APPENDICES

APPENDIX A:
PLANNING AND POLICY CONTEXT

Current transportation conditions hinder mobility for many, and if these trends continue as the economy grows, access will be even more constrained. Regional plans are focused on investing in projects that support economic growth, equity, environmental health, and efficient transportation. The US-101 MAP project will build on the existing policy context and the planned infrastructure and mobility improvements with near-term policies and programs that address mobility challenges on the corridor today.

State and Regional Framework

The California state legislature has established policies that call for regional coordination to address greenhouse gas emissions with Senate Bill (SB) 375 and SB 743. SB 375, the Sustainable Communities and Climate Protection Act passed in 2008, requires regional metropolitan planning organizations in California to develop long-range plans that align transportation, housing, and land use decisions to reduce greenhouse gas emissions from transportation. As of October 1, 2018, the California Air Resources Board (CARB) set GHG emission reduction targets at 10% by 2020 and 19% by 2035, relative to 2005 levels.

SB 743 (2013) requires a shift in transportation analysis to, "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

To respond to these state mandates and to support expected future growth and economic activity in the Bay Area, the Metropolitan Transportation Commission (MTC) developed the regional transportation plan, Plan Bay Area 2040.

Plan Bay Area's Action Plan has the following objectives:

- **Housing:** Lower the share of income spent on housing and transportation costs, lessen displacement risk, and increase the availability of housing affordable to low- and moderate-income households.
- **Economic Development:** Improve transportation access to jobs, increase middle wage job creation, and maintain the region's infrastructure.

- **Resilience:** Enhance climate protection and adaptation efforts, strengthen open space protections, create healthy and safe communities, and protect communities against natural hazards.

Transportation 2035, the regional transportation plan that preceded Plan Bay Area 2040, launched the Bay Area Express Lane Network.

Future Bay Area Express Lane Network
Source: MTC Express Lanes Program Quarterly Report, 3rd Quarter 2018

FUTURE EXPRESS LANE NETWORK
Source: MTC Express Lanes Program Quarterly Report, 3rd Quarter 2018

- ACTC Lane
- Sunol JPA Lane
- VTA Lane
- BAIFA Lane
- SMCEL-JPA Express Lanes
- Lanes TBD
- BART and Caltrain

0   4   8 Miles
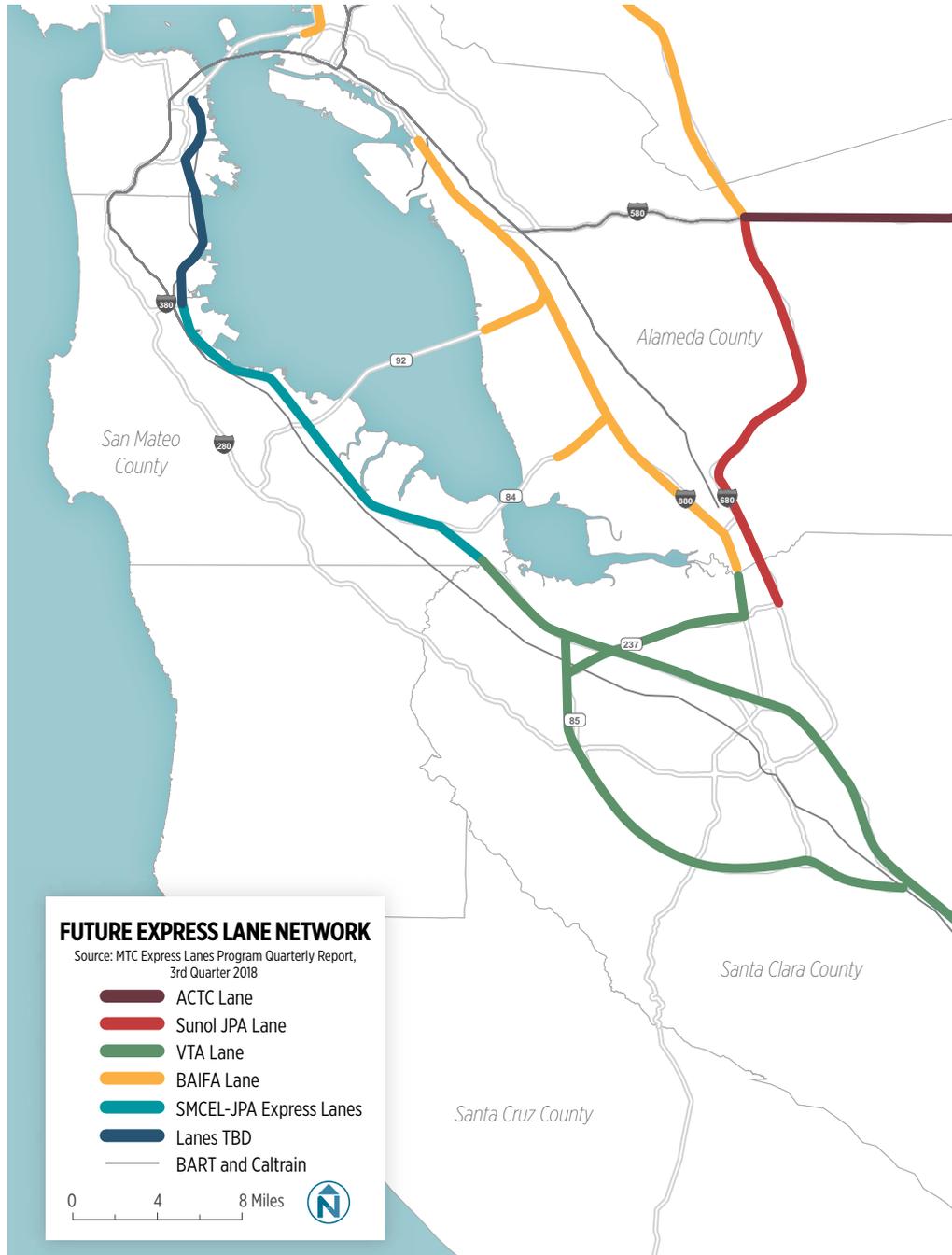
Express Lanes

The Bay Area Infrastructure Financing Authority (BAIFA), a joint powers agreement between the Bay Area Toll Authority (BATA) and the Metropolitan Transportation Commission (MTC), leads and supports express lane efforts in Solano, Alameda, and Contra Costa. Express lanes are carpool lanes that are free for carpools, buses, motorcycles and other eligible vehicles. Solo motorists — who choose to pay a toll — can use express lanes, too.[34]

MTC Express Lane Objectives

- Create a network to encourage carpools, vanpools, and express buses
- Make the best use of HOV lane capacity
- Provide reliable travel times for people driving alone
- Better manage all lanes to keep traffic moving

US-101 Express Lanes

Planning and funding for US-101 Express Lanes is led by the congestion management agency for each county. Caltrans partners on express lane projects, and operates and maintains US-101. Together these efforts represent the potential for future continuous express lanes on US-101 between San Francisco and Morgan Hill. Additional express lanes are planned to connect with US-101 as part of Santa Clara Valley Transportation Authority's (VTA) Silicon Valley Express Lanes on SR-237 and SR-85.

Shared Goals

Each of the express lane studies and projects for US-101 are separate efforts, but together they support shared goals for managing the corridor. Key shared goals of managing lanes are:

- Increase efficiency (increased person throughput)
- Enhance travel choices
- Improve travel reliability
- Support a regional network of express lanes

Express Lane and Express Bus Projects

Project or Study	Key Analysis	Outcome	Schedule
Silicon Valley Express Lanes Program	Lane conversion of current HOV lanes to Express lanes on 101 and 85.	Eventual express lanes for the entirety of 85 and from San Mateo County border to Morgan Hill for 101.	Phase 3 (fully funded) will convert double HOV to Express lanes from San Mateo County Line to 85 exchange and single lane conversion to just past 237 interchange. Construction began in 2019 and will tentatively open in 2021.
San Mateo 101 Express Lanes Project	Managed lane and all general travel lane alternatives were studied. Express lanes were found to have the greatest benefit.	Caltrans will convert existing auxiliary lanes into through lanes and convert far left lanes into express lanes.	Construction began in mid-2019, estimated completion in late-2022.
San Mateo County Express Lanes Project 380 North to San Francisco County Line	PAED will analyze options including adding a lane and converting a lane.	This segment will complete the Express Lane network in San Mateo County from Santa Clara County Line to San Francisco County Line.	PAED will commence in 2020.
San Francisco Freeway Corridor Management Study	Assessed peak hour travel behavior for three alternatives of managed lanes and compared to a no-build scenario.	Lane conversion is feasible, with additional study needed. SFCTA is in the process of studying impacts to low income commuters and understanding who might be impacted by priced lanes.	Project Initiation Document with Caltrans in 2019 followed by additional analysis and environmental clearance.
SamTrans Express Bus Feasibility Study	Proof of concept and market analysis for re-introducing an express bus network to the Peninsula. Developed multiple route concepts for long distance commute trips between San Mateo, San Francisco, and Santa Clara counties.	Recommendation of six routes, five of which travel on US-101 for at least a portion of their trip.	The first route from the Study launched in August 2019 (Route FCX). SamTrans continues to plan for additional routes to begin, including in conjunction with the opening of the San Mateo County Express Lanes Project.

Caltrain Business Plan and Caltrain Modernization

Caltrain runs parallel to US-101 throughout the length of its corridor and plays a significant role in transportation along the Peninsula, carrying over 55,000 per day during morning and afternoon peak commute times alone.[35] Since 2016, the system has over 60,000 average weekday passengers carried on 92 daily train trips. Draft elements of the 2040 Caltrain Business Plan estimate that running Caltrain at similar frequencies to BART would result in a fourfold increase in ridership to 160,000-200,000 daily passengers riding approximately 360 trains per day by 2040.[36]

Caltrain electrification is a critical component of the Caltrain Modernization program, which will improve system performance and reach higher train frequencies needed to serve more people. Additional benefits of electrification are reduced noise, lower greenhouse gas emissions, and reduced diesel emissions from replacing the diesel-hauled fleet with electric trains. Passenger service with electric trains is scheduled to begin in 2022 and will enable an increase in peak train service from five to six trains per hour in each direction, a capacity increase of over 7,000 additional passengers each commute peak.

Additional Planned Infrastructure Improvements

Several improvements are planned for the US-101 corridor in addition to express lane projects. These projects are intended to improve traffic flow at interchanges. Additional improvements are designed to reduce barriers for people trying to cross US-101, particularly people walking or riding bikes.

Planned Infrastructure Improvements (as of mid-2019)

Project	Description	Status
US-101 / Broadway Interchange	Wider overcrossing and new ramp connections to US-101	Construction complete, project close out
US-101 / Willow Interchange	Convert cloverleaf interchange to partial-cloverleaf, replace and widen existing Willow Road Overcrossing	Under construction
US-101 / Woodside Road Interchange	Woodside Road widening and realignment of freeway ramps	Design
US-101 / Holly Street Interchange and pedestrian bridge	Convert cloverleaf interchange to partial-cloverleaf, add signalized intersections, add widened sidewalks and bike lanes	Finalizing bid package for construction
US-101 State Route 92 Interchange Project	Near- and long-term safety and operations improvements including direct connector ramps between SR-92 east of US-101 and the San Mateo US-101 express lanes.	Preliminary planning study
US-101 Peninsula Ave Interchange	Modify existing interchange	Traffic analysis
US-101 Produce Ave Interchange	Study alternatives for a new interchange and street to cross US-101 in South San Francisco	Traffic analysis
Redwood City US-101 Pedestrian and Bicycle Undercrossing	Multi-modal crossing of US-101	Under construction
Hillsdale / US-101 pedestrian and bicycle bridge	Multi-modal crossing of US-101	Preliminary design
East Palo Alto pedestrian and bicycle bridge over US-101	Multi-modal crossing of US-101	Opened May 2019
Shoreline / US-101 pedestrian and bicycle bridge	Multi-modal crossing of US-101	Preliminary Design
Mathilda Ave / US-101 interchange	Reconfiguration of freeway ramps, signals, turn lanes, and multi-modal infrastructure	Under Construction
US-101/Trimble Interchange	Modifications to improve mobility and multimodal safety	Design

TRAVEL BEHAVIOR ANALYSIS

KEY FINDINGS

Purpose: to inform strategies and ground the project understanding

- **Short-distance trips are primary.** Most users of US-101 during the morning commute are traveling 10-20 miles in the study area.

