City of Santa Clara
The Center of What's Possible

BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE

CITY HALL COUNCIL CHAMBERS
1500 Warburton Avenue
Santa Clara, CA 95050

AGENDA
Monday, August 27, 2018, 4:00 p.m.

1. Call to Order and Roll Call

2. Public Presentations (10 min)
   This portion of the meeting is reserved for persons to address the Bicycle and Pedestrian Advisory Committee on any matter not on the agenda. The law does not permit Bicycle and Pedestrian Advisory Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. Commissioners or the staff liaison may briefly respond to statements made or questions posed and may request staff to report back at a subsequent meeting. Please limit your remarks to 3 minutes per person.

3. Approval of Minutes from June 25, 2018 meeting (5 min)

4. Reports for Committee Information
   A. Santa Clara P.D. Update – (Officer Saunders - 5 min)
   B. Follow-up Items from Previous Meetings (Johnson - 5 min)
   C. VTA BPAC Update - None
   D. BPAC Subcommittee – Operations (Chair O'Neill - 5 min)
   E. 2018 Annual Work Plan (Johnson - 2 min)
   F. Grant Activity (Shariat - 2 min)
   G. Climate Action Plan (Davidson - 10 min)
   H. El Camino Real Specific Plan (Xavier - 30 min)
   I. SRTS Program Update (Johnson - 5 min)
   J. Bike Parking on Private Property (Johnson - 15 min)
   K. VTA Bus Stop (Shariat – 20 min)
   L. Bike Plan Goals, Vision, Objectives & Policies (Shariat - 20 min)

5. Reports for Committee Action
   A. 2019 & 2020 Street Maintenance List (Shariat – 30 min)

6. Agenda Items for Future Meetings (5 min)

7. Announcements (2 min)

8. Adjournment
   Next meeting: October 22, 2018, 4:00 p.m.
   (In compliance with the Americans with Disabilities Act (ADA), those requiring accommodations for this meeting should notify the City Clerk at (408) 615-2220 at least 24 hours prior to the meeting.)

City of Santa Clara
The Center of What's Possible

MINUTES OF THE BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE
City Hall Council Chambers
1500 Warburton Avenue
Santa Clara, CA 95050

DRAFT MEETING MINUTES
June 25, 2018

Committee Members Present:	Teresa O'Neill– Chair Thanh Do Thomas Granvold Diane Harrison Ken Kratz Jim Parissenti Rafael Rius Don Sterk
Not Present:	Craig Larsen
Staff:	Craig Mobeck (Director of Public Works) Carol Shariat (Principal Transportation Planner) Pratyush Bhatia (Senior Civil Engineer) Marshall Johnson (Associate Engineer)
Guests:	Jeff Knowles (Alta Planning and Design) Lola Torney (Alta Planning and Design) Clysta Seney Ben Pacho (SVBC) Eversley Forte Clay Votino Michael Hazelton Betsy Magas

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Matters for Council Action:

1. Approve member Rius's appointment to serve as the City's representative on the Santa Clara Valley Transportation Authority Bicycle and Pedestrian Advisory Committee.

2. Approve proposed Complete Streets Resolution and Complete Streets Policy

3. Approve proposed City Place Multimodal Plan

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4. **Call to Order/Roll Call**
   The meeting was called to order by Chair O'Neill at 4:11 p.m. A quorum was present.

5. **Public Presentations** - None

1. **Approval of March 26, 2018 Minutes**
   Member Parissenti motioned with a 2nd by member Granvold to approve March 26, 2018 meeting minutes with recommended changes. Members unanimously approved the motion.

2. **Reports for Committee Information**
   A. Santa Clara Police Department Update – None

   B. Follow-up Items from Previous Meetings – Mr. Johnson informed the Committee that staff has started filling out the current Bicycle Friendly Community City application which is due by August 9, 2018. The City's status as Bronze is set to expire this year. Members who are a part of the Bronze to Silver subcommittee were invited to assist in filling out the application. Member Harrison indicated that she had already submitted a list of responses to questions she had done research on.

   C. VTA BPAC Update – Member Granvold provided a summary for both the May and June VTA BPAC meetings. He informed the committee that 13 projects were submitted for Transportation Funds for Clean Air (TFCA) funding. Two Santa Clara projects are on VTA staff's recommended list. VTA staff also recommended programming $600,000 Transportation Development Act (TDA) Bicycle Expenditure Program (BEP) funds for the Santa Clara bike lane project on Lafayette Street from Agnew Road to Central Expressway. The VTA Board of Directors approved the latest County Bike Plan. Mountain View now has a dockless bike share program. The bicycle and pedestrian undercrossing at Santa Clara Caltrain Station received the "Project of the Year" award from the American Public Works Association (AWPA) and the California Transportation Foundation (CTF). Both Mountain View and Santa Clara are preparing Multimodal Improvement Plans (MIP). The Measure B Bicycle/Pedestrian Capital Projects Program draft is in its final stages. The Program will fund approximately $250 million over the next 30 years. Another possible funding source for bicycle facilities is Apple. They have indicated that they are willing to fund some projects if asked.

   D. BPAC Subcommittee/Operations - Chair O'Neill informed the Committee that there will be no further discussion by VTA regarding El Camino Real Bus Rapid Transit. However, VTA is looking at Stevens Creek Boulevard Transit Study. The Public Works Director said the City informed the Santa Clara Water District that the City is looking at whether or not there is a need for the Intel Bridge. Chair O'Neill led discussion concerning the planned repaving of El Camino Real. Members expressed interest in having bicycle lanes on El Camino Real. Member Granvold motioned with 2nd by member Rius to add this item to August meeting agenda so Committee members have an opportunity to recommending including bicycle lanes in the El Camino Real Specific Plan. Members unanimously approved the motion. Chair O'Niell noted that the El Camino Real Specific Plan is being presented to the public through a series of public workshops with the next one scheduled for this summer.

   E. 2018 Annual Work Plan – Mr. Johnson noted relevant modifications to the current Work Plan. Any new items added for future meetings would be listed on the work plan for future scheduling and not on the Agenda.

   F. Grant Activity – Mr. Johnson informed the Committee that the City was waiting for final approval for TFCA funding for two Santa Clara projects and for TDA funding for one Santa Clara project.

G. Driveway Cut Standard – Ms. Shariat a led discussion concerning City Standard ST-4 detail for the residential driveway with attached sidewalk. The detail calls for a lip transition between the driveway and the gutter surfaces that member Kratz felt created a tripping hazard for bicyclists and wheel chairs when approaching at an angle. Member Parissenti noted that the existing standard detail calls for a ½"-1" lip which was designed to prevent sediment buildup, but acknowledged that contractors did not always stay within these parameters when installing these facilities. Staff agreed to consider modifying the standard detail to remove the lip, but needed to first confer with our design division and other agencies that have done so in order to make sure that we are informed of any possible negative consequences. This item will be brought back once this has been researched further.

3. **Reports for Committee Action**

A. VTA BPAC Santa Clara Representative – Chair O'Neill led the process for nominating a Committee member to serve as the City's representative on VTA's BPAC. Member Granvold, who is the current representative, gave notice that he would not be available to serve another 2-year term. Member Rius indicated that he was interested in serving on the VTA BPAC. Member Kratz motioned with a 2nd by member Harrison to recommend to City Council that member Rius serve as the City's VTA BPAC representative. Members unanimously approved the motion.

B. Complete Streets Resolution – Mr. Johnson introduced the proposed Complete Streets Policy for the City to enact which would meet the VTA's requirements for the City to be eligible to receive Measure B funds. This policy was structured after MTC's model policy and guidelines. Member Kratz recommended modifications to the policy to give the BPAC greater oversight in the process of development review. Staff recommended keeping the policy closely aligned with the MTC model so as not to jeopardize any future Measure B funding for projects. Member Granvold wanted assurances that future developments would not remove or negatively impact existing non-motorized facilities. Chair O'Neill pointed out that the principal guiding document for developments is the City's General Plan and documents like the Bicycle Plan and the Pedestrian Plan. Member Parissenti motioned with a 2nd by member Sterk to recommend City Council approve the proposed Complete Streets Policy with a friendly amendment by member Granvold to enhance the Policy with assurances that future developments would not remove or negatively impact existing non-motorized facilities. A majority of Committee members (6 – 2) approved the motion with members Kratz and Harrison dissenting.

C. City Place Multimodal Plan – Mr. Bhatia presented the revised Action List of the City Place Multimodal Plan. This Plan includes $23.4M in improvements which includes $12.5M in bicycle and pedestrian access improvements and facilities. Changes to the list were made in response to comments from the BPAC at the March meeting and VTA committees. These changes included the installation of a separated bicycle facility along Stars & Stripes Drive through VTA's parking lot to Great America Train Station and to conduct a study of a grade separated pedestrian crossing over Tasman Drive at a location yet to be determined. Member Parissenti motioned with 2nd by Chair O'Neill to recommend that City Council approve the City Place Multimodal Plan. A majority of Committee members (7 – 1) approved the motion with member Kratz dissenting.

4. **Bike Plan Review** – Mr. Knowles from Alta Planning & Design gave a short presentation which recapped the goals and objectives discussed at the March 26, 2018 BPAC meeting, presented existing data trends, and summarized the community input received to date via the on-line survey mapping tool. This was followed by a break-out session for members to discuss destinations, barriers/crossings, network gaps, upgrades, and bike parking.

5. **Added Agenda Items for Future Meetings**
   None

6. **Announcements**
   None

7. **Adjournment:** 8:27 p.m.
   Next meeting date is August 27, 2018.

2018 BPAC Annual Work Plan

MEETING DATE	AGENDA ITEM/ISSUE
January	• Brown Act Training Discussion • Bay Trail Phase IV – Lafayette Street • P.D. Report on Bicycle and Pedestrian Collisions
March	• BPAC Meeting Time and Date • Discussion of TDA Funding Recommendations • Bike Plan Review • Bronze to Silver • City Place Multimodal Plan
June	• Driveway Cut Standard • Bike Plan Review • Complete Streets Policy • VTA BPAC Representative • City Place Multimodal Plan
August	• Climate Action Plan • Bike Plan Goals, Vision, Objectives, & Policies • El Camino Real Specific Plan • 2019 & 2020 Street Maintenance List • SRTS Program Update • Bike Parking on Private Property
October	• Bike Plan Review • Pedestrian Master Plan • Membership Voting • 2019 Master Work Plan • Discussion of TFCA Funding Recommendations

Additional items yet to be scheduled:

1. **STACT Enhancements (Kratz, 6/17)**
2. **Creek Trail Master Plan**
3. **STACT During Stadium Events (O'Neill)**
4. **Intel Bridge Follow-up (O'Neill)**
5. **Developer fee for Trails**
6. **Review detached sidewalk standard at bus stops (Kratz, 3/18)**
7. **Public Message board for BPAC web page (Kratz, 3/18)**
8. **15 mph school zones (Kratz, 3/18)**
9. **Bike Route/Lane designation signage**
10. **Bike Share (Granvold, 6/18)**

GRANT ACTIVITY

Grant	Purpose	Award Yr	Awarding Agency	Grant Type		Project	Project Summary	Grant Amount	City Match	Status
VERBS (CMAQ)	Education/Air Quality	2013	FHWA/VTA	Federal	Competitive	Santa Clara Non-Infrastructure SR2S Phase 2	Education Program at Santa Clara schools	$500,000	$65,000	Active
TDA (15/16)	Bicycle and Pedestrian	2015	State of California	State	Non-Competitive	Bike Plan Update 2018	Update City's Bicycle Plan	$75,000	$25,000	Active
TDA (15/16)	Bicycle and Pedestrian	2015	State of California	State	Non-Competitive	Tasman Drive Bike Lanes	Bicycle Lanes from Sunnyvale to San Jose	$298,012	$0	Active
TDA (17/18)	**Bicycle and Pedestrian**	**2018**	**State of California**	**State**	**BEP-Competitive**	**Lafayette Street Bike Lanes**	**Bicycle Lanes from Agnew Road to Central Expwy**	**$600,000**	**$0**	**Awaiting Award**
TFCA (15/16)	Transportation Air Quaility	2015	BAAQMD/VTA	Regional	Competitive	Tasman Drive Bike Lanes	Bicycle Lanes from Sunnyale to San Jose	$95,000	$471,000	Active
TFCA (16/17)	Transportation Air Quaility	2016	BAAQMD/VTA	Regional	Competitive	Lafayette Street Signal Timing Project	Coordination and Communications of traffic signals from El Camino Real to Newhall	$210,000	$540,000	Active
TFCA (16/17)	Transportation Air Quaility	2016	BAAQMD/VTA	Regional	Competitive	Bowers Signal Timing Project	Coordination and Communications of traffic signals from 101 to El Camino Real	$590,000	$260,000	Active
TFCA (16/17)	Transportation Air Quaility	2016	BAAQMD/VTA	Regional	Competitive	SRTS Pedestrian Infrastructure Improvements	Pedestrian and Bicycle infrastructure to schools	$290,000	$75,000	Active
TFCA (17/18)	Transportation Air Quaility	2017	BAAQMD/VTA	Regional	Competitive	Mission College Bike Lanes	Bicycle Lanes from Wildwood to Great America Parkway	$109,500	$265,500	Active
TFCA (17/18)	Transportation Air Quaility	2017	BAAQMD/VTA	Regional	Competitive	Agnew/De La Cruz Signal Timing Project	Coordination and Communications of traffic signals from Lafayette to Trimble	$220,000	$475,000	Active
TFCA (17/18)	Transportation Air Quaility	2017	BAAQMD/VTA	Regional	Competitive	Homestead Signal Timing Project	Coordination and Communications of traffic signals from Lafayette to San Tomas Expressway	$300,000	$300,000	Active
TFCA (17/18)	Transportation Air Quaility	2017	BAAQMD/VTA	Regional	Competitive	Lick Mill Signal Timing Project	Coordination and Communications of traffic signals from Tasman to Montague Expressway	$166,000	$314,000	Active
TFCA (18/19)	**Transportation Air Quaility**	**Pending**	**BAAQMD/VTA**	**Regional**	**Competitive**	**Scott Blvd Signal Timing Project**	**Coordination and Communications of traffic signals from Garrett Dr. to Central Expressway**	**$200,000**	**$510,000**	**Awaiting Award List**
TFCA (18/19)	**Transportation Air Quaility**	**Pending**	**BAAQMD/VTA**	**Regional**	**Competitive**	**Benton Street Bike Lanes**	**Bicycle Lanes from Monroe St. to EL Camino Real**	**$77,000**	**$73,000**	**Awaiting Award List**
VRF-RITSMS (15/16)	ITS	2016	VTA	Local	Competitive	Santa Clara Citywide VRF-ITS Project I	Various ITS elements Citywide	$500,000	$0	Active
VRF-RITSMS (15/16)	ITS	2016	VTA	Local	Competitive	Santa Clara Citywide VRF-ITS Project II	Various ITS elements Citywide	$500,000	$0	Active
VRF-RTOPS (15/16)	ITS Operations	2016	VTA	Local	Competitive	Citywide Communication Network Repair and Troubleshooting	Repair of traffic signal communications	$20,000	$0	Active
OBAG (STP)	Roadway Maintenance	2017	FHWA/MTC/VTA	Federal	Non-Competitive	Santa Clara Streets and Roads Preservation	Roadway Maintenance of Homestead (Lincoln to Kiely), Scott (Harrison to Saratoga) and Newhall (Saratoga to Winchester)	$2,356,000	$1,057,000	2019
OBAG (CMAQ)	Bicycle and Pedestrian	2017	FHWA/MTC/VTA	Federal	Competitive	Saratoga Creek Trail Phase 1	Creek Trail connecting Central Park to Homeridge Park	$3,735,200	$1,591,200	2020
OBAG (CMAQ)	Bicycle and Pedestrian	2017	FHWA/MTC/VTA	Federal	Competitive	Santa Clara School Access Improvements	Pedestrian and Bicycle infrastructure to schools	$1,145,500	$504,500	2020
OBAG (CMAQ)	Bicycle and Pedestrian	2017	FHWA/MTC/VTA	Federal	Competitive	Hetch-Hetchy Trail Phase 1	Trail on SFPUC Right of Way	$790,000	$460,000	2021
OBAG (CMAQ)	Bicycle and Pedestrian	2017	FHWA/MTC/VTA	Federal	Competitive	San Tomas Aquino Creek Trail Underpass	Grade seperation of San Tomas Aquino Creek Trail in front of Levi's Stadium	$2,449,000	$1,271,000	2022
CSTPG	Sustainable Communities	2018	State of California	State	Competitive	Pedestrian Master Plan	Develop the first City of Santa Clara Pedestrian Master Plan	$279,214	$54,536	Active
StreetSaver	Roadway Maintenance	2017	MTC	Regional	Competitive	Annual Pavement Management PCI Update	PCI Update			Active
Cal-Recycle Grant	Cal-Recycle	2017	State of California	State	Competitive	Annual Surface Treatment	Use rubberized AC in roadway resurfacing	$350,000	$0	Active
CPUC Section 130	Transportation	2017	State of California	State	Competitive	Agnew/UPRR Crossing Improvements	Roadway/Heavy Rail Safety Improvements	$573,750	$0	Active
Total:								**$16,429,176**	**$8,311,736**	
Future Grant Opportunities:										
TFCA (19/20)										

ATP - Active Transportation Program
BAAQMD - Bay Area Air Quality Management District
Caltrans - California Department of Transportation
CMAQ - Congestion Mitigation and Air Quality
CPUC - California Public Utilities Commission
CSTPG - Caltrans Sustainable Transportation Planning Grant
FHWA - Federal Highway Association
HSIP - Highway Safety Improvement Program
IDEA - Innovative Deployments to Enhance Arterials
ITS - Intelligent Transportation Systems
MTC - Metropolitan Transportation Commission
OBAG - One Bay Area Grant
SCTPG - Sustainable Communities Transportation Planning Grant
STP - Surface Transportation Program
TDA - Transportation Development Act
TFCA - Transportation Fund for Clean Air
VERBS - Vehicle Emissions Reductions Based at Schools
VRF-RITSMS - Vehicle Registration Fee Regional Intelligent Transportation Systems Maintenance Services
VRF-RTOPS - Vehicle Registration Fee Regional Traffic Operations Personnel Staff
VTA - Valley Transportation Authority

8/22/2018

City of Santa Clara
The Center of What's Possible

Memorandum
Item - 4G

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

From: John Davidson, Principal Planner, Community Development

Subject: Climate Action Plan

The City's 2013 Climate Action Plan (CAP) laid out a road map for reducing greenhouse gases (GHGs) through 19 actionable measures the City could implement to meet targets as required by California's Global Warming Solutions Act 2006 (Assembly Bill 32). Under Assembly Bill 32, a reduction of GHG emissions to 1990 levels (equivalent to 15 percent below 2008 levels) is required by the year 2020. For this presentation, staff will provide an overview of the 2013 CAP, the 2018 CAP Annual Report, and the current process for developing the CAP Update to meet the future 2030 goals. BPAC members will be given an opportunity to provide comments and ask questions at the end of the presentation.

