DATE: February 20, 2020, Regular Meeting
TIME: 10:00 AM
PLACE: Board of Supervisors' Chambers

AGENDA

-- The recommended actions appearing on the agenda are those recommended by staff. The Committee may take other actions relating to the issues as may be determined following consideration of the matter and discussion of the recommended actions.

-- Items that will require action by the Board of Supervisors may be forwarded to a future Board of Supervisors meeting for consideration.

-- Language interpretation services are available. Please contact the Office of the Clerk of the Board at (408) 299-5001 no less than three business days prior to the meeting to request an interpreter.

-- Persons wishing to address the Committee on any item on the agenda are requested to complete a Request to Speak Form and give it to the Deputy Clerk so the Chairperson may call speakers to the podium when the item is considered. Request to Speak Forms must be submitted prior to the start of public comment for the desired item, and for items on the Consent Calendar or added to the Consent Calendar, prior to the call for public comment on the Consent Calendar.

-- In compliance with the Americans with Disabilities Act and the Brown Act, those requiring accommodations in this meeting should notify the Clerk of the Board's Office 24 hours prior to the meeting at (408) 299-5001, or TDD (408) 993-8272.

-- To obtain a copy of any supporting document that is available, contact the Office of the Clerk of the Board at (408) 299-5001.

-- Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to all or a majority of the Board of Supervisors (or any other commission, or board or committee) less than 72 hours prior to that meeting are available for public inspection at the Office of the Clerk of the Board, 70 West Hedding Street, 10th Floor, during normal business hours.

-- Persons wishing to use the County’s systems to present audio/video materials when addressing the Committee must provide the materials to the Office of the Clerk of the Board at least two business days in advance of the meeting. Speakers with audio/video materials must adhere to the same time limits as other speakers and will not be granted additional time to address the Committee. The County does not guarantee the ability to present audio/video material, and the Chairperson may limit or prohibit the use of the County’s systems for the presentation of such material.

COMMUTE ALTERNATIVES: The Board of Supervisors encourages the use of commute alternatives including bicycles, carpooling, and hybrid vehicles. Public transit access is available to and from the County Government Center, 70 West Hedding St., San Jose, California by VTA Light Rail and bus lines 61 and 181. For trip planning information, visit www.vta.org or contact the VTA Customer Service Department at (408) 321-2300.

Opening

1. Call to Order.

2. Public Comment. (ID# 100280)

   This item is reserved for persons desiring to address the Committee on any matter not on this agenda. Members of the public who wish to address the Committee on any item not listed on the agenda should complete a Request to Speak Form and place it in the tray near the podium. The Chairperson will call
individuals to the podium in turn. All Request to Speak Forms must be submitted prior to the start of Public Comment.

Speakers are limited to the following: three minutes if the Chairperson or designee determines that five or fewer persons wish to address the Committee; two minutes if the Chairperson or designee determines that between six and fourteen persons wish to address the Committee; and one minute if the Chairperson or designee determines that fifteen or more person wish to address the Committee.

The law does not permit Committee action or extended discussion on any items not on the agenda except under special circumstances. If Committee action is requested, the Committee may place the matter on a future agenda. Statements that require a response may be referred to staff for reply in writing.

3. Approve Consent Calendar and changes to the Committee's Agenda.

Items removed from the Consent Calendar will be considered at the end of the regular agenda for discussion. The Committee may also add items on the regular agenda to the Consent Calendar.

Notice to the public: there is no separate discussion of Consent Calendar items, and the recommended actions are voted on in one motion. If an item is approved on the consent vote, the specific action recommended by staff is adopted. Members of the public who wish to address the Committee on Consent Calendar items should comment under this item. Each speaker is limited to two minutes total.

**Regular Agenda - Items for Discussion**

4. Under advisement from January 14, 2020 Board of Supervisors meeting (Item No. 20): Receive report from the Office of Emergency Management relating to legislative opportunities, including grants, claims information from Pacific Gas and Electric Company, vulnerable communities, and available community resources. (ID# 100429)

5. Under advisement from March 12, 2019 (Item No. 24) and October 8, 2019 (Item No. 24) Board of Supervisors meetings: Receive report from the Office of Supportive Housing relating to implementation of housing for extremely low and very low income persons with intellectual and/or developmental disabilities. (ID# 100079)

6. Under advisement from January 28, 2020 Board of Supervisors meeting (Item No. 81): Consider recommendations relating to Employee Transportation Demand Management (TDM). (ID# 100294)

Possible action:

a. Receive report from the Facilities and Fleet Department relating to a TDM Implementation Guide for employee commutes.

b. Under advisement from August 27, 2019 Board of Supervisors meeting (Item No. 10): Receive report from the Facilities and Fleet Department relating to providing a shuttle for County employees to and from the Diridon Station during peak commute hours.
7. Receive report from the Office of the County Executive, Consumer and Environmental Protection Agency, and Department of Planning and Development relating to proposed local regulations of hemp cultivation for unincorporated Santa Clara County. (ID# 100104)

8. Receive report from the Office of the Clerk of the Board relating to proposed amendments to the Roads Commission bylaws, and forward to the Board of Supervisors for approval. (ID# 100118)

**Consent Calendar**

9. Receive annual report from the Office of Sustainability relating to progress on the County's Environmental Stewardship Goals, sustainability, and climate action programs through December 31, 2019. (ID# 99978)

10. Receive semi-annual report from the Employee Services Agency relating to Fiscal Year 2020 extra help usage for agencies and departments reporting to the Housing, Land Use, Environment, and Transportation Committee. (ID# 100211)

11. Receive report from the Roads and Airports Department relating to agreements executed by the Director, Roads and Airports Department, pursuant to authority delegated by the Board of Supervisors on December 13, 2016. (ID# 100264)

12. Receive Quarterly Noise Report from the Roads and Airports Department, Airports Division. (ID# 100135)

13. Receive evaluation and biannual report relating to the Low-cost Spay/Neuter Program. (ID# 100324)

14. Consider recommendations relating to Supportive Housing System of Care reports. (Office of Supportive Housing) (ID# 100319)

Possible action:

a. Receive monthly report relating to Supportive Housing System Dashboard.

b. Receive semi-annual report relating to Reentry Housing programs.

15. Approve minutes of the January 16, 2020 Regular Meeting.

**Adjourn**

16. Adjourn to the next regular meeting on Thursday, March 19, 2020 at 10:00 a.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San Jose.
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Megan Doyle, Clerk of the Board

SUBJECT: Public Comment

RECOMMENDED ACTION

Public Comment.

ATTACHMENTS:

- Letter from Lehigh Southwest Cement Company attorneys (PDF)
January 27, 2020

VIA ELECTRONIC MAIL: peggy.doyle@cob.sccgov.org

Mike Wasserman, Chairperson
Housing, Land Use, Environment, and
Transportation Committee
County of Santa Clara
70 West Hedding Street, 1st Floor
San Jose, CA 95110

Re: Permanente Quarry
December 19, 2019 HLUET Committee, Agenda Item No. 6

Dear Chairperson Wasserman and Members of the Committee:

We write on behalf of Lehigh Southwest Cement Company (“Lehigh”), operator of the Permanente Quarry. The purpose of this letter is to clarify certain statements made during the December 19, 2019 meeting of the County of Santa Clara’s Housing, Land Use, Environment and Transportation (“HLUET”) Committee.

During the portion of the meeting devoted to Agenda Item No. 6 involving the Permanente Quarry, Supervisor Simitian stated that, based on the information that he possessed, Lehigh had refused to engage the County regarding the June 13, 2019 Notice of Violation (“NOV”) or proposed “stipulated order to comply” shared with Lehigh on November 8, 2019.

This information was incorrect and contrary to the facts. We note the following communications between Lehigh and the County concerning the NOV and stipulated order to comply:

• On June 28, 2019, Lehigh asked to meet with the County to discuss the resolution of the NOV, and to request that the County extend a “stipulated order to comply” pursuant to the enforcement provisions of the Surface Mining and Reclamation Act (“SMARA”). (Pub. Resources Code, § 2774.1.) The County did not respond.

• On July 12, 2019, Lehigh sent a follow-up meeting request to the County. The County did not respond.
• On July 24, 2019, in a telephone call with Planning Department staff, Lehigh reiterated its request for a meeting to discuss the NOV. Staff promised to inquire internally regarding the status of Lehigh’s request.

• On October 22, 2019, Lehigh met with County staff to discuss resolving the NOV and to confirm that the County intended to follow the SMARA compliance process. Staff attempted to hold an “appeal hearing,” which did not occur. Lehigh took the opportunity to re-request that the County issue a stipulated order to comply, and to advise staff that it had completed all of the corrective actions in the NOV.

• On October 23, 2019, Lehigh wrote to County staff, reiterating its request that the County close the NOV through the SMARA process.

• On October 24, 2019, in a meeting onsite at the quarry, staff indicated that the County intended, as Lehigh requested, to close the NOV following SMARA.

• On October 29, 2019, Lehigh provided the County with a proposed stipulated order to comply.

• On November 20, 2019, in a telephone call, County’s attorneys advised that the County would send a letter confirming that the County intended to resolve the NOV pursuant to the SMARA process.

• On November 22, 2019, Lehigh’s counsel wrote to County counsel, asking when Lehigh would receive the confirming letter.

• On November 26, 2019, Lehigh’s counsel wrote again to the County to ask when Lehigh would receive the confirming letter.

• On December 2, 2019, Lehigh’s counsel wrote again to ask about the status of the confirming letter, and to request a meeting with staff to discuss a final resolution of the NOV.

• On December 3, 2019, Lehigh’s counsel wrote again to inquire about the confirming letter and request a meeting.

• On December 5, 2019, in response to County counsel’s request, Lehigh forwarded three mid-December dates for a meeting with the County staff to discuss the NOV.

• On December 9, 2019, Lehigh’s counsel wrote to again ask about the confirming letter, and to follow up on its request for a meeting with County staff.

• On December 18, 2019, attorneys for Lehigh and the County spoke by telephone. The County’s attorneys indicated that they were continuing to evaluate the County’s position.
On December 30, 2019, Lehigh wrote again asking the County to meet regarding the NOV, and Lehigh proposed meeting dates in mid-January. The County accepted the invitation and the meeting was set for January 14, 2020, which eventually took place.

These communications make it abundantly clear that Lehigh has worked diligently towards a resolution with the County regarding the NOV and stipulated order to comply. Indeed, Lehigh has been the party endeavoring to drive these discussions forward.

This letter also reiterates that Lehigh has completed all of the corrective actions listed in the NOV, as stated in our December 18, 2019 letter to this Committee. To date, the County has not disputed this nor identified any corrective action in the NOV that remains outstanding. It remains incumbent on the County to close the NOV using the appropriate SMARA process.

Lehigh continues to engage the County in this regard and is hopeful of reaching a resolution in short order. We trust that this corrects the record with respect to the matters discussed at the December 19, 2019 HLUET Committee meeting.

Sincerely,

HARRISON, TEMBLADOR, HUNGERFORD & JOHNSON

By

Sean Hungerford, Esq.

cc: Supervisor S. Joseph Simitian, Vice Chairperson, HULET Committee
Erika Guerra, Lehigh Southwest Cement Company
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Dana Reed, Director of Emergency Management

SUBJECT: PG&E PSPS Preparedness, Legislative Opportunities, Claims, and Community Resources

RECOMMENDED ACTION

Under advisement from January 14, 2020 Board of Supervisors meeting (Item No. 20):

Receive report from the Office of Emergency Management relating to legislative opportunities, including grants, claims information from Pacific Gas and Electric Company, vulnerable communities, and available community resources.

FISCAL IMPLICATIONS

There are no fiscal implications as a result of the receipt of this report.

REASONS FOR RECOMMENDATION

On January 14, 2020 (Item No. 20), the Board approved a request from Supervisor Chavez to report the below information to the next Housing, Land Use, Environment, and Transportation Committee (HLUET):

- Evaluate Bay Area Air Quality Management District's legislative bill relating to clean air centers for a comparable bill on behalf of the County to fund community resource centers during Public Safety Power Shutoff (PSPS) events, including engaging Assembly Member Evan Low and the County legislative delegation.

- Provide an off-agenda report to the Board relating to information obtained through the 2020 census process to assist with pre-mapping of the areas most impacted by disruption to power.

- Request from Pacific Gas and Electric Company (PG&E) information relating to how many claims have been presented, the type of claimants, and the number of claims paid.

- Distinguish, to the extent known, between County and PG&E efforts to support vulnerable communities during PSPS events.
- Provide the Public Safety and Justice Committee with copies of presentations provided to the Housing, Land Use, Environment, and Transportation Committee (HLUET).

**CHILD IMPACT**

The recommended action will have no/neutral impact on children and youth.

**SENIOR IMPACT**

The recommended action will have no/neutral impact on seniors.

**SUSTAINABILITY IMPLICATIONS**

The recommended action will have no/neutral sustainability implications.

**BACKGROUND**

The Bay Area Air Quality Management District (BAAQMD) sponsored Assembly Bill 836 (AB 836) by Assembly member Buffy Wicks last year and the bill was signed into law in October 2019. The bill created the Wildfire Smoke Clean Act Centers for Vulnerable Populations Incentive Pilot Program through December 31, 2024. The Program is under the administration of the California Air Resources Board (CARB), which will award grants to retrofit smoke-protective filtration systems on existing public facilities. The bill did not include funds for the Program. Implementation of the bill’s provisions is contingent upon an appropriation by the Legislature in the annual Budget Act or another statute for the Program’s purpose. Last year’s State Budget Act did not include an appropriation for the Program. However, the Governor Recommended Budget for Fiscal Year 2020-2021 includes $5.5 million for the Program’s purpose. The BAAQMD is attempting to secure another $44.5 million for the Program but it is much too early in the state budget process to know if that effort will be successful.

The County’s does not have the opportunity in the current legislative year to sponsor a similar bill to fund community resource centers during Public Safety Power Shutoff (PSPS) events. January 24, 2020 was the last day for legislators to submit bill requests to the Office of Legislative Counsel. It should be noted that AB 836 does not fund facilities or any related operation costs of Wildfire Smoke Clean Act Centers; it provides a grant program to fund the retrofit of existing public facilities, such as schools, community centers, senior centers, sports centers, and libraries with adequate filtration to provide smoke relief to the public. When introduced, the bill was Bay Area focused and subsequently amended to offer the Program statewide. The 2019 PSPS occurred in approximately 30 counties so an effort to fund community resource centers in only one county is likely to meet the same fate as AB 836 and be required to apply statewide.

The Office of the County Executive (CEO) requested from PG&E information relating to how many claims have been presented, the type of claimants, and the number of claims paid. To date the CEO has not received a response from PG&E.

The County is a party to three California Public Utilities Commission (CPUC) proceedings:
1. R. 18-12-005: Order Instituting Rulemaking to Examine Utility De-Energization of Power Lines in Dangerous Conditions. This purpose of this proceeding is to develop new and modified guidelines for utilities when implementing PSPS events. The CPUC issued proposed guidelines for comment on January 30, 2020. The County will provide comments on the proposed guidelines. The CPUC is expected to make a final decision on the proposed guidelines, at the earliest, in June 2020.

2. R. 18-10-007: Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901 (2018). The purpose of this proceeding is to provide guidance on the form and content of utilities’ Wildfire Mitigation Plans (WMP) and develop the process for review and evaluation of the WMPs. The County has provided comments on the CPUC’s proposed evaluative materials. Utilities issued draft 2020 WMPs on February 7, 2020. The County will provide comments on PG&E’s draft 2020 WMP. The CPUC is expected to issue final decisions on the 2020 WMPs by May 7, 2020.

3. I. 19-11-013: Order Instituting Investigation on the CPUC’s Own Motion on the Late 2019 PSPS Events. The purpose of this proceeding is to determine whether utilities prioritized safety and complied with the CPUC’s regulations and Public Utilities Code requirements during the PSPS events in late 2019. As part of this proceeding, an expert consultant will conduct an investigation and issue a report. The County has provided a response to the Order Instituting Investigation. The CPUC has yet to provide a schedule for the remainder of this proceeding.

As stipulated by the California Public Utilities Commission (CPUC) PG&E is required to secure locations for Community Resource Centers (CRC’s). Initially PG&E sought public locations such as parking lots, arenas, fairgrounds, and entertainment venues. The purpose of the CRC’s was to provide a location for residents and medically fragile residents to charge devices, receive drinking water, and information related to the PSPS event. Two such locations were established during the October PSPS events. PG&E is responsible to staff and equip the CRC’s. Additionally, during the October events the City of Los Gatos was impacted by the PSPS event and requested that PG&E establish a CRC in their jurisdiction. Due to limited resources and staffing PG&E was not able to fill that request. The County however offered to provide an emergency generator to Los Gatos and the City arranged for equipment and staffing. While the CRC ended up not being activated, after-action follow-up by OEM opened up discussion with PG&E to reidentify locations for CRC’s that would geographically better serve the impacted areas which primarily bordered the east foothills and westside of the valley. The Office of Emergency Management recommended during the January 14th Board meeting that County libraries be considered for future CRC’s and that we partner with PG&E to determine what resources would be needed to provide emergency power at those locations. On February 10, 2020 administration met with County Libraries to discuss the possibility of surveying current power supply(s), power requirements at strategic libraries retrofitting buildings with the appropriate electrical/switching equipment allowing for an emergency generator to arrive on site and plug in externally to power essential elements in the building for the purpose of a Community Resource Center during PSPS events. PG&E has contacted the City of Saratoga library to start the process of evaluating
electrical needs and options. These opportunities have the potential to increase community resiliency during PSPS events designating appropriate CRC locations based on impact zones and adjacencies. Additionally, OEM plans to partner with Los Gatos and the City of San Jose to identify additional CRC’s adjacent to the impacted areas in those jurisdictions. This approach would provide a advantageous location for residents seeking such services and creating a situation where residents need to travel to locations far outside the impacted areas. Funding for these projects could come from the California Governors appropriation of $854,000 to the County of Santa Clara for PSPS planning. San Jose received $500,000 as well.

In response to two recent PG&E PSPS events which impacted Santa Clara County on the dates of October 9-11 and October 26-27 the Santa Clara County Board of Supervisors requested a report on a number of issues pertaining to PSPS concepts and issues, and specific County actions taken during the recent events. Those issues reported on January 14, 2020 (Item No. 20) were as follows:

- The number of people contacted regarding the specific PSPS events
- Which cities were consulted and worked with, and in what capacities?
- The PSPS impacts on communities, specifically low income
- The roles and responsibilities of the County, and of municipalities, in PSPS events
- Predicted economic impact to the County (Addressed in off agenda memo)
- Actual economic impact to County (Addressed in off agenda memo)
- County Counsel advise on recourse for reimbursement (Addressed in off agenda memo)
- Specifics related to the sharing of Non-Disclosure Agreement information (Addressed in off agenda memo)

During the Board of Supervisors meeting on November 5, 2019 (Item No. 14) a referral was made to Administration to report to the Board of Supervisors, no later than the first meeting in January 2020, relating to the number of individuals, entities, and contracted cities that the Office of Emergency Management (OEM) and PG&E worked with as well as the economic and equity impacts, of the October 2019 PG&E power shutoffs in Santa Clara County. The Board also directed Administration to determine a method to define the roles and responsibilities of the County, and all jurisdictions within the County, for a more unified approach to addressing Public Safety Power Shutoff Program issues.

Over the past decade, wildfires in California have grown more numerous, destructive, and deadly, and the threat of wildfires extends for a longer period during the year. The California Public Utilities Code gives electric utilities such as PG&E authority to de-energize or shut off electric facilities pro-actively during dangerous conditions to prevent wildfires and to protect lives and property. The purpose of proactive de-energization or PSPS is to promote public safety by decreasing the risk of utility-infrastructure as a source of wildfire ignitions. Following the deadly wildfire seasons experienced by the state in 2017 and 2018, the California Public Utilities Commission (CPUC) issued a resolution and rulemaking.
governing the steps PG&E and other electrical investor-owned utilities must follow in implementing a PSPS.

The risk of wildfire depends on the interaction of several factors, including warm temperatures, low soil moisture, high wind speeds, low relative humidity, fuel moisture and the presence of fuel such as vegetation. When these factors combine, electrical transmission and distribution lines may ignite fires if impacted by high wind or downed trees. To reduce the chances of accidental fire ignition during periods of heightened risk conditions, PG&E has adopted a PSPS program under which it may de-energize distribution and transmission lines that cross High Fire Threat District areas as mapped by the state.

PG&E has indicated that the most likely electric lines to be considered for shutoff will be those passing through areas designated by the CPUC as at elevated risk (Tier 2) or extreme risk (Tier 3) for wildfire. However, customers who do not live or work in a high fire-threat area may still experience a power shutoff if their community relies on a line that runs through an area experiencing extreme fire danger conditions. The specific area and number of affected customers will depend on forecasted weather conditions and which circuits PG&E needs to turn off for public safety purposes. Preceding a PSPS event, PG&E is required to share with public safety partners maps showing the areas to be impacted.

The CPUC has designated the southwest portion of Santa Clara County along Skyline Boulevard and Summit Road from approximately Castle Rock State Park southward as a Tier 3 area at extreme risk of experiencing a wildfire. The CPUC has also designated an area encompassing Foothills Park and Monte Bello Open Space, the area around Los Gatos, and an area in Santa Clara Valley near Coyote Creek as a Tier 2 area at elevated risk of experiencing a wildfire. Also designated as a Tier 2 risk is an area encompassing the eastern section of the County from Milpitas, Coyote Lake, and Anderson Lake eastward.

Approximately 82,386 people live in unincorporated areas of Santa Clara County. Of that number, about 10,047 people live within a Tier 2 elevated risk for fire. Approximately 5,025 people live in the unincorporated area of the County and within a Tier 3 extreme risk for fire.

At least one 500 kilovolt (kV) transmission line owned by PG&E crosses the County in a general northeast to southwest direction. In addition, Santa Clara Valley is traversed by a number of 115kV and 60kV lines owned by PG&E. The valley also contains 161kV to 230kV PG&E transmission lines. Many of these lines pass through high fire and very high fire threat areas within the County. For a map showing high fire threat areas within Santa Clara County designated as within Tier 2 and Tier 3, see Appendix A in the attached Santa Clara County Public Safety Power Shutoff EOP Annex.

During the month of October 2019, the Santa Clara County Operational Area experienced two Public Safety Power Shutoff (PSPS) events with a third event cancelled before de-energization could begin at the end of October.

October 9-10 PSPS Event

- Sunday, October 6, 2019 at 6:00pm—The Operational Area was notified of a Potential PG&E PSPS Event
• Wednesday, October 9, 2019 at 10:41pm—De-Energization in Santa Clara County began.

• Friday, October 11, 2019 by 10:30pm—Re-Energization in Santa Clara County completed.

October 26-28 PSPS Event

• Thursday, October 24, 2019 by 12:30pm—The Operational Area was notified of a Potential PSPS Event

• Sunday, October 27, 2019 at 1:22am—De-Energization in Santa Clara County began

• Tuesday, October 29, 2019 by approximately 11:30pm—Re-Energization in Santa Clara County completed

As required by the CPUC, PGE provided a report after each Public Safety Power Shutoff (PSPS) event available at https://www.cpuc.ca.gov/deenergization/

The Santa Clara County Emergency Operations Center (EOC) activated at the direction of the CEO and functioned for several 24-hour days on a 12-hour shift rotation while also supporting and coordinating with jurisdictional Emergency Operations Centers (EOC’s) and Departmental Operations Centers (DOC’s) within the Operational Area. This included Valley Water who activate their EOC.

The number of people contacted regarding the specific PSPS events

Specific to the number of people contacted regarding the PSPS events which impacted Santa Clara County, it is important to know understand that notifications are made from several entities to several types of overlapping individuals/agencies/facilities. PG&E makes notifications to customers via multiple methods (telephone, text, email, etc…), the State makes notifications via CAHAN (California Health Alerting Network) alerts to several medical services facilities and assisted care facilities that it regulates, Santa Clara County Public Health/EMS make notifications to various health facilities, OEM sends AlertSCC notifications to echo/mirror/supplement PG&E messaging to large geographical areas anticipated to be impacted by PSPS which results in messaging via multiple potential methods to individuals, agencies, and facilities which are registered for AlertSCC (AlertSCC sends messages through telephone, cell phone, text message, and email), our PIOs make notifications to specific service providers that serve clients across several jurisdictional boundaries and they also create social media and website footprints with pertinent PSPS information as well as send press releases to a number of media partners and coordinate press conferences, municipalities potentially make supplemental notifications via AlertSCC, NIXLE, NEXTDOOR, or other platform, and then door-to-door notifications are made by PG&E as well as County and/or city staff. Trying to gather specifics on which facilities or individuals were specifically notified by which method across all platforms from all agencies/entities would be extremely arduous if even possible at all.

Specific to the Office of Emergency Management’s notifications and outreach, the attached spreadsheet and document outline all of the consolidated preparedness and response outreach completed by the office, with 322,667 total people reached during the
preparedness phase prior to any notification of real world PSPS events, and 1,078,179 total people reached during the real world PSPS events which impacted Santa Clara County, totaling 1,400,846 people reached during the combination of all preparedness efforts and response efforts (it is important to note that many of those “people” may have been repeat notifications contacted during preparedness, the two PSPS incidents, and contacted via multiple mediums). Furthermore, OEM made direct notification to key points of contact at the following Community Based Organizations during preparedness and the real-world incidents: American Red Cross, Catholic Charities, Collaborating Agencies Disaster Relief Effort (CADRE), San Andreas Regional Center, United Neighborhoods of Santa Clara County, & United Way/211. Many other community-based organizations may have likely been reached through AlertSCC notifications as well.

As mentioned above, the Santa Clara County Public Health and EMS agencies made additionally health related notifications, as did the California Department of Public Health via the California Health Alerting Network (CAHAN). A summary of the notifications made via each of these three organizations, and of additional actions taken by SCCPH and EMS are attached for review.

Cities consulted and worked with, and in what capacities and the roles and responsibilities of the County, and of municipalities, in PSPS events

Recognizing the potential immensity of any public safety power shutoff and the associated impacts to the community, the County Office of Emergency Management set out to develop a hazard specific annex for not only the County but that could be shared with all Op Area partners to assist each jurisdiction in their respective planning efforts (it should be noted that our County PSPS Annex is a document specific to the County, and only serves as a template or planning tool for other jurisdictions). Four broad areas of concern were repeatedly heard: 1) public notification and continued information flow; 2) access and functional needs identification and coordination; 3) how to maintain lifeline services and 4) continuity of operations at all levels of government. Within those four broad areas reside several subsets of concerns including business continuity and restoring power. Additionally, the County Office of Emergency Management made a concerted effort to enhance public outreach by providing PSPS preparedness materials wherever possible as well as to participate in PSPS events and forums for local government, several of which OEM invited all municipal partners, and reported out on key take-aways from other events to those same partners.

On October 4, 2019, prior to any PSPS events within the Operational Area, after seeking input and comment from our Operational Area partners, Santa Clara County adopted a Public Safety Power Shutoff Annex to the County’s Emergency Operations Plan (EOP), which is attached to this legislative file for review. This document goes into detail about the roles and responsibilities of the County, as well as assumptions and expectations of actions to be taken by municipalities and special districts. It is important to note that the PSPS Annex is not a “Power Vulnerability Plan”, but should be considered an Operations Plan outlining strategies, goals, and objectives to consider for the County as a public entity and customer/consumer of energy as a commodity to ensure continuity of government services. The plan is not really a
vulnerability plan so much as it is a hazard specific COOP/COG (Continuity of Operations/Continuity of Government) plan.

In accordance with the PSPS EOP Annex, upon notification of potential PSPS event from PG&E, and throughout the duration of the two October PSPS events, the Santa Clara County Office of Emergency Management held operational Area coordination conference calls with all of our municipal, special district, and critical key strategic partners, sometimes several times a day. A copy of the template PSPS Op Area conference call agenda, with a list of most of the consistently invited partners, can be found as Appendix B to the attached Public Safety Power Shutoff EOP Annex. Additionally, during the PSPS events, the County Emergency Operations Center (EOC) shared key coordination and situational awareness information with our Operational Area partners who had activated municipal EOCs via several platforms, such as WebEOC and email. We also held a consultation session through our County Counsel with the impacted jurisdictions regarding emergency proclamations specific to PSPS events (multiple Operational Area jurisdictions issued an emergency proclamation).

In addition to the above activities, recognizing the specific potential threat and impact to medically fragile residents, the EMS Agency and Public Health Department worked collaboratively to proactively and voluntarily address the needs of PG&E customers that had been identified in the PG&E Baseline Medical Equipment Program (BMEP), as well as additional electricity-dependent Durable Medical Equipment (DME) users identified via an emPower database that EMS and Public Health proactively chose to request access to, they then shared the pertinent data with municipalities with identified impacted residents. For more information on these activities refer to the separate EMS and Public Health activity report attachments.

Lastly, it is important to note that what actions each jurisdiction chooses to undertake in an PG&E customer outreach or notification capacity is entirely up to their discretion and no jurisdiction is under any specific obligation to take action as a result of PG&E’s PSPS activities, inclusive of gaining access to the PG&E medical baseline data, which Santa Clara County has opted to capture to improve notification, outreach, and resource posturing capabilities and decision making.

**PSPS impacts on communities, specifically low income**

While it is a fair assumption that there are certainly likely economic and social impacts on our various and combined Santa Clara County communities, it is very difficult to specifically quantify these impacts in any rigorously meaningful way. However, a few known examples of some of these impacts include school closures that impacted school revenues, children’s education, and childcare costs/impacts; business closures resulting in lost business and tax revenues impacting business owners and municipalities; residential power outages impacting home and internet business activities; etc… Regarding how the PSPS events impact low-income Santa Clara County residents specifically is even more difficult to quantify meaningfully, however, it is potentially a fair assumption than even minor interruptions to low-income individuals households and routines can have much larger ultimate bottom-line impacts. As an example, one day of lost work due to having to care for a child who’s school was closed due to a PSPS event may be a make-or-break day of income for that household.
These types of impacts are often not realized or measurable at the micro/granular level directly after an event, but are noticeable on a more macro level after several such events take place and the impacts can be measured in gross over time.

**CONSEQUENCES OF NEGATIVE ACTION**

The Board of Supervisors would not receive this report in response to their January 14, 2020 referral (Item No. 20).

**LINKS:**
- Linked To: 99031 : 99031
- Linked To: 99365 : 99365
- Linked To: 99081 : 99081
- Linked To: 99191 : 99191
- Linked To: 99187 : 99187
- Linked To: 98876 : 98876
- Linked To: 98060 : 98060
- Linked To: 95341 : 95341
- Linked To: 99722 : 99722
- Linked From: 100469 : 100469
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Ky Le, Director, Office of Supportive Housing

SUBJECT: Annual Implementation Report on I/DD Housing

RECOMMENDED ACTION

Under advisement from March 12, 2019 (Item No. 24) and October 8, 2019 (Item No. 24) Board of Supervisors meetings: Receive report from the Office of Supportive Housing relating to implementation of housing for extremely low and very low income persons with intellectual and/or developmental disabilities.

FISCAL IMPLICATIONS

There are no fiscal implications associated with this informational report.

REASONS FOR RECOMMENDATION

This is the first annual report to the Housing, Land Use, Environment, and Transportation Committee (HLUET) regarding the County’s efforts to develop affordable housing for extremely low income (ELI) and very low income (VLI) persons with intellectual and/or developmental disabilities (I/DD).

On October 8, 2019 (Items No. 24 through 27) the Board committed up to $10,000,000 to support three new housing developments. Table 1 summarizes the status of the three previously approved developments. While the County was not able to fully fund the request of the Wilton Court project, the developer, Palo Alto Housing, was able to obtain additional funding from other sources. Two of the three projects have obtained their final entitlements and all three projects are proceeding with final funding applications and are expected to begin construction by January 2021.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>County Funds</th>
<th>Total Units</th>
<th>Project Status</th>
<th>Projected Lease-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2330 Monroe</td>
<td>$3,200,000</td>
<td>65</td>
<td>Developer obtained final entitlement approval from City Council in January 2020 and is preparing a</td>
<td>December 2022</td>
</tr>
</tbody>
</table>
The Administration is still working to determine how to allocate additional funds to support the development of affordable housing for persons with I/DD and will discuss such funding as part of the County Executive’s Recommended Budget for FY 2020-21.

**CHILD IMPACT**

The recommended action will have no/neutral impact on children and youth.

**SENIOR IMPACT**

The recommended action will have no/neutral impact on seniors.

**SUSTAINABILITY IMPLICATIONS**

The recommended action will have no/neutral sustainability implications.

**BACKGROUND**

On September 11, 2018 (Item No. 10) the Board directed the Administration to identify $40,000,000 for the development of affordable housing for ELI and VLI persons with I/DD.

On March 12, 2019 (Item No. 24) the Board approved an appropriation of $10,000,000 towards the $40,000,000 goal.

On August 13, 2019 (Item No. 92), the Board approved amended guidelines for the County’s Supportive Housing Development Program. The new guidelines incorporated specific requirements related to financing of affordable housing for ELI and VLI persons with I/DD.

On August 15, 2019, the Office of Supportive Housing (OSH) issued a draft updated Notice of Funding Availability (NOFA) to assist developers with their formal submittal. On September 9, 2019, the OSH issued the formal NOFA.

**CONSEQUENCES OF NEGATIVE ACTION**

The committee would not receive the requested report.

<table>
<thead>
<tr>
<th>Application</th>
<th>Funding</th>
<th>Units</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilton Court</td>
<td>$2,800,000</td>
<td>59</td>
<td>Developer obtained final entitlement approval from City Council in February 2019 and submitted a tax credit application in January 2020.</td>
</tr>
<tr>
<td>Block 15</td>
<td>$4,000,000</td>
<td>90</td>
<td>Developer is securing final entitlements and is working on submitting a tax credit application in Summer 2020.</td>
</tr>
</tbody>
</table>

**Total** | **$10,000,000** | **214** |
LINKS:

- References: 92999:92999
  September 11, 2018 (Item No. 10)
- References: 95446:95446
  March 12, 2019 (Item No. 24)
- References: 98418:98418
  October 8, 2019 (Item No. 24)
- References: 98334:98334
  October 8, 2019 (Item No. 25)
- References: 98335:98335
  October 8, 2019 (Item No. 26)
- References: 98336:98336
  October 8, 2019 (Item No. 27)
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Jeffrey D Draper, Director, Facilities and Fleet
       Jasneet Sharma, Director, Office of Sustainability

SUBJECT: Employee Transportation Demand Management Implementation Guide

RECOMMENDED ACTION

Under advisement from January 28, 2020 Board of Supervisors meeting (Item No. 81):
Consider recommendations relating to Employee Transportation Demand Management (TDM).

Possible action:

a. Receive report from the Facilities and Fleet Department relating to a TDM Implementation Guide for employee commutes.

b. Under advisement from August 27, 2019 Board of Supervisors meeting (Item No. 10):
   Receive report from the Facilities and Fleet Department relating to providing a shuttle for County employees to and from the Diridon Station during peak commute hours.

FISCAL IMPLICATIONS

There is no impact to the General Fund related to receiving this report. Although, if the recommended strategies are approved in the Fiscal Year (FY) 2021 budget, the TDM program would have an annual cost of $1,074,000.

REASONS FOR RECOMMENDATION

On October 17, 2017, Item 10, Supervisor Chavez made a referral for the Administration to report on how to improve transportation options for clients utilizing County services and on how to improve transportation options for employees. This referral has been completed through two separate studies: one for County clients and one for County employees. Subsequently, on December 5, 2017, Item 44, the Board of Supervisors (Board) approved the Administration’s recommendation to explore options regarding the creation of County-specific TDM strategies and development of the Guide, which included the evaluation of County employee commutes and development of the lowest cost and highest impact alternative transportation programs to reduce single occupancy vehicle (SOV) commuting and associated environmental impacts.
This report also responds to Supervisor Ellenberg’s referral from the August 27, 2019 Board meeting, Item 10, at which she requested the Administration evaluate providing a shuttle for County employees to and from Diridon Station during peak commute hours.

Additionally, this report was initially presented to the Board on January 28, 2020, Item 81, and Supervisor Simitian requested to forward this item to the Housing, Land Use, Environment, & Transportation (HLUET) Committee on February 20, 2020. The requested further analysis on commuter benefits related to Caltrain is discussed below in the transit subsidy section.

There are three primary factors that make providing County employees with a variety of cost-effective, alternative transportation programs important:

1. Climate Change

The Board has adopted numerous policies and goals to help reduce the County’s greenhouse gas (GHG) emissions and mitigate the effects of climate change. On December 18, 2018, Item 21, the Board adopted a resolution to establish a 100 percent carbon neutral commitment for County operations by 2045. To achieve this target the County will need to place a significant emphasis on reducing GHG emissions caused by employee commutes, which currently make up the majority of such emissions resulting from County operations.

2. Regional Traffic and Parking at County Facilities

Many of the County’s largest campuses are in areas with some of the worst traffic congestion in the United States, and many of these facilities also have parking space availability issues.\(^1\) The number of employees and clients also continues to increase, thereby exacerbating the problem. Furthermore, expanding parking infrastructure comes at a significant upfront cost, while also encouraging SOV commuting. Therefore, an added emphasis needs to be placed on programs that increase the use of alternative transportation.

3. Making the County an Employer of Choice

Offering alternative transportation programs for its employees can make the County an employer of choice, improve employee retention, and reduce commute-related stress for current employees. More than 35 percent of County employees live at least 11 or more miles from their primary work location, and 19 percent of County employees live outside of Santa Clara County and have long-distance commutes. Additionally, more than 44 percent of current County employees are part of the millennial generation and may eventually be homeowners. However, due to the high cost of living in the Bay Area, many of them will be selecting a place of residence that is increasingly further away from most of the County’s facilities. Programs that can alleviate the current and future burdens of commuting make working for the County more attractive.

**TDM Implementation Guide**

\(^1\) INRIX 2018 Global Traffic Scorecard
In November 2018, an agreement between the County and transportation consultant, Nelson/Nygaard, was established to complete a TDM Implementation Guide. The Guide, which is attached, provides a detailed baseline analysis of existing transportation options and the built environment as it relates to transportation at County facilities. It also details the implementation and operational cost estimates, employee participation estimates, GHG reduction estimates, and phasing recommendations for the TDM strategies that were analyzed.

Based on the consultant’s detailed analysis of the TDM programs that are available and on feedback from key County leaders, the Administration plans to make recommendations to implement the robust Commute Programs first as funding resources become available and consider implementation of other TDM solutions at a later date. As shown in the following table, each TDM program was evaluated and prioritized by the consultant and the Administration based on their GHG reduction potential, their overall cost, the anticipated employee participation levels, and their social impact.

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Robust</td>
<td>Most cost effective and environmental impactful programs, while also having a strong social impact.</td>
<td>$1,732,000</td>
</tr>
<tr>
<td>2. Medium</td>
<td>Slightly lower levels of GHG reduction potential and participation than the previous phase. Also has more of a focus on improving the use of the County's existing parking.</td>
<td>$503,000</td>
</tr>
<tr>
<td>3. Light</td>
<td>Not as cost-effective as the Robust programs.</td>
<td>$179,000</td>
</tr>
</tbody>
</table>

As shown in the table below, the consulting team and the Administration are recommending for the County to extend the VTA SmartPass Program and to implement a transit subsidy program, a commuter shuttle program, a bikeshare program, and a carpool program as part of the Robust phase of the guide. A detailed breakout for all the phases and TDM programs that were considered are included in the attached TDM Implementation Guide.

<table>
<thead>
<tr>
<th>Robust (Phase 1)</th>
<th>Location</th>
<th>Estimated Annual Budget</th>
<th>Employee Participation</th>
<th>GHG Equivalent for Cars Removed From the Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Subsidy ($50/month)</td>
<td>Countywide</td>
<td>$567,000</td>
<td>950</td>
<td>600</td>
</tr>
<tr>
<td>Commuter Shuttle</td>
<td>VMC at Bascom &amp; O'Connor Hospitals to</td>
<td>357,000</td>
<td>545</td>
<td>672</td>
</tr>
<tr>
<td>Program</td>
<td>Location</td>
<td>Estimated Annual Budget</td>
<td>Employee Participation</td>
<td>GHG Equivalent for Cars Removed From the Road</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------------</td>
<td>-------------------------</td>
<td>------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Carpool Program</td>
<td>Berger Campus and SSA Senter Campus</td>
<td>100,000</td>
<td>85</td>
<td>72</td>
</tr>
<tr>
<td>Bikeshare Program</td>
<td>Only available within the Bay Wheels bikeshare zone</td>
<td>50,000</td>
<td>460</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1,074,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium (Phase 2)</th>
<th>Location</th>
<th>Estimated Annual Budget</th>
<th>Employee Participation</th>
<th>GHG Equivalent for Cars Removed From the Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Control</td>
<td>Only for specific sites</td>
<td>$100,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Parking Occupancy Counts</td>
<td>Only for specific sites</td>
<td>15,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Commute Platform</td>
<td>Countywide</td>
<td>30,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Commute Cash</td>
<td>Countywide</td>
<td>288,000</td>
<td>350</td>
<td>480</td>
</tr>
<tr>
<td>Private Bicycle Fleet</td>
<td>Only for specific sites</td>
<td>70,000</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$503,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Light (Phase 3)</th>
<th>Location</th>
<th>Estimated Annual Budget</th>
<th>Employee Participation</th>
<th>GHG Equivalent for Cars Removed From the Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Shuttle Program</td>
<td>SSA Julian Campus</td>
<td>$179,000</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$179,000</td>
</tr>
</tbody>
</table>

The Implementation Guide also recommends the County establish a monitoring and evaluation plan to assess TDM program performance and to identify opportunities for program adjustments. The Administration plans to report back to the Board during the annual
budget process or as funding resources can be identified prior to the budget process. The following is an overview for why these Programs are recommended for Phase 1 Robust:

**VTA SmartPass Program**

The SmartPass Program is part of the baseline analysis, and roughly 1,500 County employees use it each month for free non-express bus and light rail rides. Providing SmartPasses for County employees currently costs $658,000 annually, which is roughly $440 annually per employee. This is more cost effective than the annual costs of $1,485,000 to provide 1,500 employees with this transit benefit would be, and the Administration recommends extending the SmartPass Program because it has significantly higher participation and GHG reduction potential than any other proposed commute program.

The Administration also recommends using the SmartPass Program in combination with a Pre-Tax Commuter Benefits and a Transit Subsidy Program, as outlined in the following section. These three programs, when used in combination, will most cost-effectively encourage employees who use VTA and all other modes of public transportation for commuting to work.

**Transit Subsidy Program**

Approximately 72 percent of County live and work within proximity to public transit stops such as, but not limited to, Caltrain, the Altamont Corridor Express Train, Amtrak, and Bay Area Rapid Transit (BART). A Transit Subsidy Program, a common program for many other Bay Area jurisdictions, will provide supplemental financial assistance and encourage greater use of public transit for work-related commuting.

This Program is meant to be utilized in tandem with the County’s existing Pre-Tax Commuter Benefit Program to offer even more financial assistance to employees. While the overall costs for this program is high, it is recommended because the Guide’s analysis estimates there will be a high level of participation and accompanying GHG reduction.

The Implementation Guide considered the effectiveness of a variety of monthly transit subsidy amounts and how that might impact participation and greenhouse gas reduction impacts, as is shown in the table below. While a higher subsidy amount results in greater participation, the Administration recommends an initial monthly subsidy amount of $50/month for FY 2021 due to concerns over the lack of available funding for the other transportation programs that are also recommended.

<table>
<thead>
<tr>
<th>Transit Subsidy Scenario</th>
<th>Monthly Subsidy Amount</th>
<th>Estimated Annual Budget</th>
<th>Employee Participation</th>
<th>GHG Equivalent for Cars Removed from the Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$50</td>
<td>$567,000</td>
<td>950</td>
<td>600</td>
</tr>
<tr>
<td>B</td>
<td>$100</td>
<td>$1,497,000</td>
<td>1350</td>
<td>1,200</td>
</tr>
<tr>
<td>C</td>
<td>$130</td>
<td>$2,890,000</td>
<td>1750</td>
<td>1,800</td>
</tr>
</tbody>
</table>

**Commuter Shuttle Program**

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Susan Ellenberg, S. Joseph Simitian
County Executive: Jeffrey V. Smith
Agenda Date: February 20, 2020
The Administration are recommends a Commuter Shuttle Program, and this recommendation aligns with the Board referral made by Supervisor Ellenberg on August 27, 2019, Item 10, requesting for the Administration to report on a shuttle service that can connect County employees to Diridon Station during peak commute hours.

The consulting team evaluated long and short distance commuter shuttle programs based on current employee commute patterns and found short distance shuttles that connect employees to public transit hubs (e.g., Diridon Station and the anticipated Berryessa BART station) to be the most cost-effective option. Public transit, especially light and heavy rail transit, is typically very efficient and capable of transporting large volumes of people. However, many large County facilities are not located within a walkable distance to transit hubs and therefore need a means of bridging this short-distance gap.

After evaluating the cost-effectiveness of various commuter shuttle routes the Administration recommends the County to initially consider a shuttle route that connects Diridon Station to the O’Connor Hospital and the Valley Medical Center (VMC) at Bascom. It is also important to note that a Commuter Shuttle Program is most effective if implemented in combination with a Transit Subsidy Program as employees will be taking public transit to and from transit hubs and using the shuttle for the first and last leg of their commute.

**Carpool Program**

A more robust Carpool Program is recommended to provide alternatives for employees with long and short distance-commutes who do not live or work near public transit stops. The County currently only offers designated carpool parking spaces at a few County facilities as a Carpool Program.

A more vigorous Carpool Program can be administered by a web-based carpool platform that offers flexible, on-demand ride-matching and payment options to incentivize higher participation. Participation in this Program will be encouraged by offering users a small financial incentive of less than $5 per trip. Through discussions with the Nelson/Nygaard’s staff and various County Departments, the Administration recommends the Carpool Program initially be implemented only at the Berger and Senter Road Campuses due to their limited proximity to public transit routes, parking constraints, and being in areas that are not conducive for biking or walking to work. The employees who participate in this Program are considered more dependent on their personal vehicle due to the limited infrastructure for alternative transportation.

**Bikeshare Program**

A bikeshare program is a relatively low-cost TDM option that encourages physical activity while supporting employees who commute from home to work or from transit stops to work. Nelson/Nygaard evaluated a bikeshare program where memberships would have subsidized memberships versus establishing a County-provided and maintained private bicycle fleet. Initially, the Guide recommends for the County to consider a subsidized bikeshare program due to having a lower upfront cost than operating a bicycle fleet. Subsidizing bikeshare memberships can also help build an even greater bicycle culture at the County before the County considers making a higher capital investment of a private bicycle fleet.
Bay Wheels is currently the only bikeshare vendor within Santa Clara County with operations located throughout much of San Jose. It is also important to note that the participation in this Program expected to be high due to the convenience of using bicycles for first and last mile commuting. However, the overall GHG reduction is expected to be low because the participants are expected to used other modes of transportation for portions of their commute to and from work.

**County Clients’ Transportation Needs Assessment**

The Administration has a complementary transportation assessment currently being performed that is focused on County clients. On October 17, 2017, the Board made a referral to the Administration to report back on how to improve transportation options for clients utilizing County services. The Administration subsequently conducted a series of stakeholder meetings with County departments regarding their clients’ transportation challenges, and it was determined that this issue needed further study and exploration by an expert in the field of transportation.

On November 20, 2018, Item 50, the Board approved an agreement with Nelson/Nygaard, in association with Raimi & Associates, to conduct a County Clients’ Transportation Needs Assessment. The Assessment began on January 7, 2019 and is expected to be completed by the end of 2019.

The consultants are working with County staff from numerous departments to gain a comprehensive understanding of the transportation challenges faced by six vulnerable client populations in the County: foster youth, people with mental illness, those being released from jail and/or the VMC, people with disabilities and older adults, non-risk criminal witnesses and victims of crime, and individuals on probation. The Assessment will seek to recommend innovative, implementable, and integrated improvement programs to address their mobility needs in a sustainable manner. The Administration anticipates reporting back to the Board for the Transportation Needs Assessment in the Spring of 2020.

**CHILD IMPACT**

This action will have a positive impact on The Every Child Healthy Indicator through the reduction of GHG emissions, fostering a healthy environment, protecting resources, and protecting public health, safety and recreation.

**SENIOR IMPACT**

This action will have a positive impact on seniors through the reduction of GHG emissions, fostering a healthy environment, protecting resources, and protecting public health, safety and recreation.

**SUSTAINABILITY IMPLICATIONS**

This action will have a positive impact on sustainability by fostering a healthy environment through the reduction of GHG emissions, protecting resources, and protecting public health, safety and recreation.

**BACKGROUND**
Since 1999, the County has contracted with the VTA to provide transit passes through the SmartPass Program, formerly known as the Eco Pass Program. However, over the past two years, the cost of the SmartPass Program has more than doubled and available services reduced when the express bus services were removed from the program. Additionally, less than seven percent of the County’s more than 22,000 employees take advantage of the SmartPass Program.

The County provides only a partial financial incentive for its employees to use other regional public transit options, such as Caltrain and BART, through the form of a Transportation Flexible Spending Account Program. Current participation in this Program is less than 70 employees each month.

The County encourages active transportation at many facilities by providing bike racks, electronic bike lockers, bicycle repair stations, and shower facilities. However, many County facilities are in a built environment with limited access to safe bike lanes, little or no secured bicycle parking infrastructure, and low density or industrial land uses that are not conducive for bicycling.

The County is also placing a high priority on expanding the number of electric vehicle (EV) charging stations available at County facilities for fleet vehicles, County employees, and the general public. There are currently 94 EV charging station ports located at five County facilities, and an additional 71 are expected to be available by the end of 2019. Expanding the County’s EV charging station network will have a positive effect on reducing GHG emissions resulting from employee commutes, while also making it easier for employees to conveniently charge their vehicles at work. However, implementing more EV charging stations is very expensive per user, does not reduce regional traffic congestion, does not alleviate parking constraints, and does not reduce commute-related stress for County employees.

**CONSEQUENCES OF NEGATIVE ACTION**

The report will not be accepted at this time.

**STEPS FOLLOWING APPROVAL**

Notify Greg Beverlin of the Facilities and Fleet Department.

**LINKS:**

- Linked To: BOS-2018-145 : Adopt resolution of the Board of Supervisors of the County of Santa Clara to reaffirm and augment the County’s Greenhouse Gas (GHG) emissions reduction targets and establish a 100 percent carbon neutral commitment for County of Santa Clara operations by 2045, and to consolidate prior actions and resolutions. (Cortese)
- Linked To: 89033 : Consider recommendations relating to the Santa Clara Valley Transportation SmartPass Program.
- Linked To: 93676 : Consider recommendations relating to Transportation Demand Management (TDM) Study.
- Linked To: 90756 : Consider recommendations relating to Transportation Demand Management (TDM) for employee commutes.
• Linked To: 94003: Consider recommendations relating to Transportation Needs Assessment for County Clients.

ATTACHMENTS:

• County of Santa Clara TDM Study Final May 2019 (PDF)
• County of Santa Clara TDM Study Appendices Final May 2019 (PDF)
County of Santa Clara

Transportation Demand Management Implementation Guide

May 2019
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4 | TDM Toolkit ....................................................................................... 34  
5 | Roadmap to Success ........................................................................... 76
“The future will bring increased pressure on the roadway network of the County of Santa Clara”
At a time of rapid growth in the Bay Area, roadway networks are becoming increasingly constrained and commuters are faced with longer commutes. With a high single-occupancy vehicle (SOV) commuter mode share, coupled with continued growth, the future will bring increased traffic pressure on the roadway network within the County of Santa Clara.

The County of Santa Clara (the County) employs more than 20,000 employees. As a large employer, the County has a significant impact on greenhouse gas (GHG) emissions and roadway congestion, and provides large quantities of parking at each office location to accommodate the current drive-alone commute trips by employees. In an effort to minimize the negative impacts of employee commute trips on the environment and local roadway network, the County has outlined a roadmap through the development of a Transportation Demand Management (TDM) Implementation Guide (the Guide) for the implementation of a comprehensive TDM plan serving County employees.
Introduction

What is Transportation Demand Management?

Transportation Demand Management (TDM) refers to policies, programs, or projects that incentivize changes in travel behavior. The goal of TDM is to reduce single-occupancy vehicle (SOV) trips and make it easier to walk, bike, share rides, use transit, or telecommute. TDM may also include efforts to shift trips to off-peak periods or eliminate trips altogether.

What is the TDM Implementation Guide?

The Guide provides the baseline for establishing a comprehensive TDM program for the County, identifies applicable strategies, and specifically describes implementation recommendations. The Guide also identifies the overarching elements that are core to the County’s successful implementation of a TDM program. The Guide details the implementation steps for each TDM strategy, inclusive of cost, participation, and GHG reduction estimates, and provides phasing recommendations for the County to effectively implement a successful TDM program.
How was the TDM Implementation Guide Developed?

The TDM Implementation Guide was developed over the course of a six month study, which included significant consultations with County staff and site visits, as well as a thorough review of County data and assessment of existing conditions to establish the baseline for a TDM program. A workshop was also held with key stakeholders representing various County departments and facilities as a way to collect feedback about the challenges facing County employees and to identify the potential TDM solutions that would best serve and improve commutes for County employees.

Stakeholders from the following departments were consulted during the workshop:

- Facilities and Fleet
- Public Health
- Office of the CEO
- Employee Services Agency
- District Attorney’s Office
- Social Services Agency
- Employee Wellness
- Health & Hospitals

Following the establishment of the baseline, a thorough assessment of applicable TDM measures was performed to evaluate the potential impacts of each strategy, including participation rates, cost estimates, and GHG reduction impacts. Each TDM strategy was comparatively assessed to determine which solutions should be prioritized and to outline phased implementation considerations, to roll out a comprehensive TDM program for the County.
Implementation Guide Goals and Objectives

The Guide is being developed at a time when the County must address several critical transportation issues. With employees experiencing longer commutes and increased roadway congestion, the County is in need of a cost-effective solution to encourage the use of other commute modes among its employees. County employment is also forecast to grow by 22% by 2025, and this rapid growth rate will compel the County to make one of two choices:

1. Construct additional employee parking facilities at a cost of up to $50,000 per space, an inadvisable use of public agency resources; or
2. Encourage employees to commute via more sustainable modes.

The County Board of Supervisors also recognizes that access to sustainable commute options is a critical issue of employee recruitment and retention. With many of the Bay Area’s major employers offering attractive employee TDM programs – from 100%-subsidized transit passes to on-site bike share and commuter shuttles – providing a broad menu of transportation options is also essential to attracting and retaining the most talented employees.

The TDM strategies outlined in the Implementation Guide were developed to help the County work towards its established goals, including:

- Reducing SOV and GHG emissions;
- Addressing parking challenges and traffic congestion at County facilities; and
- Identifying cost-effective and environmentally sustainable ways to provide administrative services.

These goals will also in turn help achieve other County objectives, including:

- Reducing GHG emissions 40% below 1990 levels by 2030;
- Developing strategies that support the growth of the County as a major employer; and
- Providing employees with healthy and cost-effective commuting options.

Achieving the Goals

The objective of the Implementation Guide is to help the County achieve the study goals by providing the County with detailed recommendations as to which TDM measures they should pursue in reducing SOV travel and its subsequent impacts, and outlining the key steps and considerations for successfully implementing the recommended TDM strategies. The recommendations have been assessed and developed in a way to help the County achieve its GHG emissions reduction targets, support the growth of the County as an employer, and is designed in a way that will provide employees with healthy and cost-effective commuting options.
Systematically Implementing TDM Strategies

To help County decision makers choose the preferred combination, the Guide provides an outline of the implementation recommendations by systematically grouping TDM strategy recommendations into a phased approach based on cost and effectiveness, implementation requirements and ability to meet program goals. The first phase forms the building blocks on which more robust strategies are further layered in Phases 2 and 3, which will incrementally increase the success of the comprehensive TDM program.

Baseline + Phase 1

Together, the establishment of the Baseline paired with Phase 1 will set the foundation of the TDM program. The baseline will focus on the development of Core Program Elements, which together with the existing programs will establish the foundation of the program. The first phase will build on the foundation established in the baseline program, and prioritize cost-effective TDM strategies that enhance existing efforts and yield high participation.
Guide Outline

Phase 2

The second phase will include TDM strategies that complement the strategies implemented in the first phase. For instance, a Transit-Feeder Shuttle will help address the first-mile last-mile gaps and will incentivize employees to use the Transit Subsidy. These recommendations may require more time to implement and may have a high cost, but will build off the foundation of baseline and first year efforts, and will ultimately increase employee participation in the TDM program.

Phase 3

Phase 3 outlines the additional strategies that are secondary options to enhancing the foundational strategies, yet will provide additional incentives and tools to achieve the goals of the project. The strategies outlined in the third phase are those that may also require more time and coordination in strategically implementing the recommendations.

The implementation recommendations of the Core Program Elements and modal TDM Strategies are further detailed in Chapter 5.

What’s in the TDM Implementation Guide?

Chapter 2 summarizes the key findings from the baseline assessment, including a summary of the existing conditions.

Chapter 3 includes an overview of the Core Program Elements, and provides a framework for the specific TDM strategy recommendations.

Chapter 4 describes the TDM strategy recommendations, including specific implementation considerations, and maps out the prioritization and phasing of the strategies.

Chapter 5 provides a roadmap and describes the tools for the County to help guide the effective implementation of a comprehensive TDM program serving County employees.

The Technical Appendix includes interim deliverables and technical memorandums, including:

- Peer Champion Program Guidance
- TDM Strategy Assessments
- Interactive Mode Share Model Guide
“Identifying the most impactful and cost-effective TDM program opportunities”
The development of an effective TDM Plan requires various analyses to support the development of strategies that will help work towards the long-term success of the TDM program. The review of baseline conditions is necessary for identifying the most impactful and cost-effective TDM program opportunities that meet the needs of specific employee groups and work sites. Key focus areas for this analysis included:

- Employee origin and destination data
- Employee travel behaviors
- County work site assessments
- Transportation services and infrastructure
- Existing TDM programs
- Employee work schedules

This chapter summarizes the key findings of the baseline assessment, which were used to develop a thorough understanding of current conditions, employee commute behaviors, and daily transportation needs.
State of the Commute

A detailed review and evaluation of County data was performed to determine the current State of the Commute. To perform the baseline assessment, various datasets were referenced and analyses were performed, including:

- County Employee Totals by Location, Shift, and Category
- County Employee Home Locations and Zip Codes
- 2017 Employer Commuter Attitudes Preference Survey
- 2015 Climate Action Plan Data and GHG Baseline Data
- County Parking Lot Supply Data
- Collision Data
- Building Specific Multimodal Access and Parking Designs
- Countywide Growth Projections
- Site Typology and Conditions Assessment
- Core Program Elements Gap Analysis
- Informational interviews

The following provides a high-level summary of key findings related to site conditions, daily transportation needs, and employee commute behaviors.

County Work Sites

The County has several work sites spread out across the County, and as a result, each facility has different commuting environments and services. However, there are a few facilities that are home to many employees, such as the Civic Center and the Santa Clara Valley Medical Center’s (VMC) Main Campus, which employ 59% of the County workforce.

Employee Home Locations

Most employees live in the County of Santa Clara (81%), which suggests that focusing TDM policies and programs within the County may have the greatest impact. The most prominent clusters of employee residences are in San Jose, Santa Clara, Milpitas, Morgan Hill, and Gilroy. Of the 19% employees that reside outside of the County of Santa Clara, most live in Fremont, Union City, and Santa Cruz.
<table>
<thead>
<tr>
<th>County</th>
<th>Employee Count</th>
<th>% of all Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Clara</td>
<td>16,343</td>
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<td>Alameda</td>
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<td>Santa Cruz</td>
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<td>San Mateo</td>
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<tr>
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<tr>
<td>San Benito</td>
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</tr>
<tr>
<td>Contra Costa</td>
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<td>1%</td>
</tr>
<tr>
<td>San Francisco</td>
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</tr>
<tr>
<td>Monterey</td>
<td>136</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Stanislaus</td>
<td>114</td>
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</tr>
<tr>
<td>Merced</td>
<td>111</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
Employees Commute to Work

The vast majority of employees (80%) commute by driving alone. 9% took transit at least once per week, 8% carpooled/vanpooled, 2% biked, and 1% walked.

County employees typically face a long commute. Nearly 15% of County employees have a one-way commute distance of 30 miles or more. Additionally, 21% of County employees have a commute of 11-30 miles. The average commute distance is 15 miles.

A significant portion of employees (23%) have commutes of less than five miles. These employees are considered the target audience for any TDM programs related to walking or biking.

GHG Emissions

Transportation is the largest source of the County’s operational emissions – employee commuting, County vehicle fleet, and reimbursed employee mileage accounted for a majority (52%) of all County GHG emissions in 2017.

Since 2005, emissions from employee commutes have grown both per capita and in absolute amounts. Emissions increased by 25% between 2010 and 2015 due to a growth in employment and vehicle miles traveled (VMT), and a slight decline in transit, bike, and walk mode shares. Part of the increase in VMT can be attributed to the lack of affordable housing in the South Bay, which has resulted in many employees living further away from their place of employment.

