

Lake Merritt Station Area Plan: CSG Meeting #9 Transportation



DYETT & BHATIA
Urban and Regional Planners

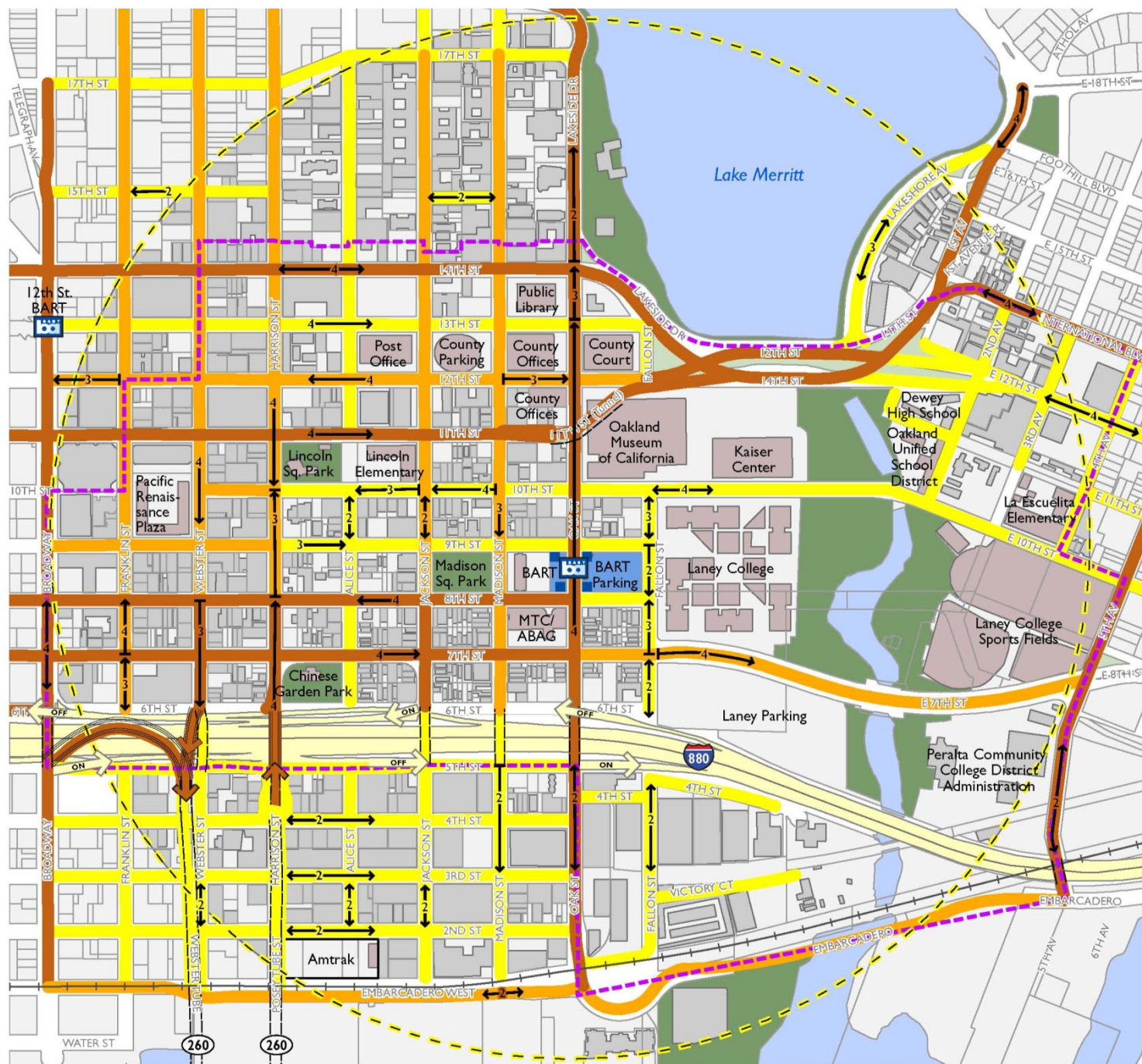
July 18, 2011

CSG Meeting #9 - Overview

- Summary of Existing Transportation Conditions
- What is Currently Planned in the Area
- Summary of Community Feedback
- Circulation Improvement Strategies

Brief Summary of Existing Conditions

- Roadway Conditions
- Pedestrian Environment
- Bicycle Environment
- Transit Service



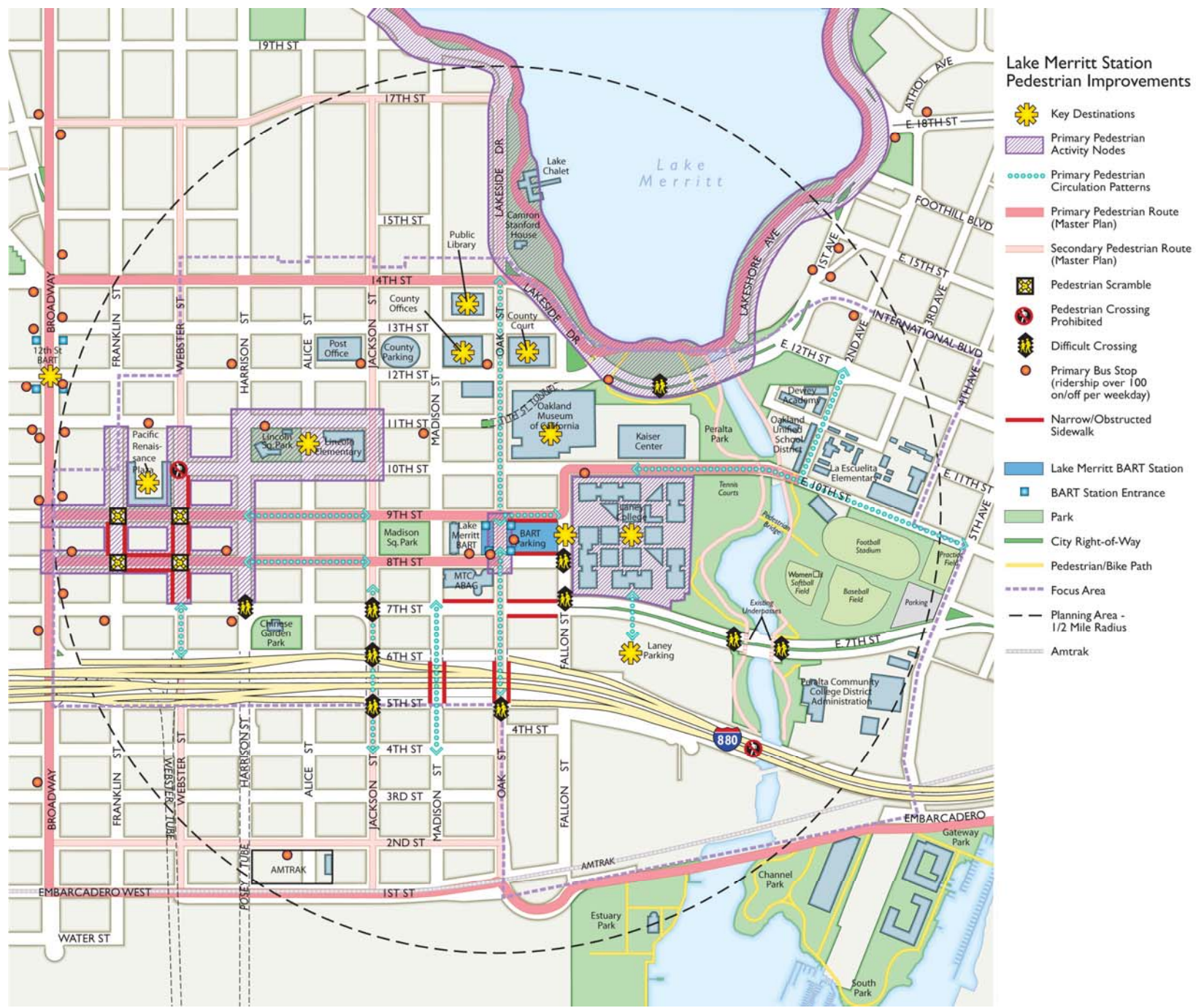
Traffic Volumes

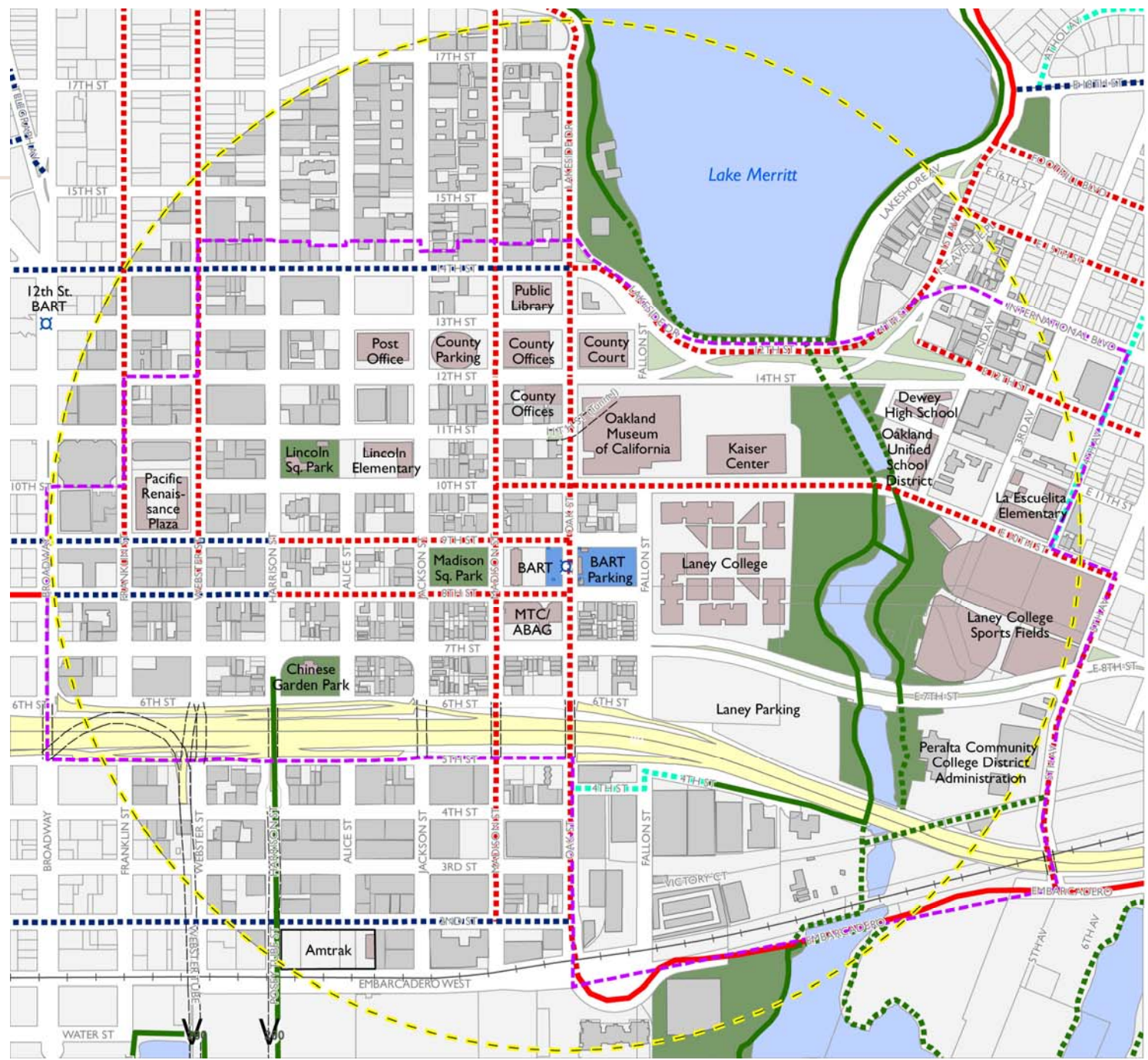
- BART Station Entrance
- BART Station
- Arterial: 2,400+ Peak-Hour Vehicles per Hour
- Collector: 1,200-2,400 Peak-Hour Vehicles per Hour
- Local: <1,200 Peak-Hour Vehicles per Hour
- 4 Number of Lanes
- Lake Merritt BART Station
- Park
- City Right of Way
- Public Buildings/ Major Destinations
- Building Footprints
- Focus Area
- Planning Area - 1/2 Mile Radius
- Freeway (with on and off access)
- Tunnel Entrance
- Travel Direction



0 100 300 500 750 1,000 Feet

Source: City of Oakland and Dyett and Bhatia, 2009.



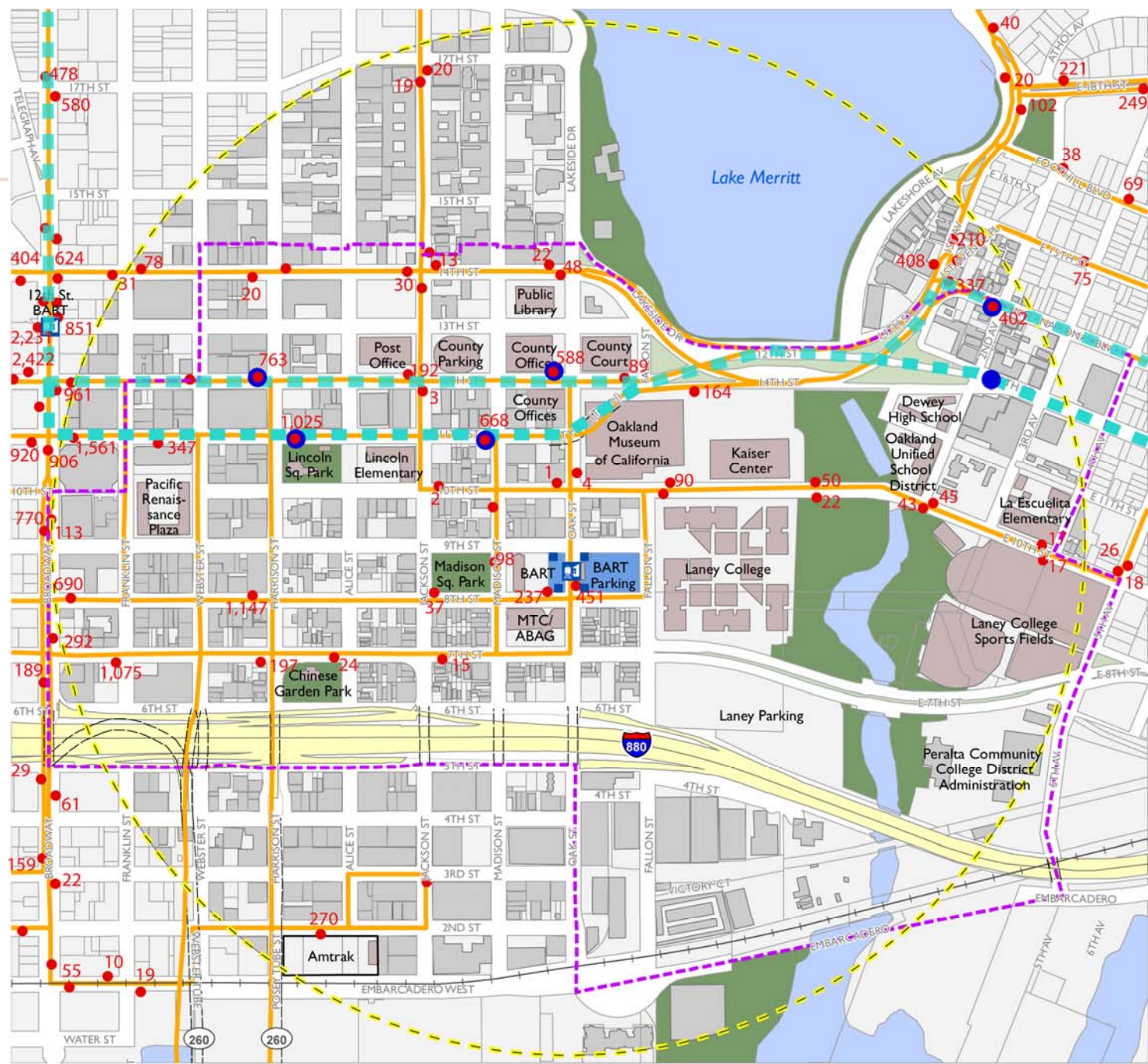


Bicycle Network

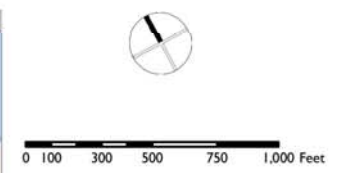
- BART Station Entrance
- BART Station
- Existing - Bike Path (Class 1)
- Existing - Bike Lane (Class 2)
- Proposed - Bike Path (Class 1)
- Proposed - Bike Lane (Class 2)
- Proposed - Arterial Bike Route (Class 3A)
- Proposed - Bicycle Boulevard (Class 3B)
- Lake Merritt BART Station
- Park
- City Right of Way
- Public Buildings/ Major Destinations
- Building Footprints
- Focus Area
- Planning Area - 1/2 Mile Radius

0 100 300 500 750 1,000 Feet

Source: City of Oakland and Dyett and Bhatia, 2009.



- AC Transit**
- BART Station Entrance
 - BART Station
 - AC Transit Stops
 - 38 Total AC Transit Weekday Ridership (On & Off)
 - AC Transit Routes
 - Proposed BRT Route
 - Proposed BRT Stops
 - Lake Merritt BART Station
 - Park
 - City Right of Way
 - Public Buildings/ Major Destinations
 - Building Footprints
 - Focus Area
 - Planning Area - 1/2 Mile Radius



Source: City of Oakland and Dyett and Bhatia, 2009.

Related Transportation Plans

- City of Oakland ITS Master Plan
- Oakland Measure DD Implementation Plan
- AC Transit Bus Rapid Transit (BRT)
- I-880/Broadway-Jackson Interchange

City of Oakland ITS Master Plan

- The City of Oakland is planning to develop a synchronized signal system along 7th Street
- This will allow cars driving at a certain speed to “get all the green lights”
- This will slow traffic along the entire 7th Street corridor, particularly during the morning and evening rush hours

Oakland Measure DD Implementation Plan

- The City of Oakland is planning improvements around Lake Merritt and the Lake Merritt Channel
- 12th Street Reconstruction – Reconfigure existing 12-lane roadway into a six-lane, tree lined boulevard
- New bridge and roadway to be completed in late summer 2011



AC Transit Bus Rapid Transit (BRT)

- AC Transit is proposing express bus service from Downtown Berkeley through Downtown Oakland and San Leandro
- The proposed BRT will travel along 11th Street and 12th Street through the area
- It will also travel along International Boulevard and 12th Street through the East Lake Neighborhood

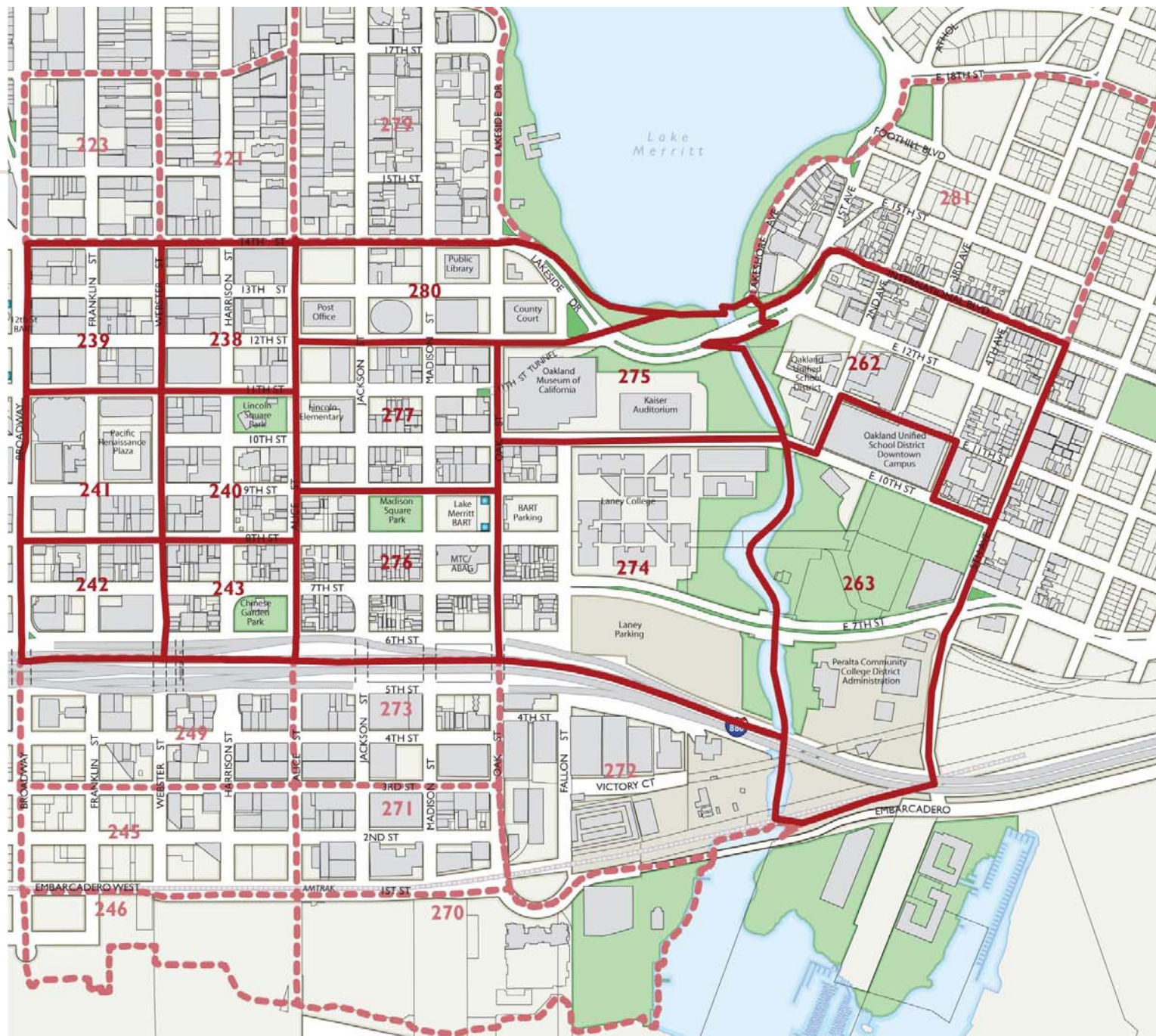
I-880/Broadway-Jackson Interchange

- Project to develop alternatives to improve access and traffic operations between Oakland, Alameda, and I-880/I-980
- Will discuss in greater detail later in presentation