- **Long-distance trips are a minority.** Long-distance trips (40 miles or more) are a small portion of trips on US-101 in the study area. The percent of the total is 5% or less of total passengers traveling through the screen lines along the highway.

- **Short trips are more common in the southern end of the corridor.** Trip distance for trips on US-101 varies along the corridor. A higher proportion of short trips pass through Ralston/US-101 and the San Mateo/Santa Clara County border than the two screen lines farther north.

- **The closer someone is to US-101 the more likely the yare to use it.** Trip origins and destinations are proportionally higher in the zones closest to US-101.

2

DATA SOURCES

Context

Building on the travel analysis used to identify potential express bus routes in the SamTrans *Express Bus Feasibility Study (2018),* analysis for the US-101 MAP utilizes the same origin/destination (O/D) data. Understanding how the corridor currently functions informs the baseline performance analysis and creates a shared understanding of the corridor from which to develop strategies. Analyzing the spatial distribution of origins and destinations enables a comparison of the differences in travel behavior along the corridor screen lines.

Data Source and Methodology

- 2018 Streetlight Data (GPS data with adjustments to mitigate sampling bias). The data was purchased for SamTrans' 2018 Express Bus Study.

- 4 screen lines on US-101. Screen lines identify the trips that pass through a set point.

- O/D data mapped by transportation analysis zone (TAZ) in GIS and analyzed by time of day, distance, and number of origins and destinations per TAZ.

3

GEOGRAPHIC SCOPE

Geographic scope:
- Trips starting or ending in San Francisco, San Mateo, Santa Clara, Contra Costa, or Alameda County

Four US-101 screen lines at:
- San Francisco/San Mateo county border
- US-101 and Millbrae Avenue
- US-101 and Ralston Avenue
- San Mateo/Santa Clara county border

Transportation Analysis Zone (TAZ)
- Geographic unit of analysis
- Size varies, with rural and open space areas having large TAZs
- Alameda and Contra Costa counties represented by a single TAZ

4

DATA LIMITATIONS
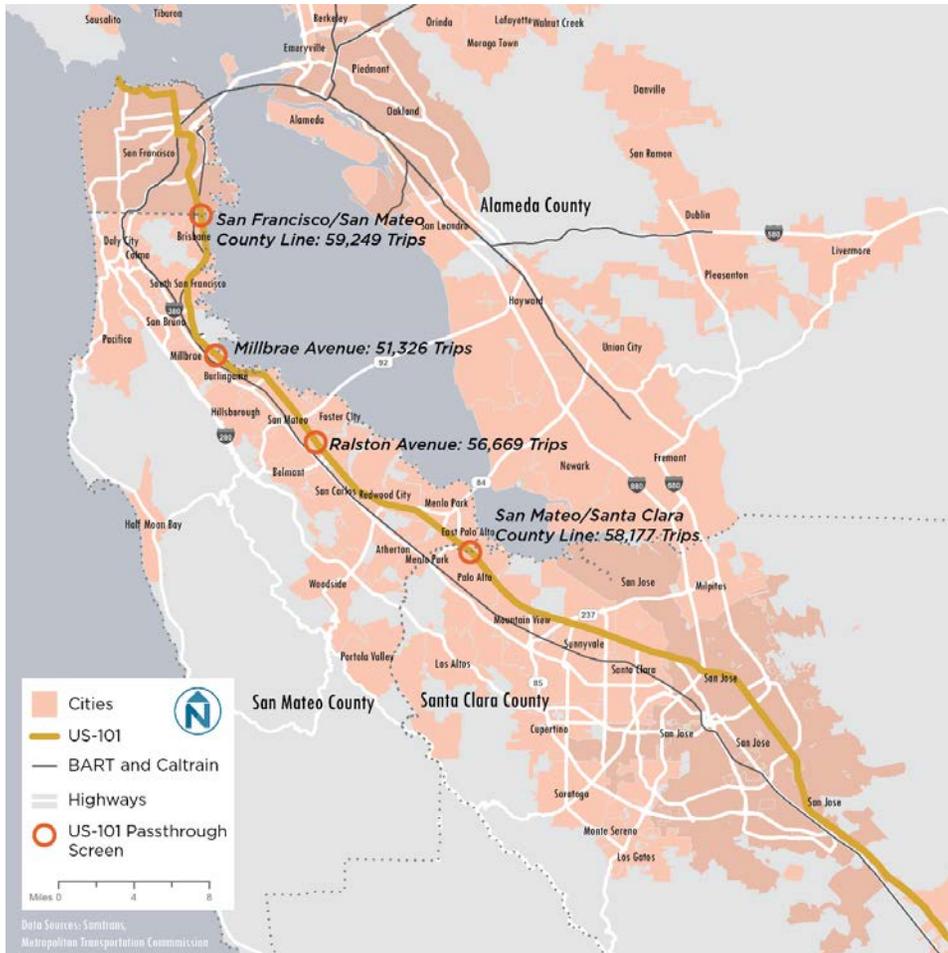
Origin-Destination data shows
- Geographic distribution
- Trip Distance
- Analyzed based on time of day (AM peak)

Limits to the data
- Four mid-point screens on 101
- No screens in Santa Clara County
- Could not combine without double counting
- Streetlight sample shows vehicle trips, not occupancy

5

US-101 TRIPS THAT PASS THE SF/SM COUNTY LINE

Morning Commute Peak (6 – 10 a.m.)

Distribution of Trip Distances
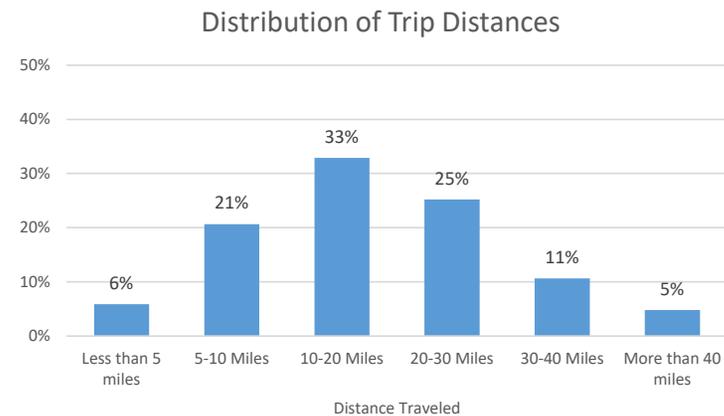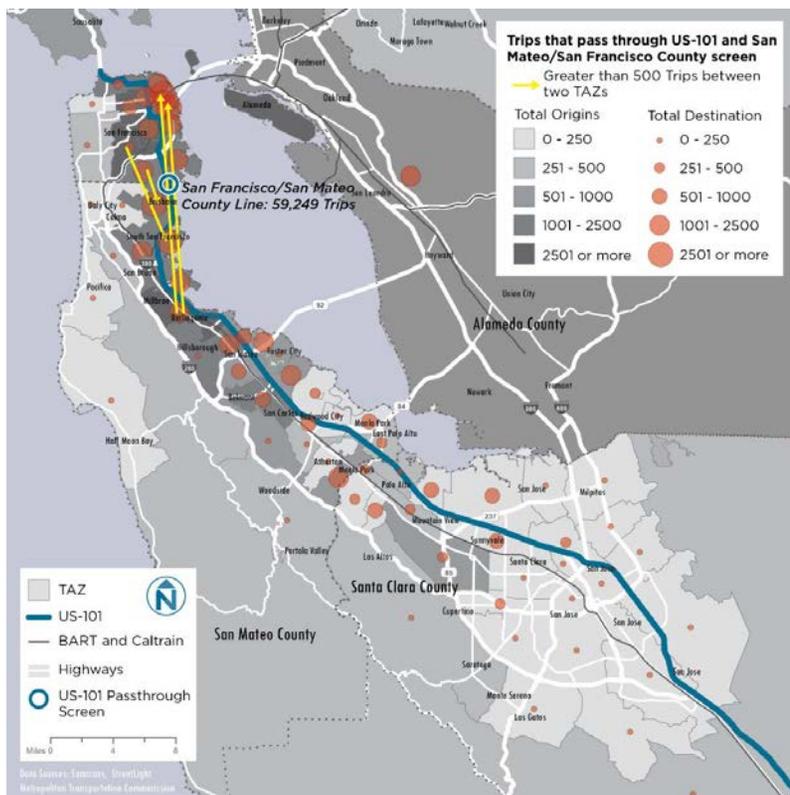
- Limited housing and employment land use near this screen line is reflected in the low number of short trips

- Bi-directional destinations - people travel north to San Francisco and south along the peninsula

- Origins are highest close to the screen line

6

US-101 TRIPS THAT PASS MILLBRAE AVENUE

Morning Commute Peak (6 – 10 a.m.)

Trips that pass through US-101 and Millbrae Avenue
→ Greater than 500 Trips between two TAZs

Total Origins
- 0 - 250
- 251 - 500
- 501 - 1000
- 1001 - 2500
- 2501 or more

Total Destination
- 0 - 250
- 251 - 500
- 501 - 1000
- 1001 - 2500
- 2501 or more

Millbrae Avenue: 51,326 Trips

TAZ
US-101
BART and Caltrain
Highways
US-101 Passthrough Screen

Distribution of Trip Distances

Distance Traveled	Percentage
Less than 5 miles	8%
5-10 Miles	14%
10-20 Miles	39%
20-30 Miles	25%
30-40 Miles	10%
More than 40 miles	3%

- Highest percentage of 10-20 mile trips among the four screen lines
- Decreasing significance of San Francisco as a destination
- The SFO airport, eastside of South San Francisco, and Foster City are the highest destination zones

7

US-101 TRIPS THAT PASS RALSTON AVE

Morning Commute Peak (6 – 10 a.m.)