Climate Action Plan 2018 Annual Report

July 2018

City of Santa Clara

The Center of What's Possible

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Introduction

Background

The City of Santa Clara has a long-standing commitment to creating a sustainable City for all community members. Under Assembly Bill 32 (AB 32), the City is required to reduce Greenhouse Gas (GHG) emissions 15% below 1990 levels by 2020. To fulfill this goal, the City prepared a 2008 Community GHG inventory; this 2008 inventory is considered to be equivalent to the amount of 1990 emissions, giving the City a baseline for 2020 reduction targets. The City prepared a 2010 Local Government Operations (LGO) Inventory to obtain a comprehensive overview of the amount of GHG emitted from the entire City.

With this baseline of GHG emissions, the City was able to create a plan to reduce GHG emissions and achieve a 15% reduction by 2020. The City's first Climate Action Plan (CAP) was adopted in December 2013. This Climate Action Plan identified 19 actionable measures to reduce GHG emissions 15% below 2008 baseline levels and three "reach measures" to reduce emissions 55% below baseline levels by the recommended target year of 2035.

A 2015 Community GHG Inventory was completed and the City produced its first Climate Action Plan Annual Report in 2016, which compared emissions from 2008 to 2015 as well as reporting the progress on the measures laid out in the 2013 CAP.

2018 CAP Annual Report

The 2013 CAP meets the criteria for a Qualified GHG Reduction Strategy, established by the California Environmental Quality Act (CEQA) Guidelines, which are supported by the Bay Area Air Quality Management District (BAAQMD). This status allows the City to use the CAP to streamline the environmental review process for new development if the proposed project demonstrates consistency with the CAP. The City must conduct regular and ongoing monitoring of CAP implementation to ensure that the CAP continues to be a Qualified GHG Reduction Strategy. CAP Implementation Program 1 (Monitor and report progress toward target achievement) requires the City to conduct annual monitoring activities to satisfy the Guidelines.

This report describes the new 2016 LGO and Community inventories and provides an update of the CAP measures between August 2016 and May 2018.

Key Terms

This report uses several key terms to explain CAP progress, including the following:

- **Greenhouse gas (GHG):** A gas capable of trapping heat inside the earth's atmosphere. These gases stop heat radiated out from the earth's surface and reflect it back, rather than allowing it to escape, not unlike the glass ceiling and walls of a greenhouse. Consistent with the US Community Protocol and the Local Government Operations Protocol (LGOP), the six GHGs assessed in Santa Clara's CAP are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). GHGs are often measured in units of carbon dioxide equivalent (CO2e), so that GHGs can be measured and analyzed for their cumulative impact.

- **Activity:** Any action that results in GHG emissions, directly or indirectly. Activity data is used to measure how much of an action (possibly GHG emitting) occurs in any given year, such as how much natural gas was used in 2015. The measurement unit of activity data varies depending on the activity (e.g., kilowatt hours for electricity use).

- **Baseline year:** The year against which future emissions changes are measured, for purposes of progress tracking and reduction target setting. Consistent with Assembly Bill (AB) 32, many communities in California use a baseline year between 2005 and 2008. Santa Clara's baseline year is 2008.

- **Carbon dioxide equivalent (CO2e):** A unit of measurement commonly used to measure GHGs, which accounts for the varying potency of different GHGs. GHGs in this report are shown in metric tons of carbon dioxide equivalent (MTCO2e).

- **Emission factor:** The amount of GHGs released for each unit of an activity (e.g., GHGs per unit of natural gas used). Factors are provided by utility companies, state agencies, and guidance documents.

- **Sector:** A category of activities responsible for GHG emissions, such as transportation, water use, or energy use. Sectors may comprise multiple GHG sources and activities, called subsectors.

GHG Emissions Summary

This section provides an overview of GHG emission monitoring methods, regulatory guidance, and assessment and comparison of GHG emissions in 2008 (the CAP's baseline year) to 2016.

GHG Emissions Monitoring Methods

City staff utilized Local Governments for Sustainability's (ICLEI) ClearPath GHG Inventory tool to quantify 2016 LGO and Community emissions in Santa Clara since 2008. The Local Government Operations Protocol and the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, which are national standards for GHG Inventories adopted by California Air Resources Board (ARB) in conjunction with ICLEI, were used as guiding documents to complete the 2016 GHG inventories. With the guidance of ICLEI, the GHG emissions were collected and calculated for both the LGO and Community inventories fulfilling CAP Implementation Program 2 (Update the baseline emissions inventory and Climate Action Plan every five years).

Regulatory Setting

AB 4420 was the first California law to address climate change, by directing the state to prepare a GHG inventory and study the impacts of climate change. Since the bill's passage in 1988, California has adopted several laws to assess climate change, analyze and reduce GHG emissions and their effects, and prepare for the impacts of a warming planet. Local governments are affected by these laws and regulations, although only some include specific requirements for specific jurisdictions.

Executive Order S-3-05

In 2005, then-Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05, declaring that California is vulnerable to the impacts of climate change through reductions in the Sierra Nevada snowpack (a major source of water for the state), reduced air quality, and rising sea levels. EO S-3-05 also sets the following GHG reduction goals for the state:

- Reduce emissions to 2000 levels by 2010
- Reduce emissions to 1990 levels by 2020
- Reduce emissions 80% below 1990 levels by 2050

The California Global Warming Solutions Act of 2006 (AB 32)

The California Global Warming Solutions Act of 2006, AB 32, codifies the goals set in EO S-3-05 and sets a target for the state to reduce its total GHG emissions to 1990 levels by 2020 through a series of market-based and regulatory mechanisms. These mechanisms are discussed in the AB 32 Scoping Plan, developed by the California Air Resources Board (CARB). The actions established in the Scoping Plan are included in Santa Clara's GHG inventory and provide additional credits for emissions reductions to help the City meet its targets. Actions in the Scoping Plan include producing 33% of the state's electricity from renewable sources by 2020, implementing clean car standards, and developing a cap-and-trade program for major stationary sources of GHGs. The Scoping Plan identifies local governments as strategic partners to achieve the statewide reduction goal and establishes a GHG emissions reduction of 15% below existing levels (generally interpreted as emission levels between 2005 and 2008) as being comparable to a return to 1990 levels, which helped inform the City's reduction target.

California Renewables Portfolio Standard

One of the most ambitious renewable energy standards in the country, the Renewables Portfolio Standard (RPS) mandates that 33% of electricity delivered by investor-owned utilities in California be generated by renewable sources like solar, wind, and geothermal by 2020. Senate Bill (SB) 1078 first codified the California RPS in 2002, requiring a 20% renewable electricity mix by 2010. SB X 1-2 further strengthened the RPS in April 2011, requiring a 33% renewable electricity mix by 2020. In 2015, SB 350 introduced a revision to the RPS that added an interim target of 50% of utility power coming from renewable energy sources by 2030, prior to Santa Clara's 2035 recommended reduction target. This enhances the ability of RPS to continue to help the City meet emission reduction targets in 2020 and 2035 by providing cleaner (therefore lower-emission) energy supply to all users.

Title 24, Energy Efficiency Standards

Title 24 of the California Code of Regulations is a statewide standard applied by local agencies through building permits. It includes requirements for the structural, plumbing, electrical, and mechanical systems of buildings and for fire and life safety, energy conservation, green design, and accessibility in and around buildings. Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code) include prescriptive and performance-based standards to reduce electricity and natural gas use in every new building constructed in California.

In 2015, the California Energy Commission and the California Public Utilities Commission released the New Residential Zero Net Energy Action Plan 2015–2020, which is supported by Title 24 Part 6. This plan establishes a roadmap for 2020, when Title 24 will support the development of all new residential homes to be zero net energy (ZNE), meaning they produce as much energy (through solar or other renewable sources) as they use. When this Action Plan is implemented, Santa Clara is expected to see a decrease in emissions from new buildings, led by guidance in the new Title 24 and ZNE Action Plan.

Community GHG Inventory

2008 Community GHG Inventory

The City conducted a 2008 Community GHG inventory to gather baseline data with activity data from that year. This data was used to determine actionable steps to reduce GHG emissions in the 2013 CAP.

Figure 1 below reflects the total emissions by sector for the year 2008. The Commercial and Industrial sector comprised 60% (1,110,100 $MTCO_2e$) of total emissions; Transportation and Mobile Sources comprised 30% (554,300 $MTCO_2e$) of total emissions in Santa Clara. Residential sources emitted 8% (153,200 $MTCO_2e$), Solid Waste emitted 1% (27,500 MTCO2e) and Water & Wastewater emitted 1% (9,200 $MTCO_2e$) of total emissions.

Figure 1. 2008 Community Baseline Emissions ($MTCO_2e$)

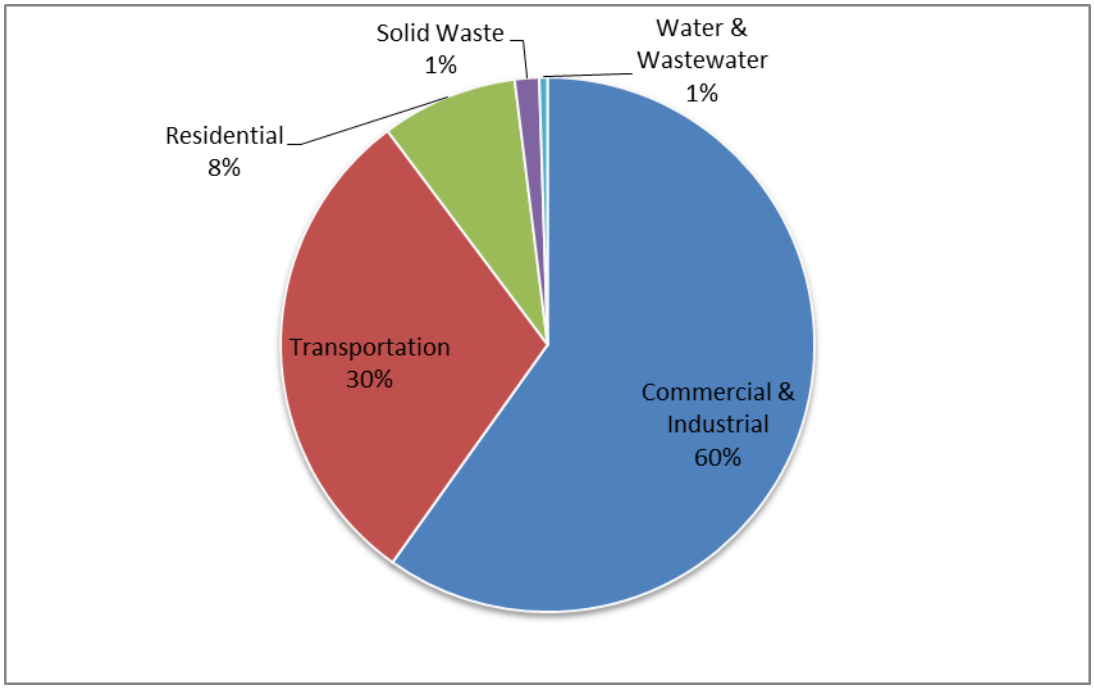


Table 1. 2008 Community GHG Inventory Emissions and Activity Data by Sector

Sector	Carbon dioxide emissions ($MTCO_2e$)	Activity Data
Commercial and Industrial Energy Use	1,110,100	2,597,934,040 KWh 57,176,860 therms
Transportation and Mobile Sources	554,300	3,190 daily VMT
Residential Energy Use	153,200	221,994,930 KWh 15,841,850 therms
Solid Waste	27,500	153,330 tons
Water and Wastewater	9,200	7390 MG
Total Emissions	1,854,300	

2016 Community GHG Inventory

City staff collected activity data to quantify GHG emissions for the year of 2016 and compare emissions to 2008 levels.

Figure 2 below reflects the total emissions by sector for the year 2016. The Commercial and Industrial sector comprised 61% (1,080,261MTCO$_2$e) of total emissions; Transportation and Mobile Sources comprised 29% (505,989 MTCO$_2$e) of total emissions in Santa Clara. Residential sources emitted 8% (132,912 MTCO$_2$e), Solid Waste emitted 1% (25,724 MTCO2e) and Water & Wastewater emitted 1% (24,292 MTCO$_2$e) of total emissions.

Figure 2. 2016 Community GHG Inventory Emissions (MTCO$_2$e)

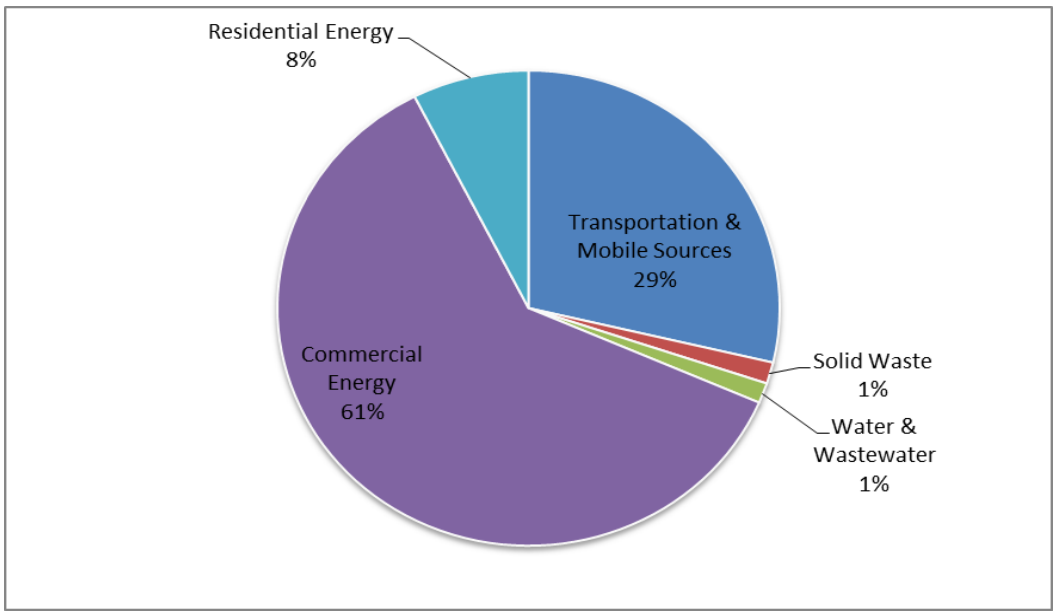


Table 2. 2016 Community GHG Inventory Emissions by Sector

Sector	Carbon dioxide emissions ($MTCO_2e$)	Activity Data
Commercial Energy	1,080,261	3,166,836,762 KWh 18,795,477 therms
Residential Energy	132,912	194,252,567.30 KWh 13,686,921 therms
Transportation & Mobile Sources	505,989	990,000,000 VMT
Solid Waste	25,724	168,237.08 tons
Water & Wastewater	24,292	29,138,000 KWh 383,340 therms
Total Emissions	1,769,178	

Changes from 2008 to 2016

Figure 3 and Table 3 below represent the changes in emissions in Santa Clara from 2008 to 2016. The Commercial and Industrial greenhouse gas emissions decreased by 3% (29,839 MTCO2e) even though energy use increased by 21%. Transportation and Mobile Sources decreased by 9% (48,311 $MTCO_2e$). Residential energy use decreased by 13% (20,288 $MTCO_2e$). Solid Waste decreased by 6% (1,776 MTCO2e).

Water and Wastewater appears to have increased by 62% (15,092 $MTCO_2e$). The City of Santa Clara sends its wastewater to the City of San Jose and City of Santa Clara Regional Wastewater Facility. Under Community protocols, energy use (electricity and natural gas) should be included in Community inventories. The reasons for the increase can either be the facility needed more energy to process water, the City of Santa Clara is discharging more water to the facility than before, or the facility was not included in the 2008 inventory.

Figure 3. Comparison of $MTCO_2e$ between 2008 and 2016.

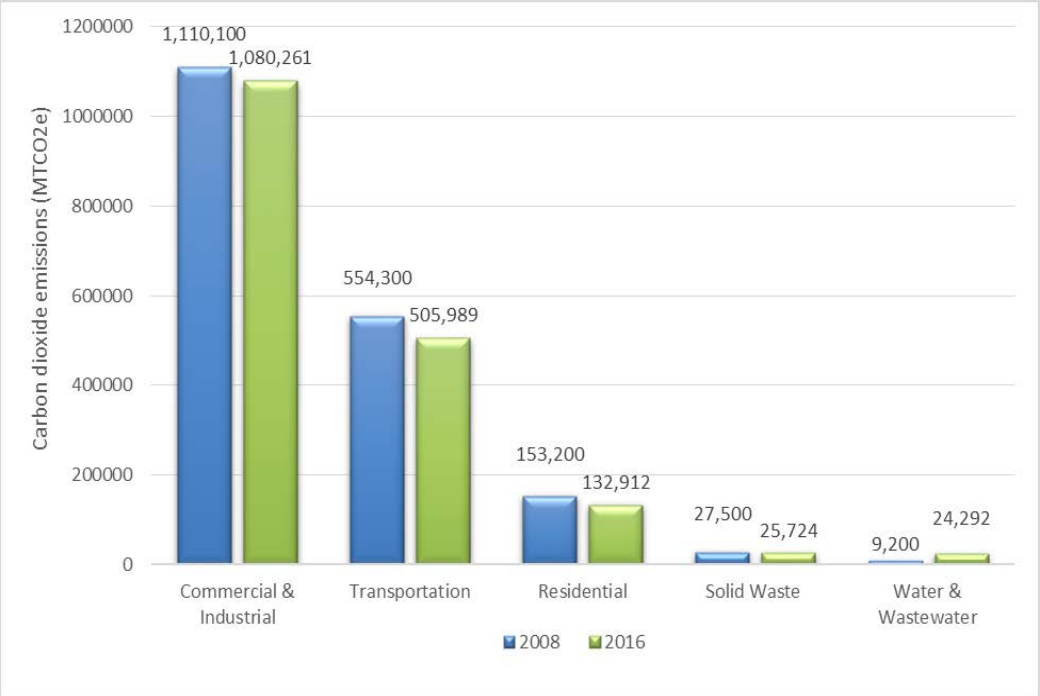


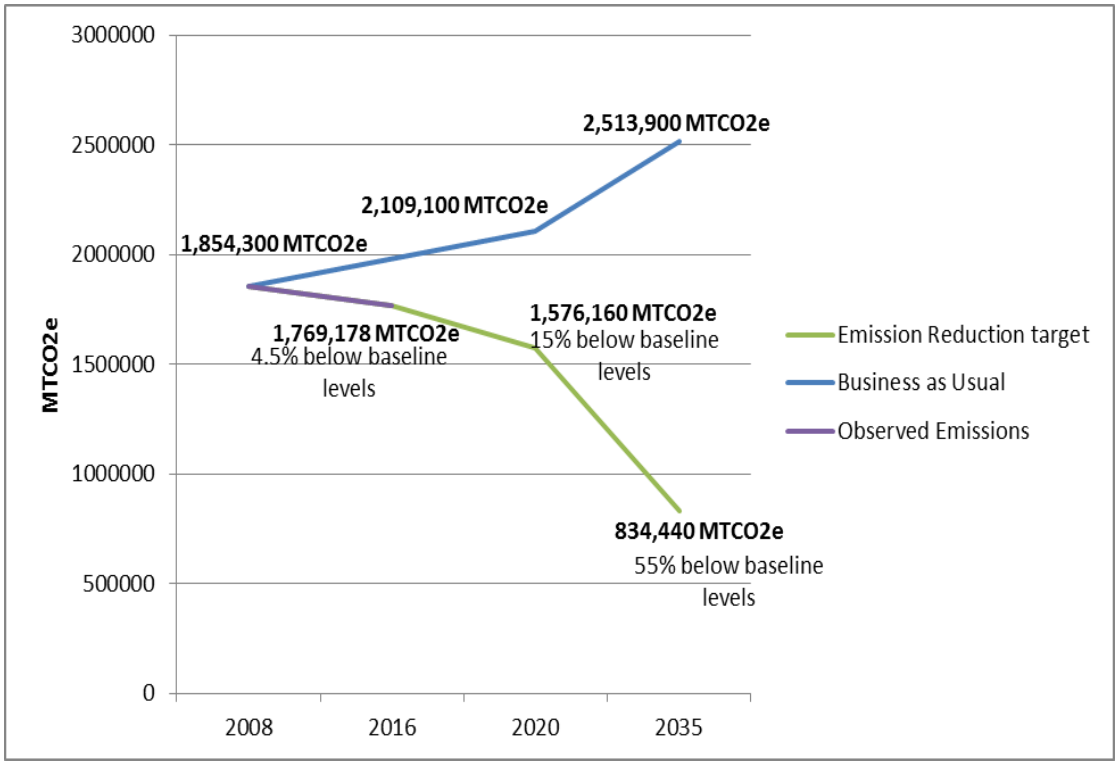
Table 3. Changes in $MTCO_2e$ between 2008 and 2016