Plan Area Future Conditions: Growth Projections

- How much development and where growth will occur
- Initial potential development numbers are in line with regional projections
 - *ABAG 2009 Projections by Traffic Analysis Zone (updated)*
 - *Looking at our focus area ONLY (not the ½ mile radius)*

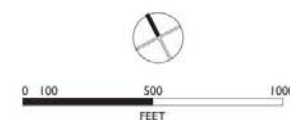
	ABAG 2009 Projections by TAZ in the Focus Area (2005-2035)	Potential Development (still to be updated based on CSG comments)
New Housing Units	4,933	4,270-6,790
New Jobs	4,169	4,983
New Non-residential Development (assumes 350 square feet per job)	1,459,000	1,744,000



Lake Merritt Station Area: Traffic Analysis Zones (TAZs)

- TAZs in the Focus Area
- TAZs in the 1/2 mile
(no longer included)

June 17, 2011



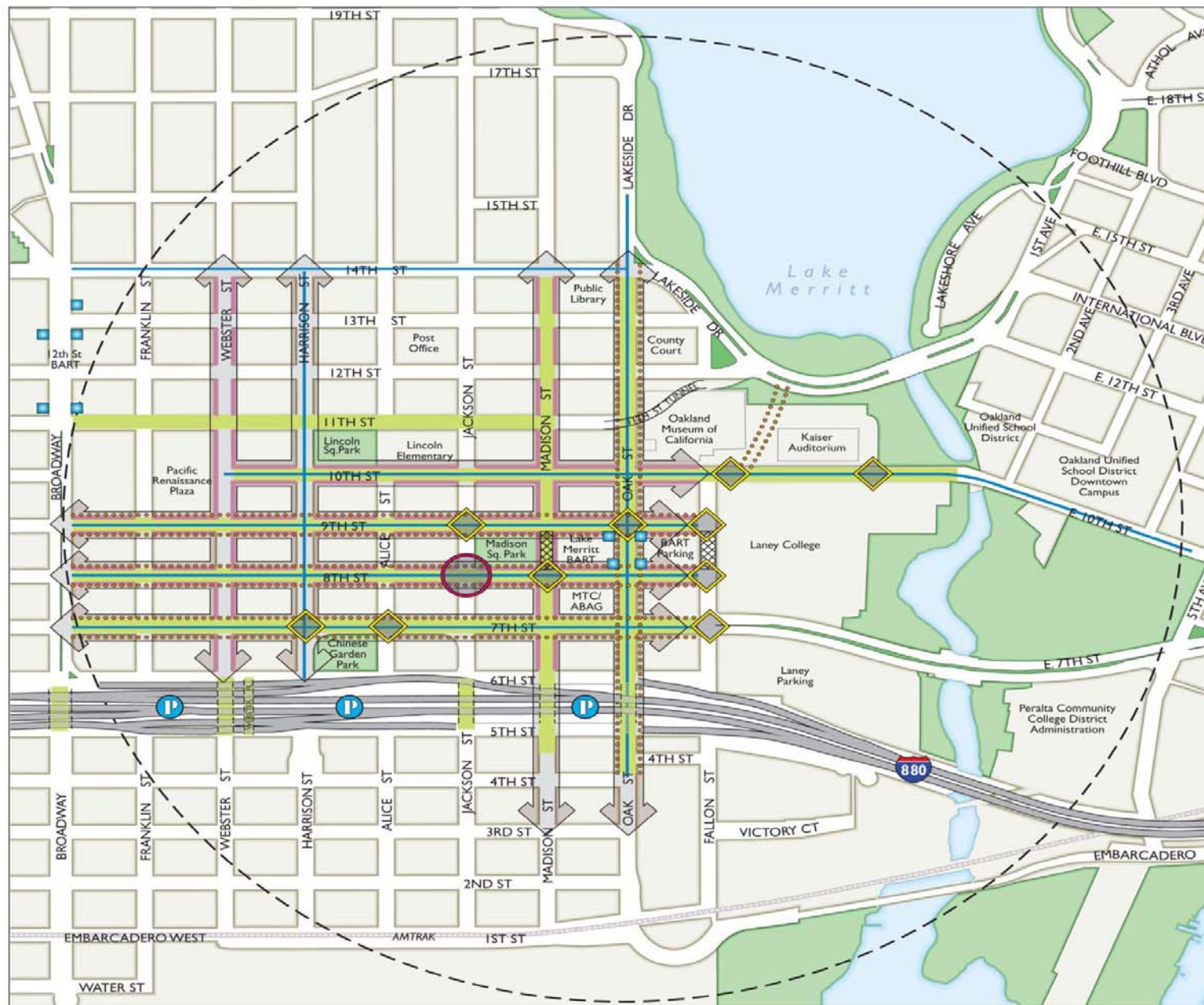
What the Community would like:

- Improve safety with better street and pedestrian lighting and reducing vehicular speeds
- Calm traffic and enhance street design by widening sidewalks and adding street trees and bus shelters
- Consider converting one-way streets to two-way traffic
- Provide better bike access around the BART station and on select streets throughout the area

What the Community would like:

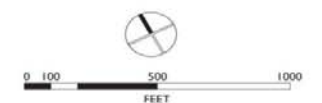
- Improve street crossings for pedestrians walking near the Lake Merritt BART station, Laney College, Madison Square and Chinese Garden Parks, and accessing Lake Merritt
- Improve street design and connections for people walking under the I-880 freeway
- Create a gateway at 8th St. and Jackson St.
- Improve connections between BART, Laney College, Chinatown and the East Lake neighborhood

Lake Merritt Station Area Summary of Community Feedback: Transportation



- Add Trees/Distinctive Street Design
- Key Bicycle Street
- Key Pedestrian Street (Main Street on 8th)
- ↔ Convert to Two-way
- Widen Sidewalk
- Gateway
- Close or Modify Street
- ◆ Intersection/Pedestrian Crossing Improvement
- P Add Parking
- BART Station Entrance
- Planning Area - 1/2 Mile Radius

Note:
The map illustrates preferences that were shared by three or more groups at the community workshops.
This feedback has not yet been reviewed for its economic or technical feasibility.



Advantages of One Way to Two Way Conversion

- Creates less confusing circulation pattern
- Eliminates indirect routes, saving time, fuel consumption, and emissions
- Creates slower traffic due to fewer lanes in each direction, parking maneuvers, and an increase in congestion
- Improves pedestrian perception of street as less of a barrier
- Increase exposure to adjacent properties to passing motorists
- Increase access to adjacent properties served by driveways

However...There are Major Disadvantages

- Two way streets increase the potential for more accidents between vehicles, pedestrians, and bicyclists at intersections
 - *For example, a crossing pedestrian has to look for vehicles in two directions instead of only one direction*
- Increases traffic congestion at intersections
- May require additional turn lanes at intersections which may eliminate on-street parking adjacent to intersection
- Converting signalized intersections to two way travel is expensive
- There may be other more cost effective ways to address concerns

Advantages of Lane Reduction

- Potential for additional amenities, including:
 - *Bike Lanes – Creates safe and convenient access/routes for bikers*
 - *Wider Sidewalks – Increases pedestrian comfort, adds space for amenities, vendors, outdoor dining*
 - *Reduced Travel Speeds – Lower speeds due to additional amenities*
 - *Angled On Street Parking – Creates more parking opportunity in area*
 - *Enhanced Transit Stops – Provides improved amenities & bus operations*
 - *Street Trees – Creates improved pedestrian environment*
 - *Green Street Amenities, such as rain gardens – Environmentally friendly*
- Lowest cost if only restriping is required

Preliminary Traffic Analysis

- Roadway Segment Analysis using future (2025, 2030) peak hour traffic volumes from other sources
 - *Oak to Ninth Avenue EIR*
 - *I-880/Broadway-Jackson PSR*
- Other Sources of Traffic Data
 - *Chinatown One-Way Street Conversion Study*
 - *Revive Chinatown*
- Analysis based on Florida DOT roadway segment LOS analysis, comparing future demand to roadway capacity

Transformation Through Reduction or Conversion

- 8th Street
- 9th Street
- 10th Street
- 13th Street
- Madison Street
- Oak Street
- Fallon Street

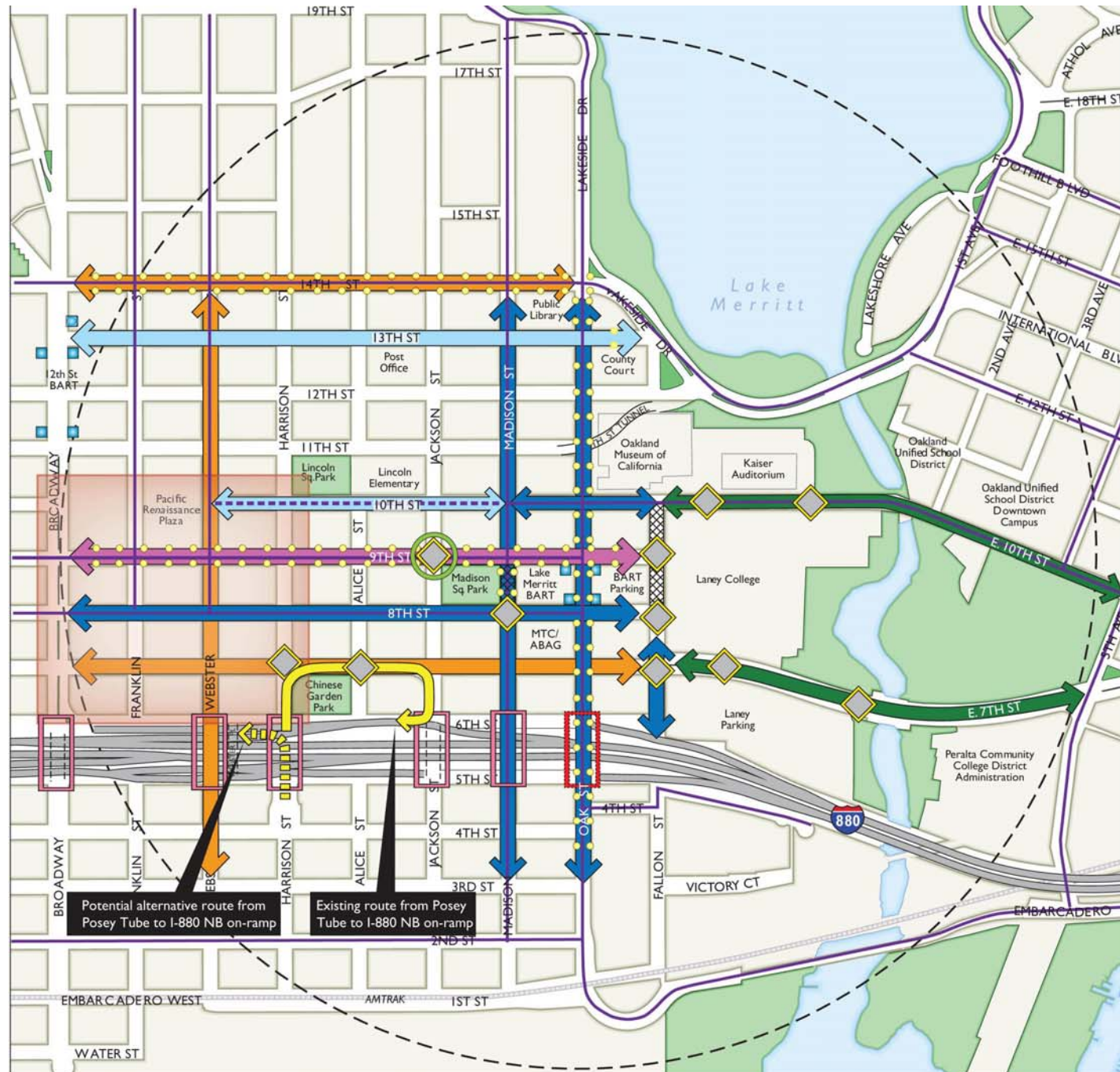
Key Streetscape Corridors and Area Gateways

- 7th Street
- 14th Street
- Webster Street
- Transform through coordinated street tree planting, sidewalk design, and lighting

Potential Criteria for Selection

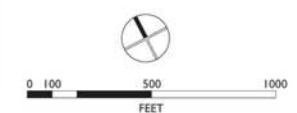
- Does street have capacity for improvements
- Feasibility of improvements
- Greatest benefit for community
- Cost of improvements
- Grant availability

Lake Merritt Station Area Circulation Improvement Strategies



- Key Streetscape Corridors
- Potential for Lane Reduction
- Potential for Lane Reduction OR Two-Way Conversion
- Potential for Lane Reduction AND Two-Way Conversion
- Potential for Narrowed Travel Lanes and "Green Street" Amenities
- Key Existing or Planned On-Street Bicycle Connection
- Key Additional On-Street Bicycle Connection
- Modify Street (Pedestrian/Vehicle Plaza)
- Chinatown Commercial Core Area
- Priority Locations for Intersection/Pedestrian Crossing Improvement
- BART Station Entrance
- Priority Lighting Corridor
- Improved Freeway Undercrossing
- Priority Improved Freeway Undercrossing
- Proposed Gateway
- Planning Area - 1/2 Mile Radius

*Current illustration shows existing and under construction park areas.



Distinctive Street Design and Wayfinding

- Distinctive Design elements:

- *Lighting*
- *Signage*
- *Wayfinding*
- *Trees/landscaping*
- *Public art*

- Wayfinding

- *Provides direction*
 - To transit
 - To local businesses
 - To cultural resources
- *Can be creative/tell a story about the neighborhood*



Street Lighting and Safety

- While all street corridors need enhanced lighting, three corridors have been identified as high priority for lighting improvements – 9th Street, 14th Street, and Oak Street
- Additional block of Madison Street at the BART station also a priority
- Pedestrian-scaled and Street Lighting can get expensive, approximately \$10,000 per light

Neighborhood Gateway

- Identified at 8th and Jackson streets
- Consider 9th Street between Jackson and Oak streets
 - *More capacity for change on 9th*
- Gateway identifies and celebrates entrance to Chinatown Commercial Core
- Distinctive design, public art that reflects the community



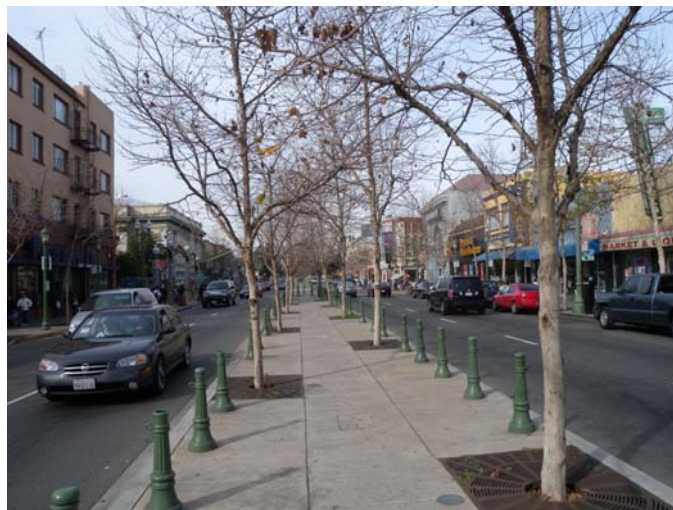
Pedestrian Enhancements at Intersections

- Narrow lanes by striping to decrease travel speed
- Corner bulb-out/curb extensions
- Reduce number of travel lanes, where possible
- Add pedestrian refuge islands on wide two-way streets
- Part-time turn prohibitions (e.g. NO RIGHT ON RED 3-6 PM)

Traffic Signal Timing/Pedestrian Enhancements

- Add “Count-down” WALK timers
- Minimize pedestrian waits by keeping cycle as short as possible
- Increase time for pedestrian crossings
- Leading WALK interval (before vehicles can move)
- Synchronize traffic signals to decrease vehicle speeds
 - *Similar to planned 7th Street traffic signal improvements*
 - *Creates synchronized signal system along identified corridors*
 - *Provides opportunity to slow traffic*

Examples of Pedestrian Enhancements



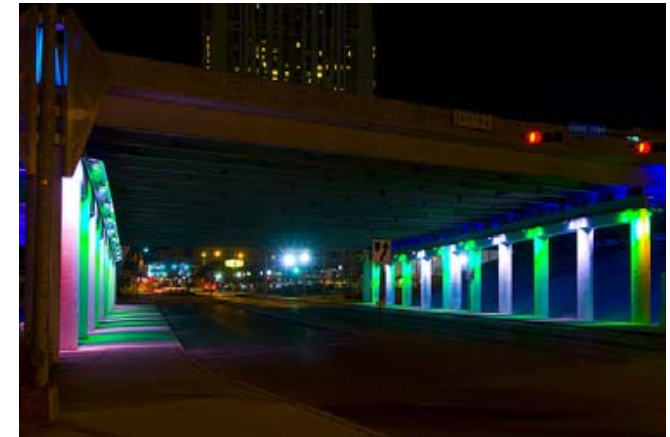
I-880 Undercrossings

- Non-motorized environment not inviting under I-880
- Identified each undercrossing for improvements, including
 - *Oak Street (Highest Priority)*
 - *Madison Street*
 - *Jackson Street*
 - *Webster Street*
 - *Webster Place*
 - *Broadway*



I-880 Undercrossings

- JLDA Charrette Findings
 - *Activities and Uses*
 - Inter-generational
 - Encourage pedestrian activity
 - Connect Chinatown and the Waterfront
 - *Access*
 - Pedestrians and bikes
 - Cars
 - Wayfinding
 - *Time*
 - Complementary uses
(day/night, weekend/weekday)
 - Seasonal uses
 - *Sustainability*
 - *Financing*



Enhanced Non-Motorized Access to Transit

- Enhanced pedestrian streets provide improved experience for pedestrians walking to and from Lake Merritt BART station
- Bike lanes and bike routes around Lake Merritt BART station provide safe and efficient access for bikers
- Additional transit amenities provide more efficient operations of buses and enhanced transit experience for users

Parking Strategy

- Parking strategy will address parking policy and parking rates
- Saving on-street parking throughout area
- Building new off-street parking facilities as part of development plan
 - *Shift from surface parking lots to parking structures*
- Potential angled on-street parking along certain corridors provides for more on-street parking
 - *However, may not be compatible with on-street bicycle facilities*