Distribution of Trip Differences
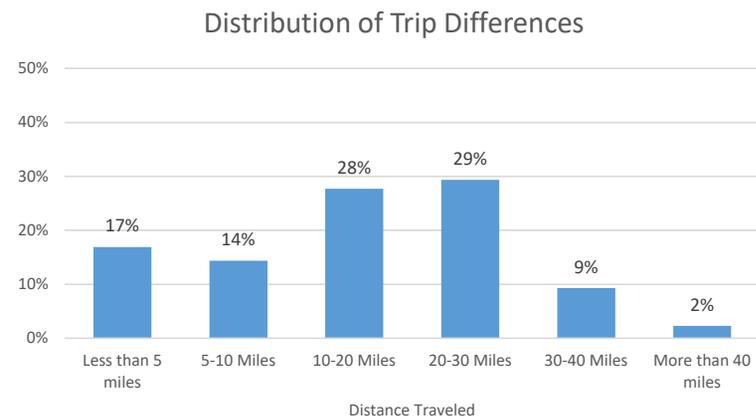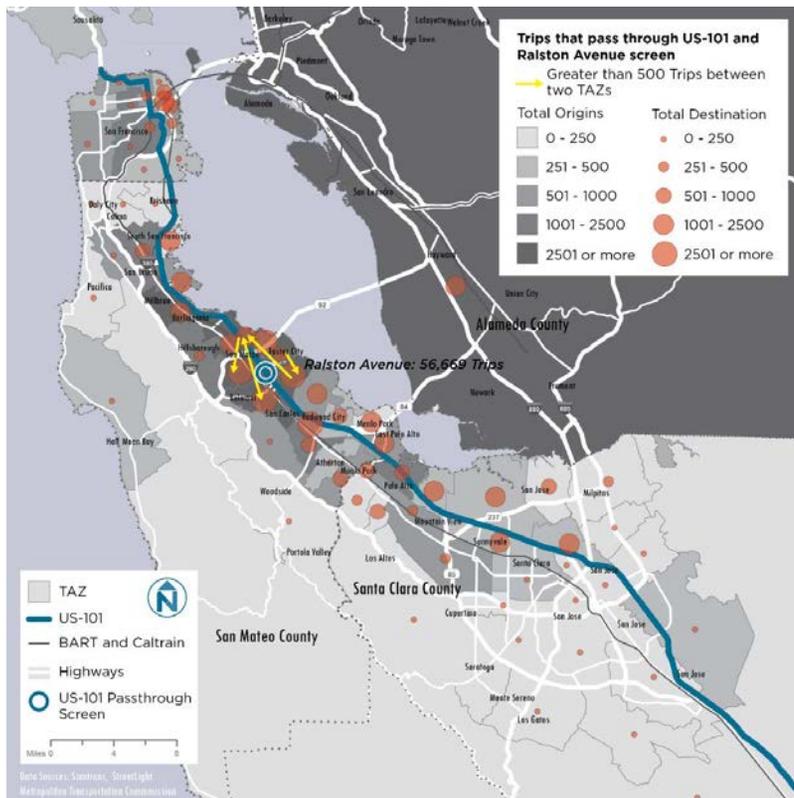
- Highest proportion of short trips among the four screen lines

- Screen line includes higher proportion of Silicon Valley commuters compared to screen lines farther north

- Santa Clara County is an increasingly significant destination

US-101 TRIPS THAT PASS THE SM/SC COUNTY LINE

Morning Commute Peak (6 – 10 a.m.)

Distribution of Trips
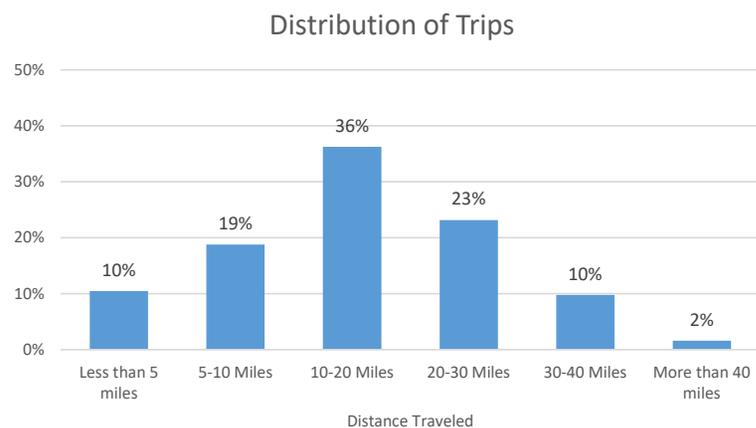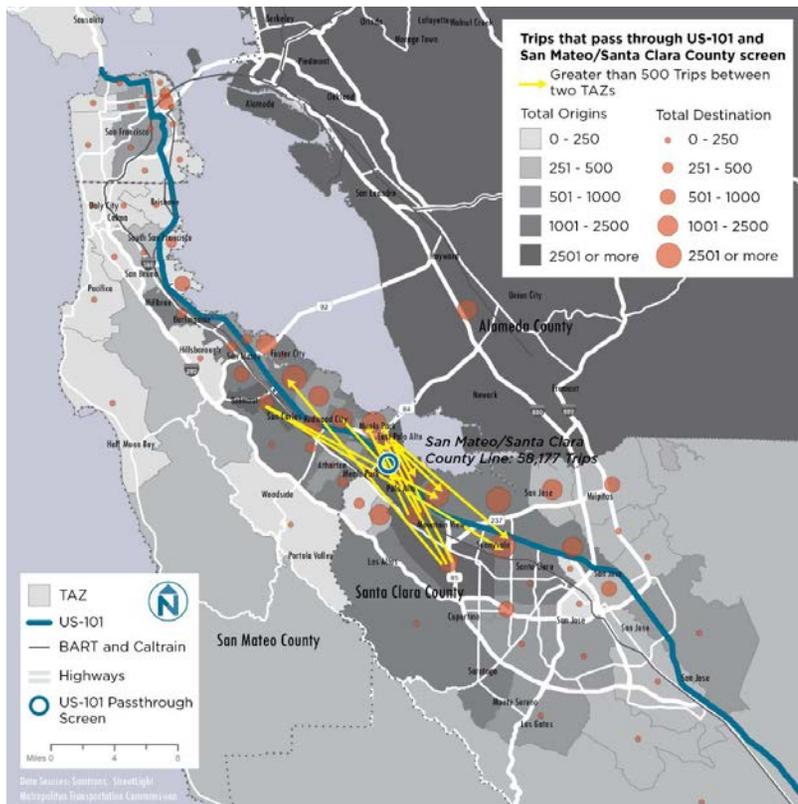
- Comparatively few vehicles going to San Francisco pass through this screen line - people traveling to San Francisco likely take alternative routes or Caltrain

- Local importance: most significant destinations are concentrated within 10 miles of the screen line in both directions

9

TRAVEL MARKETS

O-D Summary

- Short trips (under 5 miles) make up a greater proportion of total trips than long trips (more than 40 mile).

- Most users of US-101 during the morning commute are traveling 10-20 miles in the study area.

Morning Commute Trip Distance on US-101

Legend:
- More than 40 miles
- 30-40 Miles
- 20-30 Miles
- 10-20 Miles
- 5-10 Miles
- Less than 5 miles

X-axis: US-101 Screen Points (SF/SM County Line, Millbrae, Ralston, SM/SC County Line)
Y-axis: % of Trips Passing Through Screen

	SF/SM County Line	Millbrae	Ralston	SM/SC County Line
More than 40 miles	5%	3%	2%	2%
30-40 Miles	11%	10%	9%	10%
20-30 Miles	25%	25%	29%	23%
10-20 Miles	33%	39%	28%	36%
5-10 Miles	21%	14%	14%	19%
Less than 5 miles	6%	8%	17%	10%

10
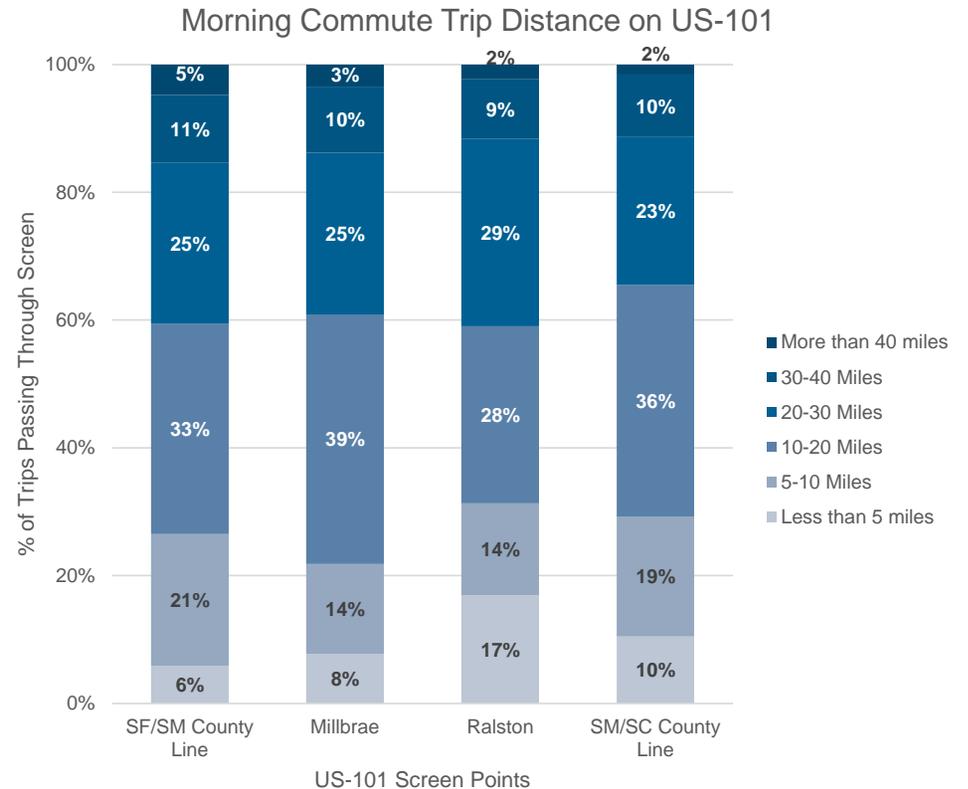
APPENDIX C: MOBILITY PERFORMANCE SCORECARD

Goal	Subcategory	No.	Actions	Goal 1: Reliability				Goal 2: High-Capacity Options				Goal 3: Healthy & Sustainable Communities					Overall Action Score	Subtotals		
			Weight	25%	25%	25%	25%	25%	25%	25%	25%	20%	20%	20%	20%	20%		Goal 1	Goal 2	Goal 3
				Consistency of average travel time at AM Peak	Percentage of time Express Lanes operate >45mph	On-Time Performance of transit using US-101	Customer-perceived reliability of US-101	Person throughput (General Purpose lanes)	Person throughput (Express Lanes)	Average vehicle occupancy	Transit Ridership on parallel North-South corridors	Collisions, including bike and ped, at highway access points	Biking mode share	Walking mode share	Rate of asthma attacks	Traffic density				
1	Normalize travel times	1	Improve enforcement of managed lanes, including carpool & express lanes, through available automated technologies.	1	3	3	1	0	1	1	0	0	0	0	0	0	2.5	2.0	0.5	0.0
1	Normalize travel times	2	Conduct education campaign about safer, more efficient driving habits.	1	1	1	3	0	0	0	0	1	0	0	0	0	1.7	1.5	0.0	0.2
1	Normalize travel times	3	Expand freeway service patrol to support clearing of vehicle breakdowns, conflicts, etc.	3	1	1	3	1	3	0	0	1	0	0	0	0	3.2	2.0	1.0	0.2
1	Normalize travel times	4	Incentivize safer driving behavior through benefits or rebates to drivers who demonstrate responsible driving.	0	0	0	1	0	0	0	0	1	1	1	0	0	0.9	0.3	0.0	0.6
1	Normalize travel times	5	Support policies or demonstration projects related to bus priority on freeway (e.g., bus-on-shoulder or bus-only lanes) or on parallel roadways such as El Camino Real or I-280.	1	1	3	1	1	1	1	1	0	0	1	1	1	4.1	1.5	1.0	0.6
1	Normalize travel times	6	Support ongoing planning projects to ensure continuous express lane on US-101 from South San Jose to downtown San Francisco.	3	3	3	1	0	3	1	0	0	0	0	0	0	3.8	2.5	1.3	0.0
1	Improve information	7	Work with Google Maps or other traffic apps to delineate travel time differences between general purpose lanes and managed lanes.	1	0	1	3	1	1	0	0	0	0	0	0	0	1.8	1.0	0.8	0.0
1	Improve information	8	Improve reliability of real-time transit arrival information for transit routes operating on US-101 or on key transit corridors parallel such as El Camino Real.	1	0	1	3	0	0	3	3	0	0	0	0	0	2.8	1.3	1.5	0.0
1	Improve information	9	Work with private sector app providers to incorporate more real-time information on accidents, construction, etc.	3	1	1	3	1	1	0	0	-1	0	0	0	-1	2.1	2.0	0.5	-0.4
1	Improve information	10	Integrate multimodal information whenever possible on freeway travel time signs, including transit and if possible parking availability at transit stations.	1	1	1	3	1	1	0	3	0	0	0	1	1	3.2	1.5	1.3	0.4
2	Increase average vehicle occupancy of US-101	11	Improve transit speeds and transit priority on El Camino Real or other parallel roadways, shifting short trips off the freeway.	1	1	0	1	1	3	0	3	0	1	1	1	1	3.3	0.8	1.8	0.8
2	Increase average vehicle occupancy of US-101	12	Encourage employers to introduce parking fees and for those who don't park, a cash-out program that puts money into employees paycheck and/or extra vacation time program.	1	1	0	1	1	1	1	1	0	0	0	1	1	2.2	0.8	1.0	0.4
2	Increase average vehicle occupancy of US-101	13	For employers and public transit agencies who operate and charge for parking, shift monthly permits/fees to daily rates.	1	1	0	1	3	1	1	1	0	0	0	1	1	2.7	0.8	1.5	0.4
2	Incentivize transit	14	Create option for bulk transit pass program (e.g., Caltrain GoPass) eligibility to include contractors, consultants, interns and temporary employees that work more than 20 hours a week.	1	1	0	1	0	3	3	3	0	0	1	3	3	5.4	0.8	2.3	1.4
2	Incentivize transit	15	Expand eligibility for bulk transit pass programs to include TMAs, neighborhood associations, colleges.	1	1	0	1	0	3	3	3	0	0	1	3	3	5.4	0.8	2.3	1.4
2	Incentivize transit	16	Introduce monthly transit pass accumulator on Clipper (automatically providing a monthly pass for rest of month when value of pass has been spent on individual rides).	1	1	0	1	0	3	3	3	0	0	1	3	3	5.4	0.8	2.3	1.4

