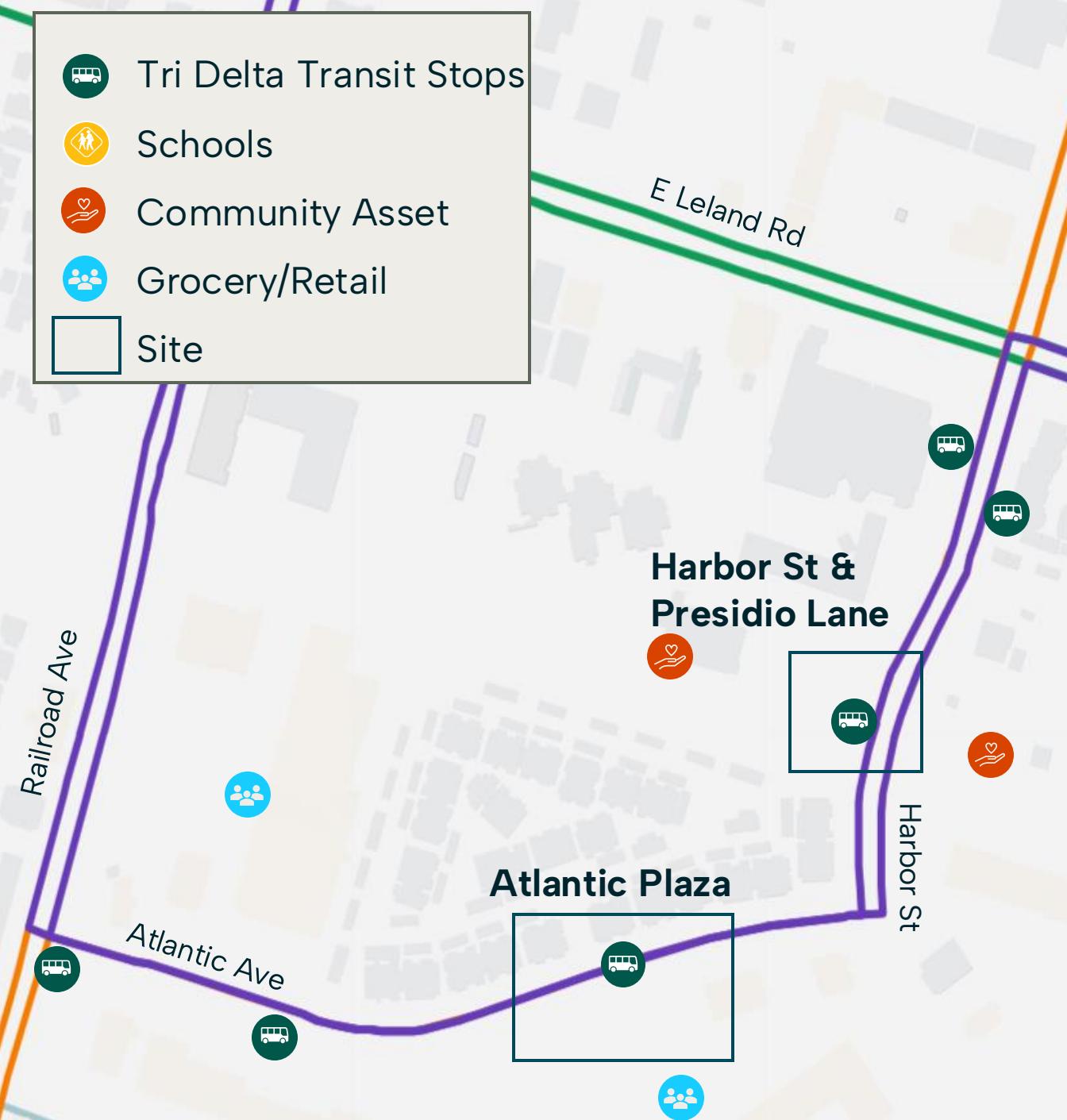


Pittsburg Center– Harbor St & Presidio Ln

- **Tri Delta Transit:** **371** route (34 min frequency) and **372** route (33 min frequency) along Atlantic Ave
- **Bike Facilities:** Existing class II on Atlantic Ave and Harbor Street, connection to Delta de Anza Trail
- **Community Assets:** Atlantic Plaza, Delta de Anza Trail, Pittsburg Senior Center, Small World Park, multi-family housing
- **Land Use:** Tri Delta Transit bus stop/Pittsburg city sidewalk adjacent to senior center/ Pittsburg Parks & Rec parking lot
- **Existing Planning Efforts:** Railroad Ave Specific Plan includes working to create more transit-oriented development surrounding Pittsburg Center BART