Detailed Transportation Improvement Strategies

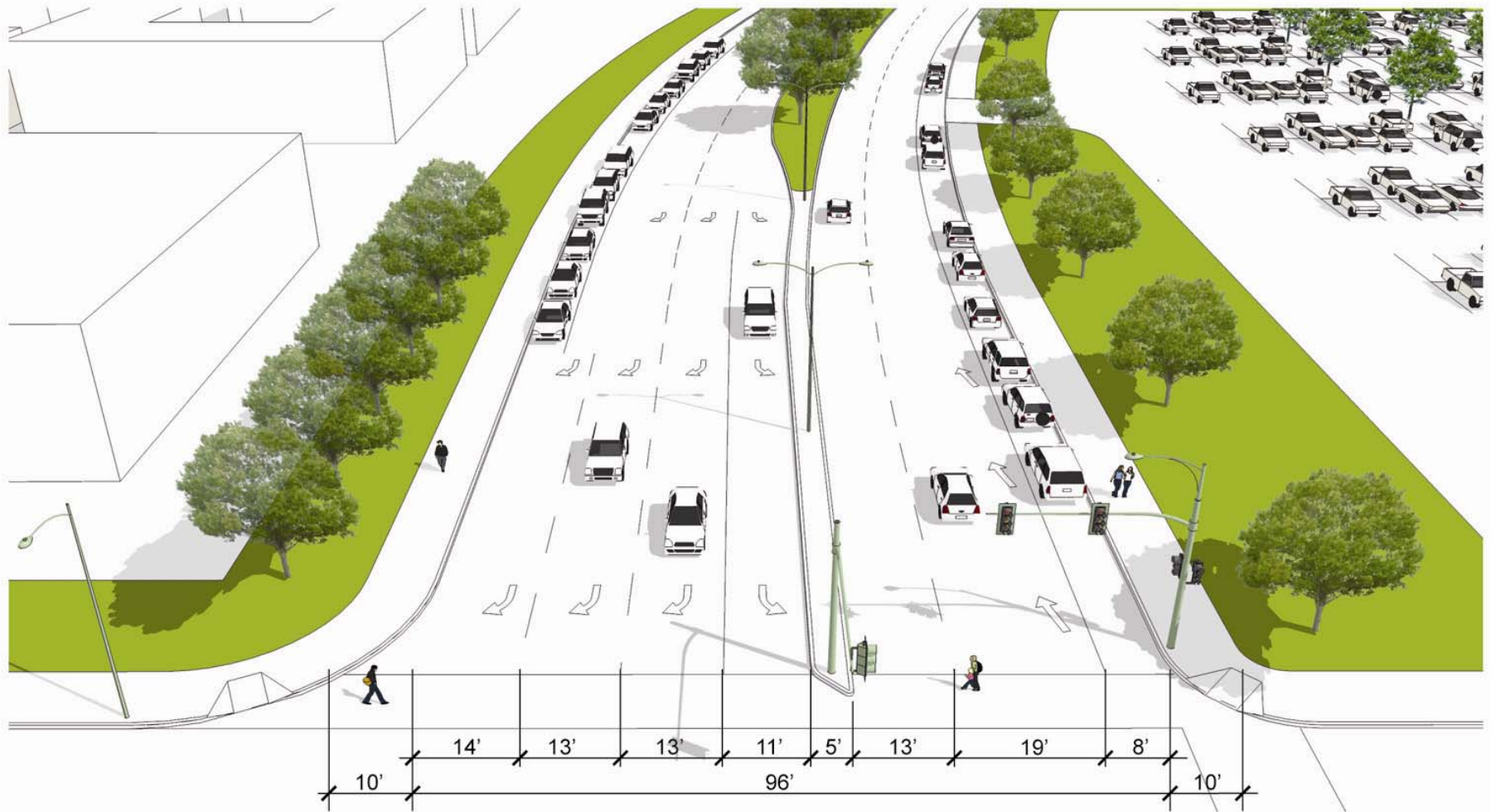
- **7th Street** – arterial and collector; high PM volume; connects East Oakland, Laney, Chinatown
- **8th Street** – arterial; high AM volume; connects Chinatown, Laney, BART
- **9th Street** – local; generally low volumes; connects Chinatown, Laney, BART
- **10th Street** - local; generally low volumes; connects Chinatown, Laney, BART, Eastlake
- **13th Street** – local; low volumes, connects Lake Merritt, County offices, 12th St BART
- **Alice Street** – local; low volumes
- **Madison Street** – collector; mid-volumes during peak hours; connects JLD, BART, County offices
- **Oak Street** – arterial; high volumes; connects JLD, BART, County buildings, and Lake Merritt
- **Fallon Street** – local; generally low volumes; connects BART and Laney
- **14th Street** - arterial; high two-way volume; connects Downtown and Lake Merritt

7th Street East of Fallon - Existing

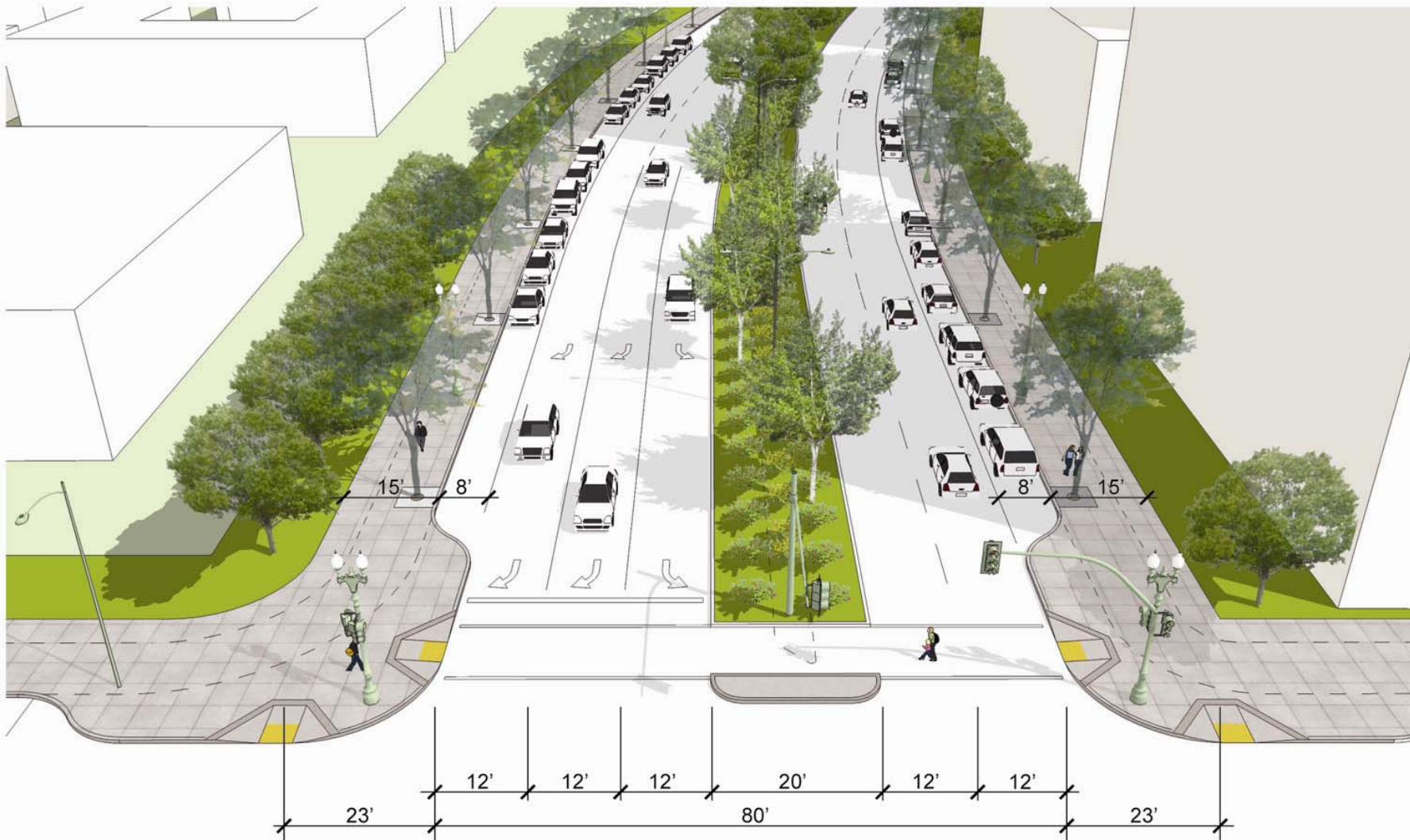


Potential for 7th Street East of Fallon Street

- Narrower travel lanes
- Widen sidewalks
- Green Street amenities
- Enhanced pedestrian crossings between Laney College and parking lot
- Add corner bulb-outs at intersections
- Create new mid-block pedestrian crossing near Lake Merritt Channel



7th Street at Laney College
Existing Looking East - 6 Lanes Two-Way



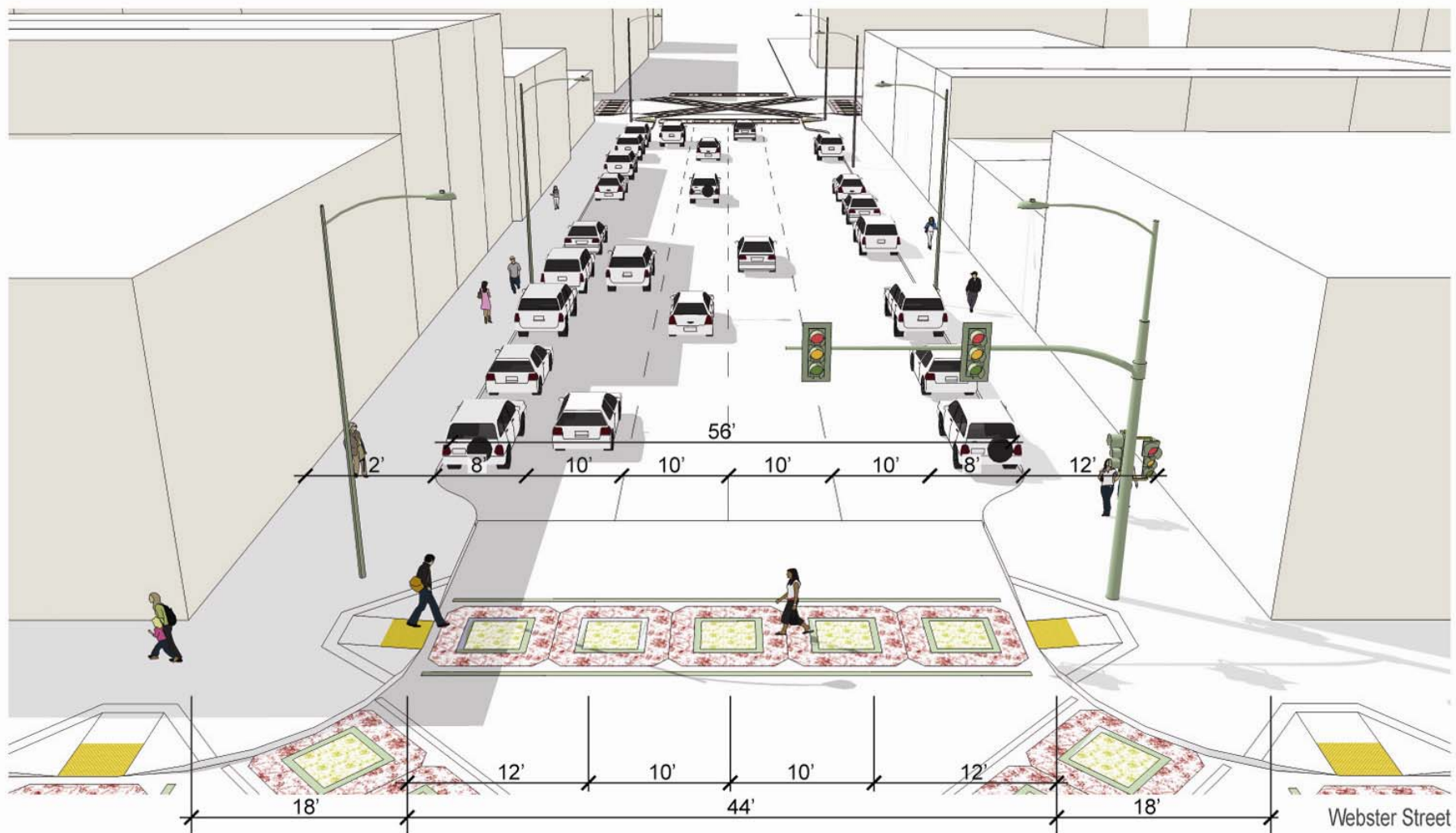
7th Street at Laney College
Westbound 4/3 Lane Reduction, Eastbound Narrowed Lane, Widened Median

8th Street - Existing

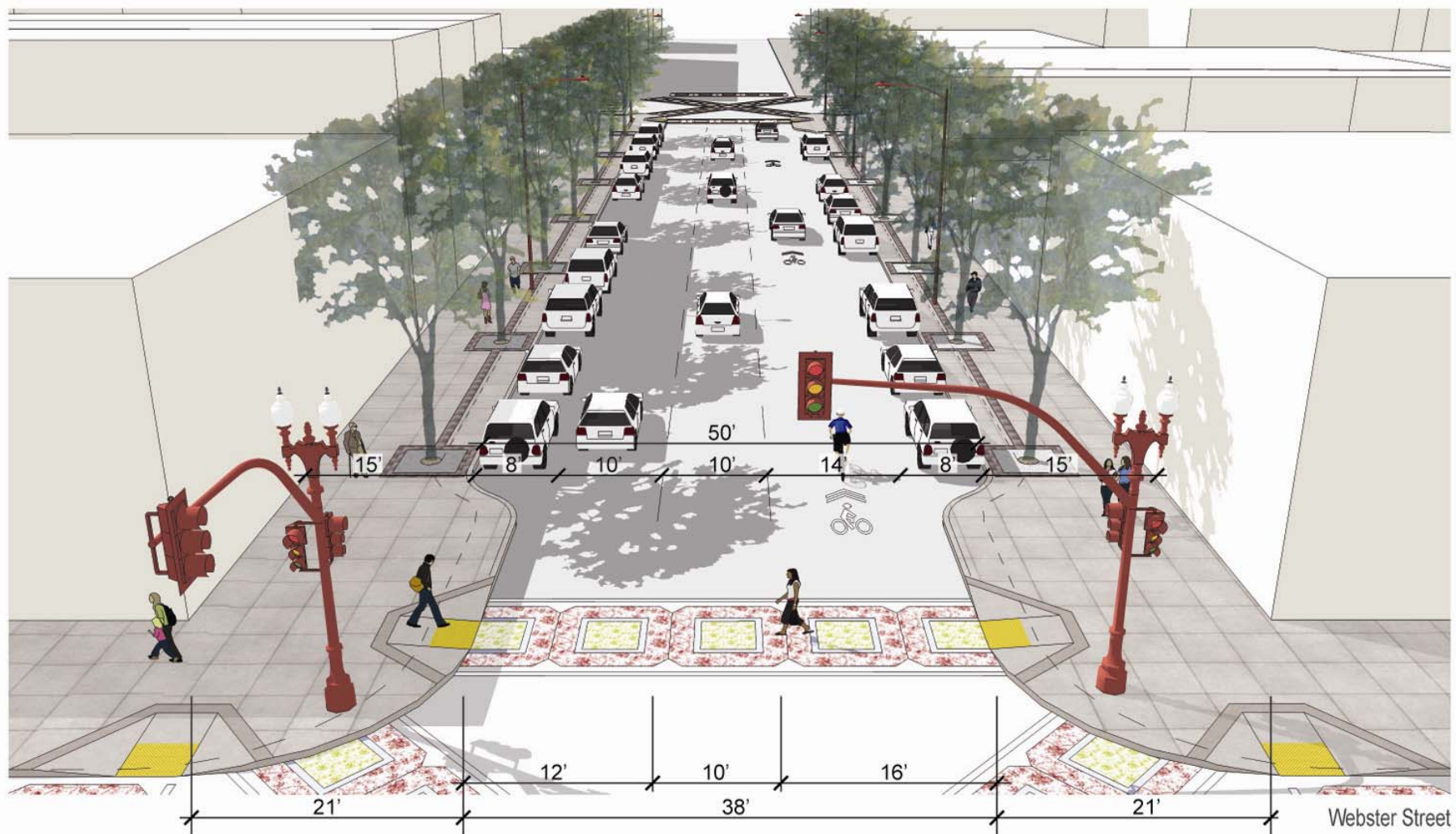


Potential for 8th Street - Chinatown Core

- Reduce roadway by one travel lane
- Add shared vehicle/bike lane
- Add street trees
- Widen sidewalks
- Add corner bulb-outs at intersections



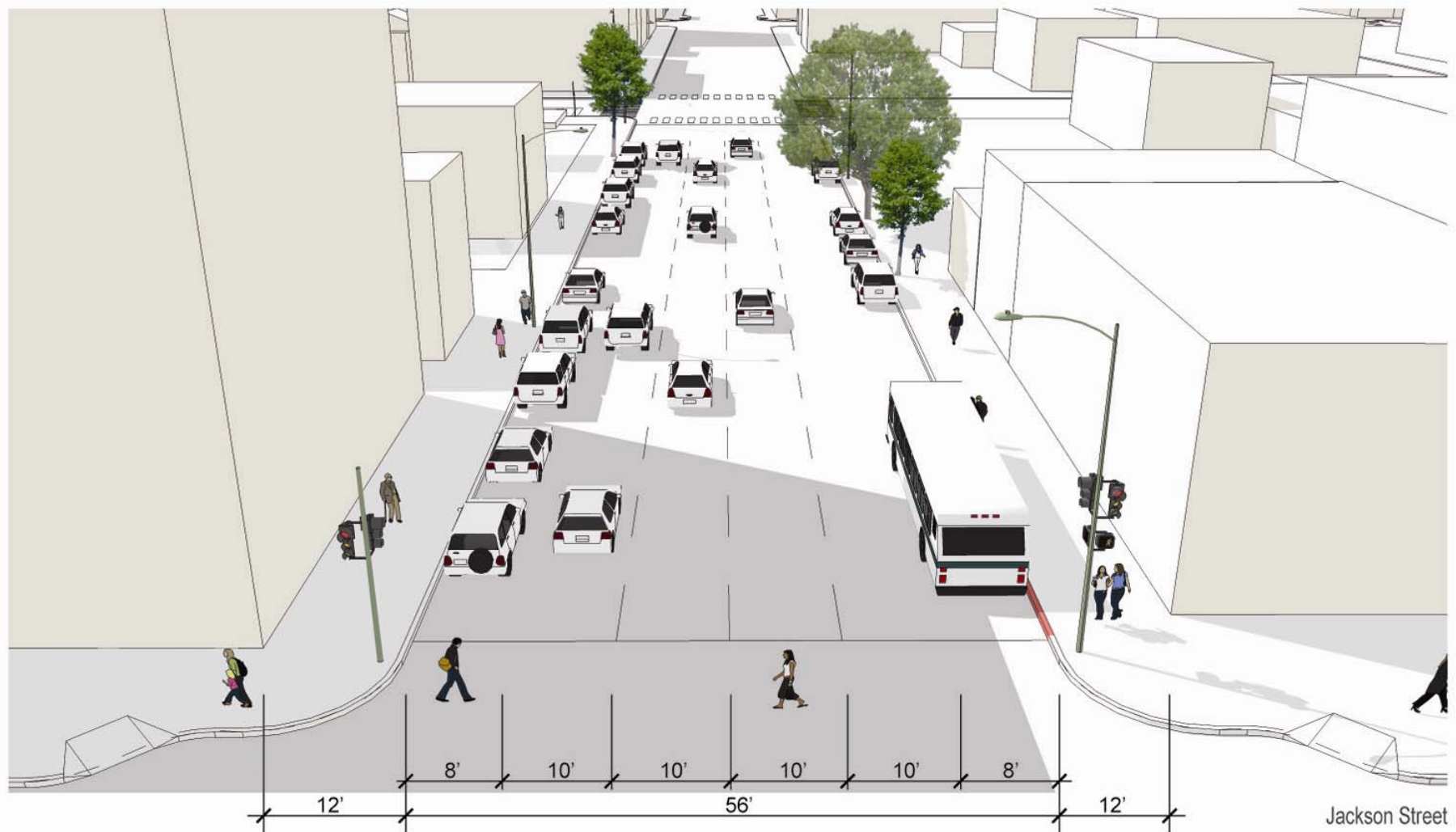
8th Street in Chinatown Core
Existing Looking West - 4 Lanes One-Way



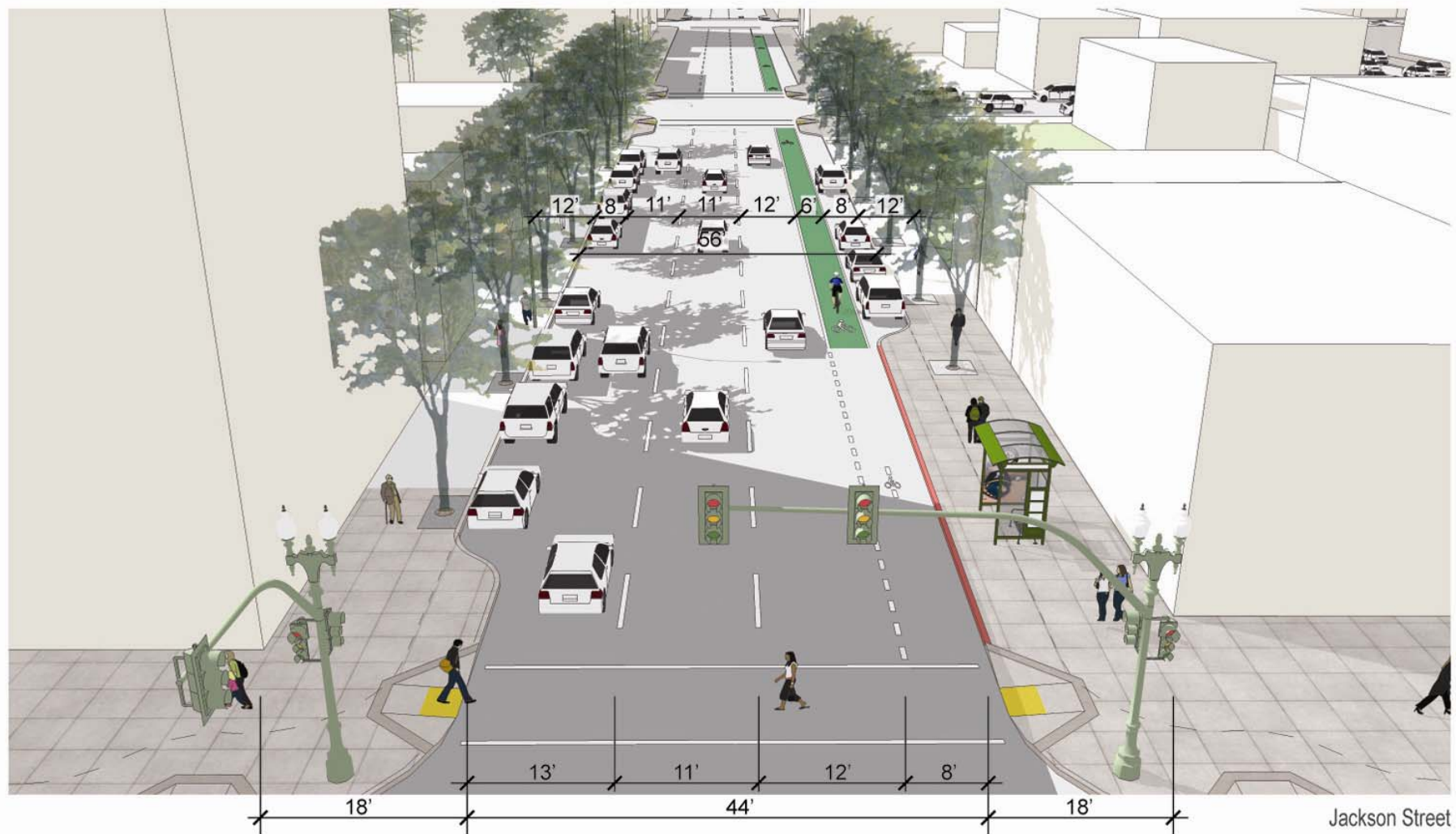
8th Street in Chinatown Core
4/3 Lane Reduction, Widened Sidewalks, Sharrow