In the spring of 2019, all of the electricity used within County facilities transitioned to being powered by 100% renewable energy through purchasing of renewable energy certificates. Therefore, as the greenhouse gas emissions associated with facilities decreases, the emissions associated with transportation become even more significant.

Interest in TDM Programs

Per a 2017 commuter survey for all employees, many employees indicated their interest in TDM programs, suggesting mode shift potential. Gas cards for carpoolers were the most popular option, followed by electric vehicle charging stations, Caltrain GoPasses/Commuter Checks, and pre-tax commuter benefits. Three of the four most popular TDM programs provide direct, cash-based incentives.

Figure 2 Employee Home Distance from Work

<table>
<thead>
<tr>
<th>Distance</th>
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<th>Percentage</th>
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<td>1 mile</td>
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<tr>
<td>2-5 miles</td>
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<tr>
<td>6-10 miles</td>
<td>7977</td>
<td>41%</td>
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<tr>
<td>11-30 miles</td>
<td>4173</td>
<td>21%</td>
</tr>
<tr>
<td>30+ miles</td>
<td>2702</td>
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</table>
Safety

Using the Transportation Injury Mapping System (TIMS), a database that maintains records of all motor vehicle collisions in the State of California, the analysis found that sites in more centrally located, densely developed areas, such as Civic Center and VMC Main Campus, are safer for people walking and biking than work sites in more peripheral exurban areas, such as Silver Creek or VHC campuses in Gilroy, Milpitas, or Tully.

Parking

Sites such as the Downtown Health Center, VHC Gilroy, VHC Milpitas, and VHC Sunnyvale provide more than 1.5 spaces per employee, indicating that many of these spaces are likely to sit empty throughout the day.

Multimodal Access

Transit, bike, and pedestrian access is mixed among the priority sites, as illustrated by the Facilities Conditions Assessment results in Figure 3.

County Growth

The County can expect significant employee growth between 2019 and 2025. The County has grown its workforce by an average of 2.9% per year, and by 2025, the County can expect to have about 24,160 full- and part-time employees, a 22% increase.
Facility Conditions Assessment

As a large employer with multiple work sites across the County, a detailed assessment of 18 work sites was performed to evaluate the potential for TDM across the County. The sites were selected based on their size (representing 90% of County employees) and ability to represent the different commuting environments, ensuring that the overall assessment captured the varying commuting contexts. Each site was assessed on a range of attributes that together influence travel decisions. A score was assigned to each attribute based on a qualitative assessment of the conditions of the site.

The County of Santa Clara work sites have varying levels of density, transit service, and multimodal access, as reflected in the scores of the sites. Figure 3 shows the assessment of each site on the five attribute categories as well as the cumulative score. Each rating is a 0-3 scale, the higher the score the higher the mode shift potential. With the exception of Berger and Silver Creek, all sites with more than 1,000 employees have a medium to high potential for mode-shift.
Methodology

Each site was assessed on multiple attributes that together influence travel decisions. A score was assigned to each attribute based on a qualitative assessment of the conditions of the site. Zero is the lowest possible score, only given out if there is a complete lack of the attribute (i.e. no transit within walking distance). Three is the highest possible score and was given when the evaluated attribute exists at the highest level of service (i.e. multiple frequent transit lines connecting the site to multiple possible destinations). Google maps was used for street view, satellite, transit, and bicycle data. The following section details how each attribute category was assessed for the 18 sites.

Land Use

Land use bases the score on a combination of the land use at and around the site. When combined, the land use and building access categories are proxies for walkability.

The following rating criteria informed the Land Use rating in Figure 3:

0 = Completely isolated single-land use. Requires the use of a car to get to/from the site.

1 = Can walk to a few places, likely have to cross a large arterial street or other barrier.

2 = Some nearby destinations.

3 = Multiple nearby destinations and high concentrations of daytime population. Some trips can be made on site (i.e. cafeteria or coffee cart on site).

Building Access

Building access bases the score on an assessment of how easy the site is to access without a car (i.e. from the sidewalk or bicycle lane). Walk trips include walking from nearby transit stops and parking that is not adjacent to the building.

The following rating criteria informed the Building Access rating in Figure 3.

0 = No sidewalk or connection offsite other than a vehicle-only road.

1 = Sidewalk around site but no direct path to building doors, may have to cross parking lot to get to building. Lack of crosswalks at closest intersections.

2 = Paths or striped walkway through parking lot that connect the sidewalk to building, paths may not follow desire lines. Crosswalks located at closest intersections.

3 = The building is not set back from the sidewalk, or if it is set back, the pedestrian path is given priority over driveways and parking. Crosswalks located at all intersections or on a low traffic street.
Transit

The transit rating bases the score off the number and frequency of transit stops near the priority site. In addition to the specific transit lines nearby the ease of getting to the transit stop and proximity of the transit stops were taken into consideration.

The following rating criteria informed the Transit rating in Figure 3, for all sites the distance used was 0.3 miles or less from a bus stop and 0.5 miles or less from a light rail stop:

- 0 = No transit stops.
- 1 = 1 or 2 bus lines.
- 2 = Light rail or multiple bus lines.
- 3 = Light rail and multiple bus lines.

Bicycle Access

The bicycle access is an assessment of the number, type, and connectivity of the bicycle network where the priority site is located. If there are significant barriers or gaps in the network such as no way to cross a highway then the score was lower. Presence of bike share was also a factor.

The following rating criteria informed the Bicycle Access rating in Figure 3:

- 0 = No bicycle infrastructure in place.
- 1 = Adjacent or nearby bicycle lanes exist, but significant gaps in the bike network limit ability to use a bicycle to get to the site.
- 2 = Dedicated bike facilities.
- 3 = Dedicated bicycle facilities and bike share.

Parking Demand

Parking demand was estimated at each priority site by assessing the parking supply compared to the number of employees at the site. Facilities with high parking scores are facilities where parking is likely most constrained due to the ratio of available spaces to employees.

The following rating criteria informed the Parking rating in Figure 3:

- 1 = More than 1.35 parking spaces per employee.
- 2 = 0.9 to 1.35 spaces per employee.
- 3 = Less than 0.9 parking spaces per employee.
### Figure 3  Assessment of County Work Sites

<table>
<thead>
<tr>
<th>Facility</th>
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<th>Employee Count</th>
<th>Land Use</th>
<th>Building Access</th>
<th>Transit</th>
<th>Bike</th>
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<td>⬤ ⬤ ⬤ ⬤ ⬤ ⬤ ⬤ ⬤ ⬤</td>
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</table>
Existing TDM Programs

TDM programs have two types of elements: modal and core program elements. The modal programs support the use of transit, biking, carpooling, walking, and teleworking. Core Program Elements are the factors that support TDM program delivery, and include elements of Culture, Cost, Convenience, and the Built Environment (CCCB). Together, modal and Core Program Elements establish a foundation for a comprehensive TDM program. An assessment of modal and Core Program Elements was performed to establish a baseline understanding of TDM efforts, and to identify gaps and opportunities in the development of a TDM program.
Existing Modal TDM Programs

The County currently offers a few modal TDM programs, incentives and amenities, providing a baseline of TDM programs to offer employees, including:

- **VTA SmartPass:** The County currently provides a fully-subsidized annual VTA SmartPass for all County employees, which can be used on all VTA-operated buses and light rail services, excluding VTA Express Bus services. SmartPasses are preloaded onto Clipper Cards and typically offered to employees when they begin working at the County. Employees can also load funds out-of-pocket to use on other transit agencies.

- **Bicycle Amenities:** Bicycle racks are commonly available at County facilities, however, bicycle theft is a concern, and has been addressed through the provision of bicycle lockers at five different facilities. The County also has a bicycle repair station at the Civic Center main campus. Additionally, showers are available at many County facilities, yet, some of the shower facilities are not readily accessible and require a passcode.

- **Telework:** Employees are equipped with laptops and many are permitted to work from home, depending on union requirements and supervisor approval. While permitted, it is not widely practiced, as it lacks clear parameters and there is a sense of uncertainty in understanding this arrangement without clear parameters.

- **Carpool:** The County has demonstrated support for carpooling, as highlighted by a carpool pilot between 2016 and 2018. The County subsidized carpool rides and used the Scoop platform to facilitate ridematching. The County continues to provide carpool parking at some of the facilities, which is only available to those who formally register their carpool.

- **Parking Management:** Parking is managed through permits that are administered by the Employee Services Agency during onboarding. All employees are eligible to receive a permit and are provided either an “A” permit for certain seniority levels or a “C” permit for all other employees. Each permit is tied to a unique employee identification number and provided in the form of a sticker, which is affixed to the exterior of a vehicle.
Core Program Elements

To develop a program that can achieve the organization’s TDM goals, a framework of four quadrants, Culture, Cost, Convenience and Built Environment (CCCB) was used to assess how the County can effectively implement a successful TDM program. Through the CCCB assessment, the following gaps and opportunities were identified:

- **Culture**: While the TDM study was performed with specific goals in mind, the County does not have official goals for the adoption of a TDM Plan. Similarly, the County does not have visible champions or assigned leaders that can support and advocate for TDM implementation and participation. Teleworking is an example of how culture can support the success of a TDM program. Employees are currently permitted to telework, however, it is not widely viewed as an accepted practice. Through the development of formal program, paired with leadership champions, employees may be encouraged to telework.

- **Cost**: The County currently offers free parking at every site, provides free electric vehicle charging stations at some facilities, and offers a subsidized VTA SmartPass to every employee. Driving remains the cheapest option for most employees, and free parking may reduce the effectiveness of other commute incentives and benefits. By providing additional subsidies or financial incentives, employees may find that the alternative options as viable choices in comparison to the convenience of driving and parking at work.

- **Convenience**: County employees must access TDM program information and incentives through various departments or platforms. For example, parking passes are distributed to employees during orientation, where VTA SmartPasses have not been consistently distributed—depending on the department. Centralizing TDM program information and developing standard processes for distributing incentives and information would provide employees increased access to TDM programs.

- **Built Environment**: Improved amenities and access to facilities can help facilitate the use of other transportation modes. County facilities upgrades could include the provision of secure bicycle parking and clearly marked or protected pedestrian access, enhancing safety for cyclists and pedestrians. Additionally, while amenities are available at some County facilities, they may not be sufficient or well-promoted. County-wide standards could be developed, and amenities should be heavily promoted to employees.
While the County offers its employees a few TDM programs, driving alone and parking remains the most convenient choice for many employees. Although parking is provided at no cost to employees, the County bears the full cost of parking construction, leasing, operations, and maintenance. In the absence of attractive incentives to try sustainable modes and recognition of the true cost of “free” parking, many employees drive alone to work, thereby increasing traffic congestion and GHG emissions, causing parking supply constraints, and undermining the County’s goals for transportation.

The following chapters of the Implementation Guide identify the TDM strategies and programs that will help the County effectively achieve its goals, and outlines a roadmap as to how the County can enhance the foundation of its TDM offerings and provide a comprehensive program.
“The goal of the TDM program at the County is to make it easier for employees to choose transportation options”
The Core Program Elements of a TDM program are those that establish a comprehensive foundation, which will span across every County site and support various transportation options. They are the soil that allow the TDM strategies to take root and thrive. Ultimately, the goal of the TDM program at the County is to make it easier for employees to choose transportation options. Employers, often unwittingly, limit employees’ commute choices, leaving many people car dependent which costs individuals in time, health, and money, but also in freedom. A workforce highly dependent on auto travel can cost the County in money and land, and impacts the community at large through dirty air and more congested roads.
Culture

Culture is all around us and it affects our everyday lives. Without knowing it, many workplaces give employees who drive to work by themselves higher status and diminish those that choose to bike, walk, or take transit. Two examples are the ‘Employee of the Quarter’ parking spots and the designated parking spaces for more executive-level staff.

Cost

For many people who work at the County, driving is the cheapest option. Parking is free for users - but not to the County where it is a considerable expense. The cost of parking for the County includes expanding parking facilities, and a valet program at the Civic Center. Employees that can take VTA have a free pass, but many rely on other transit agencies and must pay out of pocket. Time is also one of the costs that factor into travel decision. Trip times vary widely due to route, time of day and mode but recent research indicates that the ability to multitask on transit such as texting plays a small but significant reason people choose transit.

Convenience

Many employees would bike, walk, take transit, carpool, and telework if these options were easier to access and understand. The County of Santa Clara can help employees learn and understand their options, and can help inform how employees make transportation decisions.

Built Environment

The buildings, roads, sidewalks, and parking facilities that make up our built environment send messages about the ‘right’ way to commute. Work sites with no walkway to the front door and not enough bike racks make it harder for employees to take transit or bike or walk.
CORE PROGRAM RECOMMENDATIONS

The project team has developed Core Program Elements recommendations for the County of Santa Clara based on a gap analysis of the current Culture, Cost, Convenience, and Built Environment factors that influence employees’ transportation choices.

With an eye on implementation and results, the Core Program Elements are a set of 10 actions that together will allow County employees to make transportation choices that work best for them each day.

Each of the mode choice factors (Culture, Cost, Convenience, and Built Environment) buttresses two actions. Based on a gap analysis performed for this study, the project team recommends that the County adopt, in addition, two elements: “Build the Team” and “Learn and Adjust”. These will allow the County to reliably deliver a high-quality commute program to employees and monitor performance and adjust based on data.

Figure 4  Core Program Elements Framework

- **Build the team**
  - Create a commute services division
  - Adopt and communicate goals
  - Identify and empower leadership champions

- **Culture**
  - Balance the playing field
  - Use carrots and sticks

- **Cost**
  - Develop consistent communications
  - Set up an online commute platform

- **Convenience**
  - Create facilities standards for commute
  - Update existing facilities & apply standards to new

- **Learn and adjust**
  - Monitor progress towards goals
Build the Team

The County of Santa Clara employs more than 21,000 employees. Providing transportation support for that many people spread throughout many work sites is the job of a team of people. Currently only one person is dedicated full-time to managing this effort. Organizations of similar size or complexity as the County of Santa Clara usually have a Commute Services team.

Santa Clara Commute Services Team

Commute Services teams ensure coordinated and equitable delivery of a TDM program. These roles provide several benefits and serve multiple functions, including:

- **Parking Management**: access, enforcement, information, revenue management
- **Commute Benefits**: eligibility, delivery, information, user support
- **Facilitate**: plan and deliver campaigns (i.e. bike to work month, new transit rider meetups, and regular communications on transportation option)
- **Commute Services**: operations, information, customer service, contract management
- **Support Facilities**: develop standards for transportation amenities (i.e. bike racks, showers, sidewalks, etc.) and inform users about available amenities

Commute Services teams often partner with benefits, facilities, and executive teams. The exact configuration of the team, the number of people, and their reporting structure can vary widely. The bullets above are common roles and responsibilities found in commute service teams. Sometimes one person can play multiple roles, or more likely in the case of large employers, more than one person will be assigned to a given role.

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager or Director of Transportation</td>
<td>Runs the team, coordinates with other departments and outside agencies, such as transit agencies and city departments to ensure for the overall success of transportation department.</td>
</tr>
<tr>
<td>Communications Lead</td>
<td>Writes, plans, and coordinates internal communications to staff about transportation services, campaigns, and benefits.</td>
</tr>
<tr>
<td>Operations/Programs Lead</td>
<td>Manages parking and shuttles operations and manages the administration of TDM programs.</td>
</tr>
<tr>
<td>Data Lead</td>
<td>Manages operations and performance data processes for transportation programs. These can include managing commute platform, transit and other subsidies, parking management tasks such as utilization studies, and supervising the yearly TDM survey.</td>
</tr>
</tbody>
</table>
Culture

To foster a supportive culture of transportation choices, the County of Santa Clara can take two major actions, including:

1. Adopt and communicate transportation goals; and
2. Identify and empower leadership champions.

Adopt and Communicate Transportation Goals

The County dedicates considerable resources to greener operations and much attention is paid to sustainability. This success is thanks to, in part, clearly articulated Environmental Stewardship Goals.

Currently, the County does not have a Board of Supervisors’ adopted vision or goals for transportation. The project team recommends that the County adopt principles and goals to guide the development and delivery of transportation programs at County work sites. This will go a long way in creating a culture of sustainable mobility.

Define Goals

The County of Santa Clara pursued the development of a TDM program to achieve three outcomes. Figure 6 presents the three outcomes, including performance indicators, value of the indicators, and a proposed target. These targets should be universal, in the sense that they are goals that each department or facility can work towards.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Indicator</th>
<th>Current</th>
<th>Proposed Target</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Parking Demand</td>
<td>Single Occupancy Vehicle (SOV) Rate</td>
<td>80%</td>
<td>70% by 2025</td>
<td>Annual CAP Survey</td>
</tr>
<tr>
<td>Reduce Regional Congestion</td>
<td>Single Occupancy Vehicle (SOV) Rate</td>
<td>80%</td>
<td>70% by 2025</td>
<td>Annual CAP Survey</td>
</tr>
</tbody>
</table>
Leaders Set the Tone

Leaders who ‘walk the talk’ are crucial to the success of the County’s TDM program. When a leader explains sustainable transportation is a core value to the organization, the TDM program gains credibility. If they go a step further and shows they ride transit or bikes, or carpools, people take notice and options become more plausible.

Leadership support for the program is crucial, but it must be authentic. People will quickly sniff out “flavor of the week” initiatives and lose trust for the program making it harder in the long run to convince them to try different transportation options. The following checklist outlines the key considerations that County leadership should ask themselves as they contemplate becoming a visible champion of the TDM program. Champions must:

- Explain clearly the need to reduce congestion, parking demand, and emissions;
- Make the case that it’s everyone’s job to pitch in when they can – no one needs to stop driving all the time (small changes, collectively can make a big difference – one time per week is a 20% reduction, and two times per month is a 10% reduction);
- Be willing to try to reduce their driving and talk about the experience.

Peer Champions

In addition to the executive leadership, the County should develop a program of local champions who can provide information and support for staff looking for transportation options. The County already has a successful wellness champion program, and a similar effort should be applied to the TDM program. Many of the wellness champions could potentially serve as transportation champions. Transportation champions should have experience with one or more non-drive transportation options, and interest in helping other staff members understand their options.

Recruiting, training, and celebrating champions is key to maintaining a transportation peer network. See Appendix A for a detailed implementation guidance for a Peer Champions Program.

Cost

The County of Santa Clara provides a free transit pass for VTA service, making transit competitive with driving – at least on cost. However, for people who live outside the VTA service area, driving is often cheaper than transit. Since 94% of households in the County
of Santa Clara own a car, gas and maintenance are the main out of pocket expenses of driving.

By providing a subsidy for transit on BART, ACE, Caltrain, or Amtrak, the County can make transit a viable option for many more people.

Incentives

Providing incentives for non-drive trips can be a powerful motivator to drive less. Rewards may be provided in different formats, such as:

- **Cash Rewards** — a simple cash transfer is often the most effective. Combined with support programs and investments in options like shuttles, transit, and better bike facilities, they can reduce the drive-alone rate

- **Introductory Offer** — maintains some of the power of the cash transfer, but limits the expense is a time-limited cash reward in an ‘introductory offer’ where the first set number of trips in a non-drive commute mode earns rewards.

- **Points-Based System** — users earn points that can be converted into rewards, such as redeemable points for gift cards, providing administrators with the certainty what the cost of incentives will be in a given year.

- **Virtual Rewards System** — Gamification is standard fare in a wide variety of applications in affecting behavior through engaging campaigns, providing virtual rewards through competition.

The different types of incentives are not mutually exclusive and can be combined to achieve the best result for the County of Santa Clara. Program performance should be monitored and regularly tested to evaluate the impacts of different types of rewards to achieve mode shift goals.

As can be seen in the table below, some transit trips are faster and often more reliable than a car trip. The project team had developed an analysis of transit subsidy policies for the County see Appendix B.

### Figure 7 Driving and Transit Cost Comparisons

<table>
<thead>
<tr>
<th>Route</th>
<th>Driving Cost</th>
<th>Transit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palo Alto to 2310 N First Street, San Jose</td>
<td>$5.62 per day $112.40 per month 18 - 40 minutes</td>
<td>$7.50 per day $96 per month 1 hour 4 minutes (Caltrain $3.75, VTA $0)</td>
</tr>
<tr>
<td>Hayward to Valley Medical Center Hospital</td>
<td>$8.88 per day $177 per month 50 min to 2 hours</td>
<td>$28 round trip $238 per month 1 hour 22 minutes ($14 Capitol Corridor, VTA $0)</td>
</tr>
</tbody>
</table>
Convenience

Employer-based transportation programs often require employees to take other cumbersome steps before taking advantage of commute services. Intended to curb ‘abuse’, they often act as barriers to adoption and create administrative burdens on program managers. Carpool sign up, for example, can depress participation due to significant steps required for the registration process.

Reducing barriers to trying non-drive commute options is a key tactic of the Core TDM Programs. One effective tactic to increase ease of use of travel choices is the use of a commute platform.

Commuter Platform

Commuter platforms are software systems that bring together information and transportation options into one website and mobile applications. Some of the features that commuter platforms often provide include:

- Incentive management
- Benefit sign up (e.g. transit passes)
- Carpool ridematching
- Guaranteed Ride Home
- Shuttle schedules and location
- Parking management
- Commute tracking

The goal of the TDM program is not for everyone to stop driving. Rather it is to make it easier for everyone to choose how to get to work in the way that best suits them each day. This ‘dynamic transportation’ system is supported by a well-designed commute platform. The following diagram illustrates how this dynamic choice might work.

Every day, an employee can choose how to get to work, whether driving, sharing a ride, on transit or biking. Each non-drive alone trip earns points or a reward, and all of the activity is reflected back to the user so she can see a summary of her commute statistics.

The project team has developed recommendations for the features that will meet the needs of the proposed TDM strategies for the County. These recommendations can be found in Appendix G.
Built Environment

Roads, sidewalks, bike lanes, showers, and lockers all shape how—and whether—people use transportation options. The project team recommends that the County prepare an inventory of its facilities to create scorecards to rate these aspects of the Built Environment that limit or support the facilitation of using various modes of transportation to access each facility. Figure 9 provides examples of the key considerations for various aspects of the Built Environment.

Figure 9  Built Environment Scorecard Framework

<table>
<thead>
<tr>
<th>Built Environment Aspects</th>
<th>Minimum Passing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian Access</td>
<td>Pedestrian paths from the sidewalk to the front door should be easy to find and provide some separation from cars.</td>
</tr>
<tr>
<td>Bike Racks</td>
<td>County should develop standard for number of racks, placement, and model type</td>
</tr>
</tbody>
</table>
Small Project, Big Impact

Often, small facility improvement projects can make big and positive impacts for an employee’s experience in accessing their work site, ensuring safe, comfortable, and seamless access. The image below illustrates how the buildings at 2460 N. First St. and 2450 N. First St. have created a concrete walkway through the planted berm and extended it to the front door, and have created a path through the landscaping and it leads to a painted cross hatched walkway to the front door. These treatments should be an inspiration for the county to plan upgrades to its pedestrian entry ways.

The buildings next to the County facility at 2310 N. First St. are examples of how pathways and paint can be used to make a significant improvement. The images below illustrate how the buildings at 2460 N. First St. and 2450 N. First St. have created a concrete walkway through the planted berm and extended it to the front door, and have created a path through the landscaping and it leads to a painted cross hatched walkway to the front door. These treatments should be an inspiration for the county to plan upgrades to its pedestrian entry ways.
“The Toolkit includes a package of 16 strategies”
This TDM Toolkit serves as a guide on how to implement TDM strategies that are best suited for the County. The Toolkit includes a package of 16 strategies grouped into four categories: Incentives, First/Last-Mile Connections, Administrative, and Parking Management. All these elements will help the County ensure long-term success in the delivery of its TDM program. Too much emphasis on one, or ignoring some altogether, will impact the County’s ability to improve parking and mobility for all.

The Toolkit provides additional detail on each of the 16 strategies, as well as guidance to staff and leadership as it moves forward with implementation. The following information has been provided.

- **Summary Statement**: A brief overview of the strategy
- **Applicable Sites**: A list of County work sites where the strategy should be targeted
- **Program Effectiveness**: GHG reduction potential and estimated participation
- **Cost Estimate**: Planning-level estimate of the costs to implement the strategy
- **Implementation**: A list of County and contractor requirements and monitoring considerations to ensure efficient and productive implementation
- **Timeline**: Timeframe of when the strategy should be implemented within the next three years
- **Potential strategies to be considered past the next three years are considered “long-term”**

While there are many different ways to implement any given strategy, the Toolkit summarizes the recommended approach that would be the most cost-effective for the County. For more information regarding the analysis of different implementation options for each strategy, please refer to Appendix B to Appendix I.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Participation</th>
<th>Cost</th>
<th>Annual Cost per Participant</th>
<th>GHG Reduction</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incentives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Transit Subsidy</td>
<td>$50 monthly transit subsidy and pre-tax option in addition to existing free VTA SmartPass</td>
<td>2,000 - 2,300</td>
<td>$1,301,000 per year</td>
<td>$614</td>
<td>0.75 - 2.5%</td>
</tr>
<tr>
<td>2</td>
<td>Commute Cash</td>
<td>$2 daily incentive for carpooling, biking, and walking</td>
<td>2,200 - 2,400</td>
<td>$264,000 - $288,000 per year</td>
<td>$120</td>
<td>1.2% - 2.0%</td>
</tr>
<tr>
<td>3</td>
<td>Subsidized Bikeshare</td>
<td>Fully subsidized Ford GoBike membership</td>
<td>460</td>
<td>$46,000 per year</td>
<td>$100</td>
<td>0 - 0.4%</td>
</tr>
<tr>
<td>4</td>
<td>Private Bike Fleet</td>
<td>Fleet of County-owned bikes available for employees during the work day</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>0 - 0.7%</td>
</tr>
<tr>
<td><strong>First/Last-Mile Connections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Transit Feeder Shuttle</td>
<td>First/last-mile shuttles connecting major work sites to Diridon Station</td>
<td>See below</td>
<td>$615,500^2</td>
<td>See below</td>
<td>See below</td>
</tr>
<tr>
<td></td>
<td>VMC Bascom &amp; O’Connor - Diridon Shuttle</td>
<td></td>
<td>545</td>
<td>$357,000 per year</td>
<td>$755^3</td>
<td>1.7 - 2.8%</td>
</tr>
<tr>
<td></td>
<td>SSA Julian - Diridon Shuttle</td>
<td></td>
<td>73</td>
<td>$178,500 per year</td>
<td>$2,130^4</td>
<td>0.2 - 0.3%</td>
</tr>
<tr>
<td>6</td>
<td>Subsidized Ride Hailing</td>
<td>$3 subsidy on Uber/Lyft rides between work and transit</td>
<td>418</td>
<td>$627,000</td>
<td>$1,500</td>
<td>+0.6%^5</td>
</tr>
<tr>
<td><strong>Administrative Shared Rides</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Commute Platform</td>
<td>Online dashboard and/or mobile application that unifies all commute and parking information</td>
<td>--</td>
<td>$15,000-$30,000 start-up $234,000-$541,000 per year</td>
<td>$11-$26</td>
<td>--</td>
</tr>
<tr>
<td>8</td>
<td>Carpool</td>
<td>Facilitated ridematching through a commute platform</td>
<td>50-100</td>
<td>--</td>
<td>--</td>
<td>0.2 - 0.3%</td>
</tr>
<tr>
<td>9</td>
<td>Flex Work</td>
<td>Telework one day per week</td>
<td>225-320</td>
<td>$0 No cost</td>
<td>--</td>
<td>0.15 - 0.73%</td>
</tr>
</tbody>
</table>

---

1 Assuming 2,200 participants and annual budget of $264,000, the approximate breakdown is $198,000 for carpoolers and $66,000 for bicyclists and pedestrians.
2 Includes cost of both shuttles and $80,000 for one FTE.
3 Annual cost derived from cost per passenger trip ($1.51).
4 Annual cost derived from cost per passenger trip ($4.26).
5 Anticipated to increase GHG emissions by 0.6% due to the increase of vehicle trips through ride hailing.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Participation</th>
<th>Cost</th>
<th>Annual Cost per Participant</th>
<th>GHG Reduction</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Parking Wayfinding &amp; Signage</td>
<td>Static and dynamic wayfinding and signage</td>
<td>--</td>
<td>$32 per sensor</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>10</td>
<td>Parking Occupancy Counts</td>
<td>Regular parking occupancy counts</td>
<td>--</td>
<td>$10,000-$15,000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>11</td>
<td>Access Control Equipment</td>
<td>Parking technology and infrastructure that control access into and out of a parking facility</td>
<td>--</td>
<td>Varies depending on option chosen</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>12</td>
<td>Designated Visitor &amp; Employee Parking Spaces</td>
<td>Separate visitor and employee parking</td>
<td>--</td>
<td>$35 per space</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>13</td>
<td>Designated Carpool/ Vanpool Parking Spaces</td>
<td>Priority parking spaces for carpools and vanpools</td>
<td>--</td>
<td>$35 per space</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>14</td>
<td>Daily Paid Parking</td>
<td>$2 daily parking charge</td>
<td>--</td>
<td>Net positive $</td>
<td>--</td>
<td>1.2-3.7%</td>
</tr>
<tr>
<td>15</td>
<td>Shared Parking</td>
<td>Parking agreements to lease out portions of underutilized parking facilities to nearby employers</td>
<td>--</td>
<td>Net positive $</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

6 Daily paid parking is expected to generate approximately $500 in annual revenue per parking space.
7 GHG reduction of paid parking is independent of the size of a parking facility.
8 Shared parking is expected to generate revenue from leasing out parking spaces.
1. **TRANSIT SUBSIDY**

Free or highly subsidized transit passes encourage the use of public transportation and are an effective way to leverage existing public transit service to reduce driving trips to work. Depending on the amount of the financial subsidy relative to transit costs, this strategy can reduce or remove financial barriers and encourage people to change their primary or secondary commute mode.

The County currently provides a free VTA SmartPass to all County employees via a Clipper Card during orientation or upon request. In order to serve more employees and yield a higher mode shift, the County should consider providing an additional $50 transit subsidy with the existing pre-tax commuter benefit option. An additional subsidy will allow employees who live outside the VTA service area and use other transit agencies, to incur lower transit costs.

Additionally, all program participants would be able to open a pre-tax commuter account to set aside pre-tax dollars from their paycheck for transit expenses. The IRS allows up to $265.00 per month of transit costs to be set aside for pre-tax dollars. However, given the proposed monthly subsidy of $50 and VTA SmartPass Program (fair market value of $82.50) are considered tax-exempt benefits, employees can set aside a maximum of $132.50 of pre-tax dollars per month. Based on a tax rate of 22%, the maximum tax savings per employee in estimated to be $29 per month.

<table>
<thead>
<tr>
<th>Incentives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>0.75 - 2.5%</td>
</tr>
<tr>
<td>Participation</td>
<td>2,000 - 2,300</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>$1.3M</td>
</tr>
<tr>
<td>Timeline</td>
<td>Year 1</td>
</tr>
</tbody>
</table>
The SmartPass Program currently costs $658,000 and is anticipated to average 1,335 participants in 2019. This would result in SmartPasses costing, on average, $493 per actual user for the entire year and $41 per actual user per month. If the County of Santa Clara were to offer employees an equivalent service that provides free VTA non-express bus and light rail rides, the County would need to implement a transit subsidy program and purchase annual VTA passes at $990 per pass. With an anticipated 1,335 participants in 2019, the costs for instead providing annual VTA passes would be $1,321,650.

The SmartPass Program requires the County to purchase passes for all County employees, even though less than 10 percent of employees participate in the Program. However, the Program is still more cost effective than purchasing annual passes for existing users because the SmartPass Program’s discount results in passes that cost less than half per actual user when compared to purchasing annual passes.

Furthermore, if the County were to discontinue the SmartPass Program with no replacement program of equivalent service, many of the nearly 1,500 employees who currently utilize the program would elect to drive alone to work instead of paying the full amount of $990 out of pocket for an annual pass.

The County also offers a voluntary Pre-Tax Commuter Benefit Program, in addition to the SmartPass Program, which allows employees to save money on public transit and work-related parking expenses. However, participation in this benefit is less than 60 employees Countywide due mostly because it only provides a partial discount proportional to an employees’ income tax rate, while employees will need to cover the remaining transportation costs. If the County were to discontinue the SmartPass Program and only provide Pre-Tax Commuter Benefits, many of the nearly 1,500 employees who currently utilize the SmartPass Program would likely drive alone to work. Due to these reasons, the Implementation Guide recommends extending the SmartPass Program for County employees.

**Applicable Sites**

Similar to the existing transit program, the additional subsidy and pre-tax option should be offered to all County employees, regardless of work site.

**Program Effectiveness**

An additional transit subsidy and pre-tax option is estimated to increase the existing transit mode split from 9% to a maximum of 11%, which equates to a GHG reduction potential of up to 2.5%. Total participation is estimated to be between 2,000 to 2,300 users.

Please see Appendix B for a detailed assessment of transit subsidies and the assumptions used to estimate program effectiveness and costs.

**Cost**

The current subsidy program costs approximately $658,000 per year. Offering an additional $50 monthly subsidy option for other agencies, would cost an additional $567,000. The cost of a pre-tax commuter benefit currently costs an additional $76,000 – making the total cost of the program $1,301,000 annually.
Implementation

County Requirements

- Continue to offer all employees a VTA SmartPass
- Amend the original contract with Navia for pre-tax accounts to include the addition of a monthly subsidy program

Contractor Requirements

- Enroll employees in the program online and, if necessary, through hardcopy enrollment forms at no extra cost
- Allow employees to join the program at any given time
- Allow employees to access funds one of two ways:
  - Direct deposit onto a Clipper Card through the Navia website
  - Commuter benefit debit card
- Can be used for any local transit agency and allows employees to purchase transit tickets at a ticket vending machine and/or to load funds onto a Clipper Card
- Allow participants to adjust their payroll deduction, change their mailing address, and terminate their enrollment at any given time
- Establish a coordinated approach to distributing, administering, and promoting the program consistently
- Identify a point person who can support staff in countywide administration and delivery
- Eliminate terminated employees from the program and payroll deduction cycle as instructed by County staff
- Provide employee communication and outreach support (including printed and web-based information) to promote the program and distribute enrollment information
- Submit a detailed monthly report to County staff on enrollments, posted contributions, and reimbursements
- Assist County staff on technical issues affecting the administration and processing procedures of the Commuter Benefit Program
- Update County staff of any and all changes to State and/or Federal laws and regulations related to the commute benefits

Monitoring

- Consider adding questions to the annual CAP survey to gauge program usage and awareness pre- and post- implementation
- Track the use of transit subsidies and pre-tax dollars through the online portal.
- Evaluate monthly reports to determine the effectiveness of the program and whether the subsidy offered is successful in encouraging transit ridership
- If transit mode split rates does not increase, consider offering a higher subsidy to encourage more employees to take transit. Regular monitoring will help inform the appropriate subsidy amount given available funding.

Potential Contractors

<table>
<thead>
<tr>
<th>Navia (existing)</th>
</tr>
</thead>
</table>

Attachment: County of Santa Clara TDM Study Final May 2019 (100239 : Employee Transportation Demand Management Implementation Guide)
COMMUTE CASH

A Commute Cash program, also commonly known as a parking cash-out program, provides financial incentives to employees who choose to not drive and park at work. When paired with paid parking, they are one of the most effective ways to shift drive-alone commuters to other, more sustainable modes. Commute cash programs are effective in allocating scarce parking and managing a growing demand for parking.

For suburban employers, such as the County of Santa Clara, a commute cash program can:

- Limit the cost of acquiring new parking
- Offer employees/visitors more parking spaces
- Offer employees more incentive options to use alternative transportation
- Address regional congestion and air quality concerns

Although they may be administered in any timeframe, a daily incentive is recommended to avoid an all-or-nothing approach. A daily option, as opposed to a monthly one, provides more flexibility and allows commuters to choose when to use a sustainable commute mode.

Research has shown that higher subsidy amounts encourage more participation and lead to higher GHG emissions reduction, but the County can begin by offering a $1 per trip incentive. The initial incentive can be claimed by employees who use a sustainable commute option (i.e. carpool/vanpool, bike/scooters, walk), but does not include teleworking. In the interest of cost savings and avoiding double payment, transit and ride hail users would not be eligible under this program, and reimbursement cap can be set at a maximum of $10 per month, which incentivizes alternative transportation for 5 days.

<table>
<thead>
<tr>
<th>Incentives</th>
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</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>1.2 - 2%</td>
</tr>
<tr>
<td>Participation</td>
<td>2,200 - 2,400</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>$264 - $288K</td>
</tr>
<tr>
<td>Timeline</td>
<td>Year 2/3</td>
</tr>
</tbody>
</table>
Applicable Sites

Ideally, incentives would be offered to all County employees. However, due to the high cost of implementing such a program countywide, the following sites should be prioritized due to existing parking constraints, workforce size, and mode shift potential. Most sites have good transit and/or bike access and are potential commuter shuttle stops. Cost and GHG reduction estimates assumes implementation at these seven sites, which house 87% of all County employees:

- Civic Center
- Valley Medical Center (VMC) Main Campus
- Berger
- Charcot
- O’Connor Hospital
- Silver Creek
- Champion Point
- SSA Senter
- SSA Julian

Program Effectiveness

If implemented as recommended, a Commute Cash program has an estimated GHG reduction potential of 1.5 to 2.5% per site, which equates to approximately 200 to 400 employees who would shift from driving alone to work to an eligible sustainable mode. Given that approximately 2,000 employees at the nine applicable sites currently carpool/vanpool, bike/scooter, or walk to work, total participation is estimated to be between 2,200 to 2,400 users. Applying the current mode split from the CAP Survey to 2,200 users, 1,651 would carpool/vanpool to work, 317 would bike, and 232 would walk. Given that 87% of all County employees work at one of the nine recommended sites and 9.2% are transit users, and therefore ineligible, the overall GHG reduction potential is approximately 1.2 to 2.0%.

Please see Appendix C for a detailed assessment of Commute Cash programs and the assumptions used to estimate program effectiveness and costs.

Cost

Assuming a $1 per commute trip incentive and a maximum cap of $10 per month, the program is estimated to cost $264,000 to $288,000 per year.
Implementation

County Requirements

- Integrate incentive into a commute platform to simplify the management of the program and streamline recordkeeping and distribution of payment
- If abuse is a concern, consider limiting implementation to work sites with parking facilities that are managed and tracked electronically
- To minimize administrative burden for the County, consider payments as “post-tax”
- Though not ideal for employees, this would reduce significant administrative and operational challenges for the County
- Identify a point person who can support staff in countywide administration and delivery

Contractor Requirements

- Require employees to register on the platform and log their daily commute trips and mode via a commute calendar
- Deposit incentives into an employee’s “account” on a monthly basis, and add funds as a stipend onto an employee’s paycheck

Monitoring

- While the County may provide an initial $1 per trip cash-out, a higher amount can more effectively deter employees from driving to work. The County should:
- Track and monitor participation monthly on the commute platform to provide payouts and determine if the incentive is effective in encouraging non-SOV modes
- Deter abuse of the program by requiring validation. Potential validation options include the following options:
  - If parking is managed and tracked electronically, integrate management technology into the commute platform to ensure employees who park cannot receive cash-out
  - If transit users are ineligible, integrate commute benefits vendor (i.e. Navia) into the commute platform to ensure transit users cannot receive a cash-out
- Track parking usage; if demand remains high and non-SOV use remains constant, increase the commute cash amount and/or the County starts charging for parking

Potential Contractors

<table>
<thead>
<tr>
<th>Luum</th>
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</thead>
<tbody>
<tr>
<td>Participation</td>
</tr>
<tr>
<td>Ride Shark</td>
</tr>
</tbody>
</table>
3. SUBSIDIZED BIKESHARE

Bikeshare programs provide users with short-term use of bikes that are distributed across a city or district. They are useful for making last-mile connections to/from transit and facilitating short-distance circulation throughout the service area.

FordGoBike currently operates a regional bike share system in the Bay Area, which serves a number of priority sites. The following County facilities are located within walking distance of a bike share dock:

- Civic Center (100 feet)
- SSA Julian (0.3 miles)
- Valley Health Center Lenzen (0.3 miles)
- Downtown Health Center (100 feet, future dock)
- Roads and Airports (0.2 miles)

Additionally, Charcot, Fleet and Champion Point are located near or within the dockless pilot area.

Subsidizing the cost of a bikeshare membership can encourage employees to bike to work without the burden of owning, maintaining, and parking a bike. It can also reduce midday driving trips for employees who drive to work. Under Ford GoBike’s Corporate Partnerships program, the County can opt to provide a fully-subsidized annual membership for employees at a cost of $100 per membership.

<table>
<thead>
<tr>
<th>First-mile Last Mile Connections</th>
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</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
</tr>
<tr>
<td>Participation</td>
</tr>
<tr>
<td>Annual Cost</td>
</tr>
<tr>
<td>Timeline</td>
</tr>
</tbody>
</table>

Applicable Sites

The County can begin by offering a fully-subsidized membership to the eight sites that are currently located nearby a bike share dock. Given that FordGoBike is planning to expand their network in San Jose over the next few years, the County should consider expanding eligibility for this program to sites that will be located near new docks.

Program Effectiveness

Given the limited coverage of bike share docks in Santa Clara County, the anticipated participation rate is estimated at 5% or less (approximately 460 participants). With a completely free program such as a full bike share subsidy, there is the potential for more employees to sign up than estimated. However,
since most employees live outside of walking distance from bike share, it is assumed that no more than 5% of employees would sign up.

The estimated GHG reduction is 1.0% or less for each site. Given that 44% of all County employees work at one of the eight sites near a bike share dock, the maximum GHG reduction potential is approximately 0.4%.

Please see Appendix D for a detailed assessment of bikeshare programs and the assumptions used to estimate program effectiveness and costs.

Cost
An estimated participation of 460 employees and a $100 fully-subsided membership yields an annual cost of approximately $46,000.

Implementation

County Requirements

- Enroll as a corporate partner through Ford GoBike and choose the full subsidy plan
- Require employees to use a valid work email address to sign up

Contractor Requirements

On a quarterly basis, Ford GoBike shares the names of the employees who sign up under a corporate sponsorship so that their eligibility can be verified.

- Provide the following pieces of data:
  - Total number of enrolled employees
  - Total number of trips
  - Trips for each annual member

- Target outreach at sites near bikeshare docks
- Partner with Ford GoBike to sponsor additional stations in locations that are convenient for County employees to access

- Time of trips (to filter out non-work day travel)
- Distance of trips (or trip start and end points)
- Use of stations near County employment sites

Monitoring

- Track bike share usage and patterns to understand how often docks are used and where employees are biking
- If usage is high and bikes are rarely available, work with Ford GoBike to offer more bikes at the dock

- Keep track of service area expansion and target outreach at sites that have newly installed docks
- Distribute an annual survey for participants to provide feedback on the program

Potential Contractors

<table>
<thead>
<tr>
<th>Ford GoBike</th>
<th>Lime Bike</th>
<th>Jump</th>
</tr>
</thead>
</table>

Packet Pg. 76
PRIVATE BIKE FLEET

The County can provide its own fleet of shared bicycles to employees for their use during the workday. While some programs allow bikes to be used for exercise or errands, the primary focus of the private bike fleet should be on first/last-mile connections in between facilities for meetings and/or site visits. The County can also consider long-term or permanent bike loans for employees who commit to regularly commuting by bike. Doing so would likely lead to increased program effectiveness and less day-to-day management.

Electric bikes are not recommended for the initial program given the relatively flat terrain in the populated areas of Santa Clara County and the added cost and complexity such as battery charging and maintenance. After successful launch, however, the program may consider adding a few electric bicycles as they have can make riding a bike accessible to more people.

### Applicable Sites

The County can phase implementation of a countywide program by first prioritizing sites that are already accessible by bike. Prime candidates include sites that are within close proximity to other County sites and bike lanes or trails. Additionally, sites with more employees would provide a larger market capture. Using a one bike to 250 employees ratio, a total of 63 bikes would be needed for eight sites identified below.

### First/Last Mile Connections

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>0-0.7%</td>
</tr>
<tr>
<td>Participation</td>
<td>--</td>
</tr>
<tr>
<td>Startup Cost</td>
<td>$63K</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>$6-7K</td>
</tr>
<tr>
<td>Timeline</td>
<td>Year 2</td>
</tr>
</tbody>
</table>

### Figure 11  Recommended Fleet Size by Site

<table>
<thead>
<tr>
<th>Recommended Site</th>
<th>Fleet Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Center</td>
<td>18</td>
</tr>
<tr>
<td>Champion Point</td>
<td>8</td>
</tr>
<tr>
<td>Silver Creek</td>
<td>8</td>
</tr>
<tr>
<td>Berger</td>
<td>6</td>
</tr>
<tr>
<td>Charcot + Fleet</td>
<td>6</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>6</td>
</tr>
<tr>
<td>O’Connor</td>
<td>6</td>
</tr>
<tr>
<td>SSA Julian</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>63</strong></td>
</tr>
</tbody>
</table>
Program Effectiveness

Given the number of factors that go into developing a bike share program, the overall success can vary. Having internal program champions and a system that makes using shared bikes simple and easy will result in higher participation. The County could set a goal of 31,000 trips per year, an average of two trips per workday for each bike in a 63-bike system.

A private bike fleet is estimated to reduce GHG emission from midday trips by less than 1% for each site. Given that 71% of all County employees work at one of the eight applicable sites, the maximum GHG reduction potential is approximately 0.7%.

Please see Appendix D for a detailed assessment of private bike fleets and the assumptions used to estimate program effectiveness and costs.

Cost

Startup costs for an internally developed and administered program is about $1,000 per bike, including accessories helmet, U-lock, side bag panniers, lights, and shared basic maintenance tools.9

Maintenance costs vary depending on how much internally provided maintenance can be provided. Given the significant wear that shared bikes experience, it is recommended that bikes are tuned up on an annual basis by a professional mechanic for about $100 per bike. The cost for a 63-bike pilot would be $63,000 with an ongoing cost of $6,000 to $7,000.

Implementation

County Requirements

- Purchase bicycles from a contractor directly, or select a contractor through a bidding process to provide an all-in-one private bike share system
- Direct purchase ($400+ per bike): select a vendor that can also provide ongoing maintenance or contract maintenance separately with a local bike shop.
- All-in-one ($1,000 - $2,000 per bike): includes app for reserving and checking out bikes as well as ongoing maintenance.
- Develop a budget for the purchase of a fleet of bicycles, bicycle racks, helmets, odometers, saddle bags, U-locks, basic maintenance tools, and tire pumps
- Consider the need for miscellaneous items on an ongoing basis such as: tire tubes, brake pads, numbering decals for the bike and racks, replacement bike parts, etc.
- Consider costs for GPS trackers on bicycles to help identify bicycle locations

---

9 Appendix E - Sample BikeShare Start-Up Budget, Employee BikeShare Program Toolkit for Government Agencies, California Department of Public Health.
- **A successfully implemented private bike fleet** requires internal capacity to implement from the following groups:

  - **Organizational leadership**: to approve and support the program, including financially

  - **Legal team**: to address liability concerns by developing a liability waiver and other program rules for the program

  - **Facilities team**: to identify or create places to securely store the bikes as well as maintenance tools and spare parts

  - **Information Technology (IT) team**: to assist the development of an online software or system to reserve bicycles and track their usage

  - **Wellness or health team**: to help promote the program through activities and/or trainings

  - **Internal Point Persons**: At each facility where the bike fleet has bikes, there should be at least one employee point person. Their responsibilities are to ensure regular maintenance (either internal or contracted), make sure bikes are properly stored, assist with quarterly usage reports, and to help promote and provide information on the program at their worksite

**Contractor Requirements**

- Provide the following pieces of data on a quarterly basis:
  - Number of registered users
  - Number of trips
  - Miles biked per trip
  - Total miles biked per month
  - Ride purpose (work meetings, data collection, physical activity, errands, etc.)

**Potential Contractors**

<table>
<thead>
<tr>
<th>Handsome Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Republic</td>
</tr>
<tr>
<td>Sole</td>
</tr>
<tr>
<td>Zagster</td>
</tr>
</tbody>
</table>

**Monitoring**

- Monitor usage and participation quarterly

- Rebalance bikes between sites as needed

- If usage is high and bikes are rarely available, consider offering more bikes

- Distribute an annual survey for participants to provide feedback on the program
5 TRANSIT FEEDER SHUTTLE

Transit feeder shuttles provide connections from major transit hubs to nearby destinations. These shuttles particularly benefit large work sites that are just outside the reach of public transit. The purpose is to connect employees between the largest work sites and key regional transit hubs, such as Diridon Station and the Berryessa BART station.

Drawing on experience from other best practices in employer shuttle programs, the following guiding principles for the private shuttle service are recommended:

- Offer convenient shuttle service with multiple trips in the morning and afternoon peak hours
- Provide legible schedules such as trips every 15, 30, or 60 minutes
- Minimize overlap with existing public transit corridors
- Provide express service with two stops maximum
- Differentiate between commuter bus (30+ minute travel time) and first/last mile shuttles

Applicable Sites

Two shuttle routes from the Diridon Station are recommended: (1) to/from VMC Main and O’Connor, (2) to/from SSA Julian. Both routes feature a large number of potential participants, shared terminal and layover facilities at Diridon Station, and have low operating costs per passenger trip. Given that the Superior Court is located within 0.3 miles of SSA Julian, the County can consider adding an additional stop to the SSA Julian Shuttle.

Program Effectiveness

A 10% participation rate at each work site is assumed, yielding a total participation of nearly 618 employees – 545 employees from the VMC Main and O’Connor Shuttle and 73 employees from the SSA Julian Shuttle.

The VMC Main and O’Connor shuttle is estimated to reduce GHG emissions from 1.7 to 2.8%. The SSA Julian shuttle is estimated to reduce GHG emissions from 0.2 to 0.3%.

Please see Appendix E for a detailed assessment of commuter shuttles and the assumptions used to estimate program effectiveness and costs.

Cost

Given a $1.51 cost per passenger trip, the total annual cost for the VMC Main Campus Shuttle is $357,000. Given a $4.26 cost per passenger trip, the annual cost for the SSA Julian Shuttle is $178,500. The annual costs of staffing is estimated to be $80,000 for one FTE, based on average salaries for transportation managers in the San Jose area. Total annual cost for the entire program is $615,500.
Implementation

County Requirements

- Select a contractor(s) through a bidding process to create a shuttle service plan and provide the private shuttle service
- Implement the two shuttles in phases: VMC Main and O’Connor Shuttle in Year 1 and SSA Julian Shuttle in Year 3
- Hire one full-time employee - with expertise in transportation planning and operations, and procurement and project management
  - Can be hired internally as County staff or contracted to a third-party
- Coordinate shuttle pick-up and drop-off with Diridon Station
- Dedicate shuttle loading zones at VMC Main and Julian
- Coordinate all shuttle signage where necessary
- Coordinate all shuttle marketing and outreach activities and materials (e.g. brochures, schedules, maps)
- Conduct on-board passenger surveys to gauge shuttle ridership and satisfaction
Contractor Requirements

- Provide high-quality passenger shuttles, vans, or buses (between 15-35 seats)
- Ensure all vehicles have the capabilities to be wheelchair accessible
- Employ a dedicated dispatcher service, available by phone on weekdays from 6:00 AM to 7:00 P.M., to coordinate driver trips
- Equip vehicles with GPS tracking technology to ensure schedule accountability and to enable County staff to track vehicle locations in real time and display this information on web-based or mobile applications
- Provide insurance for vehicles and overall shuttle service
- Field operational and maintenance emergencies and requests
- Ensure that proper safety and risk management strategies/plans are in place
- Provide the following data:
  - Monthly and Fiscal Year to Date performance data, including vehicle service hours, service miles, ridership, and operating costs.
  - Manager’s overview of monthly activities
  - Identification of any missed runs/trips.
  - Assessment of on-time performance.
  - Summary of any vehicle maintenance activities performed.
  - Number of Full Time Employee Equivalents (FTEs)
  - Listing of all vehicle breakdowns and road call occurring in service, with a description of the cause and corrective actions taken;
  - Listing of all passenger complaints with action taken.

Monitoring

- Define key performance indicators and develop an evaluation plan (for data collection before and during the program)
- Evaluate progress toward key performance indicators on a monthly basis; summarize outcomes annually
- Be prepared to refine based on ongoing monthly monitoring

Potential Contractors

| MTR Western  |
| TransWest   |
| Tripshot    |
| WeDriveU    |
SUBSIDIZED RIDE HAILING

Ride hailing subsidies are financial incentives designed to encourage employees to use ride hailing for their commutes by making it more cost-competitive than driving alone. This is especially important where employee parking is free, as is the case at Santa Clara County work sites.

While encouraging employees to take transit may be preferable with respect to County goals to reduce vehicle trips and GHG emissions from employee commuting, a ride hailing subsidy program recognizes that transit is not a viable option for all employees. Transit commuting may be undesirable or impractical because many employee work sites and homes are located beyond the reach of high-frequency transit stops. Although the County provides free VTA SmartPasses for employees, some sites cannot benefit because they are located more than one-mile from transit. To leverage this investment, subsidized rides can be provided to employees who are just outside the reach of convenient transit. A $3 subsidy is recommended for each one-way trip between an employee's work site and the nearest transit station. A daily cap of $6 should be placed per employee for a commute to and from work.

Applicable Sites

Ride hailing subsidies should be limited to work sites that are located more than one mile from a Caltrain, BART, or VTA light rail station.

Program Effectiveness

Total participation for a ride hailing program is estimated to be approximately 418 users. While ride hailing programs are effective in reducing drive-along trips and parking demand at County facilities, and in supporting employees who commute by public transit, they are likely to result in a slight increase in GHG emissions (0.6%) as well as overall VMT.

Please see Appendix F for a detailed assessment of ride hailing and the assumptions used to estimate program effectiveness and costs.

Cost

Assuming all participants claim the $3 subsidy twice a day, the estimated annual cost for such a program is $627,000.
Implementation

County Requirements

- Negotiate a contract agreement with selected contractor, which includes a data sharing component
- Ensure must-have features are met, while allowing for flexibility in partnership design after contracting
- Limit to shorter trips (e.g. under five miles) and those that begin or end at specified transit stations

Contractor Requirements

- **Designate Pick-Up Zones:** Ride hailing pick-up zones should be clearly marked and designated for employees.
- **Ensure Pick-Up Zones are Safe:** Designated pick-up zones should be located along curb-side areas with ample space for a vehicle to get out of the general-purpose traffic lane with no bike lane conflict points. Future facility planning should include an area for 2-3 vehicles to access and egress at key intersections.
- **Implement Signage:** Ride hailing pick-up zones should be clearly marked with signage. Signage should be branded using the County’s commute brand so that it can accommodate all types of ride hailing services. Bollards can be used in conjunction with signage to designate pick-up areas.
- **Limit eligible rides to shared trips (uberPOOL, Lyft Line)**
- **To the extent possible, prioritize rides in low-emissions or zero-emissions vehicles to meet the County’s GHG emissions reductions goals**
- **Update the Geo-Fencing of County Work Sites:** County stakeholders should work with ride hailing companies to create geo-fences around County work sites and the nearest BART, Caltrain, and VTA light rail station to each respective work site. If employees at all 115 County work sites are eligible for the ride hail program, this will involve creating 115 unique geo-fenced pairs, with origins and destinations restricted to an employee’s work site and the appropriate transit station only. The geo-fencing should be updated to reflect the designated pick-up zones identified above.
- **Educate Ride Hail Drivers:** Some County work sites may be difficult to navigate. County stakeholders should develop documentation for ride hailing companies to distribute to drivers related to pick-up/drop-offs.

<table>
<thead>
<tr>
<th>Potential Contractors</th>
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</thead>
<tbody>
<tr>
<td>Uber</td>
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<td>Lyft</td>
</tr>
</tbody>
</table>
Monitoring

- Define Key Performance Indicators and develop an Evaluation Plan (for data collection before, during, and after the pilot); third-party evaluators might be used to provide protection from public records requests

- Evaluate progress toward Key Performance Indicators on a monthly basis; summarize outcomes annually (or before for shorter pilots)
  - Be prepared to refine based on ongoing monthly monitoring

- Report out early and often; communicate ongoing outcomes with all involved stakeholders and strive to respond to feedback while minimizing customer-facing program changes

Source: Humphrey Muleba via Unsplash
COMMUTE PLATFORM

A commute platform is a mobile application and/or online dashboard that is used to facilitate participation in TDM programs, provide a centralized platform to inform employees about their transportation options, and can be used to gamify commuting. The goal of a commute platform is to encourage non-driving trips by providing incentives, fostering friendly competition, and raising awareness about the associated environmental and health impacts of a trip choice. A number of potential vendors exist to administer this type of platform, including RideAmigos, RideShark, and Luum.

Commute platforms are also useful tools for the administration of robust TDM programs, by providing a centralized platform for administering various TDM programs, distribution of commuter benefits and incentives, and tracking employee participation and commuting behaviors. The platforms also allow employers to better understand travel behavior and use the data to inform decisions and priorities related to commute programming.

<table>
<thead>
<tr>
<th>Administrative</th>
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<tbody>
<tr>
<td>GHG Reduction</td>
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<tr>
<td>Participation</td>
</tr>
<tr>
<td>Startup Cost</td>
</tr>
<tr>
<td>Annual Cost</td>
</tr>
<tr>
<td>Timeline</td>
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</tbody>
</table>

Applicable Sites

A commute platform should be implemented countywide, across all sites.

Program Effectiveness

Is a supportive strategy, and thus does not have an individual trip reduction estimate. However, a number of other strategies (e.g. transit subsidy, commute cash, bike incentives) become more effective when integrated into a commute platform.

Please see Appendix G for a detailed assessment of commute platforms and the assumptions used to estimate program effectiveness and costs.

Cost

Costs can vary depending on which vendor is chosen, the features included, and where it is implemented. For example, one vendor charges $15,000 for first-year startup costs and charges annually by the number of work sites. Another vendor charges $30,000 for the first year and charges by employee. Thus, annual costs can range from $234,000 to $541,000. Custom integrations, such as parking management or transit subsidy distribution, are an additional startup cost and can also range from $10,000 to $40,000.

For it to be effective, the platform should be adjusted to accurately reflect the office culture and commute programs. Because available commute programs and benefits may vary by site, the platform should be tailored to reflect what each site offers. Custom platforms for each site may incur additional costs.

10 These cost estimates are based on rates that may have since increased.
Implementation

County Requirements

• Select a contractor(s) through a bidding process to administer the desired platform
• Working with the selected vendor to integrate Navia into the platform to allow for seamless administration and tracking of all TDM programs
• May incur an additional cost for the integration of Navia
• Gamify commutes in an effort to encourage employees to participate in TDM programs, by providing points or prizes, such as:
  • Heavily incentivizing employee registration through ongoing enrollment challenges and heavy marketing campaigns at launch
  • Including regular commute promotions and challenges on a quarterly basis (at a minimum) that award valuable prizes
  • Publicize the platform at employee events to increase awareness

Contractor Requirements

• Provide online and mobile access to the commute platform
• Integrate all web/mobile commute information into the platform
• Provide the following features:
  ◦ Ridematching, trip logging, multi-modal trip planning, gamification and incentive distribution
  ◦ Ability to incorporate third party app integrations such as Waze Carpool, Strava, and Scoop
  ◦ Ability to integrate parking information and technology
• Include automated tracking when possible to enable the commute platform to collect as much information as possible about daily commute patterns
• Provide communication support, which shall include assisting with printed and web-based information distributed to employees
• Submit a detailed monthly report to County staff on enrollments, active users, incentives received, and trip data including (mode used, miles travelled, distance, origin and destination)
• Assist County staff on technical issues affecting the administration and processing procedures of the commute platform

Potential Contractors

<table>
<thead>
<tr>
<th>Potential Contractors</th>
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</thead>
<tbody>
<tr>
<td>Luum</td>
</tr>
<tr>
<td>RideAmigos</td>
</tr>
<tr>
<td>RideShark</td>
</tr>
</tbody>
</table>

Monitoring

• Identify internal program administrators
• Develop standard operating procedures for program administrators
• Provide consistent marketing, communications, and branding so employees view the platform as a “one-stop-shop”
• Track and monitor trip data and utilize to shape improvement to parking and TDM programs
Carpool

The County can opt to provide ride-matching services directly through a commute platform (e.g. RideAmigos, Luum). This scenario is especially beneficial if the County will administer other TDM programs and information through a commute platform. Under this scenario, commuters can enter their desired weekly pickup and drop-off schedule through the app or web-based platform, which matches drivers and riders on a daily basis, alerting users in advance by email. In contrast to an on-demand platform which charges a per ride fee, ride-matching through a commute platform does not involve a per trip payment. Instead, the County is responsible for a per user fee for using the platform as a whole.

<table>
<thead>
<tr>
<th>Administrative</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>0.2 - 0.3%</td>
</tr>
<tr>
<td>Participation</td>
<td>50-100</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>NA</td>
</tr>
<tr>
<td>Timeline</td>
<td>Year 1</td>
</tr>
</tbody>
</table>

Applicable Sites

Similar to a commute platform, a carpool program should be implemented countywide, across all sites.

