

Ravenswood Business District / 4 Corners Specific Plan Update

Council Meeting #2: Transportation

June 8, 2021 | 6:00pm



Tonight's Objectives

- Continue conversation from March 23rd Session (presentation by R+A and Hexagon)
- Review preliminary back-of-the-envelope trip analysis related to RBD growth scenarios
- Discuss potential TDM strategies & improvements
- Seek feedback on proposed transportation approach:
 - 2013 EIR trips as baseline
 - Use 'trips' as primary constraint on development capacity
 - Focus on known/current transportation facilities



An aerial photograph of a city and a large body of water, possibly a bay or lake, with mountains in the distance. The image is overlaid with a semi-transparent blue filter. A white rectangular box is positioned in the center, containing the word "Background" in a dark blue font. To the left of this box is a solid orange vertical bar.

Background

Specific Plan Update - Project to Date

- Existing Plan has strong vision but lacks key implementing standards and policies (and context has changed)
- Over 4+ million s.f. of office/R&D development is proposed
- In Fall 2020, Council authorized an update to study of increased development beyond 2013 capacity:
 - Evaluate **impacts and benefits** of more development
 - Analyze potential **traffic, infrastructure, housing affordability,** and **displacement**
 - Develop detailed framework for **community benefits**
 - Develop **design standards to create a new neighborhood**
 - Evaluate potential **fiscal benefit** to the City



Recap from March 23rd Study Session

- Data refresh reinforces why an update is needed
- Draft design principles are a good start - continue refining to create a complete and interconnected neighborhood
- Supportive of adding additional housing
- Study up to maximum amount of development but less is likely
- Supportive of a defined process of community benefits in exchange for more development



Tonight's Meeting: Transportation

- Transportation may be the most important challenge, but not the *only* one
- July's meeting will focus on broader range of impacts and benefits

Impacts

- Congested roadways
- Potential displacement and/or gentrification
- Rising housing costs
- Visual impacts
- Sea level rise + flooding



Benefits

- New public facilities
- Local job opportunities
- Fiscal (new taxes/fees)
- New neighborhood retail
- New open spaces + trails
- A revitalized 'Downtown'

Tonight's Discussion Questions

1. Does Council support the proposed approach using the number of trips in the adopted Specific Plan EIR as a baseline metric (24,752 Daily Trips per 2013 EIR)?
2. Does Council support an approach using trips as the determining "currency," either in lieu of or in addition to total square footage?
3. How should trips related to light industrial, retail, civic, and housing uses be treated with regard to a potential project trip cap?
4. Should the transportation assessment be based on existing, known projects or on transportation projects that are being discussed but are not guaranteed to occur?
5. Should we proceed with analyzing all 4 development scenarios (2.8 million s.f., 3.35 million s.f., 4.15 million s.f. and 5.25 million s.f. of office/R&D development) or should any scenarios be dropped from consideration?