Potential for 8th Street - East of Chinatown Core

- Reduce roadway by one travel lane
- Add bike lane
- Add street trees
- Add corner bulb-outs at intersections, with potential bus bulb to accommodate transit patrons



8th Street
Existing Looking West - 4 Lanes One-Way



8th Street
4/3 Lane Reduction, Bike Lane

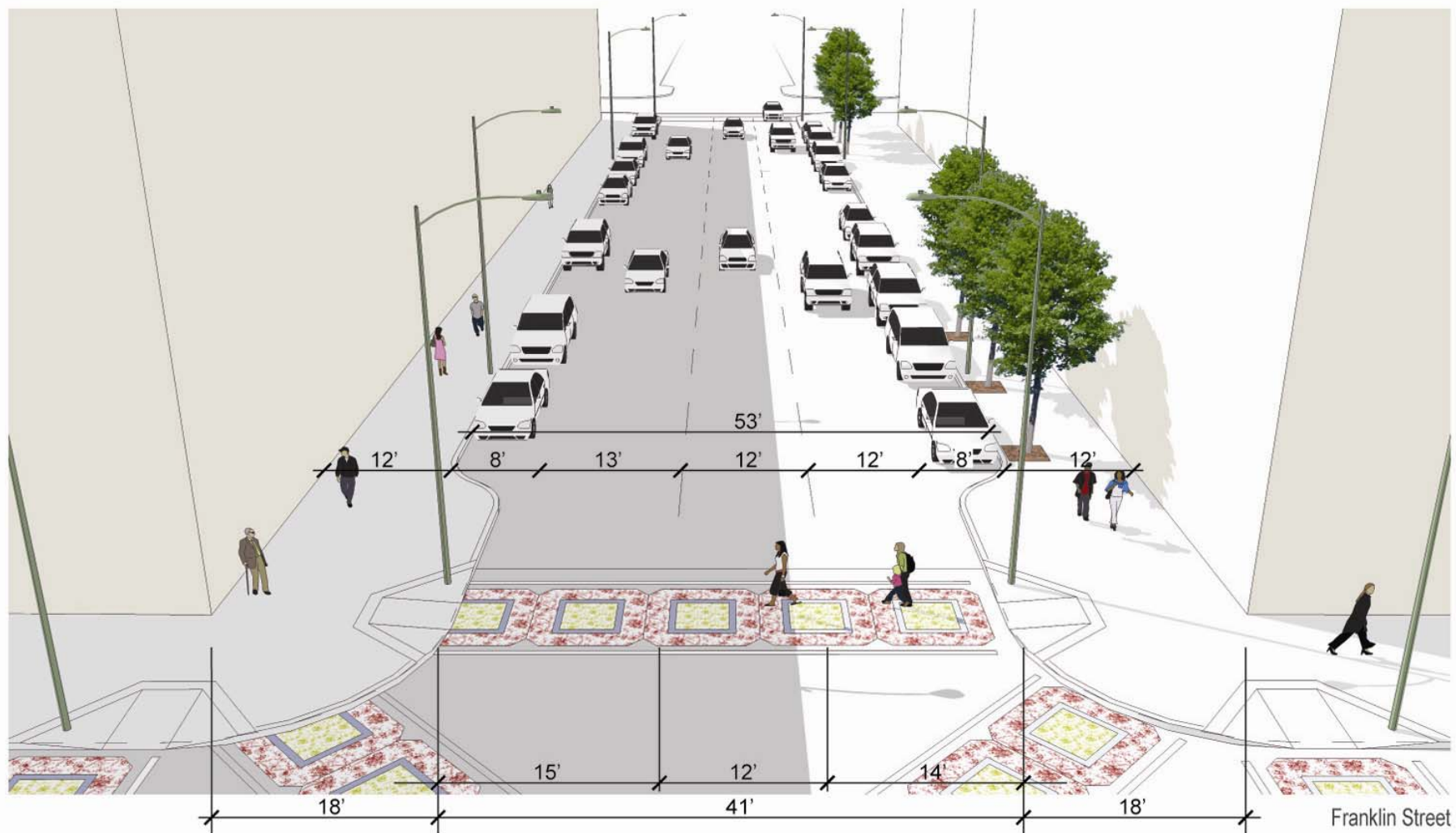
9th Street - Existing



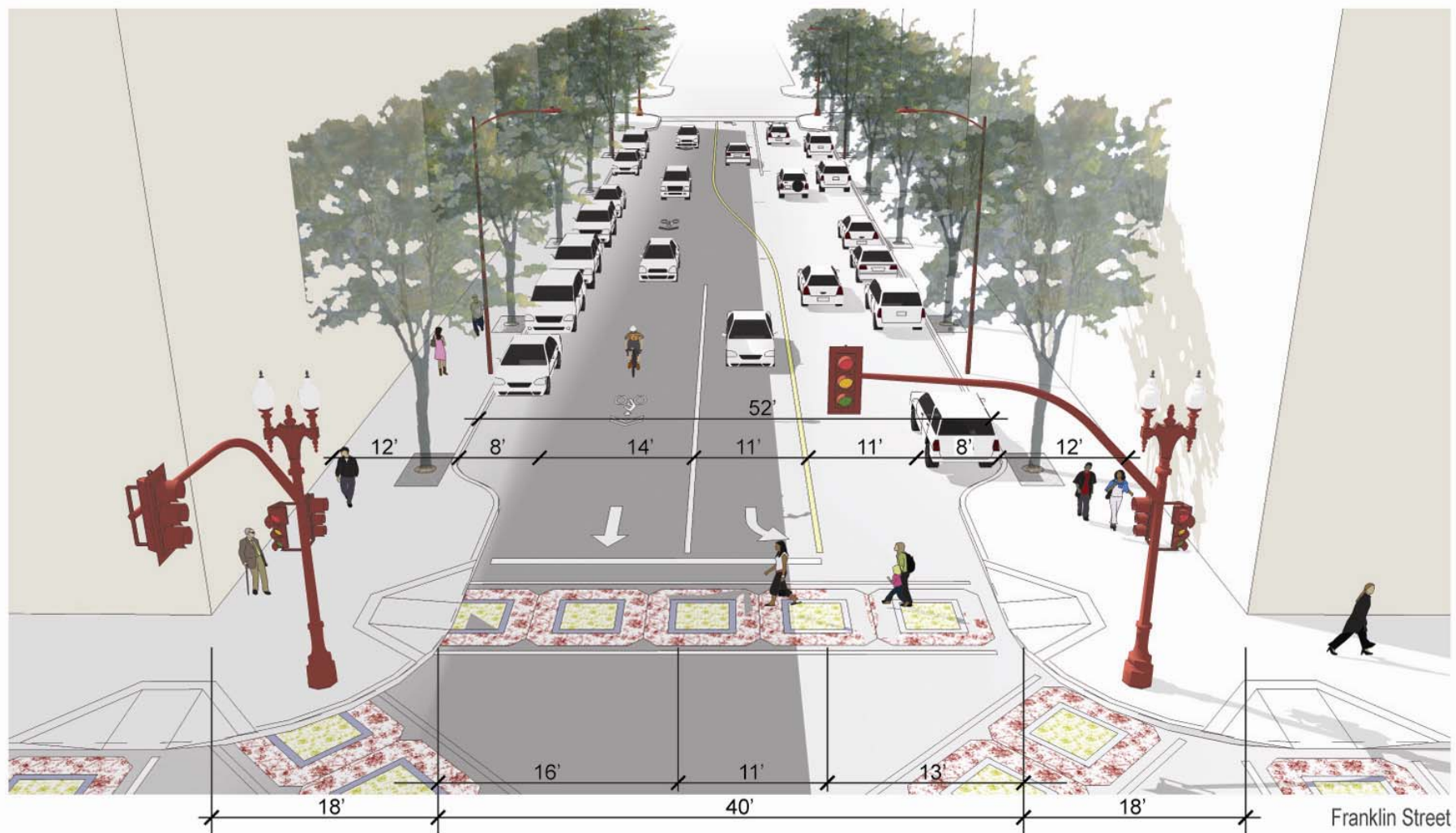
Potential 9th Street – Chinatown Core

Option A: Two Way Conversion

- Convert from one way travel to two way travel
- Need center two-way left turn lane to accommodate turning movements at intersections and driveways
- Add corner bulb-outs at intersections
- Add street trees
- No additional roadway width for bike or pedestrian amenities



9th Street in Chinatown Core
Existing Looking West - 3 Lanes One-Way

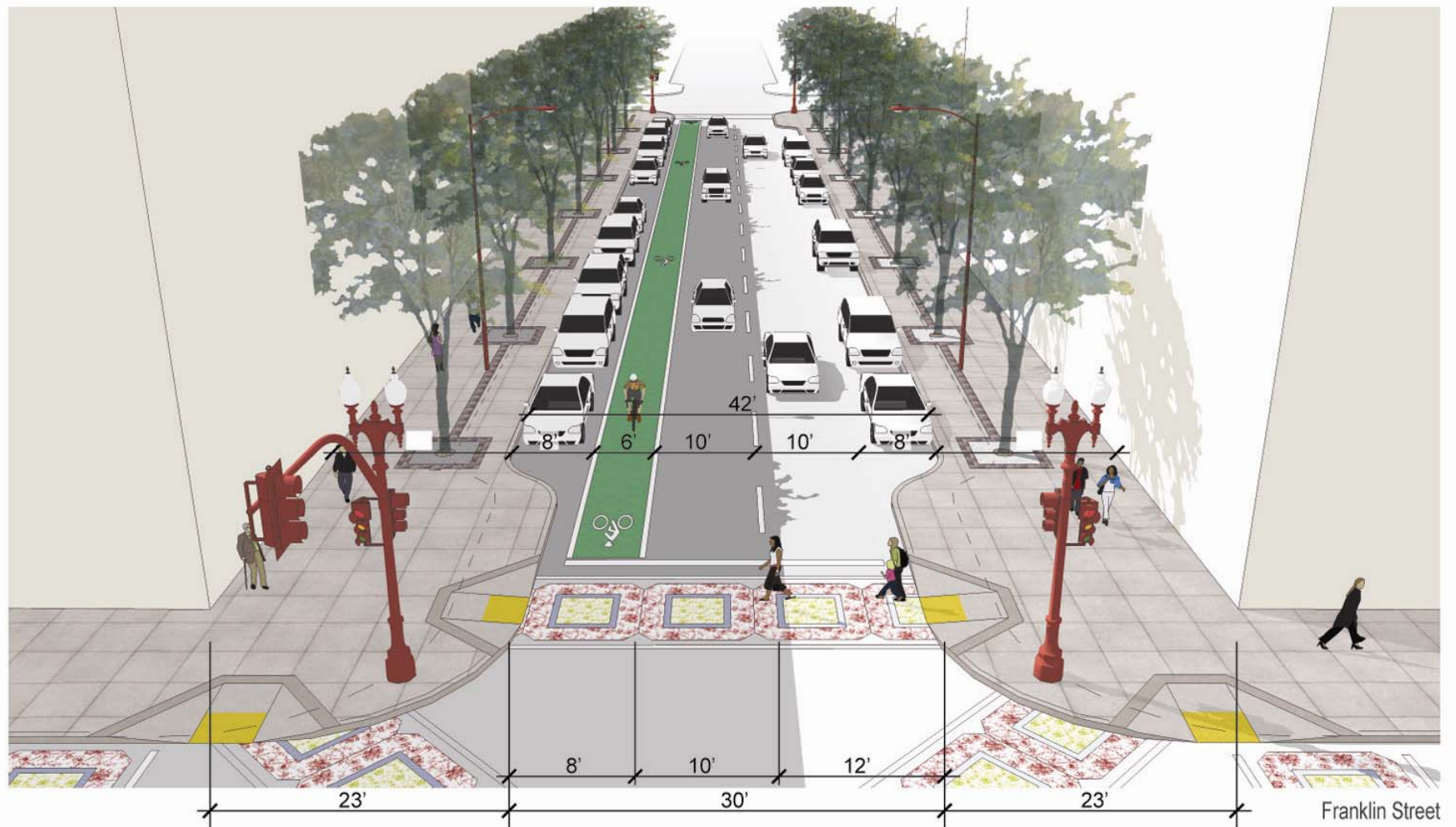


9th Street in Chinatown Core - Option A
Convert to Two-Way, Sharrow

Potential 9th Street – Chinatown Core

Option B: Lane Reduction

- Remove one travel lane
- Add bike lane
- Widen sidewalks along both sides of roadway, if funding available
- Add street trees
- Add corner bulb outs at intersections

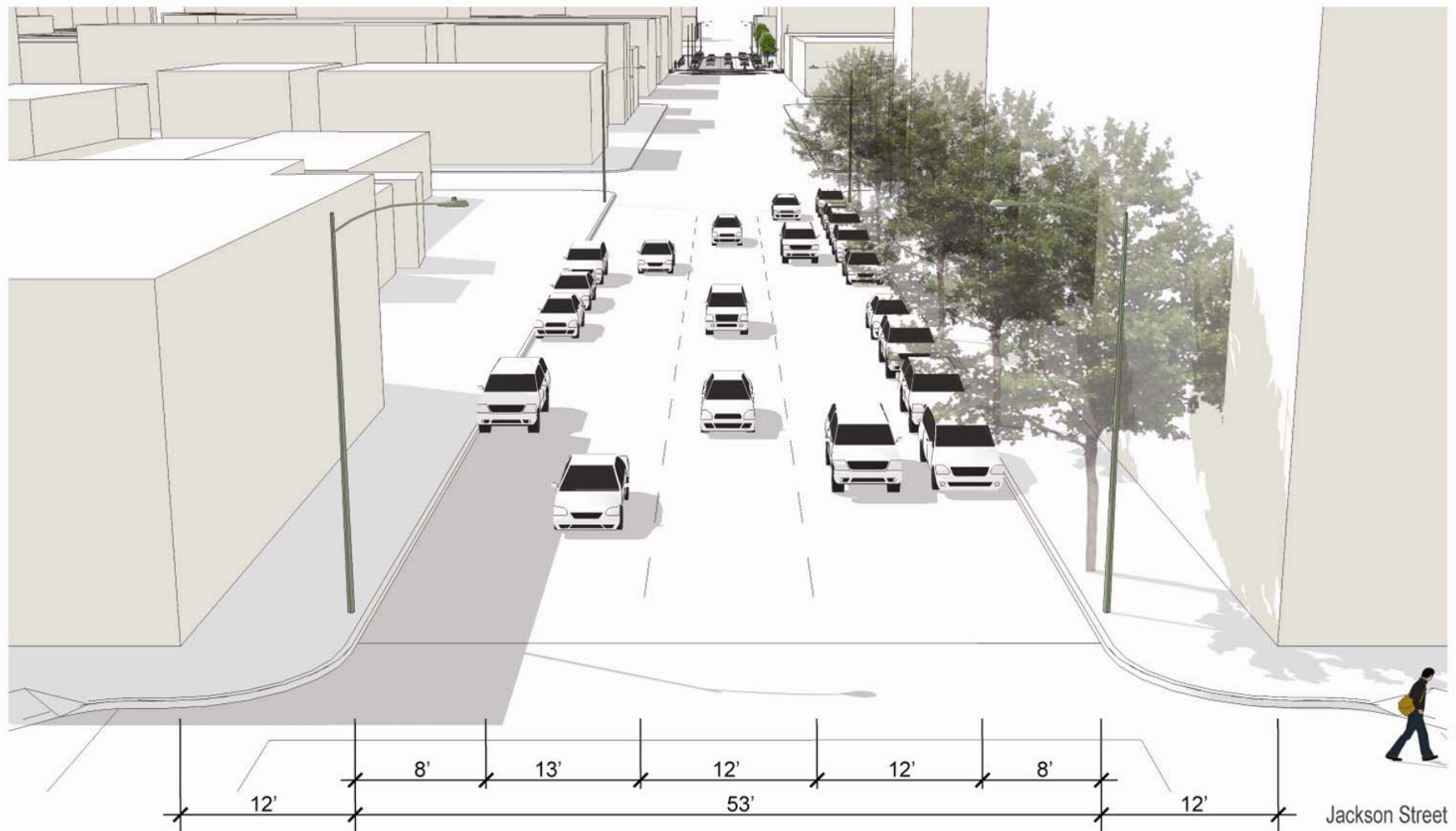


9th Street in Chinatown Core - Option B
3/2 Lane Reduction, Widened Sidewalks, Bike Lane

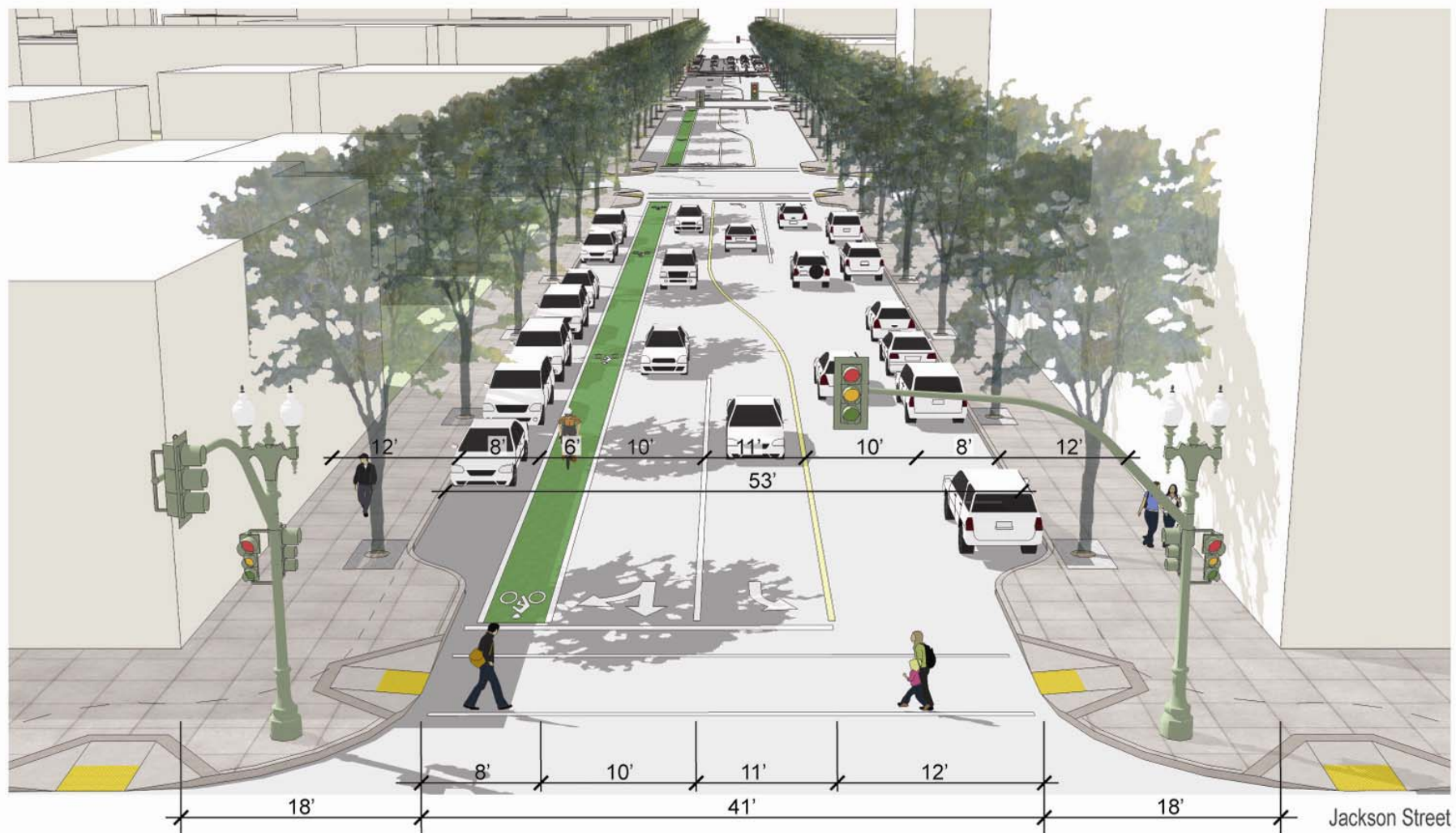
Potential 9th Street – East of Chinatown Core

Option A: Convert to Two-Way

- Convert to two-way with middle turn lane
- Add bike lane on one side of street
- Add street trees
- Add corner bulb-outs at intersections, with potential bus bulb to accommodate transit patrons