Program Effectiveness

Because no direct carpool incentive is offered, the program is not expected to result in a significant mode shift. A participation rate of 0.25 to 0.5% is expected, approximately 50 to 100 employees. This results in an adjusted employee-wide carpool mode share of 8.7 to 8.9%, and GHG reductions of 0.2 to 0.3%.

Please see Appendix H for a detailed assessment of carpooling and the assumptions used to estimate program effectiveness.

Cost

Because ride-matching services will be provided through a commute platform, there are no associated costs with a carpool program.
Implementation

County Requirements

- Work with the selected platform contractor to establish a private “closed” network so employees can carpool with coworkers instead of strangers
- In order to increase the likelihood of getting a match, provide an option for employees to select from a larger network that includes employees from other employers that provide the same service
- Target outreach to employees who are most likely to participate (i.e. employees without personal vehicles, long-distance transit commuters, “super commuters”)

Contractor Requirements

- Include automated tracking when possible to enable the commute platform to collect as much information as possible about daily carpool patterns
- Submit a detailed monthly report to County staff on carpool trip data including (mode used, miles travelled, distance, origin and destination, number of passengers)

Monitoring

- Define key performance indicators and develop an evaluation plan (for data collection before, during, and after the program)
- Evaluate progress toward key performance indicators on a monthly basis; summarize outcomes annually (or before for shorter pilots)
  - Be prepared to refine based on ongoing monthly monitoring
- Report out early and often; communicate ongoing outcomes with all involved stakeholders and strive to respond to feedback while minimizing customer-facing program changes

FLEX WORK

Technology now supports more seamless and secure communication channels than ever before, allowing employees to effectively work outside of their designated workplace on occasion and/or outside of typical office hours. Flex Work could include two different program options:
1. **Telework**: A mutually agreed upon work arrangement between the employer and the employee that allows employees to work from home or another off-site location on an occasional basis, with the remainder of his or her time at the central worksite.

2. **Flex Schedules**: A mutually agreed upon work arrangement between the employer and the employee that allows employees to work a flexible schedule. For example, employers could allow employees to arrive or depart within a range of hours rather than at specific times; or employers could allow a condensed work week, such as a 9/80 or a 4/10 schedule.

Flex Work programs can provide flexibility to both the employer and employee, as well as reduce person/vehicle trips, parking demand, and the need for on-site workspace. The County could use Flex Work strategies to remain competitive in the search for skilled workers, welcoming telecommuting as an option to attract and retain employees.

**Applicable Sites**

Flex Work should be considered at sites where employees do not require consistent face-to-face interaction with their colleagues or the public, or where positions do not require on-site manual labor.

---

**Program Effectiveness**

According to the 2017 CAP Survey, approximately 200 employees currently participate in a flex schedule, which equates to nearly 1% of all employees. Further promoting a flexwork program to employees and marketing it as a commute strategy would likely increase the number of participants. Assuming 1% to 5% of all County employees participate, CAPCOA estimates the following GHG reduction potentials:

- Telecommute (one day per week): 0.15% to 0.73%
- Flex schedule (9/80): 0.07% to 0.35%
- Flex schedule (4/10): 0.15% to 0.75%

In total, flexwork would encourage an additional 25 to 120 participants for a total of 225 to 320 participants.

Please see Appendix G for a detailed assessment of flexwork and the assumptions used to estimate program effectiveness.

**Cost**

There are no associated costs with Flex Work programs.

**Implementation**

- Define which positions are eligible for Flex Work
  - Flex Work options are most appropriate for positions that typically do not consistently require face-to-face interaction with coworkers or the public

---

**Administrative**

<table>
<thead>
<tr>
<th>GHG Reduction</th>
<th>0.07 - 0.75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>225 - 320</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>$0</td>
</tr>
<tr>
<td>Timeline</td>
<td>Year 1</td>
</tr>
</tbody>
</table>
• Provide access to strong communication networks (e.g. instant messaging capabilities and remote server access)

• Develops best practices and expectations for how employees can communicate from alternative locations and from different times of day

• Establish consistent employee and security guidelines across departments. These guidelines should include the following:
  ◦ Employee protocols to ensure that employee work performance is consistent, effective, and not a deterrent to departmental operations.
  ◦ A checklist of office supplies/equipment that foster a productive work environment.
  ◦ Consistent communication with supervisors to establish Flex Work schedules.
  ◦ Performance review processes and promotion criteria to identify and remove any bias for or against employees who opt into Flex Work.
  ◦ Management training for department leads to ensure consistent implementation across different departments and teams.
  ◦ Develop consistent security and IT protocols for employees working off-site.

Monitoring

• Monitor flex workspace usage to determine if more desk space is needed.

• Regularly track telecommuting and flex schedules through the annual Commute Alternatives Program Survey to determine program effectiveness.

• During the annual review process, supervisors can discuss program effectiveness with employees.
PARKING WAYFINDING & SIGNAGE

A key element of effective parking management includes strong signage and wayfinding, indicating the locations of buildings and key entrances, and identifying where visitors and employees are allowed to park. The information about where drivers will park should be clear in directing people as they arrive on-site, and should include appropriately-sized text for drivers and should be placed in locations where drivers have an appropriate reaction time to follow instructions.

To further enhance this information, a real-time parking guidance system could provide a benefit, as it will inform drivers where parking is available and reduce time in circling parking facilities for a parking space. For instance, if the parking garage is full, employees will know that they will need to park in the surface lot. This will provide a better experience for patients and visitors who are not as familiar with the hospital facilities.

Applicable Sites

Parking wayfinding and signage can be applied to all sites with priority given to sites that have existing parking constraints and a large parking supply. Garages should be prioritized first followed by large surface lots. Prime candidates include VMC (where not currently available), the Civic Center, and the O’Connor Hospital.

<table>
<thead>
<tr>
<th>Administrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
</tr>
<tr>
<td>Participation</td>
</tr>
<tr>
<td>Annual Cost</td>
</tr>
<tr>
<td>Timeline</td>
</tr>
</tbody>
</table>

Program Effectiveness

Parking wayfinding and signage is a supportive strategy, and thus does not have an individual trip reduction estimate.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

Cost

Real-time sensors can cost $35 per space per month, which equates to a $420 annual fee per sensor. Wayfinding and signage are additional costs.
Implementation

County Requirements

- Select a contractor(s) through a bidding process to administer the desired parking wayfinding and signage system
- Install real-time parking signs should at parking facility entrances

Contractor Requirements

- Install real-time and mobile signage systems that can be integrated into a commute platform
- Consider displaying parking availability and a parking locator map online and/or through a commute platform

Monitoring

- Develop both static and dynamic signs that have a consistent set of colors, fonts, and directional cues

Potential Contractors

<table>
<thead>
<tr>
<th>Park Assist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkifi</td>
</tr>
<tr>
<td>Streetline</td>
</tr>
<tr>
<td>Vimoc</td>
</tr>
</tbody>
</table>
**PARKING OCCUPANCY COUNTS**

Parking occupancy counts are essential in understanding how parking facilities are being utilized. Reliable parking data helps identify parking constraints and affects how parking should be managed as a whole. The County currently does not conduct parking occupancy counts at any facility. By doing so regularly, the County can gauge the effectiveness of TDM strategies over time.

**Applicable Sites**

Gathering parking counts should be applied to all sites, with a main focus for the largest facilities.

**Program Effectiveness**

A parking occupancy count is a supportive strategy, and thus does not have an individual trip reduction estimate.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

**Cost**

The cost of a parking occupancy study for Civic Center and the VMC Main Campus, the sites with the largest parking supply, is estimated to be $10,000-15,000.

**Implementation**

Parking occupancy counts should be conducted regularly to capture parking demand trends over time. Counts should be conducted throughout the day on a “typical day”, generally on Tuesdays, Wednesdays, and Thursdays. Depending on the access control available at each facility, parking occupancy counts can generally be conducted in one of three ways: real-time data collection, badge swipes, in-person counts. The County should also develop consistent methodology for collecting and reporting data.
County Requirements

- Select a contractor(s) through a bidding process to conduct parking occupancy study
- Conduct counts regularly to capture parking demand trends over time
- Conduct counts throughout the day on a “typical day”, generally on Tuesdays, Wednesdays, and Thursdays

Contractor Requirements

- Can be implemented internally or contracted out

Monitoring

- Evaluate counts by time period to capture parking demand variations throughout the day, and by year to determine parking demand trends
- If demand has increased, consider more a robust implementation of TDM strategies
- Monitor counts by space types to determine if spaces should reallocated to different users

- Depending on the access control available at each facility, parking occupancy counts can generally be conducted in one of three ways:
  - Real-time data collection
  - Badge swipes
  - In-person counts
- Develop consistent methodology for collecting and reporting data
**ACCESS CONTROL EQUIPMENT**

Parking access control equipment and solutions manage the access into and out of a parking facility. They help ensure that the proper people can access the right lot or garage. Today, the County relies on a permit sticker affixed to a vehicle, however there are many different access control options the County can consider to reduce abuse and help with enforcement. More access control means less need for enforcement and vice-versa.

### Applicable Sites

Parking access control equipment can be applied to all sites with priority given to sites that have existing parking constraints and a large parking supply. Garages should be prioritized first followed by large surface lots.

### Program Effectiveness

Parking access control equipment is a supportive strategy, and thus does not have an individual trip reduction estimate.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

### Cost

Costs varies depending on which option is chosen, where it is implemented, and the size of the parking facility. For example, a fixed license plate recognition (LPR) system that monitors vehicles entering and exiting a facility cost between $15,000 and $25,000 for each installed camera. Radio frequency identification systems (RFID) typically cost $3,000 to $5,000 per antenna and $10 to $20 per transponder.

### Implementation

Prior to selecting which access control option to use, the County should decide whether it is interested in tracking vehicles or people: should the system be built around license plates or employee ID numbers? Each option has pros and cons and different implications for users and administrators. A potential County Parking Committee should take on this as one
of its first decisions. Figure 12 summarizes the different access control options available and infrastructure and personnel required for each. The Civic Center surface lot, for example, can benefit from installing parking gates and radio frequency identification (RFID) readers, which require little enforcement.

**Figure 12 Access Control Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Infrastructure</th>
<th>Personnel Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Frequency ID (RFID)</td>
<td>Typically the same ID badges used for building access, though sometimes a stand-alone key fob assigned to an individual.</td>
<td>Parking gates, and RFID readers</td>
<td>Low</td>
</tr>
<tr>
<td>License Plate Recognition (LPR)</td>
<td>A system of cameras that read a vehicle’s license plate. LPR cameras can be used to open parking gates, or installed at free-flow driveways capturing license plates as cars enter. As a third option enforcement vehicles can be equipped with mobile LPR cameras.</td>
<td>Parking gates + Fixed LPR camera</td>
<td>Low</td>
</tr>
<tr>
<td>License Plate Input</td>
<td>License plate systems can also be ‘opened’ (or enforced) by an officer using a handheld tablet by entering the license plate.</td>
<td>No infrastructure needed</td>
<td>Moderate-high</td>
</tr>
<tr>
<td>Bluetooth or MAC Address</td>
<td>Cell phones emit unique stamps that are used by some parking systems as ‘keys’ to allow access to lots and garages.</td>
<td>Currently Zipby provides commercially available gates that open with passive signals from a preinstalled cell phone app.</td>
<td>Low</td>
</tr>
<tr>
<td>Hang tags and Permits</td>
<td>Physical permits, hang tags, stickers.</td>
<td>No infrastructure needed</td>
<td>High</td>
</tr>
</tbody>
</table>

**Monitoring**

- Provide employees access control “keys” (e.g. RFID badges, hang tags) upon request during onboarding
- Monitor abuse to determine if chosen access control option is effective
**DESIGNATED VISITOR & EMPLOYEE PARKING SPACES**

Parking is an important concern at many County sites, and a resource that must be balanced between employees, visitors, and patients throughout the course of a day. While some sites separate employee and visitor parking, many others have undesignated spaces, which are first-come-first-serve for both employees and visitors. However, these user groups tend to be very different, and managing them separately allows for more targeted strategies for each user group.

<table>
<thead>
<tr>
<th>Parking Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>NA</td>
</tr>
<tr>
<td>Participation</td>
<td>NA</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$35 per space</td>
</tr>
<tr>
<td>Timeline</td>
<td>Long Term</td>
</tr>
</tbody>
</table>

**Applicable Sites**

The designated parking standards can be implemented at all sites for employees and visitors.

**Program Effectiveness**

These parking standards are supportive strategies, and thus does not have individual trip reduction estimates.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

**Cost**

Based on industry standards, it will cost approximately $35 per space for restriping and paint. The County can also provide static signage in addition to, or instead of, restriping and paint. This can be done in-house and costs approximately $20 to $30 per sign.
Implementation

Based on their needs, visitors should be prioritized because they do not know the site as well as employees. Visitor spaces should be located in convenient locations that allow direct and clear access to the building. The remaining spaces can be available for employee use. Separating visitor stalls from employee stalls also allows medical facilities to stripe visitor stalls a bit larger than employee stalls to make it easier for visitors to get in and out of their cars. This is especially important at medical centers where patients often arrive accompanied by a family member or caretaker.

The County should also consider limiting the distribution of “A” permits, which focus on status rather than job function. Currently “A” permits are provided to certain seniority levels. Instead, the County should provide priority permits to employees who are required to have a vehicle for business purposes.

Monitoring

• Track and maintain carpool list to ensure carpools are viable and reduce carpool parking abuse

• Work with parking enforcement to ensure monitoring of carpool spaces

• Consider dedicating more carpool spaces as the carpool mode split increases

Source: Nelson\Nygaard
Designated carpool and vanpool parking spaces encourage the use of carpools and vanpools. A modest number of spaces in high-convenience locations, such as closest to building entrances, could be set aside for registered carpool/vanpool vehicles. Institute a “first come/first serve” policy.

### Applicable Sites
Designated carpool and vanpool parking spaces can be implemented at all sites.

### Program Effectiveness
These parking standards are supportive strategies, and thus does not have individual trip reduction estimates.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

### Cost
Based on industry standards, it will cost approximately $35 per space for restriping and paint. The County can also provide static signage in addition to, or instead of, restriping and paint. This can be down in-house and costs approximately $20 to $30 per sign. Costs for carpool verification software are unknown.

### Implementation
Select County facilities already provide carpool-only spaces, but abuse and lack of available enforcement has been an issue at some facilities. To curb abuse, the County can consider issuing special carpool permits for carpool that consist of two or more County employees that carpool a minimum of three days per week. In exchange for a carpool permit, both employees would need to forego their “A” or “C” permit. However, this option is still honor-system based where abuse can occur.

Another option where abuse is less common is working with a vendor that provides real-time carpool verification. Recent technology

---

**Parking Management**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Reduction</td>
<td>NA</td>
</tr>
<tr>
<td>Participation</td>
<td>NA</td>
</tr>
<tr>
<td>Annual Cost</td>
<td>$35 per space</td>
</tr>
<tr>
<td>Timeline</td>
<td>Long-term</td>
</tr>
</tbody>
</table>

---

Source: Nelson\Nygaard
uses a combination of GPS location data and Bluetooth proximity to verify that a shared ride has taken place. During the commute, the driver and passengers can confirm a shared ride via a smartphone app that collects geolocation data. Once a carpool is confirmed, a parking space is automatically reserved for that ride.

Monitoring

- Track and maintain carpool list to ensure carpools are viable and reduce carpool parking abuse
- Work with parking enforcement to ensure monitoring of carpool spaces
- Consider dedicating more carpool spaces as the carpool mode split increases
**DAILY PAID PARKING**

Paid parking is one of the most effective ways to address parking constraint issues. By charging for parking, employees will be more inclined to try non-drive alone modes. The higher the fee, the more likely employees will switch to another mode, which will reduce parking demand and reduce the need for the County to build or purchase more parking.

While parking can be charged by any timeframe, a daily fee is recommended as opposed to monthly or long-term passes. Daily parking charges are more equitable and provide more choice. Additionally, daily parking charges do not discourage participation from employees who will occasionally need to drive. To begin, the County can start by charging $2 per day.

### Applicable Sites

Daily parking should be considered at sites where:

- Parking utilization exceed optimal levels (90-95%)
- Building new parking supply is being considered
- A variety of efficient commute options are available
- Cluster of employees living within reasonable walk or bike distance to work (1 – 3 miles)
- High quality transit service within 0.3 miles

Based on the above conditions, potential sites are Civic Center and the VMC Main Campus.

### Program Effectiveness

Assuming a daily charge of $2, CAPCOA estimates the GHG reduction potential is 1.2% to 3.7% per site. This estimate is independent of the size of a parking facility.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

### Cost

Daily paid parking is assumed to be net positive, a charge of $2 per day equates to a potential annual revenue of $500 per space. Revenues generated from parking fees should be redirected to other TDM programs.

---

**Parking Management**

<table>
<thead>
<tr>
<th>GHG Reduction</th>
<th>1.2-3.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>NA</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Net Positive¹²</td>
</tr>
<tr>
<td>Timeline</td>
<td>Long-term</td>
</tr>
</tbody>
</table>

¹² Daily paid parking is expected to generate approximately $500 in annual revenue per parking space.
Implementation

The County can determine the appropriate price to charge for parking by comparing parking fees of nearby garages and lots. Parking facilities can also charge variable rates depending on time of day and user type. To encourage carpooling and vanpooling, fees for carpool and vanpool vehicles can be lower. As a general best practice, pricing should be adjusted based on an optimal parking utilization of 90 to 95 percent.

Another important consideration is the difficulty and contentiousness of transitioning from free parking to paid parking for employees. Often the reaction is acute and short-lived. Nevertheless it is helpful to consider roll-out of a comprehensive package of commuter rewards at the same time as parking charges to mitigate the perception of a ‘take away’. Paid parking can be coupled with a commute cash program, which provides a daily incentive for non-SOV trips.

In order to implement daily parking charges, the County will need to work with an appropriate parking vendor to install appropriate access control and payment infrastructure and software. The access control strategy outlines different options to consider. Payment options can take a wide variety of forms, from a person in a booth, to credit card transactions at the gates or at pay machines, to commute platforms that interface with the access control and/or enforcement systems and send parking charge--and commute reward--files directly to payroll.

Monitoring

- Monitor and enforce parking electronically through access control infrastructure or via an in-person parking attendant/enforcement
- Automatically track parking usage by integrating parking technology into a commute platform – also allow for automatic rate splitting between carpools of two people or more
- Conduct regular parking occupancy analyses to evaluate effectiveness
- Adjust pricing based on optimal occupancy (90-95%)
- Assess impacts of pricing changes on parking demand and other travel modes
SHARED PARKING

While some parking facilities are constrained, others have an abundance of parking spaces that sit unused. In order to utilize these spaces, the County can lease these spaces to nearby employers and enter into a shared parking agreement. Shared parking optimizes parking capacity by allowing complementary land uses to share parking spaces, rather than creating separate parking facilities. Agreements to share parking also reduce parking costs, and improve traffic flow due to fewer driveways. Parking can be shared among nearby buildings to take advantage of different peak periods. For example, a business can share parking with residents since parking is in demand during the middle of the day for offices and in the evenings for residents.

<table>
<thead>
<tr>
<th>Site</th>
<th>Employee Count</th>
<th>Total Supply</th>
<th>Parking Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charcot</td>
<td>1,295</td>
<td>1,674</td>
<td>1.16</td>
</tr>
<tr>
<td>Elmwood Correctional Facility</td>
<td>169</td>
<td>556</td>
<td>3.29</td>
</tr>
<tr>
<td>Valley Health Center Milpitas</td>
<td>82</td>
<td>580</td>
<td>4.77</td>
</tr>
<tr>
<td>Roads &amp; Airports</td>
<td>70</td>
<td>100</td>
<td>1.31</td>
</tr>
</tbody>
</table>

Applicable Sites

The County should consider implementation at sites where the parking ratio exceeds 1.0 space per employee and where there is not a significant number of visitors. Potential sites are listed in Figure 13.

Program Effectiveness

Shared parking is a supportive strategy, and thus does not have an individual trip reduction estimate.

Please see Appendix I for a detailed assessment of parking management strategies and the assumptions used to estimate program effectiveness and costs.

Cost

No incremental cost, assumed to be net positive. Revenues generated from parking fees should be redirected to other TDM programs.\[13\]

\[13\] Shared parking is expected to generate revenue from leasing out parking spaces.

---

Parking Management

<table>
<thead>
<tr>
<th>GHG Reduction</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>NA</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Net Positive[13]</td>
</tr>
<tr>
<td>Timeline</td>
<td>Long-term</td>
</tr>
</tbody>
</table>

---

\[13\] Shared parking is expected to generate revenue from leasing out parking spaces.
Implementation

To implement shared parking, the County should first identify facilities that consistently have available parking. Additionally, the County should identify nearby complementary uses that may be potential shared parking partners. The cost of leasing out a space can be determined by researching parking fees of nearby facilities. Shared spaces should also be clearly marked to distinguish where different users can park.

Monitoring

- Regularly monitor shared and County-only spaces:
- If shared spaces are underused, explore partnerships with other nearby uses
- If County-only spaces are at capacity, reallocate shared spaces back to County employees
- Work with parking enforcement to ensure employees and shared partners are parking in the appropriate spaces

TYPICAL ARRANGEMENT

Typical parking requirements often require adjacent land uses to build separate parking facilities, even if they are used at different times of day.

SHARED ARRANGEMENT

The concept of shared parking allows different land uses with parking demand at different times of day to share parking facilities, thereby reducing the amount of overall parking required.
Following the baseline assessment and analysis of various TDM strategies, the TDM toolkit was prepared to outline an approach in implementing the recommended strategies. The strategy recommendations were developed with considerations to cost and program effectiveness, implementation requirements, and ability to help achieve the County's goals. The following chapter provides a roadmap for the successful implementation of a County TDM program over the next three years.
Establish a Core Program

To effectively facilitate mode shift through a TDM program, the foundational elements of the program must be established. Without the development of Core Program Elements, the proposed TDM strategies will not yield their full potential. Prior to pursuing the implementation of TDM strategies, the County should begin by prioritizing the development of the following Core Program Element recommendations, further detailed in Chapter 3. The County should begin the development of the program by first:

- Establishing board-approved goals and objectives
- Identifying program champions
- Developing a communications strategy and plan
- Securing additional TDM program staff
- Developing facility standards that support access for every mode

The development of the Core Program Elements should be led by the Transportation Demand Manager, with the support of champions, and should be developed through a cohesive effort in working with the various departments and staff involved with the implementation of the TDM program. The development of a TDM program will include extensive support, and will require securing additional TDM program staff, and continued efforts in working with other staff members whose roles align with TDM programming efforts.
TDM Toolkit Phasing

Ideally, the County would proceed with implementation of all of the assessed TDM strategies. Recognizing the need to establish a strong program foundation, and understanding that funding is not limitless, the Implementation Guide provides an outline for a phased approach in implementing the recommended strategies.

### Figure 14  Recommended Toolkit Phasing

Please note that impacts of Phases 1-3 are in addition to participation and impacts of baseline programs.

<table>
<thead>
<tr>
<th>Core Program Elements</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>$658,000</td>
<td>$1,732,000</td>
<td>$2,235,000</td>
</tr>
<tr>
<td>Flex Work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VTA Smart Pass</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Transit Subsidy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commuter Shuttle Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(VMC at Bascom &amp; O’Connor Hospital)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access Control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking Occupancy Counts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commute Platform</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commute Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Bicycle Fleet</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Cost Estimates              | $658,000 | $1,732,000 | $2,235,000 | $2,414,000 |
| Number of Daily SOV Trips Reduced | 937 - 2,443 | 1,338 - 3,279 | 1,405 - 3,346 |
| GHG Reduction Estimates     | 2.8% - 7.3% | 4.0% - 9.8% | 4.2% - 10.0% |
| Staffing Support            | 1 FTE | 2 FTE | 3 FTE | 3 FTE |
| Staffing Cost Estimates     | $80,000 | $160,000 | $160,000 | $160,000 |
As described, it is critical that the core program is established prior to the implementation of new TDM strategies, and should be led by the County Transportation Demand Manager. Ideally, the County should establish the baseline in the first six months of the development of the comprehensive TDM program.

Phase 1 leverages the baseline by implementing strategies that elaborate on existing programs, and by implementing strategies that are the necessary first steps for other strategies in later phases. The Phase 1 strategies have also been prioritized as they are efforts that are less resource intensive and do not require as much planning. They will help the County quickly work towards achieving the goals of the program. The strategies outlined in Phases 2 and 3 are those that will support the strategies that are rolled out in Year 1, yet are strategies that may require additional planning and efforts to secure funding, and should be implemented based on the success of preliminary efforts.

The incremental rollout of TDM programs over three years indicates the need to secure additional funding and staffing support. Many of the strategies have annual budgets that will remain somewhat constant, however, some of the programs have an upfront investment cost, such as Parking Access Control or Private Bicycle Fleet, but will only require funding for maintenance once implemented. With a growing program, there will be a need for additional staff dedicated to the program. Chapter 3 provides recommendations regarding the potential roles for a growing Commute Services team, whereas Chapter 4 provides a breakdown of the program costs, including program funding and resource needs. In addition to securing additional staff, the County should continue to work with other departments and committees, such as the Parking Committee, to strategically partner in ways that make efficient use of County resources.

It is critical to establish a monitoring and evaluation plan, as a way to regularly assess TDM program performance. By evaluating program performance, the County will be able to determine the success and effectiveness of programs, and identify opportunities to make program adjustments.
TDM Program Monitoring & Evaluation

Establish Program Monitoring & Evaluation Parameters

Clearly stating goals will help establish program targets, and will allow the County to identify which indicators they should prioritize when evaluating the program’s performance. As described in Chapter 3, Single Occupancy Vehicle (SOV) and Vehicle Miles Traveled (VMT) will be the key levers and metrics that will help indicate and evaluate program performance. Program indicators and evaluation methods should remain constant through evaluation efforts, yet, can be supported by other performance metrics as a way to demonstrate the program’s success.

Program Performance Monitoring

There are various methods to collect data to measure the performance of the TDM program, such as employee surveys and parking utilization.

Employee Survey

The Commute Alternative Program (CAP) survey currently provides the County with baseline reports every few years. The survey provides the County with insights about commuting behaviors and preferences among County employees. To support the enhanced monitoring efforts, the Commute Alternative Program survey could be further enhanced to help meet the evaluation needs of a comprehensive TDM program, and should:

- Increase survey frequency to be delivered annually
- Design the survey in a way to filter results by County facility and department
- Include additional survey questions that collect more specific information related to TDM program improvements, commuting behaviors, and support program evaluation
- Ensure the use of consistent questions each year
Parking Utilization

To understand the demand for transportation improvements and programming, the County first needs to understand parking utilization at County facilities. To do so, annual parking occupancy counts should be conducted. Ideally, the annual parking occupancy counts would follow the parameters described below:

- Performed during a time period that overlaps with the distribution of the transportation survey.
- Counts should be conducted on peak use weekdays (not Monday or Friday) in order to ensure the highest points of parking demand are accurately reflected in the data.
- Counts should be collected hourly, though peak demand hours (11 am, 2 pm, 6 pm) could be selected to obtain a representative sample of parking patterns at various times.
- Like with the CAP survey, counts should be conducted during the same time period (weeks, days, times) each year to ensure annual comparisons can be made.
- The counts should also make note of the type of parking spaces being counted (e.g. permitted parking, disabled).

Operational Performance Monitoring

In addition to program tracking, the County will be able to collect operational performance data from platforms and vendors, and provide supplementary performance metrics, such as:

- Commute Platform tracking, including:
  - Number of matched rides
  - Logged trips and subsidy/incentive distribution
  - Participation in campaigns
- Daily shuttle ridership counts

Reporting Framework & Schedule

To ensure continued support for a TDM program from County staff and the Board of Supervisors, the County should develop a reporting framework to support the program. A reporting framework can also support the program by demonstrating the progression and success of TDM efforts. Ideally, the reporting framework should be established during the first six months, as the core program is developed. The TDM Program reporting should include:

- Annual TDM Report – provide highlights of the success and impact of the TDM program efforts against program goals.
- Champion Check-Ins – meet quarterly with program champions as a way to collect feedback of program implementation, and identify opportunities for improvement.
- Committee Coordination – regularly meet with internal committees, such as the Parking Committee, as a way to report back on coordinated efforts, and identify program alignment.
A Path Forward

The TDM Implementation Guide will serve the County as a supportive resource in providing the roadmap for implementing a comprehensive TDM program. The TDM strategies were designed in a way that best serve County employees, while helping the County achieve its goals of reducing SOV and GHG emissions, addressing parking challenges and traffic congestions, and identifying cost-effective and environmentally sustainable ways to provide administrative services.

In addition to achieving the goals of the study, the Guide also helps provide several intangible benefits to County employees by reducing commute-related stress, and in turn improving staff retention and making the County an employer of choice.

The transportation challenges in the County of Santa Clara and the Bay Area will continue to evolve, but can be addressed by taking proactive measures in tipping the scale in the right direction. The strategies in the TDM Implementation Guide provide a path forward for key decision-makers to consider in achieving the County’s goals, and supporting County employees.
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APPENDIX A

Peer Champions Program Guidance
## PEER CHAMPIONS PROGRAM GUIDANCE

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<td>Organize Peer Champion Program in one-year ‘classes’</td>
<td>A fixed annual calendar will make the program easier to manage and promote. For example, if October becomes known as the month for recruiting the next year’s Transportation Champions people will be primed to sign up in the fall.</td>
</tr>
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</table>
| Plan an annual program calendar                                        | At minimum, events should include:  
  - Recruitment  
  - Training  
  - Mode specific events such as Transit Month, Bike to Work Month, Carpool Carnival, etc.  
  - Party for Transportation Peers |
| Define role of Transportation Champions                                 | Write a short description of what the transportation champions are expected to do, such as:  
  - Attend the four events listed above  
  - Be available and responsive to staff contact  
  - Participate in at least one of the mode specific events  
  - Have fun; spread positive energy  
  In addition, transportation managers should work with HR to develop guidelines for the Peer Champions Program that align with County work rules. Some items to consider are:  
  - Primacy of assigned duties. Transportation Champions activities never supersede work.  
  - Participation is open to all who meet eligibility.  
  - Champions are volunteers, but should receive recognition. |
| Invest in Champions                                                     | Budget and thought should be allocated to celebrating champions. Recognition can come in many forms – public thank yous, virtual and physical merit badges and stickers, parties, prizes, and drawings. As with any incentive, these must meet tax regulations and rules for proper use of county resources. Lastly, rewards should be meaningful, fresh, and exciting, but not so much to distort the reasons to participate in the Peer Champion Program, which should come from a desire to help others. |
| Develop processes for champions to ‘escalate’ questions and concerns    | Champions should be trained to answer common questions about the transportation program and escalate complex issues to transportation managers. The county must develop this escalation process. A simple email alias that is checked frequently suffices. More robust issue ticketing systems are also a good approach. Most importantly, staff time should be devoted to answering and indexing questions that are escalated. |
| Set clear goals                                                        | First year: recruit at least one champion from each of the major county sites  
  Subsequent years: target growth in number and location of champions, participation targets at events, or ‘champion contacts’ such as number of questions answered |
| Establish a Transportation Program Checklist                            | Create annual calendar  
  Plan events i.e. ride transit month, bike to work month, carpool carnival etc  
  Make champion ‘job descriptions’  
  Allocate budget for champions program  
  Make escalation protocol  
  Set goals  
  Recruit great people  
  Train them  
  Launch |
APPENDIX B

Transit Subsidy Package
TDM Milestones for Assessment
Transit Subsidy Package

May 2019
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<td>Figure 3</td>
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1 INTRODUCTION

Transit subsidies are financial incentives designed to encourage employees to use public transit for their commutes by reducing financial disincentive. According to the California Air Pollution Control Officers Association (CAPCOA), transit subsidy programs can yield 0.3 to 20.0% reduction in GHG emissions from commute trips depending on the subsidy amount and percent of employees eligible for such a subsidy. Transit subsidies are commonly provided by employers to make transit more attractive in terms of cost and convenience when compared to driving alone to work. This is especially important where parking is free, as is the case with County of Santa Clara work sites. Providing passes at work for employees also greatly lowers the barriers for using transit.

In 2012, Senate Bill 1339 was signed into law and approved by the Bay Area Air Quality Management District (Air District) and the Metropolitan Transportation Commission (MTC). The bill requires employers with 50 or more full-time employees in the Bay Area, including the County of Santa Clara, to offer and implement at least one commuter benefit option. The options include pre-tax transit and vanpool expenses, transit or vanpool subsidies, or a free or low-cost transit service. Employers can also provide an alternative commuter benefit that provides the same level of effectiveness as the other benefit options.

To determine an effective Transit Subsidy program for Santa Clara County, Nelson\Nygaard and Nunes-Ueno Consulting have prepared a thorough analysis, which is grounded in best practice research, thorough model testing, and effective implementation methods for the County. The assessment is based on the feasibility and cost-benefit analysis of different transit subsidy scenarios, which outlines the program recommendation in the Final TDM Implementation Guide. The following package summarizes research findings and analysis, and outlines recommendations for the County as they prepare a proposed approach for the 2020 budget.
2 BACKGROUND

CURRENT TRANSIT SUBSIDY PROGRAM

The County currently provides a fully-subsidized VTA SmartPass for all County employees. The annual pass can be used on all VTA-operated buses and light rail services, excluding VTA Express Bus services. SmartPasses are preloaded onto Clipper Cards and typically offered to employees when they begin working at the County. Employees can also load funds out-of-pocket onto Clipper Cards to use on other transit agencies.

VTA SmartPass Usage

Although all County employees are eligible to receive a SmartPass, the usage rate is relatively low. For the 2018 calendar year, an average of 1,254 employees use the VTA SmartPass Program each month, which accounts for 6% of all employees. Discussions with the County have indicated that lower participation rates are potentially due to inconsistent marketing and communications approaches – there have been several reports of departments not offering SmartPasses to new employees as they are being onboarded.

Costs

For the 2019 calendar year, an annual VTA pass, which offers equivalent services to the VTA SmartPass Program, costs $990. For the VTA SmartPass Program, the County purchases passes in bulk at a discounted rate, which requires employers to purchase passes for all employees, as well as vacant positions. The cost of the current SmartPass Program agreement with VTA is approximately $658,000 for just County employees, sufficient to provide passes for all active and vacant positions.

In addition, in December 2018, the Board of Supervisors approved a pre-tax commuter benefits contract with Navia, a benefits administration vendor, which will allow employees to allocate a portion of their paycheck for pre-tax transit expenses on any local transit, parking expenses, and vanpool expenses. Currently, the Internal Revenue Service sets a maximum pre-tax limit of $265 per month for transit, vanpool, and parking expenses, however, the maximum value available for County employees will be $182.50 per month, as the SmartPass Program is considered a tax-exempt benefit.

The current contract with Navia has set aside funding of up to $126,000 for the benefits service, to be used until December 31, 2021, with two (2) one-year extension options. Navia offers an employee-driven ordering platform that can accommodate other types of commuter benefits, such as customized employer subsidies, bicycle benefits, and direct pay for cash only parking. The GoNavia platform allows for tailoring of programs for single-office employers, as well as large multi-location employers who want a custom experience for each office location. The platform
allows participants to place orders for their expenses through the Navia website, which will be deducted from their paychecks pretax and loaded onto a Navia Benefits Card.

**EMPLOYEE HOME LOCATIONS**

Currently, 9% of employees use transit at least one day per week to commute to work at the County. Furthermore, there are many employees who live within close proximity to transit services near County offices and facilities. Employee home locations were mapped to identify potential opportunities to increase transit ridership. As shown in Figure 1, the largest cluster of employees live and work in the San Jose metropolitan area, most of which is served by VTA transit services. Other denser pockets of home locations include Morgan Hill and Gilroy, which is served by Caltrain, and southern Alameda County, which is served by ACE Rail and the future BART extension.

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1 According to the 2017 Commute Alternatives Program Survey, 9.2% of employees commute to work via public transit.
Figure 1  Employee Home Location Assessment
3 BEST PRACTICES

To gain a better understanding of how the County can design and deliver an effective Transit Subsidy program that influences changes in commuting behaviors and helps the County achieve their goals and targets, research was performed to learn from local best practices.

EMPLOYER CASE STUDIES

Three Bay Area case studies were reviewed to identify how other major employers have implemented transit subsidy programs, and to assess the extent of their effectiveness. In evaluating the case studies, various factors were assessed, including the cost of the programs, implementation parameters, vendors, and integration with other programs and services. The case studies included a combination of a transit subsidy and pre-tax programs, with both municipal, private, and non-profit examples.

Figure 2 Case Study Summary Overview

<table>
<thead>
<tr>
<th>Program</th>
<th>Subsidy/Pre-Tax</th>
<th>Administration</th>
<th>Costs</th>
<th>Employee Registration</th>
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<tbody>
<tr>
<td>Stanford University</td>
<td>Subsidy Program</td>
<td>Internal – Parking &amp; Transportation Office</td>
<td>Full transit pass subsidies for Caltrain, VTA, AC Transit</td>
<td>Employees register for transit pass subsidies on the Parking &amp; Transportation webpage.</td>
</tr>
<tr>
<td>Kaiser Permanente – Oakland Medical Center</td>
<td>Subsidy Program</td>
<td>Internal – Commuter Services Office External – Commuter Platform (RideShark)</td>
<td>Up to $30/month per employee RideShare Contract</td>
<td>Employees must log commutes &amp; provide proof of use of sustainable commuting behavior. Once validated, the CSO will provide the subsidy.</td>
</tr>
<tr>
<td>San Mateo County</td>
<td>Subsidy</td>
<td>Internal – Commute Alternatives Program Coordinator External - WageWorks</td>
<td>Up to $75 subsidy/month per employee WageWorks Contract</td>
<td>Employees register for either option on the WageWorks portal.</td>
</tr>
<tr>
<td></td>
<td>Pre-Tax Program</td>
<td></td>
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Please note that the maximum amount that employers allow employees to set aside for pre-tax contributions may have since changed, as the Federal government recently changed the maximum cap for employees’ pre-tax dollars, which was recently raised to $265 each month.²

Stanford University

Programs: Transit Subsidies and Commuter Pre-Tax Program

Vendor: Edenred

Stanford University has a robust TDM program, supported by various subsidies that support the use of transit and other sustainable modes of transportation for campus commuting. Stanford’s TDM program has had significant impact on the mode split, with 24% of employees using transit to commute to campus, 13% using active modes, 9% carpooling or vanpooling, 50% driving alone to campus, and the remaining 4% indicated ‘other’ modes.

Stanford offers two programs that support employees in accessing a discounted or free transit passes.

Program Frameworks:

1. Free Transit Pass Program

Stanford University offers subsidized transit passes for Caltrain, VTA, and AC Transit. The Caltrain Go Pass provides unlimited travel on Caltrain between all zones, and the Express VTA SmartPass program allows unlimited travel on VTA buses, light rail, Dumbarton, Highway 17, and Monterey-San Jose Express buses. AC Transit also runs a weekday express shuttle bus service between the East Bay and the Stanford campus.

- Eligibility: The Caltrain Go Pass program is free for graduate students, postdoctoral scholars residing off Stanford property and within typical commuting distances, and for permanent university and hospital employees who work more than 20 hours a week, and receive university benefits. Students, postdoctoral scholars, and temporary scholars are not eligible for the VTA SmartPass program, but it is offered to university and hospital employees who work more than 20 hours a week. The AC Transit bus service is free for Stanford faculty, staff, students, and hospital employees with a valid ID card.

- Employee Registration & Participation: To register for the Caltrain Go Pass or VTA SmartPass program, eligible participants can request the subsidy on the Parking & Transportation Services webpage. Participants can either load funds on to their own Clipper card by, and then activating the Go Pass by tagging the card on a Clipper card reader at a Caltrain station. If participants request a VTA SmartPass, they can claim this subsidy by picking up a pre-loaded Clipper card for the Parking & Transportation office. If participants wish to use both the Caltrain Go Pass and Express VTA SmartPass, they are encouraged to load additional funds on the pre-loaded SmartPass Clipper card provided by the University.

- Program Administration: The University relies on the Parking & Transportation office on campus to host the registration page and to coordinate with the transit agencies in securing the transit subsidy program.

- Program Costs: The University covers the cost of the subsidized transit programs, and covers staffing in the Parking & Transportation office on campus to help with the administration of the program registration and overall management.

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2. Commuter Pre-Tax Program

Stanford employees who meet eligibility requirements are allowed to use a combined total of $530 per month for pre-tax transit, vanpool and/or parking expenses, with a limit of $265 per month for transit and vanpool expenses, and $265 for parking expenses. Employees who choose to use the pre-tax option to purchase a transit pass can purchase a pass for AC Transit, ACE train, BART, Caltrain, Muni, and SamTrans, as well as Clipper cash or Commuter Checks through the Edenred Commuter Benefits program.

- **Eligibility:** Employees who work more than 20 hours per week, and are paid through Stanford University, Hospital and Clinics, or the Lucile Packard Children’s Hospital are eligible for the Commuter Pre-Tax program.

- **Employee Registration & Participation:** Eligible employees can order the pre-tax transit pass through the Edenred portal, or they can order a Commuter Check credit card and can load funds on to the card to purchase transit products.

- **Program Administration:** The University is responsible for administering the contract with Edenred, who handles the administration of the pre-tax transit pass purchases.

- **Program Costs:** The University would pay the fee for Edenred’s services in administering the pre-tax program.

**Kaiser Permanente – Oakland Medical Center**

*Program Names: Commuter Spending Account and Commuter Subsidy Program*

*Vendor: Wage Works*

Kaiser Permanente offers two transit subsidy programs, including a subsidy program known as the Commuter Subsidy Program, and a pre-tax program known as the Commuter Spending Account. In addition to the Commuter Spending Account and Subsidy Program, the Oakland Medical Center offers several other programs that encourage people to walk, bike, carpool, or take transit to work. The programs include a Bicycle Reimbursement Program ($20/month) and Guaranteed Ride Home (offered by the County).

*Program Frameworks:*

1. **Commuter Subsidy Program**

- **Eligibility:** Eligible employees must work at the Oakland Medical Center and record commute to work via transit or vanpool at least three times per week for a minimum of twelve roundtrips per month.

- **Employee Administration:** Employees must register for the subsidy prior to distribution, and pick it up on one of the designated pick-up time. The registration form asks registrants to provide their commute details over the course of an ordinary workweek. Employees must present a printed copy of the last two months of their Clipper Card Account History.

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6 [https://www.kpcommuter.org/Public/PublicPage.aspx?ItemName=Commuter_Spending&FileType=HTML](https://www.kpcommuter.org/Public/PublicPage.aspx?ItemName=Commuter_Spending&FileType=HTML)

7 [https://www.kpcommuter.org/Public/PublicPage.aspx?ItemName=Commuter_Subsidy&FileType=HTML](https://www.kpcommuter.org/Public/PublicPage.aspx?ItemName=Commuter_Subsidy&FileType=HTML)
• **Program Administration:** Managed by the Commuter Services Office, Kaiser Permanente is primarily responsible for the administration of the Commuter Subsidy Program, and relies on employee tracking and records via the Commuter Platform (hosted by RideShark), where employees can log their commutes. Based on their logged commutes on the platform, or Clipper Card transaction history, employees provide proof to Kaiser Permanente about their sustainable commuting behavior in completing the registration form. The Commuter Services Office will review and validate the claim, and subsequently approve or deny the request for the subsidy.

• **Program Costs:** In addition to the cost of $30 per month for qualified employees, Kaiser Permanente also covers the cost of the transportation management platform contract with RideShark. While the platform is associated with various TDM programs, it is a critical element of the subsidy program, as it allows employees to track their commuting behaviors. The program costs also include the internal administration of the Commuter Subsidy Program, as the office manages the claim validation process.

2. **Commuter Spending Account (CSA)**

• **Eligibility:** Employees may choose to use the expenses on public transit, vanpool, or parking at a transit station. The program allows employees to allocate up to $265 of their salary each month, to pre-tax dollars for transit, parking, and vanpool expenses. For those who pay for parking at a transit station, they can set aside as much as $265, pre-tax, for parking in addition to the money they set aside for transit. Employees are to only set aside as much of their salary as they need for their daily commute.  

• **Employee Registration & Participation:** To enroll in the program, employees must register a month prior to the requested date for the benefit. To register for the CSA, employees can sign up online through the WageWorks website, or can place orders by phone. Once they have enrolled, WageWorks will coordinate the delivery of the transit pass or Commuter Card by mail. Each month, employees will be charged a $2 administrative fee for the delivery of the card. Employees can monitor their card balance through their account on the WageWorks website. For those setting money aside to cover parking costs, WageWorks can reimburse employees, pay the parking provider themselves, or send the employee a WageWorks Commuter Card.

• **Program Administration:** Kaiser Permanente primarily relies on a third-party, WageWorks for the administration and delivery of the program.

• **Program Costs:** To offer the CSA, Kaiser Permanente covers the costs of the contract with WageWorks for the administration of the program.

### San Mateo County

**Programs: Pre-Tax Commuter Benefit & Transit Subsidy**

**Vendor: WageWorks**

San Mateo County offers a $75 transit and vanpool monthly subsidy, as a part of the San Mateo County Commuter Alternatives Program (CAP), as well as a Pre-Tax Commuter Benefit.  

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9 [https://hr.smcgov.org/blog/2018-08-17/save-your-commute-new-pre-tax-commuter-benefit](https://hr.smcgov.org/blog/2018-08-17/save-your-commute-new-pre-tax-commuter-benefit)
set of programs that encourage County employees to travel to and from work in a more sustainable way than driving alone, and offers other subsidies for carpooling, vanpooling, biking, walking, shuttle service, and Guaranteed Ride Home programs.\textsuperscript{10}

\textit{Program Framework:}

- **Eligibility:** San Mateo County offers a subsidy of $75 each month for trips made by transit, as well as a pre-tax commuter benefit, which they can elect up to $190 per month. The county only allows employees to use one commuter subsidy at a time, so if they choose to use this subsidy, they are not eligible to take advantage of one of the other transportation subsidies the County offers.\textsuperscript{11}

- **Employee Registration & Participation:** Program participants must obtain a Clipper card prior to enrollment. Once they have obtained a Clipper card, employees will register for the program by setting up an account with WageWorks. Employees must order their subsidy by the 10\textsuperscript{th} of the month to receive their subsidy for the upcoming month. New employees may request to be reimbursed if they were unable to enroll in the program on time.\textsuperscript{12} Once a request for the subsidy has been placed, WageWorks will put transfer E-Cash or transit passes onto the card. The subsidy will not transfer on to the card until the card has been tagged at a card reader. Employees who chose to load a greater value than the $75 subsidy will need to reach out to the Commute Alternatives Program Coordinator, who will then assign them a Commuter Express account.

- **Program Administration:** To effectively deliver the CAP program, San Mateo County uses WageWorks as a third-party provider in supporting the administration and facilitation of subsidy distribution. The County also relies on internal staff to oversee the overall management of WageWorks, and to support with additional requests or steps, such as assigning Commuter Express accounts for employees who load more than $75.

- **Program Costs:** To effectively administer the program, San Mateo County incurs a few costs. The first cost includes the $75 subsidy, in addition to the costs for the third-party vendor, WageWorks. This is also supplemented with the County staff and time associated with general program management of the CAP program. An average of 900 employees enroll in the transit/vanpool subsidy each month. The County spends approximately $905,000 annually on the subsidy alone.

\textsuperscript{10} https://www.smcsustainability.org/livable-communities/commute-alternatives-program/

\textsuperscript{11} http://smccap.org/smccap_faq.jsp#chapter800 Question Under Public Transit FAQs

\textsuperscript{12} http://smccap.org/smccap_faq.jsp#chapter800
4 TRANSIT SUBSIDY ANALYSIS

To determine the subsidy rate that both generates sufficient mode shift and is financially effective for the County, the following three scenarios were developed:

- **Baseline Scenario**: VTA SmartPass program + pre-tax option
- **Scenario B**: VTA SmartPass program + $50 monthly transit subsidy + pre-tax option
- **Scenario C**: VTA SmartPass program + $100 monthly transit subsidy + pre-tax option
- **Scenario D**: VTA SmartPass program + $130 monthly transit subsidy

Each scenario builds off the existing VTA SmartPass program and is described in detail below with annual cost estimates and program effectiveness. Program effectiveness consists of the estimated transit mode split¹³ as well as the GHG reduction potential from the baseline scenario. Mode split and GHG reduction estimates were determined by adapting CAPCOA thresholds to the local context based on industry knowledge.

Please see Appendix A for detailed information on assumptions made to determine cost estimates within each scenario and the cost estimate analyses for the Courts and IHSS. The Housing Authority was excluded because they decided not to participate in the SmartPass Program.

As stated in the introduction, CAPCOA estimates an approximate 0.3 to 20.0% reduction in GHG emissions from commute trips depending on the subsidy amount and percent of employees eligible for such a subsidy. For the purpose of this analysis, the percent of employees eligible represents those who would likely take transit (i.e. those who live and work near transit).

Employee home and office locations were mapped, and an estimated 72% of all employees were considered ‘eligible’ based on the following criteria:

- Office location is within:
  - 0.3 miles of a VTA bus station, or
  - 0.5 miles of a VTA light rail, ACE Rail, or Caltrain station, and
- Home location is within:
  - 0.3 miles of a VTA bus station, or
  - 1.0 mile of a VTA light rail, ACE Rail, or Caltrain station.

¹³ For analysis purposes, transit mode split equals VMT reduction.
TRANSIT SUBSIDY SCENARIOS

Baseline (VTA SmartPass + Pre-tax)

The baseline scenario represents the current subsidy program, which offers a fully subsidized VTA SmartPass to all employees and pre-tax commuter benefits.

According to the 2018 CAP Survey, approximately 9% of all employees commute to work by transit at least once per week. Due to the SmartPass program, the majority of these employees are VTA riders. In 2018, an average of 1,254 employees used the subsidized VTA SmartPass provided by the County, which equates to approximately 6% of all employees. Applying the same 6% participation rate, the estimated number of participants is 1,335 employees in 2019.14

For pre-tax commuter benefits, this benefit was officially launched on April 1, 2019 and participation levels are not yet known. Program participants would be able to open a pre-tax commuter account to set aside a maximum of $182.50 in pre-tax dollars from their paycheck for transit expenses on any local transit agency. Based on a tax rate of 22%, the maximum tax savings per employee in estimated to be $40 per month.

The SmartPass Program currently costs $658,000 and is anticipated to average 1,335 participants in 2019. This would result in SmartPasses costing, on average, $493 per actual user for the entire year and $41 per actual user per month. If the County of Santa Clara were to offer employees an equivalent service that provides free VTA non-express bus and light rail rides, the County would need to implement a transit subsidy program and purchase annual VTA passes at $990 per pass. With an anticipated 1,335 participants in 2019, the costs for instead providing annual VTA passes would be $1,321,650.

The SmartPass Program requires the County to purchase passes for all County employees, even though less than 10 percent of employees participate in the Program. However, the Program is still more cost effective than purchasing annual passes for existing users because the SmartPass Program’s discount results in passes that cost less than half per actual user when compared to purchasing annual passes.

Furthermore, if the County were to discontinue the SmartPass Program with no replacement program of equivalent service, many of the nearly 1,500 employees who currently utilize the program would elect to drive alone to work instead of paying the full amount of $990 out of pocket for an annual pass.

The County also offers a voluntary Pre-Tax Commuter Benefit Program, in addition to the SmartPass Program, which allows employees to save money on public transit and work-related parking expenses. However, participation in this benefit is less than 60 employees Countywide due mostly because it only provides a partial discount proportional to an employees’ income tax rate, while employees will need to cover the remaining transportation costs. If the County were to discontinue the SmartPass Program and only provide Pre-Tax Commuter Benefits, many of the nearly 1,500 employees who currently utilize the SmartPass Program would likely drive alone to work. Due to these reasons, the Implementation Guide recommends extending the SmartPass Program for County employees.

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14 With the addition of O’Connor Hospital, the total employee count increased from 19,747 in 2018 to 21,027 in 2019.
Program Effectiveness

The Baseline Scenario has an estimated transit mode split of 9 to 10%, which equates to a GHG reduction potential of up to 1.0%. Total participation is estimated to be between 1,900 to 2,100 users.

Cost

The current subsidy program costs approximately $658,000 per year. The cost of a pre-tax vendor would cost an additional $77,000 – making the total cost of the program $735,000 annually.

Scenario A (VTA SmartPass + $50/month + Pre-tax)

Under the current subsidy program, only employees who use VTA buses and light rail can benefit from the current subsidy program. Employees that take transit and live outside the VTA service area incur higher transit costs that are not subsidized. In order to serve more employees and yield a higher mode shift, Scenario A considers an additional subsidy and pre-tax option.

Under this scenario, the VTA SmartPass would still be available for all employees. However, those who use other transit agencies can receive an additional $50 monthly subsidy to use towards any local transit agency. Additionally, all program participants would be able to open a pre-tax commuter account to set aside pre-tax dollars from their paycheck for transit expenses. Given that the monthly subsidy and VTA SmartPass are considered tax-exempt benefits, employees can set aside a maximum of $132.50 of pre-tax dollars per month. Based on a tax rate of 22%, the maximum tax savings per employee is estimated to be $29 per month. Therefore, this scenario will provide an estimated benefit of up to $79 per month for public transit—assuming a tax rate of 22%.

Program Effectiveness

Scenario A has an estimated transit mode split of 9 to 11%, which equates to a GHG reduction potential of up to 2.5%. Total participation is estimated to be between 1,900 to 2,300 users.

Cost

The current subsidy program costs approximately $658,000 per year. Offering an additional $50 monthly subsidy option for other agencies, would cost an additional $567,000. The cost of a pre-tax vendor would cost an additional $83,000 – making the total cost of the program $1,308,000 annually.

Scenario B (VTA SmartPass + $100/month + Pre-tax)

Scenario B is similar to Scenario A, but offers a higher subsidy of $100 per month to account for the high cost of transit in the Bay Area. A $100 monthly subsidy equates to nearly half the average cost of a monthly transit pass in the area. Monthly pass fares for the main transit operators in the area are:

- ACE: $231 for a Tri-Valley Pass

15 The average monthly cost of the ACE, Caltrain, and VTA passes is $214.
• Caltrain: $231 for a three-zone pass
• VTA: $180 for a pass that includes express line service

Employees can set aside a maximum of $82.50 in pre-tax dollars under this scenario. Based on a tax rate of 22%, the maximum tax savings per employee is estimated to be $18 per month. Therefore, this scenario will provide an estimated benefit of up to $118 per month for public transit—assuming a tax rate of 22%.

**Program Effectiveness**

Scenario B has an estimated transit mode split of 11 to 13%, which equates to a GHG reduction potential of 2.5 to 5.0%. Total participation is estimated to be between 2,300 to 2,700 users.

**Cost**

The current subsidy program costs approximately $658,000 per year. Offering a $100 monthly subsidy option for other agencies, would cost an additional $1,497,000. The cost of a pre-tax vendor would cost an additional $87,000—making the total cost of the program $2,242,000 annually.

**Scenario C (VTA SmartPass + $130/month)**

Scenario C provides the highest subsidy option of $130, which equates to approximately 60% of the average cost of a monthly transit pass in the area. Although this is the most costly option for the County, it would also encourage the highest mode shift. Due to the high cost of the subsidy, a pre-tax option was not included. However, based on a tax rate of 22%, the maximum tax savings per employee is estimated to be $11 per month.

**Program Effectiveness**

Scenario C has an estimated transit mode split of 12 to 15%, which equates to a GHG reduction potential of 3.5 to 7.5%. Total participation is estimated to be between 2,500 to 3,100 users.

**Cost**

The current subsidy program costs approximately $658,000 per year. Offering an additional $130 monthly subsidy option for other agencies, would cost an additional $2,890,000, making the total cost of the program $3,548,000 annually.

**Cost Benefit Analysis**

Figure 3 summarizes the trade-offs for each subsidy scenario based on estimated costs and overall program effectiveness. Participation and GHG reduction potential increases relative to the level of investment. The Baseline Scenario yields little to no GHG reduction potential with the added pre-tax option. With an additional $448,000 in funding for Scenario A, the County can provide a $50 monthly subsidy option and potentially see a higher GHG reduction.

Although scenarios B and C yield the highest GHG reduction potential, they would require over three times the amount of current funding for the VTA SmartPass program. The County may consider a phased approach by first offering a $50 monthly subsidy and pre-tax option outlined in Scenario A. Once in place, the County can scale up as needed and as funding allows.
### Figure 3  Cost Benefit Analysis Matrix

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Subsidy Program(^{16})</th>
<th>Annual Cost Estimate(^{17})</th>
<th>Project Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transit Mode Split(^{18})</td>
</tr>
<tr>
<td>Baseline</td>
<td>▪ VTA SmartPass</td>
<td>$735,000</td>
<td>9-10%</td>
</tr>
<tr>
<td></td>
<td>▪ Pre-tax (max $40 savings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>▪ VTA SmartPass</td>
<td>$1,307,000</td>
<td>9-11%</td>
</tr>
<tr>
<td></td>
<td>▪ $50/month</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Pre-tax (max $29 savings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>▪ VTA SmartPass</td>
<td>$2,242,000</td>
<td>11-13%</td>
</tr>
<tr>
<td></td>
<td>▪ $100/month</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Pre-tax (max $18 savings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>▪ VTA SmartPass</td>
<td>$3,548,000</td>
<td>12-15%</td>
</tr>
<tr>
<td></td>
<td>▪ $130/month</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The current participation rate in the VTA SmartPass Program is 6%, the remaining 3% commute to work via other transit agencies.*

---

\(^{16}\) The estimated savings in pre-tax dollars assumes a maximum contribution of $265 per IRS limits, which accounts for County contributions and an income tax rate of 22%.

\(^{17}\) Please see Appendix A for assumptions made to estimate annual costs.

\(^{18}\) For analysis purposes, transit mode split equals VMT reduction.
5 IMPLEMENTATION

To facilitate implementation of a transit subsidy program, high-level service and rollout recommendations are summarized below. These recommendations will be incorporated into the TDM Implementation Guide to ensure that the program complements the efforts of other TDM programs, which will be developed in future program packages.

SERVICE & ROLLOUT RECOMMENDATIONS

The County can consider a phased implementation approach by first introducing Scenario A and regularly monitoring the program to assess whether a higher subsidy is appropriate. Under Scenario A, employees would receive a $50 monthly subsidy and pre-tax option, as well as a VTA SmartPass. Due to its existing contract with Navia for pre-tax accounts, the County should amend its original contract to include the addition of a monthly subsidy program. Employees will be able to access subsidy and pre-tax funds by using a commuter benefit debit card provided by Navia. The debit card can be used with any local transit agency and allows employees to purchase transit tickets at a ticket vending machine and/or to load funds onto a Clipper Card.

Marketing & Communications

Internally, there are implementation considerations that the County should make with respect to the administration and promotion of the program. Currently, employees are intended to receive the subsidy and Clipper card upon their orientation session. Since there are multiple agencies and departments, there may be some inconsistency in the delivery of the subsidy, promotion about the program, and overall administration. To address this, the County should establish a coordinated approach and reintroduce and educate key staff about administering the program. This could be further emphasized with a County-wide promotion about the subsidy, and identifying a point-person who can support staff in the administration and delivery of the program County-wide.

Monitoring

To ensure that the program is being implemented effectively and to collect feedback about how the program could be improved, the County should also develop a consistent monitoring and evaluation program. The County can work to include questions on the annual CAP survey, to gauge program usage and awareness, and to inform commute behaviors and trends pre- and post-implementation. To supplement this, the Navia contract provides an opportunity to track the use of transit subsidies and pre-tax dollars through the online portal. Program enrollment and subsidy usage should be tracked monthly to determine the effectiveness of the program and determine whether the subsidy offered is successful in encouraging transit ridership. If usage rates do not increase as a result of the $50 monthly subsidy, the County should consider offering a higher subsidy to encourage more employees to take transit. Regular monitoring will help inform the appropriate subsidy amount given available funding.
APPENDIX A

Cost Assumptions
## Cost Estimate Assumptions for Transit Subsidy Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Subsidy Program</th>
<th>Annual Cost Estimate</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>VTA SmartPass</td>
<td>All county employees: 21,027</td>
<td>$735,000</td>
</tr>
<tr>
<td></td>
<td>Pre-tax (max $40 savings)</td>
<td>Estimated maximum participation rate: 72%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transit mode split of eligible employees: 13%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VTA SmartPass usage: 1,335 users/month</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of VTA SmartPass: $658,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of Navia: $3.25/user/month</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>VTA SmartPass</td>
<td>All county employees: 21,027</td>
<td>$1,308,000</td>
</tr>
<tr>
<td></td>
<td>$50/month</td>
<td>Estimated maximum participation rate: 72%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-tax (max $29 savings)</td>
<td>Transit mode split of eligible employees: 14%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VTA SmartPass usage: 1,335 users/month</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of Monthly Subsidy: $50/month/emp</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of VTA SmartPass: $658,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of Navia: $3.25/user/month</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>VTA SmartPass</td>
<td>All county employees: 21,027</td>
<td>$2,242,000</td>
</tr>
<tr>
<td></td>
<td>$100/month</td>
<td>Estimated maximum participation rate: 72%</td>
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<tr>
<td></td>
<td>Pre-tax (max $18 savings)</td>
<td>Transit mode split of eligible employees: 16%</td>
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<td>VTA SmartPass usage: 1,335 users/month</td>
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<tr>
<td></td>
<td></td>
<td>Cost of Monthly Subsidy: $100/month/emp</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of VTA SmartPass: $658,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of Navia: $3.00/user/month</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>VTA SmartPass</td>
<td>All county employees: 21,027</td>
<td>$3,548,000</td>
</tr>
<tr>
<td></td>
<td>$130/month</td>
<td>Estimated maximum participation rate: 72%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transit mode split of eligible employees: 20%</td>
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<tr>
<td></td>
<td></td>
<td>VTA SmartPass usage: 1,335 users/month</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of Monthly Subsidy: $130/month/emp</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of VTA SmartPass: $658,000</td>
<td></td>
</tr>
</tbody>
</table>

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19 The estimated savings in pre-tax dollars assumes a maximum contribution of $265 per IRS limits, which accounts for County contributions and an income tax rate of 22%.