Community Sectors	2008	2016
Commercial & Industrial	1,110,100	1,080,261
Transportation	554,300	505,989
Residential	153,200	132,912
Solid Waste	27,500	25,724
Water & Wastewater	9,200	24,292
Total Emissions	1,854,300	1,769,178

GHG Inventory Results

From the analysis of the above 2016 GHG Community Inventory, the total emissions from 2016 is **1,769,178 $MTCO_2e$.** The GHG emissions from 2008 were 1,854,300 $MTCO_2e$. In conclusion a reduction of 85,122 MTCO2e has been realized. This represents a 4.5% reduction of GHG emissions from the baseline. The City needs to reduce GHG emissions by 10.5% to reach 2020 goals. **Figure 4** below shows a trendline of emissions from 2008 to 2035, with the emissions from the 2016 GHG inventory and the amount of emissions that need to be reached by 2020 and 2035.

Figure 4. Observed and Projected Emissions from 2008 to 2035 ($MTCO_2e$)



2015 Estimated GHG Inventory

A 2015 GHG Inventory was conducted for the 2016 Climate Action Plan Annual Report. As this GHG Inventory was an estimate of 2015 emissions, it did not include activity data for every sector and used software to estimate emissions. The 2015 GHG Inventory also did not include natural gas usage from large commercial emitters for the 2015 year so data was used from 2013. Because these were estimates, the 2015 GHG Inventory was excluded from this report. With ICLEI's ClearPath tool, the City will be better able to collect and report GHG emissions moving forward.

2016 Local Government Operation Inventory

Figure 5, Figure 6 and Table 4 below reflect the total Local Government Operation emissions by sector for the year 2016. The City of Santa Clara has a municipally operated electric utility, Silicon Valley Power (SVP), thus the largest emitter for GHG emissions for the Local Government Operation is the electric power production sector, comprising 97% (517,247 $MTCO_2e$) of total municipal emissions. All other sectors make up the remaining 3%. The second largest emitter is the employee commute emitting 6,057 $MTCO_2e$. Municipal buildings and facilities emitted 4,984 $MTCO_2e$, the City's vehicle fleet emitted 2,804 $MTCO_2e$, solid waste emitted 1,715 $MTCO_2e$, water and wastewater transport emitted 1,639 $MTCO_2e$, and lastly; street lights and traffic signals emitted 859 $MTCO_2e$. The amount of electricity consumed at all three power plants amount to 42,461,000 KWh. During the year of 2016, the Gianera plant was not active due to compliance testing. The EPA recorded a total of 517,247 $MTCO_2e$ emitted from the Donald Von Raesfeld (DVR) and Co-gen power plants for the year 2016.

Figure 5. Local Government Operations $MTCO_2e$ percentage by Sector. Graph reflects the electric power production's large portion of emissions in comparison to the remaining sectors.

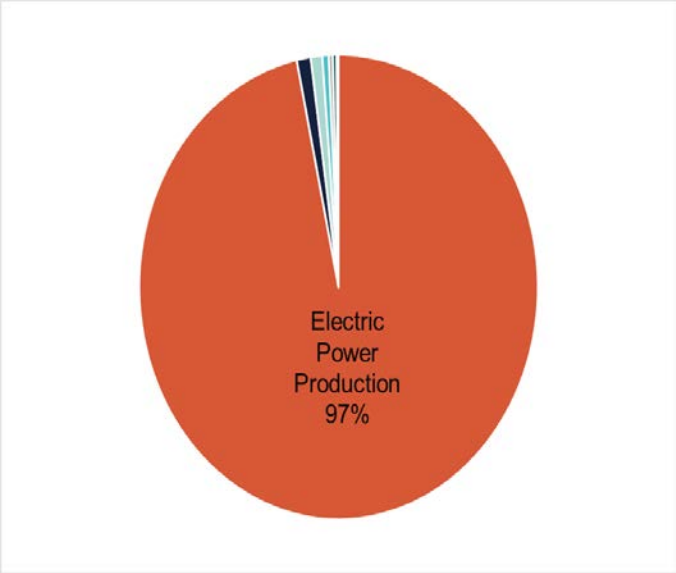


Figure 6. Local Government Operations $MTCO_2e$ percentage by Sector excluding electric power production. Graph reflects all sectors of a LGO inventory excluding electric power production.

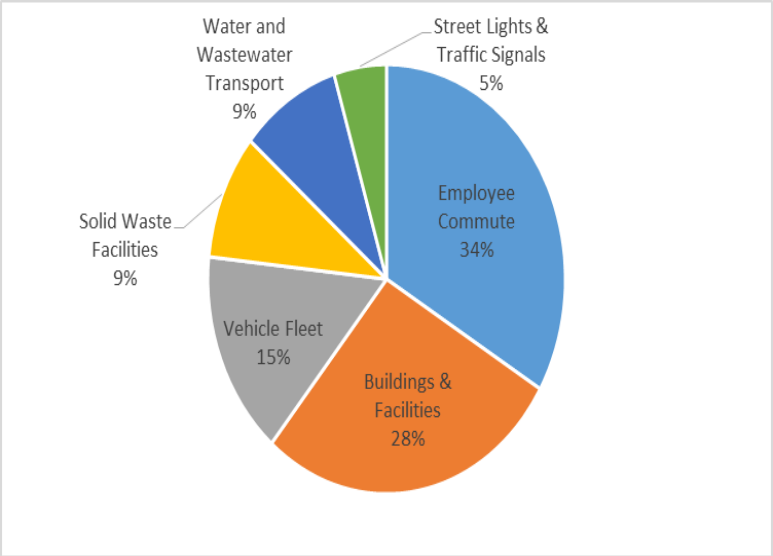


Table 4. Local Government Operations $MTCO_2e$ by Sector.

LGO Sector	Carbon dioxide emissions (MTCO2e)
Electric Power Production	517,247
Employee Commute	6,057
Buildings and Facilities	4, 984
Vehicle Fleet	2,804
Solid Waste	1,715
Water and Wastewater Transport	1,639
Streetlights and Traffic Signals	859
Total	535,305

Climate Action Plan (CAP) Actions to Date

The Climate Action Plan adopted in 2013, described 19 actionable measures the City could implement to reduce Greenhouse Gas (GHG) emissions and comply with AB 32. These measures were associated with performance metrics and the possible amount of metric tons of carbon dioxide emissions ($MTCO_2e$) to be reduced from the City's overall emissions. City staff from Community Development, Silicon Valley Power, Water & Sewer Utilities and Public Works Departments worked to accumulate updates for each measure.

The total $MTCO_2e$ reductions seen with the completion of seven of the nineteen measures was estimated to be approximately **430,000 $MTCO_2e$.** The GHG reductions resulting from the measures below will decrease the overall amount of GHG emissions for the City. These reductions, including the City's divestment from coal-fired power generation, will be quantified and shown in the next Greenhouse Gas Inventory for the calendar year 2018.

CAP Measure Updates

Focus Area 1: Coal Free and Large Renewables

1.1 Coal Free by 2020

Measure 1.1 directed the City to replace coal energy sources with natural gas to reduce the GHG emissions from Silicon Valley Power's (SVP) energy portfolio. From the year 2008 to 2015, SVP's coal use decreased from 24% to 9% of the energy mix. As of January 1st of 2018, SVP has completely divested from coal, eliminating the amount of coal in the City's energy mix. The City's energy mix now consists only of wind, solar, geothermal, hydroelectric, landfill gas and natural gas. The goal of this measure was reached before 2020, reducing approximately **388,800 $MTCO_2e$.** In the year 2016, SVP's carbon intensity amounted to 666 pounds of Carbon dioxide per Megawatt hour (CO_2/MWh); in 2017, that was reduced to 430 pounds of CO_2/MWh with the use of additional hydroelectric generation. With the elimination of coal from the energy mix, SVP's carbon intensity is forecasted at 380 pounds of CO_2/MWh for the year of 2018. Furthermore, as of January 1st, 2018, all residential customers now receive carbon-free energy. This was an essential step in the City's efforts to provide renewable energy and reduce its impact on the climate while continuing to supplying sufficient energy to all customers.

Figure 7. Comparison of Silicon Valley Power's (SVP) energy content. Comparison of energy content for the years 2008, 2013, 2016 and 2017.

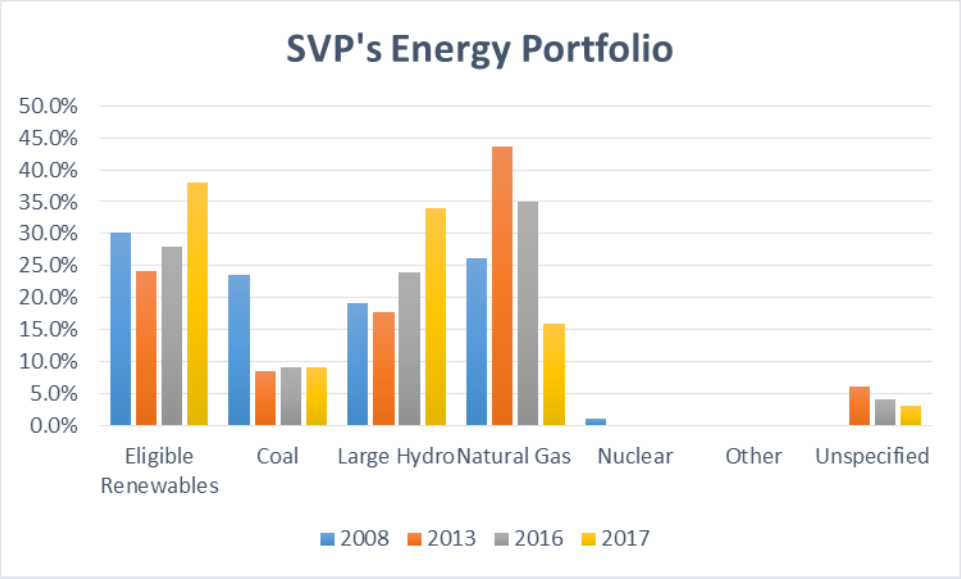
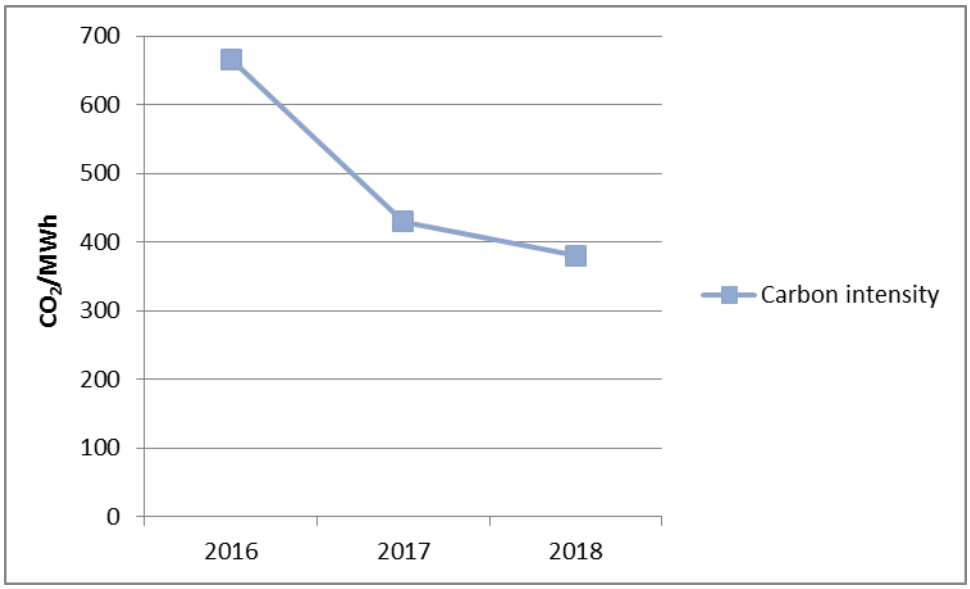


Figure 8. Silicon Valley Power's Carbon Intensity. Reduction of Carbon intensity from 2016, 2017 to 2018.



1.2 Renewable Energy Resources

Under Measure 1.2, the City aimed to investigate the usage of City owned properties outside of City limits to construct large-scale renewable energy projects. The 2016 CAP Annual Report reported for the development of a 20 Megawatt (MW) wind farm in the Altamont Pass area and a 20 MW solar installation in Kern County. Since 2016, SVP has been investigating other areas for

solar and are expected to expand in the future. The use of local renewable energy resources will increase the opportunity to further reduce GHG emissions in the City. Increased sources of renewable energy will enable the City to expand and provide more renewable energy and further reduce GHG emission.

1.3 Utility-Installed Renewables

For Measure 1.3, the 2013 CAP directed the City to develop 5 MW of utility-installed solar photovoltaics (PV) projects within the City limits. The 2016 CAP Annual Report recorded a total of 515 KW (0.515 MW) of solar programs that were implemented since 2013. This amounted to a GHG reduction estimate of **120 MTCO$_2$e**, which is equivalent to 419 pounds of coal burned or 939 miles driven by a passenger vehicle. The City has accomplished 10.3% of this goal and will continue efforts to install additional solar PV systems within City limits, including solar installations occurring within the next few years through the Neighborhood Solar Program.

Focus Area 2: Energy Efficiency Programs

2.1 Community Electricity Efficiency

Measure 2.1 required the City to achieve City-adopted energy efficiency targets which state a 5% reduction in community energy use by 2020. This was to be completed through incentives, pilot programs and rebate programs. Every year SVP reports energy efficiency savings to the Northern California Power Agency (NCPA) through these different programs. The 2016 CAP Annual Report stated 80% of this initial target was reached, by saving a total of 132,736 MWh of community energy. For the fiscal years 2015-2017, there was an additional reported total of 32,524 MWh community energy savings. These combined savings from 2008 to 2017 amount to 165,260 MWh of community energy savings, exceeding the original goal of 159,100 MWh. In total, these programs led to an emission reduction of approximately **28,700 MTCO$_2$e**.

2.2 Community Natural Gas Efficiency

Under Measure 2.2, the City was directed to work with community and social services to provide outreach and information on different Pacific Gas and Electric (PG&E) programs to encourage voluntary natural gas retrofits. The goal was to have 5% of multifamily homes, 7% of single-family homes, and 7% of nonresidential buildings to participate in these voluntary programs. Different programs PG&E offers includes the Solar Water Heating, Multifamily Cooling Optimizer Program, installing Excess Flow Valves, Automated Demand Response incentive, and other energy efficiency rebates. The City is aware of these different programs and will work towards conducting outreach.

2.3 Data Centers

Measure 2.3 in the 2013 CAP highlighted the large amount of energy use from the high number of data centers in the City, indicating that 28% of energy usage comes from data centers in Santa Clara. This measure required 10% of new data centers to utilize energy efficient practices. The 2016 CAP Annual Report mentioned new regulations under Title 24 that require the utilization of economizer technology-cooling technologies that use outside air to cool hardware and reduce energy usage-which make the operation of data centers more efficient and more cost effective. Since 2013, there have been 12 new data centers developed in the City of Santa Clara. Also as of 2013, Silicon Valley Power's baseline for data centers requires either waterside or airside economizer technology. This means 100% of new data centers since 2013 have utilized energy-efficient economizers, exceeding the goal of 10% of new data centers utilizing energy efficient technologies.

The City does however have data centers developed before 2013 that do not have these economizer technologies. In total, accounting for new and old data centers, 70% of data centers in the City have economizer technologies. Of these, approximately three have power usage effectiveness (PUE) rating of 1.2 or lower. This power usage effectiveness standard is a goal of Strategy 2.3 in the 2013 Climate Action Plan. These actions have amounted to approximately a **4,000 MTCO$_2$e** reduction.

2.4 Customer-Installed Solar

Under Measure 2.4, the City was directed to increase the amount of customer installed solar, generating a total of 6 MW of energy. This includes residential customers and non-residential business customers. SVP had a residential rebate program that allowed customers to efficiently install solar panels at an economically reasonable rate. The Planning Division also continues to ensure that solar panel installation permits are expedited for residential and non-residential areas. The 2016 CAP Annual Report noted the installation of 1.5 MW of residential solar panels and 10.5 MW of non-residential solar panels, exceeding the 2020 goal of 6 MW as well as the 2035 goal of 10 MW. The total 12 MW of installed solar has resulted in a 3,000 MTCO$_2$e reduction since 2008. From January 2017 to May 2018, there has been a total of 3.3 MW of commercial solar installed and 550 KW of single family residential solar installed, for a new total of 16.1 MW of solar This increase results in a GHG reduction estimate of **4,027 MTCO$_2$e** since 2008.

2.5 Municipal Energy Efficiency

Measure 2.5 directs the City to reduce municipal energy usage by 10% through energy retrofits previously proposed by a contracted energy auditor as well as upgrade equipment with energy efficient models. The City was to achieve this measure by replacing energy inefficient equipment in 50% of municipally owned buildings and facilities. Most City facilities are also equipped with energy efficient computers, printers and air-cooled air conditioning units; the City has also

purchased four electric vehicles (EVs) to add to its vehicle fleet. The City will continue efforts and investigate ways to participate in energy efficient programs.