Goal	Subcategory	No.	Actions	Goal 1: Reliability				Goal 2: High-Capacity Options				Goal 3: Healthy & Sustainable Communities					Overall Action Score	Subtotals		
			Weight	25%	25%	25%	25%	25%	25%	25%	25%	20%	20%	20%	20%	20%		Goal 1	Goal 2	Goal 3
				Consistency of average travel time at AM Peak	Percentage of time Express Lanes operate >45mph	On-Time Performance of transit using US-101	Customer-perceived reliability of US-101	Person throughput (General Purpose lanes)	Person throughput (Express Lanes)	Average vehicle occupancy	Transit Ridership on parallel North-South corridors	Collisions, including bike and ped, at highway access points	Biking mode share	Walking mode share	Rate of asthma attacks	Traffic density				
2	Incentivize transit	17	Introduce means-based fare structures on all transit providers throughout study area, through regional programs such as MTC's Means Based Fare pilot.	1	1	0	1	0	3	3	3	0	0	1	3	3	5.4	0.8	2.3	1.4
2	Incentivize transit	18	Offer free or reduced price transportation for youth, or other promotional or marketing initiatives, where not offered now.	1	1	0	1	0	3	3	3	0	0	1	3	3	5.4	0.8	2.3	1.4
2	Incentivize transit	19	Improve transfers/synchronization of multiple transit providers in MAP study area.	1	0	3	1	0	3	3	3	0	0	1	3	3	5.9	1.3	2.3	1.4
2	Incentivize transit	20	Conduct comprehensive study of the public and private shuttle system to identify opportunities for coordination.	1	0	1	0	0	1	1	1	0	0	1	1	1	1.9	0.5	0.8	0.6
2	Incentivize transit	21	Open private employer shuttles to all on-site employees regardless of classification.	1	0	0	1	1	3	3	0	0	0	1	1	1	3.9	0.5	1.8	0.6
2	Incentivize transit	22	Explore opportunities for coordination/partnership on long-haul commute routes between employers, such as sharing/selling excess capacity on bus trips.	1	0	0	1	1	3	3	0	0	0	1	1	1	3.9	0.5	1.8	0.6
2	Incentivize transit	23	Create perks for transit users at high traffic locations or special events, such as "cut the line" (TSA at SFO/SJC, security or concessions at Giants, Warriors, Sharks).	1	0	0	1	1	3	3	3	0	0	1	1	1	4.6	0.5	2.5	0.6
2	Incentivize transit	24	Create one fare product for trips to high traffic locations (Caltrain + VTA pass for 49ers game, Caltrain + BART pass to SFO).	1	1	0	1	1	3	3	3	0	0	1	1	1	4.9	0.8	2.5	0.6
2	Incentivize transit	25	Ensure employees of all classifications have access to non-surcharge BART fare at SFO.	1	1	0	0	0	0	0	3	0	0	1	1	1	2.9	0.5	0.8	0.6
2	Incentivize transit	26	Distribute hotel customers with transit vouchers (e.g., $20 Clipper card that must be returned) + free BART passes for return to airport.	1	0	0	1	0	1	1	3	0	0	1	1	1	2.4	0.5	1.3	0.6
2	Incentivize transit	27	Offer family / group discounted fares on weekends on transit.	0	0	0	0	0	0	3	3	0	0	1	1	1	3.1	0.0	1.5	0.6
2	Incentivize transit	28	Expand first mile/last mile transportation options such as bike/scooter/car share at key transit hubs on the Peninsula / in the South Bay.	1	0	0	1	0	0	0	3	1	3	3	1	1	3.1	0.5	0.8	1.8
2	Incentivize transit	29	Implement a "transportation credit" program that would provide toll credit for regular transit users, transit credit for regular toll lane users.	1	0	0	1	1	3	3	3	0	0	1	1	1	4.9	0.8	2.5	0.6
2	Incentivize carpool/vanpool	30	Incentivize the use of pay-as-you-go insurance plans for drivers.	1	0	0	0	0	0	0	0	0	1	1	1	1	1.3	0.3	0.3	0.8
2	Incentivize carpool/vanpool	31	Subsidize ride-matching through real-time matching apps (Scoop or another similar platform).	1	0	0	0	1	3	3	0	0	0	0	1	1	2.7	0.5	1.8	0.4
2	Incentivize carpool/vanpool	32	Create regional vanpool subsidy program with ridership tracking and improve vanpool ride-matching.	1	0	0	1	1	3	3	0	0	0	0	1	1	3.7	0.5	1.8	0.4
2	Incentivize carpool/vanpool	33	Create regional or sub-regional carpool matching program for school-age children.	1	0	0	1	1	3	3	0	0	0	0	1	1	2.7	0.5	1.8	0.4
2	Incentivize carpool/vanpool	34	Encourage employers to provide gas incentive for regular carpoolers.	1	0	0	1	3	1	1	0	0	0	0	1	1	3.2	0.5	1.3	0.4
2	Incentivize carpool/vanpool	35	Support regional policies to phase out free use of HOV/express lanes if solo driver in a hybrid or clean air vehicle, or charge a reduced toll.	1	1	1	1	0	1	1	0	0	0	0	-1	1	1.5	1.0	0.5	0.0
2	Strengthen existing TDM programs	36	Decrease parking minimums/adopt parking maximums/allow for shared parking at multi-use development as part of city developer requirements.	0	0	0	1	1	1	3	3	1	1	3	1	3	4.1	0.3	2.0	1.8
2	Strengthen existing TDM programs	37	Create regionally-consistent TDM developer requirements for specific land use types.	0	0	0	1	1	1	1	1	0	1	1	1	1	2.1	0.3	1.0	0.8
2	Strengthen existing TDM programs	38	Develop regional branding/marketing program for TMA/TDM programs.	0	0	0	0	0	1	1	1	0	1	1	0	0	1.2	0.0	0.8	0.4
2	Strengthen existing TDM programs	39	Develop a platform for developments to share current mode split, informing neighboring developments and encouraging a "friendly competition".	0	0	0	0	0	1	1	1	0	1	1	1	1	1.3	0.0	0.5	0.8

Goal	Subcategory	No.	Actions	Goal 1: Reliability				Goal 2: High-Capacity Options				Goal 3: Healthy & Sustainable Communities					Overall Action Score	Subtotals		
			Weight →	25%	25%	25%	25%	25%	25%	25%	25%	20%	20%	20%	20%	20%		Goal 1	Goal 2	Goal 3
				Consistency of average travel time at AM Peak	Percentage of time Express Lanes operate >45mph	On-Time Performance of transit using US-101	Customer-perceived reliability of US-101	Person throughput (General Purpose lanes)	Person throughput (Express Lanes)	Average vehicle occupancy	Transit Ridership on parallel North-South corridors	Collisions, including bike and ped, at highway access points	Biking mode share	Walking mode share	Rate of asthma attacks	Traffic density				
2	Strengthen existing TDM programs	40	Strengthen Bay Area Air Quality Management District (BAAQMD) employer TDM expectations for large employers (50+) by, for example:																	
2	Strengthen existing TDM programs	40a	o Enforcing the requirements and penalize employers not in compliance	3	1	0	1	1	1	3	3	0	1	1	3	3	4.9	1.3	2.0	1.6
2	Strengthen existing TDM programs	40b	o Expand the potential mitigation options beyond pre-tax commuter costs, which is not shown to be very effective; instead, require larger companies to provide public transit passes or carpool subsidies to employees	1	0	1	0	1	3	3	3	0	0	0	3	3	4.2	0.5	2.5	1.2
2	Strengthen existing TDM programs	40c	o Creating an option for employers to charge for parking, or to shift from monthly to daily parking fees	1	0	0	1	1	0	1	3	0	1	1	1	1	2.6	0.5	1.3	0.8
2	Strengthen existing TDM programs	40d	o Creating an option for employers to formalize a policy and encourage employees to work from home or alternate work schedules	1	0	0	1	1	0	0	0	1	0	0	1	1	1.4	0.5	0.3	0.6
2	Strengthen existing TDM programs	41	Support small companies in funding and offering virtual meeting services software to facilitate remote work	1	0	0	1	1	0	0	0	1	0	0	1	1	1.4	0.5	0.3	0.6
2	Expand Transportation Management Associations (TMAs)	42	Support the development of new and expanded TMAs across study area in high employment areas such as Oyster Point (SSF), Foster City, Redwood Shores (Redwood City), East Palo Alto, Mountain View, Sunnyvale.	1	1	1	1	1	1	1	1	1	1	1	1	1	3.0	1.0	1.0	1.0
3	Reduce traffic burden on local streets in adjacent communities	43	Enact trip caps for major employment centers (city-level).	1	1	1	1	1	1	1	1	3	1	1	3	3	4.2	1.0	1.0	2.2
3	Reduce traffic burden on local streets	44	Assess needs for traffic calming measures in neighborhoods/downtowns with high volume of cut-through traffic.	0	0	0	0	0	0	0	0	3	1	1	3	3	2.2	0.0	0.0	2.2
3	Reduce traffic burden on local streets	45	Price parking in downtown or high traffic areas with transit access and other modal options.	1	0	1	1	1	0	1	1	3	1	1	1	3	3.3	0.8	0.8	1.8
3	Reduce traffic burden on local streets	46	Support completion of Bay Trail bicycle facility north-south parallel to US-101.	0	0	0	0	0	0	0	1	1	3	3	3	3	2.9	0.0	0.3	2.6
3	Reduce traffic burden on local streets	47	Prioritize transit-oriented development of both residential and office development in study area.	0	0	0	0	0	0	1	3	1	1	1	1	3	2.4	0.0	1.0	1.4
3	Improve multimodal options and safety	48	Conduct pedestrian/bicycle crossing needs assessment along entire US-101 corridor.	0	0	0	0	0	0	0	0	1	1	1	1	1	1.0	0.0	0.0	1.0
3	Improve multimodal options and safety	49	Keep bicycle lanes clear of obstacles, including Uber/Lyft drop-offs, construction, and street-sweeping.	0	0	0	0	0	0	0	0	1	1	0	0	0	0.4	0.0	0.0	0.4
3	Improve multimodal options and safety	50	Strengthen local TDM requirements to encourage/require bike programs and amenities in new and existing developments.	0	0	0	0	0	0	0	0	0	3	0	1	1	1.0	0.0	0.0	1.0
3	Improve multimodal options and safety	51	Bring bike share systems to the Peninsula and other locations in the study area.	0	0	0	0	0	0	0	0	0	3	0	1	1	1.0	0.0	0.0	1.0
3	Improve multimodal options and safety	52	Strengthen/fund Safe Routes to School programs in neighboring communities.	1	0	0	1	0	0	0	0	1	3	3	3	3	3.1	0.5	0.0	2.6
3	Improve multimodal options and safety	53	Adopt Local Road Safety Plans utilizing Vision Zero principles, goals and design guidance.	0	0	0	0	0	0	0	0	3	1	3	3	3	2.6	0.0	0.0	2.6
3	Address environmental, air quality and health outcomes	54	Transition public and private bus and shuttle fleets to zero emission vehicles.	0	0	0	0	0	0	0	0	1	1	1	3	1	1.4	0.0	0.0	1.4