20 The maximum participation rate is determined as those who are most likely to take transit – those who live and work within a reasonable distance of a public transit stop.

21 The total employee count in 2018 was 19,747 and 21,027 in 2019 due to the acquisition of O’Connor Hospital. VTA SmartPass usage for 2019 was determined by applying a 6% participation rate. In 2018, an average of 1,254 employees used the subsidized VTA SmartPass provided by the County, which equates to approximately 6% of all employees.
## Cost & Participation by Entity\(^{22}\)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Subsidy Program(^{23})</th>
<th>County</th>
<th>Courts</th>
<th>IHSS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Cost Estimate(^{24})</td>
<td>Total Participants</td>
<td>Annual Cost Estimate(^{25})</td>
<td>Total Participants</td>
</tr>
<tr>
<td>Baseline</td>
<td>VTA SmartPass Pre-tax (max $40 savings)</td>
<td>$730,000</td>
<td>1,900 - 2,100</td>
<td>$57,000</td>
</tr>
<tr>
<td>A</td>
<td>VTA SmartPass $50/month Pre-tax (max $29 savings)</td>
<td>$1,268,000</td>
<td>1,900 - 2,300</td>
<td>$75,000</td>
</tr>
<tr>
<td>B</td>
<td>VTA SmartPass $100/month Pre-tax (max $18 savings)</td>
<td>$2,145,000</td>
<td>2,300 - 2,700</td>
<td>$105,000</td>
</tr>
<tr>
<td>C</td>
<td>VTA SmartPass $130/month</td>
<td>$3,548,000</td>
<td>2,500 - 3,100</td>
<td>$146,000</td>
</tr>
</tbody>
</table>

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\(^{22}\) Analysis assumes the same mode split for the Courts and IHSS as the County due to a lack of commute data.

\(^{23}\) The estimated savings in pre-tax dollars assumes a maximum contribution of $26.5 per IRS limits, which accounts for County contributions and an income tax rate of 22%.

\(^{24}\) Please see Appendix A for assumptions made to estimate annual costs.

\(^{25}\) Cost estimates includes $54,000 cost for the VTA Pass.

\(^{26}\) Cost estimates includes $488,000 cost for the VTA Pass.
APPENDIX C

Commutte Cash Package
TDM Milestones for Assessment

Commute Cash Package

May 2019
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1 INTRODUCTION

A Commute Cash program, also commonly known as a parking cash-out program, provides financial incentives to employees who choose to not drive and park at work. When paired with paid parking, they are one of the most effective ways to shift drive-alone commuters to other, more sustainable modes. Commute cash programs are effective in allocating scarce parking and managing a growing demand for parking.

While they may be administered in any timeframe, this package recommends a daily incentive to avoid an all-or-nothing approach. A daily option, as opposed to a monthly one, provides more flexibility and allows commuters to choose when to use a sustainable commute mode. Traditionally, a commute cash program offers employees the cash value of a parking space for not parking. Given the high cost of a parking space, many employers have opted for a lower subsidy amount. According to the California Air Pollution Control Officers Association (CAPCOA), a commute cash incentive of just $1 per day can yield a 0.6 to 7.7% reduction in GHG emissions from commute trips depending on the percent of eligible employees and location of the worksite. However, research has shown that higher subsidy amounts encourage more participation and lead to higher GHG emissions reduction.

For suburban employers, such as the County of Santa Clara, a commute cash program can:

- Limit the cost of acquiring new parking
- Offer employees/visitors more parking spaces
- Offer employees more incentive options to use alternative transportation
- Address regional congestion and air quality concerns

This package serves as a guide for the County on how to implement such a program. The recommendations in Chapter 4 are grounded in best practice research and a cost-benefit analysis of different incentive scenarios presented in Chapters 2 and 3.
2 BACKGROUND

In 1992, the State of California enacted legislation that required many employers who subsidized parking to employees to offer a parking cash-out option. According to California state law, employers that meet all of the following criteria must offer the cash value of the subsidized parking space to any employee who does not drive to work:

- Have 50 or more employees
- Have a work site located in an air basin designated nonattainment for any state air quality standard
- Subsidize any employee parking on property they do not own
- Can calculate the out-of-pocket expense of the parking subsidies they provide
- Can reduce the number of parking spaces in any of their leases without penalty

However, because the original legislation did not include penalties for noncompliance, many employers did not comply due to a lack of enforcement. In 2010, California authorized cities, counties, and air quality management districts to establish a penalty for employers who failed to comply. However, few have done so thus far.

\[1\] California’s Parking Cash-Out Law, [https://www.arb.ca.gov/planning/tsaq/cashout/cashout.htm](https://www.arb.ca.gov/planning/tsaq/cashout/cashout.htm)
3 CASE STUDIES

The following three case studies present different approaches to implementing a parking cash-out or commute cash program. Both public and private employers were identified and evaluated to better understand program administration, eligibility, registration, associated costs, and effectiveness. Table 1 provides an overview of the three case studies. Parking cash-outs vary and can be administered internally or through a third-party vendor. As is the case of Seattle Children’s Hospital, cash-out amounts and trip reductions are higher when implemented concurrently with paid parking and other robust TDM programs.

Table 1 Case Study Summary Overview

<table>
<thead>
<tr>
<th>Employer/Program</th>
<th>Administration</th>
<th>Costs</th>
<th>Employee Registration</th>
<th>Results²</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of San Jose Sustainable Commute Incentive Pilot</td>
<td>Internal</td>
<td>$4 per day</td>
<td>None</td>
<td>26% of employees increased the number of non-drive alone trips</td>
</tr>
<tr>
<td>City of Pleasanton pRide</td>
<td>Internal, except for trip logging through 511</td>
<td>$2 per day&lt;br&gt;• $1 if one-way</td>
<td>None</td>
<td>Daily trip logging on 511&lt;br&gt; Non-drive alone commuters doubled in 10 years ~6% reduction in drive alone trips</td>
</tr>
<tr>
<td>Seattle Children’s Hospital Commute Bonus</td>
<td>External - LUUM&lt;br&gt;• $4.50 per day&lt;br&gt;• Luum contract</td>
<td>Varies by time/location&lt;br&gt;• On-campus: up to $15 per day&lt;br&gt;• Off-site: up to $2 per day</td>
<td>Daily trip logging on LUUM</td>
<td>Drive alone trips reduced from 78% to 38% in 10 years ~49% reduction in drive alone trips</td>
</tr>
</tbody>
</table>

City of San Jose – Sustainable Commute Incentive Pilot

Vendor: Internal

In August 2018, the City of San Jose implemented a two-month parking cash-out pilot entitled, “Sustainable Commute Incentive Pilot”. The pilot was limited to select City Hall staff and offered participants $4 for each day they commuted by means other than driving alone. 36% of eligible employees participated in the pilot, and 26% increased the number of commute trips they took by...

² Mode shift results also account for other TDM programs in place.
means other than driving alone. Approximately 38% of all commute trips taken by eligible employees during the pilot were by means other than driving alone. A post-pilot survey revealed the following:

- 40% of participants would be motivated to change their behavior with just $2 per day.
- The primary reason for not participating was that it was too difficult to commute by means other than driving. Several indicated children as a complicating factor.
- 40% of non-participants would be motivated (likely to extremely likely) to change their commuting behavior with a $6 per day incentive, and half would be motivated with $10.

**Program Framework**

- **Eligibility:** All City Hall employees from the Parks, Recreation and Neighborhood Services (PNRS) Department. Eligible trips include all non-drive alone trips.
- **Employee Registration & Participation:** Internally through the Department of Transportation.
- **Program Administration:** The Department of Transportation managed the program, while the Finance Department handled the payments.
- **Program Costs:** Only the $4/day incentive, which was included in the employee's bi-monthly paycheck.
- **Staff Time:** Estimated to be 5 to 7 hours every other week.

**City of Pleasanton - pRide**

*Vendor: Internal, with assistance from 511*

An early adopter of parking cash-out, the City of Pleasanton adopted its parking cash-out program (“pRide”) in 1994. The program currently offers $2 per day ($1 if one-way) to all employees who elect not to drive a personal vehicle to work, which has had a significant impact on mode split. Prior to the program, only 28 employees (or about 6%) used sustainable commute modes. By 2004, the number of employees who opted not to drive along to work had more than doubled (to what amount?). Given an employee count of 460, this equates to a 6% reduction in drive-alone trips. In addition to the daily incentive, other incentives include monthly prize drawings and a transit subsidy, which covers 25% of monthly transit costs.

The City also runs a program called Commendable Commutes, which is a partnership between the City and local employers with 75 or more employees. This program encourages employers to adopt trip-reduction programs to reduce peak-hour traffic and pollution citywide. In an effort to evaluate both the internal City TDM program and the Commendable Commutes program, the City conducts bi-annual surveys of residents and employees to measure progress towards trip reduction goals, evaluate public awareness of the program, and determine the most effective incentives.

**Program Framework**

- **Eligibility:** All employees are eligible for parking cash-out. Eligible modes include public transit, biking, walking, telework, and compressed work week.

---

Employee Registration & Participation: Employees log their daily commute mode to and from work using the 511 Trip Diary and are paid on a monthly basis.\(^4\)

Program Administration: While the program is run on an honor system, a manager reviews the log and verifies absences. The monthly review is completed prior to submitting to payroll and the cash-out is included in the employee’s paycheck as taxed income. Fraud appears to be minimal.

Program Costs: Because 511 is a free service, the only associated costs are from the $2 per day cash-out.

Staff Time: Unknown

Seattle Children’s Hospital – Commute Bonus

Vendor: LUUM

Seattle Children’s Hospital offers a $4.50 daily commute bonus to for each day an employee does not drive alone to work. In accordance with the commute bonus, the hospital eliminated monthly parking passes and charged for parking on a daily basis. Parking rates varied by location and time of day, up to $15 per day for on-campus parking and $2 per day for off-site lots.

The hospital also offers a robust package of TDM strategies, including subsidized transit, premium vanpool and carpool parking, secure bicycle parking and free annual bicycle tune-ups, and employer shuttles between worksites, transit hubs, and off-site parking lots. Since 1995, the hospital’s TDM program has reduced drive-alone commutes by nearly half from 73% to 38% in 2005.\(^6\)

Program Framework

Eligibility: All employees are eligible. Eligible trips include all non-drive alone trips, including employees who telework.

Employee Registration & Participation: Employees register through LUUM, a commute platform that organizes and tracks commuter benefit information. Employees use an interactive calendar to track and plan trips and compete with coworkers for commuter status.

Program Administration: The hospital administers its commute incentives through LUUM. The platform also collects parking information and provides a live tracker for shuttles and vanpools. The commute bonus is automatically linked to payroll software, and distributed to employees’ paychecks. During every payroll cycle, a commute services staff member performs a quality check and confirms the distribution with payroll.

Program Costs: Aside from the cost of providing a $4.50 daily commute bonus, the hospital also pays a per employee fee for contracting with LUUM.

Staff Time: The entire TDM program is managed by 10 customer service, planning, and operations staff.

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\(^4\) 511 is a free online resource that provides commute resources to employers such as the 511 Trip Diary and information about how to implement different TDM programs.

\(^5\) http://assets.511.org/pdf/nextgen/commuter-benefits/Case_Studies.pdf

4 COMMUTE CASH ANALYSIS

Depending on available funding, a commute cash program can be implemented one of two ways: (1) points-based and (2) direct financial payment. The following scenarios assess the different options to determine which one is the most cost-effective for the County.

- **Scenario 1: Points-based**: Points-based rewards program for employees who carpool/vanpool, bike/scooter, walk, or take transit to work.
- **Scenario 2: Commute Cash A**: $2 daily incentive for employees who carpool/vanpool, bike/scooter, or walk to work.
- **Scenario 3: Commute Cash B**: $2 daily incentive for employees who carpool/vanpool, bike/scooter, walk, or take transit to work.

Each scenario is described in detail below with annual cost estimates and program effectiveness, which is represented by the GHG reduction potential. According to CAPCOA, the maximum trip reduction potential with a $1 parking cash-out are 3.0% for low-density suburbs (e.g. Silver Creek) and 4.5% for suburban centers (e.g. Civic Center). GHG reduction estimates for each cash-out option were determined by adapting CAPCOA thresholds to the local context based on industry knowledge and best practice research. Please see Appendix A for detailed information on assumptions made to determine cost estimates within each scenario.

**Applicable Sites**

Ideally, incentives would be offered to all County employees. However, due to the high cost of implementing such a program countywide, the following sites should be prioritized due to existing parking constraints, workforce size, and mode shift potential. Most sites have good transit and/or bike access and are potential commuter shuttle stops. Cost and GHG reduction estimates presented in this analysis assumes implementation at these seven sites, which house 15,846 employees in total (~87% of all County employees):

- Civic Center
- Valley Medical Center (VMC) Main Campus
- Berger
- Charcot
- O'Connor Hospital
- Silver Creek
- Champion Point
- SSA Senter
- SSA Julian
COMMUTE CASH SCENARIOS

Scenario 1: Points-Based

A points-based rewards program provides redeemable “points” for “X” number of non-SOV trips (i.e. transit, carpool/vanpool, bike, walk). A tradeoff of using points rather than cash is that points are not perceived to directly relate to the value of a parking space. In order to implement such a program, the County will need to:

- Establish a tiered framework with individual reward/prize thresholds based on the following criteria:
  - Number of trips logged;
  - Miles commuted by alternative transportation options;
  - Percentage of trips per month made by alternative transportation options; and/or other desired metrics.
- Provide rewards that could include bike/pedestrian fitness gear, gift cards, paid time off, and/or free bikes.

Program Effectiveness

A points-based program has an estimated drive-alone trip reduction of up to 1.5%. Given that approximately 3,700 employees currently use a non-SOV mode, a maximum of 200 employees are expected to shift to a sustainable mode. This equates to a total participation of between 3,700 to 3,900 users and a GHG reduction potential of up to 1.3%.8

Cost Estimate

Assuming that an annual reward value of $30 per employee, the estimated cost for a points-based program is $111,000 to $117,000 per year.

Scenario 2: Commute Cash A

A Commute Cash option provides a direct financial payment for each day an employee uses a sustainable commute option (i.e. carpool/vanpool, bike/scooters, walk), but does not include teleworking or ride hailing. In the interest of cost savings and avoiding double payment, transit users would not be eligible under this program.

An initial $1 per commute trip incentive is recommended along with a monthly reimbursement cap of $10.

Program Effectiveness

A Commute Cash program is estimated to encourage 1.5 to 2.5% of employees who currently drive alone to use an eligible sustainable mode. This equates to approximately 200 to 400 employees

---

7 Current non-SOV usage is determined by applying the transit, carpool/vanpool, bike, walk mode split (20.4%) from the 2017 CAP Survey to the total number of employees at the nine sites (18,244 employees).

8 According to CAPCOA, GHG reduction is the product of the percent reduction in drive alone trips (0 - 1.5%) and the percent of employees eligible. The percentage of eligible employees is determined by the proportion of all County employees who work at one of the seven applicable sites (87%).
who would shift modes. Given that approximately 2,000 employees at the seven applicable sites currently carpool/vanpool, bike/scooter, or walk to work, total participation is estimated to be between 2,200 to 2,400 users. Applying the current mode split from the CAP Survey to 2,200 users, 1,651 would carpool/vanpool to work, 317 would bike, and 232 would walk. The estimated GHG reduction potential is 1.2 to 2.0%.

**Cost Estimate**
Assuming a $1 per commute trip incentive and a maximum cap of $10 per month, the program is estimated to cost $264,000 to $288,000 per year.

**Scenario 3: Commute Cash B**
Given available funding, a Commute Cash program can also include transit users. Similar to the previous scenario, eligible employees would receive a $1 per commute trip incentive, with a maximum of $10 per month.

**Program Effectiveness**
The Commute Cash B scenario is estimated to lead to a 2.0 to 3.0% shift from drive-alone commuting. This equates to approximately 300 to 500 employees who would shift modes. Given that approximately 3,700 employees currently transit, carpool/vanpool, bike/scooter, or walk to work, total participation is estimated to be 4,000 to 4,200 users. The estimated GHG reduction potential is 1.7 to 2.6%.

**Cost Estimate**
Assuming a $1 per commute trip incentive and a maximum cap of $10 per month, the program is estimated to cost $480,000 to $504,000 per year.

**Cost Benefit Analysis**
Figure 1 summarizes the trade-offs for each program option based on estimated costs and overall effectiveness. A points-based program yields little to no GHG reduction potential. In order to achieve a greater reduction potential, the County should consider investing in a Commute Cash program instead. GHG reduction potential doubles with a Commute Cash program as opposed to a points-based one. Although the Commute Cash B scenario yields the highest GHG reduction potential by including transit users, it requires an additional $183,000 to $198,000 of funding compared to the Commute Cash A scenario.

The County may begin with the Commute Cash A scenario and limit eligibility to carpool/vanpool, bike/scooter, walk users, and later scale up to include transit users if funding allows.

---

9 According to CAPCOA, GHG reduction is the product of the percent reduction in drive alone trips (1.5 - 2.5%) and the percent of employees eligible. The percentage of eligible employees is determined by the proportion of all County employees who work at one of the nine applicable sites and do not take transit (79%).

10 According to CAPCOA, GHG reduction is the product of the percent reduction in drive alone trips (2.0 - 3.0%) and the percent of employees eligible. The percentage of eligible employees is determined by the proportion of all County employees who work at one of the nine applicable sites (87%).
### Figure 1  
**Cost Benefit Analysis Matrix**

<table>
<thead>
<tr>
<th>Program</th>
<th>Annual Cost Estimate(^{11})</th>
<th>Participation Rate</th>
<th>Total Participation(^{12})</th>
<th>GHG Reduction Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points-Based</td>
<td>$111,000 - $118,000</td>
<td>20 - 22%</td>
<td>3,700 - 3,900</td>
<td>0% - 1.3%</td>
</tr>
<tr>
<td>Commute Cash A</td>
<td>$264,000 - $288,000</td>
<td>12 - 13%</td>
<td>2,200 - 2,400</td>
<td>1.2% - 2.0%</td>
</tr>
<tr>
<td>Commute Cash B</td>
<td>$480,000 - $504,000</td>
<td>22 - 23%</td>
<td>4,000 - 4,200</td>
<td>1.7% - 2.6%</td>
</tr>
</tbody>
</table>

\(^{11}\) Please see Appendix A for assumptions made to estimate annual costs.

\(^{12}\) Participation estimates assume that 100% of all eligible employees will participate in the program.
5 IMPLEMENTATION

To facilitate implementation of a Commute Cash program, high-level service and rollout recommendations are summarized below. These recommendations will be incorporated into the TDM Implementation Guide to ensure that the program complements the efforts of other TDM programs, which will be developed in future program packages.

SERVICE & ROLLOUT RECOMMENDATIONS

To simplify the management of the program and streamline recordkeeping and distribution of payment, the program should be integrated into a commute platform such as RideAmigos or Luum. Employees would be required to register on the platform and log their daily commute trips and mode via a commute calendar. Daily payments can be deposited into an employee’s “account” via the platform, which will then be added as a stipend onto an employee’s paycheck.

To minimize administrative burden for the County, it is strongly recommended that payments be considered “post-tax”. While not ideal for employees, this approach would reduce significant administrative and operational challenges for the County.

Monitoring

While the County may provide an initial $2 cash-out, a higher amount can more effectively deter employees from driving to work. The County should:

- Track and monitor participation monthly on the commute platform to provide payouts and determine if the commute cash amount is effective in encouraging employees to use non-SOV modes
- Deter abuse of the program by requiring validation. Potential validation options include the following options:
  - If parking is managed and tracked electronically, integrate management technology into the commute platform to ensure that employees who park cannot receive cash-out
    - Parking can be tracked and managed through access control equipment such as radio frequency ID (RFID), license plate recognition (LPR), and Bluetooth or MAC address software. Access control equipment can be prioritized at sites with many employees, with priority given to garages and large surface lots.
    - Abuse may be more prevalent at sites that do not have access control equipment which can verify whether an employee parked at work or not.
  - If transit users are ineligible, integrate commute benefits vendor (i.e. Navia) into the commute platform to ensure transit users cannot receive a cash-out
- Track parking usage; if demand remains high and non-SOV use remains constant, increase the commute cash amount and/or the County starts charging for parking
APPENDIX A

Cost Estimate Assumptions
## Cost Estimate Assumptions for Commute Cash Scenarios

<table>
<thead>
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<th>Details</th>
<th>Annual Cost Estimate</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1: Points-based</td>
<td>• Eligible Modes: transit, carpool/vanpool, bike, walk</td>
<td>• Eligible employees: 18,244</td>
<td>$111,000 - $118,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Existing carpool/bike/walk mode split: 11.2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Existing drive alone mode split: 79.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drive alone trip reduction: 0 - 1.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reward value: $30/year/employee</td>
<td></td>
</tr>
<tr>
<td>Scenario 2: Commute Cash A</td>
<td>• $1 per trip</td>
<td>• Eligible employees: 18,244</td>
<td>$264,000 - $288,000</td>
</tr>
<tr>
<td></td>
<td>• $10 monthly max</td>
<td>• Existing carpool/bike/walk mode split: 11.2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Eligible Modes: carpool/vanpool, bike/scooter, walk</td>
<td>• Existing drive alone mode split: 79.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drive alone trip reduction: 1.5 - 2.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximum Commute Cash: $10/month</td>
<td></td>
</tr>
<tr>
<td>Scenario 3: Commute Cash B</td>
<td>• $1 per trip</td>
<td>• Eligible employees: 18,244</td>
<td>$480,000 - $504,000</td>
</tr>
<tr>
<td></td>
<td>• $10 monthly max</td>
<td>• Existing transit mode split: 9.2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Eligible Modes: transit, carpool/vanpool, bike/scooter, walk</td>
<td>• Existing carpool/bike/walk mode split: 11.2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Existing drive alone mode split: 79.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drive alone trip reduction: 2.0 - 3.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximum Commute Cash: $10/month</td>
<td></td>
</tr>
</tbody>
</table>

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13 Eligible employees determined by total employee count from the nine recommended sites (Civic Center, VMC Main Campus, Berger, Charcot, O’Connor, Silver Creek, Champion Point, SSA Julian, SSA Senter).
APPENDIX D

Shared Active Transportation Package
TDM Milestones for Assessment
Shared Active Transportation Package

May 2019
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<td>Shared Active Transportation Cost Benefit Analysis Matrix</td>
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</table>
1 INTRODUCTION

Shared active transportation is a program in which employees have access to a fleet (either a public one provided by an outside vendor or a private one provided by the County) of shared bicycles or electric scooters. According to the California Air Pollution Control Officers Association (CAPCOA), bike share is a grouped strategy with Bike Lane Street Design and Improve Design of Development. Therefore, the range of effectiveness varies greatly depending on the location and design of the work sites and connecting streets. Due to the limited number of anticipated participants, the maximum GHG reduction potential is less than 1%.

Providing access to a shared fleet of bikes or other mobility devices is a relatively low-cost way to promote active transportation and signal a culture of wellness, activity, and environmental stewardship. Enabling physical activity during a work schedule is emerging as another strategy to attract and retain talented employees. Shared active transportation programs can provide a useful way for employees to get between buildings for internal meetings, make trips to meet with external partners, collect data, and engage with the community. Programs that are available outside of work can also help with the last mile connection to and/or from transit and in some cases replace an entire driving, transit, or walking trip. By lowering barriers to trying active transportation, shared programs can lead to increased physical activity and bicycle commuting.

To determine an effective Shared Active Transportation program for the County of Santa Clara, Nelson\Nygaard and Nunes-Ueno Consulting have prepared a thorough analysis, which is grounded in best practice research, thorough model testing, and effective implementation methods for the County. The assessment is based on the feasibility and cost-benefit analysis of different shared active transportation scenarios, which informed the final program and implementation recommendations outlined in the Implementation Guide.
2 BACKGROUND

Two types of shared active transportation systems are currently offered in Santa Clara County – bike share (including both electric and non-electric bikes) and electric scooter share. This chapter provides an overview of what docked and dockless systems are available to employees and residents in the area.

Ford GoBike

Ford GoBike operates the regional bike share system in the Bay Area with 7,000 bicycles and over 500 stations. GoBike bicycles are available as electric-assist and non-electric bikes. GoBike is primarily a docked bike share system in which bikes must be picked up and returned to a dock within the system. An annual pass holder has access to the entire system and unlimited bicycle rides under 45 minutes (6-8 miles on city streets). A rider with an annual pass can dock a bike and check it out again for a longer trip. Rides over 45 minutes incur additional charges above the annual pass cost. In San Jose the bike share docks are primarily located downtown and in adjacent neighborhoods as shown by the dots in (Figure 1). Additionally, North San Jose has a Ford GoBike dockless bike pilot (Figure 2). Unlike the rest of the docked bike share system in which a rider picks up a bike from a dock and returns it to another dock, the dockless pilot allows a user pick up a bike and drop it off anywhere within a specific zone. With both the docked and dockless systems, users unlock the bike with the Ford GoBike app on their smartphone or a registered Clipper Card. The bike docks also have a kiosk where users can purchase day passes, multi-day passes, and get information about the system.

The following County facilities are located within walking distance of a bike share dock:

- Civic Center (100 feet)
- SSA Julian (0.3 miles)
- Valley Health Center Lenzen (0.3 miles)
- Downtown Health Center (100 feet, future dock)
- Roads and Airports (0.2 miles)

Additionally, the following three sites are located near or within the dockless pilot area:

- Charcot
- Fleet
- Champion Point (facility currently unoccupied)
Figure 1  Ford GoBike San Jose Station Map

Source: https://member.fordgobike.com/map/
Different colored dots display bicycle available in real time. Green has available bikes, yellow is getting low, and red has few or no bikes available.
The County of Santa Clara

Nelson\Nygaard Consulting Associates, Inc. | 4

Figure 2  Ford GoBike Dockless Pilot Area, Shown in Dark Grey

Source: https://member.fordgobike.com/map/
The blue dots show where dockless bikes are in real time.

In addition to the network shown in Figure 1 Figure 2, Ford GoBike is planning to expand their network in San Jose over the next few years. Exact timing depends on a number of variables, including permitting. Figure 3 shows the service area of the future network, exact station locations may change before they are constructed. The expanded service area does not include any additional County sites that are not already near the existing network. The future network, however, will connects more neighborhoods and can facilitate trips to more places for appointments, errands, food, and connections to transit.
Dockless Bikes and Electric Scooters

Dockless bikes—both electric assist and unpowered—as well as electric scooters (e-scooters) are privately-owned fleets unlocked with smartphones. While rapidly evolving, dockless bikes have declined in their use and distribution while multiple companies such as Bird, Lime, Skip, Scoot, and others are pursuing e-scooters. Ofo, a global dockless bike share company recently withdrew from most North American cities and Lime, the company with the largest dockless presence in the Bay Area has shifted away from bikes and to electric scooters. Currently, Lime and Bird have the largest presence in Santa Clara County.

Costs of dockless bikes and scooters are typically $1 to unlock and then additional time or distance-based costs added per trip. A Lime scooter, for example, can be unlocked for $1 with $0.15 charge for every minute the scooter is unlocked. Fleets are dockless and distributed by how people use them or are rebalanced by the company (moved from areas of low demand to areas of high demand). E-scooters and bikes use GPS tracking and users locate them using each companies’ smartphone app.

Typically, e-scooter companies operate based on agreements with cities that regulate public right of way. However, there have been multiple instances of cities not permitting private scooter fleets to be operated in public right of way. Additionally, some cities have geofenced areas where bikes and e-scooters are not permitted to park. Cities also have regulations or permit conditions about where and how dockless bikes and e-scooters are allowed to park to ensure sidewalks are not blocked.

---

3 CASE STUDIES

The following case studies present different approaches to implementing a shared active transportation program. Public and private employers were identified and evaluated to better understand program administration, eligibility, registration, liability, associated costs, and effectiveness. Figure 4 summarizes each program.

Figure 4 Active Transportation Case Study Overview

<table>
<thead>
<tr>
<th>Employer/Program</th>
<th>Administration</th>
<th>Type</th>
<th>Fleet Size</th>
<th>Costs</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>City and County of San Francisco</td>
<td>Internal</td>
<td>Work-related trips only</td>
<td>246 bikes</td>
<td>Unknown</td>
<td>Annual VMT reduction: 32,829</td>
</tr>
<tr>
<td>CityCycle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County of San Mateo</td>
<td>Internal</td>
<td>Monthly bike/walk subsidy</td>
<td>Not applicable</td>
<td>$20 per month per registered user</td>
<td>Unknown</td>
</tr>
<tr>
<td>Bike/Walk Subsidy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County of San Mateo</td>
<td>Internal</td>
<td>Work-related trips only</td>
<td>13 bikes at two work sites</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>Private bike fleet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of California, Los</td>
<td>CycleHop LLC</td>
<td>Open bike share</td>
<td>180 bikes</td>
<td>Unknown</td>
<td>500 bike share members</td>
</tr>
<tr>
<td>Angeles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bruin Bike Share</td>
<td></td>
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</tbody>
</table>

City and County Of San Francisco

Vendor: Internal

The City and County of San Francisco (CCSF) created an internal bike share system in 2001 to reduce work-related vehicle miles traveled, reduce demand for City vehicles, and improve employee health and efficiency. The program re-branded as CityCycle in 2012.

The 2012 CommuteSmart CCSF Transportation Survey found that 11% of people ride bicycles for work-related trips. Nearly half of those (47%) reported that they used a city-owned bike for some or all work-related bike trips. A total of 308 users rode a reported 2,478 bike miles per week and replaced 467 vehicle miles traveled (17%), for an estimated annual VMT reduction of 32,829.

In addition to the CityCycle Program, CCSF employees are eligible for a discounted membership with Ford GoBike, the docked bike share system in the Bay Area. Any employee can purchase an annual Ford GoBike membership for $124 instead of the regular $149 annual membership.²

**Program Framework**

- **Eligibility:** All City & County departments are eligible. Limited to work-related trips only, not for commuting.

- **Employee Registration & Participation:** It is optional for participants to fill out the Disclaimer of Liability or attend the bike safety training with the Department of the Environment before using CityCycle. Departments create their own reservation system, typically an email address and associated calendar people can email or schedule directly on the calendar. Participants must wear a helmet when riding a CityCycle bike.

- **Program Administration:** CommuteSmart, an initiative of the San Francisco Department of the Environment oversees the program including procurement of bicycles and on-site consultations to assist departments with program logistics such as setting up a location to store bikes and scheduling trainings on safe biking. Individual departments are responsible for ensuring the CityCycle bikes are available to all City staff, securely housed, and designating a point person to ensure regular maintenance of the bikes, maintain a reservation procedure, and complete quarterly usage reports. Additionally, departments must establish a fund to pay for maintenance and lost, stolen, or damaged equipment.

- **Liability:** The CityCycle program is identical to the City Vehicle Pool – employees are covered under Workers’ Compensation benefits while using CityCycle equipment for work-related purposes. A liability waiver and safety training are encouraged but not required before using a CityCycle bicycle for the first time.

- **Program Costs:** CityCycle has placed 246 bicycles in City departments from 2001-2012. The cost of the bicycles, accessories, and ongoing maintenance was not available.

- **Staff Time:** Not reported, however, significant administration tasks were identified.

**County of San Mateo**

**Vendor: Internal**

As part of its Commuter Alternatives Program (CAP), the County of San Mateo offers a $20 monthly subsidy to employees who regularly bike or walk to work. Two work sites, San Mateo Medical Center and 2000 Alameda, also offer a private fleet of 13 bikes for employee use during the day. Aside from these two benefits, the CAP also offers bike lockers at select sites, a transit/vanpool subsidy, and a carpool subsidy.

Due to limited information available regarding the private bike fleet, the following details describe the bike/walk subsidy program only.

**Program Framework**

- **Eligibility:** All employees who walk or bike at least 8 days per month can receive the monthly subsidy. Employees who receive other subsidies (transit/vanpool or carpool) are ineligible.

- **Employee Registration & Participation:** Employees log into the internal CAP website to request a bike/walk subsidy. The program is based on an honor system.

- **Program Administration:** Bike/walk subsidies are dispersed as a stipend on employees’ paychecks.
• **Program Costs:** Because the program is distributed internally, costs are the cost of the subsidy – $20 per month for each registered employee.

• **Staff Time:** The program is run by CAP staff who are responsible for overseeing the overall employee commute program.

### University of California Los Angeles

**Vendor:** *CycleHop LLC which operates Bike Share Connect*

In 2017, UCLA launched Bruin Bike Share with 18 hubs (dock locations) and 130 bikes (Figure 5). The hubs are located throughout the service area, which includes UCLA’s main campus, and through Bike Share connect also includes nearby cities of Westwood Village, Santa Monica, Beverly Hills and West Hollywood. As of April 2018, Bike Share Connect has 830 bikes and 135+ stations which includes bikes and stations from Bruin Bike Share, Breeze Bike Share, Beverly Hills Bike Share and WeHo Pedals Bike Share. In the first year, over 500 members signed up for the Bruin Bike Share program.

The Bruin Bike Share program is open to the public for $99 a year or on a pay-as-you-go basis. UCLA students, faculty, and staff can get the annual membership for $72. Annual memberships allow up to 90 minutes of riding time per day.

In addition to the bike share discount, UCLA offers employees free bike rentals at the UCLA bike shop if they have an appointment time of 43.75% or more. All employees can rent a bike for two-four weeks to try out bike commuting before purchasing their own.

**Program Framework**

• **Eligibility:** All employees, faculty, and students are eligible for bike share discount. The bike share bikes are open to the public at a higher cost.

• **Employee Registration & Participation:** 500 sign ups within the first year

• **Program Administration:** Bruin Bike Share is owned by UCLA Transportation and operated by CycleHop LLC, which manages the extended Bike Share Connect network. The Social Bicycles mobile app allows real-time access to review bike availability.

• **Program Costs:** Unknown

• **Staff Time:** Unknown
Figure 5  Bruin Bike Share Map

Source: http://bruinbikeshare.com/#bikemap-header
4 SHARED ACTIVE TRANSPORTATION ANALYSIS

Depending on available funding, share active transportation can be implemented at various scales and include a partnership with a vendor or internally implemented program. The following scenarios analyze both options with an additional option of partnering with an electric scooter company or companies.

- Full bike share subsidy
- Partial bike share subsidy
- Private fleet of bicycles
- Electric scooter subsidy

Each scenario is described in detail below with annual cost estimates and program effectiveness, which is represented by the GHG reduction potential. According to the California Air Pollution Control officers Association (CAPCOA), bike share is a grouped strategy with Bike Lane Street Design and Improve Design of Development. Therefore, the range of effectiveness varies greatly, although the maximum potential is less than 1% reduction in GHG emissions. GHG reduction estimates for each shared active transportation option were determined by adapting CAPCOA thresholds to the local context based on industry knowledge and best practice research.

Please see Appendix A for detailed information on assumptions made to determine cost estimates within each scenario and cost estimate analyses for the Courts and Housing Authority. While a bike share program may be viable for IHSS employees, it is not included in this analysis due to limited data of employee commute patterns and modes. Additional barriers specific to IHSS employees that would affect the success of a shared active transportation program are varied schedules, multiple work locations, and need for a vehicle.

SHARED ACTIVE TRANSPORTATION OPTIONS

Full Bike Share Subsidy

The County can enroll as a Ford GoBike corporate partner to provide free or discounted memberships to their employees. The Ford GoBike Corporate Partnerships requires an employer to enroll by choosing a plan (full or partial subsidy). This scenario considers a full subsidy that would provide an annual membership to all registered employees free of charge.

Applicable Sites

The County can begin by offering a fully-subsidized membership to the eight sites that are currently located nearby a bike share dock. Given that Ford GoBike is planning to expand their network in San Jose over the next few years, the County should consider expanding eligibility for this program to sites that will be located near new docks.
Program Effectiveness

CAPCOA defines bike share as a “grouped strategy,” one that is most effective at reducing GHG emissions when accompanied by improved street design and site elements to enhance the experience of riding a bike. A bike share subsidy on its own is estimated to reduce GHG emissions by less than 1% for each applicable site. Given that 44% of all County employees work at one of the eight sites near a bike share dock, the maximum GHG reduction potential is approximately 0.4%.

In conjunction with other strategies, however, it would make transit more accessible for some work sites by providing a last mile connection. Additionally, bike share can replace some daytime trips that other commute focused strategies do not directly address.

Cost Estimate

The cost of a corporate bike share membership is $100 a year for each employee that signs up within the full corporate partnership. Figure 6 shows the cost comparison of the different annual membership types, Ford GoBike gives a higher discount depending on the level of corporate subsidy.

Figure 6  Ford GoBike Annual Membership Pricing Structure

<table>
<thead>
<tr>
<th>Annual Membership Type</th>
<th>Company Cost</th>
<th>Individual Cost</th>
<th>Total Cost</th>
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</thead>
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<tr>
<td>Individual</td>
<td>$0</td>
<td>$149</td>
<td>$149</td>
</tr>
<tr>
<td>Corporate – Partial Subsidy</td>
<td>$60</td>
<td>$60</td>
<td>$120</td>
</tr>
<tr>
<td>Corporate – Full Subsidy</td>
<td>$100</td>
<td>$0</td>
<td>$100</td>
</tr>
</tbody>
</table>

Given the limited coverage of bike share docks in Santa Clara County, the anticipated participation rate is estimated at 5% less (approximately 460 participants). This would cost approximately $46,000 a year. With a completely free program such as a full bike share subsidy, there is the potential for more employees to sign up than estimated. However, since most employees live outside of walking distance from bike share, it is assumed that no more than 5% of employees would sign up.

Partial Bike Share Subsidy

Rather than providing a fully-subsidized Ford GoBike membership, the County can provide a partial subsidy at a significant discount through the corporate program, which offers an annual rate of $120. In a partial bike share subsidy, employees register and pay half the cost ($60) of an annual membership, and the County will cover the other half of the annual membership cost. The County would then be billed for their portion of the bike share subsidy on quarterly based on the number of employees who sign up.

Program Effectiveness

Given that a partial subsidy requires participants to pay for part of the membership, a lower participation rate and GHG reduction potential is expected. The GHG reduction potential is less than 0.5% for each applicable site. Given that 44% of all County employees work at one of the eight sites near a bike share dock, the maximum GHG reduction potential is approximately 0.2%.
Cost Estimate

Given the limited coverage of bike share docks in Santa Clara County and the cost to the employee, the anticipated participation rate is estimated at 3% less (approximately 280 employees). This would cost approximately $16,800 per year, depending on employee sign ups.

Private Bike Fleet

Rather than contracting with an external bike share vendor, the County can provide its own fleet of shared bicycles to employees for their use during the workday. While some programs allow bikes to be used for exercise or errands, the primary focus of the private bike fleet should be on first/last-mile connections in between facilities for meetings and/or site visits. The County can also consider long-term or permanent bike loans for employees who commit to regularly commuting by bike. Doing so would likely lead to increased program effectiveness and less day-to-day management.

Additional considerations include working with a legal team on the liability waiver or other administrative and registration requirements, a facilities team to identify a place to store and maintain bikes, and an Information Technology team to create a system for reserving bikes, tracking use, and tracking maintenance. Having a dedicated maintenance plan is a key element of success as shared bikes tend to experience significant wear.

Applicable Sites

The County can phase implementation of a countywide program by first prioritizing sites that are already accessible by bike. Prime candidates include sites that are within close proximity to other County sites and bike lanes or trails. Additionally, sites with more employees would provide a larger market capture. Using a one bike to 250 employees ratio, a total of 63 bikes would be needed for eight sites identified below.

Figure 7  Recommended Fleet Size by Site

<table>
<thead>
<tr>
<th>Recommended Site</th>
<th>Fleet Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Center</td>
<td>18</td>
</tr>
<tr>
<td>Champion Point</td>
<td>8</td>
</tr>
<tr>
<td>Silver Creek</td>
<td>8</td>
</tr>
<tr>
<td>Berger</td>
<td>6</td>
</tr>
<tr>
<td>Charcot + Fleet</td>
<td>6</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>6</td>
</tr>
<tr>
<td>O'Connor</td>
<td>6</td>
</tr>
<tr>
<td>SSA Julian</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>63</strong></td>
</tr>
</tbody>
</table>

Given the large size, varying locations, and various responsibilities of County employees, a system similar to San Francisco’s, in which departments opt in with guidance from a lead department in setting up a shared fleet, would be most cost effective. If the County pursues this program, site selection should also consider the types of departments and their workday travel needs.
Program Effectiveness

Given the number of factors that go into developing a bike share program, the overall success can vary. Having internal program champions and a system that makes using shared bikes simple and easy will result in higher participation. The County could set a goal of 31,000 trips per year, an average of two trips per workday for each bike in a 63-bike system.

A private bike fleet is estimated to reduce GHG emission from midday trips by less than 1% for each site. Given that 71% of all County employees work at one of the eight applicable sites, the maximum GHG reduction potential is approximately 0.7%.

Cost Estimate

Startup costs for an internally developed and administered program is about $1,000 per bike, including accessories helmet, U-lock, side bag panniers, lights, and shared basic maintenance tools. Maintenance costs vary depending on how much internally provided maintenance can be provided. Given the significant wear that shared bikes experience, it is recommended that bikes are tuned up on an annual basis by a professional mechanic for about $100 per bike. The cost for a 63-bike pilot would be $63,000 with an ongoing cost of $6,000 to $7,000.

Electric Scooter Subsidy or Partnership

The County can also provide employees with a subsidy on electric scooter trips at $1 per trip. Electric scooter fleets typically have an initial ride fee and time/distance-based pricing. The $1 subsidy would cover the initial ride fee that e-scooter companies typically charge. Employees would then pay for the rest of the trip. A 15-20 minute ride (2-3 miles) would cost $2-$3 in time charges to the employee. In addition to the subsidy, the County would partner with e-scooter companies to provide safety education, locate charging stations, free helmets, and parking areas to make using e-scooters more convenient. If there are areas where e-scooter use should be discouraged, the County would work with companies to establish a geo-fence where scooter use and drop off is not allowed.

Lime currently offers a corporate partnership program, however the program structure of sign ups, payment, and management are unclear. Only electric scooters are considered in this scenario. A combined dockless bike and electric scooter scenario was not considered due to the current declining presence of dockless bike share systems in the Bay Area. Lime, the company with the largest presence in the Bay Area has shifted away from bikes and to electric scooters. Additionally other scooter companies, such as Bird or Skip, only offer electric scooters.

Program Effectiveness

Given rapid changes to technology and regulations impacting electric scooters and people’s unfamiliarity with using them, it’s unlikely that scooters would be able to replace many inter-...
facility or other types of work-related trips. Additionally, paying on a per-use basis does not scale well compared to bike share memberships or an internal systems where the County pays a set cost for unlimited rides. For both cost and benefit reasons, the existing scooter fleets as currently deployed are not recommended.

**Cost Estimate**

If 200 trips were taken on scooters per week at a cost of $1 subsidy per use, that would cost approximately $10,000 annual. Costs could be capped per person at a set amount, a set number of trips a month, or restricted to certain work sites.

**COST-BENEFIT ANALYSIS**

Figure 8 summarizes the trade-offs for each program option based on estimated costs and overall effectiveness. A full bike share subsidy and private fleet have a greater potential to reduce GHG emissions and a higher use rate. An electric scooter program is the most uncertain in terms of participation and GHG reduction potential, however, it is unlikely to have a significant impact.

The County’s time costs to implement and manage shared active transportation scenarios vary. The private bike fleet has the highest time cost for both set up and ongoing outreach, maintenance, and management. Ford GoBike would have the lowest administrative time cost since the agreements are quick to set up and outreach materials are included in the partnership. An electric scooter company partnership would have more time costs than bike share since it less common than bike share partnerships and there are multiple companies to evaluate and work with.

**Figure 8 Shared Active Transportation Cost Benefit Analysis Matrix**

<table>
<thead>
<tr>
<th>Program</th>
<th>Annual Cost Estimate</th>
<th>Program Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Participation Rate</td>
</tr>
<tr>
<td>Full bike share subsidy</td>
<td>$46,000</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>([$100 subsidy])</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial bike share subsidy</td>
<td>$17,000</td>
<td>Less than 3%</td>
</tr>
<tr>
<td>([$60 subsidy])</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private bike fleet</td>
<td>Startup: $63,000</td>
<td>Less than 5%</td>
</tr>
<tr>
<td></td>
<td>Ongoing: $6,000 - $7,000</td>
<td></td>
</tr>
<tr>
<td>Electric scooter subsidy</td>
<td>Unknown</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>([$1 subsidy])</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5 IMPLEMENTATION

To facilitate implementation of a shared active transportation program, high-level service and rollout recommendations are summarized below. These recommendations will be incorporated into the TDM Implementation Guide to ensure that the program complements the efforts of other TDM programs, which will be developed in future program packages.

SERVICE & ROLLOUT RECOMMENDATIONS

Two scenarios are recommended for development and implementation:

- Full bike share subsidy (Year 1)
- Private bike fleet (Year 2)

A full bike share subsidy is recommended for near term implementation given the ease of implementation and ability to test bike share without committing to purchasing bicycles for an internally run system. In year 2, a private bike fleet can be implemented, particularly at sites that are not located near Ford GoBike’s current service area or planned expansions.

Partial Bike Share Subsidy Implementation

Implementation

To implement such a bike share program, the County will need to enroll as a corporate partner through Ford GoBike and choose the full subsidy plan. Employees must have a valid work email address to sign up. If there are employees without work email addresses, codes can be created by Ford GoBike for employees to sign up for the subsidized membership. The County would then be billed for their portion of the bike share subsidy on quarterly based on the number of employees who sign up. The County can also partner with Ford GoBike to sponsor additional stations in locations that are convenient for County employees to access.

As the sole public docked-bike share provider in the Bay Area, including Santa Clara County, Ford GoBike offers a level of service and predictability that other companies cannot. This plan recommends partnering with Ford GoBike rather than a dockless bike share system.

While this level of detail need not be a requirement of the program, it can help quantify the GHG emissions reduced as well as determine the level of employee participation.

Marketing & Communications

Ford GoBike provides marketing materials as a part of their partnership and can come in person to provide information about bike share. A transportation fair is a great setting for in-person outreach. Outreach should be targeted at sites near bike share docks. The County can also offer one-time and ongoing enrollment incentives such as free helmets, biking gear, or one-time free memberships.
Additionally, the County should consider partnering with Silicon Valley Bike Coalition or another bike safety education provider to offer bicycle education classes to employees. The County should advertise the partnership to employees at bike to work day and other bike-related events.

**Monitoring**

Ford GoBike bills quarterly and provides an updated list of employees with annual memberships. This is used to confirm eligibility and for payment tracking. Depending on the final data sharing agreement, the County should monitor bike share usage, especially at stations near County worksites. If usage is high and bikes are rarely available, the County should work with Ford GoBike to expand nearby stations and add more bikes to the program as needed.

Depending on data availability, the County should analyze bikeshare usage and patterns to understand how often stations are used and where employees are biking. Following implementation, the County can distribute an annual survey for participants to provide feedback on the program and to inform the design of an internal program if desired.

**Private Bike Fleet**

**Implementation**

A successfully implemented private bike fleet requires internal capacity to implement from the following groups:

- **Organizational leadership**: to approve and support the program, including financially
- **Legal team**: to address liability concerns by developing a liability waiver and other program rules for the program
- **Facilities team**: to identify or create places to securely store the bikes as well as maintenance tools and spare parts
- **Information Technology (IT) team**: to assist the development of an online software or system to reserve bicycles and track their usage
- **Wellness or health team**: to help promote the program through activities and/or trainings
- **Internal Point Persons**: At each facility where the bike fleet has bikes, there should be at least one employee point person. Their responsibilities are to ensure regular maintenance (either internal or contracted), make sure bikes are properly stored, assist with quarterly usage reports, and to help promote and provide information on the program at their worksite

To implement a private bike fleet, the County will need to select a vendor to purchase the bicycle fleet and to potentially help with other elements of managing a private fleet. There are a few vendors such as Zagster that offer an all-in-one private bike share system. The cost ranges from $1,000-$2,000 per bicycle depending on the system design. Zagster includes an app for reserving and checking out bikes as well as ongoing maintenance. If considering a system such as Zagster the County should be clear about system ownership and ongoing operational costs. Additionally, all system usage information should be made regularly available to the County.

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6 Price reported in “Bike sharing is pricey: can startup Zagster make it profitable?” The Guardian, 2014. 
https://www.theguardian.com/sustainable-business/2014/aug/28/bike-sharing-is-pricey-can-startup-zagster-make-it-profitable
Alternatively, the County can purchase bicycles from a vendor directly, of which there are several that offer various price tiers and customization levels such as: Public, Solé, Republic, or Handsome Cycles. Prices start around $400 per bike. A company with a local presence will be better positioned to provide ongoing maintenance if desired, or the County can contract that separately with a local bike shop.

**Fleet Specifications**

The County should purchase 5 to 7-speed, city style bicycles in a variety of style. City style refers to a type of bike that has fenders, rack for saddlebags, and swept back or straight handlebars that allow for a relatively upright body position when riding. Hybrid styles bicycles that allow the ride to step through can be easier for less experienced cyclists to ride. Electric bikes are not recommended for the initial program given the relatively flat terrain in the populated areas of Santa Clara County and the added cost and complexity such as battery charging and maintenance. After successful launch, however, the program may consider adding a few electric bicycles as they have can make riding a bike accessible to more people.

The County should also develop a budget for the purchase of bicycle racks, helmets, odometers, saddle bags, U-locks, basic maintenance tools, and tire pumps in addition to the bicycle fleet. The County should also consider the need for miscellaneous items on an ongoing basis such as: tire tubes, brake pads, numbering decals for the bike and racks, replacement bike parts, etc.

Each bike and its accessories is estimated to cost $1,000 (approximately $600 for the bike and $400 for accessories). Bikes should come with a one-year maintenance agreement, and the County could consider negotiating a longer service agreement to ensure bicycles are kept in good condition.

**Marketing & Communications**

As an internally developed program, the marketing and communication materials will need to be developed. The general outreach approach is otherwise the same as the Partial Bike Share Subsidy. The primary differences are the inclusion of a liability waiver/form and an education component about how the private bike fleet works, including reserving a bike and documenting trips.

**Monitoring**

The County should monitor the private bike fleet program quarterly for usage of the bicycles and participation by employees. The following data should be collected and reported:

- Number of registered users
- Number of trips
- Miles biked per trip
- Total miles biked per month
- Ride purpose (work meetings, data collection, physical activity, errands, etc.,)

The County will need to rebalance bikes between sites as needed and distribute an annual survey for participants to provide feedback on the program. Bike fleet questions can also be included in any ongoing commute surveys to learn about barriers to using the bicycles.
APPENDIX A

Cost Assumptions
## Cost Estimate Assumptions for Shared Active Transportation Scenarios

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<tr>
<th>Program</th>
<th>Assumptions for Cost Estimate</th>
<th>Annual Cost Estimate</th>
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<tr>
<td>Full bike share subsidy</td>
<td>- Employees at recommended sites: 9,201</td>
<td>$46,000</td>
</tr>
<tr>
<td></td>
<td>- Subsidy amount: $100/year/employee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Estimated maximum participation rate: 5%</td>
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<tr>
<td>Partial bike share subsidy</td>
<td>- Employees at recommended sites: 9,201</td>
<td>$16,800</td>
</tr>
<tr>
<td></td>
<td>- Subsidy amount: $60/year/employee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Estimated maximum participation rate: 3%</td>
<td></td>
</tr>
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<td>Private bike fleet</td>
<td>- Employees at recommended sites: 14,913</td>
<td>Startup: $63,000</td>
</tr>
<tr>
<td></td>
<td>- Recommended employees per bike: 250</td>
<td>Ongoing: $6,000 - $7,000</td>
</tr>
<tr>
<td></td>
<td>- Total Bikes: 63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Cost per bike (one-time): $1,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Maintenance cost per bike: $100/year</td>
<td></td>
</tr>
<tr>
<td>E-scooter subsidy</td>
<td>- Subsidy amount: $1 per trip</td>
<td>$10,000</td>
</tr>
<tr>
<td></td>
<td>- Estimated maximum number of weekly trips: 200 one-way trips</td>
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### Cost & Participation by Entity<sup>8</sup>

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<th>Courts</th>
<th>Housing Authority</th>
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<tr>
<td></td>
<td>Annual Cost Estimate&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Total Participants</td>
<td>Annual Cost Estimate</td>
</tr>
<tr>
<td>Full bike share subsidy ($100 subsidy)</td>
<td>$46,000</td>
<td>460</td>
<td>$3,500</td>
</tr>
<tr>
<td>Partial bike share subsidy ($60 subsidy)</td>
<td>$16,800</td>
<td>280</td>
<td>$1,200</td>
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<sup>7</sup> Estimated one-time cost for purchase of bicycles and accessories.

<sup>8</sup> Analysis assumes the same participation rate (5%) for the Courts and Housing Authority as the County.

<sup>9</sup> Please see Appendix A for assumptions made to estimate annual costs.
APPENDIX E

Commuter Shuttle Package
TDM Milestones for Assessment
Commuter Shuttle

May 2019
# TDM Program Milestones for Assessment | Shuttles

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<td>UCSF Shuttle System Productivity Measures</td>
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<td>Seattle Children’s Hospital Shuttle System</td>
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<td>Gilroy Commuter Shuttle Cost and Ridership Estimates</td>
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<td>Santa Cruz Long Distance Commuter Shuttle Cost and Ridership Estimates</td>
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<td>Figure 11</td>
<td>Cupertino Long Distance Commuter Shuttle Cost and Ridership Estimates</td>
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<td>Figure 12</td>
<td>Fremont Commuter Shuttle Cost and Ridership Estimates</td>
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<td>Figure 13</td>
<td>Transit Feeder Shuttles Estimated Daily Ridership</td>
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<tr>
<td>Figure 14</td>
<td>Transit Feeder Shuttles Estimated Cost per Passenger Trip</td>
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<td>Figure 15</td>
<td>Cost Benefit Analysis Matrix</td>
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1 INTRODUCTION

More than 30% of employees live further than 20 miles away from their primary work location. Compared to other transportation benefit programs, such as transit passes, carpool incentives, and parking cash-out, private shuttles are an expensive alternative for the County to consider implementing. To ensure an efficient allocation of resources while reducing drive-alone trips to County worksites and meeting County GHG emissions reduction goals, the County has set parameters for new commuter shuttle routes.

This package summarizes the components of a successful commuter shuttle program, the methodology used to estimate demand for shuttle services, and the process used for selecting shuttle route and stop locations. The initial shuttle program proposes five first/last-mile routes. As the employee count continues to grow and move within the Bay Area and beyond, this methodology serves as a guide for making changes to route design, stop locations, and the optimal level of service investment.

To determine an effective shuttle program for the County of Santa Clara, Nelson Nygaard and Nunes-Ueno Consulting have prepared a thorough analysis, which is grounded in best practice research, thorough model testing, and effective implementation methods for the County. The assessment is based on the feasibility and cost-benefit analysis of different shuttle scenarios and outlines recommendations for the Final TDM Implementation Guide.
2 BACKGROUND

Although the majority (81%) of County employees live in Santa Clara County, many face long commutes. According to the County’s CAP survey, more than 35% of County employees live more than 20 miles from work (see Figure 1). These employees live beyond a reasonable bike/walk distance, often do not have direct public transit service available for their commute, and are potential markets for commuter shuttles.

Figure 1  Employee One-Way Commute Length (in Miles)

Figure 2 shows home locations of all County employees throughout the Bay Area. The most prominent clusters of employees are found within Santa Clara County, in the cities of San Jose, Santa Clara, Milpitas, Morgan Hill, and Gilroy. Within Santa Clara County, comparatively fewer employees live in the cities of Cupertino, Mountain View, Sunnyvale, and Palo Alto. Among the 19% of employees who reside outside of Santa Clara County, the most significant clusters are in the cities of Fremont, Union City, and within or near Santa Cruz. These residential clusters are also indicators of potential commuter shuttle stops.
Figure 2  Employee Home Locations

Employee Home Locations
Number of Employees per 1-mile-diagonal hexagon

- Office Location
- CalTrain
- BART
- ACE Rail
- VTA Light Rail

Attachment: County of Santa Clara TDM Study Appendices Final May 2019 (100294 : Employee Transportation Demand Management)
3 BEST PRACTICES

EMPLOYER CASE STUDIES

The following case studies provide a point of reference for how different commuter shuttles are designed and evaluated. Figure 3 summarizes select case studies for which comparable performance data was available.

- **San Mateo County Employee Shuttle** – commuter shuttle
- **UCSF Shuttle** – inter-campus and last-mile transit feeder
- **Genentech gRide Program** – commuter shuttle, last-mile transit feeder, and campus circulator shuttles
- **Seattle Children’s Hospital** – remote parking shuttle, last-mile transit feeder
- **North Natomas TMA** – commuter shuttle

**Figure 3** Summary of Service Characteristics for Select Commuter Shuttles

<table>
<thead>
<tr>
<th>Employer</th>
<th>San Mateo County (SMC Commuter)</th>
<th>UCSF (UCSF Shuttles)</th>
<th>North Natomas TMA (Jibe Express)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of routes</td>
<td>4</td>
<td>13 fixed-route, one on-demand</td>
<td>4</td>
</tr>
<tr>
<td>Characteristics of destinations</td>
<td>Largest San Mateo County work sites from South Bay, East Bay, and North County</td>
<td>UCSF campuses and transit hubs in San Francisco</td>
<td>North Natomas and downtown Sacramento</td>
</tr>
<tr>
<td>Route distance (miles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North County (HS): 19.8</td>
<td></td>
<td>Central: 6.8</td>
<td></td>
</tr>
<tr>
<td>North County (CC): 23.8</td>
<td></td>
<td>Eastside: 6.2</td>
<td></td>
</tr>
<tr>
<td>East Bay (HS &amp; CC): 38.0</td>
<td></td>
<td>Westside: 7.1</td>
<td></td>
</tr>
<tr>
<td>South Bay (HS &amp; CC): 36.6</td>
<td></td>
<td>Square: 4.5</td>
<td></td>
</tr>
<tr>
<td>Number of trips per weekday (includes morning &amp; evening)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North County (HS): 11</td>
<td></td>
<td>Central: 8</td>
<td></td>
</tr>
<tr>
<td>North County (CC): 11</td>
<td></td>
<td>Eastside: 8</td>
<td></td>
</tr>
<tr>
<td>East Bay (HS &amp; CC): 13</td>
<td></td>
<td>Westside: 6</td>
<td></td>
</tr>
<tr>
<td>South Bay (HS &amp; CC): 9</td>
<td></td>
<td>Square: 2</td>
<td></td>
</tr>
<tr>
<td>Average daily boardings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North County (HS): 23</td>
<td>Green Line: 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North County (CC): 44</td>
<td>Blue and Gold Line: 1,610</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Bay: 85</td>
<td>Grey Line: 1,447</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Bay: 29</td>
<td>Red Line: 1,231</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average daily ridership per vehicle trip</td>
<td>N/A</td>
<td>All routes: 408</td>
<td></td>
</tr>
<tr>
<td>North County (HS): 2</td>
<td>Central: 123</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North County (CC): 4</td>
<td>Eastside: 159</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Bay: 7</td>
<td>Westside: 103</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Bay: 3</td>
<td>Square: 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passengers/ revenue hour</td>
<td>-</td>
<td>Central: 15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eastside: 20</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>Westside: 17</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Square: 11</td>
<td></td>
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<tr>
<td>Program cost/month</td>
<td>$178,800</td>
<td>$595,919 (five routes)</td>
<td>$32,700</td>
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</table>

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San Mateo County

San Mateo County operates multiple work sites and employs over 7,000 people throughout the County. Like the County of Santa Clara, work sites are located in a variety of settings with variable transportation services, and employees have a high drive alone commute mode share (86% in 2018). As part of its Commute Alternatives Program (CAP) for employees, the County provides transportation subsidies to employees who commute to work by public transit, vanpool, carpool, bicycle, or walking.