-  Tri Delta Transit Stops
-  Schools
-  Community Asset
-  Grocery/Retail
-  Site



Appendix D:

Site Visit Notes

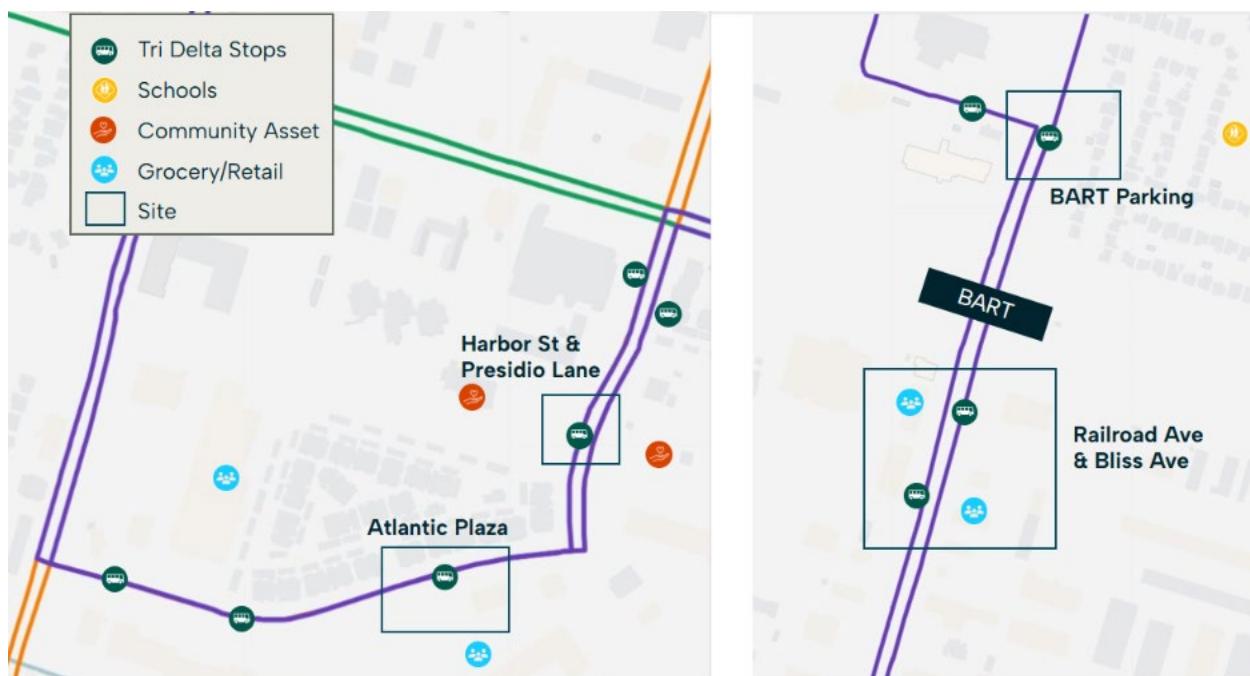
Tri Delta Transit Mobility Hub Site Visit Notes

Pittsburg Site Visit Summary

Thursday, July 24 | 10:00 AM – 12:00 PM

Participants

- City of Pittsburg
- BART
- CCTA
- CCTA
- emergent labs
- Leshner Planning
- Fehr & Peers
- Tranzito



Site 1: Harbor Street & Presidio Lane (Senior Center Area)

This site was described as one of the most welcoming places visited. The Pittsburg Senior Center parking lot includes trees and lighting, which provide shade and a sense of safety and comfort. Participants noted that traffic on Harbor Street feels calmer than nearby roads, especially south of Atlantic Avenue.

The site is directly adjacent to the Delta de Anza Trail and across from Small World Park, creating opportunities for outdoor activity, community events, or pop-up programming. However, the trail crossing is currently inconvenient: people walking or biking must travel about half a block to reach a crosswalk. The City shared that it is actively working on new crossing improvements for this area.

Sidewalk conditions were a concern. The sidewalk is narrow and curving, which may be difficult for seniors and people using wheelchairs or walkers. The City expressed interest in widening the sidewalk and adding a bus pull-out so buses can load and unload more safely. The existing bike lane on Harbor Street is unprotected, and several participants felt it does not offer enough comfort given vehicle traffic.