2.6 Municipal Renewables

Measure 2.6 directed the City to install 1 MW of solar on City facilities to increase renewable energy usage. The City has begun the process of completing this measure; two City facilities have been selected to attain solar panels, the Northside Library and the Police Department building. These solar panels will be installed in the next few years. The City will continue to determine other City facilities that could install solar panels and reach the goal of 1MW solar installs.

Focus Area 3: Water Conservation

3.1 Urban Water Management Plan Targets

Measure 3.1 required the City to abide by the 2010 Urban Water Management Plan (UWMP) and comply with the Senate Bill 7 (SBx7-7) goal to save 1,362 acre-feet of water (443,000,000 gallons) by 2020. The 2016 CAP Annual Report noted the completion of this measure by saving 6,328 acre-feet (2,060,000,000 gallons) of water from 2008 through 2016. The completion of this measure led to a reduction estimate of **210 $MTCO_2e$**. Since the 2016 report, the City has adopted a 2015 UWMP which called for a progress update on the SBx7-7 goals of a 20% reduction by 2020 which the City accomplished in 2016. The City will be updating the UWMP in the near future and will be looking for methods to create water use efficiency standards. As of 2017, the amount of water used, expressed in Gallons per Capita per Day (GPCD), for the City of Santa Clara is 134 gallons.

Focus Area 4: Waste Reduction

4.1 Food Waste Collection

Measure 4.1 encourages the City to increase food waste and composting services to 25% of restaurants to recycle food scraps diverting them from the landfill. This measure was put in place to ensure compliance with Assembly Bill 1826 (AB 1826), which requires commercial businesses to recycle organic waste by 2021. In 2016, the City of Santa Clara's pilot program for commercial businesses had five businesses participating. As of May 2018, there are 131 businesses recycling food scraps with approximately 30 of those businesses being participating restaurants. The City will continue efforts to fulfill AB 1826 requirements; in addition, the City has adopted a Mandatory Organic Waste Recycling ordinance that reiterates AB 1826 requirements and the showcases the City's determination to comply. The City has further increased efforts to divert food waste from landfills by piloting a residential food scraps recycling program in order to fulfill Senate Bill 1383 (SB 1383) with specific reductions for different types of organic waste.

4.2 Increased Waste Diversion

Measure 4.2 directed the City to work with regional partners and increase landfill diversion rates from 58% to 80% by 2020. As of 2017, the City's diversion rate is 59% by population and 60% by Employment. With the Pilot Residential Food Scrap Recycling Program and the Mandatory Organics Recycling of Commercial food scraps, both backed by State laws Senate Bill 1383 (SB 1383) and Assembly Bill 1826 (AB 1826) respectively, Santa Clara is required to divert organics 50% by 2020 and 75% by 2025 from the landfill. Working with regional partners, the City is also ramping up efforts to implement a new program called "A la Carte" which is a food recovery program for Santa Clara County. This food recovery program will pick up excess food from designated stops and distribute food to those in need. The City has also increased outreach for recycling as well as greenwaste disposal, and will continue to aim for an overall diversion rate of 80% by 2020.

Focus Area 5: Off-Road Equipment

5.1 Lawn and Garden Equipment

Under Measure 5.1 the City aimed to encourage community fuel switching of diesel powered lawn and garden equipment to electric equipment. The plan had a goal of 1,170 leaf blowers and 130 lawn mowers being switched to electric equipment by 2020. The CAP directed the City to work with BAAQMD and its Lawn Mower Exchange Program; as of 2016, three residents used the program and successfully fuel switched, but the program is no longer operational due to limited interest. The City will explore alternative strategies for off-road equipment as part of the Climate Action Plan update, possibly working with regional partners on this effort.

5.2 Alternative Construction Fuels

Measure 5.2 required construction equipment for development projects to comply with BAAQMD best management practices. This measure specifically called for construction vehicle fuel switching from conventional technologies to alternative fuels such as hybrid, electricity, biodiesel, or compressed natural gas (CNG). The use of alternative fuel in construction vehicles improves the overall air quality for the community, while additionally reducing the amount of GHGs released during the construction of new development. Stated in the 2016 CAP Annual Report, 12% of construction projects used alternative-fueled vehicles as of July 2016 reducing GHG emissions by approximately **2,440 MTCO$_2$e**. All development approvals have requirements in their environmental documents to use BAAQMD best management practices, which includes the encouragement of fuel switching to alternative fuels. The City can make further progress on this measure by adding the use of alternative fuels in construction vehicles to the conditions of approval for new development permits and updating project monitoring software to account for the type of fuel used for construction vehicles at each development site. The City conducts pre-construction meetings to review developments' plans prior to

construction; to further the progress of this measure; the City can open these meetings to include building and planning staff to ensure completion of CAP measures.

Focus Area 6: Transportation and Land Use

6.1 Transportation Demand Management Program

Measure 6.1 directed the City to require developments in transportation districts, noted in Table 1 below, to adopt and implement their own Transportation Demand Management (TDM) Plan. Under this measure, developments were required to achieve a minimum of 5% to 10% reductions in Vehicle Miles Travelled (VMT) resulting from TDM Plans contributing to an overall 1% reduction in VMT citywide. Since the CAP's adoption, 26 new developments have been required to have a TDM Plan, and from those, three have been constructed and one has implemented a TDM plan. The TDM plan from this development describes adding bike facilities, a fitness center, ridesharing and car-matching programs, and incentives for VTA ECO Passes. The developments are required to create annual reports on their TDM plans to provide information to calculate overall VMT reduction. The City has not received an annual report regarding the one TDM program developed, but looks forward to receiving and analyzing it in the near future. The City will continue to require TDM Plans in their conditions of approval for all new developments in transportation districts as well as monitor developments' annual report submissions.

Table 5. Transportation Districts. Transportation districts determine the minimum amount of VMT reduction and VMT reduction from TDM plans required for developments in each General Plan land use designation.

	General Plan Land Use Designation							
	Medium-Density Residential	High-Density Residential	Regional Commercial	Neighborhood Mixed Use	Community Mixed Use	Regional Mixed Use	Low Intensity Office/R&D	High Intensity Office/R&D
Average trip generation rate [1, 2]	6	7	8	8	8	8	11	7
Transportation Districts	**Minimum % VMT reduction per project [3, 4, 5] (Minimum % VMT reduction per project from TDM) [6, 7]**							
1 - North of Caltrain	15% (5%)	20% (10%)					25% (10%)	20% (10%)
2 - Downtown					20% (10%)			
3 - El Camino Real Corridor		15% (5%)			20% (10%)	20% (10%)		
4 - Stevens Creek Blvd			5% (n/a)		15% (5%)			

Notes:

1. *Average trip generation rates represent the number of daily trips per housing unit (for residential projects) or per 1,000 square feet (for nonresidential projects).*
2. *For commercial and mixed-use designations, average trip generation rates describe employee and resident trips rather than retail visitor trips.*
3. *Highlighted cells indicate that the General Plan land use designation is present in the transportation district.*
4. *The VMT reductions for each land use in each district exceed the total cumulative VMT reductions anticipated for each district in Appendix B, as projects consisting of less than or equal to 25 dwelling units or 10,000 nonresidential square feet would typically be considered exempt.*
5. *All projects subject to minimum vehicle miles traveled reduction requirements are subject to annual reporting requirements.*
6. *Staff retains discretion to require a TDM program as a condition of approval for discretionary projects not located in one of the four identified districts.*
7. *TDM reductions are expressed as minimum requirements. However, staff retains discretion to require greater levels of TDM as a condition of approval for discretionary projects.*

Sources:

City of Santa Clara General Plan. 2010. http://santaclaraca.gov/ftp/csc/pdf/general-plan/SantaClara_Ch8-6_1-3-11_Final.pdf
Fehr & Peers. 2013. VMT+ Tool http://www.fehrandpeers.com/vmt/

6.2 Municipal Transportation Demand Management

Under Measure 6.2, the 2013 CAP required the City to create a Transportation Demand Management (TDM) program for City employees to utilize. A TDM program would not only reduce City generated single occupancy vehicle use (SOV) and VMT but would also act as an example for other developments in the City to create and maintain programs. A TDM program would help reduce the amount of VMT taken by City employees on a daily basis. The City has taken steps to start a program by collecting and analyzing baseline data regarding employee commutes. The collected information expressed that 85% of employees drive alone to work resulting in approximately 102 $MTCO_2$ emissions from City employee commutes. The City has also collected information regarding different departments' employee work schedule and has begun compiling possible TDM actions to reduce VMT. Now that the City has collected baseline data for the City employee commute patterns, a TDM program for the City can be expected in the near future.

6.3 Electric Vehicle Parking

Measure 6.3 advised the City to increase the number of electric vehicle (EV) parking spaces in the City to 430 new spots in commercial, industrial and multi-family residential zones. From 2008 to 2016, 376 EV charging stations were installed, 64 of which were located at City facilities. Since then, 79 more charging stations have been installed, amounting to a total of 455 charging stations installed in public spaces leading to approximately **1,480 MTCO$_2$e reduction.** The City is also planning to update the Santa Clara Municipal Code to require new nonresidential and residential developments to include EV chargers.

Focus Area 7: Urban Heat Island Effect

7.1 Urban Forestry

Measure 7.1 directed to City to plant a total of 2,500 trees, requiring new developments to plant a minimum of two shade trees on the site. The City created a mandatory 2:1 replacement rule for developments, requiring two trees to be planted for every one tree removed during new construction. The 2016 CAP Annual Report noted 3,792 trees planned in new developments since 2013, accomplishing the goal of 2,500 trees. The planting of these trees resulted in approximately **110 MTCO$_2$e reduction**. The City will continue to uphold the mandatory 2:1 replacement rule.

7.2 Urban Cooling

Measure 7.2 required new parking lots and spaces to utilize light-colored (low-albedo) or permeable materials to combat the urban heat island effect. Combating the heat island effect by paving surfaces with low-albedo materials will allow heat and radiation from the sun to reflect off the surface and back into the atmosphere rather than being caught in darker-colored pavements and heating up the surface. This effect can often lead to increased energy usage for AC units in buildings to mitigate the warmer surrounding temperatures. The City should consider drafting language for this measure to include in developments' conditions of approval.

Recommendations

- The City should staff a Sustainability Committee to track and monitor Climate Action Plan measures and conduct Greenhouse Gas inventories.
- The City needs to update the Greenhouse Gas Inventory every year, starting with calendar year 2018. This needs to include both an LGO inventory and a Community inventory. Starting with the 2018 calendar year will reflect SVP's divestment from coal and all other $MTCO_2e$ reductions.
- For each subsequent GHG Inventory, ensure that the same methodology and data source are used repeatedly to get the best comparison over the years.
- For the next Climate Action Plan, each department should be included in the planning process and should have a monitoring method in place or should create a monitoring method for each measure they are responsible for before the CAP is adopted.

Appendix A

Table 5. Emission Factors for 2016 GHG Inventory.

Sector/Activity	CO2	CH4	N2O	Unit
Silicon Valley Power Electricity Carbon Intensity	666 (lbs/MWh)	129 (lbs/GWh)	44.4 (lbs/GWh)	N/A
Residential natural gas	53.02	0.005	1×10^{-4}	(Kg/MMBtu)
Commercial natural gas	53.02	0.005	1×10^{-4}	(Kg/MMBtu)
Diesel Commercial Transportation	1309.2	0.0051	0.0048	G/mile
Gas Commercial Transportation	737.1	0.0333	0.0134	G/mile
Diesel Passenger Transportation	427.6	0.005	0.001	G/mile
Gas Passenger Transportation	357.4	0.0187	0.011	G/mile
Diesel Bus Transportation	2118.7	0.001	0.0015	G/mile
Gas Bus Transportation	1308.5	0.0201	0.017	G/mile

Appendix B

Table 6. Emissions Summary Table. Table explaining CO_2 emissions, included and excluded data, and Global Protocol for Community GHG inventory reference numbers for the 2016 Community GHG Inventory.

Inventory Record	Calculator	Scope	GPC Ref Number	CO2 (MT)	CO2e (MT)	Notation Keys*
Residential Energy						
Residential Energy-SVP fact sheet	Emissions from Grid Electricity	Scope 2	I.1.2	67,685	69,357	IE
Residential Electricity Use 2016	Emissions from Grid Electricity	Scope 2	I.1.2	58,682	60,132	Included
Residential Therm Usage 2016	Emissions from Stationary Fuel Combustion	Scope 1	I.1.1	72,568	72,780	Included
Transportation and Mobile Sources						
Gas Construction Off-road equipment	Emissions from Off Road Vehicles	Scope 1	I.3.1	5,827	5,879	Included
Gas Agricultural Off-road equipment	Emissions from Off Road Vehicles	Scope 1	I.5.1	1,230	1,243	Included
Diesel Agricultural Off-road equipment	Emissions from Off Road Vehicles	Scope 1	I.5.1	1,495	1,512	Included
Diesel Construction Off-road equipment	Emissions from Off Road Vehicles	Scope 1	I.3.1	1,547	1,561	Included
Diesel Commercial Transportation	On Road Transportation	Scope 1	II.1.1	108,717	108,847	Included
SC bus-gasoline transportation	On Road Transportation	Scope 1	II.1.1	31,551	31,685	IE
Gas Commercial Transportation	On Road Transportation	Scope 1	II.1.1	32,112	32,322	Included

Diesel Passenger Transportation	On Road Transportation	Scope 1	II.1.1	2,588	2,590	Included
SC bus-diesel transportation	On Road Transportation	Scope 1	II.1.1	51,087	51,098	Included
Gas Passenger Transportation	On Road Transportation	Scope 1	II.1.1	297,817	300,938	Included
Caltrain-gas 2017	Rail Transportation	Scope 3	II.2.3	0	0	NE
Caltrain-diesel 2017	Rail Transportation	Scope 3	II.2.3	2,068	2,087	Included
Commercial Energy Use						
Commercial and Industrial electricity usage	Emissions from Grid Electricity	Scope 2	I.2.2	956,679	980,317	Included
Commercial and Industrial Natural Gas Usage	Emissions from Stationary Fuel Combustion	Scope 1	I.2.1	99,654	99,945	Included
Solid Waste Facilities						
Santa Clara Waste Generation 2016	Waste Generation	Scope 3	III.1.2		25,724	Included
Water and Wastewater						
CSJ/CSC RWF methanol	CO2 Emissions from the Use of Fossil Fuel Derived Methanol	Scope 3	III.4.2	0	0	NE
RWF energy use	Emissions from Wastewater Treatment Energy Use	Scope 3	VI.1	24,206	24,292	Included
CSJ/CSC RWF combustion of digester gas	Emissions from the Combustion of Digester Gas	Scope 3	I.3.1		155	NE
CSJ/CSC RWF BOD5	Fugitive Emissions from Septic Systems	Scope 1	III.4.1		150,275	NE
CSJ/CSC RWF	Nitrification/Denitrification Process N2O Emissions	Scope	III.4.2		3,534	NE

nitrification/denitrification	from Wastewater Treatment	3				
CSJ/CSC RWF BOD5 and removed BOD5	Process Emissions from Wastewater Treatment Lagoons	Scope 3	III.4.2		203,281	NE
CSJ/CSC RWF N2O effluent	Process N2O from Effluent Discharge to Rivers and Estuaries	Scope 3	III.4.2		4,699	NE
Industrial Energy						
Industrial Energy	Emissions from Grid Electricity	Scope 2	I.3.2	0	0	IE

*IE = Included elsewhere and NE = Not estimated (not included in this inventory)

2016 Community GHG Inventory

The population data used for this inventory was as follows:

- Population: 122,725
- Households: 45,903

City of Santa Clara
The Center of What's Possible

Memorandum
Item – 4H

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

From: Lesley Xavier, Principal Planner, Community Development

Subject: El Camino Real Specific Plan

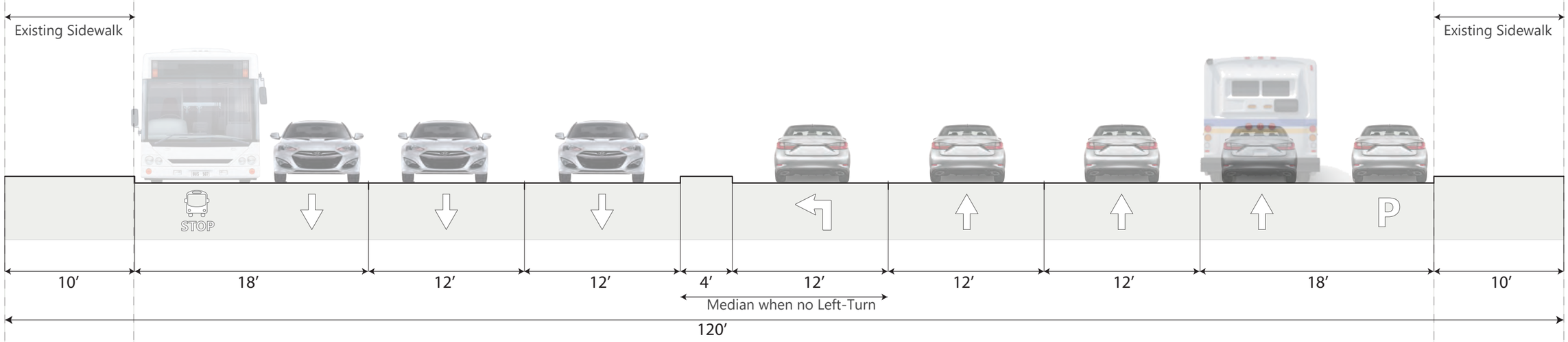
The El Camino Real is the City's most visible and identifiable commercial corridor. The City's 2015-2023 General Plan vision for El Camino Real is to transform the Focus Area from a series of automobile-oriented strip malls to a tree-lined, pedestrian and transit-oriented corridor with a mix of residential and retail uses.

To encourage the transformation of land uses along El Camino Real to become a multi-modal transportation facility, the City of Santa Clara, with support from the Santa Clara Valley Transportation Authority (VTA), has been provided grant funding to develop a Specific Plan and Environmental Impact Report for El Camino Real within the City of Santa Clara. The Specific Plan will build on: the Grand Boulevard Initiative - a regional, multi-jurisdictional effort to transform El Camino into a multi-modal corridor, VTA's high capacity transit (522 Limited Stop Service) and bicycle and pedestrian infrastructure to the corridor, and the City's 2015-2023 General Plan Vision.

The City has been working with Raimi and Associates on a draft Specific Plan for the area. As a part of the planning process the City staff and the consultant have been working to engage citizens and stakeholders through outreach engagement activities. Thus far, we have held two workshops, three pop-up events, and an online survey. From this outreach and combined with the City's General Plan, and the Grand Boulevard Initiative, the consultant has developed land uses and transportation alternatives for the El Camino Real. From these alternatives, one alternative or a hybrid of them will be chose to develop the Plan around.