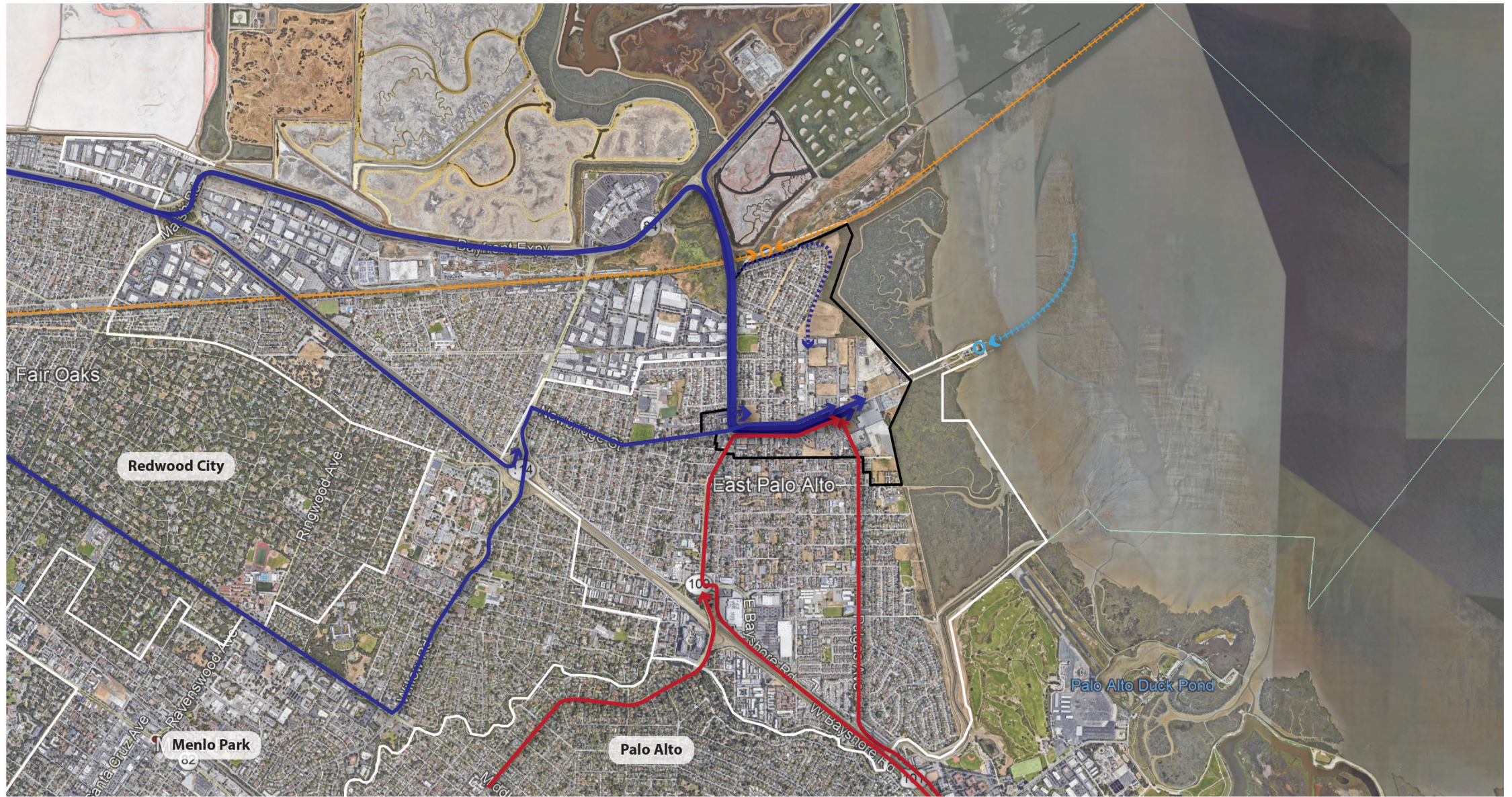
Mobility in RBD / 4 Corners

Mobility Challenges in the Plan Area

- Significant potential increase in trips
 - 12,000 - 15,000 new employees proposed
- Network challenges
 - Significant roadway congestion
 - Limits to expanding roadway capacity
 - New transit options are limited
 - Current bicycle + pedestrian mobility is poor
 - Mitigating traffic impacts will require coordination, TDM, and expenditures by property owners and local/regional partners



Figure 3
AM Peak Period Cut-Through Traffic Patterns to/from SR 84 East and Facebook



- Ravenswood Business District
- City Boundaries
- South and West-bound traffic flow
- North-bound traffic flow
- Loop Road (conceptual)
- Dumbarton Rail (proposed)
- Station area (proposed)
- Ferry Line (?)

Transportation in 2013 Specific Plan

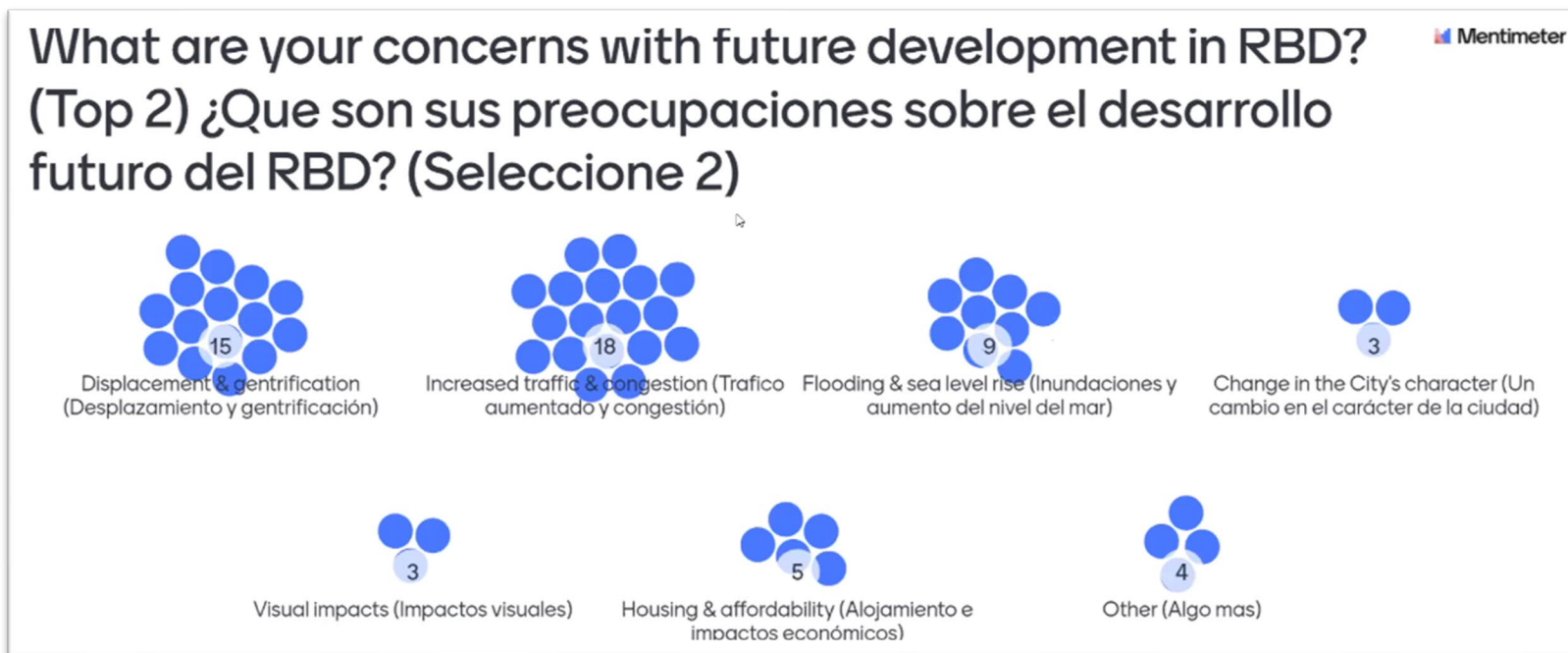
- Specific Plan and EIR analyzed a limited amount of development:
 - 1.268 MSF of office
 - 351,000 sf of industrial/R&D
 - 112,400 sf retail
 - 61,000 sf civic
 - 835 residential units
- Included a “Loop Road” to reduce delay at University & Bay Rd
- Approved the following trips:

Daily Trips	AM Peak	PM Peak
24,752	2,908	2,989



Initial Community Feedback (May 27th workshop)

- Transportation is a top issue identified by residents
- Concern over impacts to local roadways and quality of life if significant new development is approved



An aerial photograph of a coastal city, likely San Francisco, showing a dense urban area with a mix of residential and commercial buildings. In the background, a large body of water (the San Francisco Bay) is visible, with hills and mountains in the distance. The image is overlaid with a semi-transparent blue filter. A white rectangular box is positioned in the center-left, containing the title text. A solid orange vertical bar is on the left side of the white box.

Potential Solutions/Strategies

TRIP REDUCTION STRATEGIES

- Mixed-Use Development (Internalization)
- Land Use and Location
- Neighborhood Site Enhancements
- Parking Policy and Pricing
- Transportation Demand Management (TDM) Measures
- Long-Haul Employer Shuttles
- Other Community Benefit Measures i.e. school bus program
- Long-Term Major Transportation Projects

MIXED-USE DEVELOPMENT (INTERNALIZATION)

- Mixing a variety of land uses satisfies travel needs within the development site and reduces external travel
- Higher densities shorten trip lengths, allow for more walking and biking, and support quality transit



Source: University and Bay / 'Four Corners' ,
Sand Hill Property Company, Nov. 2020

Maximum Reduction = 15%

LAND USE AND LOCATION

- On-site Affordable Housing
- Orient Project Toward Non-Auto Corridor
- Locate Project near Bike Path/Bike Lane

Maximum Reduction = 2%

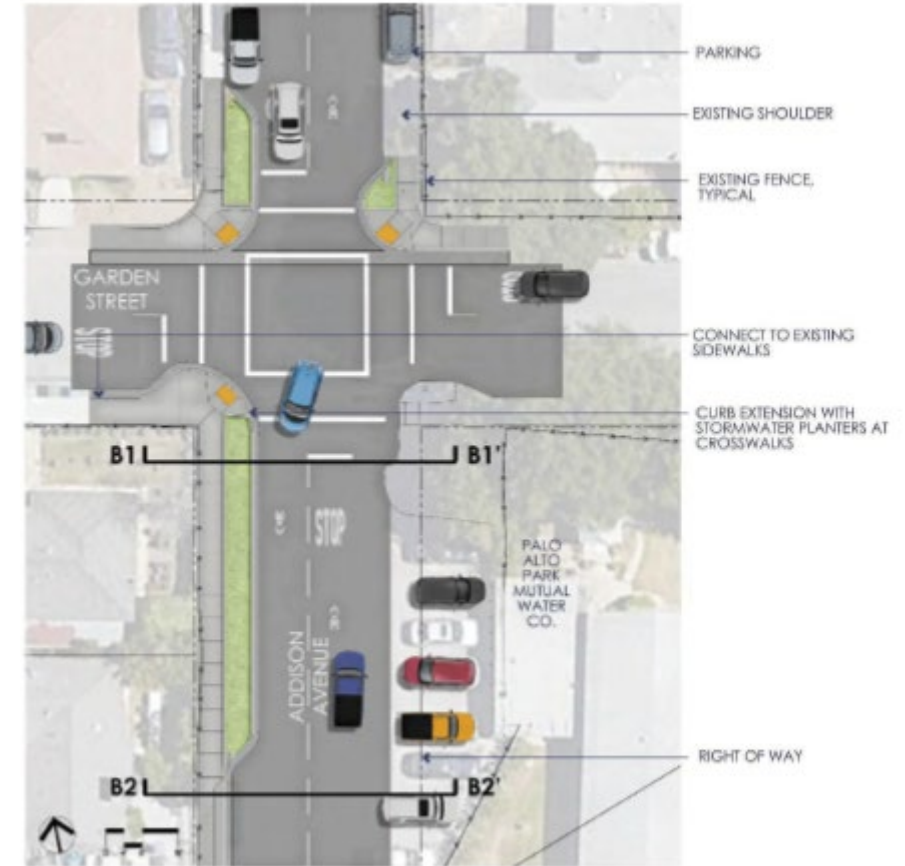
*Density and diversity of use strategies already included in mixed-use trip reduction (“internalization”)