9th Street
Existing Looking West - 3 Lanes One-Way

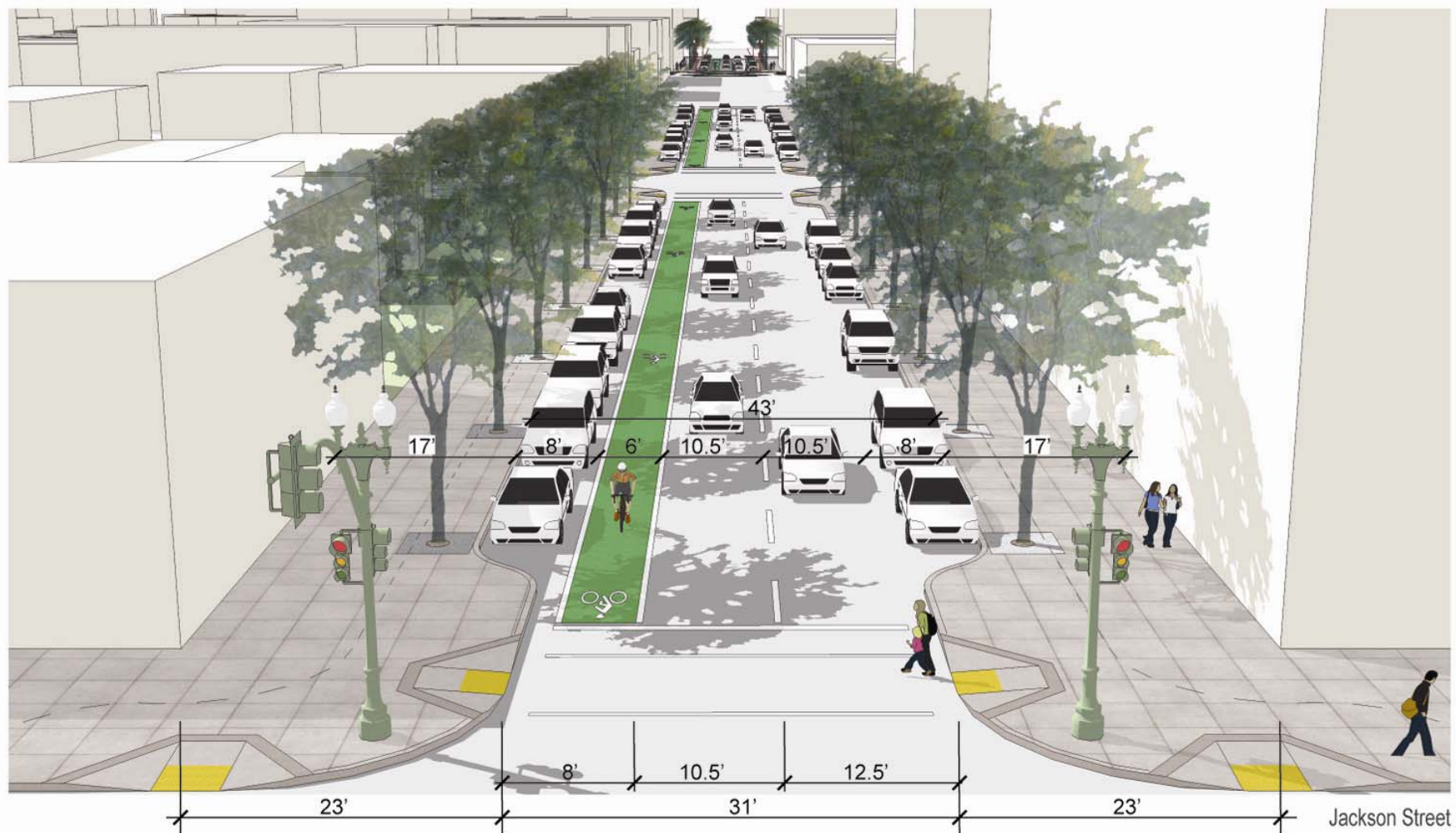


9th Street - Option A
Convert to Two-Way, Bike Lane

Potential 9th Street – East of Chinatown Core

Option B: Lane Reduction

- Reduce roadway by one travel lane
- Add bike lane
- Add street trees
- Add corner bulb-outs at intersections, with potential bus bulb to accommodate transit patrons



9th Street - Option B
3/2 Lane Reduction, Widened Sidewalks, Bike Lane

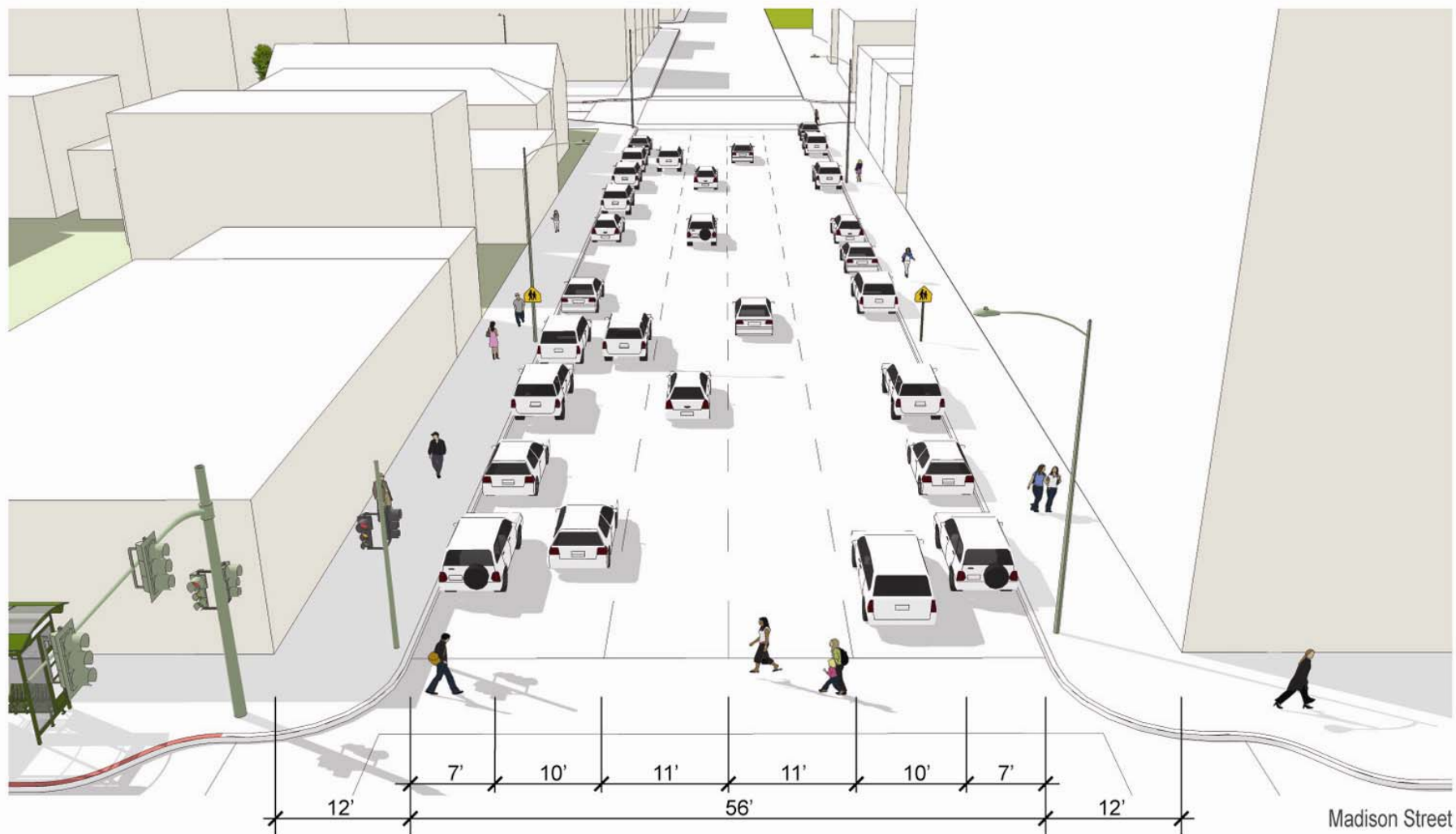
10th Street (West of Madison) - Existing



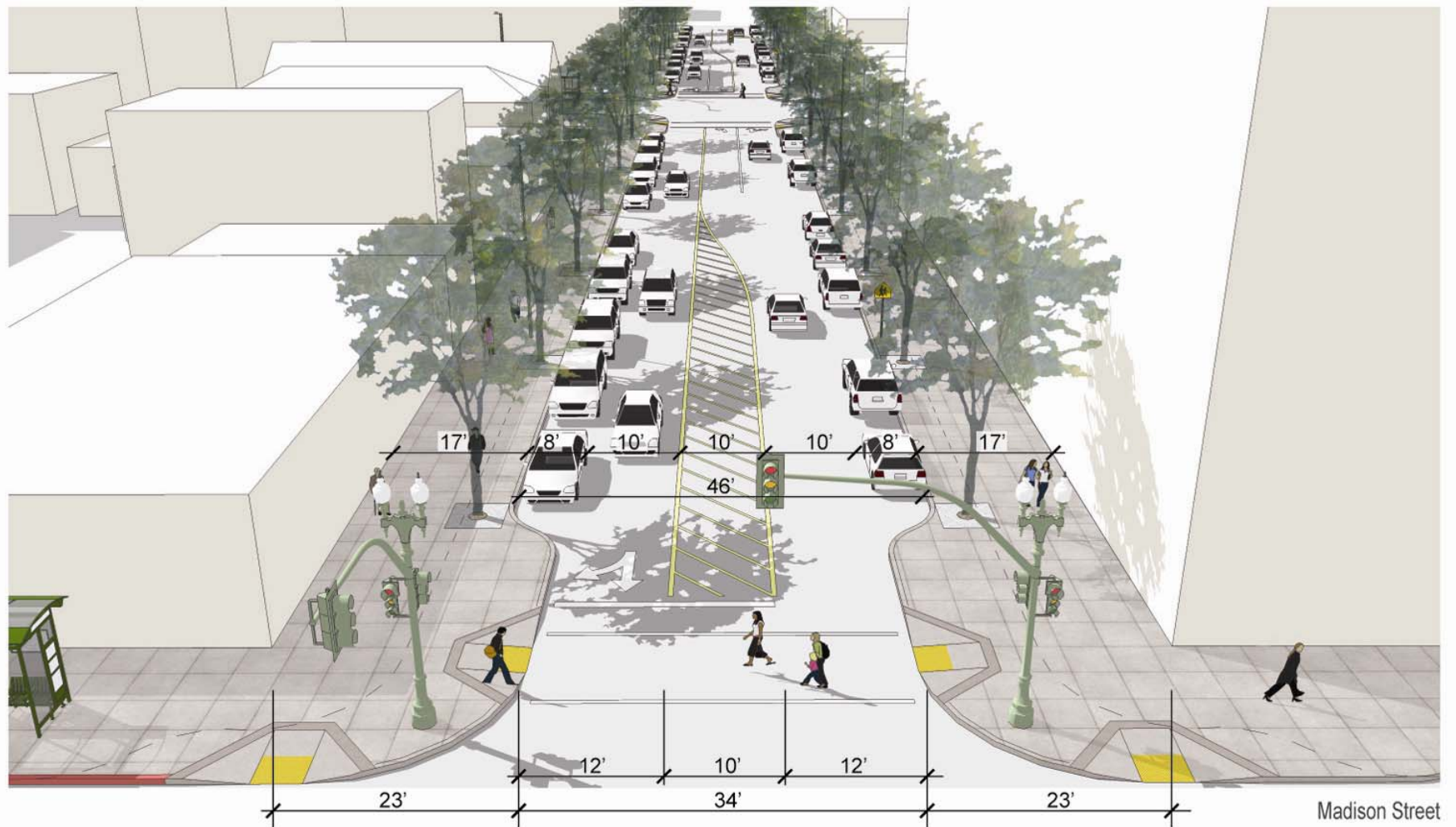
Potential 10th Street –

Option A: Two Way Conversion

- Convert from one way travel to two way travel
- Need center two-way left lane to accommodate turning movements at intersections and driveways
- Widen sidewalks along both sides of roadway
- Add street trees
- Add corner bulb outs at intersections



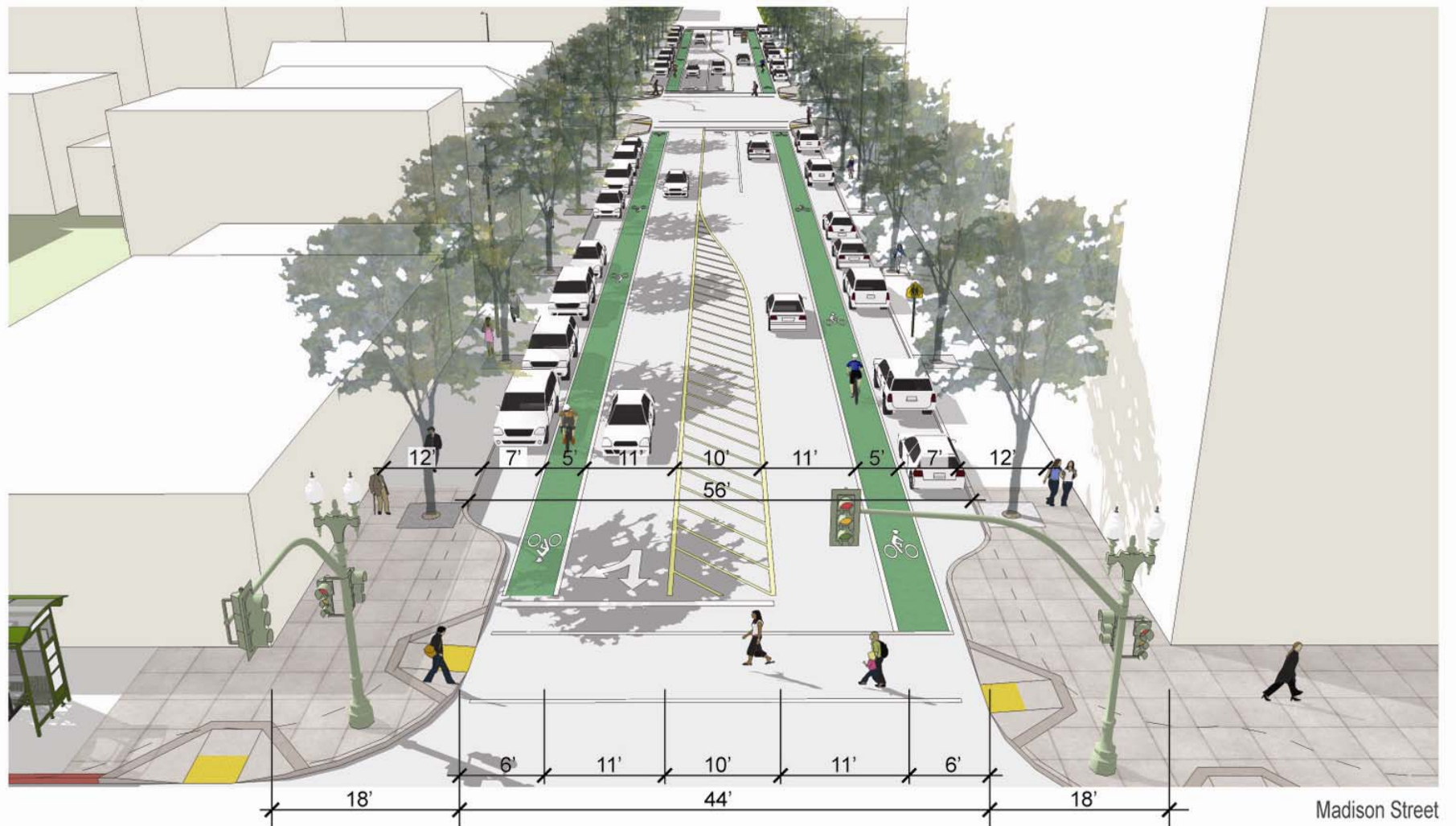
10th Street
Existing Looking West - 4 Lanes One-Way



10th Street - Option A
Convert to Two-Way, 4/3 Lane Reduction, Widened Sidewalks

Potential 10th Street – Option B: Two Way Conversion

- Convert from one way travel to two way travel
- Need center two-way left lane to accommodate turning movements at intersections and driveways
- Add bike lanes
- Add street trees
- Add corner bulb outs at intersections



10th Street - Option B
Convert to Two-Way, 4/3 Lane Reduction, Bike Lanes

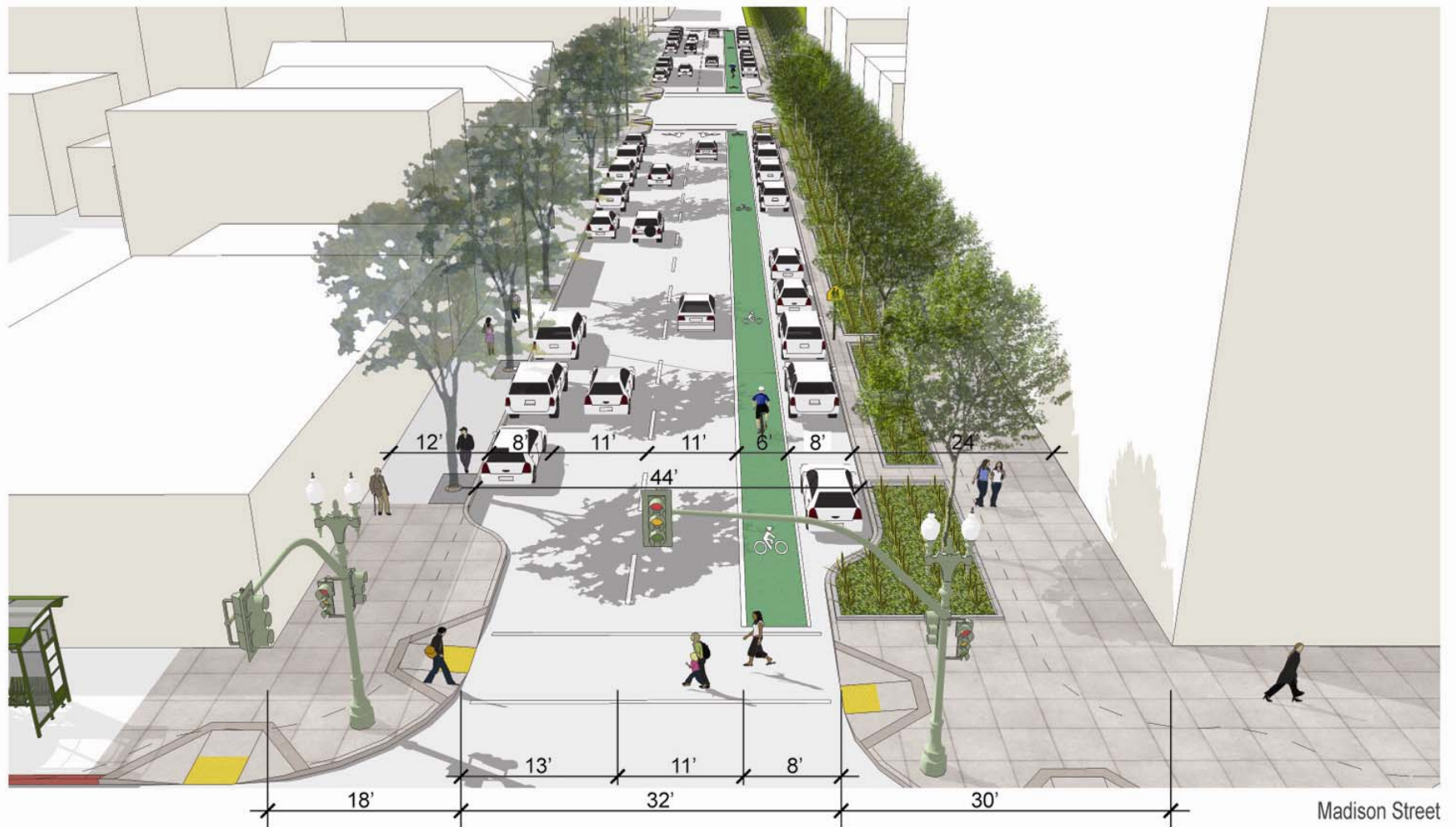
Potential 10th Street – Option C: Lane Reduction

- Remove two travel lanes
- Widen sidewalk along one side of roadway
- Provide angled on-street parking
- Provide enhanced streetscaping/green street amenities, such as rain garden
- Add street trees
- Add corner bulb outs at intersections

4/2 Lane Reduction, Widened Sidewalk (north side only), Angle Parking, "Green Street"

Potential 10th Street – Option D: Lane Reduction

- Remove two travel lanes
- Widen sidewalk along one side of roadway
- Provide enhanced streetscaping/green street amenities, such as rain garden
- Add bike lane
- Add street trees
- Add corner bulb outs at intersections