Background

In August 2016, the County introduced the SMC Commuter Shuttle program, a one-year employee commuter bus pilot through Transmetro, a private-sector transportation services provider. The County extended the service for another four months, until December 2017. In December 2017, the County awarded an extension of the Commuter Shuttle program to the microtransit operator Chariot for an additional two years, through the end of 2019. In February 2019, Chariot ceased its global operations. Due to Chariot’s premature exit and the program’s high cost per rider, the commuter shuttle program was discontinued in February 2019. The funds have since been redistributed to other commute programs.

Shuttle Program

The San Mateo County (SMC) Commuter Shuttle service consisted of four routes that connected key transit hubs and park-and-rides in the Bay Area to the three largest County work sites: County Center, Health System Main, and 2000 Alameda de las Pulgas. Each route operated between two and five morning trips to work sites and the same number of returning evening trips during commute hours. Employees booked rides through Chariot’s website or mobile app. Seats could be booked within 30 to 45 minutes of scheduled departure. Additionally, Chariot operated vehicles with a maximum occupancy of 14 passengers.

Cost

Employees riding the SMC Commuter Shuttle had several pricing options – tickets were available as a monthly pass ($50), a 10-ride pack ($25), or a single ride ticket ($2.50). The $75 transit subsidy was factored into the price of the monthly pass. The annual cost to run the shuttle program was approximately $2.1 million and required one County full-time employee to manage its operations, with additional part-time support from two other employees, for the equivalent of two FTEs.

Applicability to the County of Santa Clara

As with the County of Santa Clara, San Mateo County employees commute between highly dispersed residential areas and work sites throughout the Bay Area. Operating a shuttle service at frequencies high enough to attract sufficient ridership proved to be much more costly than alternative TDM strategies, on a per-employee basis. Based on the experience of San Mateo County’s costly shuttle pilot, it is unlikely that any similar, long-distance commuter shuttle program could provide service as cost-effective as several other alternative transportation options.
University of California San Francisco (UCSF)

Background

University of California San Francisco (UCSF) is a public research university that includes multiple hospitals and four campuses within San Francisco. As San Francisco’s second-largest employer, UCSF has over 25,000 employees of staff and faculty and over 5,000 students, fellows, and scholars. UCSF operates a shuttle system to connect its five major campuses, hospitals, and other research sites as well as to supplement existing public transit service. The shuttles connect to major transit connections such as the 16th Street BART station.

Shuttle System

The UCSF shuttle system serves all primary UCSF campuses and some secondary campus locations. The primary purpose of the UCSF shuttle network is to provide inter-campus transportation for faculty, staff, students, patients and their visitors, and university guests while reducing private vehicle trips. In particular, the City’s permitting of UCSF’s campus developments at several locations requires the university to reduce single-occupancy trips. There are 13 fixed routes in the shuttle network, as shown in Figure 4. Most routes are oriented to provide connections between UCSF campuses, though the “Red” route provides a first/last-mile connection between the Mission Bay campus and the 16th Street BART station. Additionally, the Zuckerberg San Francisco General offers free shuttle service to the 24th St. Mission BART station during peak commute times. This service is free to patients, visitors and staff.

Several of the shuttle routes, including the most popular Blue and Gold routes, operate throughout the day from 5 AM to 10 PM to accommodate multiple hospital shifts. Service frequencies on the fixed-route shuttles are typically 20-25 minutes. There are also two on-demand routes—Eastbound/Westbound/Parnassus Night/Evening, and Mission Bay Local, a day and evening service that provides on-demand shuttle service within the boundaries of the Mission Bay campus. Of the approximately 30,000 UCSF affiliates, 11% used the shuttle system for their commute, while 26% drove alone to work in 2017. In 2017, the shuttle system saw 86,500 boardings, or about 4,500 boardings on a typical weekday.

Reducing GHG emissions has long been a top priority at UCSF. In October 2018 the university deployed its first 30-foot electric shuttle vehicles, with 15 vehicles in circulation on the Blue, Bronze, Gold, Grey and Red routes. The University invested $8.2 million, after state and local rebates, in the 15 new buses, EV chargers, electrical infrastructure and transit yard enhancements. The buses run for 200 miles per charge and can be fully charged in less than three hours. The new buses also have a larger passenger capacity than the diesel-hybrid fleet they replaced, which will help reduce the number of shuttles circulating throughout the city, as well as impacts on the neighborhoods near UCSF campuses.
Cost

Shuttle service is free to UCSF faculty, staff, students, patients, patient visitors, and university guests. The program uses a total of about eight FTEs, including one person overseeing the shuttle operations, one administrative support employee, and three dispatchers per shift.

Applicability to the County of Santa Clara

Like the County of Santa Clara, UCSF has affiliates distributed across multiple sites with varying levels of public transit access and parking. As major employers subject to trip reduction requirements, both the County and UCSF are legally obligated to implement TDM strategies to
reduce drive-alone commuting. UCSF’s shuttle system offers several key lessons for the County. The UCSF shuttle routes have limited stops and prioritize corridors that lack direct transit access. The system’s new electric shuttle vehicles support UCSF’s climate goals and warrant consideration when evaluating potential vendor fleets. Shuttle service operates relatively frequently, every 20-25 minutes, to encourage higher ridership. Most importantly, staff parking permits are costly at most UCSF facilities, at $233 per month. UCSF’s parking management strategy of high permit pricing reflects its campuses’ urban context, the high cost of parking facility operations, and it effectively shifts commuting from drive-alone to more sustainable modes.

**Genentech**

Genentech is the largest South San Francisco employer east of US-101; the biotechnology company employs more than 15,000 people at its main campus. The main campus consists of over 60 buildings about a mile east of the Caltrain Station. As part of an update to its campus Master Plan, Genentech plans to develop existing surface parking lots into new work sites to serve the increasing number of employees. Reducing demand for employee parking and congestion on US-101 and other campus access points are key motivations for Genentech’s TDM and shuttle program.

**Shuttle Program**

In 2006, Genentech’s main campus in South San Francisco began gRide, its branded shuttle program. This program was implemented to reduce the campus’s parking demand and GHG emissions. The campus’s location in an industrial and research park area isolates it from other land uses, including housing and transit corridors, limiting the number of people who can easily walk, bike, or take transit to work. gRide consists of several TDM programs, including subsidized transit passes, carpool and vanpool incentives, and three shuttle types, including:

- **Genenbus** is the branding of the commuter bus service to the main campus, which is a comprehensive system that serves neighborhoods across the Bay Area. Genenbus operates 24 routes serving San Francisco, Alameda, Contra Costa, Solano, and Marin Counties.

- **Transit shuttles** connect employees to BART, Caltrain, and the San Francisco Bay Ferry. Buses are outfitted with Wi-Fi and bicycle storage (in the compartment underneath the bus body).

- **DNA shuttles** circulate within the South San Francisco Campus to connect its various buildings and discourage intra-campus vehicle trips. Six routes run on 15-minute headways.

The gRide program is widely viewed as a success. Genentech’s shuttle program allowed the company to more than double its employee headcount in South San Francisco from about 6,000 employees in 2006 to 15,000 in 2017, while parking demand declined, from 5,700 to 5,500. During the same period, Genentech’s drive alone mode share has declined from 75% in 2006 to 55%, due in large part to the shuttle programs. Transit (including public transit and gRide) mode share has increased from 10% in 2006 to 30% in 2017 at the Main Campus.
Applicability to the County of Santa Clara

Unlike the County of Santa Clara employees who work in various sites throughout the County, Genentech employees primarily work in a single main campus. A centralized destination requires fewer routes to serve with transit than multiple destination. Additionally, operating a transportation program as comprehensive as Genentech’s requires a fleet of 65 shuttle vehicles and eight FTE’s. These are significant personnel and fleet resources that may not be feasible for the County to acquire.

Figure 6  Genentech’s gBus Commuter Shuttle Fleet

Source: MTC’s VPP Parking Project

Seattle Children’s Hospital

Seattle Children’s Hospital is a highly specialized academic medical center that serves children and youth from Washington, Alaska, Montana and Idaho. Children’s has long been considered a national leader in campus TDM. The hospital’s campus in northeast Seattle is isolated from regional transit hubs and surrounded by residential neighborhoods, with little possibility of expanding parking facilities. Beginning in 2004, the hospital used a combination of ambitious TDM strategies to reduce the share of commuters who drive alone to work from 50% to 38%. These strategies, which range from transit and remote parking shuttles to daily parking charges and daily cash incentives for commuting by sustainable modes, have enabled Children’s to significantly expand its clinical facilities without building additional parking supplies.

In 2008, under pressure from the City of Seattle, the hospital developed a Transportation Master Plan (TMP) calling for additional, major reductions in drive-alone commuting. The 2008 TMP laid out a new target: to reduce the hospital’s drive-alone commute mode share to 30% by 2028. Because of the City’s ambitious Commute Trip Reduction ordinance, large employers like Children’s are obligated to reduce their employees’ drive-alone vehicle trips as a condition of receiving any building permits for additional clinical expansion.

Shuttle Program

Shuttle service provides an important role in serving Children’s current travel demand, supporting the overall TMP goals of reducing drive-alone travel as well as supporting campus parking management efforts. During the commute period, approximately 11% of employees arrive via shuttles from remote parking lots and transit hubs. Children’s operates five shuttle routes that
provide access to three off-site employee parking lots, three regional transit hubs (the hospital’s Gold, Green, and Purple Lines), as well as connections to and from the hospital, administrative buildings, and research facilities. The connection to off-site parking serves employee commuter travel and reduces the need for campus parking. The employee shuttles make it possible for Children’s to locate employee parking at remote sites, allowing it to reserve the parking at its main campus for patients and visitors. Shuttle routes are shown in Figure 7.

Shuttle service to the remote parking lots operates Monday through Friday from approximately 5:30 am to 9:00 pm. There is no shuttle service to off-site parking lots on weekends or holidays; employees who normally park in the off-site parking lots on weekdays park at the hospital at these times. The shuttles run every 7 to 15 minutes during peak times and less frequently during other times of day. Based on shuttle ridership counts conducted in 2017, the shuttles serve about 2,300 total riders per day, including shuttle routes to transit hubs and remote parking lots.

In 2016, in coordination with Link light rail service opening at the University of Washington, Children’s designed and implemented a new shuttle line, called the Gold Line. The Gold Line was designed to take advantage of the fast, frequent and reliable service with Link, whose travel time and frequency makes it competitive with commuting by car. In 2017, the Gold Line remains the most popular shuttle line in the history of Children’s shuttle operations, carrying over 200 passengers a day. Ridership on this shuttle line is expected to grow, especially when three additional Link stations in North Seattle open in 2021. The Green Line shuttle continues to connect Children’s Hospital to the Children’s downtown worksites every 20 minutes. The Purple Line connects the hospital with the University district, making possible a host of transit connections not directly available due to the lack of bus service from the University District to Children’s. All Children’s shuttle schedules appear on Children’s web and mobile sites via One Bus Away.
Cost

Cost information was not available for Seattle Children’s Hospital’s shuttle system.

Applicability to the County of Santa Clara

Seattle Children’s Hospital’s shuttle system demonstrates that robust, frequent, shuttle service can serve significant ridership and be a key strategy in reducing employee drive-alone commute trips. It also demonstrates that to be most effective, shuttle programs must be integrated with broader mobility incentives that encourage employees to choose sustainable modes. Children’s successful shuttle system is just one component of a broader TDM plan, which includes both “carrots” – fast and frequent shuttles, daily alternative commute incentives, on-site bike share, and transit subsidies, among others – as well as “sticks”, such as daily parking charges and off-site parking requirements for employees. The shuttle system’s fast, frequent connections to remote parking lots and key transit hubs support the hospital’s parking management and transit subsidy programs, and without this programmatic integration the shuttles would not be as effective or widely used. This example suggests that the County of Santa Clara should prioritize shuttle connections to area transit hubs to add value to the proposed transit subsidy program by making it easier for employees to access local and regional transit services.

North Natomas TMA

North Natomas is a fast growing, primarily residential part of northwestern Sacramento. The North Natomas Transportation Management Association (NNTMA), a non-profit organization funded by area employers, provides commuter benefits through the Sacramento Region Commuter Club. The NNTMA offers local employers an Emergency Ride Home service, commuter tax incentive information, vanpool and carpool resources, and advocacy for safe pedestrian and biking routes near work sites.

Shuttle Program

In September 2003, the North Natomas Transportation Management Association (NNTMA) launched the Flyer Shuttle to connect residents of North Natomas to their jobs in downtown Sacramento. NNTMA has since rebranded as North Natomas Jibe, and renamed its shuttle Jibe Express. The Jibe Express consists of five routes (Downtown, Central, Eastside, Westside, and Square), which primarily run on 32-foot, Wi-Fi capable buses that have a seating capacity of 28 passengers. Each route has a “Flag Zone” where a rider can hail an approaching shuttle. The Jibe Express also connects to regional transit options such as the Sacramento Valley Station on Amtrak’s Capitol Corridor, three Sacramento Regional Transit light rail lines, and two Yolobus routes. Currently transfers to other transit services are not included in the fare. Riders can park for free at the Natomas Marketplace Park-and-Ride Lot, which has 50 marked spaces for Jibe Express riders.

The four routes operate on headways that range from three or four trips per commute period. The trips with the highest daily ridership are roughly 7:00-7:30 a.m. during the AM period and 4:30-5:00 p.m. during the PM period. The average passenger load for the 12 trips is 17 people.
Cost

Currently, riders have flexibility and pay $2 per ride rather than having to purchase a weekly or monthly pass. Riders have three payment options: cash, pre-paid tickets, and the Connect Card (the Sacramento region’s transit fare smartcard).

The Jibe Express is primarily funded through the City of Sacramento’s developer impact fees, community facilities district fees, grants, and the North Natomas TMA. In 2016, the Jibe Express cost a total of $392,091 to operate (approximately $32,674 per month), which resulted in an average fare box recovery ratio of 35%.

Applicability to the County of Santa Clara

The NNTMA has been successful because riders are able to access key destinations in downtown Sacramento, and the services are not limited to workers of a single employer. The short distances of the routes also allows for a relatively high frequency of service during the peak commute times. The North Natomas model of combining public and private funding sources to operate shuttles that are open to the public may be desirable for some the County of Santa Clara work sites with public-facing functions, such as Civic Center or VMC Main Campus.
4 SHUTTLE ANALYSIS

The project team considered two types of shuttle service: long distance commuter shuttles and transit feeder shuttles. Both services are designed to serve travel markets, which are groups of employees who currently drive alone to work and could benefit from a shuttle program based on home and work location. The scenarios developed will help meet the transportation needs of employees that do not have access to public transit, ensure that the shuttle program parameters reinforce the broader objectives of the County’s TDM Plan, and leverage the County of Santa Clara’s investment in transit. Only large County work sites were evaluated for the shuttle program to ensure sufficient economies of scale and reduce the costs per trip to operate. The two proposed shuttle scenarios include:

- **Long Distance Commuter Shuttle**: Fills critical gaps in transit service coverage by connecting County work sites with neighborhoods and/or cities where significant numbers of employees live. This scenario focuses on parts of the Bay Area located more than a 30-minute, one-way distance from any County work sites and for which fixed-route transit service is unlikely to be viable.

- **Transit Feeder Shuttle**: Connects employees between the largest work sites and key regional transit hubs, such as Diridon Station and the Berryessa BART station. This scenario reduces drive-alone trips by making public transit a more attractive and seamless option for a larger share of County employees.

Each option is described in detail below with annual cost estimates and program effectiveness, which is represented by the GHG reduction potential. According to the California Air Pollution Control Officers Association (CAPCOA), the maximum trip reduction potential for an employer-sponsored commuter shuttle program is 13.4% of commute vehicle miles traveled (VMT), and therefore up to 13.4% reduction in commute trip GHG emissions. No equivalent estimate is available for a transit feeder shuttle, as this option is considered a supportive strategy for other transit system improvements. To more effectively measure the trip reduction and GHG emissions reduction impacts from these shuttle types, the project team uses a ridership forecast model to estimate a modal shift from current drive-alone employees.

**LONG DISTANCE COMMUTER SHUTTLE**

To achieve economies of scale and minimize the service’s cost per trip, Long Distance Commuter Shuttle scenarios consider the County’s largest work sites as potential destinations, including the following:\[1\]

- VMC Main Campus
- Civic Center
- Berger
- Charcot
- SSA Senter

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The project team’s analysis of employee home locations illustrates that several significant clusters of employees are in peripheral areas where few direct, public transit commute options to County work sites are available. The most significant of these residential clusters include the following communities:

- Cupertino
- Fremont
- Gilroy
- Morgan Hill
- Santa Cruz

This list of communities is not comprehensive, as nearby communities could conceivably generate additional demand for commuter shuttles from employees who would drive from nearby communities to a centrally located park-and-ride to board the shuttle. Additional communities of interest include Mountain View and Palo Alto. However, no suitable park-and-ride locations could be identified in these communities.

**Ridership Estimation**

The project team’s experience with planning and implementing private commuter shuttles indicates that the most likely riders of a commuter shuttle system live within two miles of any proposed park-and-ride location. Peer shuttle systems have found that high-quality commuter shuttles, with onboard Wi-Fi and limited stops, offer a sufficiently attractive commute experience to entice 40% of employees who live within two miles of a shuttle stop from driving alone. However, employees who live beyond this threshold from a proposed stop location are likely to drive alone to work. To estimate ridership for the Commuter Shuttle scenarios, the project team began by selecting proposed park-and-ride locations and then calculating the number of employees living within two network miles of each. It is then assumed that of these potentially riders, 40% will opt to ride the Commuter Shuttles.

Proposed Long Distance Commuter Shuttle stop locations include existing park-and-ride facilities, houses of worship, and shopping centers. These park-and-ride locations are selected because they are more likely than other locations to have significant parking supplies available during peak commute hours. Additionally, these locations have greater numbers of employees living nearby than other locations reviewed. The list of potential park-and-ride locations for the Commuter Shuttle program, and the number of employees of each work site within two miles of each, are shown in Figure 8.


### Corridor Selection

The goal of Commuter Shuttles is to connect the largest clusters of employees near a proposed stop with the largest County work sites. Other approaches are likely to result in commuter shuttles with very high costs per passenger trip. Therefore, several Commuter Shuttle scenarios propose intermediate stops at either Civic Center or VMC Main Campus so that the largest number of potential riders may be served. Because of the highly dispersed distribution of employee home locations throughout the Bay Area, few corridors are likely to generate sufficient demand to justify the cost of operating a Commuter Shuttle program. Even the least costly service alternatives would cost the County $22 to $23 per passenger trip served. The daily cost estimate would be $44-$46 per daily rider, much higher than the average cost per day for the VTA SmartPass Program of $2 per regular rider. Commuter shuttle costs at these levels are unlikely to be sustainable. Cost and ridership estimates for each proposed Commuter Shuttle corridor are shown in Figure 9 through Figure 12.

### Cost Estimation Assumptions

Using industry best practices and operating characteristics from peer shuttle systems, the project team estimated the cost to operate various service alternatives and compared these costs against the potential ridership served at their stop locations. One key assumption is the combined costs of operations, maintenance, and vehicle leases at $120 to $160 per service hour, using long distance commuter coaches, which can seat between 35-55 depending on vehicle type and seating configuration. It is also assumed that the shuttles would operate only during peak commute hours, from 6 to 9 AM and 3 to 7 PM, at 30-minute frequencies, with service 250 workdays

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**Figure 8** Park-and-Ride Locations and Potential Ridership

<table>
<thead>
<tr>
<th>City</th>
<th>Site Name</th>
<th>Total Employees within 2 Miles Driving Distance</th>
<th>Employees Per Worksite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VMC Main Campus</td>
<td>Civic Center</td>
</tr>
<tr>
<td>Cupertino</td>
<td>De Anza College Transit Center – 21250 Stevens Creek Boulevard</td>
<td>167</td>
<td>60</td>
</tr>
<tr>
<td>Fremont</td>
<td>Ardenwood Park-and-Ride – 34867 Ardenwood Boulevard</td>
<td>94</td>
<td>39</td>
</tr>
<tr>
<td>Gilroy</td>
<td>St. Mary’s Parish – 11 1st Street</td>
<td>547</td>
<td>138</td>
</tr>
<tr>
<td>Morgan Hill</td>
<td>Lawrence Oaks Shopping Center – 850 E Dunne Avenue</td>
<td>458</td>
<td>113</td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>LDS Church – 220 Elk Street</td>
<td>39</td>
<td>9</td>
</tr>
</tbody>
</table>
annually. Ridership from the general, non-employee public is assumed to be zero. To maximize ridership, it is assumed that the service would be fare-free for employees.

**Figure 9 Gilroy Commuter Shuttle Cost and Ridership Estimates**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Est. Cost per Passenger Trip</th>
<th>Intermediate Stops</th>
<th>Est. Daily Boardings</th>
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</thead>
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<tr>
<td>VMC Main Campus</td>
<td>$23</td>
<td>Morgan Hill</td>
<td>86</td>
</tr>
<tr>
<td>Civic Center</td>
<td>$22</td>
<td>Morgan Hill</td>
<td>90</td>
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<tr>
<td>Berger</td>
<td>$129</td>
<td>Morgan Hill</td>
<td>15</td>
</tr>
<tr>
<td>Charcot + Fleets</td>
<td>$259</td>
<td>Morgan Hill</td>
<td>8</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>$356</td>
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<td>SSA Julian + Housing Authority</td>
<td>$154</td>
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</tbody>
</table>

**Figure 10 Santa Cruz Long Distance Commuter Shuttle Cost and Ridership Estimates**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Est. Cost per Passenger Trip</th>
<th>Intermediate Stops</th>
<th>Est. Daily Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus</td>
<td>$316</td>
<td>Continues to Civic Center</td>
<td>6</td>
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<tr>
<td>Civic Center</td>
<td>$316</td>
<td>VMC Main Campus</td>
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<tr>
<td>Berger</td>
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<tr>
<td>Charcot + Fleets</td>
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<td>3</td>
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<tr>
<td>SSA Julian + Housing Authority</td>
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<td>VMC Main Campus</td>
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</tbody>
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**Figure 11 Cupertino Long Distance Commuter Shuttle Cost and Ridership Estimates**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Est. Cost per Passenger Trip</th>
<th>Intermediate Stops</th>
<th>Est. Daily Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus</td>
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<td>Continues to Civic Center</td>
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<tr>
<td>Civic Center</td>
<td>$35</td>
<td>VMC Main Campus</td>
<td>28</td>
</tr>
<tr>
<td>Berger</td>
<td>$36</td>
<td>VMC Main Campus</td>
<td>27</td>
</tr>
<tr>
<td>Charcot + Fleets</td>
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<td>VMC Main Campus</td>
<td>24</td>
</tr>
<tr>
<td>SSA Senter</td>
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<td>VMC Main Campus</td>
<td>21</td>
</tr>
<tr>
<td>SSA Julian + Housing Authority</td>
<td>$44</td>
<td>VMC Main Campus</td>
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</table>
Table 1: Fremont Commuter Shuttle Cost and Ridership Estimates

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<thead>
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<th>Destination</th>
<th>Est. Cost per Passenger Trip</th>
<th>Intermediate Stops</th>
<th>Est. Daily Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus</td>
<td>$81</td>
<td>Civic Center</td>
<td>18</td>
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<td>Civic Center</td>
<td>$107</td>
<td>Berger</td>
<td>14</td>
</tr>
<tr>
<td>Berger</td>
<td>$107</td>
<td>Civic Center</td>
<td>14</td>
</tr>
<tr>
<td>Charcot + Fleets</td>
<td>$164</td>
<td>Civic Center</td>
<td>9</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>$203</td>
<td>Civic Center</td>
<td>7</td>
</tr>
<tr>
<td>SSA Julian + Housing Authority</td>
<td>$164</td>
<td>Civic Center</td>
<td>9</td>
</tr>
</tbody>
</table>

**TRANSIT FEEDER**

To achieve economies of scale and minimize the service’s cost per trip, Transit Feeder Shuttle scenarios consider the County’s largest work sites as potential origins, including the following:

- VMC Main Campus
- O’Connor Hospital
- Civic Center
- Berger
- Charcot
- SSA Senter
- SSA Julian
- Silver Creek
- Champion Point

The project team’s analysis of employee commute mode, from the 2017 CAP survey, indicates that Caltrain, VTA light rail, and BART are the most commonly used public transit modes. The Transit Feeder Shuttle program enhances the effectiveness of the Transit Pass Subsidy program by optimizing connections to these modes’ regional transit hubs from the work sites indicated above. The primary transit station destinations of interest are Diridon Station (Caltrain/VTA light rail/Amtrak, ACE Train) and the future Berryessa BART station. For some corridors, however, these are not the most proximate stations available. To reduce operating costs, alternate transit stations have been proposed for several corridors where appropriate. These stations include Blossom Hill, Lawrence, Santa Clara, and Tamien Caltrain stations and the Milpitas BART station.

**Ridership Estimation**

The forecast transit mode share of 10%, estimated for the Transit Pass Subsidy program’s preferred scenario, is used for the analysis of potential Transit Feeder Shuttle ridership. These estimates reflect the assumption that 10% of employees at each work site will use the Transit Feeder Shuttle to access regional transit hubs, which is based on the most recent employee home location and work site data. Based on employees’ reported ridership of Caltrain and BART from the 2017 CAP survey, it is assumed that 73% of transit ridership to and from each work site will
use Caltrain, while 27% will use BART. Based on these assumptions, estimated ridership for Transit Feeder Shuttles between various work sites and transit stations are shown in Figure 13.

**Figure 13  Transit Feeder Shuttles Estimated Daily Ridership**

<table>
<thead>
<tr>
<th>Origin</th>
<th>Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diridon (Caltrain/VTA)</td>
</tr>
<tr>
<td>VMC Main Campus</td>
<td>465</td>
</tr>
<tr>
<td>O'Connor</td>
<td>81</td>
</tr>
<tr>
<td>Berger</td>
<td>93</td>
</tr>
<tr>
<td>Charcot + Fleets</td>
<td>84</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>81</td>
</tr>
<tr>
<td>SSA Julian + Housing Authority</td>
<td>82</td>
</tr>
<tr>
<td>Civic Center</td>
<td>275</td>
</tr>
<tr>
<td>Champion Point</td>
<td>95</td>
</tr>
<tr>
<td>Silver Creek</td>
<td>95</td>
</tr>
</tbody>
</table>

**Ridership and Cost Estimation Assumptions**

Using industry best practices and operating characteristics from peer shuttle systems, the project team estimated the cost to operate various service alternatives and compared these costs against the potential ridership served at their stop locations. One key assumption is the combined costs of operations, maintenance, and vehicle leases at $80 to $120 per service hour, using cutaway shuttles. Cutaway shuttles are smaller than the buses used for longer distance commuter trips and are therefore less expensive to own, maintain, and operate than a larger commuter coach. Transit feeder shuttles also do not require park-and-ride facilities. It is also assumed that the shuttles would operate only during peak commute hours, from 6 to 9 AM and 3 to 7 PM, at 15-minute frequencies, with service 250 workdays annually. Ridership from the general, non-employee public is assumed to be zero. To maximize ridership, it is assumed that the service would be fare-free for employees.

**Corridor Selection**

The goal of Transit Feeder Shuttles is to provide a short connection between the largest County work sites and regional transit hubs via relatively short trips. Other approaches are likely to result in commuter shuttles with very high costs per passenger trip. One of the core principles of the TDM Plan’s shuttle program is to avoid duplicating existing public transit corridors. Therefore,

---

2 This distribution between BART and Caltrain ridership is based on these transit networks’ extents as of 2017, when the most recent commute survey of County employees was conducted. Two BART stations in Santa Clara County are scheduled to open in late 2019, at Berryessa and Milpitas. These stations are expected to lead to a higher share of transit commuters riding BART and lower share of commuters riding Caltrain.
several corridors have been eliminated from consideration because direct, public transit corridors already connect the work site to regional transit hubs. These corridors include:

- Civic Center – Diridon (already served by VTA light rail)
- Champion Point – Milpitas BART (already served by VTA light rail)
- Champion Point – Diridon (already served by VTA light rail)

The estimated cost per passenger trip for each Transit Feeder Shuttle scenario is presented in Figure 14. Unsurprisingly, the scenarios featuring the largest County work sites and the shortest trip distances are the least expensive to operate on a per-trip basis. Based on these findings, the preferred Transit Feeder Shuttle scenarios include:

- VMC Main Campus – Diridon
- Silver Creek – Blossom Hill
- SSA Senter – Tamien
- SSA Julian – Diridon

Each of these scenarios involves a per-trip cost of less than $5, a level of subsidy that warrants further consideration against other strategies of the TDM Plan.

**Figure 14 Transit Feeder Shuttles Estimated Cost per Passenger Trip**

<table>
<thead>
<tr>
<th>Origin</th>
<th>Diridon (Caltrain/VTA)</th>
<th>Berryessa BART</th>
<th>Blossom Hill Caltrain</th>
<th>Lawrence Caltrain</th>
<th>Santa Clara Caltrain</th>
<th>Tamien Caltrain</th>
<th>Milpitas BART</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus</td>
<td>$1.51</td>
<td>$5.99</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>O’Connor Hospital</td>
<td>$8.68</td>
<td>$34.54</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Berger</td>
<td>$11.27</td>
<td>$9.96</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Charcot + Fleets</td>
<td>$12.44</td>
<td>$21.99</td>
<td>x</td>
<td>x</td>
<td>$8.29</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>$8.61</td>
<td>$34.27</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>$4.31</td>
<td>x</td>
</tr>
<tr>
<td>SSA Julian + Housing Authority</td>
<td>$4.26</td>
<td>$22.62</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Civic Center</td>
<td>x</td>
<td>$6.74</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Champion Point</td>
<td>x</td>
<td>$39.29</td>
<td>$11.11</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Silver Creek</td>
<td>$22.22</td>
<td>$49.12</td>
<td>$3.70</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Courts</td>
<td>$9.94</td>
<td>$52.72</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

**COST-BENEFIT ANALYSIS**

In comparison to transit feeders, commuter shuttles are significantly more costly to operate due to longer trip distances, larger and more costly fleet requirements, and parking required for a park-and-ride service model. Thus, commuter shuttles were not further analyzed for this assessment.
Figure 15 summarizes the trade-offs for each transit feeder program option based on estimated costs and overall effectiveness. The 10% participation rate for each option assumes that the same transit mode share estimated under the TDM Plan’s Transit Subsidy strategy holds at each priority site. This transit mode share is based on existing employee home location and work site patterns, as well as proposed transit subsidy levels of $50 per employee per month in addition to the existing VTA SmartPass program. GHG reduction potential is not applicable to the Transit Feeder Shuttle program because CAPCOA considers it a supportive strategy as part of a broader transit system improvement package.

**Figure 15  Cost Benefit Analysis Matrix**

<table>
<thead>
<tr>
<th>Program</th>
<th>Annual Cost Estimate</th>
<th>Participation Rate</th>
<th>Total Participants</th>
<th>Cost per Passenger Trip</th>
<th>GHG Reduction Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus – Diridon</td>
<td>$357,000</td>
<td>10%</td>
<td>465</td>
<td>$1.51</td>
<td>N/A</td>
</tr>
<tr>
<td>Silver Creek – Blossom Hill</td>
<td>$178,500</td>
<td></td>
<td>95</td>
<td>$3.70</td>
<td></td>
</tr>
<tr>
<td>SSA Senter – Tamien</td>
<td>$178,500</td>
<td></td>
<td>81</td>
<td>$4.31</td>
<td></td>
</tr>
<tr>
<td>SSA Julian + Housing Authority – Diridon</td>
<td>$178,500</td>
<td></td>
<td>82</td>
<td>$4.26</td>
<td></td>
</tr>
</tbody>
</table>

The VMC Main Campus – Diridon transit feeder shuttle is recommended for implementation. It is the estimated highest performing shuttle route from both a total number of participants and features the lowest cost per passenger trip.
5 IMPLEMENTATION

The VMC Main Campus – Diridon and Julian-Diridon transit feeder shuttles are recommended for implementation. Both routes feature a large number of potential participants, shared terminal and layover facilities at Diridon Station, and low operating costs per passenger trip. Given that the Superior Court is located within 0.3 miles of SSA Julian, the County can also consider adding an additional stop to the SSA Julian Shuttle.

Private shuttle programs often require significant administrative resources to design and implement, and often fall outside of a TDM program administrator’s expertise. Therefore, the most important implementation consideration for private shuttle systems is selecting a vendor or staff member(s) with shuttle planning experience. Drawing on experience from other best practices in employer shuttle programs, Nelson\Nygaard recommended the following guiding principles for the private shuttle service:

- Offer convenient shuttle service with multiple trips in the morning and afternoon peak hours
- Provide legible schedules such as trips every 15, 30, or 60 minutes
- Minimize overlap with existing public transit corridors
- Provide express service with two stops maximum
- Differentiate between commuter bus (30+ minute travel time) and first/last mile shuttles

Other important considerations include budget and employee feedback.

- **Expertise/Provider**: Private shuttle programs have several elements, ranging from route planning and ridership estimates to determining vehicle size to hiring and training drivers. It is important to engage experts for program design and implementation.
- **Budget**: Shuttles can be an expensive employee benefit. It is important to understand the financial implications of any service before starting. Even circulator or transit feeder shuttle services can be costly depending on type/size of the vehicles, the number of vehicles, and the service hours. Also, the budgeting process must include potential hidden costs, like tolls, park-and-ride fees, and Wi-Fi.
- **Park-and-Ride Locations for Long Distance Commuter Shuttles**: Commuter shuttles will need to pick up employees in a centralized location. Given the growing popularity of employer-sponsored shuttle programs in the Bay Area, park-and-ride locations can be difficult to come by. As soon as the County determines if/where shuttles will go, they should begin engaging in conversations with potential park-and-ride lots (such as churches, grocery stores, and parks). Long distance shuttle parking and stop facilities play an important role in determining if shuttles will be convenient for employees. Utilizing large parking lots and shuttle stops easily accessible to drivers, near freeways, on arterial streets, adjacent to public transit, and near bike infrastructure can make shuttle use more attractive to employees.
- **Employee feedback**: Shuttles can be seen as the silver bullet of commute solutions by employees, and cause potential tension with groups not served by long distance shuttles. Commute is an emotional topic and it is important for employees to feel heard, however, making sure expectations are set appropriately and service design standards are clearly
explained can help provide transparency in the planning process. Communicating shuttles as one of the many options employees have available is important.

- **Marketing:** Develop a marketing plan for the shuttle program that incorporates key channels of communication such as new employee orientation, County internal communications (e.g. intranet, newsletters, or e-blasts), internal staff departmental and working group meetings, and social media channels.

- **Partnerships:** Given the number of employers who offer private shuttle service in the region, the County should explore partnership opportunities with other major employers.

- **Fleet Right-Sizing:** Using the “right sized fleet” means matching the right vehicle with the right trip, as well as limiting the County’s unused transit capacity to reduce operating costs. For trips/routes with lower observed demand, fleet vehicles carrying six to 15 passengers may suffice, while more popular routes may warrant larger vehicles of 16 to 30-passengers.

Other important elements to consider when planning a private shuttle program include:

- **Service design principles:** Service design principles provide a framework for employers to make decisions on shuttle elements such as: cost effectiveness, employee populations served, and service frequencies. Additionally, it is important to understand how frequently the routes will be revaluated and potentially changed to best serve the current employee population. Service design principles should be developed to maximize the employee experience by ensuring there are multiple runs in the morning and evening with limited stops, at legible frequencies (e.g. every 15, 30, or 60 minutes). The service design should also ensure a cost-effective operation, with costs per passenger trip within industry standards. To avoid unduly prioritizing some employee commutes over others, the shuttle’s cost per passenger trip should not significantly exceed the proposed subsidies for other modes proposed for other strategies in the County’s TDM Plan.

- **Schedule:** Employee shift schedules and traffic patterns are important when outlining a shuttle schedule. Successful programs meet the needs of employees, while providing reliable service even in periods of high congestion.

- **Staffing:** Shuttle programs require full-time staff to design and plan shuttle services, manage daily operations and maintenance activities, and evaluate program performance. Based on peer systems, a shuttle program could include up to two full-time employees (FTEs): one with expertise in transportation planning and operations and another with expertise in procurement and project management.

- **Amenities:** The shuttles used for long distance services should provide comfortable seats, and Wi-Fi and power outlets for work or personal use.
APPENDIX F
Ride Hailing Package
TDM Milestones for Assessment
Ride Hailing Subsidy Package

May 2019
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</thead>
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<td>Figure 3</td>
<td>Lyft Emergency Ride Home Program Promotional Graphic</td>
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<td>Lyft for Work at Mercy General Hospital</td>
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<td>Initial Screening of Ride Hailing Scenario Analysis</td>
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<td>Transit Elasticity Values (highlighted in yellow)</td>
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<tr>
<td>Figure 8</td>
<td>Cost-Benefit Analysis of Ride Hailing Scenarios</td>
<td>13</td>
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</tbody>
</table>
1 INTRODUCTION

Ride hailing services, also known as Transportation Network Companies (TNCs), match riders with drivers in real-time through mobile apps that also accept payment. These platforms typically operate through a network of third-party contractor drivers using non-commercial vehicles. Ride hailing drivers are not themselves travelers. Ride hailing companies are distinguished from taxi services by the inability to street-hail (customers can only pick up prearranged rides). The companies typically offer several ride types, such as private ride and pooled-ride/fare splitting, in which multiple users with origins and destinations along a similar route can hail the same driver in real time.

A ride hail subsidy program offers County employees discounted rides from ride hailing companies such as Uber and Lyft under a specified range of conditions. While encouraging employees to take transit may be preferable with respect to County goals to reduce vehicle trips and GHG emissions from employee commuting, a ride hailing subsidy program recognizes that transit is not a viable option for all employees at all times. Transit commuting may be undesirable or impractical because many employee work sites and homes are located beyond the reach of high-frequency transit stops. Similarly, many late-shift workers start or end work shifts between 7 PM and 5 AM, when many transit lines stop operating or operate with reduced frequency. This is a significant concern particularly at Valley Medical Center’s Main Campus and the Valley Health Center Clinics.

While typically less expensive than legacy taxis, ride hailing is seldom affordable for commute trips without subsidies. According to research published by the Transportation Research Board in 2018, use of ride hailing is very unlikely for employee commutes on a regular basis. Transit and driving are used routinely for commuting, whereas use of TNCs occurs only occasionally to fill gaps or serve specific transportation needs. Ride hailing subsidies are financial incentives designed to encourage employees to use ride hailing for their commutes by making it more cost-competitive with driving alone. This is especially important where employee parking is free, as is the case at Santa Clara County work sites.

In 2012, Senate Bill 1339 was signed into law and approved by the Bay Area Air Quality Management District (Air District) and the Metropolitan Transportation Commission (MTC). The bill requires employers with 50 or more full-time employees in the Bay Area, including Santa Clara County, to offer and implement at least one IRS-qualified commuter benefit option. The options include pre-tax transit and vanpool expenses, transit or vanpool subsidies, or a free or low-cost transit service. Employers can also provide an alternative commuter benefit that provides the same level of effectiveness as the other benefit options. Ride hailing qualifies as an IRS-qualified pre-tax commuter benefit provided only shared-ride services, such as Uber Pool or Lyft Line, are selected, and the vehicle seats six passengers or more. Lyft and Uber’s mobile apps automatically assign riders to shared-ride services in 6+ passenger vehicles if a commuter benefits card (e.g. WageWorks) is used as payment.

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Ride hailing services can be beneficial for employees by reducing single-occupancy vehicle trips and improving access to public transit. A partnership with Uber, Lyft, or other ride hail vendors could help to achieve some of the following objectives:

- **Enhance flexibility for pedestrian, bike, and transit commuters** by giving these employees a “guaranteed ride home” if they cannot use their usual mode or in an emergency.
- **Provide a “last-mile” connection** that can link high propensity riders to public transit.
- **Offer an alternative to driving alone** for employees who live too far from transit stops to commute by transit.
- **Make transit viable for night-shift employees** by offering subsidized, one-way rides when public transportation is no longer in service.

To determine an effective Ride Hail Subsidy program for the County of Santa Clara, Nelson\Nygaard and Nunes-Ueno Consulting have prepared a thorough analysis, which is grounded in best practice research, thorough model testing, and effective implementation methods for the County. The assessment is based on the feasibility and cost-benefit analysis of three different ride hail subsidy scenarios... The following report summarizes research findings and analysis, and outlines recommendations for the County as they prepare a proposed approach for the 2020 budget.
2 BACKGROUND

Employer-sponsored ride hailing subsidies are an emerging TDM solution with few precedents and little to no academic study, as of April 2019. The few employer-based ride hailing subsidies have typically targeted large campus environments or compact commercial districts with large numbers of employees who face a particular set of mobility challenges that are unlikely to be met by existing fixed-route transit services. Several employers have implemented the subsidies after finding that other, more conventional TDM solutions have not sufficiently shifted employee commuting away from single-occupancy vehicles.

While typically cheaper than taxis, the cost of ride hailing on a per trip basis, especially for longer distance trips, remains more expensive than most other modes, including transit and driving alone. It is also important to note that ride hailing subsidies may, under the companies’ default user settings, increase net employee vehicle miles traveled and contravene the County’s GHG emissions reduction goals. But this typically occurs if ride hailing users replace a drive-alone commute with ride hailing in between home and work.

Another concern is the extent to which ride hailing is likely to substitute for transit, walking, or bike trips rather than drive-alone trips. A recent study found that ride-hailing usage in a city is correlated with a three percent increase in commuter-rail ridership (e.g. Caltrain), a six percent decline in local bus ridership, and a three percent reduction in light rail (e.g. VTA light rail) ridership.3

Ride hailing is also known to be a significant net contributor to congestion in the Bay Area. In a 2018 study, The San Francisco County Transportation Authority (SFCTA) found that between 2010 and 2016, average AM peak arterial travel speeds in San Francisco decreased by 26 percent, while PM peak arterial speeds decreased 27 percent, or about three miles per hour.4 Ride hailing was found to be responsible for 55% of the decrease in travel speeds, while just 41 percent of the decrease was due to population and employment growth. Vehicle hours of delay on major roadways increased by 40,000 hours on a typical weekday, and ride hailing was responsible for 51% of this change. Ride hailing also accounted for about five percent of total citywide VMT. The effects of ride hailing on congestion are most prominent during peak commuting hours and in the densest, busiest commercial corridors.

---


3 BEST PRACTICES

EMPLOYER CASE STUDIES

The adoption of on-demand ride hailing apps such as Lyft and Uber is widespread in cities, particularly the Bay Area. Ride hailing services offer customers a lower cost per trip, more reliable service, and more seamless booking and fare payment than taxis.

The case studies reviewed in this section examine ride hailing partnership programs that target specific transportation needs that other modes could not effectively meet. Employers in these case studies worked with ride hailing companies to develop geographic fencing and other screening criteria to limit the distance and trip types eligible for subsidy. The following case studies provide examples for Santa Clara County:

- **Oregon Health Sciences University** – ride hailing connection to transit program and off-peak ride hailing program
- **Mercy Hospital Sacramento** – ride hailing connection to transit service
- **Palo Alto TMA** – off-peak ride hailing program

Figure 1  Employer Ride Hail Subsidy Case Studies

<table>
<thead>
<tr>
<th>Employer/Program</th>
<th>Program Orientation</th>
<th>Annual Subsidy per Participating Employee (Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHSU</td>
<td>Subsidized ride hails for late-shift employees; Subsidized ride-hails for employees who commute by transit, carpool, or walking/biking</td>
<td>Lyft Off: $7,920) Emergency Ride Home: $150</td>
</tr>
<tr>
<td>Lyft Off</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lyft Emergency Ride Home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercy Hospital (Sacramento)</td>
<td>Subsidized ride hails between work and selected remote parking facilities or transit stations</td>
<td>$4,800</td>
</tr>
<tr>
<td>Lyft for Work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palo Alto TMA</td>
<td>Subsidized ride hails for low-income, late-shift employees</td>
<td>$2,028</td>
</tr>
<tr>
<td>Lyft After Hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OREGON HEALTH SCIENCES UNIVERSITY, PORTLAND

Background

Oregon Health Sciences University (OHSU) in Portland, Oregon, has a robust offering of transit, pedestrian, and cycling options that make it a leading example of a large employer with a low drive-alone rate. Faced with an immediate need to reduce the number of employees who drive alone to work and depend on OHSU parking facilities – where most parking costs employees $15/day – the Transportation and Parking team piloted a ride hailing partnership with Lyft to connect employees who commute during off-peak periods. OHSU began a pilot with two subsidized ride-hail programs with Lyft in April 2018, the “Lyft Off” program, for shift employees who work during off-peak hours, and a Lyft Emergency Ride Home program.
OHSU also considered a third ride-hail program to connect employees from their homes to transit stations. This proposed “Transit Connector” service would offer lower-cost rides, making it more financially viable in the long-term. However, stakeholders were unable to operationalize the geo-fencing necessary to implement it, as the program would need to create customized buffers around transit stations nearest to every employee home location. The Lyft Off and Emergency Ride Home programs were implemented as part of OHSU’s TDM Plan, and they coincided with the launch of an integrated commute management platform, Luum, at the same time.

Lyft Off

The “Lyft Off” program provides one subsidized Lyft ride per day (up to $15 per ride) for all employees who start or end their shifts between 7 PM and 5:30 AM. For employees who start their shift during these “off-peak” hours, the Lyft ride would be provided between home and OHSU; for employees who end their shift during off-peak hours, the Lyft ride would be provided between home and OHSU. It is assumed that the employee would take transit on the other end of their trip during “peak” hours. The Transportation and Parking team originally wanted to use Lyft Line, which dynamically pools together multiple trips with a similar origins and destinations. However, Lyft Line is not yet available for many corridors or off-peak periods in Portland. The program is not available to OHSU students.

To be eligible for the Lyft Off program, employees must complete a short commute survey with their home address and commute mode, and this information is cross-checked against their shift schedule on file with Human Resources. After a review period of three to five business days, the employee receives a unique promotional code for use in the Lyft app, which distributes the subsidized rides. These codes expire after 90 days, so OHSU must periodically refresh them for registered employees. Lyft provides OHSU with a monthly data report featuring code usage for every registered employee, ride date and time, and the ride charges (fares that exceed the $15 OHSU subsidy are not shown).

In a recent survey, OHSU employees indicated that their top motivation for the university’s ride hailing program was safety while traveling at night. Other motivations included saving money on parking and shorter travel times. The university promoted Lyft Off by promotional posts distributed on a staff intranet site, as well as the OHSU Transportation and Parking website. Lyft Off launched immediately after the publication of the TDM Plan, which was accompanied by a promotional tour where the program was shared at departmental staff and working group meetings. The program is also included in the OHSU new employee orientation, along with other TDM options. Lyft Off has received generally positive feedback in its first year of operation, with many employees saying it has improved their job satisfaction, commute, and quality of life. Structuring the program as a pilot has given the university the flexibility to scale the program up or down depending on its needs.
In addition to the above employee rideshare markets, OHSU identified an opportunity to reward employees who are already biking, walking, taking transit, and sharing rides to work by providing an Emergency Ride Home program with Lyft. OHSU previously operated an Emergency Ride Home program through their contract with TriMet, but the program was not user friendly and was significantly underutilized. In TriMet’s program, employees were required to call a taxi and then get reimbursed by submitting a receipt. The Lyft program, on the other hand, allows employees to request a ride home via their Lyft app; the employee uses a prepaid code to pay for the Lyft. Employees who bike, walk, take transit, and carpool are eligible for up to three emergency rides home per year through Lyft, with a maximum ride cost of $50. The Lyft program also integrates with Luum, the university’s new commute management platform.

Cost

The program has proven highly popular with employees, with the number of monthly rides increasing from 600, in May 2018, to 5,000, in February 2019. Trip estimates for the Emergency
Ride Home program were not available but are likely to be nominal compared to the employee participation of the other two programs. Because of the program’s popularity, its overall costs to OHSU are increasing, and the university may consider reducing the subsidy in the near future.

**Applicability to Santa Clara County**

The OHSU pilot demonstrates that public-sector employers can implement multiple types of ride hailing subsidies, with multiple eligibility screening criteria, simultaneously. The two distinct service offerings helps the university fulfill several of its broader mobility objectives, such as supporting transit commuters, improving mobility for late-shift workers, and offering logistical backup options for employees who already commute by sustainable modes. The key to the ride hailing programs’ long-term viability is limiting the available subsidy per trip, as it is likely that the OHSU program’s current subsidy of $15 for the Off-Peak program is not sustainable given its growing popularity among late-shift employees.

**MERCY HOSPITAL SACRAMENTO**

**Background**

In early 2018, Mercy General Hospital (MGH) partnered with Lyft to enhance transit access. As a major employer, Mercy General is mandated by the California Transportation Commission to attain 35 percent participation from our employees in their sustainable commute program. Prior to 2018, MGH ran a private shuttle for employees between an off-site parking lot and two light rail stations near the main hospital campus. Employees had to arrange their commutes around the shuttle schedules, or else spend time waiting for the shuttle. The shuttle program was tested with an initial pilot program for a small sample of employees and opened up to all employees after the pilot proved successful.

**Ride Hailing Program**

To improve the commute experience of their employees, MGH replaced shuttle service with on-demand Lyft service, free of charge. Wait times typically range from two to five minutes, allowing for more flexibility of arrival and departure times. By improving the commute experience of employees taking light rail and by providing an easy way to reach remote parking lots, MGH was able to take steps towards freeing up parking spaces at the main campus.

MGH assisted employees with sign-up by providing detailed FAQs, as well as information booths where staff could assist employees with sign-up. To incentivize sign up, MGH offered the first 1,000 employees to sign up a chance to win $1,000. Finally, all employees who created and used a separate Lyft business account for the program received a one-time prize of $15 in Lyft credit for personal use.
Cost

The partnership is based on “geo-fences” around MGH, a handful of remote parking facilities, and the light rail stations at 29th and 39th Street. Only rides whose origin and destination falls within these locations are eligible to be covered by the monthly stipend; all other Lyft rides are the responsibility of the employee. MGH provides a maximum of $400 a month per participating employee, or roughly $10 per ride. Originally, when the partnership launched in early 2018, the monthly subsidy was $100 per month. The stipend was increased when it became clear that many employees could not complete daily rides between the geo-fenced locations and stay within the original monthly allocation, due to an increase in Lyft fares. Any unused balance at the end of the month is returned to the hospital, while any rides charged after the $400 monthly credit is used up are the responsibility of the employee.
Applicability to Santa Clara County

The MGH Lyft to transit and remote parking program shows how a ride hailing partnership provides a flexible connection to transit, remote parking lots, or other nearby destination such as a secondary office location. An additional option not used by MGH: require or incentivize Lyft Line, the shared ride service from Lyft that picks up additional passengers. Shared rides would lower the cost per ride and reduce the number or trips generated by the program, a particular concern where there is traffic congestion or pick-up/drop-off circulation issues.

PALO ALTO TMA

Background

Downtown Palo Alto is a vibrant commercial district and destination with restaurants, retail, and office space. Parking is a scarce resource downtown, with both commuters and visitors competing for spaces. The Palo Alto Transportation Management Association (TMA) provides an “after hours” Lyft subsidy for low-income commuters who live near Palo Alto and arrive at work before 6 a.m. or leave after 8 p.m. Additionally, the TMA provides free transit passes to low income workers and collaborates with Scoop and Waze Carpool to facilitate and incentivize carpool trips into the downtown Palo Alto area for all employees.

Ride Hailing Program

The Palo Alto TMA surveys Downtown workers’ commute mode and found that service workers had the highest drive-alone rate of any employment sector, at about 70%. Given the high cost of living along the Caltrain corridor, as well as off-peak or irregular schedules, many service workers drive to work. Providing an after-hours Lyft subsidy when transit service is limited or infrequent allows employees to take transit more often, freeing up parking spaces for visitors/patrons and reducing traffic. The after-hours Lyft program provides a subsidy of up to $10 per trip for up to 15 one-way trips a month. This volume of trips accounts for less than half of all monthly commute trips for a typical, full-time employee, and therefore encourages riders to use Lyft as a backup option and transit as their primary commute mode. In Figure 5 below, the geographical limits of the after-hours Lyft program are shown. To be eligible, an employee must work in downtown Palo Alto, the map on the right and also live in “Greater Palo Alto Area” the map on the left. Employees who do not own a smartphone can call a dispatcher to get a ride.

5 Defined by the TMA as a household making $70,000 per year.
Cost

The TMA provides both marketing support and financial support to the program. Palo Alto TMA’s after-hours Lyft subsidy costs $2,028 annually per participant. The program has between 11-20 active users a month and an average cost per trip of around $8. Active users take 10-11 trips per month, on average.

Applicability to Santa Clara County

The Palo Alto TMA after-hours Lyft subsidy program demonstrates how a targeted ride-hailing partnership complements other TDM efforts, making transit and carpooling more viable for more people’s commute. This type of targeted program is relevant to Santa Clara County employees or employment sites with irregular schedules who commute when transit service is low. The overall number of people served or trips shifted with a targeted program such as the after-hours Lyft program, however, is low.
4 RIDE HAILING SUBSIDY ANALYSIS

Employees who drive alone to work are considered immediate candidates for a countywide ride hailing subsidy program. The three markets identified below will help the County leverage its investment in transit, meet the needs of employees that do not have access to transit, and ensure that employees who are already using sustainable modes do not switch to ride hailing.

- **Transit Connector**: Although the County provides free VTA SmartPasses for employees, some sites cannot benefit because they are located more than one-mile from transit. To leverage this investment, subsidized rides can be provided to employees who are just outside the reach of convenient transit.

- **Off-Peak**: Access for late shift employees was identified as a key issue particularly for employees of Valley Medical Center’s Main Campus and the Valley Health Center clinics. The Off-Peak program provides a one-way ride to employees whose shift either starts or ends when transit has limited service.

- **Transit Desert**: For some employees, transit, biking, and walking is not an option and getting consistent matches for carpooling can be difficult. These employees live beyond a reasonable bike/walk distance or in “transit deserts” (more than three miles from any transit stop). Some employees in transit deserts may benefit from ride hailing as an alternative to driving alone. However, due to the extensive transit coverage in most areas of the County, it is unlikely that trips between Priority Sites and employee homes in transit-starved areas can be cost-effectively subsidized at rates sufficient to encourage ride hailing instead of driving alone.

**RIDE HAILING SUBSIDY SCENARIOS**

The project team evaluated four subsidy scenarios, one each for the Off-Peak and Transit Desert populations identified above, and two for the Transit Connector model above. These scenarios include the following conditions:

- **Transit Connector A**: $3 subsidy for each one-way trip between an employee’s work site and the nearest Caltrain, BART, or VTA light rail station, provided the work site is located more than one mile from the station.

- **Transit Connector B**: Same as Transit Connector A, with a $4 subsidy.

- **Off-Peak**: $3 subsidy for each one-way trip between an employee’s home and work locations, provided the employee’s shift starts or ends between 7 p.m. and 5 a.m.

- **Transit Desert**: County provides $3 subsidy for each one-way trip between an employee’s home and work locations, provided the employee’s home is more than three miles from any transit stop.

The project team conducted GIS analysis to determine the number of participants who would qualify for the Transit Connector scenarios based on their work location, as well as their work locations’ network distance to the nearest Caltrain, BART, or VTA light rail station. Similar analysis was conducted to determine the average distance between home and work sites for employees who live more than three miles from any transit stop, in the Transit Desert scenario. Additional analysis of employee timecards was used to estimate the share of total employees who would be eligible for the Off-Peak scenario based on their shifts’ start and end times. Based on
this timecard activity data, it is assumed that for all of these groups, the average work site has a daily attendance rate of 86%. Results of the first phase of this analysis are presented in Figure 6.

To avoid burdening the County with unsustainable costs for long-distance rides, this analysis evaluates smaller subsidy amounts than the pilots reviewed in the case studies section, of $3 or $4 per trip, with a maximum of two trips per day allowed. As shown in Figure 6, these levels of subsidy are sufficient to induce a modal shift from drive-alone to ride-hailing (and transit) only in the two Transit Connector scenarios. This is because these scenarios are designed to accommodate only relatively short ride hailing trips, of about 2.5 miles on average.6 Because of the short ride hail trips compared to the Off-Peak and Transit Desert scenarios, participants in the Transit Connector scenarios pay a total daily commute cost of between $14 and $16, including ride hailing plus transit fares,7 compared to the daily cost of driving 30 miles round-trip, at $17.

Figure 6  Initial Screening of Ride Hailing Scenario Analysis

<table>
<thead>
<tr>
<th></th>
<th>Transit Connector A</th>
<th>Transit Connector B</th>
<th>Off-Peak</th>
<th>Transit Desert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average one-way ride distance (miles)</td>
<td>2.53</td>
<td>15</td>
<td>55.63</td>
<td></td>
</tr>
<tr>
<td>Average one-way ride duration (minutes)</td>
<td>5</td>
<td>21</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Undiscounted One-Way Ride Cost</td>
<td>$8.45</td>
<td>$24.78</td>
<td>$76.04</td>
<td></td>
</tr>
<tr>
<td>Cost per One-Way Ride to Santa Clara County</td>
<td>$3</td>
<td>$4</td>
<td>$3</td>
<td></td>
</tr>
<tr>
<td>Employee Cost per One-Way Ride</td>
<td>$5.45</td>
<td>$4.45</td>
<td>$21.78</td>
<td>$73.04</td>
</tr>
<tr>
<td>Daily Drive Alone Cost per Employee (at $0.57/mile)</td>
<td>$17.09</td>
<td>$17.09</td>
<td>$17.09</td>
<td>$63.42</td>
</tr>
<tr>
<td>Percent of Total Trip Covered by Subsidy</td>
<td>36%</td>
<td>47%</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>Daily Ride Hail (plus Transit Cost, if applicable) per Employee</td>
<td>$16.35</td>
<td>$14.35</td>
<td>$24.50</td>
<td>$146.08</td>
</tr>
<tr>
<td>Percent Difference between Daily Driving Alone and Ride Hail + Transit Costs</td>
<td>-5%</td>
<td>-19%</td>
<td>+30%</td>
<td>+57%</td>
</tr>
<tr>
<td>Potential participants</td>
<td>12,133</td>
<td>3,483</td>
<td>1,638</td>
<td></td>
</tr>
</tbody>
</table>

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6 This is the average one-way driving distance between work sites located more than one mile from BART, Caltrain, or VTA light rail, and the nearest transit station of these types.

7 Average transit fares are based on the proportional share of employees riding each transit agency service reported in the 2017 CAP Survey, with an assumed average one-way fare of $2.72.

8 This figure is the average one-way driving distance for all employees.

9 Estimated travel times are derived from posted speed limits on the road network. These estimates do not reflect the impacts of traffic congestion and may underestimate travel costs during AM and PM peak hours.

10 This $0.57/mile rate is what the IRS uses to calculate the cost of driving for tax collection purposes, and as a result it is the rate at which most major employers reimburse work-related driving expenses.
Based on known elasticities of transit demand with respect to travel cost, shown in Figure 7, we can expect between 0.29% and 1.24% of current drive-alone commuters to switch to ride hailing plus transit (see Error! Reference source not found.). Conversely, because the cost of ride hails are significantly more expensive than daily driving costs for employees eligible for the Off-Peak and Transit Desert programs – commute cost increases of 30% and 57%, respectively – we cannot expect any meaningful participation in these programs. Therefore, the Off-Peak and Transit Desert scenarios do not merit further consideration at the County’s proposed subsidy levels of $3-4.

**Figure 7**  Transit Elasticity Values (highlighted in yellow)

<table>
<thead>
<tr>
<th>Market Segment</th>
<th>Short Term</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit ridership WRT transit fares overall</td>
<td>-0.2 to -0.5</td>
<td>-0.5 to -0.9</td>
</tr>
<tr>
<td>Transit ridership WRT transit fares peak</td>
<td>-0.15 to -0.3</td>
<td>-0.4 to -0.6</td>
</tr>
<tr>
<td>Transit ridership WRT transit fares off-peak</td>
<td>-0.3 to -0.6</td>
<td>-0.8 to -1.0</td>
</tr>
<tr>
<td>Transit ridership WRT transit service suburban commuters</td>
<td>-0.3 to -0.6</td>
<td>-0.8 to -1.0</td>
</tr>
<tr>
<td>Transit ridership WRT transit service overall</td>
<td>0.50 to 0.7</td>
<td>0.7 to 1.1</td>
</tr>
<tr>
<td>Transit ridership WRT auto operating costs overall</td>
<td>0.05 to 0.15</td>
<td>0.2 to 0.4</td>
</tr>
<tr>
<td>Automobile travel WRT transit costs overall</td>
<td>0.03 to 0.1</td>
<td>0.15 to 0.3</td>
</tr>
</tbody>
</table>

*This table summarizes recommended values resulting from this study. These values should be modified as appropriate to reflect specific conditions. (WRT = With Respect To)*

Source: Victoria Transport Policy Institute

**COST-BENEFIT ANALYSIS**

The two ride hailing scenarios under consideration, Transit Connectors A and B, offer potential benefits that significantly outweigh their costs to Santa Clara County, as shown in . The subsidy levels of $3 and $4 are primarily responsible for the difference in cost between Transit Connectors A and B, respectively. The net change in employee commute VMT is shown in .