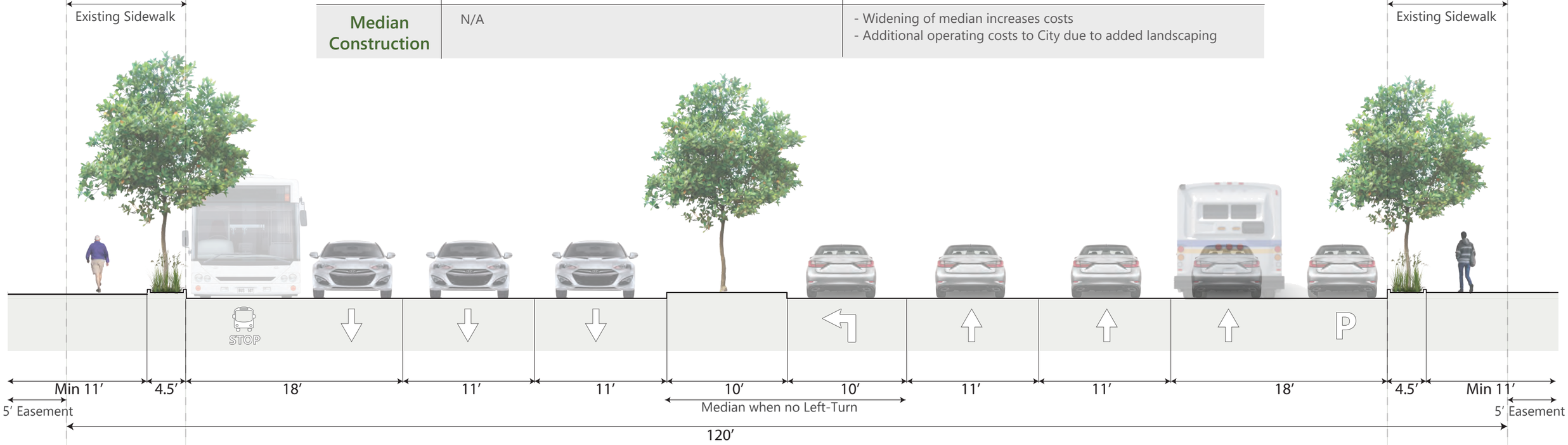
The BPAC members will be asked for their feedback on the three alternatives that facilitate installation of bicycle facilities, wider pedestrian sidewalks with landscape buffer or wider landscape median.

Modal Considerations	Pros	Cons
Vehicle	- Vehicles have capacity - No delay to vehicles related to transit stops	N/A
Parking	- On-street parking available, including TNC drop-off/pick-up - Access to commercial businesses	N/A
Transit	N/A	- Buses pull in and out of traffic, which adds delay to transit operations - Transit shares stops at on-street parking
Bike	N/A	- No dedicated bicycle facilities / Shares travel way with vehicles - Conflicts between bikes and vehicles at driveways and right-turn at intersections
Pedestrian	- Adequate sidewalk width	- No landscape buffer between pedestrian and travel way
ROW	- No added ROW needed	N/A
Median Construction	N/A	N/A



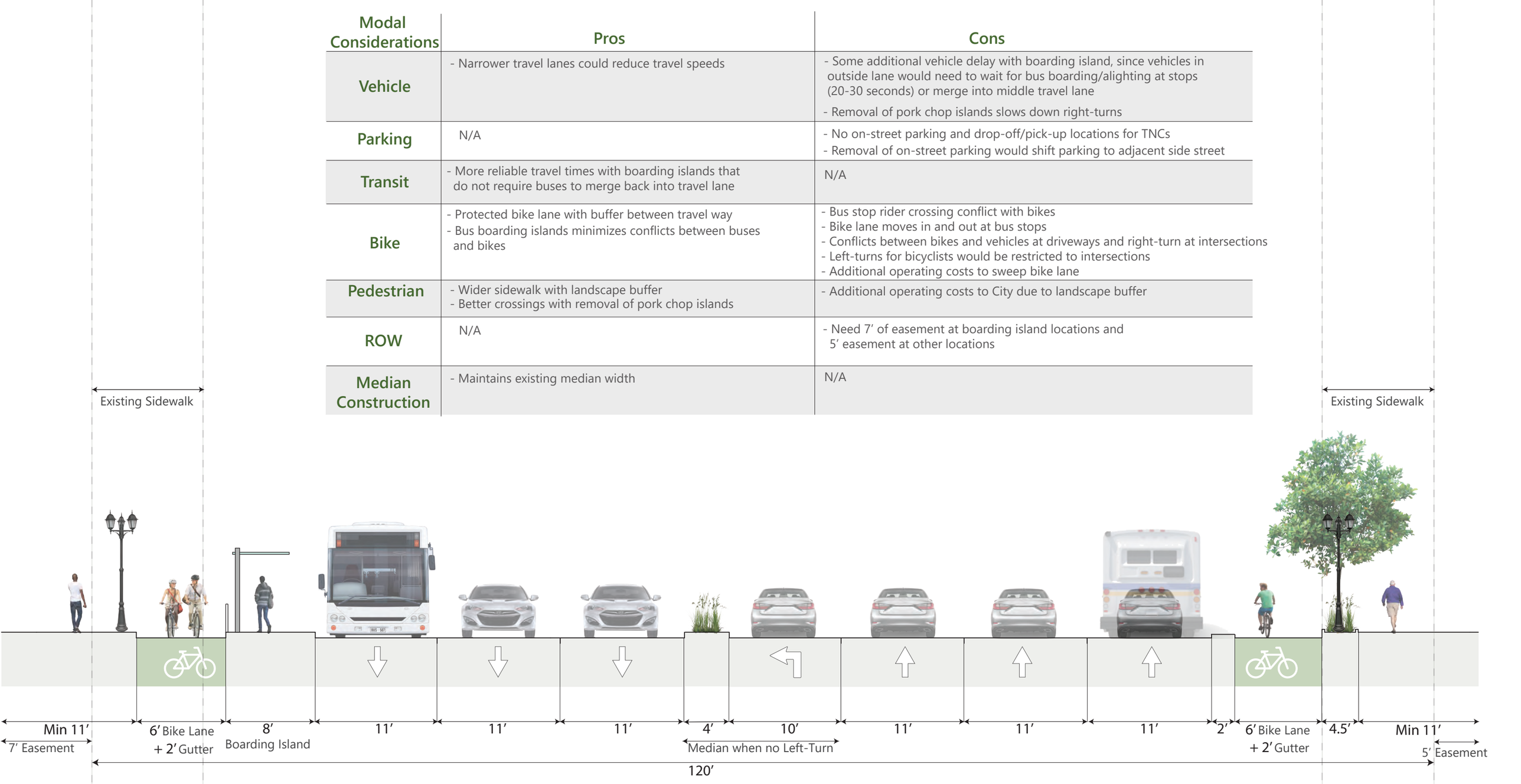
Existing Condition (Typical 3-Lane Cross-Section with Left-Turn Lane, On-Street Parking, and Bus Boarding)

Modal Considerations	Pros	Cons
Vehicle	- Maintains vehicle capacity - Narrower travel lanes could reduce travel speeds	- Removal of pork chop islands slows down right-turns
Parking	- On-street parking available, including TNC drop-off/pick-up - Access to commercial businesses	N/A
Transit	N/A	- Buses pull in and out of traffic, which adds delay to transit operations - Transit shares stops at on-street parking
Bike	N/A	- No dedicated bicycle facilities / Shares travel way with vehicles - Conflicts between bikes and vehicles at driveways and right-turn at intersections
Pedestrian	- Wider sidewalk with landscape buffer - Better crossings with removal of pork chop islands	- Additional operating costs to City due to landscape buffer
ROW	N/A	- Need 5' of easement from each side
Median Construction	N/A	- Widening of median increases costs - Additional operating costs to City due to added landscaping



Scenario 1: Implement Minor Modifications: Widen Median, Narrow Traffic Lanes, Add Landscaping, and Remove Pork Chop Islands at Intersections

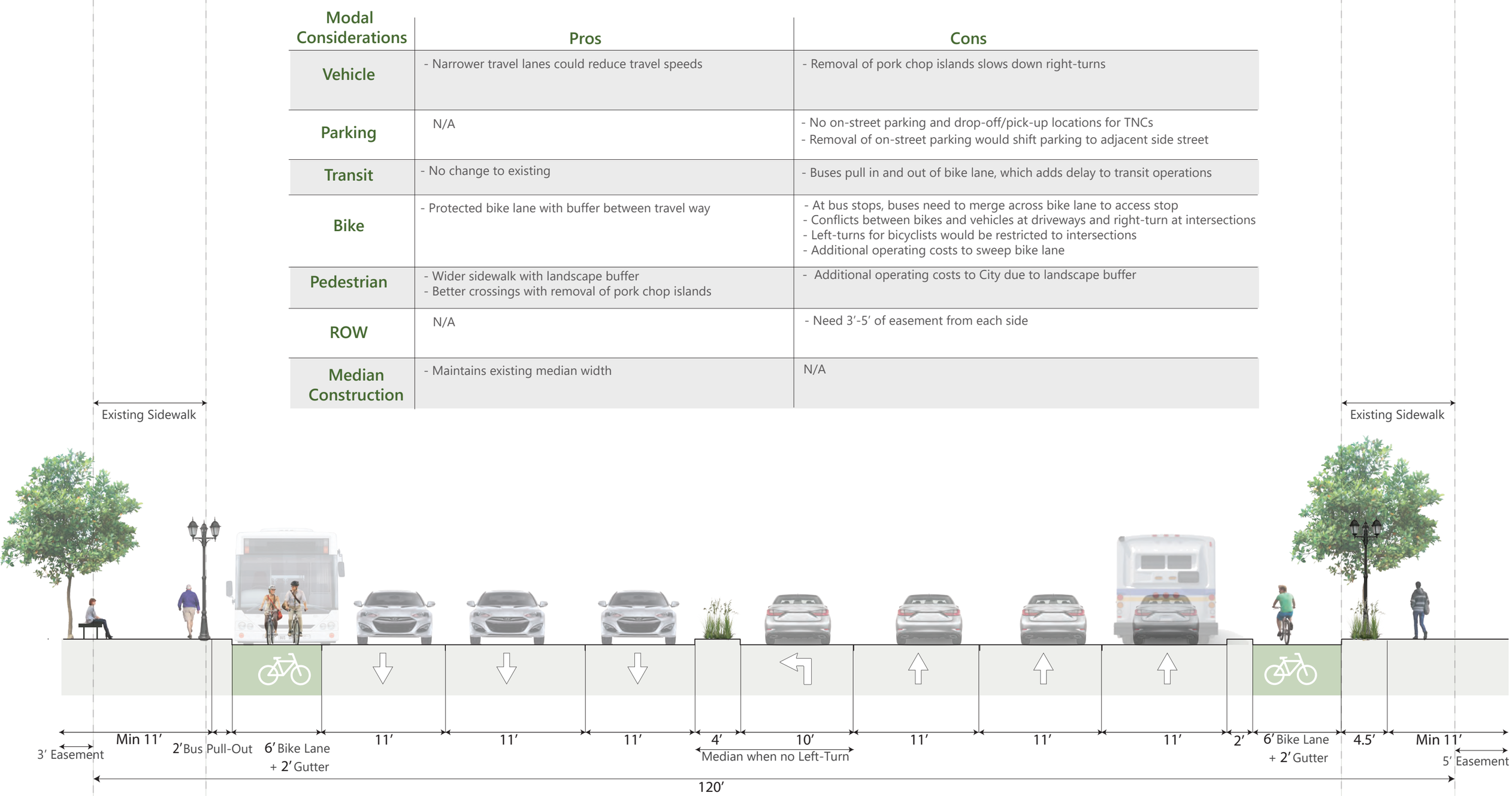
Modal Considerations	Pros	Cons
Vehicle	- Narrower travel lanes could reduce travel speeds	- Some additional vehicle delay with boarding island, since vehicles in outside lane would need to wait for bus boarding/alighting at stops (20-30 seconds) or merge into middle travel lane - Removal of pork chop islands slows down right-turns
Parking	N/A	- No on-street parking and drop-off/pick-up locations for TNCs - Removal of on-street parking would shift parking to adjacent side street
Transit	- More reliable travel times with boarding islands that do not require buses to merge back into travel lane	N/A
Bike	- Protected bike lane with buffer between travel way - Bus boarding islands minimizes conflicts between buses and bikes	- Bus stop rider crossing conflict with bikes - Bike lane moves in and out at bus stops - Conflicts between bikes and vehicles at driveways and right-turn at intersections - Left-turns for bicyclists would be restricted to intersections - Additional operating costs to sweep bike lane
Pedestrian	- Wider sidewalk with landscape buffer - Better crossings with removal of pork chop islands	- Additional operating costs to City due to landscape buffer
ROW	N/A	- Need 7′ of easement at boarding island locations and 5′ easement at other locations
Median Construction	- Maintains existing median width	N/A



Scenario 2-A: Remove On-Street Parking to Accommodate a Protected Bike Lane with Bus Boarding Island

Due to the high frequency of transit services along El Camino Real, it is recommended to design the bike lanes passing behind bus boarding islands at bus stop locations to minimize the potential conflicts between cyclists and buses.

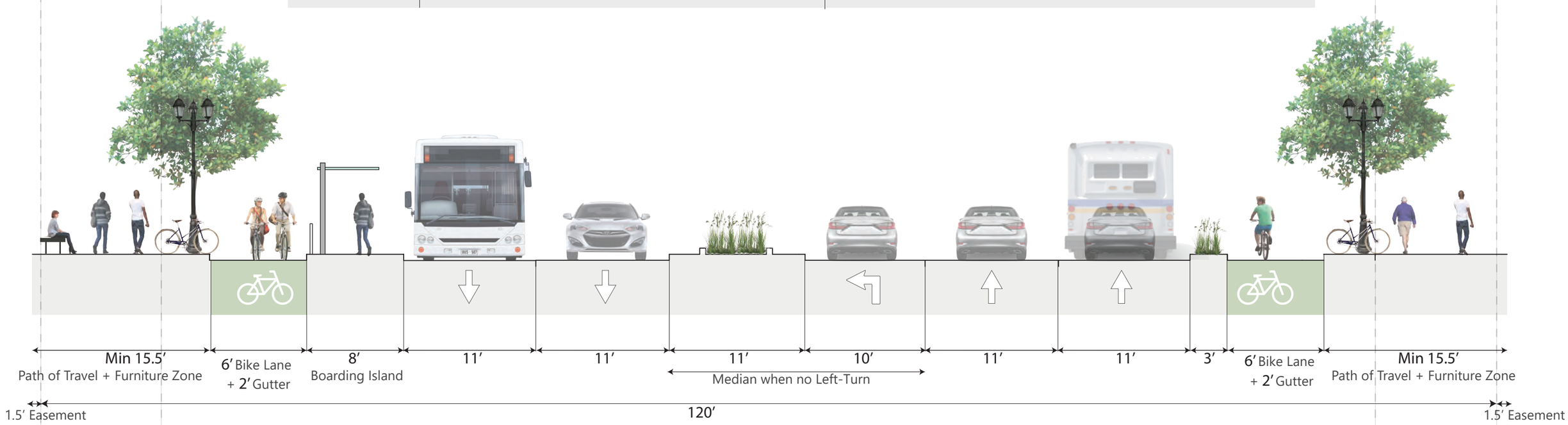
Modal Considerations	Pros	Cons
Vehicle	- Narrower travel lanes could reduce travel speeds	- Removal of pork chop islands slows down right-turns
Parking	N/A	- No on-street parking and drop-off/pick-up locations for TNCs - Removal of on-street parking would shift parking to adjacent side street
Transit	- No change to existing	- Buses pull in and out of bike lane, which adds delay to transit operations
Bike	- Protected bike lane with buffer between travel way	- At bus stops, buses need to merge across bike lane to access stop - Conflicts between bikes and vehicles at driveways and right-turn at intersections - Left-turns for bicyclists would be restricted to intersections - Additional operating costs to sweep bike lane
Pedestrian	- Wider sidewalk with landscape buffer - Better crossings with removal of pork chop islands	- Additional operating costs to City due to landscape buffer
ROW	N/A	- Need 3′-5′ of easement from each side
Median Construction	- Maintains existing median width	N/A



Scenario 2-B: Remove On-Street Parking to Accommodate a Protected Bike Lane with Bus Pull-Out

In this Scenario, 2 feet bus pull-out extension is proposed at bus stop locations. This scenario would not be as efficient as scenario 2-A in minimizing the conflicts between cyclists and buses at bus stop locations. However, it would preserve more space for sidewalks. At locations without bus stops, protected bike lanes are placed between sidewalk and the traffic lanes as it is shown on the left side of this cross section. In this scenario cars can pass buses stopping at bus stops to drop-off/pick-up passengers.