While the site is well positioned to serve seniors, many of whom rely on Tri Delta Transit and paratransit. It also sits near a Hillview Junior High, Future Build East County, and Small World Park/Delta De Anza trail, making it a potential all-ages gathering point. Some participants questioned whether the nearby park and trail generate daily trips, noting that sites near grocery stores or job centers may see more frequent use.

Site 2: Atlantic Plaza

Atlantic Plaza is a privately owned shopping center anchored by a grocery store, with large areas of underused parking and several vacant storefronts. While the grocery store draws visitors, the overall site feels hot and exposed due to a lack of shade or landscaping.

Participants noted that the walking route between the bus stop and the grocery store is long and uncomfortable, crossing wide areas of parking. Ideas were raised about improving this connection with landscaping or a defined pedestrian walkway. The plaza is close to both Hillview Junior High and the senior center, which could support use by a wide range of people. There is also a gated community across the street.

Because the site is privately owned, any improvements would require strong coordination with the property owner. While the “blank slate” nature of the parking lot is appealing, participants acknowledged that turning it into a welcoming community space would require significant investment. The site is also the farthest from BART compared to other locations, which was viewed as a limitation.

Site 3A: Railroad Avenue & Bliss Avenue (West Side)

This site received strong support due to its combination of transit access, retail, and existing infrastructure. The bus stop sits along a newly built Class I path that directly connects to BART. A grocery store and other retail uses are immediately adjacent, making the location useful for everyday errands.

Railroad Avenue carries heavy traffic, and participants emphasized the need for safer pedestrian crossings. The existing median could potentially be upgraded to serve as a pedestrian refuge. The group also discussed the challenge of bus stops being on opposite sides of a wide roadway, and whether northbound and southbound stops could be better aligned to improve wayfinding and convenience.

Many planning efforts on Railroad Ave, including the Railroad Ave Specific Plan & City desire for Transit-Oriented mixed-use development along Bliss Avenue. There is planned high-density development, largely on east side of Railroad Ave, which would enhance the Bliss Avenue Corridor when developed. TOD planning is in the works but not expected for a couple years. City is ready but has not identified a developer.

Because this west-side location is already developed, participants saw it as an opportunity to deliver near-term improvements that could also support future growth nearby. Its proximity to retail, BART, City Hall, and the Library was viewed as a major advantage.

Site 3B: Railroad Avenue & Bliss Avenue (East Side)

The east side of Railroad Avenue has planned for future transit-oriented development. The City owns several parcels in the area, including land near BART's satellite parking, but major redevelopment is not expected for several years. Bliss Avenue is expected to be home to new development, and is unique as a privately owned street with parcel ownership extending to the roadway centerline.

While participants agreed that this site has strong long-term potential, the City recommended waiting to invest here until development plans are further along. Any future TOD project would ideally integrate mobility options and shared amenities as part of a larger redevelopment effort.

Site 4: Pittsburg Center BART Drop-Off Lot

This site was noted as the most physically comfortable place visited. It already includes benches, trees that provide shade, bike lockers, and a well-organized drop-off area. Participants commented that it feels inviting and much more finished than other sites.

Surrounding uses include the Library, City Hall, Courthouse, hotels, and a planned second hotel. The site serves both regional travelers—such as hotel guests using BART to reach San Francisco—and local trips to the Pittsburg waterfront and nearby neighborhoods.