Goal	Subcategory	No.	Actions	Goal 1: Reliability				Goal 2: High-Capacity Options				Goal 3: Healthy & Sustainable Communities					Overall Action Score	Subtotals		
			Weight	25%	25%	25%	25%	25%	25%	25%	25%	20%	20%	20%	20%	20%		Goal 1	Goal 2	Goal 3
				Consistency of average travel time at AM Peak	Percentage of time Express Lanes operate >45mph	On-Time Performance of transit using US-101	Customer-perceived reliability of US-101	Person throughput (General Purpose lanes)	Person throughput (Express Lanes)	Average vehicle occupancy	Transit Ridership on parallel North-South corridors	Collisions, including bike and ped, at highway access points	Biking mode share	Walking mode share	Rate of asthma attacks	Traffic density				
3	Address environmental, air quality and health outcomes	55	Develop policies to reduce vehicle idling in areas near schools, youth activity areas, affordable housing, and other areas with high asthma or greenhouse gas emissions rates.	1	0	0	0	0	0	0	0	1	1	1	3	1	1.7	0.3	0.0	1.4
3	Address environmental, air quality and health outcomes	56	Explore opportunities to provide high quality air filtration systems to residents and/or schools located in close proximity of US-101.	0	0	0	0	0	0	0	1	0	1	1	3	1	1.5	0.0	0.3	1.2
3	Address environmental, air quality and health outcomes	57	Allocate investments and funding to communities with higher asthma and greenhouse gas emission rates for programs like San Mateo County Parks Rx, urban tree canopy and tree-planting programs.	0	0	0	0	0	0	0	1	0	1	1	3	1	1.5	0.0	0.3	1.2
3	Address environmental, air quality and health outcomes	58	Support overall greening efforts related to infrastructure and construction materials and designs, such as the C/CAG Green Streets Pilot Program. Adopt plans and policies for green infrastructure planning at the city or county levels.	0	0	0	0	0	0	0	1	3	3	3	3	1	2.9	0.0	0.3	2.6
3	Address environmental, air quality and health outcomes	59	Develop an incentive/rebate program for residents along the corridor to purchase E-bikes	0	0	0	0	0	0	0	0	0	3	0	1	1	1.0	0.0	0.0	1.0

APPENDIX D: EQUITY ACTION LIST

Mobility and Equity Actions

The following table lists all actions identified throughout Phase One of the 101-MAP effort alongside each of the methods by which the Project Management Team will leverage ongoing investment to advance equity within communities in the project area.

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
1		Improve enforcement of managed lanes, including carpool & express lanes, through available automated technologies.	Enforce equally across entire length of managed lanes	Enforce equally across all times of day, not targeting specific times more than others	Develop education-based violation policy that offers multilingual education to those who repeatedly get violations. Create easy ways to appeal a fine if rules or process not provided in all relevant languages. Study income-based toll and fine structures and develop policies for these in specific Equity studies to be undertaken in support of express lane projects.	Create ways to appeal a fine if rules or process not understandable by everyone.	Distribute usage rules and requirements in all relevant languages proactively. Translate or use symbols and icons on signage in the lanes. Track and utilize enforcement data by race and income. Enforcement staff should be trained in cultural competency.
2		Conduct education campaign about safer, more efficient driving habits.	Conduct campaign across entire length of corridor				Conduct campaign in all relevant Title VI languages in the project area. Conduct campaign using lay language, easy to understand.
3		Expand freeway service patrol to support clearing of vehicle breakdowns, conflicts, etc.	Clear with equal priority across entire corridor.			Disability sensitivity training for those clearing breakdowns, when engaging with people in the roadway.	Cultural sensitivity for those clearing breakdowns, when engaging with people in the roadway.
4		Incentivize safer driving behavior through benefits or rebates to drivers who demonstrate responsible driving.	Conduct campaign across entire length of corridor		Partner with a wide variety of insurance companies, offering all levels of coverage. Offer access to program not requiring smart phone or use of full data version of app; provide data lite option.	Allow participants to designate someone to be an authorized representative.	Promote program in all relevant languages. Use easy to use, lay language in program communications.
5		Support policies or demonstration projects related to bus priority on freeway (e.g., bus-on-shoulder or bus-only lanes) or on parallel roadways such as El Camino Real or I-280.	Explore equitably throughout entire study area.	Seek projects that provide transit priority benefits throughout the day, not only peak periods. Seek opportunities to advance immediate quick-build and pilot projects.	Prioritize demonstration projects in Communities of Concern or on routes that have a higher proportion of low income riders compared to the system-wide average.		Partner with and compensate community ambassadors to help develop the pilot/infrastructure and to provide guidance on changes to the pilot based on results/data and whether the pilot becomes permanent.

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
6	⏱	Support ongoing planning projects to ensure continuous express lanes on US-101 from South San Jose to downtown San Francisco.	Support across entire length of corridor.				
7	⏱	Work with Google Maps or other traffic apps to delineate travel time differences between general purpose lanes and managed lanes.			Offer access to program not requiring smart phone or use of full data version of app; provide data lite option of equal quality user experience. Ensure voice-activated mobility app features.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions	
8	⏱	Improve reliability of real-time transit arrival information for transit routes operating on US-101 or on key parallel transit corridors such as El Camino Real.	Prioritize placement of bus-stop based real-time arrival screens in areas with concentrations of people without smart phone or data plan access.	Strive to provide real-time transit arrival information throughout the day but especially during late night or overnight hours when safety concerns are heightened.	Offer access to program not requiring smart phone or use of full data version of app; provide data lite option of equal quality user experience.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	Use simple, easy to understand language. Translate into all relevant languages in area. Adopt use of univerally-understood icons and symbols.
9	⏱	Work with private sector app providers to incorporate more real-time information on accidents, construction, etc.			Offer access to program not requiring smart phone or use of full data version of app; provide data lite option of equal quality user experience.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	
10	⏱	Integrate multimodal information whenever possible on freeway travel time signs, including transit and if possible parking availability at transit stations.	Place equitable across corridor.	Provide information at all times of day, outside of peak periods.		Provide and promote audio-based options.	Use simple, easy to understand language. Translate into all relevant languages in area. Adopt use of univerally-understood icons and symbols.
11	🚌	Improve transit speeds and transit priority on El Camino Real or other parallel roadways, shifting short trips off the freeway.	Work with cities or other municipalities with responsibility for sidewalk infrastructure to ensure public transportation is accessible for those walking. If reducing bus stops, consider proximity to medical centers and senior populations.	Seek projects that provide transit priority benefits throughout the day, not only peak periods.		Work with cities or other municipalities with responsibility for sidewalk infrastructure to ensure public transportation is accessible for those using wheelchairs or other mobility aids. Ensure parent or child-friendly amenities on board public transit such as designated stroller parking, level boarding, places for bags.	

⏱ **Goal 1: Reliability** 🚌 **Goal 2: High-Capacity Options** 💓 **Goal 3: Healthy & Sustainable Communities**

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
12		Encourage employers to introduce parking fees and for those who don't park, a cash-out program that puts money into employees paycheck and/or extra vacation time program.		Explore variable parking rates based on parking demand at specific times, or that reduce parking fees during hours when transit options are reduced, such as late evening.	Encourage reinvestment parking fee revenue in equitable strategies, such as free transit passes for low income commuters.		Extend program eligibility to all those who commute or drive to worksite regularly, including contractors, consultants, vendors, interns, etc.
13		For employers and public transit agencies who operate and charge for parking, shift monthly permits/fees to daily rates.					Promote program change in all relevant languages. Use easy to use, lay language in program communications.
14		Create option for bulk transit pass program (e.g., Caltrain GoPass) eligibility to include contractors, consultants, interns and temporary employees that work more than 20 hours a week.		Ensure transit service (or other transportation model such as a subsidized rideshare program) includes early morning, midday, and late night service options.		Ensure parent or child-friendly amenities on board public transit such as designated stroller parking, level boarding, places for bags.	
15		Expand eligibility for bulk transit pass programs to include TMAs, neighborhood associations, colleges.		Ensure transit service (or other transportation model such as a subsidized rideshare program) includes early morning, midday, and late night service options.	Offer reduced fee program for affordable housing developers/managers and non-profit institutions.		
16		Introduce monthly transit pass accumulator on Clipper (automatically providing a monthly pass for rest of month when value of pass has been spent on individual rides).	Expand the number and geographic reach of Clipper vendors, especially in Communities of Concern.	Ensure Clipper vendor locations are open outside of normal business hours. Improve the immediacy of Clipper value added online.	Distribute free Clipper cards in low-income areas/Communities of Concern.	Allow sharing of Clipper cards/accounts for caregivers. Ensure parent or child-friendly amenities on board public transit such as designated stroller parking, level boarding, places for bags.	Promote program change in all relevant languages. Use easy to use, lay language in program communications.
17		Introduce means-based fare structures on all transit providers throughout study area, through regional programs such as MTC's Means Based Fare pilot.	Expand the number and geographic reach of Clipper vendors, especially in Communities of Concern.	Ensure Clipper vendor locations are open outside of normal business hours. Improve the immediacy of Clipper value added online.	Distribute free Clipper cards in low-income areas/Communities of Concern.	Allow participants to designate someone to be an authorized representative. Allow sharing of Clipper cards/accounts for caregivers.	Simplify enrollment process; tie to existing programs with similar eligibility and consider auto-enrollment. Promote program change in all relevant languages. Use easy to use, lay language in program communications.
18		Offer free or reduced price transportation for youth, or other promotional or marketing initiatives, where not offered now.	Prioritize implementation and promotion of program in areas with highest truancy rates or where students have the most challenges accessing school regularly.	Make available for use on all routes, all times of day, not just for accessing school.		Ensure parent or child-friendly amenities on board public transit such as designated stroller parking, level boarding, places for bags.	Simplify enrollment process; tie to existing programs with similar eligibility and consider auto-enrollment. Promote program change in all relevant languages. Use easy to use, lay language in program communications.