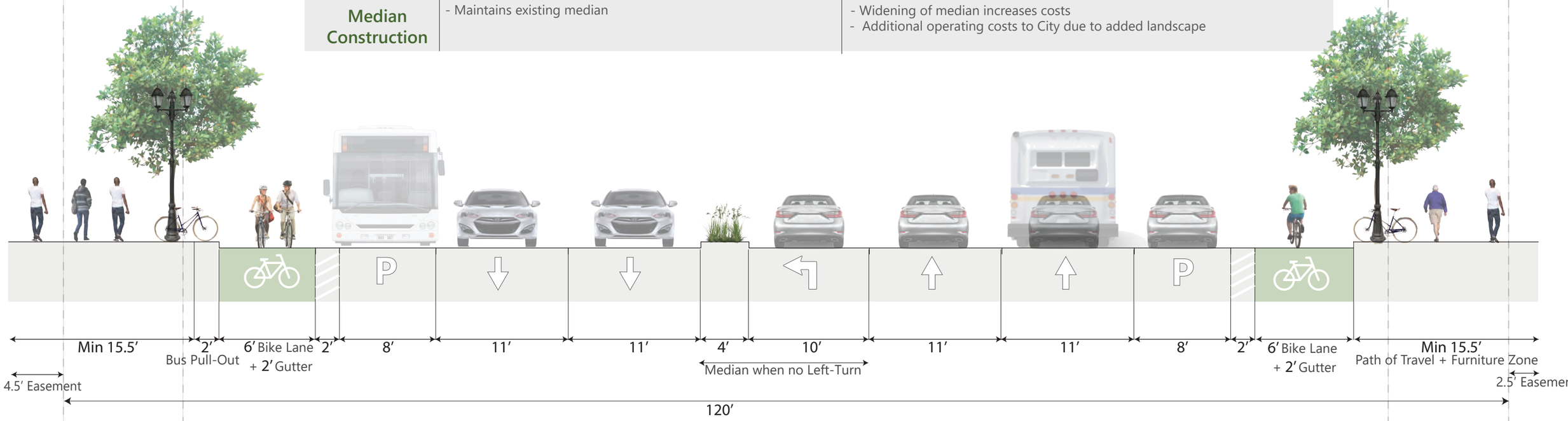
Modal Considerations	Pros	Cons
Vehicle	- Narrower travel lanes could reduce travel speeds	- Removal of pork chop islands slows down right-turns - Reduced vehicle capacity with removal of one travel lane per direction - Could divert traffic to parallel facilities, such as Warburton Avenue and Homestead Road
Parking	N/A	- No on-street parking and drop-off/pick-up locations for TNCs - Removal of on-street parking would shift parking to adjacent side streets
Transit	- More reliable travel times with boarding islands that do not require buses to merge back into travel lane	N/A
Bike	- Protected bike lane with buffer between travel way - Bus boarding island minimizes conflicts between buses and bikes	- Bus stop rider crossing conflict with bikes - Conflicts between bikes and vehicles at driveways and right-turn at intersections - Left-turns for bicyclists would be restricted to intersections - Additional operating costs to sweep bike lane
Pedestrian	- Wider sidewalk with landscape buffer - Better crossings with removal of pork chop islands - shorter crossing distances at intersections with removal of pork chop islands	- Additional operating costs to City due to landscape buffer
ROW	N/A	- Need 1.5' of easement from each side
Median Construction	N/A	- Widening of median increases costs - Additional operating costs to City due to added landscaping



Scenario 3-A: Implement Roadway Re-Allocation - Remove Travel Lane(s), Widen Center Median, Add Bulb-Outs, and Widen Sidewalks

Or in this scenario, the median width could be reduced to 8' with no easements

Modal Considerations	Pros	Cons
Vehicle	- Narrower travel lanes could reduce travel speeds	- Removal of pork chop islands slows down right-turns - Reduced vehicle capacity with removal of one travel lane per direction - Could divert traffic to parallel facilities, such as Warburton Avenue and Homestead Road
Parking	- On-street parking available, including TNC drop-off/pick-up - Street access to commercial businesses	N/A
Transit	- No change to existing	- Buses pull in and out of traffic, which adds delay to transit operations - Transit shares stops at on-street parking
Bike	- Protected bike lane with buffer between travel way	- Bus stop rider crossing conflict with bikes - Conflicts between bikes and vehicles at driveways and right-turn at intersections - Left-turns for bicyclists would be restricted to intersections - Additional operating costs to sweep bike lane
Pedestrian	- Wider sidewalk with landscape buffer - Better crossings with removal of pork chop islands - shorter crossing distance at intersections with removal of travel lane	- Additional operating costs to City due to landscape buffer
ROW	N/A	- Need 2.5'- 4.5' of easement from each side
Median Construction	- Maintains existing median	- Widening of median increases costs - Additional operating costs to City due to added landscape



Scenario 3-B: Implement Roadway Re-Allocation - Remove Travel Lane(s), Keep Parking, Add parking protected Bike Lane, Add Bulb-Outs, and Widen Sidewalks

City of Santa Clara
The Center of What's Possible

Memorandum
Item – 4I

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

From: Marshall Johnson, Associate Engineer (Civil), Public Works

Subject: Safe Routes To School (SRTS) Program Update

The City of Santa Clara wrapped up the first year of the current City sponsored Safe Routes to School (SRTS) Program which involves 12 Santa Clara Unified School District schools (Hughes Elementary, Montague Elementary, Bracher Elementary, Scott Lane Elementary, Bowers Elementary, Briarwood Elementary, Haman Elementary, Sutter Elementary, Westwood Elementary, Don Callejon, Washington Open, and Cabrillo Middle Schools). This program is designed to encourage and increase the number of students walking or biking to school. As part of their Physical Education (PE) classes, students were taught valuable skills that would enable them to safely walk and bike to school by Safe Moves staff working for the City.

Another important aspect of the program is to ensure sure that both the students and their parents feel that the walking and biking routes students take to school is safe. One of the ways to achieve this goal is that Safe Routes to School maps are created for each of these schools in the program. In addition, the program includes conducting "walk and bike" audits designed to give parents an opportunity to point out locations adjacent to the school where they feel infrastructure improvements could be made to address their concerns. Crosswalk enhancements, better signage, additional ADA curb ramps and school crossing guards were among the items listed by parents. Those items that can be addressed in a short period of time will be implemented over the school summer break. The remaining items will be studied by the Traffic Engineering Division to determine the appropriate measures that need to be taken to implement them.

This fall marks the beginning of the second year of the program and we anticipate a flurry of activities taking place as we restart the program as schools reopens. A major event for this program is Walk and Bike to School Week that will take place during the first week in October.

City of Santa Clara
The Center of What's Possible

Memorandum
Item – 4J

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

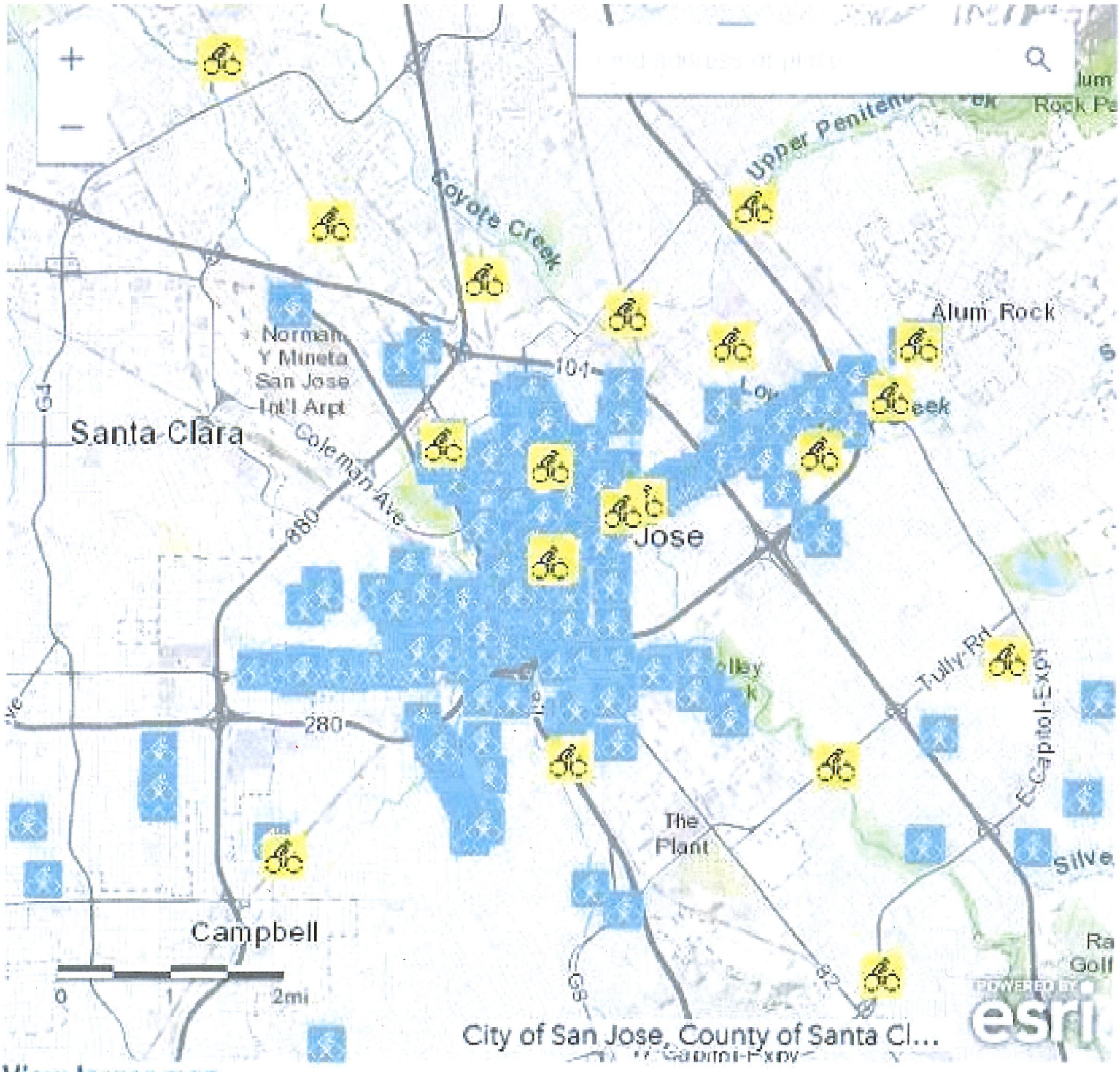
From: Marshall Johnson, Associate Engineer (Civil), Public Works

Subject: Bike Parking on Private Property

The City of San Jose recently launched a program to install bike parking for existing businesses in San Jose at no cost to businesses. The City will install the racks even on private property and maintain them. Requests can be made at http://www.sanjoseca.gov/index.aspx?NID=3705 with consent of property owner required for installations on private property. There is a selection process involved with preference given to business locations located near commercial destinations. Members expressed interest in the program and wanted to discuss the item and possibly endorse such a program for Santa Clara.

Bike Racks

This map shows the location of bike racks that we own and maintain. Icons in blue are bike racks and icons in yellow are electronic bike lockers (for more information on bike lockers, visit www.bikelink.org). Bike racks at other facilities like VTA Transit Stations or San Jose State University are not shown on this map.



View larger map

Request a Bike Rack

The City of San José installs bicycle parking at no cost. We will evaluate requests for installation on both public and private property. Private property requests require the landowner's consent. Send us your request.

Bike Rack Request Form

City of San Jose, Department of Transportation, Bicycle Parking Program

* Required

The City of San Jose installs bike racks throughout the City, at no cost. Examples of locations include: storefronts, businesses, public space and private commercial space.

Please fill out the below information to request a bike rack

Address of Desired Bike Rack Location *

Your answer

Business Name that the Desired Location is Close To (if applicable)

Your answer

Cross Streets (e.g. 1st St. at San Fernando St) *

Your answer

Your Name *

Your answer

Your Contact (phone or email)--(we may need to contact you regarding clarification--your personal information will not be used or shared in any other way) *

Your answer

City of Santa Clara
The Center of What's Possible

Memorandum
Item - 4K

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

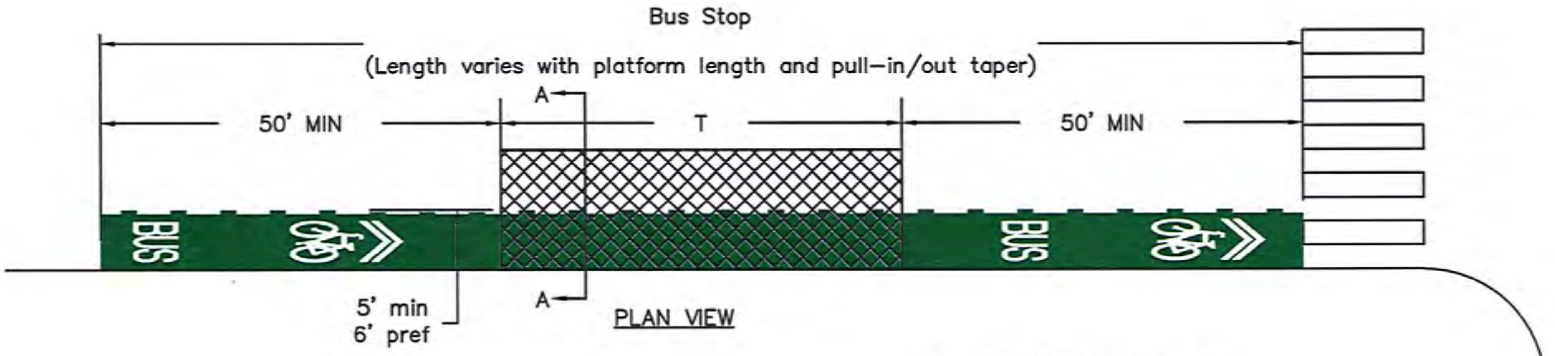
From: Carol Shariat, Principal Transportation Planner, Public Works

Subject: VTA Bus Stop Guidelines for Bike Lanes and Cycle Tracks

The Santa Clara Valley Transportation Authority (VTA) as the County's transit provider and Congestion Management Agency is proposing new design guidelines for accommodating bike lanes and cycle tracks at bus stops. They have developed multiple variations for these guidelines and are currently looking for comments and feedback from City Staff and BPACs prior to finalization.

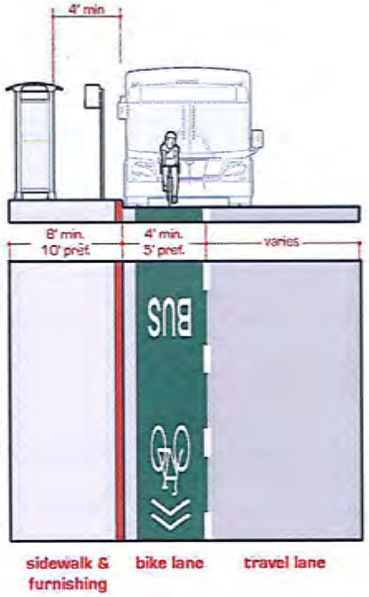
The draft guidelines once approved be will incorporated into VTA's Bicycle Technical Guidelines for reference and use when designing bicycle facilities. The draft guidelines use a combination of striping and green bicycle lane markings to highlight the bicycle/bus conflict areas. Based on the volume of traffic on the roadway, frequency of bus service use of green conflict bike lane marking is consistent with current implementation in Santa Clara. Staff will relay comments from the BPAC to VTA for presentation to the VTA BPAC and potential modification of the Design Guidelines.

Attachment A



PLAN VIEW

T = 50' For Standard Bus
T = 70' For Articulated Bus
T = 110' For Transfer Point



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

Santa Clara Valley Transportation Authority

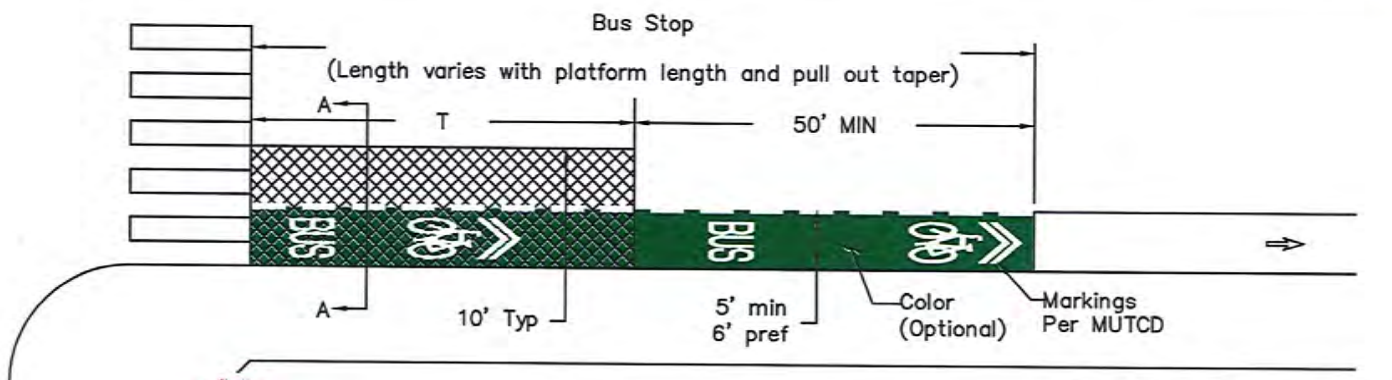
CAD FILE NAME
2018_FSD2001.DWG

BIKE LANE THROUGH NEAR SIDE BUS PAD DASHED LINE

FIGURE
20

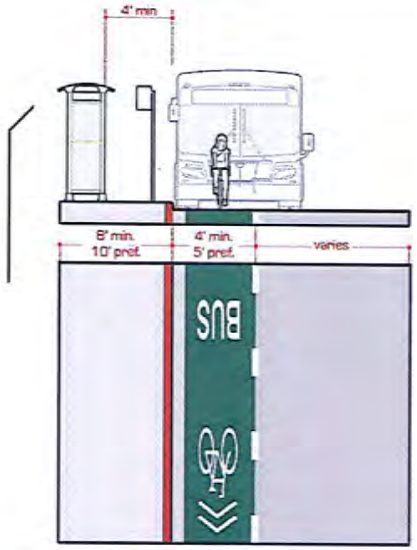
DATE
JUN 2018

Attachment A



PLAN VIEW

T = 50' For Standard Bus
T = 70' For Articulated Bus
T = 110' For Transfer Point



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

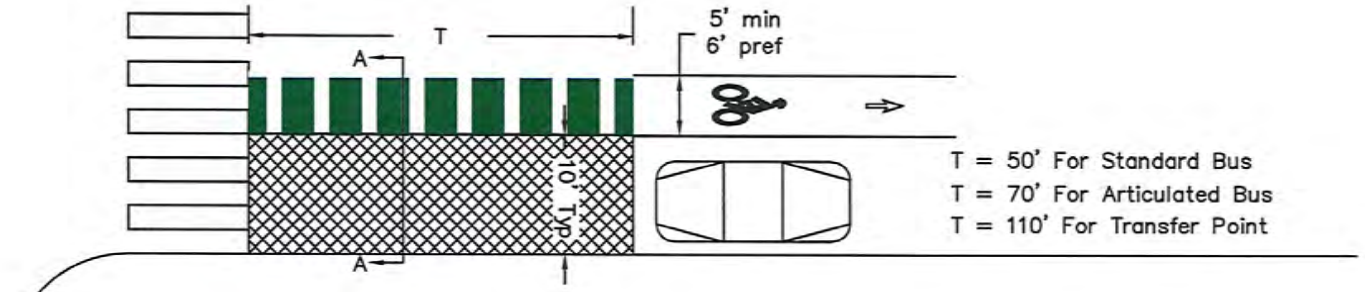
Santa Clara Valley Transportation Authority

CAD FILE NAME: 2018_FSD2101.DWG

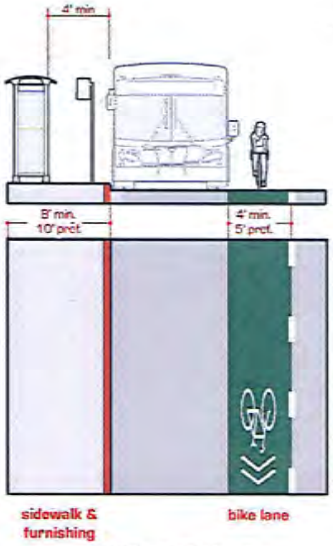
BIKE LANE THROUGH FAR SIDE BUS PAD DASHED LINE