**Figure 8**  Cost-Benefit Analysis of Ride Hailing Scenarios

<table>
<thead>
<tr>
<th></th>
<th>Transit Connector A</th>
<th>Transit Connector B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadhead miles as percent of Ride Hail VMT&lt;sup&gt;11&lt;/sup&gt;</td>
<td></td>
<td>39%</td>
</tr>
<tr>
<td>Percent of employees whose work is more than one mile from a BART, Caltrain, or VTA light rail station.</td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>Percent of one-way commute VMT taken via Ride Hailing</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Percent of one-way commute VMT taken via Public Transit</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td><strong>Modal Shift from Drive-Alone Commuting</strong></td>
<td><strong>-0.30%</strong></td>
<td><strong>-1.25%</strong></td>
</tr>
<tr>
<td><strong>Share of Program Participants Switching from Drive-Alone to Ride Hailing + Transit</strong></td>
<td>9%</td>
<td>32%</td>
</tr>
</tbody>
</table>

<sup>11</sup> “Deadhead” refers to VMT produced by ride hail drivers operating without a passenger in the vehicle, e.g. VMT produced from driving to pick up a passenger.

<sup>12</sup> BART includes the Milpitas and Berryessa stations set to open by EOY 2019.
In each scenario, ride hail trips are only eligible for the program’s subsidy if they are taken between an employees’ work site and the nearest BART, Caltrain, or VTA light rail station. For each scenario, this means that on average, public transit comprises the vast majority of an employee’s commute length, at 83 percent of the total journey length.

Nevertheless, each of these scenarios are likely to cause a marginal increase in VMT due to the effect of deadhead miles produced by ride hail drivers operating without a passenger in the vehicle. This impact contravenes one of the County’s primary goals of the TDM Plan, GHG emissions reduction. While ride hailing programs are effective in reducing drive-along trips and parking demand at County facilities, and in supporting employees who commute by public transit, they are likely to result in a slight increase in GHG emissions as well as overall VMT. The primary difference in impact between Transit Connectors A and B is that B, with its $4 subsidy, creates more of a cost savings versus the cost of driving alone, which induces a larger number of employees who currently drive alone to switch to ride-hailing plus transit. As a result, a larger

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13 Includes value of CO2 emissions, priced at $15.10 per metric ton, according to the Climate Policy Initiative, [http://calcarbondash.org/](http://calcarbondash.org/).

14 Assumes that program participants surrender their parking privileges and participate five days a week.

share of employees participating in Transit Connector B are likely to have switched modes from driving alone, at 32% of participants compared to 9% of Transit Connector A participants.

For either scenario to result in a decline in VMT, as well as GHG emissions, it must entice a sufficient number of current drive-alone commuters to switch to ride-hailing plus transit. Participating employees’ former drive-alone commute VMT must exceed the VMT between their work site and nearest transit station, plus the deadhead VMT their trips generate. Scenario B comes closer to Scenario A in achieving this goal, though both cause modest increases in employee VMT, of 0.6% and 1.3%, respectively. The total annual costs to Santa Clara County of Scenarios A and B are approximately $637,000 and $954,000, respectively. These costs include not only the annual cost of ride subsidies but also the cost of greenhouse gas emissions, which are currently priced in California for major emitters at $15.10 per metric ton. The County is not legally obligated to pay for its emissions under California AB 32, the California Global Warming Solutions Act (2006). These costs are included as a proxy to quantify these emissions’ approximate economic impact.

The financial benefits of a ride hailing program are the result of reduced employee parking demand at County worksites and include:

- Operations & maintenance cost savings from a right-sized parking supply
- New revenues from the sale of County-owned real estate currently occupied by employee parking facilities
- They further encourage the use of public transit as they provide connectivity for the last few miles of a commute.

These benefits significantly outweigh the costs of operating a ride hailing program. The typical operations & maintenance cost of surface parking facilities in the County of Santa Clara averages $480 per space per year, according to the Victoria Transport Policy Institute. Parking facility operations and maintenance costs often include resurfacing/restriping, insurance, access control, lighting, landscaping, cleaning, staffing, security, and enforcement. This cost savings accounts for between 20 and 30 percent, for Scenarios B and A respectively, of the annual program’s subsidy per employee. More significant are the potential revenues the County could generate by selling under-utilized parking real estate freed up by the ride hailing program. This assumes the facilities are County-owned, of sufficient size to redevelop, and a buyer paying fair market value is found. Under these conditions, the County could potentially generate $3 million to $3.4 million in annualized revenues for 30 years, although the payment would likely come in the form of a much larger, one-time lump sum.

**RECOMMENDED EMPLOYEE RIDESHARE PROGRAM**

The final rows of Error! Reference source not found. show a benefit-to-cost ratio for each ride hailing scenario. The Transit Connector A, with a $3 subsidy per trip, offers a higher benefit-to-cost ratio of 4.70, while Transit Connector B offers a ratio of 3.56. Therefore, the County should implement Transit Connector A, monitoring closely to ensure key performance metrics are met. These performance metrics and other important implementation considerations are described in the following section.
5 IMPLEMENTATION

Given its leadership role as a public sector employer, the County should encourage all modes of public transit ridership, rather than cannibalize it by replacing higher-occupancy trips (e.g. local bus) with lower-occupancy ride hail trips. Therefore, ride hailing subsidies for County employees are only congruent with the broader goals of the Santa Clara County TDM Plan if they align the following principles:

- Support, rather than compete with, public transit and encourage use of high-occupancy modes. Ride hailing should dovetail with the County’s proposed transit subsidy solution by expanding the reach of public transit and providing riders with first- and last-mile connections to transit stations. To do so, subsidies should be limited to shorter trips (e.g. under five miles) and those that begin or end at specified transit stations.
- Be available only for commute trips to or from designated County work sites, not for employees’ discretionary trips or mid-day trips from work.
- Alternatively, ride hailing should reduce drive-alone trips and parking demand by enhancing travel options during hours when public transit service is limited or unavailable (e.g., late night and weekend commute trips).
- Limit the growth of vehicle miles traveled (VMT) and cost-per-trip by requiring pooled rides (e.g. Uber Pool or Lyft Line), rather than the more common default, single passenger hailed rides.
- To the extent possible, prioritize rides in low-emissions or zero-emissions vehicles to meet the County’s GHG emissions reductions goals.

SERVICE & ROLLOUT RECOMMENDATIONS

Because employer-based ride hailing programs represent emerging territory in TDM, they require careful stakeholder coordination, clear performance indicators, strong positioning during negotiation and procurement, and effective marketing and communications to succeed. The project team recommends the following approach in advance of implementation.

Marketing & Communications

- Develop a marketing plan for the ride hailing program that incorporates key channels of communication such as:
  - New employee orientation
  - County internal communications (e.g. intranet, newsletters, or e-blasts)
  - Internal staff departmental and working group meetings
  - Social media channels

Monitoring

- Define Key Performance Indicators and develop an Evaluation Plan (for data collection before, during, and after the pilot); third-party evaluators might be used to provide protection from public records requests
• Evaluate progress toward Key Performance Indicators on a monthly basis; summarize outcomes annually (or before for shorter pilots)
  – Be prepared to refine based on ongoing monthly monitoring
• Report out early and often; communicate ongoing outcomes with all involved stakeholders and strive to respond to feedback while minimizing customer-facing program changes

Establish Ride Hailing Facilities

The employee ride hailing programs will increase the number of ride hail drivers picking up and dropping off on campus. Campus planning, facilities, and TDM stakeholders should collaborate on establishing Ride Hailing Facilities as a way to accommodate the additional ride hailing traffic and ensure a seamless and safe experience for employees and visitors. Ride Hailing Facilities should consider the following:

1. **Designate Pick-Up Zones:** Ride hailing pick-up zones should be clearly marked and designated for employees.
2. **Ensure Pick-Up Zones are Safe:** Designated pick-up zones should be located along curb-side areas with ample space for a vehicle to get out of the general-purpose traffic lane with no bike lane conflict points. Future facility planning should include an area for 2-3 vehicles to access and egress at key intersections.
3. **Implement Signage:** Ride hailing pick-up zones should be clearly marked with signage. Signage should be branded using the County’s commute brand so that it can accommodate all types of ride hailing services. Bollards can be used in conjunction with signage to designate pick-up areas.
4. **Update the Geo-Fencing of County Work Sites:** County stakeholders should work with ride hailing companies to create geo-fences around County work sites and the nearest BART, Caltrain, and VTA light rail station to each respective work site. If employees at all 115 County work sites are eligible for the ride hail program, this will involve creating 115 unique geo-fenced pairs, with origins and destinations restricted to an employee’s work site and the appropriate transit station only. The geo-fencing should be updated to reflect the designated pick-up zones identified above.
5. **Educate Ride Hail Drivers:** Some County work sites may be difficult to navigate. County stakeholders should develop documentation for ride hailing companies to distribute to drivers related to pick-up/drop-offs.
APPENDIX G

Alternative TDM Package
TDM Milestones for Assessment
Alternative TDM Solutions Package

May 2019
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<td>Commute Platform</td>
<td>4</td>
</tr>
<tr>
<td>Vanpool</td>
<td>6</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

Through the TDM Study, the County of Santa Clara is exploring various strategies that support the County’s goals of reducing SOV commuting and GHG emissions, addressing parking challenges and traffic congestion in and around County sites, and finding cost-effective ways of providing administrative services. The Study has primarily focused on strategies that have proven successful for other employer TDM programs, however there are other strategies that may be applicable to the County program and would complement the efforts of implementing a comprehensive TDM program.

As technology and transportation services evolve, the County should leverage these opportunities as a way to incorporate strategies that best reflect commuter preferences and incentives, and encourage behavior change. This package summarizes alternative TDM solutions, including Flex Work, Commute Platform, and Vanpool. These solutions will help fill gaps in the TDM program or to complement the other strategies that are under consideration.

BACKGROUND

The County of Santa Clara currently demonstrates some support for the strategies outlined in this package; however, the County has an opportunity to formalize this support and further enhance the impact of these strategies. Employees are currently allowed to work remotely and are equipped with laptops. These provisions allow for seamless facilitation of flex working, but participation may be low due to a perception that supervisors do not support remote working arrangements. The County also supports ridesharing, as demonstrated through the provision of carpool spaces, but could formally demonstrate support for other ridesharing arrangements by administratively and/or financially supporting vanpools. The County has also supported the Scoop carpool pilot, which signals the support and interest in using platform technology to help administer, incentivize and monitor TDM programs.
2 ALTERNATIVE TDM SOLUTIONS

FLEX WORK

Technology now supports more seamless and secure communication channels than ever before, allowing employees to effectively work outside of their designated workplace on occasion and/or outside of typical office hours. Flex Work could include two different program options:

1. **Telework**: A mutually agreed upon work arrangement between the employer and the employee that allows employees to work from home or another off-site location on an occasional basis, with the remainder of his or her time at the central worksite.

2. **Flex Schedules**: A mutually agreed upon work arrangement between the employer and the employee that allows employees to work a flexible schedule. For example, employers could allow employees to arrive or depart within a range of hours rather than at specific times; or employers could allow a condensed work week, such as a 9/80 or a 4/10 schedule.

Flex Work programs can provide flexibility to both the employer and employee, as well as reduce person/vehicle trips, parking demand, and the need for on-site workspace. The County could use Flex Work strategies to remain competitive in the search for skilled workers, welcoming telecommuting as an option to attract and retain employees.

Case Studies

City and County of San Francisco

The City and County of San Francisco (CCSF) has a Telecommuting Policy and Program that applies to eligible employees citywide. Eligibility is based on both the nature of the position and the performance of the employee. City departments tailor the requirements, guidelines, or procedures to the needs of the department and develop telecommuting agreements with its employees. The program does not require the City to provide employees with off-site workplace supplies or to assume the responsibility of setup or operating costs; departments can determine how to allocate resources for supplies or reimbursements. CCSF has found that telecommuters are 30 to 40% more productive, 80% of employees consider telecommuting a job perk, and 95% of employers say telecommuting improves retention.

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1. [https://sfdhr.org/sites/default/files/documents/Employees/Telecommute/Telecommute-Policy.pdf](https://sfdhr.org/sites/default/files/documents/Employees/Telecommute/Telecommute-Policy.pdf)
Cigna Corporate Services

In 2002, to make more efficient use of space and reduce the cost of employee overhead, CIGNA conducted an assessment to determine which job classes were particularly suited to working at home, and introduced a formal telecommuting option for employees in eligible job classes. By 2005, 11% of CIGNA’s workforce worked full time from home. Critical to the success of the program was a written policy, developed and reviewed with each telecommuter during a face-to-face meeting, to ensure each employee understood and agreed to company expectations for the program.

Implementation Considerations

When establishing a formal program, the County should define which positions are eligible for Flex Work. Flex Work options are most appropriate for positions that typically do not consistently require face-to-face interaction with coworkers or the public. This program works best if employees have access to strong communication networks (e.g. instant messaging capabilities and remote server access) and the County develops best practices and expectations for how employees can communicate from alternative locations and from different times of day. Specifically, the County would need to establish consistent employee and security guidelines across departments. These guidelines should include the following:

- Employee protocols to ensure that employee work performance is consistent, effective, and not a deterrent to departmental operations.
- A checklist of office supplies/equipment that foster a productive work environment.
- Consistent communication with supervisors to establish Flex Work schedules.
- Performance review processes and promotion criteria to identify and remove any bias for or against employees who opt into Flex Work.
- Management training for department leads to ensure consistent implementation across different departments and teams.
- Develop consistent security and IT protocols for employees working off-site.

The County could phase in a Flex Work option to allow time for employees to accustom to a new work schedule and environment. Texas Health Resources, a large healthcare provider, began by allowing a few workers to telecommute one of two days a week, and slowly built out the program to accommodate additional employees and telecommuting days. This approach would allow the County to scale up the program over time.

Applicability

Flex Work should be considered at sites where employees do not require consistent face-to-face interaction with their colleagues or the public, or where positions do not require on-site manual labor.

Monitoring

- Monitor flex workspace usage to determine if more desk space is needed.

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3 https://ctrides.com/images/docs/CignaCS.pdf
TDM PROGRAM MILESTONES FOR ASSESSMENT | ALTERNATIVE TDM SOLUTIONS
County of Santa Clara

- Regularly track telecommuting and flex schedules through the annual Commute Alternatives Program Survey to determine program effectiveness.
- During the annual review process, supervisors can discuss program effectiveness with employees.

Program Effectiveness
Assuming 1% to 5% of all County employees participate, the GHG reduction potential is 0.15% to 0.73% for telecommuting one day per week, 0.07% to 0.35% for a 9/80 flex schedule, and 0.15% to 0.75% for a 4/10 schedule. According to the 2017 CAP Survey, approximately 200 employees currently participate in a flex schedule. Telework would encourage an additional 25 to 120 participants for a total of 225 to 320 participants.

Cost Estimate
There are no associated costs with Flex Work programs.

COMMUTE PLATFORM
A commute platform is a mobile application and/or online dashboard that is used to facilitate participation in TDM programs, provide a centralized platform to inform employees about their transportation options, and can be used to gamify commuting. The goal of a commute platform is to encourage non-driving trips by providing incentives, fostering friendly competition, and raising awareness about the associated environmental and health impacts of a trip choice. A number of potential vendors exist to administer this type of platform, including RideAmigos, RideShark, and Luum.

Commute platforms are also useful tools for the administration of robust TDM programs, by providing a centralized platform for administering various TDM programs, distribution of commuter benefits and incentives, and tracking employee participation and commuting behaviors. The platforms also allow employers to better understand travel behavior and use the data to inform decisions and priorities related to commute programming.

Case Studies

Alameda General Services Agency
The County of Alameda’s General Services Agency (GSA) employs approximately 9,500 people at 200 offices. In 2017, the GSA entered a three-year contract with RideAmigos to develop and maintain an online platform that integrated existing commute resources as well as its new parking cash-out program. The GSA has used the platform to track commutes, survey participants, and tailor commute programs accordingly.

Seattle Children’s Hospital
Seattle Children’s Hospital made a commitment to support a multimodal commute program through its 2008 Comprehensive Transportation Plan. The hospital uses Luum, a commute platform, to support a range of TDM programs. As part of the program, employees who commute by train, bus, carpool, vanpool, bicycle, or walk are paid $4.50 per day. This incentive is automatically deposited into employee paychecks through the Luum commute platform. Luum
allows Seattle Children’s to provide employees with a tangible set of direct financial incentives, while clearly documenting and informing employees about their travel choices. 4

Implementation Considerations

The County would need to identify a commute platform vendor that can administer the desired platform. To maximize efficiency and overall effectiveness of the platform, the County would integrate all web/mobile information into the platform (e.g. real-time arrival, parking availability, program options, trip planning, and benefits). The implementation of a commute platform should include automated tracking when possible, including access to all parking facilities, to enable the commute platform to collect as much information as possible about daily commute patterns. Features such as parking may require customized integrations.

A commute platform provides an opportunity to gamify commutes in an effort to encourage employees to participate in TDM programs. The platform could include regular commute promotions and challenges on a quarterly basis (at a minimum) that award valuable prizes. Marketing, communications, and branding also are critical to its success to ensure that employees view the platform as a centralized program. For instance, the County could publicize the platform at employee events to increase awareness. Furthermore, gamification is more likely to have a strong impact if financial benefits are offered; however, a commute platform could also use a point structure if direct financial benefits are not a viable option.

Registration for the platform is critical to its effectiveness. The County of Santa Clara should heavily incentivize employee registration through ongoing enrollment challenges and heavy marketing campaigns at launch. The County should also consider working with the selected vendor to integrate Navia into the platform, though this would likely be provided with an additional cost. This approach would increase the enrollment of the commute platform for all employees who currently use TDM programs, and would support seamless administration and tracking of other TDM programs such as transit subsidies, parking cash-outs, and carpool incentives.

Applicable Sites

A commute platform could be implemented countywide, across all sites. For it to be effective, the platform must be adjusted to accurately reflect the office culture and commute programs. Because available commute programs and benefits may vary by site, the platform should be tailored to reflect what each site offers. Custom platforms for each site may incur additional costs. The County can also offer to other entities such as the Courts, Housing Authority, and IHSS.

Monitoring

- Identify internal program administrators.
- Develop standard operating procedures for program administrators.
- Provide consistent marketing, communications, and branding so employees view the platform as a “one-stop-shop”.

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• Track and monitor travel data and utilize to shape improvement to parking and TDM programs.

Program Effectiveness

A commute platform is a supportive strategy, and thus does not have an individual trip reduction estimate. However, a number of other strategies (e.g. transit subsidy, commute cash, bike incentives) become more effective when integrated into a commute platform.

Cost Estimate

First year start-up costs are approximately $15,000 to $30,000. Depending on the vendor chosen, monthly fees are charged either by number of total employees or by the number of work locations. Cost vary depending on which vendor is chosen, the features included, and where it is implemented, for example custom integrations such as parking management can cost between $10,000 to $40,000. The annual cost for a commute platform for the County is approximately $234,000 to $541,000. These cost estimates are based on rates that may have since increased.

VANPOOL

Vanpools are a type of ride-sharing, similar to carpools, but typically involve more people and a shared, provided vehicle. A vanpool typically consists of a group of 6 to 15 people who live relatively close to each other and commute to the same employer or employers located nearby each other. Vanpools are most successful where employees travel longer distances along corridors with limited or no existing transit service.

Vans can either be provided by the company, leased from an outside operator, or self-supported by participants. In most cases, vans are owned or leased by a sponsoring organization and riders share the cost of operating the vehicle to and from work. If the van is leased, the operator owns the vehicle and is responsible for maintenance and insurance. If the van is self-supported, the van is owned by an individual and costs are divided among individual riders. The driver of a vanpool may be dedicated or in some cases the driver of a vanpool alternates. Vanpool users typically make a month-to-month commitment to ensure reliability across the group.

Case Studies

San Mateo County

In 1991, San Mateo County established a Commute Alternative Program (CAP) that uses TDM strategies to reduce employee drive-alone trips. Starting in 2002, the County incorporated a private vanpool subsidy into the CAP. Since then, the County has offered up to $75 per month for employees using a qualified vanpool vendor, including vRide, 511 Ridematch or Enterprise Rideshare Van. The rideshare vendors help to facilitate the vanpool program by referring employees to leasing companies if they need a van and/or matching vanpool users with each other through ride match services. The program requires a month-to-month commitment.

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5 One vendor charges $15,000 per month for employers with 4,500 to 6,000 employees and $2 per employee over 6,000. Another vendor charges $4,500 for the first work location and $800 for each additional location.
Stanford University

As a component of its Commute Club program, Stanford University fully subsidizes the monthly vanpool fare for employees who use qualifying vanpools and have at least five riders. Employees who use vanpool services are also eligible for up to $300 per year in Clean Air Cash. Stanford provides a number of alternatives for ride matching services, including listings on the parking and transportation services website, posting via Scoop, contacting Stanford’s rideshare coordinator, or coordinating with Enterprise Rideshare.

Implementation Considerations

Vanpool programs are organized in many different structures, and the planning and implementation would depend on the type of vanpool structure organized or promoted by the County. The most common vanpool arrangements fall into these categories:

- **Third party/turn-key:** In these instances vehicles are owned and operated by a for-profit vendor who covers maintenance, insurance, and administration of the vanpool, and members are responsible for promoting their vanpool and collecting fees. These contracts can be entered into directly with the company, or directly between an interested group of vanpoolers and a private vanpool company. Possible vendors that facilitate vanpools and lease vehicles include vRide, 511 Ridematch, and Enterprise Rideshare Van.
- **Public program:** Under this model, the administration and operation of the vanpool program is managed entirely through public agencies. Most commonly, the vanpool operates out of a local transit agency or MPO, and supports other public transportation goals.
- **Employer-sponsored:** In an employer-sponsored program the employer purchases or leases the vans and arranges maintenance, insurance, and administration of the program. Employees may or may not pay a fare, or the fare may be partly subsidized.
- **Owner-operated:** In this model, the vanpool is owned by one or more of the group’s members. The owner arranges for maintenance, insurance, billing, and advertising.
- **Combination models:** In many cases, an entity such as a transit agency, MPO, or TMA acts as an organization point to help match potential riders and provide information about leasing through third party providers.

To incentivize employees to opt into a vanpool program, the County can provide a monthly subsidy for vanpool users. This can be administered through existing commute benefits platforms, such as Navia. As an alternative, the County could provide free parking for people who commute in vanpool vehicles.

Applicable Sites

Vanpool can be implemented countywide. This program is primarily applicable to employees who live in proximity to others and work at the same site or work at sites in close proximity. Vanpools should receive priority parking spaces as needed.

Monitoring

- Track and maintain list of employees who participate in vanpools. This is particularly important if the employer subsidizes or leases the vehicles.
TDM PROGRAM MILESTONES FOR ASSESSMENT | ALTERNATIVE TDM SOLUTIONS
County of Santa Clara

- Track and maintain list of employees who are interested in participating and being matched.
- Require participants to maintain a minimum occupancy of 55%.\(^6\)
- Use a commute platform to advertise existing vanpools and notify employees of potential matches.
- If demand for the program is high, consider increasing the vanpool subsidy.

Program Effectiveness

According to CAPCOA, the maximum GHG reduction potential for employer-sponsored vanpools or shuttles is 0.3 to 13.4%, depending on the degree of implementation and percent of employees eligible.

Cost Estimate

Assume a lease rate of $1,000 to $2,250 per month per vehicle. Costs for a vanpool program depend on the vehicle size, vehicle miles traveled, and how the program is administered. If an incentive is provided, the cost will include the subsidy amount offered to employees; the subsidy offered should be comparable to the subsidies offered through the other TDM packages, such as carpool.

While some vanpool programs are administered by an employee leasing a vehicle; it is not recommended that the County implement such a program where the employee has to carry the burden of the cost.

\(^6\) https://www.metro.net/riding/vanpool/occupancy-policy/
APPENDIX H
Carpool Package
TDM Milestones for Assessment

Carpool Package

May 2019
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<td>MTC/BART/Scoop Carpool Advertisement</td>
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<td>Figure 4</td>
<td>Cost-Benefit Analysis of Carpool Scenarios</td>
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1 INTRODUCTION

Carpool programs offer the County numerous benefits with respect to the County’s objectives. These benefits include reducing parking demand at large County work sites, reducing single-occupancy vehicle (SOV) trips and associated congestion, and reducing greenhouse gas (GHG) emissions. Additionally, the County’s facilitation of carpool programs can potentially reduce the barriers to carpooling by improving communications, linking potential riders with each other, and facilitating the transaction costs of sharing a ride (e.g. routing, driver reimbursement, and trip logging). Carpool programs are an especially effective means of improving County employee commutes by serving the following groups of employees:

- Employees commuting to County work sites that are poorly served by public transit;
- Employees living in neighborhoods that are poorly served by public transit;
- Employees with long commutes (e.g. more than 50 miles);
- Employees seeking shared rides for short trips, such as first/last-mile connections to and from BART, Caltrain, or VTA light rail stations.
- Employees living and working along corridors with physical travel time or cost incentives to carpool, such as HOV/express lanes or toll crossings with HOV discounts. In the Bay Area, such corridors include but are not limited to: Highway 101 between San Francisco and San Jose, Highway 280 in between San Francisco and San Jose, and Highway 880 between Oakland and San Jose.

To determine an effective carpool program for the County of Santa Clara, the project team assessed the feasibility and cost-benefit analysis of two carpool program scenarios and identified a final program recommendation. The following report summarizes research findings and analysis, and outlines implementation recommendations for the County.
2 BACKGROUND

The most common forms of carpooling in the Bay Area include web-based ride-matching platforms such as 511 Rideshare, operated by the Metropolitan Transportation Commission (MTC), a casual carpooling program between Downtown San Francisco and select East Bay corridors that is also operated by MTC,1 and carpooling with friends or family members. These platforms typically arrange long-term carpool matches based on shared home origins and work destinations. However, doing so fails to recognize that carpoolers’ work schedules and travel needs can change frequently and with little notice. Additionally, these platforms seldom allow carpoolers flexibility in selecting their carpool partners, and do not offer payment mechanisms for riders to reimburse drivers for gas costs.

These conventional forms of carpooling are now joined by emerging ridesharing services offered by mobility service providers and commute management platforms. Ridesharing refers to the third-party service of matching riders and drivers with similar origins or destinations, enabling them to split the cost of the ride. Unlike ride hailing, the driver is themselves a fellow commuter and is not fare-motivated; the cost to the rider is based on the actual cost of the trip.

There are two types of emerging ride sharing services. Dynamic carpooling, also known as on-demand rideshare, is a real-time carpooling arrangement, generally made through mobile apps, that does not require pre-scheduling nor long-term participation commitment, as is typical in traditional ride matching programs. Additionally, dynamic carpooling can be structured with ride-matching restrictions, so employees only get matched with other coworkers. Alternatively, the program could be opened up to the general public to increase the overall pool of potential ride partners. Scoop and Waze Carpool are currently the leading dynamic carpooling services in the United States. A second approach is the batching of matches through a commute management platform (e.g. RideAmigos, Luum), where travelers enter their desired pickup and drop-off schedule and the platform matches drivers and riders on a daily basis, alerting users in advance by email.

These applications improve significantly upon the traditional, web-based carpool platforms by offering flexible, on-demand ride-matching and seamless payment options. For drivers, on-demand carpool platforms offer the opportunity to recoup transportation costs as well as make social connections. For riders, these platforms offer an affordable transportation option for places that lack high-frequency transit service.

Given the numerous barriers to adoption of traditional forms of carpooling, a successful carpool platform for County employees requires a well-coordinated system of incentives for riders and drivers, effective ride-matching, and data-sharing to track the program’s performance.

1 https://511.org/carpool-vanpool/carpool/casual
COUNTY OF SANTA CLARA SCOOP PILOT

In 2016, the County partnered with Scoop to implement a two-year pilot program which ended in July 2018. The parameters of the pilot included:

- An open network that allows County employees to carpool with other neighboring companies and agencies, thereby increasing the critical mass needed for efficient ridesharing/carpooling.
- $1 rides for riders, and an incentive of $3 per ride and mileage-based reimbursement to drivers that are County employees.
- Monthly reporting on the pilot program.
- A marketing plan that includes site visits and online materials.

Marketing & Communications

Following the launch of the ridesharing pilot, Scoop representatives promoted the ridesharing platform at major County facilities.

The County also promoted the Scoop Ridesharing Pilot Program through Green Memes email blasts, posts on department intranet sites, SCC Connect, distributed marketing materials at facility manager meetings, and via monthly presentations at all New Employee Orientations. While marketing efforts were made throughout the duration of the Pilot, the Administration believes the gradual increase in participation can be attributed mostly to word-of-mouth from County employees.

Program Cost

In total, $23,000 was budgeted from the County’s General Fund for the full duration of the Scoop Ridesharing Pilot Program from October 2016 through July 2018.

Initially, the Pilot’s pricing structure for County employees required riders to pay a flat rate of $1.00 per trip, while the drivers received reimbursement for maintenance and gas based on mileage for trips to and from County facilities. However, to encourage more carpool drivers and increase overall participation, the Contract was amended in September 2017, so drivers would receive a flat rate of $3.00 per trip, in addition to reimbursement for mileage, while riders continued to pay a flat rate of only $1.00 per trip. It should be noted that members of the general public can also participate as drivers or riders in the Ridesharing Pilot Program in order to increase the number of carpool matches. However, only County employees were eligible for financial incentives.

The Ridesharing Pilot monthly cost gradually increased over time with a significant increase shown in the fall of 2017 when County carpool drivers were offered greater incentives. Additionally, on average, the Ridesharing Pilot cost $4.23 per trip (morning or evening) for County employees who were either riders or drivers.

Program Effectiveness

Similar to the gradual cost increase, the total number of one-way trips increased per month for County employees who were either riders or drivers. The Pilot continued to have significantly
more carpool riders than drives, even after the additional $3.00 incentive was implemented in September 2017. This might partially be due to the reimbursement rate not being high enough to incentivize regular single-occupancy drivers from wanting to share their vehicle.

Additionally, the highest number of monthly trips for riders and drivers combined, 601 total, was achieved in June 2018, while the average number of total trips per month through the duration of the Pilot was 266 for both riders and drivers. And from January 2018 through June 2018, the average number of total trips per month was 473 for both riders and drivers combined. Furthermore, the Pilot averaged 24 unique users (i.e., individual employees) participating per month with the highest amount, 52 unique users, achieved in June 2018.

The following table provides numbers related to the performance of the Scoop Ridesharing Pilot Program for the full duration of the Pilot.

**Figure 1 Santa Clara County Scoop Pilot Performance**

<table>
<thead>
<tr>
<th>Category</th>
<th>Impact for the Entire Pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>County of Santa Clara Employees Registered</td>
<td>493</td>
</tr>
<tr>
<td>(verified employee sign ups)</td>
<td></td>
</tr>
<tr>
<td>Rider Miles Saved</td>
<td>63,698</td>
</tr>
<tr>
<td>(the sum of the original distance from a user’s work to home)</td>
<td></td>
</tr>
<tr>
<td>Pounds of CO2 Saved</td>
<td>58,875</td>
</tr>
<tr>
<td>(the EPA estimates that the average mile driven results in .9061 lbs of CO2)</td>
<td></td>
</tr>
<tr>
<td>Final Cost</td>
<td>$22,079</td>
</tr>
<tr>
<td>(the combined cost for incentivizing riders and drivers)</td>
<td></td>
</tr>
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3 CASE STUDIES

The case studies reviewed in this section examine carpool partnership programs that target specific transportation needs that other modes could not effectively meet. Employers in these case studies worked with carpool platforms to develop unique eligibility criteria and incentive structures. Figure 2 outlines the case studies referenced to assess potential applicability for the County of Santa Clara.

Figure 2  Carpool Case Studies

<table>
<thead>
<tr>
<th>Employer/Program</th>
<th>Administration</th>
<th>Cost</th>
<th>Employee Registration</th>
<th>Results</th>
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<tr>
<td>Palo Alto TMA – Waze and Scoop carpooling</td>
<td>External – Waze and Scoop</td>
<td>Annual cost per person: ▪ $1,255 (Waze) ▪ $2,635 (Scoop)</td>
<td>2,000+ registered users</td>
<td>365 regular users</td>
</tr>
<tr>
<td>MTC – Regional Scoop carpooling</td>
<td>External - Scoop</td>
<td>$521,000 (FTA Mobility on Demand grant plus local funding)</td>
<td>400+ registered users at Dublin/Pleasanton BART station</td>
<td>Carpooling activity increased by 200% at Dublin/Pleasanton BART station, the first implementation site</td>
</tr>
<tr>
<td>Mayo Clinic – carpool matching and preferred parking</td>
<td>Internal</td>
<td>Unknown</td>
<td>At least 850 registered carpools</td>
<td>12% carpool mode split of all Mayo Clinic commute trips</td>
</tr>
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</table>

PALO ALTO TMA

Vendor: Scoop and Waze Carpool

In 2016, the newly created Palo Alto Transportation Management Association (TMA) partnered with the dynamic carpooling software start-up, Scoop Technologies, to expand carpooling to and from major employers in Palo Alto. Since starting, Waze Carpool (Waze) has also been added to the program. Both Scoop and Waze use GPS software and a ride-matching algorithm to match up carpoolers with similar origins and destinations in real time. Unlike traditional ride-matching programs, dynamic carpooling does not require carpoolers to share similar shifts or commit to a long-term carpool arrangement; rather, carpoolers can request rides on an on-demand basis, reimbursing drivers for the cost of driving. The partnership involves TMA-subsidized, peer-to-peer carpool rides offered for $2 to anywhere in Downtown Palo Alto between 6–10 a.m. and 3–7 p.m. Comparable rides elsewhere through Scoop cost $5 to $6.
The Palo Alto TMA negotiated with Scoop and Waze Carpool, determined the subsidy level, and eligibility parameters of the program. Additionally, the TMA helped promote the program to local employers, including door to door outreach at over 300 businesses.

The Palo Alto TMA reports annually to the Palo Alto City Council. The annual report includes evaluation of the trip reduction, vehicle miles traveled reduction, and cost effectiveness of their TDM programs. The Scoop and Waze carpool was found to be a cost-effective way of reducing drive alone commute trips to the Downtown, lowering parking demand and reducing congestion.

**Program Framework**

- **Eligibility**: Downtown Palo Alto Employees (no income restrictions)
- **Employee Registration & Participation**: Commuters register through and schedule their rides through the app. There were 2,000 registered Scoop participants (Waze not reported) and 365 average monthly users for both Scoop and Waze combined. The estimate of reduced vehicle miles traveled in 2018 was 350,000 miles.
- **Program Administration**: Palo Alto TMA manages the agreements with Scoop and Waze to provide discounted rides to Downtown Palo Alto employees. Staff administration includes marketing and outreach for the program as well as monitoring and reporting ongoing participation and trip TDM trip reduction.
- **Program Costs**: Monthly costs vary depending on participation and which company a user chooses to use. The current agreement with Scoop has a higher fee than Waze as costs are capped at $4,500 a month for Waze. Average cost per trip with Scoop in 2019 was $3.20-$4.25 and with Waze was $1.90-$2.62. The total annual cost was $50,250. In this case, riders pay $2, and drivers receive a per mile subsidy with a cap.
- **Staff Time**: Unknown

**METROPOLITAN TRANSPORTATION COMMISSION**

**Vendor: Scoop**

MTC operates BART’s carpool permitting program, which provides dedicated carpool spaces at 21 BART stations, of the 34 that offer commuter parking. Prior to 2016, this legacy carpool program was unsuccessful, as first-come/first served carpool spaces are difficult to preserve for legitimate carpools given limited staffing and enforcement resources. As a result, BART was reluctant to enlarge the number of dedicated carpool spaces or expand the program to additional facilities. Unfortunately, parking facilities at many suburban BART stations fill up before 8 AM, leaving many commuters unable to access regional transit service.

Since October 2016, the Metropolitan Transportation Commission (MTC) has been expanding its existing 511 Rideshare program through a partnership with BART and the dynamic carpool platform Scoop to improve access to regional heavy rail stations for carpoolers. With over 60,000 users in the Bay Area, Scoop is mainly marketed to large employers in the Bay Area for commute trips but can also be used for discretionary trips.

MTC and BART received $358,000 in FTA funding under the Mobility on Demand (MOD) Sandbox program, with an additional $163,000 in local matching funds. MTC and BART partnered with Scoop to offer a guaranteed parking space at selected BART stations for registered Scoop carpoolers. This pilot program restricts the most optimally-located spaces at 17 of the agency’s 34 stations with parking to carpoolers registered with Scoop until 10 AM on weekdays. Riders must book their carpool arrangement using the Scoop mobile app by 9 PM of the evening.
before the following morning commute. Unmatched riders are eligible for the MTC’s Guaranteed Ride Home program. Scoop riders reimburse drivers at the IRS rate of $0.57 per mile, while drivers earn a restricted carpool parking permit, guaranteeing them a space at the station on all but the busiest days.

In the first eight months of the pilot, from January 2017 to September 2017, carpooling increased significantly at Dublin/Pleasanton BART station, the first station to launch the program. Over 400 unique participants registered for the program, resulting in more than 6,000 carpool trips taken. The rate of carpooling increased from about 500 trips per month, in February 2017, to 1,200 trips per month, in August 2017. The ride-match rate during this period was 91%.

**Figure 3** MTC/BART/Scoop Carpool Advertisement

*Source: Scoop*

**Program Framework (BART Partnership)**

- **Eligibility**: Transit riders at select stations with park-and-rides.
- **Employee Registration & Participation**: Commuters register through Scoop and schedule their rides the night before for the morning commute, and midday for an evening commute. The app technology verifies that two or more people were in the car when parked.
- **Program Administration**: This program is FTA-funded, administered by MTC, and implemented by BART parking management vendors. Scoop handles the day to day interaction with carpoolers while BART enforces the carpool parking permit system.
- **Program Costs**: $521,000 for the duration of the pilot, January 2017 through June 2019.
**Staff Time:** Unknown

**MAYO CLINIC – ROCHESTER, MN**

**Vendor:** Internal

The Mayo Clinic in Rochester, Minnesota is the largest integrated medical center in the world and a flagship presence in the city with approximately 34,000 employees. In 2018, the City of Rochester adopted a comprehensive mobility plan that included aggressive mode split goals for 2035: 43% drive alone, 30% transit, 13% walk and bike, 14% carpool.

Recognizing the value of these goals, and their significant role in helping achieve them, the Mayo Clinic partnered with the city to establish a transportation management association (TMA) to implement programs including expanded TDM offerings at the clinic and an extensive bus system from outlying areas. In support of the carpool mode shift goal, the clinic has reserved parking for carpools. Employees can register for carpool ride-matching directly through the Mayo Clinic Intranet. The program has had a high success rate of 12% of commute trips traveling by carpool.

**Program Framework**

- **Eligibility:** All employees are eligible for ride-matching services. Reserved carpool spaces are not available in every parking facility, but expanding the program has been identified as a near term strategy in the comprehensive mobility plan.

- **Employee Registration & Participation:** Employees can register and get matched through the May Clinic Intranet. Current carpool mode split is 12%, however, the number of those that are registered through the ride-match program is unknown

- **Program Administration:** Unknown

- **Program Costs:** Unknown

- **Staff Time:** Unknown
4 CARPOOL MARKET ANALYSIS

The following scenarios were developed to determine the carpool subsidy and platform that is the most cost-effective for the County:

- **On-demand platform:** This scenario is a continuation of the recent Scoop Pilot with the County. Drivers would continue to receive a $3 per trip incentive, whereas riders would pay a flat rate of $1 per trip. The County would be charged $4.50 per passenger trip under Scoop’s most recent pricing agreement...

- **Commute platform:** Carpool ride-matching is offered as a bundled service to employees via a Commute Platform (e.g. Luum, Ride Amigos, or similar). Riders are not charged, and there are no cash-based incentives for either riders or drivers.

Several key assumptions support the analysis of the carpool program scenarios. Demand for carpooling is relatively low, even with incentives for riders and drivers as indicated in the on-demand carpool platform scenario above. At the Scoop pilot’s peak, in June 2018, it averaged 52 unique users (riders and drivers combined) and 601 monthly user trips. CAPCOA estimates that carpool ride-matching programs are capable of achieving commute VMT reductions of between one and 15%. However, based on the low participation of County employees during the Scoop pilot, of about 0.2% of employees, it is unlikely that such a program can achieve more than 200 monthly users (about 1% of all County employees), even with more concerted marketing and outreach activities. Therefore, we conservatively assume that carpool participation will reduce employee vehicle trips by between 0.5 and 1%.

Likewise, a commute platform featuring a ride-matching function without additional incentives is likely to achieve even lower participation rates. We assume that such a scenario has potential participation rates of between 0.25 and 0.5% of employees, without additional incentives for drivers or riders.

Please see Appendix A for detailed information on assumptions made to determine cost estimates within each scenario, as well as the cost estimate analyses for the Courts and Housing Authority. While a carpool program may be viable for IHSS employees, it is not included in this analysis due to limited data of employee commute patterns and modes. Additional barriers specific to IHSS employees that would affect the success of a carpool program are varied schedules, multiple work locations, and need for a vehicle.

CARPPOOL PROGRAM SCENARIOS

**On-Demand Platform**

This scenario assumes a full roll-out to a program similar to the Scoop pilot. Similarly, drivers would receive an incentive of $3 per trip and riders would receive a subsidized ride of $1. Such a program would consist of an open network that allows County employees to carpool with
neighboring agencies, thereby increasing the likelihood of a match. Employees will need to schedule rides before 9 p.m. the night before their morning commute, or by midday for that evening’s commute.

**Program Effectiveness**

Given an estimated participation range of between an additional 0.5% and 1% of employees who would carpool if the County offered an on-demand platform, this scenario would increase the existing carpool usage of 8.4% to approximately 8.9% to 9.4%. This represents an additional 105 and 210 daily participants, which would displace the GHG emissions of between 53 and 105 employees, assuming that the average carpool consists of two people. The displacement of these drive-alone commutes equates to a potential GHG reduction of between 0.3% and 0.6%, based on the 2017 drive-alone mode share of 80%.

**Cost**

According to the typical pricing structure, the County would pay approximately $4.50 per passenger trip. Assuming each carpool match contains two employees, the estimated annual cost is between $473,000 and $945,000 for the program’s 105 to 210 new participants.

**Commute Platform**

The County can opt to provide ride-matching services directly through a commute platform (e.g. RideAmigos, Luum). This scenario is especially beneficial if the County will administer other TDM programs and information through a commute platform. Under this scenario, commuters can enter their desired weekly pickup and drop-off schedule through the app or web-based platform, which matches drivers and riders on a daily basis, alerting users in advance by email. In contrast to an on-demand platform which charges a per ride fee, ride-matching through a commute platform does not involve a per trip payment. Instead, the County is responsible for a per user fee for using the platform as a whole.

**Program Effectiveness**

Because no direct carpool incentive is offered, the program is not expected to result in a significant mode shift. A participation rate of 0.25 to 0.50% is expected, approximately 50 to 100 employees. This results in an adjusted employee-wide carpool mode share of 8.7 to 8.9%, and GHG reductions of 0.2 to 0.3%.

**Cost**

Because ride-matching services will be provided through a commute platform, there are no associated costs with a carpool program.

**COST-BENEFIT ANALYSIS**

Of the two carpool program scenarios under consideration, the commute platform is recommended for the County. The commute platform offers the greatest benefits at the lowest cost to the County (see Figure 4). As opposed to an on-demand platform which charges a per trip fee, a commute platform can integrate ride-matching services which leads to a much lower cost to the County. Furthermore, an on-demand platform is limited to smartphone users, thereby excluding employees who do not own a smartphone or are unlikely to use smartphone apps.
Pairing ride-matching services via a commute platform with parking management strategies and a Commute Cash program that rewards sustainable modes would further increase the GHG reduction potential.

Figure 4  Cost-Benefit Analysis of Carpool Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Annual Cost Estimate(^2)</th>
<th>Program Effectiveness</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Carpool Mode Split</td>
<td>Participation</td>
<td>GHG Reduction Potential</td>
<td></td>
</tr>
<tr>
<td>On-Demand Platform</td>
<td>$473,000 - $945,000</td>
<td>8.9 - 9.4%</td>
<td>105 - 210</td>
<td>0.3 - 0.6%</td>
<td></td>
</tr>
<tr>
<td>Commute Platform</td>
<td>No cost(^3)</td>
<td>8.7 - 8.9%</td>
<td>53 - 105</td>
<td>0.2 - 0.3%</td>
<td></td>
</tr>
</tbody>
</table>

\(^2\) Please see Appendix A for assumptions made to estimate annual costs.

\(^3\) Costs are integrated into the cost of a commute platform.
5 IMPLEMENTATION

To facilitate implementation of a Commute Cash program, high-level service and rollout recommendations are summarized below. These recommendations will be incorporated into the TDM Implementation Guide to ensure that the program complements the efforts of other TDM programs, which will be developed in future program packages.

Employer-based carpool programs require careful stakeholder coordination, clear performance indicators, strong positioning during negotiation and procurement, and effective marketing and communications to succeed. The following approach is recommended for implementation.

SERVICE & ROLLOUT RECOMMENDATIONS

In order to provide ride-matching services through a commute platform, the County will need to work with the selected platform vendor to establish a private “closed” network so employees can carpool with coworkers instead of strangers. In order to increase the likelihood of getting a match, the County should also work with the vendor to provide an option for employees to select from a larger network that includes employees from other employers that provide the same service.

Operations

- Establish data-sharing needs with carpool platform and ensure these terms are sufficiently enumerated in contract negotiations. Detailed performance metrics are necessary to evaluate the success or failure of carpool programs in the long-term.

Marketing & Communications

- Develop a marketing plan for the carpool program that incorporates key channels of communication such as:
  - New employee orientation
  - County internal communications (e.g. intranet, newsletters, or e-blasts)
  - Internal staff departmental and working group meetings
  - Social media channels

Employees who drive alone to work are considered immediate candidates for a countywide carpooling program. Three commuter groups are especially likely to benefit from carpooling and should be considered for targeted outreach due to the lack of other commute alternatives and unique incentives to do so.

- Employees without Personal Vehicles: Carpooling offers an affordable means of transportation for County employees who do not have access to a personal vehicle. Lower-income and late-shift employees, in particular, are likely to own vehicles at lower rates than other employees. The limited range of commute alternatives for late shift employees was identified is a key issue particularly for employees of Valley Medical...
Center’s Main Campus and the Valley Health Center clinics. Carpooling is an especially valuable commute option for trips that occur between 7 PM and 5 AM, when transit service is less frequent or unavailable.

- **Long-Distance Transit Commuters:** Some employees may need assistance with first/last-mile connections between their homes/work sites and nearby transit stations. A County carpool program can coordinate rides for employees accessing regional transit hubs, which would connect them to transit services that occupy the majority of their commute time. Many regional transit stations offer preferential parking permits for registered carpooling, encouraging this type of carpool arrangement. This type of carpool parking program will help the County leverage its existing investment in transit pass subsidies.

- **“Super-Commuters:”** Many employees live beyond a reasonable bike/walk distance or in “transit deserts” (more than three miles from any transit stop). This group of about 1,500 employees has some of the County’s longest commutes, with average one-way commute distances of about 55 miles. For riders, carpooling is likely the most cost-effective commute option other than driving alone, as transit is often unavailable for journeys of such long distances. Drivers who commute long distances alone have a significant incentive to carpool because it allows them to reduce their transportation costs which, at 55 miles each way, likely exceed $60 per day. On several corridors, particularly in the East Bay, high-occupancy vehicle (HOV) lane networks offer valuable travel time savings of between 19% and 28% during peak hours, an incentive likely to encourage carpooling at higher rates.

### Monitoring

- Define key performance indicators and develop an evaluation plan (for data collection before, during, and after the program); third-party evaluators might be used to provide protection from public records requests.

- Evaluate progress toward key performance indicators on a monthly basis; summarize outcomes annually (or before for shorter pilots).
  - Be prepared to refine based on ongoing monthly monitoring

- Report out early and often; communicate ongoing outcomes with all involved stakeholders and strive to respond to feedback while minimizing customer-facing program changes.

---

APPENDIX A

Cost Assumptions
### Cost Estimate Assumptions for Carpool Scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Details</th>
<th>Annual Cost Estimate</th>
<th>Annual Cost</th>
</tr>
</thead>
</table>
| On-Demand Platform     | $3 incentive for drivers  
                          $1 rides for riders                                             |                      | $473,000 - $945,000 |
|                        | Eligible employees: 21,027                                           |                      |                   |
|                        | Participation rate: 0.5 - 1.0%                                       |                      |                   |
|                        | - Daily carpool users (riders and drivers combined): 105-210         |                      |                   |
|                        | Per user trip cost to County: $4.50                                  |                      |                   |
|                        | Working days: 250 days/year                                          |                      |                   |
| Commute Platform       | No incentives, ride-matching only                                    |                      | No cost$^6$       |
|                        | Eligible employees: 21,027                                           |                      |                   |
|                        | Participation rate: 0.25 - 0.50%                                      |                      |                   |
|                        | - Daily carpool users (riders and drivers combined): 53-105          |                      |                   |
|                        | Working days: 250 days/year                                          |                      |                   |

### Cost & Participation by Entity$^6$

<table>
<thead>
<tr>
<th>Scenario</th>
<th>County</th>
<th>Courts</th>
<th>Housing Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Cost Estimate</td>
<td>Total Participants</td>
<td>Annual Cost Estimate</td>
</tr>
<tr>
<td>On-Demand Platform</td>
<td>$473,000 - $945,000</td>
<td>105 - 210</td>
<td>$15,000 - $30,000</td>
</tr>
<tr>
<td>Commute Platform</td>
<td>No cost</td>
<td>53 - 105</td>
<td>No cost</td>
</tr>
</tbody>
</table>

---

$^5$ Costs are integrated into the cost of a commute platform.

$^6$ Analysis assumes the same mode split for the Courts and Housing Authority as the County due to a lack of commute data.

$^7$ Please see Appendix A for assumptions made to estimate annual costs.
TDM Milestones for Assessment
Parking Management Package

May 2019
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1 INTRODUCTION

Parking management has evolved significantly in the last decade. The technology for access, enforcement, and sales is more sophisticated than ever and as the mobility choices available to users grow, parking management options are increasing.

This package includes different parking strategies that the County should consider in order to address parking supply constraints and management burdens that many sites experience. A comprehensive approach can facilitate parking management, improve the parking experience for employees, ensure the efficient use of existing parking facilities, and reduce the need to build more parking.

BACKGROUND

Currently, the County of Santa Clara offers free parking at all sites as well as free electric vehicle charge stations at five sites. While parking is provided at no cost to employees, the County bears the full cost of parking construction, leasing, operations, enforcement, and maintenance. In the absence of parking fees and attractive incentives to try sustainable modes, many employees drive alone to work, thereby increasing traffic congestion and GHG emissions and causing parking supply constraints.

Parking is managed through permits that are administered by the Employee Services Agency or facility managers during onboarding. All employees are eligible to receive a permit and are provided either an “A” permit for certain seniority levels or a “C” permit for all other employees. Each permit is tied to a unique employee identification number and provided in the form of a sticker, which is required to be affixed to the exterior of a vehicle. Employees can also apply for a second permit if deemed necessary.

The Facilities and Fleet Department is primarily responsible for parking enforcement. Support is also provided by public safety officers (PSOs), some of whom are with the Sheriff’s Department. Enforcement is mostly concentrated at Civic Center and consists of ensuring that vehicles parked in employee spaces have a permit and issuing a $45 fine for those that do not. Fines are also issued for employees who park in visitor-only spaces. Due to limited staff and time, the general protocol consists of driving by and verifying if a permit sticker is affixed rather than tracking usage and whether permits are valid.

As shown in Figure 1, parking is managed differently at each site. Civic Center, for example, provides a valet parking program. Parking enforcement via standard parking patrol with a main priority for parking is available at five sites. Some sites also have public safety officers (PSOs), whose primary purpose is safety rather than enforcement. In order to create a more streamlined process, the County could consider forming a Parking Committee to better manage parking for all County facilities.
### Figure 1  Parking Characteristics by Priority Site

<table>
<thead>
<tr>
<th>Priority Site</th>
<th>Ownership</th>
<th>Employee Count</th>
<th>Total Supply</th>
<th>Parking Ratio</th>
<th>Facility Type</th>
<th>Access</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMC Main Campus</td>
<td>Owned</td>
<td>7,376</td>
<td>5,429</td>
<td>0.74</td>
<td>Surface lots and garages</td>
<td>Sticker permits; gates for both garages</td>
<td>• PSO; gates for both garages; Valet for visitors only;</td>
</tr>
<tr>
<td>Civic Center</td>
<td>Owned</td>
<td>4,371</td>
<td>1,734</td>
<td>0.39</td>
<td>Surface lots and 1 garage</td>
<td>• Sticker permits; • The garage has a gate;</td>
<td>• Public/employee valet program that parks at Civic Center lot and Court garage; Parking Enforcement • Parking Enforcement</td>
</tr>
<tr>
<td>Berger</td>
<td>Owned</td>
<td>1,479</td>
<td>1,049</td>
<td>0.66</td>
<td>Surface lot</td>
<td>• Sticker permits; • No gate</td>
<td>Parking Enforcement</td>
</tr>
<tr>
<td>Charcot</td>
<td>Owned</td>
<td>1,295</td>
<td>1,674</td>
<td>1.16</td>
<td>Surface lot</td>
<td>• Sticker permits; • No gate</td>
<td>Parking Enforcement</td>
</tr>
<tr>
<td>SSA Senter</td>
<td>Leased</td>
<td>1,290</td>
<td>1,278</td>
<td>0.99</td>
<td>Surface lots</td>
<td>• Sticker permits; • No gate</td>
<td>Parking Enforcement &amp; PSO</td>
</tr>
<tr>
<td>O’Connor Hospital</td>
<td>Owned</td>
<td>1,280</td>
<td>927</td>
<td>0.72</td>
<td>Surface lot and garage</td>
<td>NA for permits; no gates</td>
<td>Private Parking Enforcement</td>
</tr>
<tr>
<td>SSA Julian</td>
<td>Leased</td>
<td>1,153</td>
<td>420</td>
<td>0.36</td>
<td>Surface lots and garage</td>
<td>• Sticker permits; • No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>East Valley Behavioral Health</td>
<td>Owned</td>
<td>212</td>
<td>286</td>
<td>1.35</td>
<td>Surface lot</td>
<td>• Sticker permits; • No gate</td>
<td>PSO</td>
</tr>
</tbody>
</table>

1 Total supply consists of all spaces available to employees – includes employee only and undesignated spaces. Excludes designated parking for County-owned and operated vehicles and vehicles with "exempt" status license plates.
<table>
<thead>
<tr>
<th>Priority Site</th>
<th>Ownership</th>
<th>Employee Count</th>
<th>Total Supply</th>
<th>Parking Ratio</th>
<th>Facility Type</th>
<th>Access</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valley Health Center Tully</td>
<td>Owned</td>
<td>187</td>
<td>253</td>
<td>1.35</td>
<td>Surface lot</td>
<td>Sticker permits; No Gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Valley Health Center Lenzen</td>
<td>Owned</td>
<td>187</td>
<td>95</td>
<td>0.51</td>
<td>Surface lot</td>
<td>Sticker permits; No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Elmwood Correctional Facility</td>
<td>Owned</td>
<td>169</td>
<td>556</td>
<td>3.29</td>
<td>Surface lot</td>
<td>Sticker permits; Gated</td>
<td>PSO</td>
</tr>
<tr>
<td>Valley Health Center Sunnyvale</td>
<td>Owned</td>
<td>119</td>
<td>205</td>
<td>1.72</td>
<td>Parking garage</td>
<td>Sticker permits; No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Valley Health Center Milpitas</td>
<td>Owned</td>
<td>82</td>
<td>580</td>
<td>4.77</td>
<td>1 garage and surface lots</td>
<td>Sticker permits; No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Downtown Health Center</td>
<td>Owned</td>
<td>80</td>
<td>147</td>
<td>1.81</td>
<td>Surface lot</td>
<td>Sticker permits; No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Roads &amp; Airports</td>
<td>Owned</td>
<td>70</td>
<td>100</td>
<td>1.31</td>
<td>Surface lot</td>
<td>Sticker permits; No gate</td>
<td>NA</td>
</tr>
<tr>
<td>Valley Health Center Gilroy</td>
<td>Owned</td>
<td>61</td>
<td>304</td>
<td>2.28</td>
<td>Surface lot</td>
<td>Sticker permits; No gate</td>
<td>PSO</td>
</tr>
<tr>
<td>Champion Point</td>
<td>Owned</td>
<td>2,000</td>
<td>1,345</td>
<td>0.67</td>
<td>Surface lot</td>
<td>NA for permits; no gates</td>
<td>NA</td>
</tr>
<tr>
<td>Silver Creek</td>
<td>Owned</td>
<td>2,000</td>
<td>1,540</td>
<td>0.77</td>
<td>Surface lot</td>
<td>NA for permits; no gates</td>
<td>NA</td>
</tr>
</tbody>
</table>
2 PARKING MANAGEMENT STRATEGIES

There is a wide variety of parking management systems and strategies, however there is no ‘right way’ to implement it. The right parking management system is one that meets strategic program goals and provides a convenient experience for users. The right system will also depend on the built environment conditions of the garage or lot. Finally, internal data management systems such as access control, Human Resources, and others which will likely interact with the parking management system. As the newly formed Parking Committee begins to convene, this package should serve as a guide for possible strategies to consider given the unique context of each site.

DAILY PAID PARKING

Paid parking is one of the most effective ways to address parking constraint issues. By charging for parking, employees will be more inclined to try non-drive alone modes. The higher the fee, the more likely employees will switch to another mode, which will reduce parking demand and reduce the need for the County to build or purchase more parking.

Figure 2 outlines how three employers charge for parking. Each case study represents a different approach – varying from daily to monthly parking fees. When Santa Clara County is ready to implement parking charges it should do so with current best practices rather than antiquated approaches. Chief among these new approaches is charging daily fees rather than selling prepaid permits, such as monthly or long-term passes. Daily parking charges are more equitable and provide more choice. Additionally, daily parking charges do not discourage participation from employees who will occasionally need to drive. Employees still have access to parking without committing to a permit and daily rates allow people to choose how to get to work each day.
Implementation Considerations

The County can determine the appropriate price to charge for parking by comparing parking fees of nearby garages and lots. Parking facilities can also charge variable rates depending on time of day and user type. To encourage carpooling and vanpooling, fees for carpool and vanpool vehicles can be lower. As a general best practice, pricing should be adjusted based on an optimal parking utilization of 90 to 95%.

Another important consideration is the difficulty and contentiousness of transitioning from free parking to paid parking for employees. Often the reaction is acute and short-lived. Nevertheless it is helpful to consider roll-out of a comprehensive package of commuter rewards at the same time as parking charges to mitigate the perception of a ‘take away’. Paid parking can be coupled with a commute cash program, which provides a daily incentive for non-SOV trips.

In order to implement daily parking charges, the County will need to work with an appropriate parking vendor to install appropriate access control and payment infrastructure and software. The access control strategy outlines different options to consider. Payment options can take a wide variety of forms, from a person in a booth, to credit card transactions at the gates or at pay machines, to commute platforms that interface with the access control and/or enforcement systems and send parking charge--and commute reward--files directly to payroll.

Applicable Sites

Daily parking should be considered at sites where:

- Parking utilization exceed optimal levels (90-95%)
- Building new parking supply is being considered

---

2 http://www.sjsu.edu/parking/permits/employee/index.html
3 https://per.lacity.org/ParkingMOU-07.pdf
A variety of efficient commute options are available:
- Cluster of employees living within reasonable walk or bike distance to work (1 – 3 miles)
- High quality transit service within 0.3 miles

Based on the above conditions, potential sites are Civic Center and the VMC Main Campus.

**Monitoring**

- Monitor and enforce parking electronically through access control infrastructure or via an in-person parking attendant/enforcement
- Automatically track parking usage by integrating parking technology into a commute platform – also allow for automatic rate splitting between carpools of two people or more
- Conduct regular parking occupancy analyses to evaluate effectiveness
- Adjust pricing based on optimal occupancy (90-95%)
- Assess impacts of pricing changes on parking demand and other travel modes

**Program Effectiveness**

Assuming a daily charge of $2, the GHG reduction potential is 1.2% to 3.7% per site.

**Cost Estimate**

Daily paid parking is assumed to be net positive, a charge of $2 per day equates to a potential annual revenue of $500 per space. Revenues generated from parking fees should be redirected to other TDM programs.

**ACCESS CONTROL EQUIPMENT**

Parking access control equipment and solutions manage the access into and out of a parking facility. They help ensure that the proper people can access the right lot or garage. Today, the county relies on a permit sticker affixed to a vehicle, however there are many different access control options the County can consider to reduce abuse and help with enforcement. More access control means less need for enforcement and vice-versa.