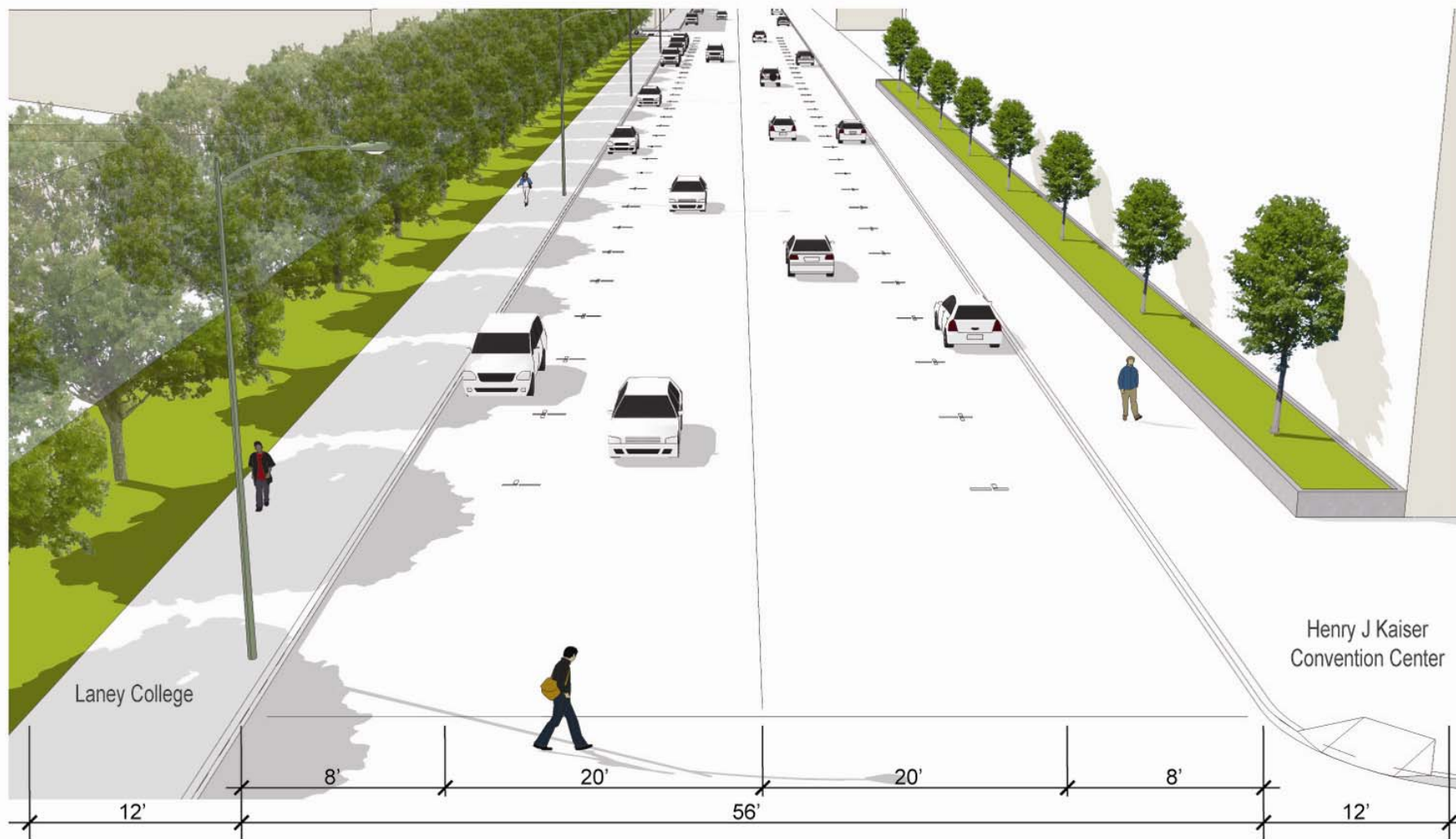


10th Street - Option D

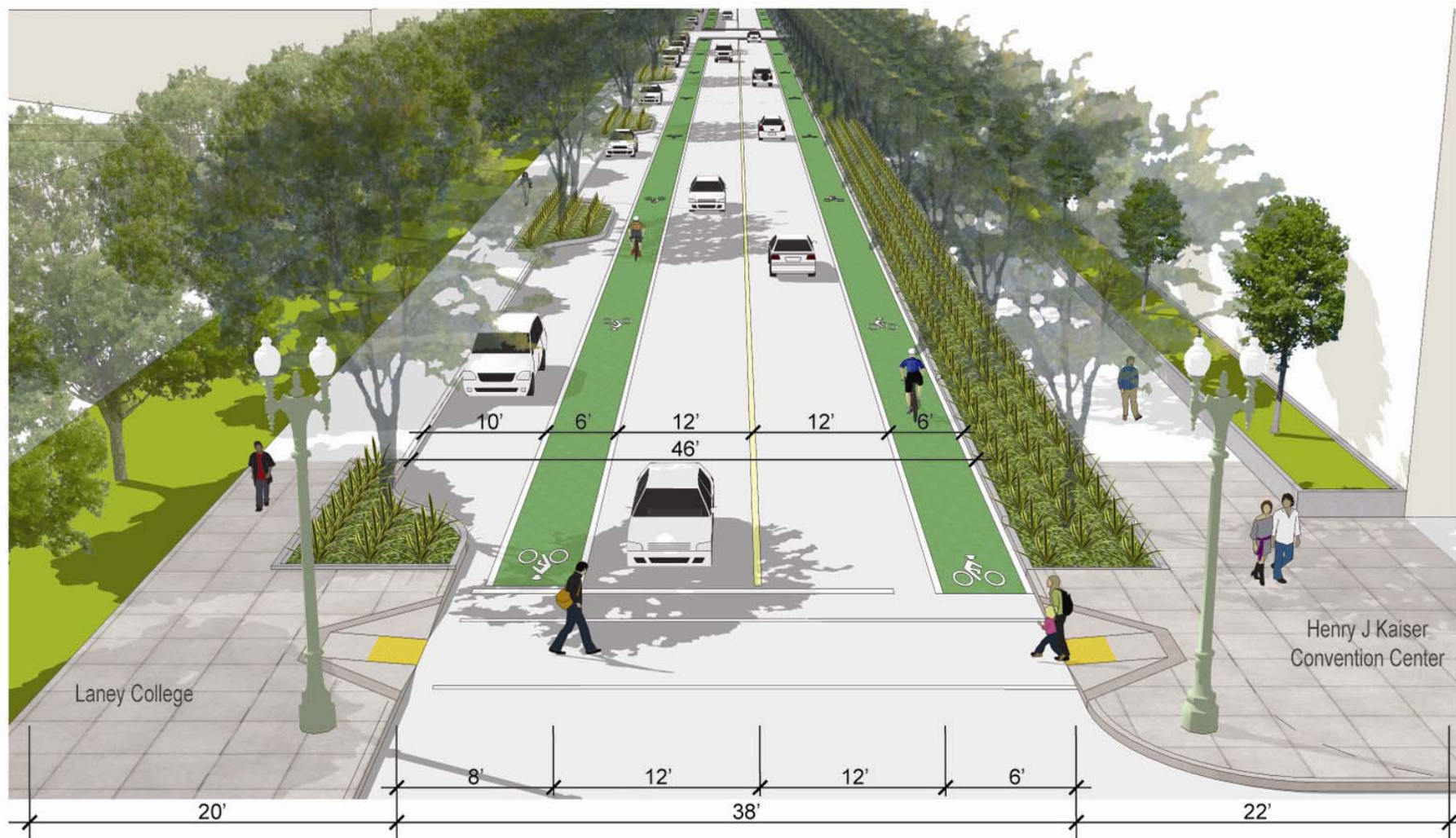
4/2 Lane Reduction, Widened Sidewalk (north side only), Parallel Parking, Bike Lane, "Green Street"

Potential 10th Street East of Fallon Green Street

- Widen sidewalk along both sides of roadway
- Provide enhanced streetscaping/green street amenities such as rain gardens
- Add street trees
- Add bike lanes
- Add corner bulb outs at intersections



**10th Street East of Fallon Street
Existing Looking West - 2 Lanes Two-Way**



10th Street East of Fallon Street
Narrowed Lanes, Widened Sidewalk, Bike Lanes, "Green Street" Improvements

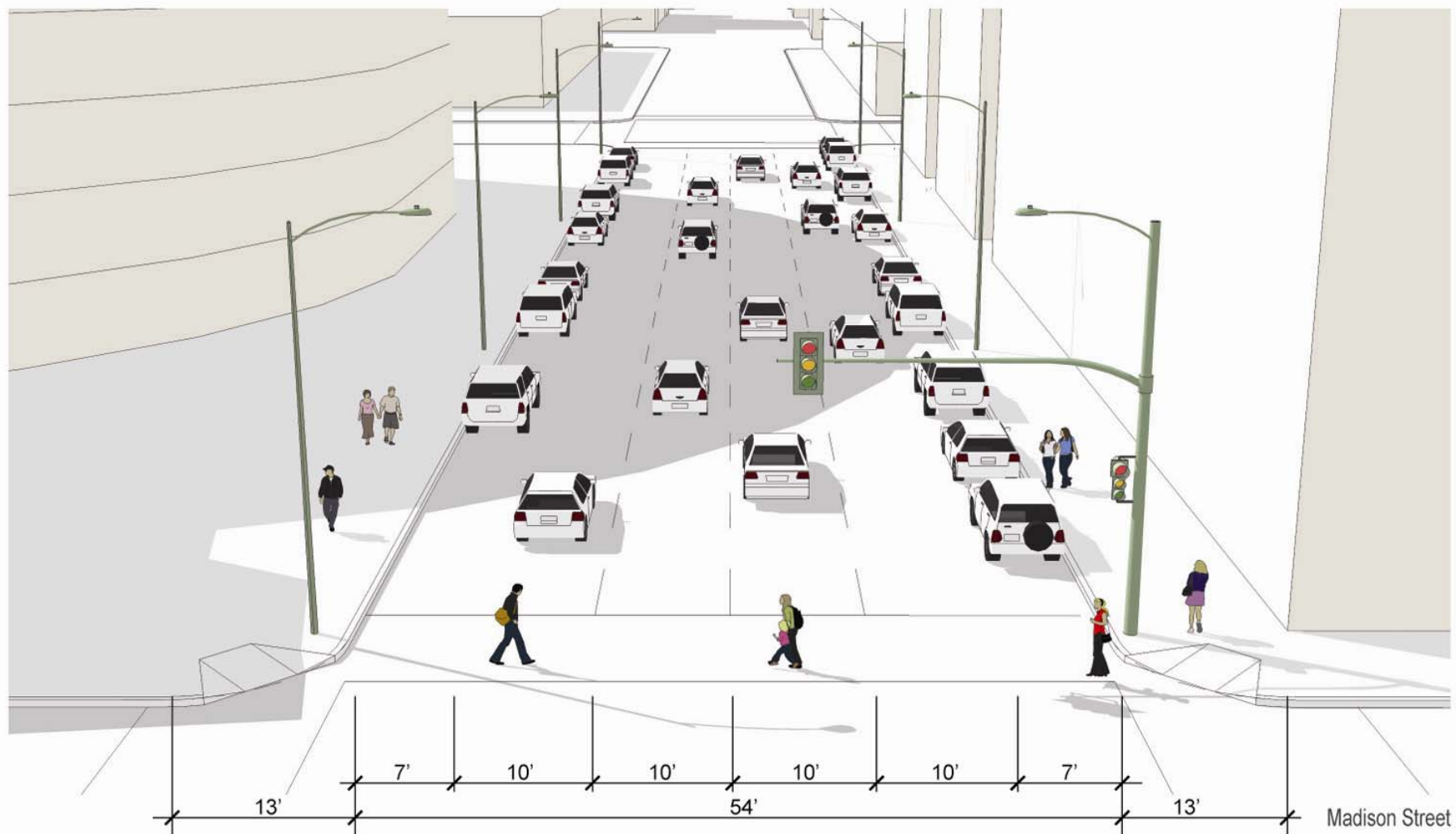
13th Street - Existing



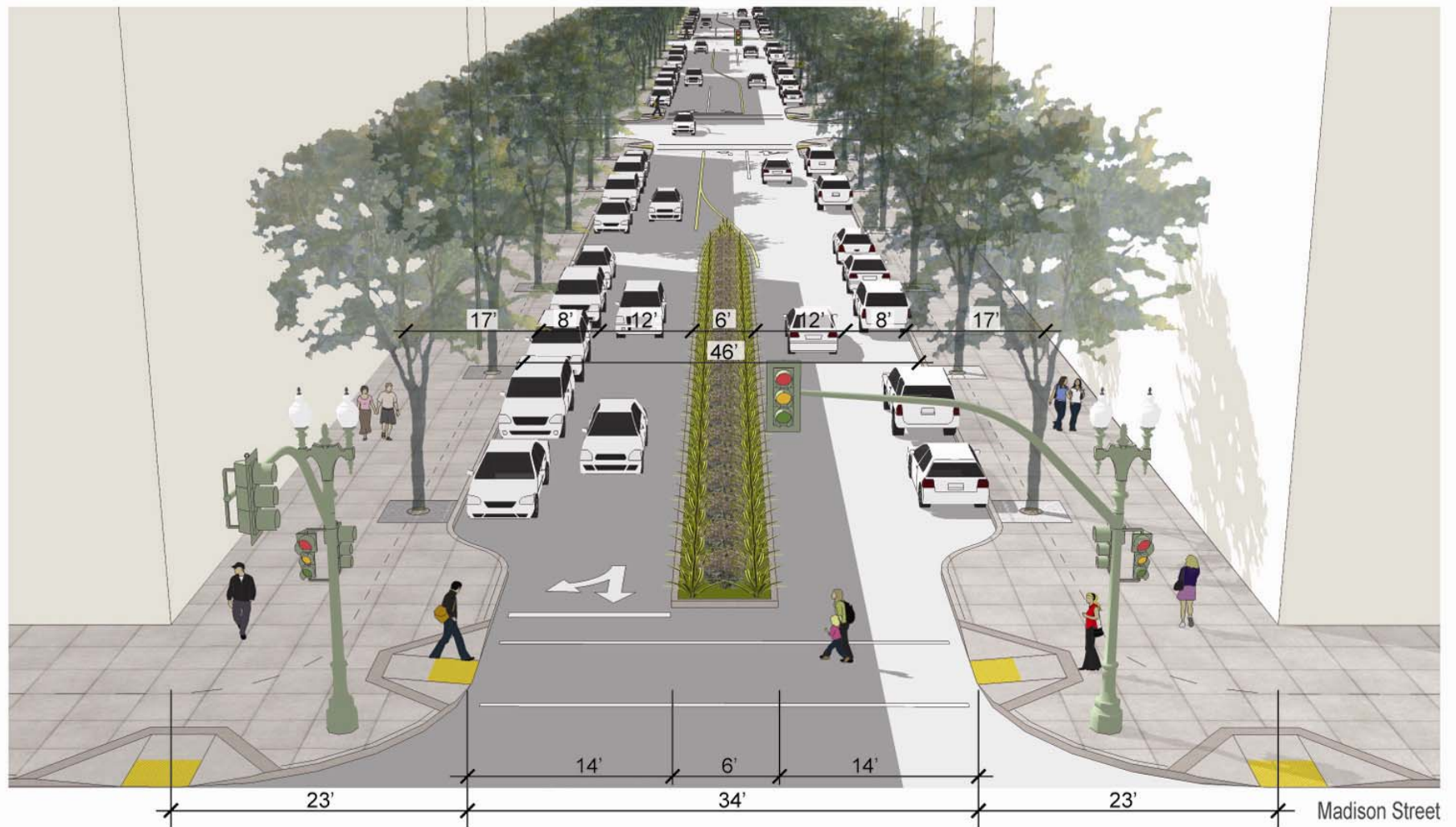
Potential 13th Street –

Option A: Two-Way Conversion

- Convert from one way travel to two way travel
- Need center two-way left lane to accommodate turning movements at intersections and driveways
- Remove one travel lane
- Widen sidewalks along both sides of roadway
- Provide enhanced streetscaping/green street amenities, such as rain garden
- Add street trees
- Add corner bulb outs at intersections



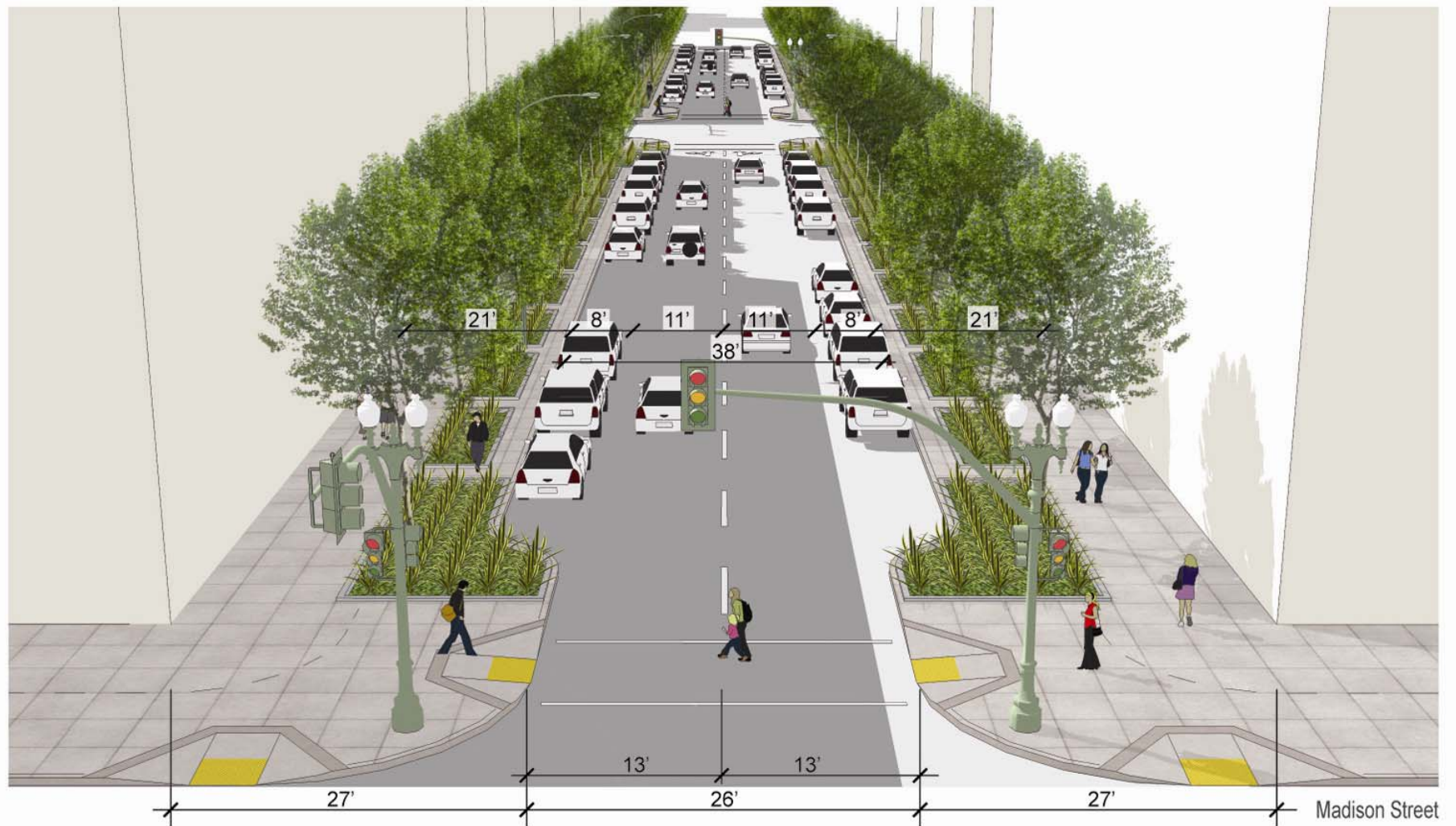
13th Street
Existing Looking West - 4 Lanes One-Way



13th Street - Option A
Convert to Two-Way, 4/3 Lane Reduction, Widened Sidewalks

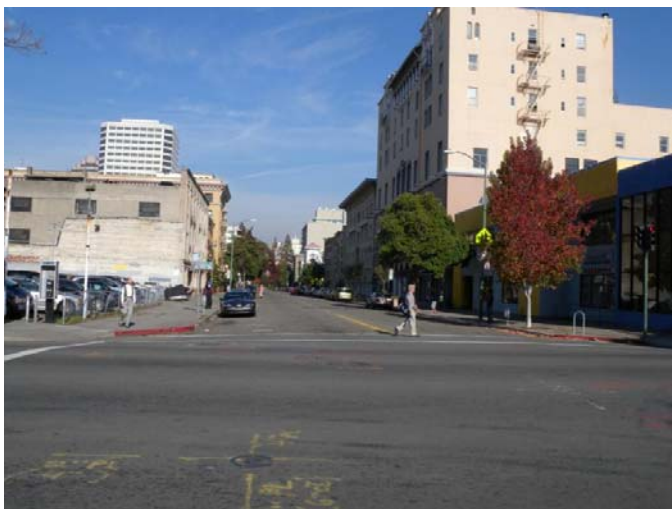
Potential 13th Street – Option B: Lane Reduction

- Remove two travel lanes
- Widen sidewalk along both sides of roadway
- Provide enhanced streetscaping/green street amenities such as rain gardens
- Add street trees
- Add corner bulb outs at intersections