Goal 1: Reliability Goal 2: High-Capacity Options Goal 3: Healthy & Sustainable Communities

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
19	🚌	Improve transfers/synchronization of multiple transit providers in MAP study area.	Prioritize areas with high transfer rates currently.	Strive to provide real-time transit arrival information throughout the day but especially during late night or overnight hours when safety concerns are heightened.			
20	🚌	Conduct comprehensive study of the public and private shuttle system to identify opportunities for coordination.					
21	🚌	Open private employer shuttles to all on-site employees regardless of classification.					
22	🚌	Explore opportunities for coordination/partnership on long-haul commute routes between employers, such as sharing/selling excess capacity on bus trips.			Prioritize partnerships with nearby small and disadvantaged businesses.		
23	🚌	Create perks for transit users at high traffic locations or special events, such as "cut the line" (TSA at SFO/SJC, security or concessions at Giants, Warriors, Sharks).			Offer to all ticket-holders at all levels. Provide option for utilizing the perk without a smart phone.		Promote program change in all relevant languages. Use simple, clear language in program communications.
24	🚌	Create one fare product for trips to high traffic locations (Caltrain + VTA pass for 49ers game, Caltrain + BART pass to SFO).			Offer bulk passes as part of existing ticket product.		Promote program change in all relevant languages. Use simple, clear language in program communications.
25	🚌	Ensure employees of all classifications have access to non-surcharge BART fare at SFO.					Promote program change in all relevant languages. Use simple, clear language in program communications.
26	🚌	Provide hotel customers with transit vouchers (e.g., $20 Clipper card that must be returned) + free BART passes for return to airport.			No fees for lost/stolen cards; reward for returned cards.		Promote program change in all relevant languages. Use simple, clear language in program communications.
27	🚌	Offer family / group discounted fares on weekends on transit.			Distribute free Clipper cards in low-income areas/Communities of Concern.		Promote program change in all relevant languages. Partner with and compensate community ambassadors to help develop and promote the program. Use simple, clear language in program communications.

🕐 **Goal 1: Reliability**   🚌 **Goal 2: High-Capacity Options**   💓 **Goal 3: Healthy & Sustainable Communities**

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
28	🚗	Expand first mile/last mile transportation options such as bike/scooter/car share at key transit hubs on the Peninsula / in the South Bay.	Require or enter into risk-sharing agreements with shared mobility operators to locate in neighborhoods with gaps in the transportation network, specifically Communities of Concern, as a condition for operating in public right-of-way or entering into a contract with the public sector.	Ensure new mobility vehicles are available 24 hours a day.	Deploy shared mobility kiosks to allow access for users without smart phones; ensure availability of non app or data-lite apps with equal user experience quality. Defray annual membership costs or sign-up fees for low-income users. Require tiered membership costs by income.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	Simplify enrollment process; tie to existing programs with similar eligibility and consider auto-enrollment. Promote program change in all relevant languages. Use easy to use, lay language in program communications.
29	🚗	Implement a "transportation credit" program that would provide toll credit for regular transit users, transit credit for regular toll lane users.	Incorporate public transit serving express lanes, as well as use of parallel public transportation systems.	Credit transit trips taken at all times of day, outside of peak periods.	Distribute necessary transponders or cards (FastTrak and/or Clipper cards) and waive any monthly maintenance fees or minimums for low-income users.	Allow participants to designate someone to be an authorized representative.	Simplify enrollment process; tie to existing programs with similar eligibility and consider auto-enrollment. Promote program change in all relevant languages. Use easy to use, lay language in program communications.
30	🚗	Incentivize the use of pay-as-you-go insurance plans for drivers.	Conduct campaign across entire length of corridor		Partner with a wide variety of insurance companies, offering all levels of coverage. Offer access to program not requiring smart phone or use of full data version of app; provide data lite option.	Allow participants to designate someone to be an authorized representative.	Promote program in all relevant languages. Use easy to use, lay language in program communications. Prevent sociodemographic profiling within mobility apps.
31	🚗	Subsidize ride-matching through real-time matching apps (Scoop or another similar platform).	Extend to all employees regardless of home location.		Offer access to program not requiring smart phone or use of full data version of app; provide data lite option. Prioritize available funding, if limited, for matching funds to be provided to lower income employees.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	Extend to all workers at the site, including contractors, vendors, interns, etc. Prevent sociodemographic profiling within mobility apps. Conduct marketing and promotions specifically to multilingual or disadvantaged populations among employees. Provide carpool matching services exclusively for women.

🕐 **Goal 1: Reliability**　　🚗 **Goal 2: High-Capacity Options**　　💗 **Goal 3: Healthy & Sustainable Communities**

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
32	🚗	Create regional vanpool subsidy program with ridership tracking and improve vanpool ride-matching.	Extend to all employees regardless of home location.	Promote the availability of guaranteed ride home available to all workers/residents through commute.org.		Ensure accessible vehicles, including wheelchair accessible.\n\nEnsure booking options include a range of accessible communication functions such as short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	Extend to all workers at the site, including contractors, vendors, interns, etc.\n\nProvide, as an extra service, carpool matching services exclusively for women.
33	🚗	Create regional or sub-regional carpool matching program for school-age children.	Prioritize implementation and promotion of program in areas with highest truancy rates or where students have the most challenges accessing school regularly.		Subsidize program participation for low-income households.		Promote program in all relevant languages. Use easy to use, lay language in program communications.\n\nPrevent sociodemographic profiling within mobility apps.
34	🚗	Encourage employers to provide gas incentive for regular carpoolers.			Prioritize available funding, if limited, for incentive funds to be provided to lower income employees.		Extend to all workers at the site, including contractors, vendors, interns, etc.
35	🚗	Support regional policies to phase out free use of HOV/express lanes if solo driver in a hybrid or clean air vehicle, or charge a reduced toll.					
36	🚗	Decrease parking minimums/adopt parking maximums/allow for shared parking at multi-use development as part of city development requirements.	Supplement with high quality transit service, particularly in Communities of Concern.				
37	🚗	Create regionally-consistent TDM developer requirements for specific land use types.		Build requirements that provide transportation solutions 24 hours per day.	Encourage subsidized transit passes/memberships for new mobility services for affordable housing residents.		
38	🚗	Develop regional branding/marketing program for TMA/TDM programs.					Promote program in all relevant languages. Use easy to use, lay language in program communications.
39	🚗	Develop a platform for developments to share current mode split, informing neighboring developments and encouraging a "friendly competition".					

🕐 Goal 1: Reliability   🚗 Goal 2: High-Capacity Options   💚 Goal 3: Healthy & Sustainable Communities

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
40	🚗	Strengthen Bay Area Air Quality Management District (BAAQMD) employer TDM expectations for large employers (50+) by, for example:	Extend to all employees regardless of home location.	Promote the availability of guaranteed ride home available to all workers/residents through commute.org.		Ensure accessible vehicles, including wheelchair accessible. Ensure booking options include a range of accessible communication functions such as short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.	Extend to all workers at the site, including contractors, vendors, interns, etc. Provide carpool matching services exclusively for women.
40 a	🚗	Enforcing the requirements and penalize employers not in compliance	Enforce equitably throughout region.		Conduct widespread education campaign to all employers but particularly smaller employers more around the 50 employee threshold.		Communicate program requirements in all relevant languages; use clear, simple language.
40 b	🚐	Expand the potential mitigation options beyond pre-tax commuter costs, which is not shown to be very effective; instead, require larger companies to provide public transit passes or carpool subsidies to employees			Provide separate discounted pricing structure for non-profit organizations to purchase transit passes.		Simplify employee reimbursement for transit programs.
40 c	🚗	Creating an option for employers to charge for parking, or to shift from monthly to daily parking fees					
40 d	🚗	Creating an option for employers to formalize a policy and encourage employees to work from home or alternate work schedules					
41	🚐	Support small companies in funding and offering virtual meeting services software to facilitate remote work			Subsidize for small businesses		Promote program in all relevant languages; proactively promote among minority-owned businesses.
42	🚗	Support the development of new and expanded TMAs across study area in high employment areas such as Oyster Point (SSF), Foster City, Redwood Shores (Redwood City), East Palo Alto, Mountain View, Sunnyvale.			Prioritize programs for low-income workers within these TMA areas.		
43	💗	Enact trip caps for major employment centers (city-level).					
44	💗	Assess needs for traffic calming measures in neighborhoods/downtowns with high volume of cut-through traffic.	Prioritize in areas with highest rate of pedestrian/bicycle collisions, especially in Communities of Concern.				

🕐 Goal 1: Reliability   🚐 Goal 2: High-Capacity Options   💗 Goal 3: Healthy & Sustainable Communities

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
45		Price parking in downtown or high traffic areas with transit access and other modal options.		Ensure transit and other multimodal options are available including midday and late night hours, otherwise adjust pricing scheme accordingly to be cheaper when other options are not as plentiful.	Focus revenues on investing in transportation benefits for low wage workers such as free transit passes or improving multimodal transportation options to the area.		Communicate program requirements in all relevant languages; use clear, simple language.
46		Support completion of Bay Trail bicycle facility north-south parallel to US-101.	Focus on gaps in Communities of Concern.	Add lighting to the trail to make it feel safe for use in evenings and early mornings when there isn't as much daylight.	Explore bicycle donation or subsidies for nearby communities.		Promote trail's availability to all communities in all relevant languages. Consider bicycling training for nearby communities.
47		Prioritize transit-oriented development of both residential and office development in study area.			Enact strong requirements for affordable housing and subsidized transit passes within those developments.		Work closely with the community and local jurisdictions to support anti-displacement policies and practices.
48		Conduct pedestrian/bicycle crossing needs assessment along entire US-101 corridor.	Focus on crossing needs for Communities of Concern.	Add lighting to crossings to ensure they are and feel safe for use at all hours.		Ensure sidewalk facilities are accessible, safe and dependable for those using a wheelchair or other mobility aid.	
49		Keep bicycle lanes clear of obstacles, including Uber/Lyft drop-offs, construction, and street-sweeping.	Focus on bicycle lanes in Communities of Concern.		Avoid fine-based enforcement mechanisms for double-parked cars, focusing on education first.		Consider bicycle training for nearby communities.
50		Strengthen local TDM requirements to encourage/require bike programs and amenities in new and existing developments.			Explore bicycle donation or subsidies for nearby communities.		Consider bicycle training for nearby communities.
51		Bring bike share systems to the Peninsula and other locations in the study area.	Require shared mobility operators to locate in neighborhoods with gaps in the transportation network as a condition for operating in public right-of-way or entering into a contract with the public sector. Consider risk-sharing partnerships in exchange for locating services in potentially less profitable areas	Ensure bike share is available 24 hours per day. Ensure docking locations are well-lit.	Subsidize program participation (annual fees or one-time sign-up fees) for low-income households. Deploy shared mobility kiosks to allow access for users without smart phones. Ensure ways to participate that don't require smart phone or offer a "data lite" version of the booking app.	Promote availability of bike share to all communities in all relevant languages. Consider bicycling training for nearby communities. Hire community ambassadors to promote and educate about bike share in local communities. Hire staff locally for bike share program. Prevent sociodemographic profiling within mobility apps.	Ensure apps have a range of accessible communication functions, including native apps popular with users, short message services (SMS), voice-activated functionality, audio dial-in for landline users, and desktop-friendly browser versions.
52		Strengthen/fund Safe Routes to School programs in neighboring communities.	Prioritize funds for SRTS programs in Communities of Concern or areas with highest pedestrian collisions.				Communicate program details in all relevant languages; use clear, simple language; hire local ambassadors to lead and promote the program from within the community.