**Implementation Considerations**

Prior to selecting which access control option to use, the County should decide whether it is interested in tracking vehicles or people: should the system be built around license plates or employee ID numbers? Each option has pros and cons and different implications for users and administrators. The current study is not scoped to support this choice, but a potential County Parking Committee should take on this as one of its first decisions. Figure 3 summarizes the different access control options available and infrastructure and personnel required for each. The Civic Center surface lot, for example, can benefit from installing parking gates and radio frequency identification (RFID) readers, which require little enforcement.
### Access Control Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Infrastructure</th>
<th>Personnel Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio Frequency ID (RFID)</td>
<td>Typically the same ID badges used for building access, though sometimes a stand-alone key fob assigned to an individual.</td>
<td>Parking gates, and RFID readers</td>
<td>Low</td>
</tr>
<tr>
<td>License Plate Recognition (LPR)</td>
<td>A system of cameras that read a vehicle’s license plate. LPR cameras can be used to open parking gates, or installed at free-flow driveways capturing license plates as cars enter. As a third option enforcement vehicles can be equipped with mobile LPR cameras.</td>
<td>Parking gates + Fixed LPR camera Fixed LPR cameras with free flow entry Mobile LPR cameras mounted on parking enforcement cars</td>
<td>Low-Low-moderate High</td>
</tr>
<tr>
<td>License Plate Input</td>
<td>License plate systems can also be ‘opened’ (or enforced) by an officer using a handheld tablet by entering the license plate.</td>
<td>No infrastructure needed</td>
<td>Moderate-high</td>
</tr>
<tr>
<td>Bluetooth or MAC Address</td>
<td>Cell phones emit unique stamps that are used by some parking systems as ‘keys’ to allow access to lots and garages.</td>
<td>Currently Zipby provides commercially available gates that open with passive signals from a preinstalled cell phone app.</td>
<td>Low</td>
</tr>
<tr>
<td>Hang tags and Permits</td>
<td>Physical permits, hang tags, stickers.</td>
<td>No infrastructure needed</td>
<td>High</td>
</tr>
</tbody>
</table>

### Applicable Sites

Parking access control equipment can be applied to all sites with priority given to sites that have existing parking constraints and a large parking supply.

### Monitoring

- Provide employees access control “keys” (e.g. RFID badges, hang tags) upon request during onboarding
- Monitor abuse to determine if chosen access control option is effective

### Program Effectiveness

Parking access control equipment is a supportive strategy, and thus does not have an individual trip reduction estimate.
Cost Estimate

Costs vary depending on which option is chosen, where it is implemented, and the size of the parking facility. For example, a fixed license plate recognition (LPR) system that monitors vehicles entering and exiting a facility cost between $15,000 and $25,000 for each installed camera. Radio frequency identification systems (RFID) typically cost $3,000 to $5,000 per antenna and $10 to $20 per transponder.

DESIGNATED VISITOR & EMPLOYEE PARKING SPACES

Parking is an important concern at many County sites, and a resource that must be balanced between employees, visitors, and patients throughout the course of a day. While some sites separate employee and visitor parking, many others have undesignated spaces, which are first-come-first-serve for both employees and visitors. However, these user groups tend to be very different, and managing them separately allows for more targeted strategies for each user group.

Implementation Considerations

Based on their needs, visitors should be prioritized because they do not know the site as well as employees. Visitor spaces should be located in convenient locations that allow direct and clear access to the building. The remaining spaces can be available for employee use. Separating visitor stalls from employee stalls also allows medical facilities to stripe visitor stalls a bit larger than employee stalls to make it easier for visitors to get in and out of their cars. This is especially important at medical centers where patients often arrive accompanied by a family member or caretaker.

The County should also consider limiting the distribution of “A” permits, which focus on status rather than job function. Currently “A” permits are provided to certain seniority levels. Instead, the County should provide priority permits to employees who are required to have a vehicle for business purposes.

Applicable Sites

The designated parking standards can be implemented at all sites for employees and visitors.

Program Effectiveness

These parking standards are supportive strategies, and thus does not have individual trip reduction estimates.

Cost Estimate

Based on industry standards, it will cost approximately $35 per space for restriping and paint.

DESIGNATED CARPOOL & VANPOOL PARKING SPACES

Designated parking spaces encourage the use of carpools and vanpools. A modest number of spaces in high-convenience locations, such as closest to building entrances, could be set aside for registered carpool/vanpool vehicles. Institute a “first come/first serve” policy.
Implementation Considerations

Select County facilities already provide carpool-only spaces, but abuse and lack of available enforcement has been an issue at some facilities. To curb abuse, the County can consider issuing special carpool permits for carpool that consist of two or more County employees that carpool a minimum of three days per week. In exchange for a carpool permit, both employees would need to forego their “A” or “C” permit. However, this option is still honor-system based where abuse can occur.

Another option where abuse is less common is working with a vendor that provides real-time carpool verification. Recent technology uses a combination of GPS location data and Bluetooth proximity to verify that a shared ride has taken place. During the commute, the driver and passengers can confirm a shared ride via a smartphone app that collects geolocation data. Once a carpool is confirmed, a parking space is automatically reserved for that ride.

Applicable Sites

Designated carpool and vanpool parking spaces can be implemented at all sites.

Monitoring

- Track and maintain carpool list to ensure carpools are viable and reduce carpool parking abuse
- Work with parking enforcement to ensure monitoring of carpool spaces
- Consider dedicating more carpool spaces as the carpool mode split increases

Program Effectiveness

These parking standards are supportive strategies, and thus does not have individual trip reduction estimates.

Cost Estimate

Based on industry standards, it will cost approximately $35 per space for restriping and paint. Costs for carpool verification software are unknown.

SHARED PARKING

While some parking facilities are constrained, others have an abundance of parking spaces that sit unused. In order to utilize these spaces, the County can lease these spaces to nearby employers and enter into a shared parking agreement. Shared parking optimizes parking capacity by allowing complementary land uses to share parking spaces, rather than creating separate parking facilities. Agreements to share parking also reduce parking costs, and improve traffic flow due to fewer driveways. Parking can be shared among nearby buildings to take advantage of different peak periods. For example, a business can share parking with residents since parking is in demand during the middle of the day for offices and in the evenings for residents.

https://taxi.co.uk/corp/en/about/proof-of-carpooling/
Implementation Considerations

To implement shared parking, the County should first identify facilities that consistently have available parking. Additionally, the County should identify nearby complementary uses that may be potential shared parking partners. The cost of leasing out a space can be determined by researching parking fees of nearby facilities. Shared spaces should also be clearly marked to distinguish where different users can park. Shared parking partners will also need to provide their employees and/or patrons with unique stickers that indicate they are allowed to park in shared spaces.

Applicable Sites

The County should consider implementation at sites where the parking ratio exceeds 1 space per employee and where there is not a significant number of visitors. Potential sites are listed in Figure 4.

Figure 4 Priority Sites with Parking Ratios Over 1.0

<table>
<thead>
<tr>
<th>Site</th>
<th>Employee Count</th>
<th>Total Supply</th>
<th>Parking Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charcot</td>
<td>1,295</td>
<td>1,674</td>
<td>1.16</td>
</tr>
<tr>
<td>Elmwood Correctional Facility</td>
<td>169</td>
<td>556</td>
<td>3.29</td>
</tr>
<tr>
<td>Valley Health Center Milpitas</td>
<td>82</td>
<td>580</td>
<td>4.77</td>
</tr>
<tr>
<td>Roads &amp; Airports</td>
<td>70</td>
<td>100</td>
<td>1.31</td>
</tr>
</tbody>
</table>

Monitoring

- Regularly monitor shared and County-only spaces:
  - If shared spaces are underused, explore partnerships with other nearby uses
  - If County-only spaces are at capacity, reallocate shared spaces back to County employees
- Work with parking enforcement to ensure employees and shared partners are parking in the appropriate spaces

Program Effectiveness

Shared parking is a supportive strategy, and thus does not have an individual trip reduction estimate.

Cost Estimate

Shared parking is assumed to be net positive. Revenues generated from parking fees should be redirected to other TDM programs.

PARKING WAYFINDING & SIGNAGE

A key element of effective parking management includes strong signage and wayfinding, indicating the locations of buildings and key entrances, and identifying where visitors and employees are allowed to park. The information about where drivers will park should be clear in...
directing people as they arrive on-site, and should include appropriately-sized text for drivers and
should be placed in locations where drivers have an appropriate reaction time to follow
instructions.

To further enhance this information, a real-time parking guidance system could provide a benefit,
as it will inform drivers where parking is available and reduce time in circling parking facilities for
a parking space. For instance, if the parking garage is full, employees will know that they will need
to park in the surface lot. This will provide a better experience for patients and visitors who are
not as familiar with the hospital facilities.

**Implementation Considerations**

The County will need to work with a parking wayfinding and signage vendor to develop both static
and dynamic signs that have a consistent set of colors, fonts, and directional cues. Real-time
parking signs should be located at parking facility entrances. The County could also display
parking availability and a parking locator map online and/or through a commute platform.

**Applicable Sites**

Parking wayfinding and signage can be applied to all sites with priority given to sites that have
existing parking constraints and a large parking supply. Garages should be prioritized first
followed by large surface lots. Prime candidates include VMC, Civic Center, and O’Connor
Hospital.

**Program Effectiveness**

Parking wayfinding and signage is a supportive strategy, and thus does not have an individual trip
reduction estimate.
Cost Estimate
Real-time sensors cost approximately $35 per space per month, which equates to a $420 annual fee per sensor. Wayfinding and signage are additional costs.

Monitoring
- Develop both static and dynamic signs that have a consistent set of colors, fonts, and directional cues

PARKING OCCUPANCY COUNTS
Parking occupancy counts are essential in understanding how parking facilities are being utilized. Reliable parking data helps identify parking constraints and affects how parking should be managed as a whole. The County currently does not conduct parking occupancy counts at any facility. By doing so regularly, the County can gauge the effectiveness of TDM strategies over time.

Implementation Considerations
Parking occupancy counts should be conducted regularly to capture parking demand trends over time. Counts should be conducted throughout the day on a “typical day”, generally on Tuesdays, Wednesdays, and Thursdays. Depending on the access control available at each facility, parking occupancy counts can generally be conducted in one of three ways: real-time data collection, badge swipes, in-person counts. The County should also develop consistent methodology for collecting and reporting data.

Applicable Sites
Gathering parking counts should be applied to all sites, with a main focus for the largest facilities.

Monitoring
- Evaluate counts by time period to capture parking demand variations throughout the day, and by year to determine parking demand trends
- If demand has increased, consider more a robust implementation of TDM strategies
- Monitor counts by space types to determine if spaces should reallocated to different users

Program Effectiveness
A parking occupancy count is a supportive strategy, and thus does not have an individual trip reduction estimate.

Cost Estimate
The cost of a parking occupancy study for Civic Center and the VMC Main Campus, the sites with the largest parking supply, is estimated to be $10,000-15,000.
APPENDIX J

Interactive Mode Share Model Guide
INTERACTIVE MODE SHARE MODEL GUIDE

The TDM Project Team developed a transportation model to help the County of Santa Clara’s Transportation Demand Manager and transportation staff make program decisions for specific sites. The model allows users to change population, growth, parking supply, and mode share to see how these impact parking demand and costs as well as use of the various transportation modes. This short guide explains the features of the model and how to use it.

Model Features

The model has sliders for Population Growth and Mode Share that users can adjust as one would fine tune the bass and treble on a stereo system to visualize different scenarios. Starting population, parking supply, cost of parking per stall and other assumptions specific to the site being tested are entered in the Inputs tab.

How to Use the Model

The model is specific to a worksite therefore it needs inputs related to the population, mode share and parking supply as a starting point. The project team has preset these values for four County worksites: Valley medical Center, Civic Center, SSA Julian, and Bergen. To test scenarios for these sites skip Step 0 and go directly to Step 1. If County staff would like to use the model for other sites, they need to enter in starting values.

Step 0: Set up Baseline

Using the Inputs tab enter the starting 2018 population for employees and the 2018 visitor parking stalls used at peak. Then enter the parking supply for employees and visitors. Note that
the model shows combined parking demand and supply. Then enter the starting mode share percentage for each mode. Finally enter the cost of building a parking stall.

**Step 1: Create a Scenario**

**Population**
Move the various sliders to increase or decrease the growth rate or the show rate. The growth slider applies a percentage growth to both employee headcount and visitor parking. Show Rate means how many people worked that day. This excludes people that were on vacation or sick leave but includes people who worked remotely.

**Mode Share**
Adjust the mode share sliders to increase or decrease the number of people using each type of transportation. Adjusting DRIVE distribute the added (or reduced) trips proportionally into the other modes based on their starting percentage. Adjust the other modes reduces DRIVE trips.

**Step 2: Read the Output**

2.1 Supply v Demand

The lines represent demand for each mode with the red line being parking demand. The bars show the parking supply. The bars with a dashed red border show the gap between parking demand and parking supply.

2.2 Daily Trip Change

This table shows the change in daily trips relative to the baseline. In this scenario drive trips go down by 622 and trips in bike go up by 47, walk goes up by 34 and so forth. Note that the model assumes no change in overall number of trips just a different distribution of trips. However, changing population numbers or growth rate will increase the number of trips. A good way to think about the change in trip output is: In this scenario our program will have to encourage and accommodate this number of new trips in each of these modes.
The parking cost output shows the number of stalls needed at 2025 and 2030 and the cost of building these at the $/stall cost input. The 2030 numbers are inclusive of 2025. The savings are relative to the baseline scenario.

### Parking Costs

<table>
<thead>
<tr>
<th>Parking Needed at 2025</th>
<th>Parking Needed at 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>STALLS: 1,228</td>
<td>STALLS: 1,378</td>
</tr>
<tr>
<td>COST: $79,810,104</td>
<td>COST: $89,557,619</td>
</tr>
</tbody>
</table>

SAVINGS: $45,010,536

$/STALL: 65,000
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Sylvia Gallegos, Deputy County Executive
       Jo Zientek, Director, Consumer/Environmental Protection Agency
       Jacqueline R. Onciano, Director, Dept. of Planning and Development

SUBJECT: Proposed Local Regulations of Hemp Cultivation

RECOMMENDED ACTION

Receive report from the Office of the County Executive, Consumer and Environmental Protection Agency, and Department of Planning and Development relating to proposed local regulations of hemp cultivation for unincorporated Santa Clara County.

FISCAL IMPLICATIONS

There is no impact to the General Fund resulting from the approval of the recommended action.

REASONS FOR RECOMMENDATION

There have been significant changes recently in federal and State law regulating hemp, distinguishing it from psychoactive cannabis and recognizing it as an agricultural commodity for purposes of cultivation and processing. With the enactment of the 2018 Federal Farm Bill in December of 2018, hemp is no longer a controlled substance under federal law, and it will become lawful for registered growers to cultivate hemp in California upon securing necessary federal and State approvals.

The changes to the federal and State regulatory regimes for hemp production are still in process. On October 31, 2019, the United States Department of Agriculture (USDA) published an interim final rule allowing it to begin implementing the federal hemp program, including reviewing and approving State hemp production plans and issuing licenses under a USDA hemp plan for those states without submitted or approved plans.
On October 12, 2019, California Senate Bill 153 changed State industrial hemp law, requiring the California Secretary of Food and Agriculture, in consultation with the Governor and the Attorney General, to develop and submit a State hemp production plan to the United States Secretary of Agriculture by May 1, 2020. Approval of this plan will clear the way for legal hemp production in California, and once a State plan has been approved, County Agricultural Commissioners will be required to register State-compliant industrial hemp growers. Absent the adoption of local regulations by the County, registered growers in the unincorporated areas of the county would be able to cultivate hemp by right consistent with the County’s Zoning Ordinance regulations to produce agricultural commodities.

Executive Summary

In anticipation that the USDA will approve California’s hemp production plan by July 2020, the Administration is developing regulations governing hemp cultivation in the unincorporated areas of Santa Clara County, establishing restrictions and an approval process. The proposed local regulations would limit cultivation to certain rural agricultural areas of the county and impose the following restrictions on growers:

- Eligible parcels for hemp cultivation would be limited to “A” zoning district, (Exclusive Agriculture) and cultivation would be prohibited within:
  - 1/4 mile of any Sensitive Receptor (e.g., religious institutions, child daycare centers, schools, and property with a residential zoning designation); and
  - 200 feet from any property boundary line.
- Growers must provide written consent from the deed holder of the property where cultivation would occur;
- Each registered grower would be limited to a total of 50-acres of cultivation;
- Growers must post signs indicating hemp is being cultivated onsite; and
- The County would be authorized to inspect any approved hemp site during normal business hours.

Following HLUET’s consideration of this report, the Department of Planning and Development and the Agricultural Commissioner staff would hold community outreach meetings in South County to inform residents and stakeholders of the proposed County regulations and receive input. Following those meetings, staff would finalize an Ordinance and present the proposed hemp regulations to the Planning Commission in March for recommendation and subsequently to the Board of Supervisors in April for approval. This timeline would align the adoption of the County’s regulations with the USDA’s anticipated approval of the State plan and possibly accommodate cultivation of hemp this year.
Considerations for the Development of Local Regulations

As defined in the 2018 Farm Bill, the term “hemp” means the plant species *Cannabis sativa* L. and any part of the plant, with a delta-9 tetrahydrocannabinol (THC) concentration of not more than 0.3 percent on a dry weight basis. Hemp can be produced for its fiber, grain, or seed, and in the U.S, hemp production has seen a resurgence in the last five years. Potential high sales of hemp flowers, to be processed into cannabidiol (CBD), relative to other crops, have intensified the increase in hemp’s cultivation; however, it remains unclear whether consumer demand will meet the supply. There is an increased interest by local growers in the cultivation of hemp. Hemp works well as a rotational crop, as it improves soils by providing organic matter, aeration, and can extract heavy metals from contaminated soils.

Because hemp and cannabis are derivatives of the same plant, *Cannabis sativa* L., the appearance and odor of hemp and cannabis can be indistinguishable. As a result, there are potential community impacts associated with hemp cultivation, including nuisances caused by the odor of plants; potential safety concerns related to theft of plants; and the possibility that growers could cultivate non-compliant crops (>0.3% THC) unintentionally or circumvent local prohibitions on the cultivation of cannabis.

Following the passage of the 2018 Farm Bill, the County Ag Commissioner/Consumer and Environmental Protection Agency, Department of Planning and Development, and the Office of the County Executive evaluated regulatory options for hemp cultivation that could mitigate potential community conflicts and safety concerns. Research for this effort included contacting neighboring counties and reviewing various jurisdictions’ cultivation regulations, including pilot programs in Monterey and Stanislaus Counties, and cultivation requirements in San Benito and San Joaquin Counties (see Attachment A). County staff also had the opportunity to meet with the County of San Benito Ag Commissioner; observe the harvest of 10-acres of hemp cultivated; and visit a laboratory in Gilroy that tests hemp samples from local growers to verify they do not exceed the legal limit of 0.3% THC.

Based on this review, the Administration recommends limiting the cultivation of hemp to parcels within the rural unincorporated areas of Santa Clara County located in the “A” (Exclusive Agriculture) zoning district and requiring the following property setbacks designed to reduce potential conflicts with surrounding residential or urban uses:

- 1/4 mile from any Sensitive Receptor (e.g., religious institutions, child daycares, schools, and property with a residential zoning designation); and
- 200 feet from any property boundary line.
These restrictions would effectively limit hemp cultivation in the unincorporated areas to the agricultural areas of southern Santa Clara County (i.e., areas surrounding Morgan Hill and Gilroy and parts of San Martin and the Coyote Valley, see Attachment B). The Administration continues to research the efficacy of property setbacks designed to address nuisances caused by the odor of plants. Upon complete analysis of the impact of the odor, a final recommendation that addresses appropriate setbacks will be made to the Planning Commission and Board after receiving input from local neighborhood groups, stakeholders of the agricultural community, and property owners in the Agricultural zoning districts. The proposed restrictions would require amendments to the Zoning Ordinance. These amendments would not affect hemp research and processing, as those activities occur under the existing zoning classifications of Agricultural Research and Agricultural Processing, which require discretionary land use approvals that regulate community and neighborhood impacts.

**Requirements for Hemp Cultivation Registration and Agricultural Clearance Approval**

State law requires growers of hemp to register with the County Ag Commissioner prior to cultivation. Per state law, growers must provide the County Ag Commissioner with the legal description, Global Positioning System (GPS) coordinates, and map of the land area where cultivation of hemp will occur, and the approved cultivar to be grown. Additionally, a grower’s application to the County Ag Commissioner must be accompanied by a registration fee, as set by state law (currently, $900). The cultivation registration is valid for one year.

In addition to the cultivation registration, the County would separately require that hemp growers obtain an Agricultural/Hemp Cultivation Clearance from the Department of Planning and Development before cultivation could commence. Obtaining this clearance requires verification of a grower’s registration with the Counties Ag Commissioner; compliance with the required setbacks from sensitive receptors; and the following local requirements:

- Each registered grower would be limited to 50-acres of cultivated hemp;
- Growers must either be the deed holder of the land where the cultivation occurs or provide the deed holder’s written consent;
- Property owners will be limited to 50-acres of cultivated hemp; and  
- Property owners and growers must post onsite signs indicating that hemp is being cultivated.

Administration proposes the 50-acre per limit for each registered grower and property owner to ensure that the cumulative acreage of hemp cultivated in rural Santa Clara County is ancillary to the production of food crops, consistent with the goals of the Santa Clara Valley
Agricultural Plan adopted by the Board of Supervisors in 2018 of which one focal point was to increase local food production and food security.

Enforcement of Local Regulations and Coordination with the Office of the Sheriff

The proposed local regulations would authorize the County Ag Commissioner to inspect any permitted hemp site during regular business hours without prior notice to ensure cultivation is compliant with the County’s regulations and State/federal law. If County staff identifies any zoning violations or violations of state and federal requirements, the County may issue penalties provided under State/federal law, issue violations, require the grower to pay a fine, and/or require the destruction of non-compliant crops. If an inspection or required sampling of a hemp crop reveals that a grower has produced cannabis exceeding the maximum allowed THC level for hemp (e.g., 0.3% on a dry-weight basis), the grower would be required to comply with a hemp destruction plan approved by the Ag Commissioner for the non-compliant crop. County staff would ensure non-compliant plants are disposed of in accordance with state and federal regulations governing the handling and destruction of marijuana, and Sheriff’s Office staff would participate in the destruction of all non-compliant crops.

The County Ag Commissioner would provide the Office of the Sherriff’s Marijuana Eradication Team GPS location information and a map of the area where cultivation of hemp would occur for each registered hemp cultivation site and coordinate with the Office of the Sheriff to ensure proper destruction of any non-complaint hemp crops. These requirements would enable the County to properly administer the program and ensure public health, safety, and welfare.

Community Outreach for County Local Regulations of Hemp Cultivation

The Department of Planning and Development and County Ag Commissioner staff plan to hold community outreach meetings on the following dates in March to present to neighborhood groups, stakeholders in the agricultural community, and property owners in the Agricultural zoning districts the proposed County hemp cultivation regulations:

- Tuesday, March 10, 2020 – Morgan Hill Community Center, 6:30pm to 8:30pm
- Tuesday, March 17, 2020 – Gilroy Library, 7:00pm to 8:30pm
- Thursday, March 19, 2020 – San Martin County Office, 6:00pm to 8:00pm

**CHILD IMPACT**

The recommended action would have no/neutral impact on children.
SENIOR IMPACT
The recommended action would have no/neutral impact on seniors.

SUSTAINABILITY IMPLICATIONS
The recommended action would have no/neutral sustainability implications.

BACKGROUND
The 2014 Farm Bill allowed for hemp cultivation only as part of a pilot project or agricultural research programs from institutions of higher education or a State department of agriculture. The Bill did not authorize commercial hemp cultivation. The 2018 Farm Bill legalized hemp federally and transferred regulatory authority of hemp and hemp products away from the DEA and to the USDA. The Bill removed hemp from CSA Schedule I, and defined hemp as “the plant Cannabis sativa L. and any part of that plant” and its byproducts with “a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.” The bill also added hemp to the definition of “agricultural commodity” in the Federal Crop Insurance Act (7 U.S.C. § 1518.)

The 2018 Farm Bill further provided State Departments of Agriculture or Tribal governments with primary regulatory authority over the production of hemp, if they obtained USDA approval of a monitoring and regulation plan. For jurisdictions that have not submitted USDA approval of a monitoring plan, the USDA retains regulatory authority and hemp producers will be required to obtain a federal license. The USDA published implementing regulations for the 2018 Farm Bill through an Interim Final Rule on October 31, 2019, which remain effective from the implementation date until November 1, 2021. The USDA issued the Interim Final Rule without prior opportunity for notice and comment but provided a 60-day comment period, which it extended by another 30 days through January 29, 2020 for comments. Thereafter, the USDA will determine whether to modify or extend the current regulations beyond November 1, 2021.

Changes in State Law Relating to Hemp
Since 2013, California law has changed several times to permit the cultivation and processing of industrial hemp. Senate Bill 1409, passed in 2018, legalized commercial cultivation of hemp beginning January 1, 2019. The California Department of Food and Agriculture (CDFA) submitted an implementing regulation, effective April 25, 2019, establishing a registration fee for industrial hemp growers and seed breeders. On May 31, 2019, CDFA also submitted emergency regulations regulating industrial hemp sampling, laboratory testing, and non-compliant crop destruction. The emergency regulations took effect for 180 days on June 10, 2019 and thereafter were extended for an additional 180 days beginning December 10, 2019. In proposing to extend the emergency regulations, CDFA noted the
need to correct discrepancies between the State regulations and the federal requirements set forth in the USDA’s Interim Final Rule. Permanent regulations must be adopted through the regular rulemaking process.

On October 12, 2019, the Governor approved Senate Bill 153, which made changes to State industrial hemp law to conform to requirements of the 2018 Farm Bill. Among other things, SB 153 requires CDFA to submit a State hemp production plan to the USDA for its approval by May 1, 2020, after which the USDA has sixty days to approve or reject the State plan. California has not yet submitted its plan to USDA. Before doing so, the Legislature may need to further amend state industrial hemp law to correct discrepancies between SB 153 and the Interim Final Regulations, including testing times and standards, and laboratory registrations.

Although commercial cultivation of hemp is legal under California law, only hemp produced under the 2014 Farm Bill or pursuant to a USDA license will be lawful until produced in compliance with a USDA-approved State plan.

**Existing Treatment of Hemp Under the County Ordinance Code**

At the May 21, 2019 meeting of the Board of Supervisors, the Board approved a referral by Supervisor Wasserman to the Administration and County Counsel to amend the County Ordinance Code to distinguish industrial hemp from cannabis; designate industrial hemp as an allowed agricultural commodity for the purposes of processing, but not cultivation; and include the processing of industrial hemp within the same land use classification as Agricultural Processing. For the purposes of the County Ordinance Code, the existing definition of “cannabis” incorporates the definition of cannabis in the Health and Safety Code, section 11018, which specifically excludes industrial hemp. For the purposes of the County Ordinance, industrial hemp is distinct from cannabis. The Zoning Ordinance permits agricultural uses including the processing of agricultural commodities, so long as the use in question does not conflict with State or federal law.

Upon State plan approval to license and regulate hemp as provided by the 2018 Farm Bill and the USDA’s Interim Final Rule, commercial hemp activities compliant with the approved State plan will become lawful as an agricultural commodity, and the Ordinance Code will not be required to change to permit hemp cultivators or processors. At that time, industrial hemp cultivation will be an agricultural use and may be conducted by right in all zoning districts that allow agriculture, unless the Board adopts the recommendations above imposing setback and signage requirements and limits cultivation of hemp to only the Exclusive Agriculture zoning district. Existing facilities used to process agricultural commodities may be used to process legally produced industrial hemp, subject to any required modifications to the facility’s use permit and applicable laws and regulations.
CONSEQUENCES OF NEGATIVE ACTION

The HLUET Committee will not receive the report related to proposed local regulations of hemp cultivation for unincorporated Santa Clara County.

ATTACHMENTS:

- Attachment A - Hemp Cultivation Regulations in Neighboring Counties  (PDF)
- Attachment B - Land Eligible For Hemp Cultivation  (PDF)
<table>
<thead>
<tr>
<th>Counties</th>
<th>Local Regulations of Hemp Cultivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Napa, San Benito, Solano, Sonoma</td>
<td>Adopted Temporary Moratorium</td>
</tr>
</tbody>
</table>
| Merced                   | - **License Requirements**: Written consent of deed holder, bond to cover estimated costs to fully abate non-compliant crops, parcel must be min 20 acres (§9.31.050)  
                          | - **Restrictions on Cultivation**: Limited to A-1 (General Agriculture) zoning district, 200 ft from boundary line, 1000 ft from sensitive receptor, 200 ft from any residence (Outdoor); 50 ft from boundary line, 500 ft from sensitive receptors, 100 ft from any residence (Indoor); onsite signage (§9.31.060). |
| Monterey                 | - **License Requirements**: Two year pilot program, limited to 30 registrations total; property owners provide access to County staff to verify compliance (§21.49.060)  
                          | - **Restrictions on Cultivation**: Limited to “HMP” district, on land previously cultivated, limited to 100 acres of cultivation or less; cultivation must occur at least 3 miles from existing commercial cannabis; onsite signage (§21.49.060) |
| San Joaquin              | - **License Requirements**: Written consent of deed holder, identify type of hemp production to occur (seed/fiber, oil, nursery) (§6-1304)  
                          | - **Restrictions on Cultivation**: 100 ft from boundary line, 1000 ft from sensitive receptors, 200 ft from residential uses (Outdoor); 50 ft from boundary line, 1000 feet from sensitive receptors, 100 ft from residential uses; onsite signage (§6-1305) |
| Stanislaus               | - **License Requirements**: Interim Ordinance, applications were due July 18, 2019; licenses expired May 1, 2020 (§6.85.050)  
                          | - **Restrictions on Cultivation**: Limited to A-2 (General Agriculture) zoning district, minimum 10 acre parcel, cumulative total of 12 acres of cultivation (§6.85.050) |
| Alameda, Contra Costa, Marin, San Mateo, San Francisco, Santa Cruz | N/A |

**ATTACHMENT A - Hemp Cultivation Regulations in Neighboring Counties**
Acreage of land eligible for hemp cultivation: 11,975

Number of eligible parcels: 1,081
DATE: February 20, 2020
TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)
FROM: Megan Doyle, Clerk of the Board
SUBJECT: Proposed Amendments to Roads Commission Bylaws

RECOMMENDED ACTION
Receive report from the Office of the Clerk of the Board relating to proposed amendments to the Roads Commission bylaws, and forward to the Board of Supervisors for approval.

FISCAL IMPLICATIONS
The recommended action will have no fiscal implications.

REASONS FOR RECOMMENDATION
Bylaws establish the rules of procedure for a legislative body such as the Roads Commission, including the duties and powers of Commission members. The bylaws were last approved by the Board of Supervisors on August 28, 2007.

CHILD IMPACT
The recommended action will have no/neutral impact on children and youth.

SENIOR IMPACT
The recommended action will have no/neutral impact on seniors.

SUSTAINABILITY IMPLICATIONS
The recommended action will have no/neutral sustainability implications.

BACKGROUND
The Santa Clara County Roads Commission was established by Ordinance No. NS-300.567 on April 18, 1995, and amended by Ordinance No. NS-300.722 on October 7, 2003, and No. NS-300.773 on December 12, 2006.

At its January 13, 2020 regular meeting, the Commission approved the amended bylaws as provided by the Office of the County Counsel.

CONSEQUENCES OF NEGATIVE ACTION
The amended bylaws will not be forwarded to the Board of Supervisors for approval.
STEPS FOLLOWING APPROVAL
The Office of the County Counsel will submit the amended bylaws to the Board of Supervisors for adoption.

ATTACHMENTS:
- Roads Commission Bylaws (2020) (PDF)
- Roads Commission Bylaws (redlined) (PDF)
BYLAWS
SANTA CLARA COUNTY ROADS COMMISSION

ARTICLE I
ESTABLISHMENT OF COMMISSION

The Santa Clara County Roads Commission ("Commission") was created, in accordance with Sections 500 and 506 of the County of Santa Clara Charter, by Ordinance No. NS-300.567 on April 18, 1995. The Commission is currently codified in Sections A6-230 et seq. of the Santa Clara County Ordinance Code.

ARTICLE II
PURPOSE OF COMMISSION

As provided in Ordinance Code section A6-236, the purpose of the commission is to give advice and make recommendations to the Board of Supervisors on matters generally relating to:

a) the planning, design, construction, maintenance and operation of the County’s expressways, highways, and roads; and
b) such other matters as directed by the Board.

ARTICLE III
MEMBERS

A. Membership

The membership of the Commission is defined in Ordinance Code section A6-231. The Commission shall consist of seven (7) members, one (1) member to be allocated to each supervisory district and appointed by the respective Supervisor. The remaining two (2) members shall be appointed one (1) each by two (2) Supervisors on a rotational basis.

B. Oath of Office

Upon appointment to the Commission, each member shall take the Oath of Office. A certified copy of the Oath shall be filed with the Clerk of the Board of Supervisors.

C. Attendance Requirement

A member’s failure to attend three consecutive regular meetings of the Commission without good cause as determined by the Commission Chairperson, will result in notification to the appointing authority, which may result in removal of the member from the Commission. Each member’s absence at a meeting shall be entered into the minutes of the meeting.
D. Resignation of Members

A resignation by a member shall be in writing and shall be filed with the member's appointing Board member with copies to the Clerk of the Board of Supervisors and the Commission Chairperson. The Commission Chairperson shall present the resignation to the commission.

If the Commission Chairperson learns that a member is no longer able to participate but has not received a resignation from the member, notification shall be made to the appointing authority, which may result in removal of the member from the Commission.

E. Representative to the VTA Bicycle & Pedestrian Advisory Committee

From the Commission membership and based on interest and expertise, the Commission Chairperson shall on a bi-annual basis nominate for appointment by the Board of Supervisors the County representative to the Valley Transportation Agency Bicycle & Pedestrian Advisory Committee (VTA BPAC.) The VTA BPAC representative shall keep the Commission apprised of activities and actions of the BPAC and shall represent the County at the VTA BPAC. See Maddy Report VTA Bicycle Pedestrian Advisory Committee entry for appointment process and term.

F. Representatives to the Comprehensive County Expressway Planning Study Policy Advisory Board

Pursuant to Board of Supervisors' authorization on September 11, 2007 (Item No. 59), the Chairperson of the Commission shall appoint two commissioners to serve as non-voting members of the Comprehensive County Expressway Planning Study Policy Advisory Board.

ARTICLE IV
TERMS OF OFFICE

The term of each member is defined in Ordinance Code section A6-232. A commissioner shall serve a term of four (4) years, with the term expiring on July 1, of the fourth year. In compliance with Section 14 of Appendix B of the Rules of the Board, no member shall serve for more than three consecutive terms, plus any unexpired term.

ARTICLE V
OFFICERS

A. Officers

The officers of the commission shall be the Chairperson and Vice-Chairperson. These officers shall perform the duties prescribed by these by-laws.
B. **Election of Officers**

The Chairperson and Vice-Chairperson shall be elected from the membership of the Commission at the Commission's first regular meeting held after July 1st each year. Members shall hold office for one year or until such time as a successor is elected. There shall be no limit to the number of terms served by the chairperson or vice-chairperson.

If the office of the Chairperson or Vice-Chairperson becomes vacant during the term of the office, the Commission shall elect a successor from its membership at the earliest meeting at which such election is practicable. Such election shall be for the unexpired term of the office.

C. **Duties of Officers**

The Chairperson, when present, shall preside at all meetings of the Commission. The Vice-Chairperson shall preside at all meetings in the absence of the Chairperson.

In the absence of the Chairperson and Vice Chairperson, the remaining members shall appoint one of the members to act as Chairperson pro tempore for the duration of the meeting at which such appointment was made.

D. **Secretary**

The Clerk of the Board of Supervisors shall be ex-officio secretary of the Commission and shall be responsible for providing secretarial assistance to the Commission, such as preparation of Commission agendas, attendance at meetings, preparation of minutes, and meeting room support.

However, the Clerk of the Board of Supervisors does not provide secretarial assistance to any committees of the Commission.

**ATICLE VI**

**RULES OF PROCEDURE**

A. **Robert’s Rules of Order**

Except as provided in these bylaws or to comply with the Ralph M. Brown Act, meetings of the commission shall be conducted in accordance with Robert’s Rules of Order, latest edition. The Chairperson shall serve as parliamentarian.

B. **Public Report of Actions Taken**

In compliance with Government Code section 54953(c)(2) of the Ralph M. Brown Act, the Commission shall publicly report any action taken and the vote or abstention, as well as recusal, on that action of each member present for the action. Items cannot be approved on consensus.
ARTICLE VII
MEETINGS

A. Compliance with Ralph M. Brown Act and County Ordinance

Meetings of the Commission shall be properly noticed and open to the public in accordance with the Ralph M. Brown Act (Gov. Code section 54950 et seq.) and the County Open Government Ordinance (Division A17).

B. Schedule of Regular Meetings

The Commission shall approve the calendar year’s schedule of regular meetings prior to the first meeting in January of that year. In accordance with Ordinance Code section A6-3, the Commission will hold regular meetings no more frequently than once every two months.

C. Special Meetings

Special meetings may be called by order of the Chairperson or at the request of a quorum of the Commission and must be noticed in compliance with the Ralph M. Brown Act and County Open Government Ordinance. The purpose of the meeting shall be stated in the call.

D. Location of Meetings

Pursuant to County Ordinance Code section A17-4 and Board of Supervisors Policy 3.2, the Commission shall conduct all meetings at the County Government Center unless it is unavailable or infeasible to do so or the Board of Supervisors approves a change in the meeting location, in which case the meetings shall be held at another County facility with ease of public access.

E. Commission Agenda

The Chairperson shall work with the Secretary to prepare the agenda for each Commission meeting. Items to be placed on the agenda of any regular meeting shall be on file with the Secretary of the Commission nine days prior to the scheduled meeting.

F. Quorum

A quorum is required to initiate the transaction of business at any meeting of the Commission. In compliance with Charter Section 506, a quorum is a majority (4) of the entire Commission membership seats, whether filled or vacant (7). A member who abstains from an item is counted to determine whether a quorum exists. However, a member who is disqualified from participating and recuses himself/herself from an item due to a conflict of interest is not counted toward the quorum for that item.

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G. Voting

A motion passes only when a majority of the membership seats (not just those members present or those seats that are filled) votes in support of the motion.

No member shall be permitted to vote upon an item unless present (or participating by teleconference) for the meeting. Voting by proxy shall not be permitted.

ARTICLE VIII
COMMITTEES

The Commission may establish standing and ad hoc committees, as prescribed in these bylaws and the County of Santa Clara Boards and Commissions Handbook, to assist in furthering the purposes of the Commission.

Any committee will have the duties provided by its mandate, but will not have the power to exercise the authority of the Commission or to bind the Commission. Committees report their recommendations to the full Commission for consideration.

Only Commission members may be members of standing or ad hoc committees. However, a committee may not include a quorum of the entire Commission membership.

In creating any committee, the Commission will:

1. Define the purpose and scope of the committee’s charge;
2. Identify if the committee will have an ongoing role in a particular subject area/issue or if the committee is being created for a limited duration to address a single issue/purpose;
3. Only set a meeting schedule if the committee is to be subject to the Brown Act;
4. Define the membership of the committee;
5. Document the creation of the committee in the Commission’s minutes;
6. If the committee is subject to the Brown Act, immediately notify the Clerk of the Board’s Records Unit; and
7. If the committee is to be a standing committee, update the bylaws for approval by the Board of Supervisors.

A. Creation of Standing Committees

A standing committee has a continuing subject matter it oversees or a meeting schedule fixed by formal action.

A standing committee may be created following majority approval of the Commission and designation in the Commission’s bylaws, approved by the Board of Supervisors. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.
The Chairperson of the Commission shall appoint a chair to each committee. The Commission shall approve appointments to the committee.

All standing committees are subject to the Brown Act and must be properly noticed, open to the public, and have a quorum of the committee membership present to transact business. Each standing committee is required to prepare an agenda for each meeting and ensure the agenda is properly posted. Minutes (in summary form) of each committee meeting shall be prepared and shall include a record of attendance of the members and the vote taken on each matter. Copies of the minutes shall be submitted to the next meeting of the committee for approval.

B. Standing Committees of the Commission

The Commission has no standing committees.

C. Creation of Ad Hoc Committees

An ad hoc committee may be established by the Commission, as the need arises, to carry out a specific task for a limited duration.

An ad hoc committee may be created following majority approval of the Commission. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.

The Chairperson of the Commission shall appoint a chair to the committee. The Commission shall approve appointments to the committee.

D. Disbanding Ad Hoc Committees

The Commission shall agendize the disbanding of an ad hoc committee when the committee’s specific task is completed. The disbanding of the ad hoc committee shall be noted in the Commission’s meeting minutes.

ARTICLE IX
ANNUAL WORK PLAN

The Commission is required to provide an update to the Board of Supervisors about its activities through an Annual Work Plan. The Annual Work Plan includes a list of prior year accomplishments. Work Plans are updated each Fiscal Year in accordance with a template and instructions provided by the Clerk of the Board. The Commission shall complete and approve the Work Plan at a regular Commission meeting no later than April 1 of each year. The Office of the Clerk of the Board will transmit the Work Plans to the appropriate Board Committee for review in May of each year and to the Board of Supervisors for approval in June.

Once each year, the commission shall evaluate its necessity to continue or not to continue and report on this evaluation to the County Board of Supervisors.
ARTICLE X
CONFLICT OF INTERESTS

Commission members shall comply with all applicable federal, state, and local conflict of interest laws and regulations, including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.).

Generally, if a Commission member is disqualified from participating in a decision because of a conflict of interest, the Commission member must (1) publicly recuse him or herself and announce the source of the conflict of interest, (2) leave the room during any discussion or deliberations on the matter in question, and (3) not participate in the decision or be counted for purposes of a quorum.

ARTICLE XI
AB 1234 ETHICS TRAINING

Each member of the Commission must receive training in public service ethics laws and principles within twelve months of assuming membership on the Commission and every two years thereafter. If a member has already received the training prior to assuming membership, the member may submit proof of his/her last training completion. The signed certification of completion must be sent to the Clerk of the Board as soon as practicable upon completion of the training.

ARTICLE XII
AB 1661 SEXUAL HARASSMENT PREVENTION TRAINING

Each member of the Commission must receive training regarding the federal and state statutory provisions concerning the prohibition against, and the prevention and correction of, sexual harassment and the remedies available to victims of sexual harassment in employment within six months of assuming office on the Commission and every two years thereafter. If a member has already received the training prior to assuming membership, the member may submit proof of his/her last training completion. The certification of completion must be sent to the Clerk of the Board as soon as practicable upon completion of the training.

ARTICLE XIII
REIMBURSEMENT OF EXPENSES

Any commission member shall be reimbursed for actual and necessary expenses incurred as a result of official business of the commission, to the extent permitted by County policies and the County of Santa Clara Ordinance Code. Mileage shall be reimbursed in compliance with County policy and at the official County rate. Child care reimbursement shall be as provided by Section A6-9 of the Ordinance Code and County policy. All expense reimbursement shall be paid out of the Roads and Airports Department budget.
ARTICLE XIX
AMENDMENT TO BYLAWS

Proposed amendments to these bylaws may be considered at any meeting of the Commission. Upon majority vote of the entire membership, the Commission may recommend amendment of these bylaws, subject to approval as to form and legality by County Counsel and approval by the Board of Supervisors. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.

Approved as to Form and Legality:

[Signature]
Christopher R. Cheleden
Lead Deputy County Counsel

2157389
BYLAWS
SANTA CLARA COUNTY ROADS COMMISSION

ARTICLE I—NAME

Section 1. The name of this commission is the Santa Clara County Roads Commission.

ESTABLISHMENT OF COMMISSION

The Santa Clara County Roads Commission (“Commission”) was created, in accordance with Sections 500 and 506 of the County of Santa Clara Charter, by Ordinance No. NS-300.567 on April 18, 1995. The Commission is currently codified in Sections A6-230 et seq. of the Santa Clara County Ordinance Code.

ARTICLE II—OBJECT

PURPOSE OF COMMISSION

Section 1. The object, as provided in Ordinance Code section A6-236, the purpose of this commission will be to advise and make recommendations to the Board of Supervisors on matters generally relating to:

a) the financial and physical planning, design, construction, maintenance, and operation of the County’s expressways, highways, and roads;

b) such other matters as directed by the Board.

ARTICLE III
MEMBERS

A. Membership

Section 1. The membership of this commission shall consist of seven (7) members, one (1) member to be allocated to each supervisory district and appointed by the respective supervisor. The remaining two (2) members shall be appointed one (1) each by two (2) supervisors on a rotational basis. The rotational sequence for these two (2) appointments shall be established among the supervisory districts, by lot, upon the establishment of the commission.

B. Section 2. A vacancy

An appointment to the Commission, each member shall exist and take the Oath of Office. A certified copy of the Oath shall be reported to the Clerk of the Board of Supervisors whenever a member fails.
C. Attendance Requirement

A member’s failure to attend more than three (3) consecutive regular meetings of the Commission without good cause as determined by the Commission Chairperson, will result in notification to the appointing authority, which may result in removal of the member from the Commission. Each member’s absence at a meeting shall be entered into the minutes of the meeting.

Section 3. Any member desiring to resign from the commission shall submit his or her resignation to the appointing authority.

D. Resignation of Members

A resignation by a member shall be in writing and presented to the Clerk of the Board of Supervisors and the Commission Chairperson, who shall present it to the commission for action.

Section 4. If the Commission Chairperson learns that a member is no longer able to participate but has not received a resignation from the member, notification shall be made to the appointing authority, which may result in removal of the member from the Commission.

E. Representative to the VTA Bicycle & Pedestrian Advisory Committee

From the Commission membership and based on interest and expertise, the Commission Chairperson shall on an annual basis nominate for appointment by the Board of Supervisors the County representative to the Valley Transportation Agency Bicycle & Pedestrian Advisory Committee (VTA BPAC) to the Board of Supervisors for their appointment action. The VTA BPAC representative shall keep the Commission apprised of activities and actions of the BPAC and shall represent the County at the VTA BPAC. See Maddy Report VTA Bicycle Pedestrian Advisory Committee entry for appointment process and term.

F. Representatives to the Comprehensive County Expressway Planning Study Policy Advisory Board

Pursuant to Board of Supervisors’ authorization on September 11, 2007 (Item No. 59), the Chairperson of the Commission shall appoint two commissioners to serve as non-voting members of the Comprehensive County Expressway Planning Study Policy Advisory Board.
ARTICLE IV
TERMS OF OFFICE

Section 1. — The term of each member is defined in Ordinance Code section A6-232. A commissioner shall serve a term of four (4) years, with the term expiring on July 1 of the fourth year.

Section 2. — The terms of the first commissioners shall be staggered in accordance with Section 50614 of Appendix B of the charter. The first commissioners’ terms shall have terms of four (4) years, two (2) commissioners shall have terms of three (3) years, two (2) commissioners shall have terms of two (2) years, and one (1) commissioner shall have a term of one (1) year-consecutive terms, plus any unexpired term.

ARTICLE V
OFFICERS

A. Section 1. — Officers

The officers of the commission shall be the Chairperson and Vice-Chairperson. These officers shall perform the duties prescribed by these bylaws.

Section 2. — The

B. Election of Officers

The Chairperson and Vice-Chairperson shall be elected from the membership of the Commission at the Commission’s first regular meeting held after July 1st each year. Members shall hold office for one year or until such time as a successor is elected. There shall be no limit to the number of terms served by the chairperson or vice-chairperson.

If the office of the Chairperson or Vice-Chairperson becomes vacant during the term of the office, the Commission shall elect a successor from its membership at the earliest meeting at which such election is practicable. Such election shall be for the unexpired term of the office.

C. Duties of Officers

The Chairperson, when present, shall preside at all meetings and shall be an ex officio member, with the right to vote, of all standing and special committees of the Commission. The Vice-Chairperson shall preside at all meetings in the absence of the Chairperson.

Section 3. — The In the absence of the Chairperson and Vice-Chairperson, the remaining members shall be elected for a term of one year or until their successors are selected. The term of office for the members to act as Chairperson and Vice-Chairperson shall
begin on the first regular pro tempore for the duration of the meeting held in July at which such appointment was made.

D. Secretary

The Clerk of the Board of Supervisors shall be ex-officio secretary of the Commission and shall be responsible for providing secretarial assistance to the Commission, such as preparation of Commission agendas, attendance at meetings, preparation of minutes, and meeting in June, unless a replacement is deemed necessary.

However, the Clerk of the Board of Supervisors does not provide secretarial assistance to any committees of the Commission.

**ARTICLE VI**

**RULES OF PROCEDURE**

**Section 1.** The commission shall adopt Robert’s Rules of Procedure to govern its proceedings.

A. Robert’s Rules of Order

Except as provided in these bylaws or to comply with the Ralph M. Brown Act, meetings of the commission shall be conducted in accordance with Robert’s Rules of Order, latest edition. The Chairperson shall serve as parliamentarian.

**Section 2.** Once each year, the commission shall evaluate its necessity to continue or not to continue and report on this evaluation on the County Board of Supervisors.

B. Public Report of Actions Taken

In compliance with Government Code section 54953(c)(2) of the Ralph M. Brown Act, the Commission shall publicly report any action taken and the vote or abstention, as well as recusal, on that action of each member present for the action. Items cannot be approved on consensus.

**ARTICLE VII**

**MEETINGS**

**Section 1.** The regular meetings of the commission shall be held monthly at the County Government Center, 70 West Hedding Street, San José, CA 95110, unless otherwise ordered by the Chairperson.

**Section 2.** Special meeting may be called by the Chairperson of at the request of a quorum of the commission. The purpose of the meeting shall be stated in the call.
Section 3. Four (4) members of the commission shall constitute a quorum. No act will be valid save with the concurrence of the majority of the entire membership thereof, unless as otherwise provided by law.

A. Compliance with Ralph M. Brown Act and County Ordinance

Meetings of the Commission shall be properly noticed and open to the public in accordance with the Ralph M. Brown Act (Gov. Code section 54950 et seq.) and the County Open Government Ordinance (Division A17).

B. Schedule of Regular Meetings

The Commission shall approve the calendar year’s schedule of regular meetings prior to the first meeting in January of that year. In accordance with Ordinance Code section A6-3, the Commission will hold regular meetings no more frequently than once every two months.

C. Special Meetings

Special meetings may be called by order of the Chairperson or at the request of a quorum of the Commission and must be noticed in compliance with the Ralph M. Brown Act and County Open Government Ordinance. The purpose of the meeting shall be stated in the call.

D. Location of Meetings

Pursuant to County Ordinance Code section A17-4 and Board of Supervisors Policy 3.2, the Commission shall conduct all meetings at the County Government Center unless it is unavailable or infeasible to do so or the Board of Supervisors approves a change in the meeting location, in which case the meetings shall be held at another County facility with ease of public access.

E. Commission Agenda

The Chairperson shall work with the Secretary to prepare the agenda for each Commission meeting. Items to be placed on the agenda of any regular meeting shall be on file with the Secretary of the Commission nine days prior to the scheduled meeting.

F. Quorum

A quorum is required to initiate the transaction of business at any meeting of the Commission. In compliance with Charter Section 506, a quorum is a majority (4) of the entire Commission membership seats, whether filled or vacant (7). A member who abstains from an item is counted to determine whether a quorum exists. However, a member who is disqualified from participating and recuses himself/herself from an item due to a conflict of interest is not counted toward the quorum for that item.
G. Voting

A motion passes only when a majority of the membership seats (not just those members present or those seats that are filled) votes in support of the motion.

No member shall be permitted to vote upon an item unless present (or participating by teleconference) for the meeting. Voting by proxy shall not be permitted.

ARTICLE VIII STANDING COMMITTEES

Section 1. The following Standing Committees shall be established. The Chair of each committee shall be established on an annual basis.

Section 2. Executive Committee: Membership shall consist of the Chairperson, Vice-Chairperson and one Chairperson of any other standing committee to be appointed by the Chairperson on an annual basis.

Section 3. Finance and Strategic Committee: Membership shall consist of three (3) members to be appointed by the Chairperson on an annual basis. The committee will address the budget, five (5) year plan and Strategic Plan.

Section 4. Commuter Network Committee: Membership shall consist of three (3) members to be appointed by the Chairperson on an annual basis. The committee will address expressway and rural commute route planning in the context of overall transportation development in the County.

ARTICLE VIII COMMITTEES

The Commission may establish standing and ad hoc committees, as prescribed in these bylaws and the County of Santa Clara Boards and Commissions Handbook, to assist in furthering the purposes of the Commission.

Any committee will have the duties provided by its mandate, but will not have the power to exercise the authority of the Commission or to bind the Commission. Committees report their recommendations to the full Commission for consideration.

Only Commission members may be members of standing or ad hoc committees. However, a committee may not include a quorum of the entire Commission membership.

In creating any committee, the Commission will:

1. Define the purpose and scope of the committee’s charge;
2. Identify if the committee will have an ongoing role in a particular subject area/issue or if the committee is being created for a limited duration to address a single issue/purpose;
3. Only set a meeting schedule if the committee is to be subject to the Brown Act;
4. Define the membership of the committee;
5. Document the creation of the committee in the Commission’s minutes;
6. If the committee is subject to the Brown Act, immediately notify the Clerk of the Board’s Records Unit; and
7. If the committee is to be a standing committee, update the bylaws for approval by the Board of Supervisors.

A. Creation of Standing Committees

A standing committee has a continuing subject matter it oversees or a meeting schedule fixed by formal action.

A standing committee may be created following majority approval of the Commission and designation in the Commission’s bylaws, approved by the Board of Supervisors. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.

The Chairperson of the Commission shall appoint a chair to each committee. The Commission shall approve appointments to the committee.

All standing committees are subject to the Brown Act and must be properly noticed, open to the public, and have a quorum of the committee membership present to transact business. Each standing committee is required to prepare an agenda for each meeting and ensure the agenda is properly posted. Minutes (in summary form) of each committee meeting shall be prepared and shall include a record of attendance of the members and the vote taken on each matter. Copies of the minutes shall be submitted to the next meeting of the committee for approval.

B. Standing Committees of the Commission

The Commission has no standing committees.

C. Creation of Ad Hoc Committees

An ad hoc committee may be established by the Commission, as the need arises, to carry out a specific task for a limited duration.

An ad hoc committee may be created following majority approval of the Commission. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.
The Chairperson of the Commission shall appoint a chair to the committee. The Commission shall approve appointments to the committee.

D. Disbanding Ad Hoc Committees

The Commission shall agendize the disbanding of an ad hoc committee when the committee’s specific task is completed. The disbanding of the ad hoc committee shall be noted in the Commission’s meeting minutes.

Once each year, the commission shall evaluate its necessity to continue or not to continue and report on this evaluation to the County Board of Supervisors.

ARTICLE IX
ANNUAL WORK PLAN

The Commission is required to provide an update to the Board of Supervisors about its activities through an Annual Work Plan. The Annual Work Plan includes a list of prior year accomplishments. Work Plans are updated each Fiscal Year in accordance with a template and instructions provided by the Clerk of the Board. The Commission shall complete and approve the Work Plan at a regular Commission meeting no later than April 1 of each year. The Office of the Clerk of the Board will transmit the Work Plans to the appropriate Board Committee for review in May of each year and to the Board of Supervisors for approval in June.

Once each year, the commission shall evaluate its necessity to continue or not to continue and report on this evaluation to the County Board of Supervisors.

ARTICLE X
CONFLICT OF INTERESTS

Commission members shall comply with all applicable federal, state, and local conflict of interest laws and regulations, including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.).

Generally, if a Commission member is disqualified from participating in a decision because of a conflict of interest, the Commission member must (1) publicly recuse him or herself and announce the source of the conflict of interest, (2) leave the room during any discussion or deliberations on the matter in question, and (3) not participate in the decision or be counted for purposes of a quorum.
ARTICLE XI
AB 1234 ETHICS TRAINING

Each member of the Commission must receive training in public service ethics laws and principles within twelve months of assuming membership on the Commission and every two years thereafter. If a member has already received the training prior to assuming membership, the member may submit proof of his/her last training completion. The signed certification of completion must be sent to the Clerk of the Board as soon as practicable upon completion of the training.

ARTICLE XII
AB 1661 SEXUAL HARASSMENT PREVENTION TRAINING

Each member of the Commission must receive training regarding the federal and state statutory provisions concerning the prohibition against, and the prevention and correction of, sexual harassment and the remedies available to victims of sexual harassment in employment within six months of assuming office on the Commission and every two years thereafter. If a member has already received the training prior to assuming membership, the member may submit proof of his/her last training completion. The certification of completion must be sent to the Clerk of the Board as soon as practicable upon completion of the training.

ARTICLE IX–XIII
REIMBURSEMENT OF EXPENSES

Section 1. Any commission member shall be entitled to reimbursement for mileage, actual and child care, necessary expenses necessarily incurred as a result of official business of the commission, to the extent permitted by County policies and the County of Santa Clara Ordinance Code. Mileage shall be reimbursed in compliance with County policy and at the official County rate. Child care reimbursement shall be as provided by Section A6-9 of the Ordinance Code and County policy. All expense reimbursement shall be paid out of the Roads and Airports Department budget.

ARTICLE XIX
AMENDMENT TO BYLAWS

Proposed amendments to these bylaws may be considered at any meeting of the Commission. Upon majority vote of the entire membership, the Commission may recommend amendment of these bylaws, subject to approval as to form and legality by County Counsel and approval by the Board of Supervisors. A majority is defined as a majority of the entire Commission membership seats, not just those members present or those seats that are filled.

Approved as to Form of Legality:

____________________________
Christopher R. Cheleden
Lead Deputy County Counsel
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Jasneet Sharma, Director, Office of Sustainability

SUBJECT: 2019 Annual Sustainability and Climate Action Plan Report

RECOMMENDED ACTION

Receive annual report from the Office of Sustainability relating to progress on the County's Environmental Stewardship Goals, sustainability, and climate action programs through December 31, 2019.

FISCAL IMPLICATIONS

There are no fiscal implications associated with receiving this report.

REASONS FOR RECOMMENDATION

The Office of Sustainability (OOS) 2019 Annual Sustainability and Climate Action Report (Annual Report), issued February 2020, updates the Finance and Government Operations Committee (FGOC), Housing, Land Use, Environment, and Transportation (HLUET) Committee, and the Board of Supervisors on the County’s progress on sustainability and climate action programs, policies, activities, and ESGs from June 2019 through December 2019.

2019 Annual Report Highlights

The following is a summary of the County’s key sustainability advancements since the 2019 Semi-Annual Report that was presented in June 2019.

- **Energy Efficiency and Renewable Energy**
  
  o One hundred percent of electrical power for County facilities is now sourced from renewable sources. This was accomplished through a mix of strategies that includes on-site renewable energy projects, solar farms, direct renewable electricity purchases from Community Choice Energy providers, and the purchase of Renewable Energy Certificates.

  o The current percentage of highest efficiency lighting owned and operated by the County is at 11 percent and will increase to 26 percent when the current energy efficiency lighting projects are complete.
o Seven hundred and sixty-eight single-family and multi-family home and property owners and real estate professionals reached out through the BayREN program and 188 building professionals trained on energy code compliance and best practices. This was accomplished through in-person workshops led by OOS and BayREN staff.

o Over $1.7 million rebates delivered through BayREN to single-family and multi-family property owners in Santa Clara County for home improvements, thereby reducing greenhouse gas (GHG) emissions by an estimated 769 metric tons of carbon dioxide equivalent (CO2e) — equivalent to the CO2e emitted from the energy use of approximately 130 average American homes annually.

- **Waste Reduction**
  o Countywide waste diversion rates for calendar year 2019 remained stable at 71 percent, despite the addition of new County facility sites, including two new hospitals.

- **Water Conservation**
  o Despite an increase in the County’s real estate portfolio, which includes office buildings, detention facilities, and health clinics, potable and recycled water usage in Facilities and Fleet (FAF) serviced facilities decreased five percent from 2018 to 2019. When compared to the original 2009 baseline, this is a decrease of 43 percent.

- **Green Fleets and Employee Commutes**
  o A total of 137 active electric vehicle charging ports are available for fleet vehicles, County employees, and the general public, with another 33 ports expected to be available in the spring of 2020 and 110 ports planned for future construction.

  o Completion of the County Employees Transportation Demand Management Implementation Guide, which includes employee commute transportation program recommendations to reduce GHG emissions, reduce regional traffic and parking constraints at County facilities, and make the County an employer of choice while reducing commute-related stress.

- **Urban Forestry**
  o Development of an Ecology-Based Tree Management Guide and a County Tree Inventory on 38 FAF-managed sites, and 29 County parks to help structure and organize County tree management and develop future department tree planting and maintenance plans.

- **Stream and Riparian Corridor Stewardship**
  o Adoption of a new Environmental Stewardship Goal (ESG No.12) by the Board of Supervisors on September 10, 2019 (Item No. 42) to “Develop educational programs and volunteer service opportunities that promote local stewardship of...
streams and riparian corridors and develop programs of ecologically compatible recreational use of streams and riparian corridors.” Efforts on this goal will be led by OOS, the Department of Parks and Recreation, and the Consumer and Environmental Protection Agency.