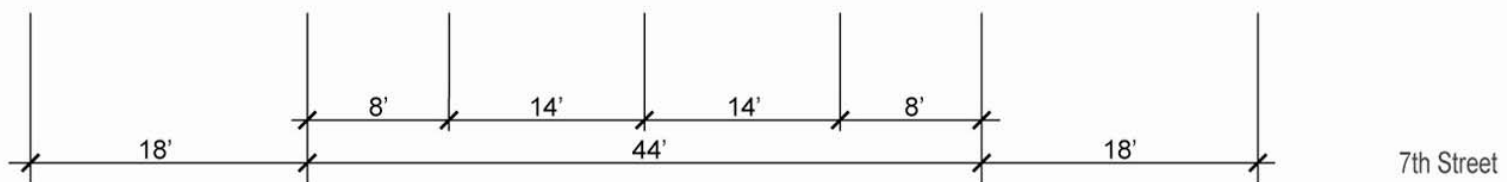
13th Street - Option B
4/2 Lane Reduction, Widened Sidewalks, "Green Street"

Alice Street – Existing

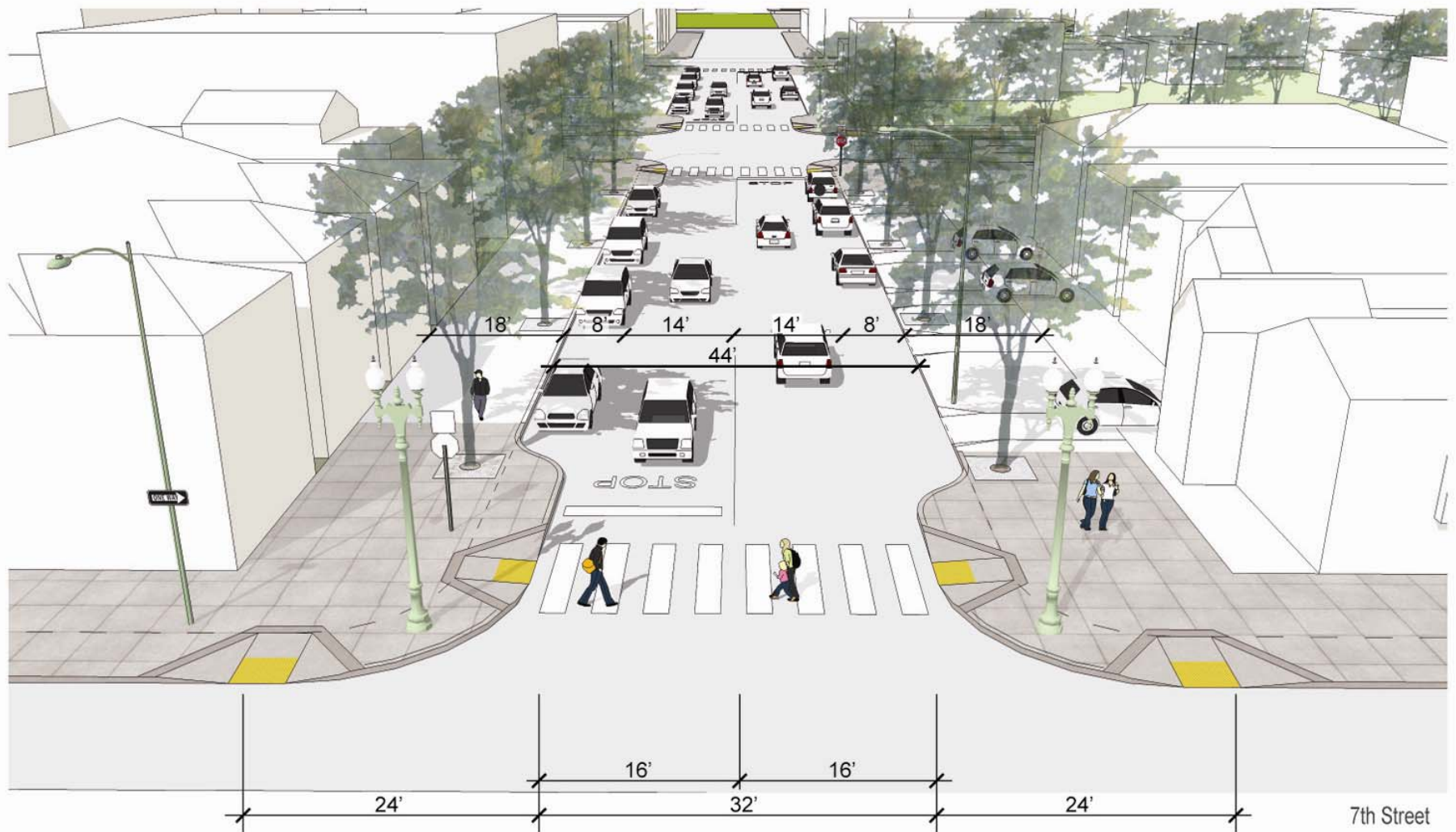


Potential Alice Street

- Add street trees
- Add corner bulb outs at intersections



Alice Street
Existing Looking North - 2 Lanes Two-Way



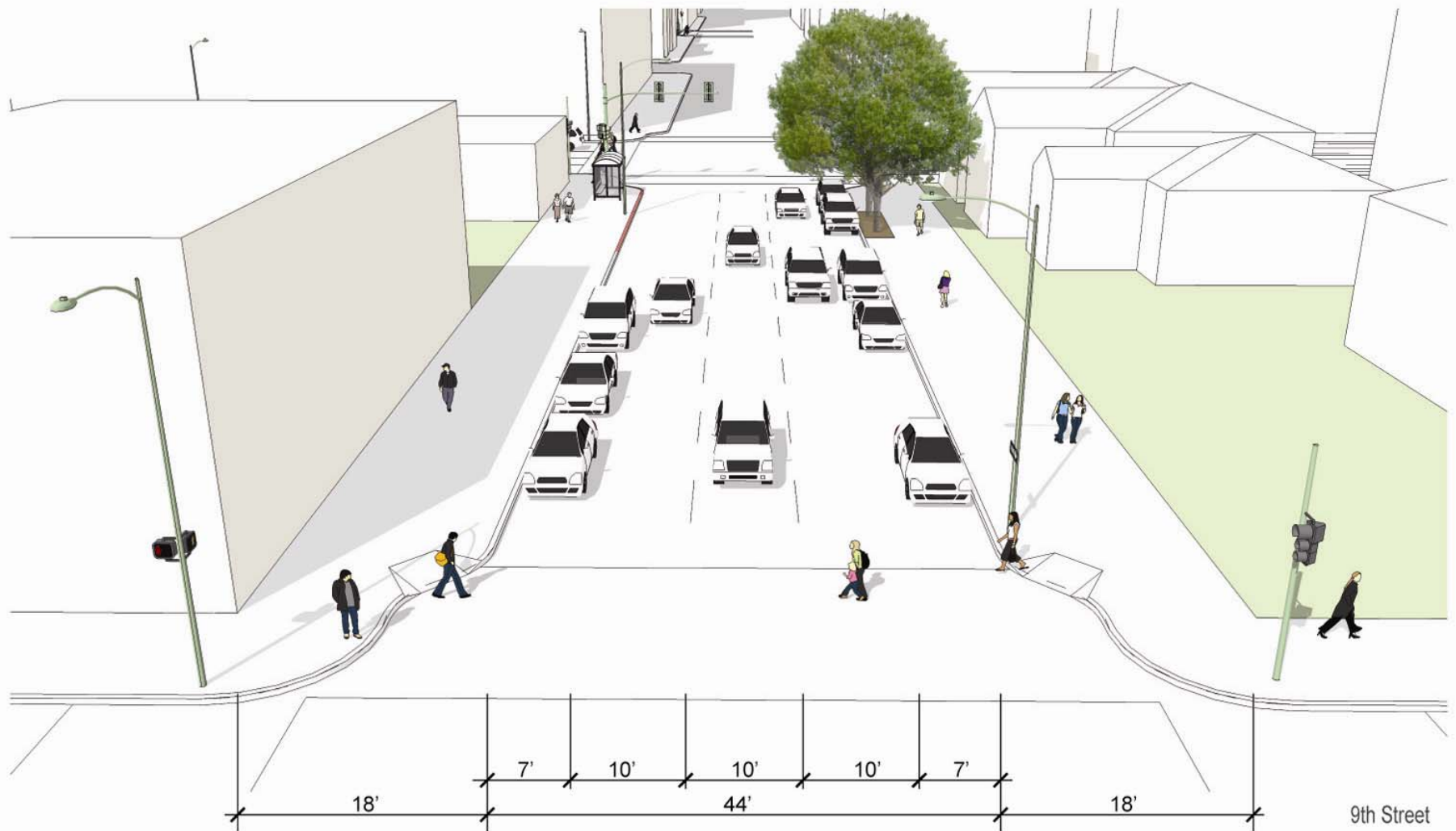
**Alice Street
Sidewalk Improvements**

Madison Street – Existing

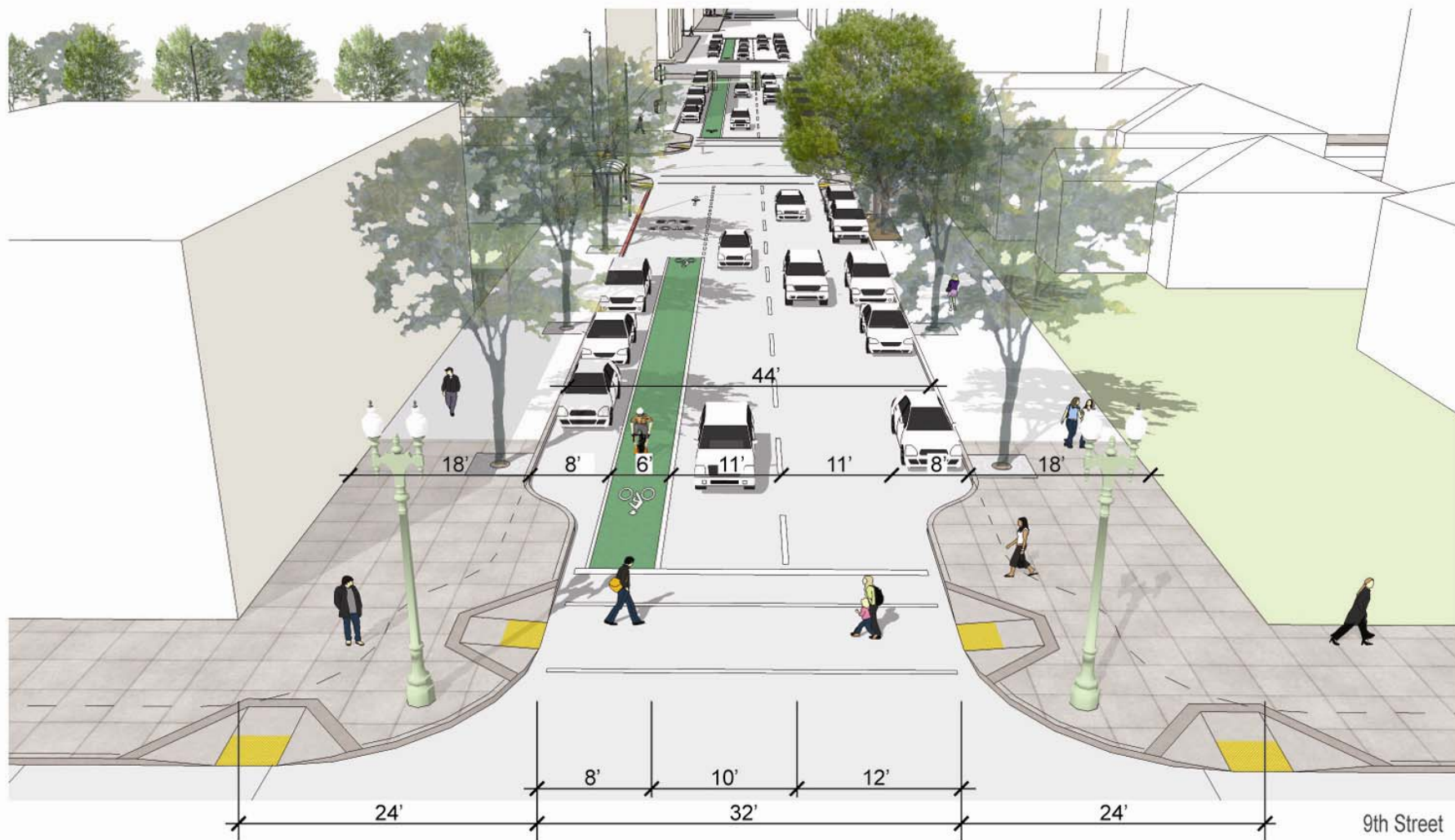


Potential Madison Street – Lane Reduction

- Remove one travel lane
- Add bike lane
- Widen on-street parking
- Add street trees
- Add corner bulb outs at intersections



Madison Street
Existing Looking North - 3 Lanes One-Way



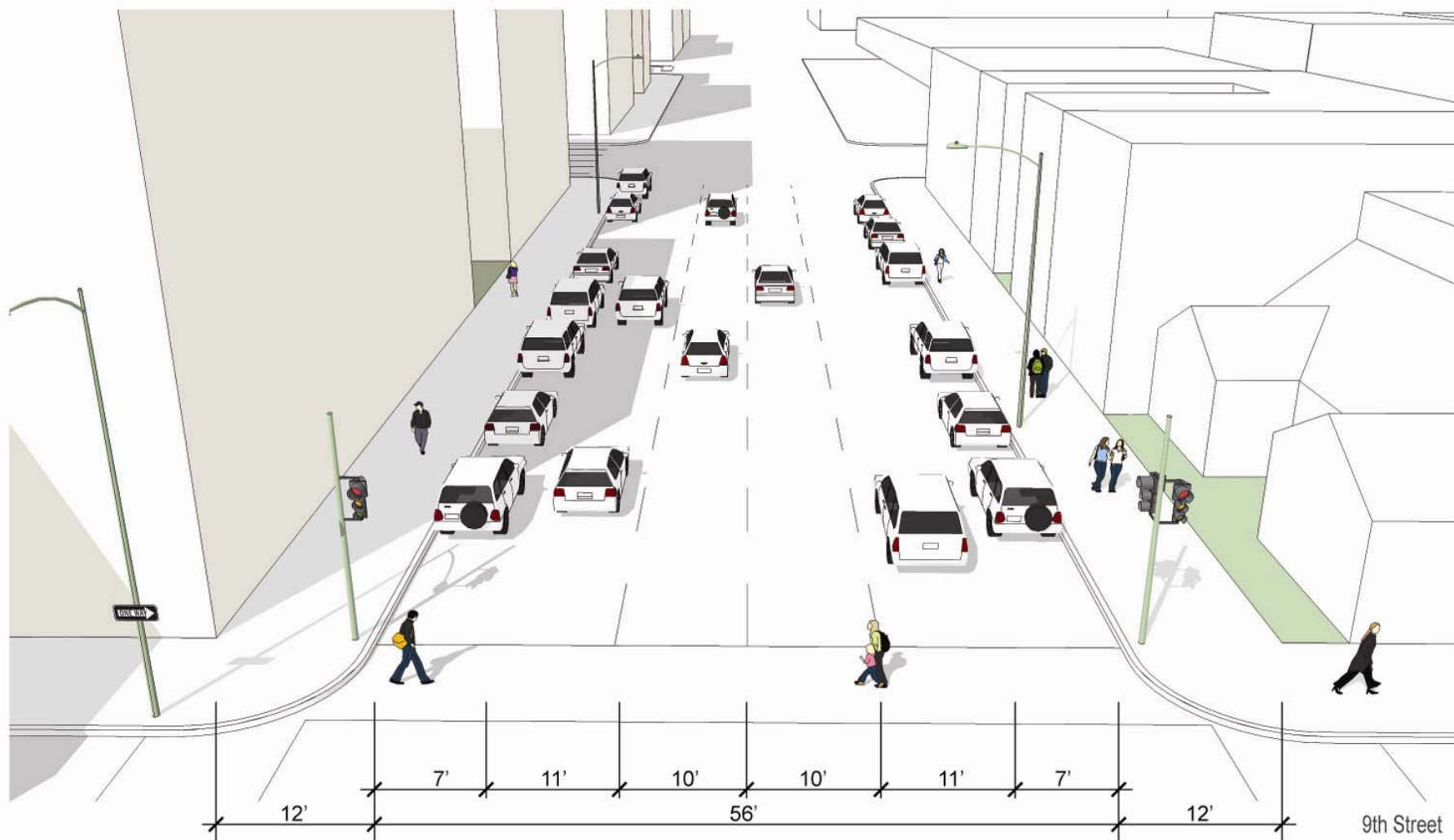
Madison Street
3/2 Lane Reduction, Bike Lane

Oak Street – Existing

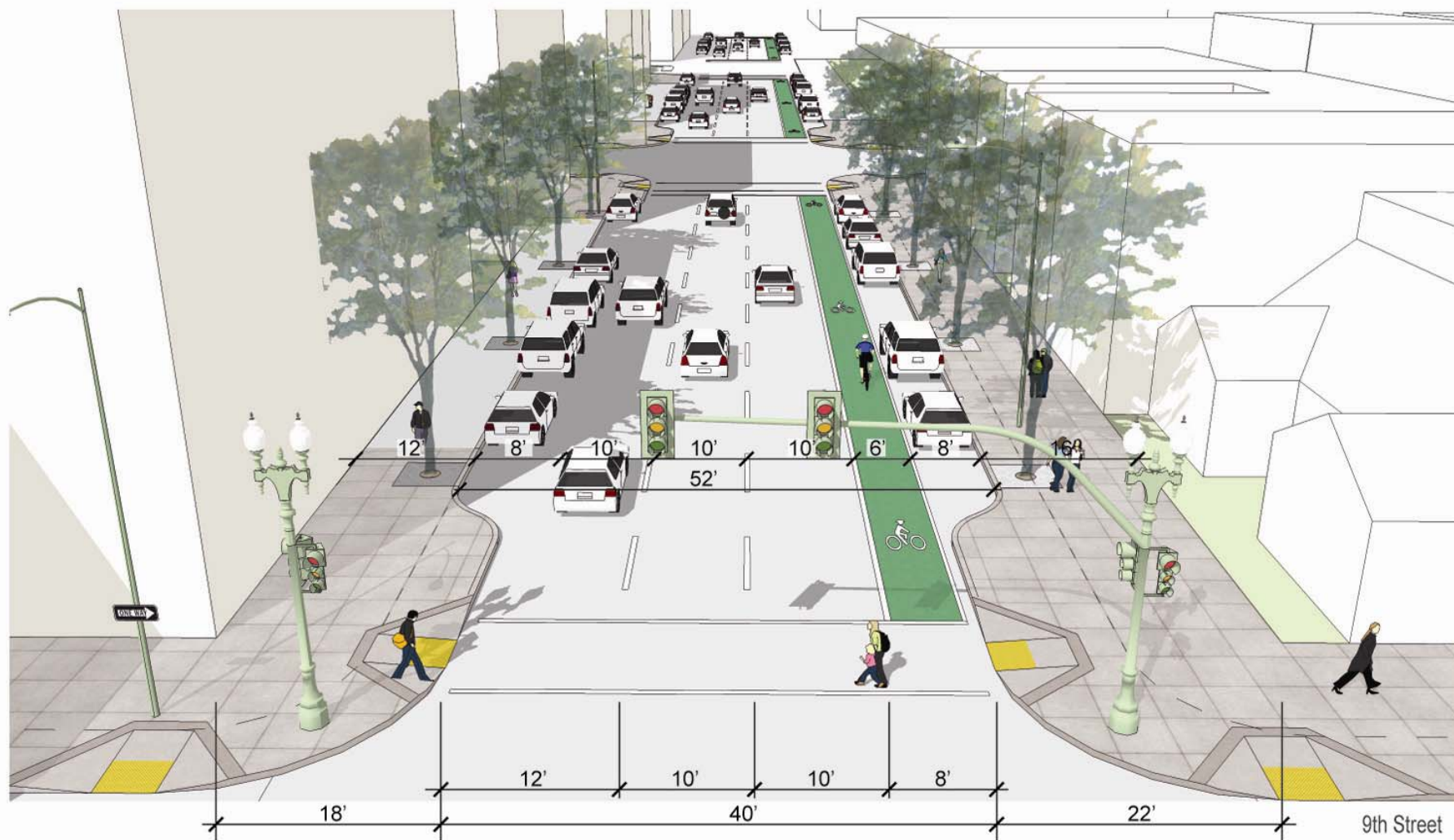


Potential Oak Street – Lane Reduction

- Remove one travel lane
- Widen sidewalk along one side of roadway, if funding available
- Add bike lane
- Add street trees
- Add corner bulb outs at intersections