NEIGHBORHOOD SITE ENHANCEMENTS

- Provide Pedestrian Network
- Provide Traffic Calming Measures

Maximum Reduction = 2%



Source: Addison Avenue Complete Streets Project

PARKING POLICY AND PRICING STRATEGIES

- Limit Parking Supply
- Unbundle Parking Costs
- On-Street Market Price Public Parking
- Residential Area Parking Permits

Maximum Reduction = 2-3%
(20% of residential trips)

**Applicable to Residential Only



FOR RENT

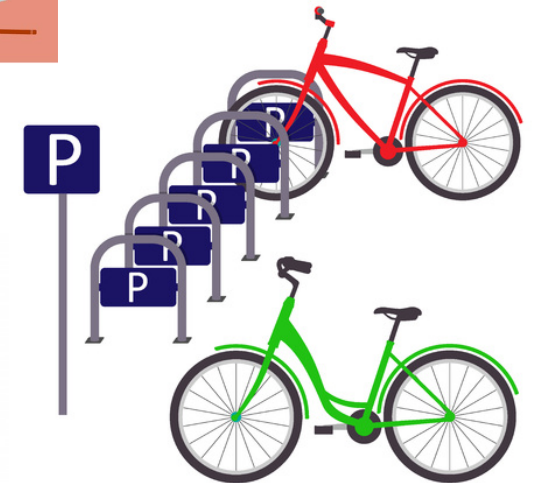
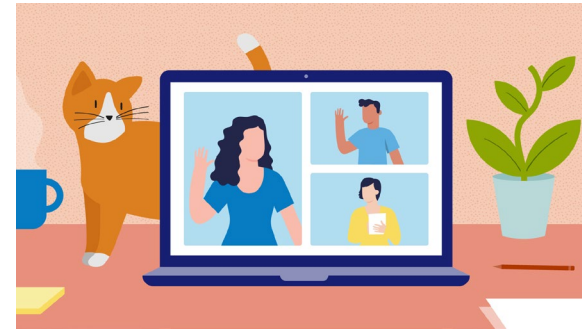
1 Bedroom Apartment \$1800

Optional parking \$250



Developer Transportation Demand Management (TDM)

- Marketing
- Ride-Sharing Program
- Subsidized or Discounted Transit Program
- End of Trip Facilities
- Telecommuting and Alternative Work Schedule
- Car-Sharing Program



Note: All achievable by developer actions

Developer TDM Measures (cont)

- Employer-Sponsored Vanpool/Shuttle
- Price Workplace Parking
- Employee Parking "Cash-Out"
- Preferential Parking
- Bike Sharing Program