Goal 1: Reliability   Goal 2: High-Capacity Options   Goal 3: Healthy & Sustainable Communities

#	Goal	Actions	Spatial	Temporal	Economic	Physiological	Social
53	♥	Adopt Local Road Safety Plans utilizing Vision Zero principles, goals and design guidance.	Prioritize road safety improvements in areas with highest bike and pedestrian collisions, especially in Communities of Concern.				Include plans for training enforcement staff in cultural competency and tracking enforcement data by race and income
54	♥	Transition public and private bus and shuttle fleets to zero emission vehicles.	Prioritize placement of these vehicles on routes that serve schools and/or neighborhoods with highest asthma rates.				
55	♥	Develop policies to reduce vehicle idling in areas near schools, youth activity areas, affordable housing, and other areas with high asthma or greenhouse gas emissions rates.	Prioritize areas with highest asthma rates.	Policies should be effect 24 hours per day.			
56	♥	Explore opportunities to provide high quality air filtration systems to residents and/or schools located in close proximity of US-101.	Prioritize areas with highest asthma rates.		Provide at no or low cost for low income households.		Simplify enrollment process. Promote program in all relevant languages. Use simple, clear language in program communications.
57	♥	Allocate investments and funding to communities with higher asthma and greenhouse gas emission rates for programs like San Mateo County Parks Rx, urban tree canopy and tree-planting programs.					
58	♥	Support overall greening efforts related to infrastructure and construction materials and designs, such as the C/CAG Green Streets Pilot Program. Adopt plans and policies for green infrastructure planning at the city or county levels.	Prioritize green infrastructure in Communities of Concern.		Provide subsidies for lower income communities to adopt and implement green infrastructure.		
59	♥	Develop an incentive/rebate program for residents along the corridor to purchase E-bikes.	Prioritize rebates in Communities of Concern near the freeway.				Simplify enrollment process. Promote program in all relevant languages. Use simple, clear language in program communications.

🕐 **Goal 1: Reliability**   🚌 **Goal 2: High-Capacity Options**   ♥ **Goal 3: Healthy & Sustainable Communities**

APPENDIX E: IMPLEMENTATION SCORECARD

Goal	No.	Actions	Feasibility Assessment			
			Readiness	Potential Lead Implementors	Cost	Potential New Revenue
🕐	1	Improve enforcement of managed lanes, including carpool & express lanes, through available automated technologies.	2	Managed Lanes Agencies	1	Ticket revenue
🕐	2	Conduct education campaign about safer, more efficient driving habits.	3	Regional Agencies, CMAs, Advocates	3	None
🕐	3	Expand freeway service patrol to support clearing of vehicle breakdowns, conflicts, etc.	3	Managed Lanes Agencies, Regional Agencies	3	None
🕐	4	Incentivize safer driving behavior through benefits or rebates to drivers who demonstrate responsible driving.	1	Managed Lanes Agencies, Private Sector, Regional Agencies, CMAs	2	None
🕐	5	Support policies or demonstration projects related to bus priority on freeway (e.g., bus-on-shoulder or bus-only lanes) or on parallel roadways such as El Camino Real or I-280.	3	State, Regional Agencies, Transit agencies, Advocates	3	Not directly, could increase ridership (and fare revenue)
🕐	6	Support ongoing planning projects to ensure continuous express lane on US-101 from South San Jose to downtown San Francisco.	3	State, CMAs, Regional Agencies, Managed Lanes Agencies	3	None
🕐	7	Work with Google Maps or other traffic apps to delineate travel time differences between general purpose lanes and managed lanes.	2	Private Sector, Regional Agencies, Managed Lanes Agencies	3	Not directly, could increase Express Lane use (and toll revenue)
🕐	8	Improve reliability of real-time transit arrival information for transit routes operating on US-101 or on key transit corridors parallel such as El Camino Real.	2	Transit agencies	2	Not directly, could increase ridership (and fare revenue)
🕐	9	Work with private sector app providers to incorporate more real-time information on accidents, construction, etc.	2	Private Sector, Managed Lanes Agencies, Regional Agencies	3	None
🕐	10	Integrate multimodal information whenever possible on freeway travel time signs, including transit and if possible parking availability at transit stations.	3	State	3	
🚌	11	Improve transit speeds and transit priority on El Camino Real or other parallel roadways, shifting short trips off the freeway.	3	State, Transit agencies, Cities, CMAs	1	Not directly, could increase ridership (and fare revenue)
🚌	12	Encourage employers to introduce parking fees and for those who don't park, a cash-out program that puts money into employees paycheck and/or extra vacation time program.	3	Employers, Cities, TMAs, Regional Agencies	2	Parking revenue
🚌	13	For employers and public transit agencies who operate and charge for parking, shift monthly permits/fees to daily rates.	3	Cities, TMAs, Employers, Transit Agencies	3	Revenue neutral
🚌	14	Create option for bulk transit pass program (e.g., Caltrain GoPass) eligibility to include contractors, consultants, interns and temporary employees that work more than 20 hours a week.	2	Transit agencies, Regional Agencies, Employers	3	Not directly, could increase ridership (and fare revenue)

🕐 **Goal 1: Reliability**   🚌 **Goal 2: High-Capacity Options**   💗 **Goal 3: Healthy & Sustainable Communities**

Goal	No.	Actions	Feasibility Assessment			
			Readiness	Potential Lead Implementors	Cost	Potential New Revenue
🚌	15	Expand eligibility for bulk transit pass programs to include TMAs, neighborhood associations, colleges.	3	Transit agencies	3	Not directly, could increase ridership (and fare revenue)
🚌	16	Introduce monthly transit pass accumulator on Clipper (automatically providing a monthly pass for rest of month when value of pass has been spent on individual rides).	2	Regional Agencies, Transit agencies	2	Could increase ridership but might result in fare revenue loss
🚌	17	Introduce means-based fare structures on all transit providers throughout study area, through regional programs such as MTC's Means Based Fare pilot.	2	Regional Agencies, Transit agencies	2	Could increase ridership but might result in fare revenue loss
🚌	18	Offer free or reduced price transportation for youth, or other promotional or marketing initiatives, where not offered now.	2	Transit agencies, Regional Agencies, Advocates, County Departments	1	None
🚌	19	Improve transfers/synchronization of multiple transit providers in MAP study area.	2	Transit agencies, Regional Agencies	2	Not directly, could increase ridership (and fare revenue)
🚌	20	Conduct comprehensive study of the public and private shuttle system to identify opportunities for coordination.	3	Transit Agencies, Regional Agencies, Cities, TMAs, Employers	3	None
🚌	21	Open private employer shuttles to all on-site employees regardless of classification.	3	Employers, TMAs	3	None
🚌	22	Explore opportunities for coordination/partnership on long-haul commute routes between employers, such as sharing/selling excess capacity on bus trips.	3	Regional Agencies, TMAs, Employers	3	None
🚌	23	Create perks for transit users at high traffic locations or special events, such as "cut the line" (TSA at SFO/SJC, security or concessions at Giants, Warriors, Sharks).	2	Regional Agencies, Transit Agencies, Cities, TMAs, Private Sector	2	Not directly, could increase ridership (and fare revenue)
🚌	24	Create one fare product for trips to high traffic locations (Caltrain + VTA pass for 49ers game, Caltrain + BART pass to SFO).	2	Transit agencies, Regional Agencies, Cities, Private Sector	2	Not directly, could increase ridership. Could results in revenue loss depending on sharing model.
🚌	25	Ensure employees of all classifications have access to non-surcharge BART fare at SFO.	3	Transit agencies, Regional Agencies, SFO	3	Not directly, could increase ridership (and fare revenue). Could result in revenue loss for BART.
🚌	26	Distribute hotel customers with transit vouchers (e.g., $20 Clipper card that must be returned) + free BART passes for return to airport.	2	Regional Agencies, Cities, Transit Agencies, Private Sector	1	Not directly, could increase ridership (and fare revenue)

🕐 **Goal 1: Reliability**   🚌 **Goal 2: High-Capacity Options**   ❤ **Goal 3: Healthy & Sustainable Communities**

Goal	No.	Actions	Feasibility Assessment			
			Readiness	Potential Lead Implementors	Cost	Potential New Revenue
🚌	27	Offer family / group discounted fares on weekends on transit.	3	Transit agencies	2	Not directly, could increase ridership. Might result in revenue loss.
🚌	28	Expand first mile/last mile transportation options such as bike/scooter/car share at key transit hubs on the Peninsula / in the South Bay.	2	Cities, Transit agencies	2	Permit fees
🚌	29	Implement a "transportation credit" program that would provide toll credit for regular transit users, transit credit for regular toll lane users.	2	Managed Lanes Agencies, Transit agencies, Regional agencies	1	Could be revenue neutral depending on funding agreement.
🚌	30	Incentivize the use of pay-as-you-go insurance plans for drivers.	3	Cities, Regional Agencies, TMAs, Employers	3	None
🚌	31	Subsidize ride-matching through real-time matching apps (Scoop or another similar platform).	3	CMA, Regional Agencies, Cities, TMAs, Employers	2	None
🚌	32	Create regional vanpool subsidy program with ridership tracking and improve vanpool ride-matching.	3	Regional Agencies, TMAs	1	None
🚌	33	Create regional or sub-regional carpool matching program for school-age children.	2	Regional Agencies, Cities, CMAs	2	None
🚌	34	Encourage employers to provide gas incentive for regular carpoolers.	3	Cities, TMA, Regional Agencies, Employers	2	None
🚌	35	Support regional policies to phase out free use of HOV/express lanes if solo driver in a hybrid or clean air vehicle, or charge a reduced toll.	3	Managed Lane agencies, State, Regional Agencies	3	Toll revenue
🚌	36	Decrease parking minimums/adopt parking maximums/allow for shared parking at multi-use development as part of city developer requirements.	2	Cities	3	None
🚌	37	Create regionally-consistent TDM developer requirements for specific land use types.	2	Regional Agencies, CMAs, Cities	3	None
🚌	38	Develop regional branding/marketing program for TMA/TDM programs.	2	Regional Agencies, TMAs	3	None
🚌	39	Develop a platform for developments to share current mode split, informing neighboring developments and encouraging a "friendly competition".	2	Advocates, Cities, TMA	2	None
🚌	40	Strengthen Bay Area Air Quality Management District (BAAQMD) employer TDM expectations for large employers (50+) by, for example:				
🚌	40a	o Enforcing the requirements and penalize employers not in compliance	2	Regional Agencies, Employers	2	Fees
🚌	40b	o Expand the potential mitigation options beyond pre-tax commuter costs, which is not shown to be very effective; instead, require larger companies to provide public transit passes or carpool subsidies to employees	2	Regional Agencies, Employers	1	None