Oak Street
Existing Looking North - 4 Lanes One-Way



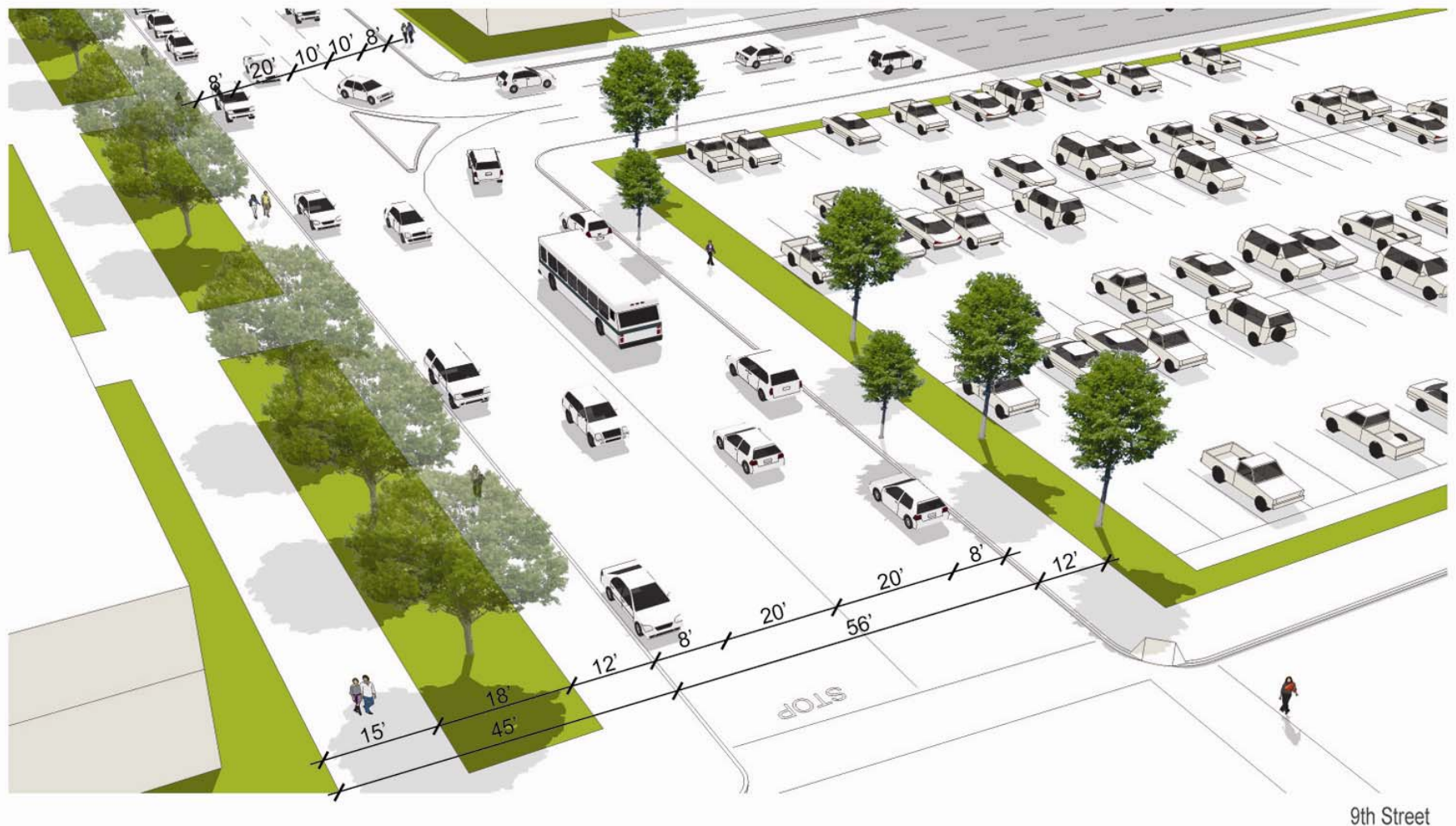
Oak Street
4/3 Lane Reduction, Bike Lane, Widened Sidewalk (east side only)

Fallon Street – Existing



Potential Fallon Street – Options A and B: Pedestrian/Vehicle Plaza

- Create pedestrian/vehicle plaza from 8th Street to 10th Street
- Widen sidewalks or add corner bulb outs at intersections
- Provide enhanced streetscaping and to tie into Laney College campus
- Special paving



Fallon Street
Existing Looking South - 2 Lanes Two-Way



9th Street

Fallon Street - Plaza Option A
Narrowed Lanes, Street Amenities in Center



9th Street

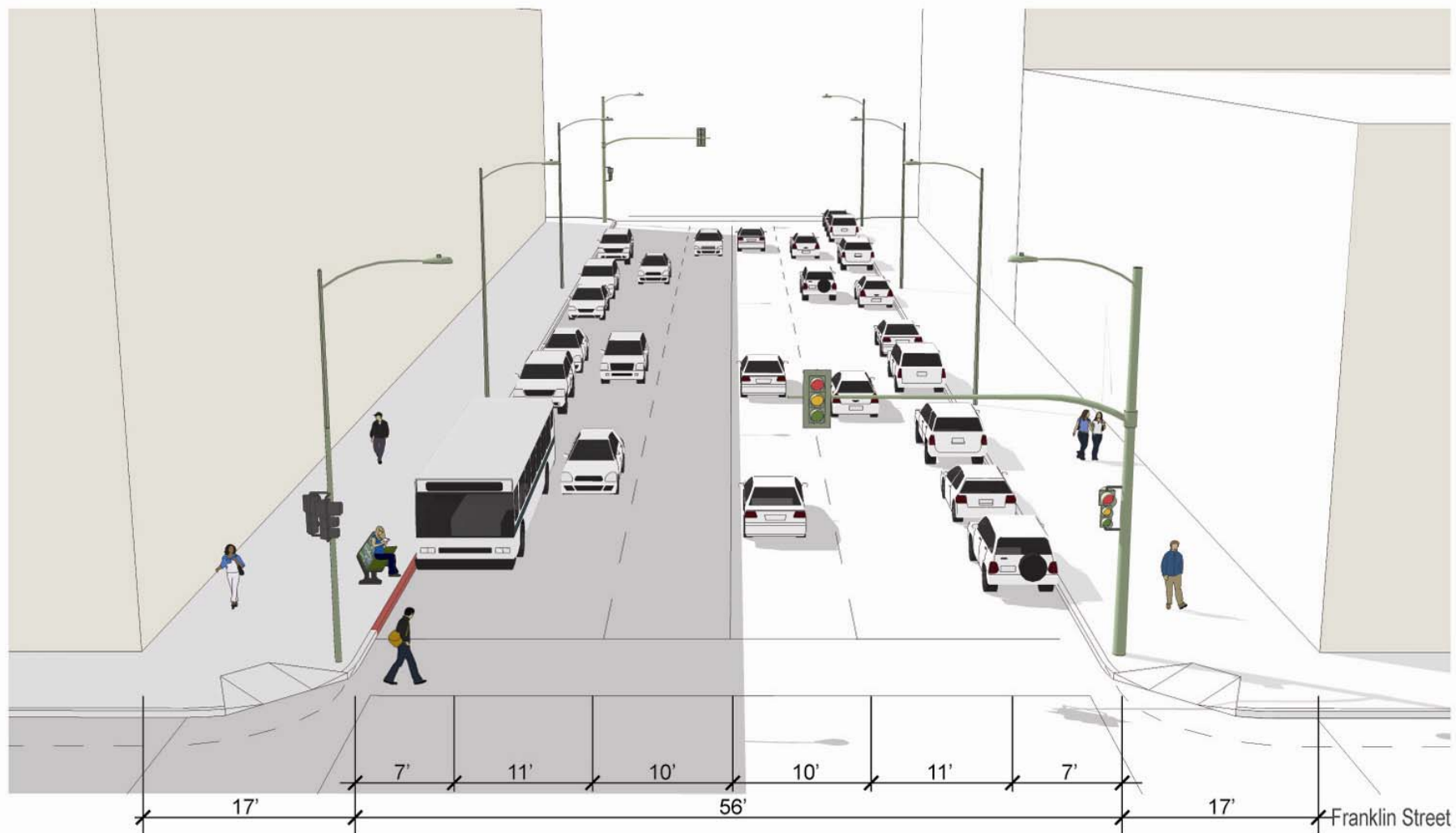
Fallon Street - Plaza Option B
Narrowed Lanes, Widened Sidewalks, Street Amenities at Frontage

14th Street – Existing



Potential 14th Street Modifications

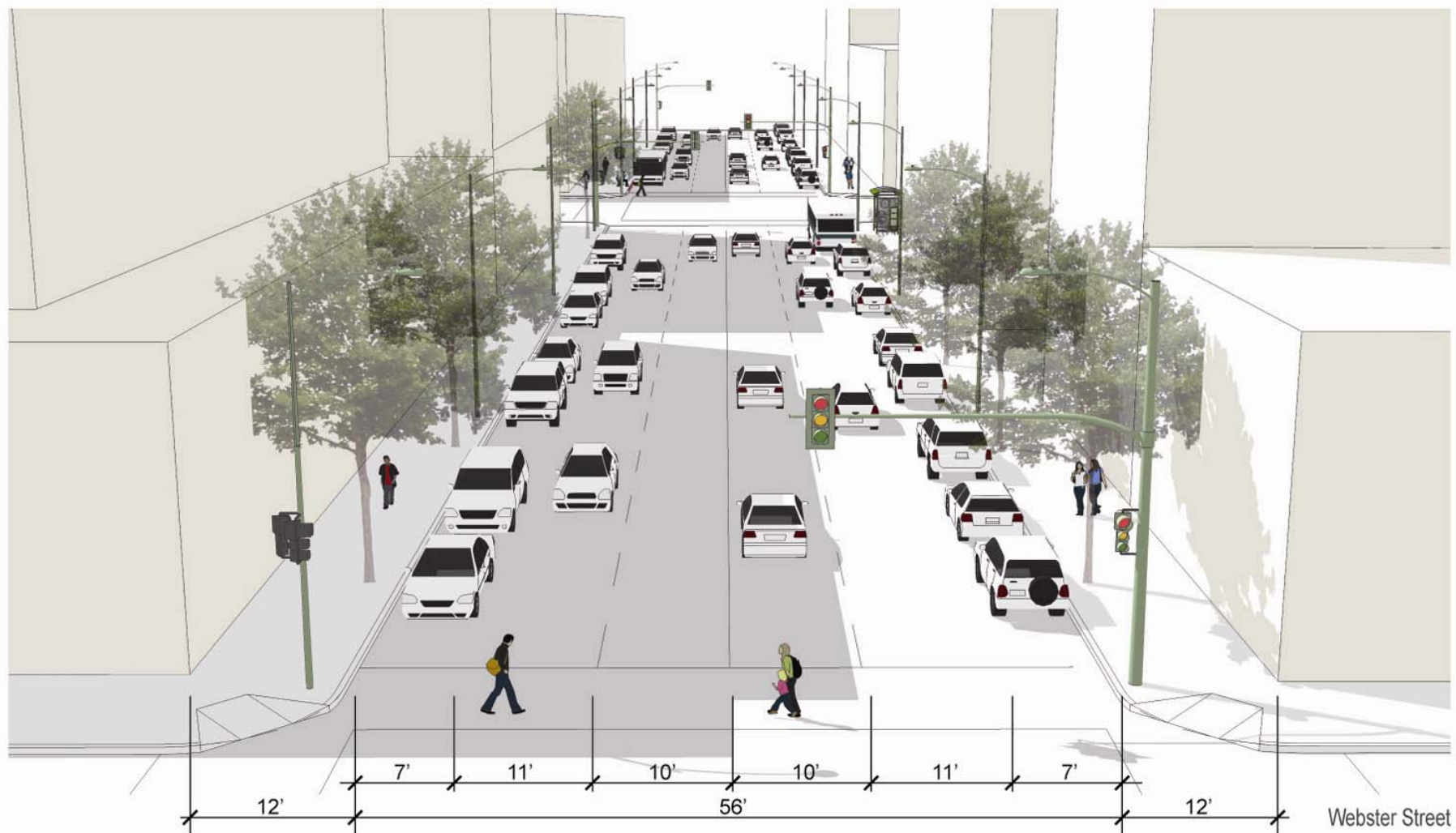
- Add shared vehicle/bicycle lane, as identified in Bike Plan
- Add street trees or other landscaping
- Add corner bulb outs at intersections



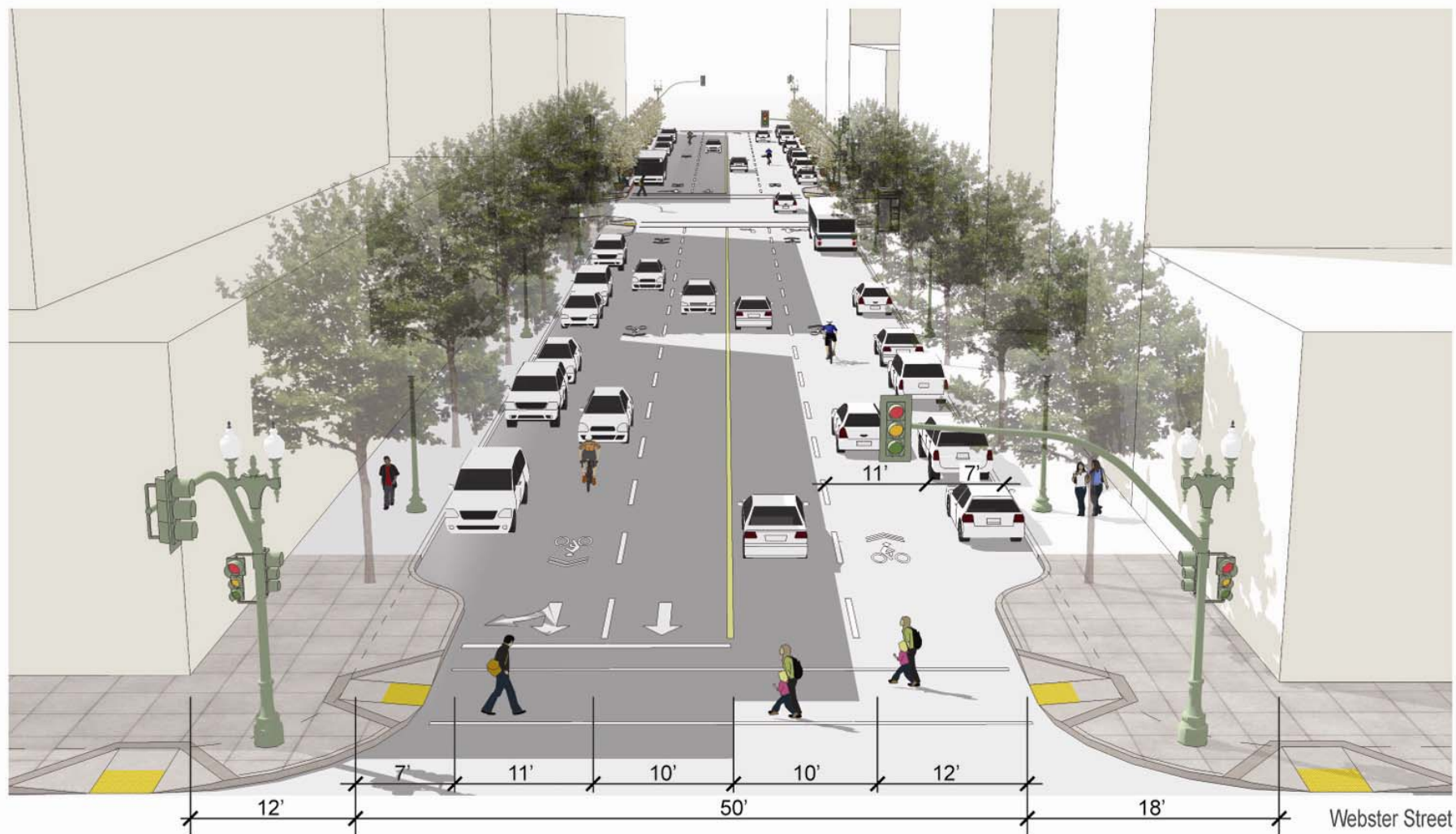
14th Street at Franklin Street
Existing Looking West - 4 Lanes Two-Way



**14th Street at Franklin Street
Sharrow, Sidewalk Improvements**



14th Street at Webster Street
Existing Looking West - 4 Lanes Two-Way



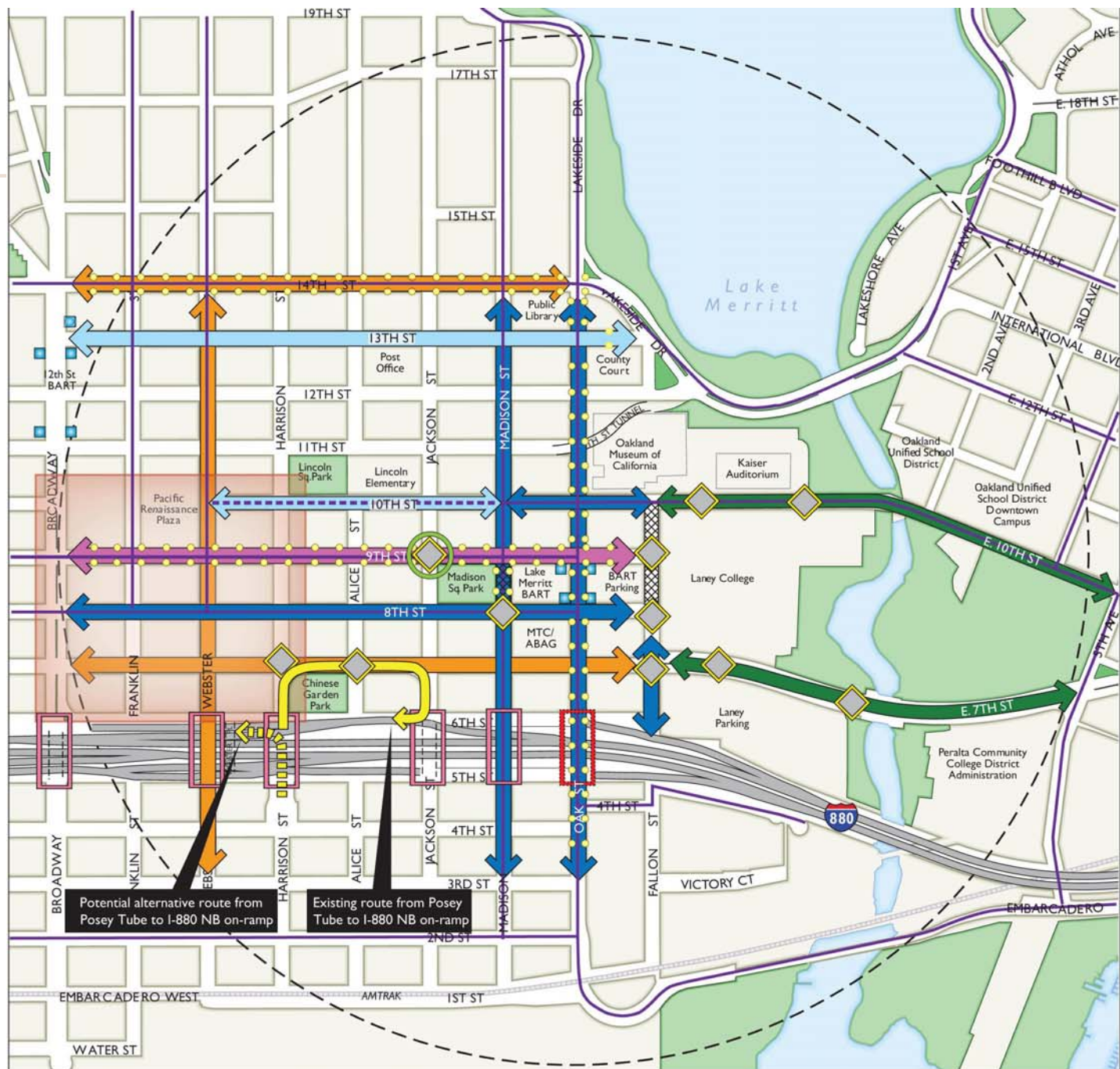
14th Street at Webster Street
Sharrow, Sidewalk Improvements

Preliminary Cost Estimates (per 400 foot block, both sides of the street)

- Restripe for lane reduction, bike lanes, angled parking - \$1,000
- Street trees – \$14,000 (20 trees per block)
- Widen sidewalks - \$26,000 (widen four feet)
- Corner bulb outs - \$60,000 (four corners)
- New street lighting - \$60,000 (\$10,000 per light, 3 per block)
- New pedestrian lighting - \$100,000 (\$10,000 per light, 5 per block)
- Two way street traffic signal conversion - \$150,000 per signal

Criteria for Prioritization

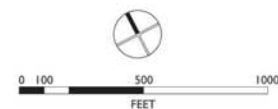
- Identify the top five street improvements (plus restriping)
 - *Does street have capacity for improvements*
 - *Feasibility of improvements*
 - *Greatest benefit for community*
 - *Relative cost of improvements*
 - *Grant availability*



Lake Merritt Station Area Circulation Improvement Strategies

- Key Streetscape Corridors
- Potential for Lane Reduction
- Potential for Lane Reduction OR Two-Way Conversion
- Potential for Lane Reduction AND Two-Way Conversion
- Potential for Narrowed Travel Lanes and "Green Street" Amenities
- Key Existing or Planned On-Street Bicycle Connection
- Key Additional On-Street Bicycle Connection
- Modify Street (Pedestrian/Vehicle Plaza)
- Chinatown Commercial Core Area
- Priority Locations for Intersection/Pedestrian Crossing Improvement
- BART Station Entrance
- Priority Lighting Corridor
- Improved Freeway Undercrossing
- Priority Improved Freeway Undercrossing
- Proposed Gateway
- Planning Area - 1/2 Mile Radius

*Current illustration shows existing and under construction park areas.



I-880/Broadway-Jackson Interchange

- Project to improve access and traffic operations between Oakland, Alameda, and I-880/I-980
- Currently proposed alternative recommends routing traffic from the Posey Tube/Harrison Street to turn left at 6th Street and travel to a new interchange at Market Street to access I-880 Northbound
- This creates an opportunity to improve the pedestrian crossings at 7th Street/Harrison Street and 7th Street/Jackson Street due to decreased traffic volumes
- This alternative is currently the staff recommendation; however, the Chinatown Committee has not approved.

I-880/Broadway-Jackson Interchange

- Additional details on project forthcoming