Maximum Reduction

= **15% - 30%***

*30% with Long-Haul Shuttles

Note: All achievable by developer actions



Potential Community Benefits Programs

- Citywide School Pool Program
- Citywide School Bus Program

Maximum Reduction of ~15%

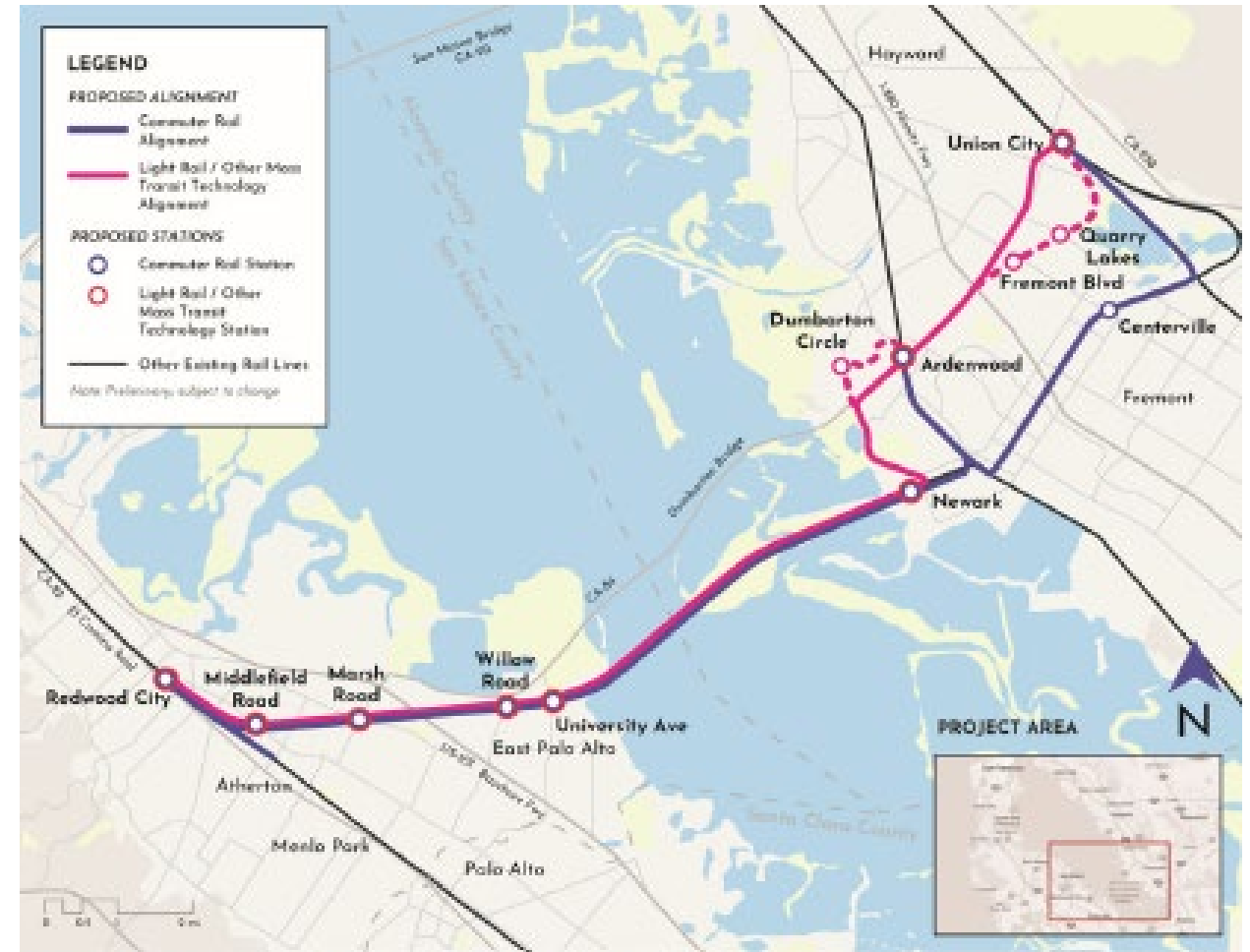
Achievable by developers with significant City of EPA support



Long-Term, Major Transportation Projects

- Dumbarton Rail Station and other Transit System Improvements (Max Reduction = 10%)
- Cooley Landing Ferry terminal (Max Reduction = 10%)
- University Avenue Toll/Area Pricing (Max Reduction = 20%)

Long-term policy change; requires State legislative approval



Source: http://www.samtrans.com/Planning/Planning_and_Research/Dumbarton_Rail_Corridor.html

Potential Capacity Improvement: Loop Road

- Proposed in 2013 Specific Plan
- New Roadway Connection between University Ave and Demeter St
- Not a trip reduction measure
- Increase vehicle capacity
 - 2-lane roadway
 - Divert some existing traffic from University Avenue, Purdue Avenue, and Bay Road
 - Provide direct connection between Plan Area and University Avenue
- Reduce cut-through traffic on local streets

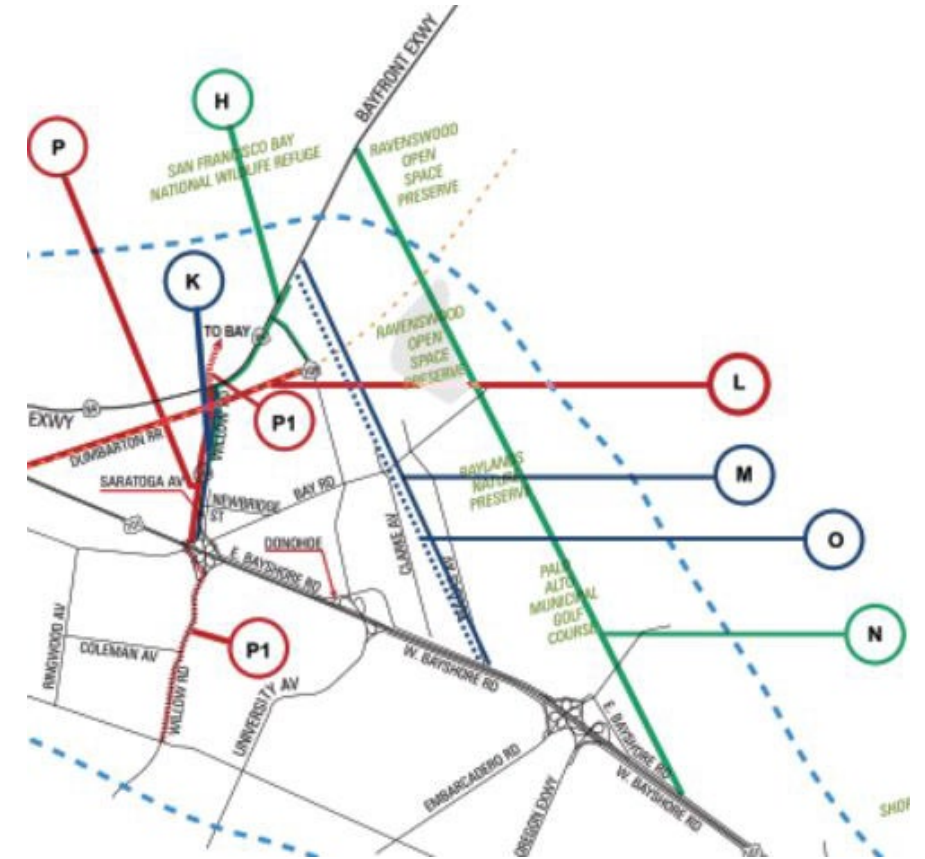


Source: Ravenswood / 4 Corners TOD Specific Plan, 2013



Potential Capacity Improvement: New expressway connection between 101 and Bridge/84