FIGURE: 21

DATE: JUN 2018



PLAN VIEW



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

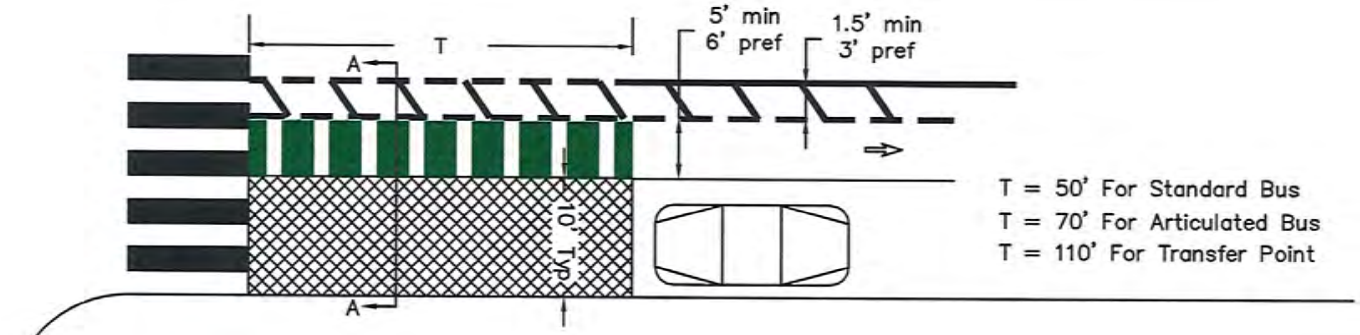
Santa Clara Valley Transportation Authority

CAD FILE NAME
2018_FSD2201.DWG

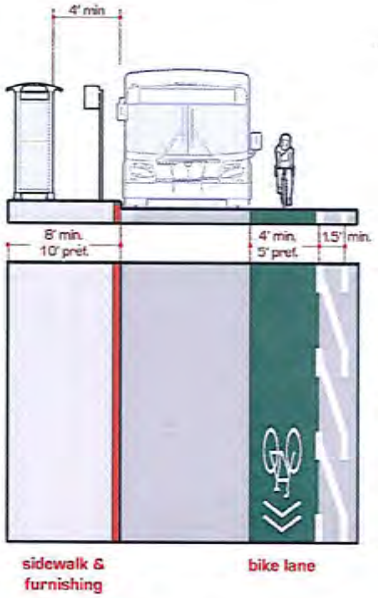
BIKE LANE
ADJACENT TO NEAR SIDE BUS PAD
DASHED LINE

FIGURE
22

DATE
JUN 2018



PLAN VIEW



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

Santa Clara Valley Transportation Authority

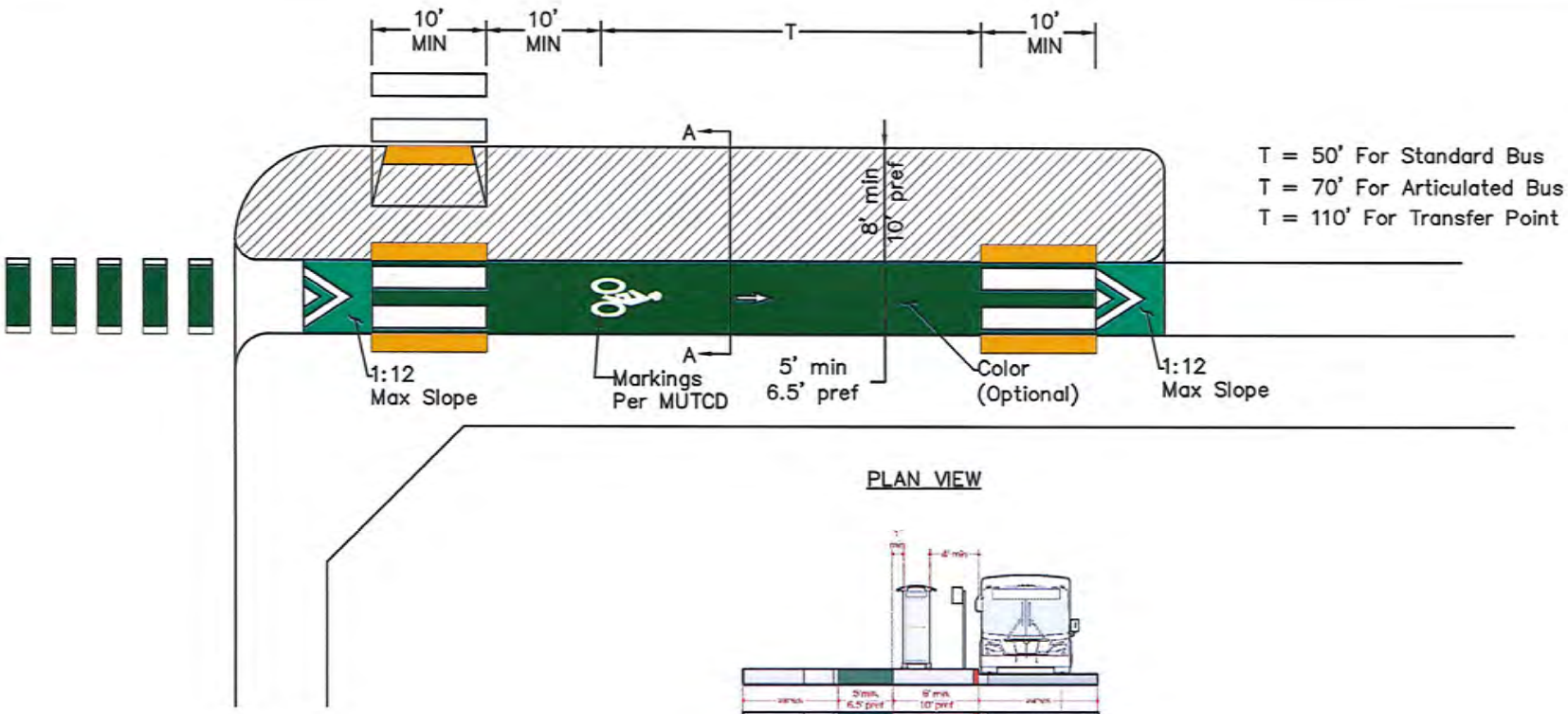
CAD FILE NAME: 2018_FSD2301.DWG

BIKE LANE (BUFFERED) ADJACENT TO NEAR SIDE BUS PAD DASHED LINE

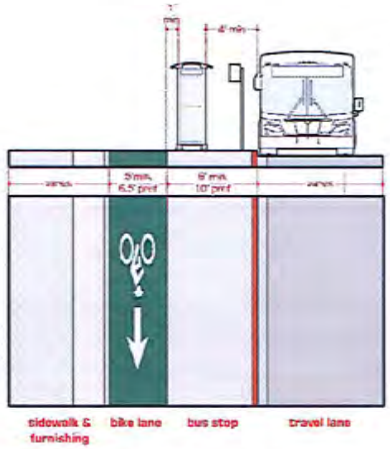
FIGURE: 23

DATE: JUN 2018

Attachment A



PLAN VIEW



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

Santa Clara Valley Transportation Authority

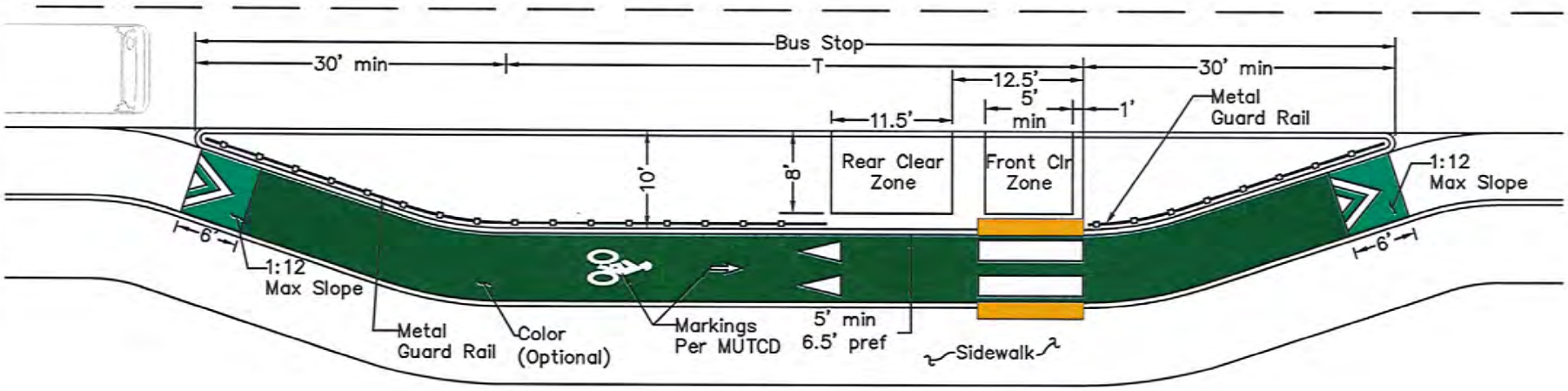
CAD FILE NAME
2018_FSD2401.DWG

BIKE LANE (SIGN LANE SEPERATED) BETWEEN SIDEWALK & BUS STOP ISLAND

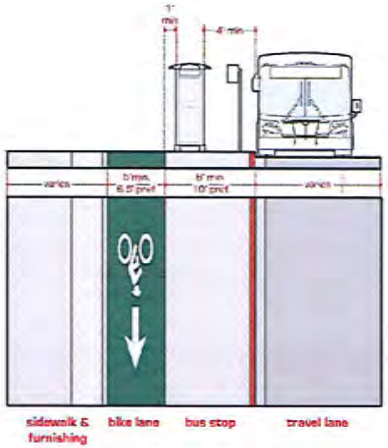
FIGURE
24

DATE
JUN 2018

Attachment A



PLAN VIEW



SECTION A–A

T = 50' For Standard Bus
T = 70' For Articulated Bus
T = 110' For Transfer Point

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

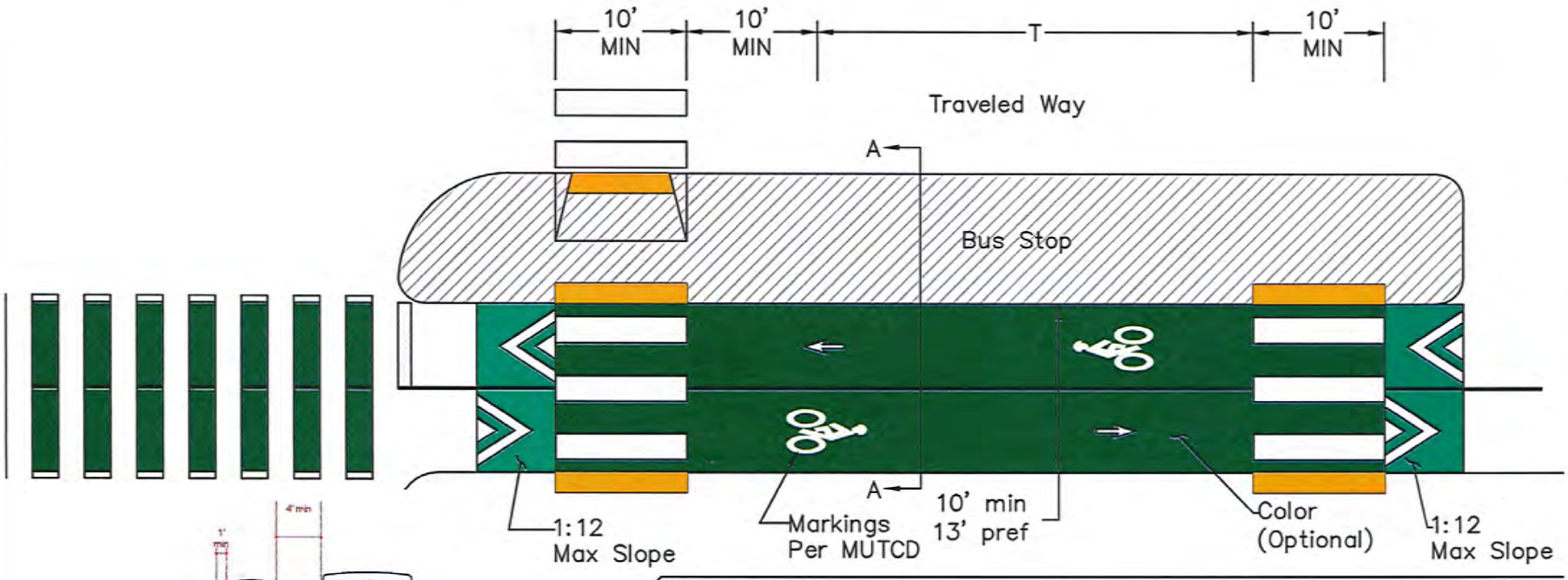
Santa Clara Valley Transportation Authority

CAD FILE NAME: 2018_FSD2601.DWG

BIKE LANE (ONE WAY SEPERATED) CONVERTED BETWEEN SIDEWALK & BUS STOP ISLAND DUCKOUT

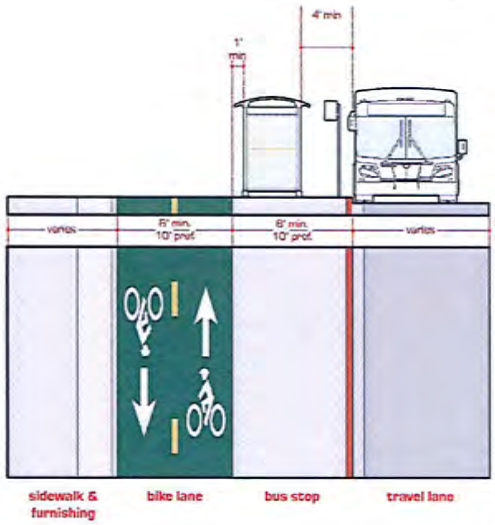
FIGURE: 26

DATE: JUN 2018



T = 50' For Standard Bus
T = 70' For Articulated Bus
T = 110' For Transfer Point

PLAN VIEW



SECTION A–A

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

Santa Clara Valley Transportation Authority

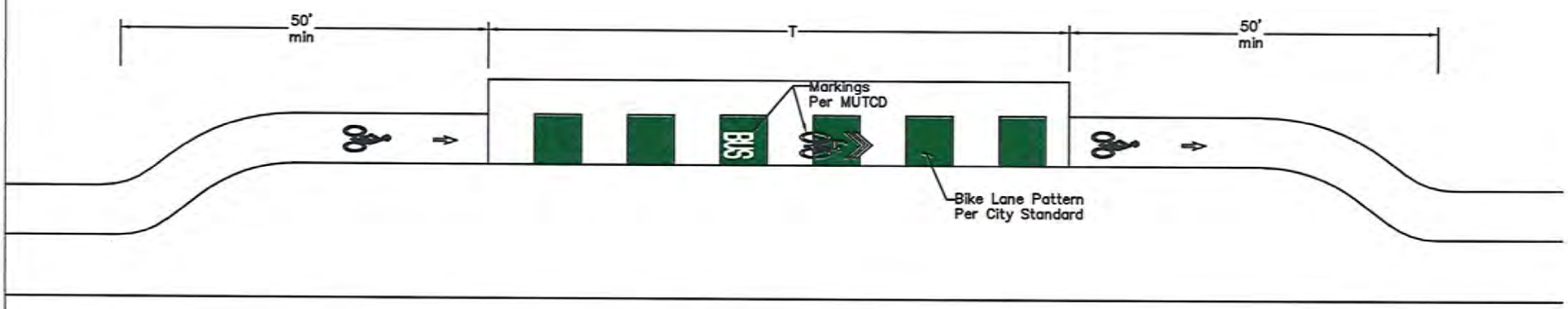
CAD FILE NAME
2018_FSD2501.DWG

BIKE LANE (TWO-WAY SEPERATED) BETWEEN SIDEWALK & BUS STOP ISLAND

FIGURE
25

DATE
JUN 2018

Attachment A



T = 50' For Standard Bus
T = 70' For Articulated Bus
T = 110' For Transfer Point

BUS STOP AND PASSENGER FACILITIES STANDARD DETAILS

Santa Clara Valley Transportation Authority

CAD FILE NAME
2018_FSD2701.DWG

BIKE LANE
THROUGH BLUB OUT BUS STOP

FIGURE
27

DATE
JUN 2018

City of Santa Clara
The Center of What's Possible

Memorandum
Item - 4L

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

From: Carol Shariat, Principal Transportation Planner, Public Works

Subject: Bike Plan Goals, Vision, Objectives, and Policies

Alta Planning & Design has been retained to update the City's Bicycle Plan. Alta has prepared a draft vision statement, goals, objectives, and policies to be included in the Bicycle Master Plan Update 2018. These policies will be used to help shape future investment, planning, and other future City decisions. The draft vision statement was developed through an exercise conducted with the BPAC members present at the BPAC meeting on March 26, 2018. Members were asked to write their vision for the state of bicycling in Santa Clara. Alta staff combined elements of those statements to develop the one presented in the attached document.

The draft objectives were also developed through an exercise with BPAC members at the March meeting. BPAC members ranked their priority objectives, noting that many could be combined. Alta staff merged several of these to develop the ones also in the attached documents.

The policies were developed using input from City staff, local knowledge about Santa Clara, other existing plans and policies already in place, state and national best practices, and priorities noted by BPAC members. We welcome your feedback on these draft statements and invite you to suggest any relevant policies not included.

Vision

The City of Santa Clara is a healthy, thriving, and safe city where people of all ages and abilities may easily and comfortably ride a bicycle as a part of their daily lives.

Goals

Safety – Design bicycle facilities that are accessible and comfortable for people of all ages and abilities.

Connectivity – Identify, develop, and maintain a complete and convenient bicycle network.

Programs - Increase bicycling as a transportation option through encouragement, education, enforcement, and evaluation programs.

Objectives and Policies

1. Safety

Design bicycle facilities and roadways that are accessible and comfortable for people of all ages and abilities.

Objective 1.A: Reduce the number and severity of bicycle-related collisions, injuries, and fatalities.

Policy 1.A.1: *Annually review the number, locations, and contributing factors of bicycling related collisions to identify and implement ongoing improvements at key locations throughout the transportation network.*

Policy 1.A.2: *Identify opportunities to reduce exposure for people bicycling by reducing crossing distances or providing dedicated facilities.*

Policy 1.A.3: *Study the need for 15 mph School Zone speed limits and adopt in appropriate locations by 2022.*

2. Connectivity

Identify, develop, and maintain a complete and convenient bicycle network.

Objective 2.A: Identify and pursue all potential funding sources for bicycle enhancements funding

Policy 2.A.1: *Actively pursue funding mechanisms to implement this Bicycle Master Plan Update 2018.*

Objective 2.B: Plan, design, and construct a complete bicycle network that accommodates the needs of all mobility types, users, and ability levels.

Policy 2.B.1: *Implement the recommendations from this Bicycle Master Plan Update 2018.*

Policy 2.B.2: *Implement the cross county corridor recommendations within Santa Clara identified by the Santa Clara Countywide Bicycle Plan.*

Policy 2.B.3: *Upgrade and improve the existing arterial bikeway network to increase bicyclist comfort and lower barriers for more risk-averse users.*

Policy 2.B.4: *Implement bicycle detection at signalized intersections within the City.*

Policy 2.B.5: *Incorporate green stormwater infrastructure into bikeway projects to the greatest extent possible for both new and updated projects.*

Objective 2.C: Enhance standard operating practices for installing new bicycle facilities and for bicycle facility maintenance.