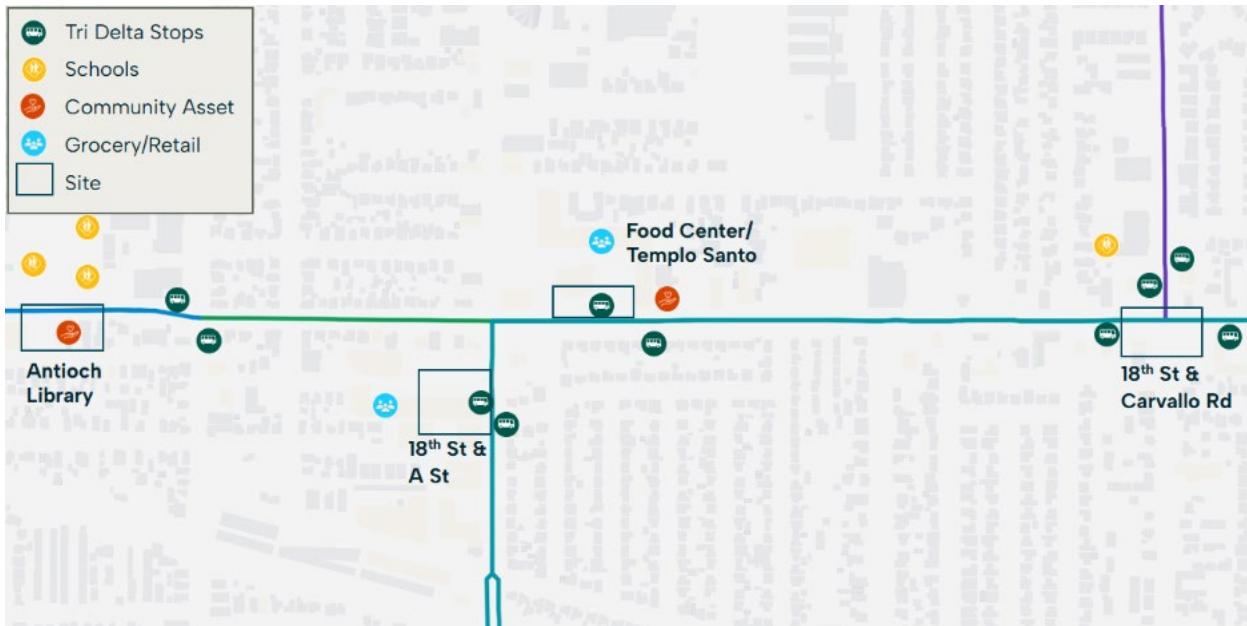
One concern raised was the lack of nearby retail, which may limit its appeal as a daily destination. The site's proximity to Pittsburg High School was also discussed, as many students currently face long or unsafe trips to school. Participants noted potential opportunities to support student transportation, though additional coordination with the school district would be needed.

Antioch Site Visit Summary

Thursday, July 31 | 9:00 AM – 11:00 AM

Participants

- emergent labs
- Fehr & Peers
- Tri Delta Transit
- Lincoln Families
- City of Antioch
- Antioch Council Member



Site 1: Antioch Library

The Antioch Library is already a popular and well-used community space, with several schools nearby. However, it is located mid-block on 18th Street, where participants observed speeding vehicles and limited crossing opportunities.

Sidewalks are very narrow, and the library's parking lot is small and often full. While safety improvements along 18th Street are a community priority—especially for students—the group felt there is not enough space at this location to comfortably add mobility amenities or gathering areas.

Site 2: 18th Street & Carvallo Road

This site includes an empty lot planned for residential development and is surrounded by housing, schools, and community-serving uses. Nearby motels are currently used as transitional housing, and Rocketship Delta, a charter elementary school, brings daily foot traffic to the area.

A county-owned building nearby may become the future African American Wellness Hub, which would significantly increase activity if approved. Some safety improvements, such as an enhanced crosswalk with a pedestrian beacon near the school, are already in place. Participants viewed this site as a strong candidate for

future investment, particularly if new development moves forward and partnerships can be formed.

Site 3: Antioch Food Center Parking Lot & Pedestrian Path

This site was widely viewed as the strongest option. The Food Center grocery store, food trucks, nearby churches, and a pedestrian path connecting to Kimball Elementary School and surrounding neighborhoods already make it a natural gathering place.

Participants noted that the parking lot feels more spacious and quieter than other sites along 18th Street. The pedestrian path behind the site offers opportunities for murals, better lighting, and wayfinding. Lincoln Families shared that families they work with often choose this grocery store because of lower prices, even though it is farther from their children's school.

Key needs identified include safer crossings along 18th Street, an improved bus shelter, seating, restrooms for families, and better lighting—especially along the pedestrian path. The site also benefits from frequent bus service, making it well suited for everyday trips.

Site 4: 18th Street & A Street (Cielo Supermarket)

Cielo Supermarket is a busy and grocery store surrounded by restaurants and shops, making it an important daily destination. However, the intersection is loud and stressful for cyclists and pedestrians, with fast-moving traffic and little shade or greenery.

Participants noted poor walking and biking connections along A Street, particularly between Highway 4 and 10th Street. While the site has strong activity and visibility, it would need significant pedestrian safety improvements, bus shelters, and placemaking elements to feel comfortable and welcoming.