- Not a trip reduction measure
- Increases area carrying capacity
 - 2-lane road could carry about 1,400 vph (equivalent to 20% of Updated Ravenswood Plan trips)
 - Reduce cut-through trips on other EPA streets
 - Induce travel/increase VMT
- Significant visual, environmental, and ROW impacts



Source: 2020 Peninsula Gateway Corridor Study, 2008.

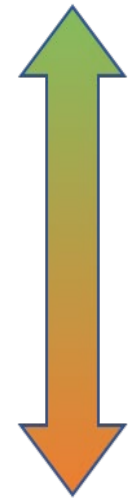


Potential RBD Capacity Improvements

Roadway Expansion

- Right of Way Improvements (e.g., add turn lanes)
- Widen Bay Road east of Pulgas Avenue
- University Avenue Reversible Lane – requires coordination with other entities
- Loop Road – 2-lane road with bicycle/pedestrian facilities – requires land acquisition for sufficient road right-of-way
- 101 Bypass – limited access elevated roadway along shoreline – Significant visual, environmental, and ROW impacts

Short-range
(more likely)



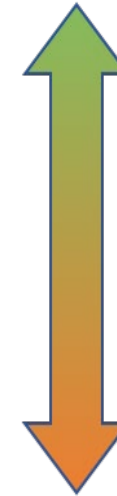
Long-range
(less likely)

Potential RBD TDM Strategies

Vehicle Trip Reduction Strategies

- **Transportation Demand Management (TDM) Program - 40% daily trip reduction**
- **New and Improved Bicycle and Pedestrian Facilities**
- Transit Priority Lane on University Avenue – requires coordination with other entities
- Expanded Transit Service (Dumbarton Rail, Cooley Landing Ferry)
- Congestion Pricing – currently prohibited by state law; requires legislative action

Short-range
(more likely)



Long-range
(less likely)

Trip Reduction Framework

No.	Strategy	Maximum Trip Reduction ¹ (each strategy)	Cumulative Maximum Trip Reduction ²
0	Mixed-Use (Internalization) ³	15%	15%
1	Land Use/Location	2%	17%
2	Neighborhood Site Enhancements	2%	18%
3	Parking Policy and Pricing (Residential Only)	2%	20%
4	TDM Measures	15%	32%
5	Long-Haul Employer Shuttles	15%	42%
6	Other Community Benefit Measures (School bus/pool)	15%	51%
7	Major Transit System Improvements (Dumbarton Rail or Priority Lane on Univ.)	10%	56%
8	Cooley Landing Ferry Terminal	10%	60%
9	University Avenue Toll/Area Pricing	20%	68%

TIER 1

Achievable by Developer Actions

TIER 2

Achievable w/ local govt. support

TIER 3

Large infrastructure improvements

TIER 4

Long-term policy change; requires State legislative approval

1. Maximum possible reduction calculated using CAPCOA, 2010. In order to achieve maximum reduction, aggressive implementation of the measure is required. Actual reduction may be less depending on design details.

2. Decreasing efficacy of reduction.

3. Preliminary estimates using EPA MXD model which will vary substantially based on the diversity/density of land uses proposed.

An aerial photograph of a coastal city, likely San Francisco, showing a large bay, a city grid, and mountains in the distance. The image is overlaid with a semi-transparent blue filter. A white rectangular box is positioned in the center, containing the word "Analysis" in a bold, dark blue font. To the left of this box is a solid orange vertical bar.

Analysis

Growth Scenarios Presented in March

Scenario Name	Total Office/R&D Square Footage	
Original Specific Plan EIR	~1.41 million sf (1.235m + 0.175m)	Baseline
<i>Twice Original Plan EIR</i>	<i>~2.55 million sf</i>	Simple Multiple of Other Scenarios
<i>80% Reduction of Proposed Development</i>	<i>~3.35 million sf</i>	
Proposed Development	~4.15 million sf	
Proposed Plus Remaining Capacity ¹	~5.15 million sf	

¹ “Remaining Capacity” represents an estimate of the potential developable square footage in addition to known/proposed projects (parcels with moderate to high likelihood of change).



Revised Approach to Growth Scenarios

Use 2013 RBD/4 Corners Specific Plan EIR trips as the baseline (not-to-exceed target) outcome of the Plan update

Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
24,752	2,908	2,989

Revised Approach to Growth Scenarios

(1) Calculate trip reductions required for proposed scenarios.