Goal	No.	Actions	Feasibility Assessment			
			Readiness	Potential Lead Implementors	Cost	Potential New Revenue
	40d	o Creating an option for employers to formalize a policy and encourage employees to work from home or alternate work schedules	1	Regional Agencies, Employers	3	None
	41	Support small companies in funding and offering virtual meeting services software to facilitate remote work	3	Employers, Regional Agencies, CMAs	3	None
	42	Support the development of new and expanded TMAs across study area in high employment areas such as Oyster Point (SSF), Foster City, Redwood Shores (Redwood City), East Palo Alto, Mountain View, Sunnyvale.	3	Cities, Regional Agencies	3	Revenue neutral
	43	Enact trip caps for major employment centers (city-level).	2	Cities	2	Fees
	44	Assess needs for traffic calming measures in neighborhoods/downtowns with high volume of cut-through traffic.	3	Cities, State, Regional Agencies	3	None
	45	Price parking in downtown or high traffic areas with transit access and other modal options.	3	Cities	2	Parking revenue
	46	Support completion of Bay Trail bicycle facility north-south parallel to US-101.	3	Regional Agencies, Cities, State	3	None
	47	Prioritize transit-oriented development of both residential and office development in study area.	3	Cities, Regional Agencies	3	
	48	Conduct pedestrian/bicycle crossing needs assessment along entire US-101 corridor.	3	Managed Lanes agencies, CMAs, Regional Agencies	3	None
	49	Keep bicycle lanes clear of obstacles, including Uber/Lyft drop-offs, construction, and street-sweeping.	3	Cities	2	None
	50	Strengthen local TDM requirements to encourage/require bike programs and amenities in new and existing developments.	3	Cities, Advocates	3	None
	51	Bring bike share systems to the Peninsula and other locations in the study area.	2	Cities, CMAs, Regional Agenices	2	None
	52	Strengthen/fund Safe Routes to School programs in neighboring communities.	3	CMAs	2	None
	53	Adopt Local Road Safety Plans utilizing Vision Zero principles, goals and design guidance.	3	Cities, Counties	3	
	54	Transition public and private bus and shuttle fleets to zero emission vehicles.	3	Transit Agencies, TMAs, Employers	2	None

Goal 1: Reliability   **Goal 2: High-Capacity Options**   **Goal 3: Healthy & Sustainable Communities**

Goal	No.	Actions	Feasibility Assessment			
			Readiness	Potential Lead Implementors	Cost	Potential New Revenue
♥	55	Develop policies to reduce vehicle idling in areas near schools, youth activity areas, affordable housing, and other areas with high asthma or greenhouse gas emissions rates.	3	Cities, Counties	3	None
♥	56	Explore opportunities to provide high quality air filtration systems to residents and/or schools located in close proximity of US-101.	2	Cities, Counties	2	None
♥	57	Allocate investments and funding to communities with higher asthma and greenhouse gas emission rates for programs like San Mateo County Parks Rx, urban tree canopy and tree-planting programs.	3	Cities, Counties, Regional Agencies	3	None
♥	58	Support overall greening efforts related to infrastructure and construction materials and designs, such as the C/CAG Green Streets Pilot Program. Adopt plans and policies for green infrastructure planning at the city or county levels.	3	Cities, Counties	2	None
♥	59	Develop an incentive/rebate program for residents along the corridor to purchase E-bikes	3	Cities, Counties, TMAs, Employers	2	None

🕐 **Goal 1: Reliability**　　🚍 **Goal 2: High-Capacity Options**　　♥ **Goal 3: Healthy & Sustainable Communities**

APPENDIX F: ASSESSMENT METHODOLOGY

MEMORANDUM

To: 101-MAP Project Team

From: Nelson\Nygaard

Date: March 30, 2020

Subject: 101-MAP Actions Assessment Scoring Protocols

Introduction

Phase One of the 101-MAP identifies over 50 actions to address project goals through programs policies. To inform the future implementation of each action, the MAP team assessed the directness of each action's impact on each of 13 performance metrics associated with project goals.

Figure 1   Performance Metrics

Goal	Metric
Reliability: Offer reliable travel times for all people regardless of how they travel on US-101	▪ Consistency of average travel time at AM peak (+) ▪ Percentage of time Express Lanes operate at >45 mph (+) ▪ On-time performance (OTP) of transit using US-101 (+) ▪ Customer-perceived reliability of US-101 (+)
High-capacity options: Prioritize high-capacity mobility options for all, such as buses and carpools	▪ Person throughput in general purpose lanes on US-101 (+) ▪ Person throughput in Express Lanes on US-101 (+) ▪ Average vehicle occupancy on US-101 (+) ▪ Transit ridership on parallel corridors (such as El Camino Real, I-280, Potrero Ave, Bayshore Blvd, 3rd Street in SF) (+)
Healthy and sustainable communities: Foster healthy and sustainable communities near US-101	▪ Collisions, including bike and pedestrian, at highway access points (-) ▪ Biking mode share (+) ▪ Walking mode share (+) ▪ Rate of asthma attacks (-) ▪ Traffic density (-)

To inform the ultimate prioritization and implementation details of each action, the MAP team also identified several "readiness" factors for each action. These include:

- **Implementation readiness**
- **Cost factors**
- **Potential implementing entities**

Performance Scoring

Because many of the actions have not yet been tested on the US-101 corridor, the assessment process relies on research, case studies, example pilot programs in other locations, and professional judgement to estimate the impact of each action on the performance metrics. These estimates of likely impact are represented with a numerical score that can be compiled and summed for each goal, ranging from -1 to 3, according to the following score definitions:

Actions' Impact on Performance Metrics

- **DETRACTS (-1)** – Evidence to suggest this strategy may negatively impact the desired outcome for this metric
- **NEUTRAL (0)** – No known impact from this strategy on the outcome of the metric, or there is evidence to suggest this strategy has no impact
- **INDIRECT (1)** – Evidence to suggest this strategy has a measurably positive but secondary or peripheral impact on the outcome for this metric
- **DIRECT (3)** – Evidence to suggest this strategy has a measurably positive and primary impact on the outcome of this metric

Each action gets an extra point when survey responses indicate support for the idea. Each action can receive up to 10 total points in this framework.

To create an aggregate score of each action, performance metric have equal weighting within each goal, and each goal has equal weight to one another. For example, Goal 1 (Reliability) includes four performance metrics, each of which is weighted 25 percent toward the overall Goal score. For each strategy, scores are aggregated by goal and overall.

To score each of the 50+ actions according to their likely impacts on the 13 metrics, the project team developed scoring criteria for each metric. These are summarized below, grouped by goal, with a definition for each of the four possible number scores. The -1 score was not commonly assigned in the scoring process; as such, "N/A" is noted for metrics that did not receive any -1 scores.

Figure 2   Assessment Score Definitions

Goal	Score definition			
Metric	DETRACTS -1	NEUTRAL 0	INDIRECT 1	DIRECT 3
Reliability				
Consistency of average travel time at AM peak (+)	Makes average travel time less consistent (N/A)	Has no known or potential impact on average travel time	Supports high-occupancy transit modes that could shift vehicle trips off the freeway	Directly reduces unpredictability of peak travel

Goal	Score definition			
Metric	DETRACTS -1	NEUTRAL 0	INDIRECT 1	DIRECT 3
Percentage of time Express Lanes operate at >45 mph (+)	Makes Express Lane travel slower (N/A)	Has no known or potential impact on Express Lane operations	Supports high-occupancy transit modes that could shift vehicle trips off the freeway and reduce competition for Express Lane space	Directly expands continuity/improves operations of Express Lane network
On-time performance of transit using US-101 (+)	Makes Express Lane travel slower (N/A)	Has no known or potential impact on transit service operations	Supports transit operations on streets and highways	Directly addresses transit operations on streets and highways
Customer-perceived reliability of US-101 (+)	Creates a perception of additional traffic on US-101 (N/A)	Has no known or potential impact on perception of US-101 operations	Supports predictability of travel times	Visibly reduces elements that make travel time unpredictable Involves a high-profile program that has widespread applicability or eligibility
High-Capacity Options				
Person throughput in general purpose lanes on US-101 (+)	Induces additional single occupancy vehicle (SOV) trips (N/A)	Has no known or potential impact on mode choice or operational efficiencies on US-101	Increases convenience of carpool of 2+ passengers in general purpose lanes	Directly incentivizes carpool of 2+ passengers or directly increases operational efficiency
Person throughput in Express Lanes on US=101 (+)	Induces additional SOV trips (N/A)	Has no known or potential impact on mode choice on US-101	Potential ability to increase convenience of 3+ passenger carpool trips or transit use	Directly incentivizes carpool (3+ passengers) or transit use or directly increases operational efficiency of Express Lanes
Average vehicle occupancy on US-101 (+)	Induces additional SOV trips (N/A)	Has no known or potential impact on mode choice on US-101	Increases convenience of higher capacity modes	Financially incentivizes highest capacity modes

Goal	Score definition			
Metric	**DETRACTS** **-1**	**NEUTRAL** **0**	**INDIRECT** **1**	**DIRECT** **3**
Transit ridership on parallel corridors (+)	Disincentivizes transit use or reduces transit efficiency (N/A)	No known or potential ability to address attractiveness or efficiency of transit	Supports but does not directly affect transit use	Directly incentivizes more transit trips
Healthy and sustainable communities				
Collisions, including bicycle and pedestrian, at highway access points (-)	Increases vehicle speeds and traffic exposure (N/A)	No known or potential ability to impact traffic patterns or multimodal access on local street network	Increases awareness for safe driving at highway access points and local streets	Reduces speed and severity of traffic conflicts (impacting all modes) at highway access points and local streets
Biking mode share (+)	Disincentivizes bike trips (N/A)	No known or potential ability to address local street operations for people on bikes	Encourages or incentivizes bicycle use	Protects and enhances bicycle use and access
Walking mode share (+)	Incentivizes shift away from walk trips (NA)	No known or potential ability to address local street network for people walking	Encourages walking	Protects and enhances walking
Rate of asthma attacks (-)	Increases pollution from vehicle emissions by decreasing electric vehicle incentives or increasing SOVs	Has no known or potential impact on pollution levels from vehicle emissions	Encourages shift to high-occupancy modes, especially for regular commute trips that use US-101	Measurably reduces traffic density on local streets or vehicle emissions levels on highway or local streets

Goal	Score definition			
Metric	DETRACTS -1	NEUTRAL 0	INDIRECT 1	DIRECT 3
Traffic density (-)	Incentivizes dispersal of SOV trips across local street network	Has no known or potential ability to change traffic patterns on local street network	Encourages shift to high-occupancy modes primarily on US-101	Reduces vehicle volumes on local streets and incentivizes shift to high-occupancy modes in communities adjacent to the highway

Readiness Scoring

The MAP team also assessed each action's readiness for implementation by examining two main factors. The approach is summarized in Figure 3. The outcomes of this assessment are included in the MAP Scorecard.

Note that this readiness assessment does not include a judgment of political readiness. Each action's political readiness should be assessed by the lead implementing agency closer to the time of implementation as contextual variables can change quickly.

Figure 3   Readiness Scoring Protocol

	Low Score = 1	Moderate Score = 2	High Score = 3
Readiness How ready is this action for implementation? What external variables might impact its readiness?	▪ Action requires a regulatory or state-level legal change ▪ Action requires a technology that does not yet exist	▪ The implementing entity would need to be created ▪ Implementation would require new coordination between multiple existing entities ▪ The technology has been implemented elsewhere	"Shovel ready" ▪ No new technology or legislative changes required ▪ Action is ready to start in the next two years but for funding identification
Cost How easy will it be to identify funding for this action? Does the action highly rely on operational or capital funding?	▪ High cost (operating and capital)	▪ More capital or one-time costs than annual operating costs	▪ Only capital/one-time costs ▪ No operating costs

Identification of Potential Implementing Entities

Many of the 101-MAP actions identified in Phase One are inherently multidisciplinary and could require multiple implementing entities to start making impact. The process of identifying specific lead agencies for each action is outside the scope of Phase One of the project. As such, the

scorecard identifies potential leaders to be considered in Phase Two. These potential lead agencies include:

- Transit agencies
- Transportation Management Associations (TMAs)
- Managed Lanes agencies (includes the JPA, MTC, VTA, Alameda CTC, SFCTA)
- Regional agencies (includes MTC, BATA, ABAG, BAAQMD, Caltrans District 4)
- Employers
- Cities
- Advocates / community organizations
- Congestion Management Agencies (CMAs)
- County departments (e.g., County Office of Education)
- State agencies (e.g. Caltrans, state legislature, CARB, Coastal Commission)