Policy 2.C.1: *Adopt a pavement maintenance schedule for Class I trails.*

Policy 2.C.2: *Identify opportunities for parking removal or roadway reallocation where there is excess capacity now and in the future in order to provide new or improved bicycle facilities.*

Policy 2.C.3: *Review striping plans for all roadways prior to resurfacing projects to consider upgrading or installing new bicycle facilities.*

Policy 2.C.4: *Provide bicycle detour routes and signage during construction work affecting the public right-of-way.*

Policy 2.C.5: *Maintain bicycle facilities by street sweeping roadways with bike facilities twice a month and conducting pavement repair or filling pot holes in a timely manner.*

Policy 2.C.6: *Install green colored bicycle lanes at high conflict zones such as at significant weaving areas, freeway on/off-ramps, trap lanes, or any other unusual condition.*

3. Programs

Increase awareness and value of bicycling through encouragement, education, enforcement, and evaluation programs.

Objective 3.A:Identify and support programs that promote and encourage bicycling as an ordinary form of transportation.

Policy 3.A.1: *Update the MySantaClara app and online service request website to include community complaints and requests for maintenance on bicycle facilities.*

Policy 3.A.2: *Develop a city-wide bicycle wayfinding system, providing access to appropriate locations such as employment centers, schools, and commercial centers.*

Policy 3.A.3: *Prioritize the installation of bicycle parking in the public right-of-way at key commercial and retail destinations.*

Policy 3.A.4: *Continue to support Safe Routes to School programs.*

Policy 3.A.5: *Work with the Santa Clara Police Department to host an annual bike light giveaway before/around Daylight Savings time each fall.*

Objective 3.B: Conduct ongoing planning and evaluation for bicycle facilities.

Policy 3.B.1: *Where feasible, conduct before-and-after studies prior to implementing a bicycle project in order to measure the efficacy of the facility.*

Policy 3.B.2: *Whenever LOS studies are required, include measures that account for bicyclists and pedestrians as part of the overall throughput of the corridor.*

Policy 3.B.3: *Encourage local community input in the planning and implementation of bikeways and other bicycle-related improvements by holding public meetings and workshops within the neighborhood where the project will be implemented.*

Policy 3.B.4: *Work with the Santa Clara Police Department to improve the reporting and analysis of bicycle collisions.*

Policy 3.B.5: *Regularly monitor implementation of the Plan, and review and update the recommended bike facilities and Plan every five years.*

Policy 3.B.6: *Strive to improve the city's Bicycle Friendly Community (BFC) status by 2026.*

Policy 3.B.7: *Increase bicycle mode share by 1.0 percent by 2040.*

City of Santa Clara
The Center of What's Possible

Memorandum
Item – 5A

Date: August 27, 2018

To: Bicycle and Pedestrian Advisory Committee (BPAC) members, City of Santa Clara

From: Carol Shariat, Principal Transportation Planner, Public Works

Subject: 2019 & 2020 Annual Street Maintenance List

Each year the Public Works Design Division establishes a list of streets for preventative maintenance treatment for that fiscal year. The streets listed in the attachment will have treatments ranging from slurry seal, cape seal, or AC overlay applied to them. Annually, staff provides the list in August to the BPAC for discussion and prioritization. This year in order to help traffic staff better manage workloads, staff is presenting the 2019 and 2020 list of streets for preventative maintenance. BPAC members will review this list for the purpose of ranking streets as candidates for adding bicycle facilities based upon the current Bicycle Plan.

Traffic engineering staff will coordinate with Public Works Design Division staff to implement prioritized bicycle facilities as recommended by the BPAC. It is important to note that streets that are more complex and require extensive public outreach or studies cannot be implemented under the street preservation maintenance program as they will require more work and time than can be accommodated. Staff will separately apply for grant funding to study and implement those facilities.

Based upon the streets listed for preventative maintenance for both 2019 and 2020, staff is recommending adding in bicycle facilities to the following streets:

1. Market Street from Monroe Street to the Alameda (Class III bike route)
2. Lick Mill Boulevard from Tasman Drive to Hope Drive (Class II bike lanes)
3. Lick Mill Boulevard from Hope Drive to Montague Expressway (Class III bike route)

These streets are identified to include proposed bicycle facilities on them based upon the current Bicycle Plan.

2019 PAVEMENT REHABILITATION PROJECT (CE 17-18-19)

PROJECT'S STREET LIST

No.	Street Name	Begin Location	End Location	Treatment	Length (ft)	Width (ft)
1	DE LA CRUZ BLVD.	GREENWOOD DR.	ALDO AVE.	overlay/mill/fill	1,421	60
2	DE LA CRUZ BLVD.	ALDO AVE.	LAURELWOOD RD.	overlay/mill/fill	1,580	60
3	DE LA CRUZ BLVD.	LAURELWOOD RD.	TRIMBLE RD.	overlay/mill/fill	1,056	60
4	PERRY COURT	DE LA CRUZ BLVD.	CUL-DE-SAC	overlay/mill/fill	370	44
5	DE LA CRUZ BLVD. (A)	COLEMAN AVE.	MERGE (DE LA CRUZ NB OFF-RAMP)	slurry seal	1,048	33
6	DE LA CRUZ BLVD. (A)	ALVISO ST.	MERGE (EL CAMINO ON- RAMP)	slurry seal	648	24
7	DE LA CRUZ BLVD. (A)	MERGE (DE LA CRUZ NB OFF- RAMP)	REED ST.	slurry seal	388	43
8	DE LA CRUZ BLVD. (B)	REED ST.	FORK (DE LA CRUZ SB ON- RAMP)	slurry seal	614	47
9	DE LA CRUZ BLVD. (B)	FORK (DE LA CRUZ SB ON- RAMP)	COLEMAN AVE.	slurry seal	996	30
10	DE LA CRUZ BLVD. (C)	FORK (EL CAMINO OFF- RAMP)	EL CAMINO REAL	slurry seal	791	25
11	DE LA CRUZ BLVD. (D)	COLEMAN AVE.	MERGE (DE LA CRUZ SB ON-RAMP)	slurry seal	1,311	28
12	DE LA CRUZ BLVD. (E)	EL CAMINO REAL	MERGE (EL CAMINO ON- RAMP)	slurry seal	908	25
13	DE LA CRUZ BLVD. (E)	FORK (COLEMAN OFF-RAMP)	COLEMAN AVE.	slurry seal	798	18
14	DE LA CRUZ BLVD. (F)	FORK (COLEMAN OFF-RAMP)	MERGE (DE LA CRUZ NB OFF-RAMP)	slurry seal	892	32
15	DE LA CRUZ BLVD. (F)	FORK (EL CAMINO OFF- RAMP)	LEWIS ST.	slurry seal	788	25
16	DE LA CRUZ BLVD. (F)	MERGE (EL CAMINO ON- RAMP)	FORK (COLEMAN OFF-RAMP)	slurry seal	805	38
17	DE LA CRUZ BLVD.	CENTRAL EXPWY.	816' N of MARTIN AVE	cape seal	1,792	92
18	DE LA CRUZ BLVD.	816 FT NORTH MARTIN AVE	MARTIN AVE	cape seal	859	100
19	DE LA CRUZ BLVD.	MARTIN AVE.	REED ST.	cape seal	2,133	100
20	LOS PADRES BOULEVARD	HOMESTEAD RD.	FORBES AVE.	cape seal	2,022	43
21	LOS PADRES BOULEVARD	FORBES AVE.	SARATOGA AVE.	cape seal	997	42
22	BOWERS AVENUE	CHROMITE DR.	MEAD AVE.	slurry seal	1,729	76
23	BOWERS AVENUE	KIFER RD./WALSH AVE.	CENTRAL EXPWY.	slurry seal	598	96
24	BOWERS AVENUE	CENTRAL EXPWY.	SCOTT BLVD.	slurry seal	1,762	84
25	BOWERS AVENUE	SCOTT BLVD.	AUGUSTINE DR.	slurry seal	628	84
26	BOWERS AVENUE	MEAD AVE.	KIFER RD./WALSH AVE.	slurry seal	830	76
27	BOWERS AVENUE	South of 101 @ bridge to limit of area treated by Santa Clara Square		slurry seal	600	100
28	BOWERS AVENUE	North of Augustine Dr. to limit of area treated by Santa Clara Square		slurry seal	515	100
29	KIELY BOULEVARD	HOMESTEAD RD.	BENTON ST.	cape seal	3,026	61
30	KIELY BOULEVARD	BENTON ST.	EL CAMINO REAL	cape seal	2,082	61
31	MONROE STREET	CABRILLO AVE.	WARBURTON AVE.	cape seal	1,536	58
32	MONROE STREET	WARBURTON AVE.	EL CAMINO REAL	cape seal	1,084	60
33	AGNEW RD.	SAN TOMAS CREEK	LAKESHORE DR.	cape seal	1,411	60
34	AGNEW RD.	LAKESHORE DR.	FILLMORE ST	cape seal	747	60
35	AGNEW RD.	FILLMORE ST.	LAFAYETTE ST.	cape seal	1,125	60
36	BELLOMY STREET	SARATOGA AVE.	MONROE ST.	cape seal	3,080	41
37	BELLOMY STREET	MONROE ST.	JACKSON ST.	cape seal	378	41
38	BELLOMY STREET	LAFAYETTE ST.	PARK AVE	slurry seal	1,192	40
39	JACKSON STREET	BELLOMY ST.	MARKET ST.	cape seal	374	44
40	MARKET STREET	SARATOGA AVE./FALLON	N. WINCHESTER BLVD.	slurry seal	789	42
41	MARKET STREET	N. WINCHESTER BLVD.	MONROE ST.	slurry seal	1,862	44
42	MARKET STREET	MONROE ST.	JACKSON ST.	slurry seal	380	45
43	MARKET STREET	JACKSON ST.	LAFAYETTE ST.	slurry seal	1,121	45
44	FRANKLIN SQUARE PARKING LOT @ 1245 HOMESTEAD RD.			slurry seal		
45	FRANKLIN SQUARE PARKING LOT @ 1202 BENTON ST.			slurry seal		

Existing Bicycle Facility

Proposed Bicycle Facility

Road Reallocation or Removal of Parking Required to Install Bicycle Facility

Future Proposed Bicycle Facility

2020 Pavement Projects - Street Selection List

Santa Clara Various Streets and Roads Preservation (OBAG 2)

The Following will be done with **Santa Clara Various Streets and Roads Preservation (OBAG 2) CIP.**

Street Name	Begin Location	End Location	Streetsaver Treatment
HOMESTEAD ROAD	KIELY BLVD.	SAN TOMAS EXPWY.	SLURRY SEAL
HOMESTEAD ROAD	SAN TOMAS EXPWY.	LOS OLIVOS DR.	2 IN OVERLAY W/DIGOUTS
HOMESTEAD ROAD	LOS OLIVOS DR.	LOS PADRES BLVD.	SLURRY SEAL
HOMESTEAD ROAD	LOS PADRES BLVD.	SCOTT BLVD.	2 IN OVERLAY W/DIGOUTS
HOMESTEAD ROAD	SCOTT BLVD.	LINCOLN ST.	CAPE SEAL W/DIGOUTS
NEWHALL STREET	SARATOGA AVE.	N. WINCHESTER BLVD.	2 IN OVERLAY W/DIGOUTS
SCOTT BOULEVARD	SARATOGA AVE.	MURGUIA AVE.	SLURRY SEAL
SCOTT BOULEVARD	MURGUIA AVE.	DE LA PENA AVE.	SLURRY SEAL
SCOTT BOULEVARD	DE LA PENA	HOMESTEAD RD.	SLURRY SEAL
SCOTT BOULEVARD	HOMESTEAD RD.	LIBERTY ST.	SLURRY SEAL
SCOTT BOULEVARD	LIBERTY ST.	BENTON ST.	RECONSTRUCT SURFACE (AC)
SCOTT BOULEVARD	BENTON ST.	EL CAMINO REAL	RECONSTRUCT SURFACE (AC)

Annual Pavement Maintenance and Rehabilitation Project

Street Name	Begin Location	End Location	Streetsaver Treatment
ARMOUR DRIVE	HOGAN DR.	EISENHOWER DR.	SLURRY SEAL
AVENIDA DE CARMEN	AVENIDA DE LAGO	AVENIDA DE LAS ROSAS	SLURRY SEAL
AVENIDA DE LAS FLORES	AVENIDA DE LAS FLORES (CORTE)	CALLE DE PRIMAVERA	SLURRY SEAL
AVENIDA DE LAGO	AVENIDA DE LOS ARBOLES	AVENIDA DE LAS ROSAS	SLURRY SEAL
AVENIDA DE LAS ROSAS	AVENIDA DE LOS ARBOLES	AVENIDA DE LAGO	CAPE SEAL W/DIGOUTS
BASSETT STREET	THIRD ST.	AGNEW ST.	SLURRY SEAL
BASSETT STREET	AGNEW ST.	CHESTNUT ST.	SLURRY SEAL
* BASSETT STREET	CHESTNUT ST.	WYATT DR.	SLURRY SEAL
BASSETT STREET	WYATT DR.	MONTAGUE EXPWY.	CAPE SEAL W/DIGOUTS
BENTON STREET	CUL-DE-SAC	THRUSH WAY	CAPE SEAL W/DIGOUTS
BENTON STREET	THRUSH WAY	DUNFORD WAY	SLURRY SEAL
BENTON STREET	DUNFORD WAY	WOOD DUCK AVE.	SLURRY SEAL
BENTON STREET	WOOD DUCK AVE.	LAWRENCE EXPWY.	2 IN OVERLAY W/DIGOUTS
BENTON STREET	LAWRENCE EXPWY.	CAPITOLA WAY	SLURRY SEAL
BENTON STREET	CAPITOLA WAY	POMEROY AVE.	2 IN OVERLAY W/DIGOUTS
BENTON STREET	POMEROY AVE	MORAGA ST	SLURRY SEAL
BENTON STREET	MORAGA ST.	KIELY BLVD	SLURRY SEAL
BURKE DRIVE	EISENHOWER DR.	HOGAN DR.	SLURRY SEAL
CALLE DE PRIMAVERA	LAFAYETTE ST.	AVENIDA DE LOS ARBOLES	CAPE SEAL W/DIGOUTS
CORTE PRIMAVERA	CALLE DE PRIMAVERA	CUL-DE-SAC	SLURRY SEAL
DI GIULIO AVENUE	LAFAYETTE ST.	AVILLA AVE.	SLURRY SEAL
DI GIULIO AVENUE	AVILLA AVE.	RONALD ST.	SLURRY SEAL
DEMARET DRIVE	HOGAN DR.	EISENHOWER DR.	SLURRY SEAL
EISENHOWER DRIVE	LAFAYETTE ST.	EAST END	SLURRY SEAL
FAIRWAY GLEN DRIVE	LAFAYETTE ST.	HOGAN DR.	SLURRY SEAL
HOGAN DRIVE	LAFAYETTE ST.	SNEAD DR.	2 IN OVERLAY W/DIGOUTS
HOGAN DRIVE	SNEAD DR.	FAIRWAY GLEN DR.	2 IN OVERLAY W/DIGOUTS
HOPE DRIVE	LAFAYETTE	500 ft WEST OF LICK MILL BLVD	SLURRY SEAL
KIELY BOULEVARD	STEVENS CREEK BLVD.	PRUNERIDGE AVE.	SLURRY SEAL
KIELY BOULEVARD	PRUNERIDGE AVE.	HOMESTEAD RD.	SLURRY SEAL
KIFER ROAD	URANIUM DR.	OAKMEAD VILLAGE DR.	RECONSTRUCT SURFACE (AC)
KIFER ROAD	OAKMEAD VILLAGE DR.	BOWERS AVE.	RECONSTRUCT SURFACE (AC)
LICK MILL BOULEVARD	MONTAGUE EXPWY.	EAST RIVER PKWY	SLURRY SEAL
LICK MILL BOULEVARD	EAST RIVER PKWY	TASMAN DR.	SLURRY SEAL
MANGRUM DRIVE	HOGAN DR.	EISENHOWER DR.	SLURRY SEAL
MARTIN AVENUE	SCOTT BLVD.	LAFAYETTE ST.	SLURRY SEAL
MARTIN AVENUE	LAFAYETTE ST.	RAILROAD CROSSING	CAPE SEAL W/DIGOUTS
MARTIN AVENUE	RAILROAD CROSSING	DE LA CRUZ BLVD.	CAPE SEAL W/DIGOUTS
MEMOREX DRIVE	RICHARD AVE.	SHULMAN AVE.	RECONSTRUCT SURFACE (AC)
MEMOREX DRIVE	SHULMAN AVE.	LAFAYETTE ST.	2 IN OVERLAY W/DIGOUTS
MONROE STREET	EL CAMINO REAL	HARRISON ST.	2 IN OVERLAY W/DIGOUTS
MONROE STREET	HARRISON ST.	BENTON ST.	CAPE SEAL W/DIGOUTS
MONROE STREET	BENTON ST.	HOMESTEAD RD.	SLURRY SEAL
NORTHWESTERN PARKWAY	WALSH AVE.	CENTRAL EXPWY.	SLURRY SEAL
POMEROY AVENUE	EL CAMINO REAL	CALABAZAS BLVD.	SLURRY SEAL
POMEROY AVENUE	CALABAZAS BLVD.	BENTON ST.	CAPE SEAL W/DIGOUTS
POMEROY AVENUE	BENTON ST.	HOMESTEAD RD.	2 IN OVERLAY W/DIGOUTS
POMEROY AVENUE	HOMESTEAD RD.	PRUNERIDGE AVE.	SLURRY SEAL
RONALD AVENUE	MEMOREX DR.	DI GUILIO AVE.	SLURRY SEAL
SARATOGA AVENUE	STEVENS CREEK BLVD.	KEYSTONE AVE.	SLURRY SEAL
SARATOGA AVENUE	KEYSTONE AVE.	SAN TOMAS EXPWY.	SLURRY SEAL
SARATOGA AVENUE	SAN TOMAS EXPWY.	SUTTER AVE.	SLURRY SEAL
SARATOGA AVENUE	SUTTER AVE.	PRUNERIDGE AVE.	CAPE SEAL W/DIGOUTS
SARATOGA AVENUE	PRUNERIDGE AVE.	NEWHALL ST.	SLURRY SEAL
SARATOGA AVENUE (N/B)	NEWHALL ST./SCOTT	BELLOMY ST.	SLURRY SEAL
SARATOGA AVENUE (S/B)	NEWHALL ST./SCOTT BLVD.	MARKET ST./FALLON	SLURRY SEAL
SNEAD DRIVE	HOGAN DR.	EISENHOWER DR.	SLURRY SEAL
WILCOX AVENUE	GIANERA ST	ESPERANCA AVE	SLURRY SEAL

Existing Bicycle Facility

Proposed Bicycle Facility

Road Reallocation or Removal of Parking Required to Install Bicycle Facility

Future Proposed Bicycle Facility

* Future TDA Funded Bicycle Lanes