Scenario	Reduction needed to hit baseline	
	Daily Trips	PM Peak Hour
3.35 million s.f.	47%	29%
Proposed Projects (4.15 msf)	57%	43%
Max Buildout (5.15 msf)	67%	56%

Trip reductions >40% would be needed for high-growth scenarios

Revised Approach to Growth Scenarios

(2) Solve for size of office/R&D development that would produce the same number of trips as baseline assuming a 40% trip reduction.

Scenario	40% TDM		
	Daily Trips	AM Peak Hour	PM Peak Hour
2,824,000 s.f.	24,752	1,924	2,245
4,172,300 s.f.	33,062	2,653	2,989

Revised Approach to Growth Scenarios

Scenario		Office	"R&D"	Light Industrial	Retail	Civic	Amenity ¹	Units
2013 Baseline		1,268,500	175,500	175,500	112,400	60,000	n/a	835
Completed		32,647	107,500		0	0	0	0
<u>Remaining</u>		1,235,853	243,000		112,400	60,000	n/a	835
New Net Zero ADT	2	2,824,000		240,000	112,000	60,000	40,000	835
80% Scenario	2	3,350,000		240,000	112,000	60,000	40,000	835
Proposed Projects	3	4,150,000		300,000	125,000	100,000	55,000	1,100
Maximum Buildout	4	5,250,000		350,000	150,000	150,000	70,000	1,650

^[1] Trips generated by tenant amenities are available only to the tenant. Therefore, all trips will be internal.

^[2] Non-office/R&D uses assume buildout of 2013 EIR baseline program minus Completed projects

^[3] Non-office/R&D uses includes uses proposed by pipeline projects plus slightly expanded uses throughout the area roughly in proportion to the increase in office/R&D s.f.

^[4] Non-office/R&D uses are based on an approximation of the area's maximum development capacity (for parcels likely to redevelop)

Impact of the “Loop Road” on Trips

- Reduces **delay** at University & Bay Rd, not number of trips
- To achieve the same level of delay at University & Bay Rd, the number of trips would need to be reduced by approximately 23%



An aerial photograph of a city and a large body of water, possibly a bay or lake, with mountains in the distance. The image is overlaid with a semi-transparent blue filter. A white rectangular box is positioned in the center, containing the text 'Discussion Questions'. To the left of this box is a solid orange vertical bar.

Discussion Questions

Question #1

Does Council support the proposed approach using the number of trips in the adopted Specific Plan as a baseline metric?

Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
24,752	2,908	2,989

Recommendation: Treat the volume of traffic studied in 2013 as the baseline outcome that the Specific Plan update effort is hoping to attain. Use 2.824 MSF as a growth scenario to be studied. (Replace the “Twice Original Plan” of 2.55 MSF)



Question #2

Does Council support the use of trips as the “currency,” either in lieu of or in addition to total square footage?

- Land use characteristics of a development can change over time (program, tenants, employee density, hours)
- Using trips would increase flexibility on the nature of development allowed and be more responsive to market/economic forces
- Using trips would incentivize applicants to exceed City TDM Ordinance
- Trips are a specific, measurable **outcome** while development square footage is an **input**
- *Recommendation: Use the measurable outcome of trips to focus clearly on the impacts this City and its residents wish to avoid (greater traffic congestion) and less on an uncertain future program of land uses.*



Question #3

Would Council consider a higher number of trips than the 2013 baseline in order to obtain more land uses desired by the community (light industrial, retail, civic, and housing)?

- Office accounts for approx. 75% of total trips
- Community-desired uses (retail, civic, and housing) contribute to total daily trips
- Concern that approach could create a “disincentive” to build the uses desired by the community

Recommendation:

- *Develop an “incentive” process for developers to build desired uses*
 - *Specific mechanism to be developed at a later date*
-



Question #4

Should the transportation assessment be based on existing, known projects or on transportation projects that are being discussed but are not guaranteed to occur?

- Known TDM strategies can achieve a maximum of 42% reduction
- Multiple long-term projects could positively impact the transportation network: Loop Road, Dumbarton Rail, bypass road, congestion pricing, bus lane on University Ave, etc.
- Long-term projects are ***speculative*** and may never occur

Recommendation: Approve projects based on known capacity; not speculative projects. If and when projects become less speculative, the City can re-evaluate increases in development.



Trip Reduction Framework

No.	Strategy	Maximum Trip Reduction ¹ (each strategy)	Cumulative Maximum Trip Reduction ²
0	Mixed-Use (Internalization) ³	15%	15%
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Achievable by Developer Actions

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Achievable w/ local govt. support

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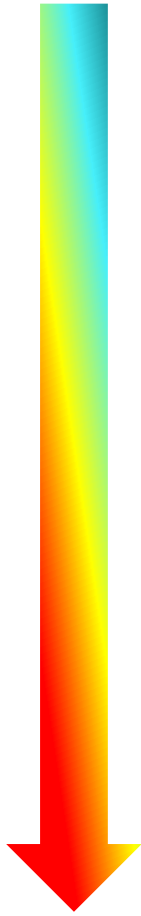
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Long-term policy change; requires State legislative approval

1. Maximum possible reduction calculated using CAPCOA, 2010. In order to achieve maximum reduction, aggressive implementation of the measure is required. Actual reduction may be less depending on design details.

2. Decreasing efficacy of reduction.

3. Preliminary estimates using EPA MXD model which will vary substantially based on the diversity/density of land uses proposed.



Question #5

Should we proceed with analyzing all 4 development scenarios (2.8 MSF, 3.35 MSF, 4.15 MSF and 5.25 MSF of office/R&D) or should any scenarios be dropped from consideration?

	Office/ R&D	Flex/ Industrial	Retail	Civic	Units	Daily Trips w/ (40% TDM)	PM Trips w/ (40% TDM)
<i>2013 Baseline</i>	1.23 MSF	240 KSF	112 KSF	60 KSF	835 du	24,752 (no TDM)	2,989 (no TDM)
Scenario 1	2.8 MSF	240 KSF	112 KSF	60 KSF	835 du	24,752	2,245
Scenario 2	3.35 MSF	240 KSF	112 KSF	60 KSF	835 du	27,994	2,535
Scenario 3	4.15 MSF	300 KSF	125 KSF	100 KSF	1,100 du	34,734	3,161
Scenario 4	5.25 MSF	350 KSF	150 KSF	150 KSF	1,650 du	45,075	4,067

Recommendation: Council recommended studying all four scenarios in full on March 23rd and therefore we will continue down this path at this time.



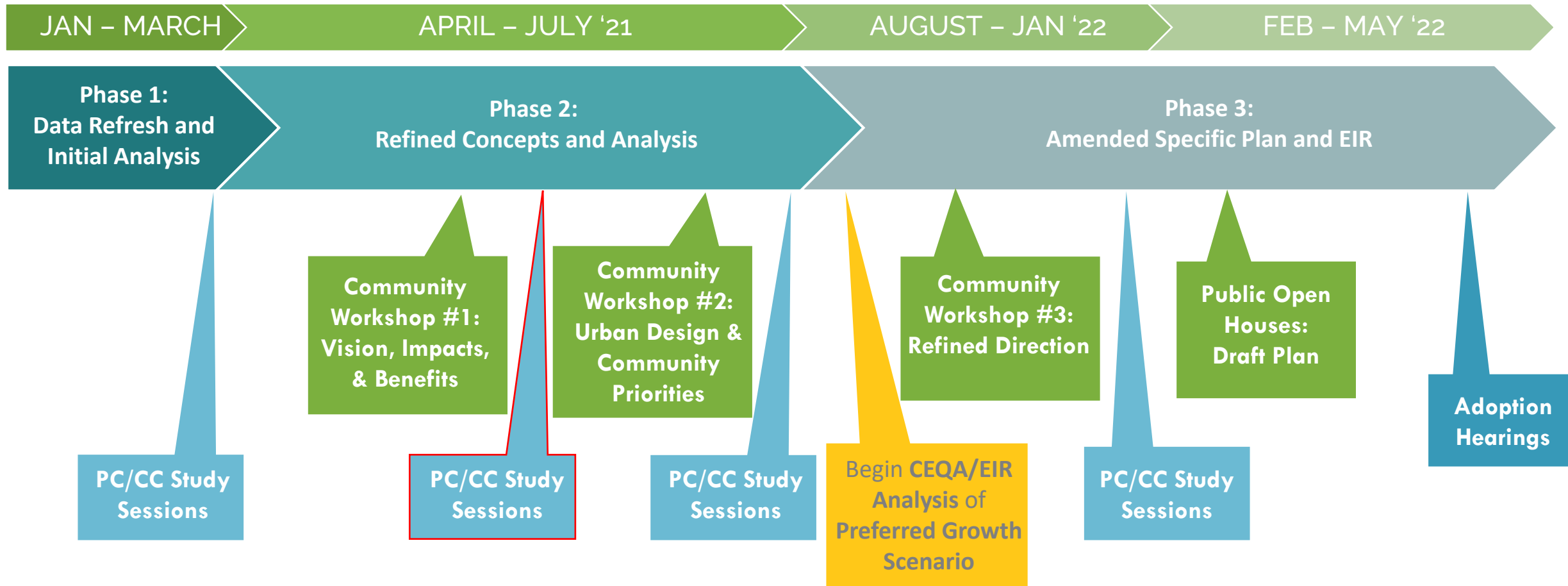
An aerial photograph of a city and a large body of water, possibly a bay or a large lake, with mountains in the background. The image is overlaid with a semi-transparent blue filter. A white rectangular box is positioned in the center, containing the word "Conclusion" in a bold, dark blue font. To the left of this box is a solid orange vertical bar.

Conclusion

Discussion Questions

1. Does Council support the proposed approach using the number of trips in the adopted Specific Plan EIR as a baseline metric (24,752 Daily Trips per 2013 EIR)?
2. Does Council support an approach using trips as the determining “currency,” either in lieu of or in addition to total square footage?
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Project Schedule / Next Steps



Thank you!

<https://www.cityofepa.org/planning>