- **Green Workforce and Job Training**
  
  - Seventeen local youth trained as Energy Specialists through partnership with the Rising Sun Center for Opportunity provided 457 no-cost Green House Calls to help homeowners save energy, water, and money.

- **Sustainability and GHG Reduction, Programs & Policy Updates**
  
  - The Board of Supervisors approved a resolution on August 27, 2019 (Item No. 10) declaring a climate emergency demanding immediate action to halt, reverse, restore, and address the consequences and causes of global warming.
  
  - Addition of seven new member counties to the County Climate Coalition, bringing the total to 29 member counties in the coalition.
  
  - Progress with the development of the County’s Sustainability Master Plan, Sustainability Dashboard and Communitywide Climate Action Plan.

**CHILD IMPACT**

Sustainability, energy and climate action programs, projects, and activities are undertaken by the County to advance and serve the economic, environmental, and social interests of the community, including those impacting children and youth.

**SENIOR IMPACT**

Sustainability, energy, and climate action programs, projects, and activities are undertaken by the County to advance and serve the economic, environmental, and social interests of the community, including those impacting seniors.

**SUSTAINABILITY IMPLICATIONS**

The recommended action to receive and approve the 2019 Annual Report supports the programs, policies, and activities that balance public policy and program interests, and which advance the Board’s sustainability objectives to foster a healthy environment, protect resources and public health and safety, promote a diverse economy, and advance social equity and safety.

**BACKGROUND**

Since OOS’ establishment by the Board in August 2010 (Item No. 50), progress on the County’s sustainability initiatives was presented to FGOC and HLUET once a year in an annual report. To streamline sustainability and climate action reporting, a new reporting schedule and scope was adopted by HLUET on June 21, 2018 (Item No. 7). The revised reporting schedule includes one semi-annual (mid-year) and one annual (end-of-year) report that consolidates ESG and sustainability and climate action programs progress into one
report. Thereafter, on August 23, 2018 (Item No. 6), FGOC adopted the same reporting schedule and report scope. The last report out to FGOC and HLUET occurred in June 2019 with the 2019 Semi-Annual Sustainability and Climate Action Report.

**CONSEQUENCES OF NEGATIVE ACTION**

The HLUET Committee will not receive the 2019 Annual Report.

**LINKS:**
- Linked To: 97492 : 97492

**ATTACHMENTS:**
- 2019 Annual Sustainability and Climate Action Report (FEB 2020) (PDF)
2019 Annual Sustainability and Climate Action Report

February 2020
Office of Sustainability, County of Santa Clara
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The 2019 Annual Sustainability and Climate Action Report (2019 Annual Report) provides information on the Office of Sustainability's achievements and continued progress on the County's sustainability and climate action programs, policies, activities, and Environmental Sustainability Goals (ESGs) for the period of June 2019 through December 2019.
Executive Summary

The County of Santa Clara (County) continues to be a leader in its commitment to “building and maintaining a healthy and safe community for current and future generations through preserving natural resources and the environment, fostering a healthy economy, and meeting the basic needs of all residents with respect and cultural awareness”. In 2019, the County made many sustainability advancements which included the following:

### Energy Efficiency and Renewable Energy

- One hundred percent of electrical power for County facilities is now sourced from renewable sources.

- The current percentage of highest efficiency lighting owned and operated by the County is at 11 percent and will increase to 26 percent when the current energy efficiency lighting projects are complete.

- Seven hundred and sixty-eight single-family and multi-family home and property owners and real estate professionals reached through the BayREN program and one hundred and 188 building professionals trained on energy code compliance and best practices.

- Over $1.7 million rebates delivered through BayREN to single-family and multi-family property owners in Santa Clara County for home improvements, thereby reducing GHG emissions by an estimated 769 metric tons of carbon dioxide equivalent (CO2e) — equivalent to the CO2e emitted from the energy use of approximately 130 average American homes annually.

### Waste Reduction

- Countywide waste diversion rates for calendar year 2019 remained stable at 71 percent, despite the addition of new County facility sites, including two new hospitals.
Water Conservation

Facility potable and recycled water usage decreased by 5 percent in calendar year 2019, despite an increase in the County real estate portfolio, which includes office buildings, detention facilities, and health clinics.

Green Fleets and Employee Commutes

A total of 137 active electric vehicle charging ports are available for fleet vehicles, County employees, and the general public, with another 33 ports expected to be available in the spring of 2020 and 110 ports planned for future construction.

Completion of the County Employees Transportation Demand Management Implementation Guide, which includes employee commute transportation programs recommendations to reduce GHG emissions, reduce regional traffic and parking constraints at County facilities, and make the County an employer of choice while reducing commute-related stress.

Urban Forestry

Development of an Ecology-Based Tree Management Guide and a County Tree Inventory on 38 FAF-managed sites, and 29 County parks to help structure and organize County tree management and develop future department tree planting and maintenance plans.

Stream and Riparian Corridor Stewardship

Adoption of a new Environmental Stewardship Goal (ESG No. 12) to promote environmental education and stewardship of the County’s streams and riparian corridors.
### Green Workforce and Job Training

Seventeen local youth trained as Energy Specialist through partnership with the Rising Sun Center for Opportunity provided 457 no-cost Green House Calls to help homeowners save energy, water, and money.

### Sustainability and Greenhouse Gas Reduction, Programs & Policy Updates

The Board of Supervisor adoption of a resolution declaring a climate emergency to combat the consequences of global warming.

Addition of seven new member counties to the County Climate Coalition, bringing the total to 29 member counties in the coalition.

Progress with the development of the County’s Sustainability Master Plan (SMP) and Communitywide Climate Action Plan (CCAP).
Energy Efficiency and Renewable Energy

Environmental Stewardship Goal No.1
Ensure that 100% of light fixtures owned and operated by the County, in buildings, on streets, and in parks are at the highest energy efficiency standard.

As of June 2019, the Facilities and Fleet (FAF) department estimated that 13% of the County’s real estate was retrofitted with the highest efficiency lighting.¹ Through Board approved lighting efficiency contracts in 2019 with Ameresco and Siemen, FAF estimates that upon completion of planned energy efficient retrofits, the percent of County real estate using the most efficient lighting will increase by 18%, from 13% to 31%. Figure 1 shows the distribution of lighting efficiency over the different type of fixtures with lighting for roadways getting the highest efficiency score.

However, due to the recent County acquisition of facilities including the Tasman campus, Silver Creek campus, St Louise Hospital, De Paul Health Center, and O’Connor Hospital, the County’s real estate baseline has increased significantly, from roughly 10 million to 11.7 million square feet. Using the new County real estate baseline, the County’s current percentage of highest efficiency lighting is 11%, which will increase to 26% when the lighting projects mentioned above are complete.

FAF and Valley Medical Clinics (VMC) continue to work with energy services company Engie on energy efficiency retrofits at the VMC campus. The VMC project scope would represent an additional 900,000 square feet of energy efficiency retrofitted space. FAF is currently in the process of contract negotiations with Engie and is concurrently making a capital request to the Administrative Capital Committee to fund this project.

¹ Facilities and Fleet (FAF) estimates the number of existing light fixtures based on building square footage and calculates lighting upgrades based on actual, completed retrofits.
Environmental Stewardship Goal No.2
Reduce per capita energy use by 50%.

Due to BayREN changes in data collection and reporting, the County’s estimated 2019 per capita energy use when compared to 2018 is currently unavailable. However, the County continues to make progress with stakeholder engagement and participation in the BayREN program. In 2019, 768 single-family and multi-family home and property owners and real estate professionals were reached through the BayREN program and 188 building professionals were trained on energy code compliance and best practices.

BayREN Residential Workshop Outreach 2019
In 2019, as part of the Bay Area Residential Energy Network\(^2\), OOS conducted eight single-family residential workshops in partnership with local cities throughout the County, with a total of 493 participants. One of these workshops,

\(^2\) The Bay Area Regional Energy Network (BayREN) is a collaboration of the nine counties that make up the San Francisco Bay Area and provides regional-scale energy efficiency programs, services, and resources for single and multi-family residents. In Santa Clara County, this program is administered through the Office of Sustainability.
offered in Spanish, had 60 attendees. Ten additional presentations, five for single family homeowner community groups, two for multifamily property owners and three for real estate professionals attracted a total of 275 attendees.

**Codes and Standards Activities 2019**
BayREN also administers a “Codes and Standards” program for local governments, to help member cities evaluate and improve compliance with energy codes and develop options for accelerating energy efficiency. The program offers no-cost training to building departments and hosts quarterly regional forums throughout the Bay Area. In 2019, OOS partnered with the cities of Gilroy, Milpitas, Morgan Hill, San Jose and Silicon Valley Clean Energy (SVCE) to host seven trainings to educate 188 building professionals to increase understanding of developments in the Energy Code and promote best practice for compliance and enforcement.

**BayREN Impacts 2019**
The 2019 BayREN Single Family program has been entirely redesigned and relaunched as “Home+.” From the inception of the Home+ program in January 1, 2019 to December 31, 2019, a total of 512 Santa Clara County single-family residences have completed Home+ applications, which represents 1,852 energy efficiency upgrades such as air sealing, insulation, and heating and cooling system improvements or upgraded appliances. Santa Clara County homeowners received $819,815 in incentives in 2019. In 2019, single family improvements have reduced energy usage by about 65,590 kilowatt-hours (kWh) and 34,476 therms.

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3 Home+ is intended to appeal to moderate-income homeowners by allowing single measure upgrades to reduce upfront costs and decrease barriers to participation.
The BayREN Bay Area Multifamily Building Enhancements (BAMBE) program from January 1, 2019 to December 31, 2019, installed energy efficiency improvements in 15 multifamily properties (accounting for 1,238 units) and delivered $928,500 in rebates to Santa Clara County building owners. In 2019, multifamily improvements have reduced energy usage by 382,708 kWh and 50,956 therms.

In summary, in 2019, BayREN delivered over $1.7 million rebates to single family and multifamily property owners in Santa Clara County. These single and multifamily improvements have collectively reduced energy usage by over 448,298 kWh and 85,432 therms, thereby reducing GHG emissions by an estimated 769 MT of CO2e — equivalent to the CO2e emitted from the energy use of some 130 average American homes’ annually.

**Silicon Valley Clean Energy**

In collaboration with Silicon Valley Clean Energy, the County achieved commitment to save customers money, buy cleaner power and reduce community-wide carbon emissions – in 2019 24,900 unincorporated Santa Clara County households and businesses received carbon-free electricity, resulting in $2,614,000 in electricity savings for unincorporated customers and $55,600 in cash payments to customers for generating surplus solar energy.
Energy Services Companies (ESCOs) Projects
FAF and Valley Medical Center (VMC) have been working with three separate ESCOs to develop energy efficiency projects at County facilities. On June 18, 2019 and October 8, 2019, the Board approved contracts with the first two ESCOs, Ameresco, and Siemens, respectively. Combined, these two projects will implement $7 million of energy efficiency measures at 1.8 million square feet of County facilities over the next two years.

Environmental Stewardship Goal No.3
Receive 100% of our electrical power from clean renewable sources

The County has achieved ESG No.3 of receiving 100 percent of its electricity from renewable sources. This was accomplished through a mix of strategies that includes on-site renewable energy projects, solar farms, direct renewable electricity purchases from Community Choice Energy providers, and the purchase of Renewable Energy Certificates (REC). Figure 3 shows the County’s renewable electricity percentage usage from 2009 through 2019.
Green Buildings

Environmental Stewardship Goal No.4
Ensure that 100% of County buildings are LEED certified and require LEED standards for construction in county land use jurisdictions.

Since adoption of the Green Building Policy 7.14, a total of three (3) FAF managed facilities have received certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. FAF continues to incorporate Green Building Policy 7.14 in all its current planning of new construction projects, including Main Jail South, the South County Animal Shelter Services Center, and the Vietnamese American Service Center.

Sustainability in Capital Projects
To achieve an integrated design process and exceed State and County sustainability goals, the Energy and Sustainability group within FAF continues to engage during the programming, design, and schematic design phases of three major new construction projects: Main Jail South; South County Animal Services Center; and the Vietnamese American Service Center. Due to the varying nature and use of each facility, the sustainability strategies will differ. However, all three facilities are targeted to meet the County of Santa Clara's Green Building Policy 7.14, which requires all new County-owned facilities to achieve Leadership in Energy and Environmental Design (LEED) Silver certification. The Energy and Sustainability group is responsible for reviewing draft LEED scorecards and life cycle cost analyses to recommend strategies that ensure that a facility is designed, operated, and maintained in a sustainable manner.
Environmental Stewardship Goal No.5
Divert 100% of county waste from landfills and convert waste to energy.

Zero Waste Program
For calendar year 2019, despite the addition of various new County facility sites, including two new hospitals, the countywide diversion rates remain stable at 71% (see Figure 4). The existing contract with Republic is set to expire in December 2020. The RFP to be released in February 2020, will incorporate additional sustainability goals and use of innovative technology along with the base services scope of services to enable the County to reach the 100 percent diversion goal through waste to energy options or other means. Examples of innovative technologies may include a small-scale anaerobic digester that can process organic waste to capture biogas and generate finished compost. Business practices that highlight environmental stewardship and innovation will be considered as part of the solicitation and evaluation criteria.

Figure 4: Waste Diversion Percentages at County Facilities

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4 Base services include the collection and processing of the County’s solid waste for composting, recycling, and landfill in support of the County’s diversion requirement.
Water Conservation

Environmental Stewardship Goal No.6
Reduce our consumption of water by 20% and recycle or beneficially reuse 100% of our wastewater.

Despite an increase in the County real estate portfolio, which includes office buildings, detention facilities, and health clinics, facility potable and recycled water usage decreased by five percent (5%) in calendar year 2019. In addition, there are currently six facilities that use recycled water, including the new Downtown Health Center. Figure 5 provides the potable and recycled water usage for FAF serviced facilities.

![ESG No.6: FAF Annual Potable and Recycled Water](image)

**Figure 5: Potable Water and Recycled Water Usage in FAF Serviced Facilities**

Charcot Recycled Water Project
FAF received a total of $1 million in FY 19-20 funds to complete a landscaping upgrade at the County Center at Charcot. Project highlights include a full recycled water irrigation system, as well as low water and maintenance planting. Currently, the consultant is finalizing construction documents and the project is expected to be completed in fall 2020. Using recycled water for irrigation will save approximately 3.5 million gallons of potable water annually,
not only preserving the drinking water supply but also providing an estimated $2,200 in annual savings because recycled water is about 10 percent less expensive than potable water.

**Sustainable Landscaping**
OOS continues to maintain the County sustainable landscape management website that provides information to educate and promote sustainable landscaping to County employees, residents and businesses and reduce water usage.

A Landscape Assessment for all FAF-managed buildings (34 sites) was completed in June 2019. The Assessment included inventory and maps of existing landscape layouts, plant palettes, and irrigation systems and recommended changes to irrigation systems and plant palettes to increase sustainability and water efficiency, along with staffing and resource levels needed to maintain these new landscapes. The provided cost estimation for transitioning all existing project landscapes to sustainable was $10.7 million. FAF is exploring funding options. OOS will request additional funding for sustainable landscaping public outreach for FY 2020-21.
Environmental Stewardship Goal No.8
Ensure that 100% of public fleet vehicles are electric, hybrid electric or run on alternative fuels.

The County of Santa Clara’s total fleet vehicle inventory has remained stable over the last eight years. The 2009 year-end fleet inventory was 1,698 and the 2019 year-end inventory was 1,817, an increase of 119 vehicles or about 7%. During this time, the County workforce increased by 15%, from approximately 19,000 to 22,000 employees.

The total percentage of alternative fuel vehicles (AFVs) for FAF and Parks and Recreation Department (Parks) was 29.8% percent. Alternative Fuel Vehicles (AFVs) in the fleets of other departments are currently not reported. Figure 6 illustrates the percentage of AFVs for FAF and Parks since 2009.

Figure 6: Alternative Fuel Fleet, Excludes Roads and Airports (Roads) Vehicles
Electric Vehicle Charging Stations
FAF has allocated $2.1 million to design and construct approximately 170 level II electric vehicle charging ports. As shown in Table 1, the County has 137 active charging ports with another 33 ports that are expected to be available in the spring of 2020. Additionally, the County has 110 ports that are currently planned, but not yet under construction, for the PG&E EV Charge Network Program. Majority of the County’s charging stations are made available for fleet vehicles, County employees, and the general public. The installation of these charging stations increases the use of electric vehicles, thus reducing GHG emissions that would otherwise occur with vehicles operated using fossil fuels.

Table 1: Locations of County EV Charging Stations

<table>
<thead>
<tr>
<th>Charging Station Address</th>
<th># of EV Ports</th>
<th>Status of Level 2 Chargers</th>
</tr>
</thead>
<tbody>
<tr>
<td>950 N San Pedro, St San Jose</td>
<td>12</td>
<td>Active</td>
</tr>
<tr>
<td>70 W Hedding St, San Jose</td>
<td>4</td>
<td>Active</td>
</tr>
<tr>
<td>2265 Junction Ave, San Jose</td>
<td>18</td>
<td>Active</td>
</tr>
<tr>
<td>79 N 17th St, San Jose</td>
<td>16</td>
<td>Active</td>
</tr>
<tr>
<td>751 S Bascom Ave, San Jose</td>
<td>20</td>
<td>Active</td>
</tr>
<tr>
<td>2220 Moorpark Ave, San Jose</td>
<td>8</td>
<td>Active</td>
</tr>
<tr>
<td>55 W Younger Ave, San Jose</td>
<td>6</td>
<td>Active</td>
</tr>
<tr>
<td>1553 Berger Drive, San Jose</td>
<td>18</td>
<td>Active</td>
</tr>
<tr>
<td>373 W Julian St, San Jose</td>
<td>10</td>
<td>Active</td>
</tr>
<tr>
<td>171 W Hedding St, San Jose</td>
<td>20</td>
<td>Active</td>
</tr>
<tr>
<td>19050 Malaguerra Ave, Morgan Hill</td>
<td>5</td>
<td>Active</td>
</tr>
<tr>
<td>2310 N 1st St, San Jose</td>
<td>19</td>
<td>Under Construction</td>
</tr>
<tr>
<td>373 W Julian St, San Jose</td>
<td>14</td>
<td>Under Construction</td>
</tr>
<tr>
<td>150 Tasman Ave, San Jose</td>
<td>80</td>
<td>Planned</td>
</tr>
<tr>
<td>13555 Diessner Ave, San Martin</td>
<td>16</td>
<td>Planned</td>
</tr>
<tr>
<td>7475 Camino Arroyo, Gilroy</td>
<td>14</td>
<td>Planned</td>
</tr>
<tr>
<td>TOTAL</td>
<td>280</td>
<td></td>
</tr>
</tbody>
</table>
**Greening County Fleet and Operations**
On October 8, 2019 (Item No. 76), the Board of Supervisors approved a Service Agreement with Matrix Consulting Group, Ltd. to complete a Greening County Fleet and Operations Study. The Study will conduct a detailed evaluation of the County’s fleet management operation to determine a course of action for lowering GHG emissions, optimize the use of AFVs, reduce the use of non-renewable resources, operational efficiencies to reduce fleet vehicle demand, vehicle and staff levels needed to support the evolving fleet, and improve fuel efficiency in the most practical and cost-effective manner. It is anticipated that the study will be completed by the end of calendar year 2020.

**Employee Commuter Programs**

**Transportation Demand Management (TDM) Study**
On January 28, 2020, FAF and OOS will provide the Board of Supervisors with an overview of the findings from the County Employees TDM Implementation Guide and make recommendations for transportation programs for the County to consider in FY 2021. The Implementation Guide supports the County’s decision to extend the VTA SmartPass Program, and also recommends to implement a (i) Transit Subsidy Program, a (ii) Commuter Shuttle Program that can connect employee at the O’Connor and the VMC at Bascom Hospitals to Diridon Station, a (iii) more robust Carpool Program, and a (iv) Bikeshare Program. These programs were recommended because they are cost-effective compared to alternatives. They will also significantly reduce GHG emissions, reduce regional traffic and parking constraints at County facilities, and make the County an employer of choice while reducing commute-related stress.

**VTA SmartPass Program**
The County offers a SmartPass Program that has roughly 1,500 County individual employees who use the service for free non-express bus and light rail rides each month. Providing SmartPasses for just County employees currently costs $658,000 annually, which is roughly $440 annually per employee. On December 10, 2019, the Board extended the SmartPass Program for six months until June 30, 2020. The Administration recommends to extend the SmartPass Program for the foreseeable future because it will have significantly higher participation and GHG reduction potential than any other proposed commute program that provides an equivalent service for VTA users.
Pre-Tax Commuter Benefits
The County currently also offers a voluntary Pre-Tax Commuter Benefit Program which allows employees to save money on public transit (e.g. Caltrain, BART, etc.) and work-related parking expenses. However, participation in this benefit has remained at less than 60 employees per month over the 8 months the Program has been in place. Low participation is due mostly because it only provides a partial discount proportional to an employees’ income tax rate, while employees pay out of pocket for their remaining public transit costs.
Environmental Stewardship Goal No.10
Plant 1,000 trees in unincorporated urban county pockets and work with local governments and agencies to build a comprehensive urban forest

The County so far has planted 757 trees (75 percent) between 2011 and 2019 through contracts with the volunteer-based non-profit organization Our City Forest (OCF). At the Feb. 11, 2020 Board of Supervisors meeting OOS will present to the Board an approach and strategy to support the annual planting of 1,000 climate-appropriate species in areas to address issues such as urban heat islands, low tree canopy, poor air quality, and stormwater management, and work with local governments, agencies, and non-profits to build a comprehensive urban forest.

Figure 7: County Tree Planting with Our City Forest
County Tree Programs

Tree Management Guide and Departmental Plans
In 2018-19, the OOS Integrated Pest Management (IPM) program worked with Roads and Airports Department (RDA), FAF and Parks to identify departmental challenges, propose solutions, and share best practices aimed at creating sustainable tree management, completing ESG#10, and ultimately developing a Countywide forest management plan. An *Ecology-Based Tree Management Guide* (Tree Guide) was co-developed with RDA, FAF and Parks to help structure and organize County tree management overall, as a foundation for then developing subsequent department-specific plans. Policy support and direction will be explored to adopt this guide and implement department-specific guide development.

County Tree Inventory
In 2019, Davey Resource Group completed a tree inventory on 38 FAF-managed sites, as well as in 29 County parks, in areas which receive the most interaction with people, such as restrooms, picnic areas, parking lots, and buildings. This inventory included 19,056 trees and documented their condition based on International Society of Arboriculture standards. Inventory data can be used to more accurately develop future department tree planting and maintenance plans, as well as to determine environmental benefits of County trees. Tree inventory data is maintained in Davey’s TreeKeeper system. Inventory data will be analyzed for recommendations and then discussed with departments for appropriate actions. This may lead to additional tree maintenance funding requests from respective departments.
Green Workforce and Job Training

Environmental Stewardship Goal No.11
Increase the available blue and white collar "clean and green workforce" course/trainings available regionally and in Santa Clara County and help place 20,000 trainees and graduates in the regional labor force by the end of 2013.

In 2019, OOS through the BayREN partnered with Rising Sun Center for Opportunity to employ and train seventeen local youth as Energy Specialists. The youth provided four hundred and fifty-seven no-cost Green House Calls to help homeowners save energy, water, and money.

Figure 8: Rising Sun Center Youth Energy Specialists Cohort
Stream and Riparian Corridor Stewardship

Environmental Stewardship Goal No.12
Develop educational programs and volunteer service opportunities that promote local stewardship of streams and riparian corridors and develop programs of ecologically compatible recreational use of streams and riparian corridors.

On September 10, 2019 (Item No. 42), the Board adopted a new ESG to “Develop educational programs and volunteer service opportunities that promote local stewardship of streams and riparian corridors and develop programs of ecologically compatible recreational use of streams and riparian corridors.” Efforts on achieving this goal will be coordinated between OOS, Parks, and the County’s Consumer and Environmental Protection Agency (CEPA).

Figure 9: Penitencia Creek at Mabury Rd. & N. Jackson Ave., San Jose
Sustainability and Greenhouse Gas Reduction, Programs & Policy Updates

County Adopts Climate Emergency Resolution
In August 27, 2019 (Item No.10), the Board approved a resolution declaring a climate emergency that demands immediate action to halt, reverse, restore, and address the consequences and causes of global warming. OOS will be working with County departments and external partners to identify and accelerate action to reduce our greenhouse gas emission and prepare for climate change impacts.

Sustainability Master Plan (SMP)
OOS recently relaunched efforts to complete development of the Sustainability Master Plan. On January 22, 2020, the County’s Directors Stewardship Team and Sustainability County Working Group (consisting of agency directors, managers, and sustainability leads) convened for an update on the progress of the SMP, OOS facilitated discussions on SMP goals, strategies, and targets. Over 50 staff were in attendance and contributed valuable feedback to aid in the SMP’s development. Further updates on the SMP’s progress will be provided in March per the HLUET Work Plan.

Community Climate Action Plan (CCAP)
In October 2019, OOS completed consultant interviews for the CCAP and is moving forward with contract negotiations in mid-February 2020.

Municipal Operations GHG Inventory
The municipal operations GHG emissions inventory for CY 2019 will be available in spring 2020. FAF is awaiting approval to release an Employee Commute Survey to compile information for the employee commute emissions sector. However, it is anticipated that this sector will be the largest contributor towards operational emissions.
Climate Adaptation and Preparedness Through Silicon Valley 2.0 (SV2.0)
In October 2019, OOS revisited the feasibility of updating the SV2.0 Climate Change Preparedness Decision Support Tool. Discussions between OOS, AECOM, and Point Blue continue regarding potential improvements to the tool, its integration with other sustainability efforts, and its usability for both County staff and the public.

County Climate Coalition
OOS continues to work with the Climate Reality Project (CRP) to build the County Climate Coalition. As of December 2019, seven new member counties have joined, bringing the total to 29 member counties in the coalition. OOS staff continue to meet with CRP staff monthly to discuss program updates and the coordination and distribution of its quarterly newsletter. The newsletter provides members with the latest updates on local climate initiatives and provide resources for members to connect with one another. The next newsletter is scheduled to be sent in February 2020.
DATE: February 20, 2020
TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)
FROM: John P. Mills, Director, Employee Services Agency
SUBJECT: HLUET Semi-annual Extra Help Usage Report Fiscal Year 2020

RECOMMENDED ACTION
Receive semi-annual report from the Employee Services Agency relating to Fiscal Year 2020 extra help usage for agencies and departments reporting to the Housing, Land Use, Environment, and Transportation Committee.

FISCAL IMPLICATIONS
There are no fiscal implications associated with the receipt of this informational report.

CONTRACT HISTORY
Not applicable.

REASONS FOR RECOMMENDATION
To monitor and comply with the County's agreement with SEIU Local 521, this semi-annual report is a summary of the extra-help usage for SEIU Local 521-represented classifications in agencies/departments that report to the Housing, Land Use, Environment, and Transportation (HLUET) Committee. Additionally, this report is a summary of the extra-help usage for non-SEIU Local 521-represented classifications in agencies/departments that report to the HLUET Committee.

A summary comparison of the actual extra-help usage for the first two quarters of Fiscal Year 2020, as compared to the extra-help reduction plan for agencies/departments reporting to the HLUET Committee, is as follows:

For SEIU Local 521-represented classifications, the total allocated hours for agencies/departments reporting to the HLUET Committee for Fiscal Year 2020 is 82,913 hours. This semi-annual summary shows that these agencies/departments used 46,432.48 hours, which is approximately 56.0% of the allocated hours.
For non-SEIU Local 521-represented classifications, the total allocated hours for agencies/departments reporting to the HLUET Committee for Fiscal Year 2020 is 19,980 hours. This semi-annual summary shows that these agencies/departments used 14,287.40 hours, which is approximately 71.5% of the allocated hours.

Attached is a semi-annual summary of extra-help hours usage by each agency/department reporting to the HLUET Committee for Fiscal Year 2020.

**CHILD IMPACT**
The recommended action will have no/neutral impact on children and youth.

**SENIOR IMPACT**
The recommended action will have no/neutral impact on seniors.

**SUSTAINABILITY IMPLICATIONS**
The recommended action will have no/neutral sustainability implications.

**BACKGROUND**
On March 22, 2000, the Board of Supervisors approved a re-opener with SEIU Local 521 to reduce extra-help usage incrementally over the next three and one-half years, from January 1, 2000 through June 22, 2003.

For Fiscal Year 2020, the County's agreement with SEIU Local 521 is to maintain the reduction level from Fiscal Year 2003. A similar reduction plan is in place for non-SEIU Local 521 extra-help usage.

**CONSEQUENCES OF NEGATIVE ACTION**
The Committee would not have a current extra-help usage status report.

**STEPS FOLLOWING APPROVAL**
The Clerk of the Board of Supervisors will follow the usual procedures for a report of this type.

**ATTACHMENTS:**
- HLUET - SEIU Semi-annual Extra Help Usage Report Fiscal Year 2020 (PDF)
- HLUET - Non-SEIU Semi-annual Extra Help Usage Report Fiscal Year 2020 (PDF)
<table>
<thead>
<tr>
<th>Agency/Department</th>
<th>Hours used in 1st Qtr</th>
<th>Hours used in 2nd Qtr</th>
<th>50% Credit for Interns</th>
<th>Total FYTD Hours Used</th>
<th>Allocated Hours FY 2020</th>
<th>% Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer &amp; Environmental Protection</td>
<td>2,438.40</td>
<td>1,536.10</td>
<td>226.50</td>
<td>3,748.00</td>
<td>7,480.00</td>
<td>50.1%</td>
</tr>
<tr>
<td>Dept of Planning and Development</td>
<td>229.50</td>
<td>424.25</td>
<td>-</td>
<td>653.75</td>
<td>3,117.00</td>
<td>21.0%</td>
</tr>
<tr>
<td>Parks &amp; Recreation</td>
<td>29,616.78</td>
<td>13,080.60</td>
<td>816.65</td>
<td>41,880.73</td>
<td>72,016.00</td>
<td>58.2%</td>
</tr>
<tr>
<td>Roads &amp; Airports</td>
<td>40.00</td>
<td>110.00</td>
<td>-</td>
<td>150.00</td>
<td>300.00</td>
<td>50.0%</td>
</tr>
<tr>
<td>Total</td>
<td>32,324.68</td>
<td>15,150.95</td>
<td>1,043.15</td>
<td>46,432.48</td>
<td>82,913.00</td>
<td>56.0%</td>
</tr>
<tr>
<td>Agency/Department</td>
<td>Hours used in 1st Qtr</td>
<td>Hours used in 2nd Qtr</td>
<td>Total FYTD Hours Used</td>
<td>Allocated Hours FY 2020</td>
<td>% Used</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>-------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Consumer &amp; Environmental Protection</td>
<td>1,855.10</td>
<td>787.00</td>
<td>2,642.10</td>
<td>4,300.00</td>
<td>61.4%</td>
<td></td>
</tr>
<tr>
<td>Dept of Planning and Development</td>
<td>-</td>
<td>60.00</td>
<td>60.00</td>
<td>1,040.00</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>Parks &amp; Recreation</td>
<td>3,340.20</td>
<td>4,031.85</td>
<td>7,372.05</td>
<td>10,700.00</td>
<td>68.9%</td>
<td></td>
</tr>
<tr>
<td>Roads &amp; Airports</td>
<td>2,578.25</td>
<td>1,635.00</td>
<td>4,213.25</td>
<td>3,940.00</td>
<td>106.9%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7,773.55</td>
<td>6,513.85</td>
<td>14,287.40</td>
<td>19,980.00</td>
<td>71.5%</td>
<td></td>
</tr>
</tbody>
</table>
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Harry Freitas, Director, Roads and Airports

SUBJECT: Quarterly Delegation of Authority Status Report

RECOMMENDED ACTION
Receive report from the Roads and Airports Department relating to agreements executed by the Director, Roads and Airports Department, pursuant to authority delegated by the Board of Supervisors on December 13, 2016.

FISCAL IMPLICATIONS
The Department estimated that the cost of preparing and processing a legislative file is approximately $1,600. For the fourth quarter of Calendar Year 2019, the Department saved an estimated $4,800 (3 items x $1,600/item) in legislative file preparation and processing costs by being able to execute routine agreements that previously required Board approval.

REASONS FOR RECOMMENDATION
On December 13, 2016, the Board of Supervisors adopted a resolution delegating authority to the Director, Roads and Airport Department, subject to specified conditions and directed the Department to provide quarterly reports to the Housing, Land Use, Environment and Transportation Committee summarizing the agreements entered into pursuant to the delegation of authority. The attached report covers the fourth quarter of Calendar Year 2019 (October 1 through December 31).

ATTACHMENTS:
• Summary of Documents signed by the Director - CY 2019 Fourth Quarter HLUET (PDF)
Delegation of Authority to the Director of Roads and Airports Department Calendar Year 2019
4th Quarter 2019

<table>
<thead>
<tr>
<th>Date signed by the Director</th>
<th>Description of Agreement</th>
<th>Entity</th>
<th>Supervisorial District</th>
<th>Dollar Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  10/4/2019</td>
<td>Maintenance and Indemnification Agreement with Co-Trustees of the Linh Lu Family Trust dated October 30, 2017 to install a fence, mailbox, retaining wall, and landscaping within the County right-of-way at 15830 Rica Vista Way, San Jose.</td>
<td>Linh Lu Family Trust</td>
<td>Three</td>
<td>$0</td>
</tr>
<tr>
<td>2  10/11/2019</td>
<td>Maintenance and Indemnification Agreement with City of Gilroy to install additional landscape, irrigation system, entry monument, sidewalk, tubular steel fence, bike racks, and electroliers street lights in the County right-of-way in the vicinity of Santa Teresa Boulevard and Hecker Pass Highway in Gilroy.</td>
<td>City of Gilroy</td>
<td>One</td>
<td>$0</td>
</tr>
<tr>
<td>3  12/12/2019</td>
<td>Maintenance and Indemnification Agreement with E. and L. Rosenquist to install a retaining wall and improvements within County right-of-way along Gist Road in Los Gatos, CA.</td>
<td>E. and L. Rosenquist</td>
<td>One</td>
<td>$0</td>
</tr>
</tbody>
</table>
DATE: February 20, 2020
TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)
FROM: Harry Freitas, Director, Roads and Airports
SUBJECT: County Airports Quarterly Noise Report

RECOMMENDED ACTION
Receive Quarterly Noise Report from the Roads and Airports Department, Airports Division.

FISCAL IMPLICATIONS
There is no fiscal impact to the General Fund or the Airport Enterprise Fund.

CONTRACT HISTORY
None.

REASONS FOR RECOMMENDATION
The HLUET Committee has requested that the County Airports Quarterly Noise Report be agendized for the Committee’s review on a quarterly basis.

CHILD IMPACT
The recommended action will have no/neutral impact on children and youth.

SENIOR IMPACT
The recommended action will have no/neutral impact on seniors.

SUSTAINABILITY IMPLICATIONS
The recommended action will have no/neutral sustainability implications.

BACKGROUND
Staff documents all complaints, and where possible establishes communications with the complainant to secure additional information or to answer specific questions regarding aircraft operations. When sufficient information is available, staff will contact an aircraft operator to determine if the aircraft was operated outside of normal flight procedures or if corrective action is warranted.

During the fourth quarter of 2019, which covers the months of October, November and December, there were twelve noise referrals for Reid-Hillview Airport, and no referral for
San Martin Airport (attachment). One complainant accounted for all but one of the referrals with sixteen individual phone calls\(^1\) related to activity at Reid-Hillview Airport.

There were 48,825 operations (takeoffs and landings) during the quarter at Reid-Hillview, which equates to one referral for every 4,068 operations. There were 9,692 operations at San Martin Airport.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul</td>
<td>17,894</td>
<td>577</td>
<td>3,272</td>
<td>106</td>
</tr>
<tr>
<td>Aug</td>
<td>16,727</td>
<td>558</td>
<td>3,430</td>
<td>114</td>
</tr>
<tr>
<td>Sep</td>
<td>14,204</td>
<td>458</td>
<td>2,990</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>48,825</td>
<td>531</td>
<td>9,692</td>
<td>105</td>
</tr>
</tbody>
</table>

**ATTACHMENTS:**

- 4Q19 Referrals (PDF)

---

\(^1\) Multiple calls in one day from one caller are counted as one referral.

\(^2\) Estimated using recorded E16 Unicom radio calls.
### Quarterly Noise Referrals

<table>
<thead>
<tr>
<th>Airport</th>
<th>Date</th>
<th>Time</th>
<th>Nature of Complaint</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHV</td>
<td>10/4/2019</td>
<td>10:59:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Friday, October 4. A Cessna aircraft conducted a right-downwind departure at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/6/2019</td>
<td>10:29:00 PM</td>
<td>Mr. B from East San Jose left two (2) messages on the County Airports noise referral voicemail. Mr. B stated that there were departures from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Sunday, October 6. A Citabria aircraft conducted two takeoffs at the times specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/7/2019</td>
<td>10:53:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Monday, October 7. Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/10/2019</td>
<td>10:16:00 PM</td>
<td>Mr. B from East San Jose left two (2) messages on the County Airports noise referral voicemail. Mr. B stated that there were departures from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Thursday, October 10. A Cessna 172 aircraft conducted two takeoffs at the times specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/18/2019</td>
<td>11:07:00 PM</td>
<td>Mr. B from East San Jose left three (3) messages on the County Airports noise referral voicemail. Mr. B stated that there were departures from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Friday, October 18. A Cessna 152 aircraft conducted three takeoffs at the times specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/20/2019</td>
<td>10:09:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Sunday, October 20. A Cessna 152 aircraft conducted a departure at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>10/24/2019</td>
<td>10:36:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Thursday, October 24. A Cessna 152 aircraft conducted a straight-out departure at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>11/1/2019</td>
<td>11:00:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Tuesday, October 1. A Cessna 172 aircraft conducted a right-downwind missed-approach at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>12/6/2019</td>
<td>10:06:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Monday, December 16. A Piper Cherokee aircraft conducted a right-downwind departure at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>12/12/2019</td>
<td>9:00:00 AM</td>
<td>Mr. K called airport operations to complain about low flying aircraft over his house at night and between 0900 and 1000 hours.</td>
<td>Airport staff spoke with Mr. K and discussed the nature of the aircraft operations in question. Airport staff also advised the caller that a noise report will be filed on his behalf. Mr. K will call back if noise issues continue.</td>
</tr>
</tbody>
</table>
## Quarterly Noise Referrals

<table>
<thead>
<tr>
<th>Airport</th>
<th>Date</th>
<th>Time</th>
<th>Nature of Complaint</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHV</td>
<td>12/22/2019</td>
<td>10:08:00 PM</td>
<td>Mr. B from East San Jose left a message on the County Airports noise referral voicemail. Mr. B stated that there was a departure from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the evening of Friday, November 22. A Cessna aircraft conducted a right-crosswind departure at the time specified by the caller. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
<tr>
<td>RHV</td>
<td>12/31/2019</td>
<td>11:52:00 PM</td>
<td>Mr. B from East San Jose left two (2) messages on the County Airports noise referral voicemail. Mr. B stated that there were departures from RHV Airport post 10:00 pm.</td>
<td>Airport staff reviewed ATC radio transmissions and available radar data for the late evening of Tuesday, January 31. Two Separate Cessna aircraft conducted departures at the times specified by the callers. The caller did not reference an aircraft operation contrary to County or Federal rules and regulations. No further action was taken.</td>
</tr>
</tbody>
</table>
DATE: February 20, 2020
TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)
FROM: Jo Zientek, Director, Consumer/Environmental Protection Agency
SUBJECT: FY20 Biannual Status Report - Spay/Neuter Program

RECOMMENDED ACTION
Receive evaluation and biannual report relating to the Low-cost Spay/Neuter Program.

FISCAL IMPLICATIONS
There is no impact to the General Fund as a result of this action.

REASONS FOR RECOMMENDATION
The Housing, Land Use, Environment, and Transportation (HLUET) Committee requested that the Division of Animal Care and Control in the Consumer and Environmental Protection Agency (CEPA) provide Spay/Neuter Program status reports biannually to HLUET for July through December and the entire fiscal year.

CHILD IMPACT
The recommended action will have no/neutral impact on children and youth.

SENIOR IMPACT
The recommended action will have no/neutral impact on seniors.

SUSTAINABILITY IMPLICATIONS
The recommended action will have no/neutral sustainability implications.

BACKGROUND
Program Evaluation
In FY99, the Board of Supervisors approved funding to subsidize the cost of spay/neuter in the County of Santa Clara to reduce shelter euthanasia and prevent the birth of unplanned litters. At that time, the County Animal Shelter did not have clinic or veterinary personnel to provide this service. Therefore, the Department of Agriculture and Environmental Management launched a Countywide program to subsidize the procedure at private veterinary clinics and animal shelters equipped to perform the surgeries Countywide. More
recently, the County began developing inhouse services and hired its first staff veterinarian in FY17. Since then, County Animal Shelter veterinary operations have grown to allow the shelter to fulfill over 1,500 spay/neuter requests for the public, in addition to more than 2,000 shelter pet surgeries in 2019. Through contracted service providers, 2,789 spay/neuter services were completed during the same period.

The need for the County to provide direct spay/neuter services was further necessitated by the recent closure of Saint Francis of Assisi Spay/Neuter Clinic: the last remaining South County participant in the County’s Low-Cost Spay/Neuter Program, which performed approximately 25% of all the program’s surgeries. The clinic’s closing left a significant service gap for affordable veterinary care in Morgan Hill, San Martin, and Gilroy, which represents one of the lower-income communities in Santa Clara County.

With the new Animal Services Center scheduled to open in 2021, CEPA staff is evaluating the existing program to ensure the best use of County General Fund resources for providing low-cost spay/neuter services. Factors in this evaluation include the following:

1) **Optimize use of new clinics in the Animal Services Center:** The County made a significant investment in the Animal Services Center, constructed to meet the evolving needs of County’s pet and human populations. The new Center includes a modern veterinary clinic with dual operating rooms built specifically to provide high volume and quality spay/neuter services to the public.

2) **Ability to target services to low-income/housing insecure residents:** The current Low-Cost Spay/Neuter Program is open to all residents of Santa Clara County on a “first come, first served” basis, regardless of socioeconomic status. Unfortunately, this means that those who need the services most may not be as likely to benefit from them. Animal Services staff are engaging pet owners in the field and working with other County agencies to identify and offer services to pet owners experiencing housing or other financial issues. These efforts reach those who could not otherwise afford for their pets to access care at a private practice veterinary clinic. This approach increases the effectiveness of the service while encouraging relationships between veterinary practices and those pet owners with the means to procure services on their own.

3) **Redundant existing services:** Apart from the County’s program, low-cost or free spay/neuter services are also provided Countywide by several well-established organizations, including City of San Jose Animal Care and Services, Silicon Valley Animal Control Authority (Santa Clara), Humane Society of Silicon Valley (Milpitas) and Pets in Need (Redwood City/Palo Alto). South County is the only area without access to low-cost spay/neuter services apart from the County’s in-house services provided at the existing San Martin Animal Shelter.

4) **Cost of Current Program:** Under the current spay/neuter program, the County reimburses spay/neuter providers at a rate of $45-$200 depending on the type and sex of the pet. The owner contributes an additional co-pay up to the remaining balance of the cost of the service. At current reimbursement rates, participating clinics have dropped to an all-time low this past year. It is expected that providers will require increased reimbursement rates to continue participation. The conservative estimate of County staff time to provide these services (with
overhead and benefits) and materials is equal to or less than the cost paid by the County to contract veterinarians, without requiring a co-pay from the resident. Although the co-pay is a reasonable cost, it still may present a barrier for those most needing these services. Further, the current program requires considerable administrative costs to oversee contracts; reconcile payments; collect program data; compile billing information.

5) Addressing unmet veterinary health needs: By offering spay/neuter services to the pets of underserved residents, the County can efficiently provide at the same time veterinary services to these companion animals. As part of the County’s in-house service, County veterinarians administer basic vaccinations and anti-parasitic medications; implant a microchip for identification to help with reunification should they become lost; provide care for injuries and illnesses to improve the lives of pets and help them remain with their families. These services are not included in the services provided by private participating clinics in the current program.

CEPA staff has engaged participating service providers and cities about this evaluation and the potential for program changes, and no issues were identified. Upon finalizing the evaluation, CEPA will bring forward any recommendations as part of the FY21 budget process.

Bi-annual Report

Spay/Neuter Funding

The Board approved a FY20 base budget of $211,000 for the Spay/Neuter Program. This funding is augmented with donations and reimbursements from three participating cities. For the first half of FY20, eight contracted veterinarian clinics utilized $67,095 of the Low-Cost Spay/Neuter Program funds for services rendered. Following the closure of Saint Francis of Assisi Spay/Neuter Clinic, the last remaining clinic in the South County area, the Board approved the reallocation of the $69,000 in funds previously allotted to the clinic, to add 1.0 FTE Veterinarian to CEPA with the intent of filling the service gap in the areas of Gilroy, San Martin, and Morgan Hill.

Limited No Charge Spay/Neuter Services for Large Breed Dogs

Under the Large Breed Dog Program, male large breed dogs of any age, and female large breed dogs under six months of age, are eligible for free spay/neuter services. The maximum County subsidy for a female large breed dog over six months of age is $100.
Since this program began, the following numbers of surgeries have been performed:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Surgeries</th>
<th>Fiscal Year</th>
<th>Surgeries</th>
<th>Fiscal Year</th>
<th>Surgeries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>84</td>
<td>2013</td>
<td>294</td>
<td>2018</td>
<td>281</td>
</tr>
<tr>
<td>2009</td>
<td>129</td>
<td>2014</td>
<td>327</td>
<td>2019</td>
<td>324</td>
</tr>
<tr>
<td>2010</td>
<td>157</td>
<td>2015</td>
<td>334</td>
<td>2020*</td>
<td>57</td>
</tr>
<tr>
<td>2011</td>
<td>154</td>
<td>2016</td>
<td>320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>261</td>
<td>2017</td>
<td>294</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Reporting Period: July-December

**Program Status**

For the first half of FY20, eight veterinary clinics participated in the Program and allocated funding as shown below:

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Total Funds Utilized FY20 (July-December)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feral &amp; Stray Cats</td>
<td>$33,655</td>
</tr>
<tr>
<td>Domestic Cats</td>
<td>$7,950</td>
</tr>
<tr>
<td>Dogs</td>
<td>$25,490</td>
</tr>
<tr>
<td><strong>Total Low-cost Spay/Neuter</strong></td>
<td><strong>$67,095</strong></td>
</tr>
<tr>
<td>Large Breed Dogs</td>
<td>$8,210</td>
</tr>
<tr>
<td><strong>Total Spay Neuter/Program</strong></td>
<td><strong>$75,305</strong></td>
</tr>
</tbody>
</table>
Program Surgeries Completed and Funds Used

Through the first half of FY20, participating clinics completed the following number of surgeries and utilized the following percentages of allocated contract funding:

<table>
<thead>
<tr>
<th>Spay/Neuter Clinic</th>
<th>Feral Cat</th>
<th>Domestic Cat</th>
<th>Dog</th>
<th>Total Surgeries</th>
<th>% Allocated Funds Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akal/ San Jose Animal Hospital</td>
<td>60</td>
<td>46</td>
<td>62</td>
<td>168</td>
<td>35.5%</td>
</tr>
<tr>
<td>Animal Medical Center</td>
<td>576</td>
<td>14</td>
<td>25</td>
<td>615</td>
<td>80.5%</td>
</tr>
<tr>
<td>The Animal Medical Clinic</td>
<td>125</td>
<td>14</td>
<td>31</td>
<td>164</td>
<td>51.4%</td>
</tr>
<tr>
<td>Humane Society of Silicon Valley</td>
<td>127</td>
<td>0</td>
<td>29</td>
<td>156</td>
<td>25.2%</td>
</tr>
<tr>
<td>Reed Animal Hospital</td>
<td>29</td>
<td>5</td>
<td>10</td>
<td>44</td>
<td>19.7%</td>
</tr>
<tr>
<td>SNV Alum Rock and Bloom Plaza</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td>Silicon Valley Animal Control Authority</td>
<td>3</td>
<td>136</td>
<td>157</td>
<td>296</td>
<td>38.9%</td>
</tr>
<tr>
<td>Canyon Creek Pet Hospital</td>
<td>1</td>
<td>50</td>
<td>19</td>
<td>70</td>
<td>56.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>921</strong></td>
<td><strong>265</strong></td>
<td><strong>345</strong></td>
<td><strong>1,531</strong></td>
<td><strong>44.1%</strong></td>
</tr>
</tbody>
</table>

In addition to the Low-Cost Spay/Neuter Program, the Animal Shelter performs spay/neuter surgeries for all previously unaltered shelter animals. In FY15, the Shelter began piloting a program to provide low-cost spay/neuter for owned pets and community cats. To date, these services have not used funding from the Low-Cost Spay/Neuter Program.

Animal Shelter Positive Outcome Statistics

Animals adopted, placed with a rescue group, and those returned to their owner/guardian are considered to have achieved a positive outcome. The HLUET Committee requested that the Shelter’s positive outcome statistics be provided with this report. The Asilomar/Maddie’s Fund Report (attached) lists the activity of the Shelter during the calendar year. This attachment includes the live release rate, beginning shelter count (or inventory), and ending shelter count. To be considered a “no-kill” shelter, the live release rate must be at least 90%.
The following are the Shelter’s live release rates:

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Live Release Rate</th>
<th>Calendar Year</th>
<th>Live Release Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>72.4%</td>
<td>2015</td>
<td>93.8%</td>
</tr>
<tr>
<td>2011</td>
<td>80.2%</td>
<td>2016</td>
<td>92.8%</td>
</tr>
<tr>
<td>2012</td>
<td>89.2%</td>
<td>2017</td>
<td>92.9%</td>
</tr>
<tr>
<td>2013</td>
<td>90.3%</td>
<td>2018</td>
<td>94.3%</td>
</tr>
<tr>
<td>2014</td>
<td>90.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONSEQUENCES OF NEGATIVE ACTION**

The HLUET Committee and the Board of Supervisors will not receive the FY20 biannual status report on the Spay/Neuter Program and animal shelter operations.

**ATTACHMENTS:**

- Asilomar Report 2019  (PDF)
LIVE RELEASE RATE: 94.4%

The Live Release Rate does not include 96 owner/guardian requested euthanasias which were unhealthy and untreatable (see line R) and 189 animals that died or were lost in shelter care (see line U).

Beginning Shelter and Ending Shelter totals have an acceptable variance of .5% due to database variances in intake and outcome dispositions of the shelter population.

### A BEGINNING SHELTER COUNT

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33</td>
<td>20</td>
<td>53</td>
</tr>
</tbody>
</table>

### B INTAKE (Live Dogs and Cats Only)

#### From the Public

- **Healthy**: 851, 441, 1292
- **Treatable-Rehabilitatable**: 84, 1,304, 1,388
- **Treatable-Manageable**: 112, 95, 207
- **Unhealthy & Untreatable**: 57, 1,383, 1,440

#### Subtotal Intake from the Public

|       | 1104 | 3223 | 4327 |

### C Incoming Transfers from Organizations within Community/Coalition

- **Healthy**: 32, 9, 41
- **Treatable-Rehabilitatable**: 2, 16, 18
- **Treatable-Manageable**: 2, 4, 6
- **Unhealthy & Untreatable**: 28, 30, 58

#### Subtotal Intake From Incoming Transfers from Organizations within community

|       | 64   | 59   | 123  |

### D Incoming Transfers from Organizations outside Community/Coalition

- **Healthy**: 30, 6, 36
- **Treatable-Rehabilitatable**: 7, 25, 32
- **Treatable-Manageable**: 10, 1, 11
- **Unhealthy & Untreatable**: 0, 0, 0

#### Subtotal Intake From Incoming Transfers from Organizations outside community

|       | 47   | 32   | 79   |

### E From Owners/Guardians Requesting Euthanasia

- **Healthy**: 0, 0, 0
- **Treatable-Rehabilitatable**: 2, 2, 4
- **Treatable-Manageable**: 6, 6, 12
- **Unhealthy & Untreatable**: 66, 26, 92

#### Subtotal Intake From Owners/Guardians Requesting Euthanasia

|       | 74   | 34   | 108  |

### F TOTAL INTAKE [B + C + D + E]

|       | 1289 | 3348 | 4637 |

### G From Owners/Guardians Requesting Euthanasia (Unhealthy & Untreatable Only)

|       | -66  | -26  | -92  |

### H ADJUSTED TOTAL INTAKE [F minus G]

|       | 1223 | 3322 | 4545 |

### I  ADOPTIONS

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>419</td>
<td>1,161</td>
<td>1,580</td>
</tr>
<tr>
<td>Treatable-Rehabilitatable</td>
<td>11</td>
<td>31</td>
<td>42</td>
</tr>
<tr>
<td>Treatable-Manageable</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Unhealthy &amp; Untreatable</td>
<td>1</td>
<td>27</td>
<td>28</td>
</tr>
</tbody>
</table>

**TOTAL ADOPTIONS**

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>440</td>
<td>1228</td>
<td>1668</td>
</tr>
</tbody>
</table>

### J  OUTGOING TRANSFERS to Organizations within Community/Coalition

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>51</td>
<td>50</td>
<td>101</td>
</tr>
<tr>
<td>Treatable-Rehabilitatable</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Treatable-Manageable</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Unhealthy &amp; Untreatable</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL OUTGOING TRANSFERS to Organizations within Community/Coalition**

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55</td>
<td>61</td>
<td>116</td>
</tr>
</tbody>
</table>

### K  OUTGOING TRANSFERS to Organizations outside Community/Coalition

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>48</td>
<td>212</td>
<td>260</td>
</tr>
<tr>
<td>Treatable-Rehabilitatable</td>
<td>18</td>
<td>32</td>
<td>50</td>
</tr>
<tr>
<td>Treatable-Manageable</td>
<td>12</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Unhealthy &amp; Untreatable</td>
<td>7</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

**TOTAL OUTGOING TRANSFERS to Organizations outside Community/Coalition**

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85</td>
<td>247</td>
<td>332</td>
</tr>
</tbody>
</table>

### L  RETURN TO OWNER/GUARDIAN

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>540</td>
<td>39</td>
<td>579</td>
</tr>
</tbody>
</table>

### LL  RETURN TO FIELD

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>386</td>
<td>386</td>
</tr>
</tbody>
</table>

### DOGS & CATS EUTHANIZED

### M  Healthy (Includes Owner/Guardian Requested Euthanasia)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### N  Treatable-Rehabilitatable (Includes Owner/Guardian Requested Euthanasia)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### O  Treatable-Manageable (Includes Owner/Guardian Requested Euthanasia)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### P  Unhealthy & Untreatable (Includes Owner/Guardian Requested Euthanasia)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>117</td>
<td>161</td>
<td>278</td>
</tr>
</tbody>
</table>

### Q  TOTAL EUTHANASIA [M + N + O + P]

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>117</td>
<td>161</td>
<td>278</td>
</tr>
</tbody>
</table>

### R  Owner/Guardian Requested Euthanasia (Unhealthy & Untreatable Only)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-66</td>
<td>-30</td>
<td>-96</td>
</tr>
</tbody>
</table>

### S  ADJUSTED TOTAL EUTHANASIA [Q minus R]

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>51</td>
<td>131</td>
<td>182</td>
</tr>
</tbody>
</table>

### T  SUBTOTAL OUTCOMES [I + J + K + L + LL + S] Excludes Owner/Guardian Requested Euthanasia (Unhealthy & Untreatable Only)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1171</td>
<td>2092</td>
<td>3263</td>
</tr>
</tbody>
</table>

### U  DIED OR LOST IN SHELTER/CARE

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>182</td>
<td>189</td>
</tr>
</tbody>
</table>

### V  TOTAL OUTCOMES [T + U] Excludes Owner/Guardian Requested Euthanasia (Unhealthy & Untreatable Only)

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1178</td>
<td>2274</td>
<td>3452</td>
</tr>
</tbody>
</table>

### W  ENDING SHELTER COUNT

<table>
<thead>
<tr>
<th></th>
<th>Dog</th>
<th>Cat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>78</td>
<td>1062</td>
<td>1140</td>
</tr>
</tbody>
</table>
DATE: February 20, 2020

TO: Housing, Land Use, Environment, and Transportation Committee (HLUET)

FROM: Ky Le, Director, Office of Supportive Housing

SUBJECT: Supportive Housing Reports

RECOMMENDED ACTION
Consider recommendations relating to Supportive Housing System of Care reports. (Office of Supportive Housing)

Possible action:
   a. Receive monthly report relating to Supportive Housing System Dashboard.
   b. Receive semi-annual report relating to Reentry Housing programs.

FISCAL IMPLICATIONS
There are no fiscal implications associated with this informational report.

REASONS FOR RECOMMENDATION
At its meeting on January 12, 2016 (Item No. 11), the Board of Supervisors directed the Administration to provide the Board with recurring reports or dashboards about the capacity and effectiveness of the supportive housing system for homeless individuals and families. The purpose of the reports is to communicate the impact of the County and community investments in solutions to prevent and end homelessness. On October 19, 2017 (Item No. 13), the Housing, Land Use, Environment, and Transportation Committee (HLUET) approved a monthly reporting schedule that includes a Supportive Housing System Dashboard and a semi-annual program type or subpopulation report or annual system report.

Attached is the Supportive Housing System Dashboard Report and the semi-annual report on Reentry Housing Programs (Attachment A).

CHILD IMPACT
The recommended action will have no/neutral impact on children and youth.
SENIOR IMPACT
The recommended action will have no/neutral impact on seniors.

SUSTAINABILITY IMPLICATIONS
The recommended action will have no/neutral sustainability implications.

BACKGROUND
The supportive housing system includes Permanent Supportive Housing programs (PSH), Rapid Rehousing programs (RRH), Homelessness Prevention programs (HP) and a Crisis Response system of outreach services, emergency shelter and transitional housing. The backbone to the system of care is a coordinated entry system with a robust Homeless Management Information System (HMIS) and dedicated staff to support performance management, compliance with federal grants and system planning.

This report describes the type, content of and frequency of reports that the Office of Supportive Housing (OSH) would provide to the Board.

Types of Reports

- Supportive Housing System Report – This report describes the overall supportive housing system of care. The report’s primary function is to communicate whether different program types are contributing to an overall reduction in homelessness. For example, the report describes housing placement rates across all programs.

- System Component Reports – OSH provides four reports, one each for PSH, RRH, HP and Temporary Housing strategies. The primary purpose of these reports is to summarize the effectiveness of all programs under each strategy.

- Sub-Population Reports – OSH provides reports for certain sub-populations. Currently, the only sub-population scheduled for ongoing reporting is homeless veterans. This report provides the Board with a summary of the community’s progress toward ending veteran homelessness. Unlike the System Component Reports, this report summarizes the effectiveness of the entire supportive housing system as it relates to homeless veterans, who can and are served by the full range of supportive housing programs.

Report Content

- Programmatic Capacity – Each report describes the total resources that were available to serve homeless individuals and families. Depending on the program type, the resources are categorized in different ways. For example, emergency shelter capacity is reported as the number of shelter beds or units, whereas Homelessness Prevention capacity is reported as the number of households the system is expects to serve annually.
• Utilization – Each report provides the utilization rates of applicable programs. As with program capacity, utilization is described differently for different programs. For example, emergency shelter utilization is typically limited to how often shelter beds are occupied. However, for PSH programs, utilization reports consider both enrollment in services and the number of enrolled clients who are housed.

• Performance Measures – As a requirement of the Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act of 2009, OSH and local stakeholders established performance measures by program type and for the supportive housing system. Each report includes the relevant programs’ progress toward community-approved performance measures. For example, housing retention after 12 months is a key performance measure for PSH programs.

• Demographic Information – Each report describes program participants basic characteristics including race, ethnicity, gender, and age.

• Other – Each report may include additional information such as expansion opportunities (e.g., new grant opportunities) and development activities (e.g., new permanent supportive housing projects).

CONSEQUENCES OF NEGATIVE ACTION
The HLUET committee would not receive the requested reports. OSH would continue providing the current reports on a monthly basis for system reporting and management purposes.

ATTACHMENTS:
• SH Dashboard and System Report Combined Feb 2020  (PDF)
February 10, 2020

TO: Board of Supervisors
   Housing, Land Use, Environment and Transportation Committee (HLUET) Committee

FROM: Ky Le, Office of Supportive Housing (OSH)

SUBJECT: Supportive Housing System in Santa Clara County and Reentry Report

The attached report highlights trends, successes, and challenges of the supportive housing system in Santa Clara County between January 2019 and December 2019. The report's primary function is to communicate how different programs are contributing to an overall reduction in homelessness. The supportive housing system includes housing programs that fall into four main categories: Emergency Shelter (ES), Transitional Housing (TH), Rapid Rehousing (RRH), and Permanent Supportive Housing (PSH). Additionally, this report provides supplementary data focusing on the County's reentry RRH programs.

Supportive Housing System Trends and Highlights

Housing program utilization remains high, averaging 87% across the seven programs shown in Appendix B. PSH, RRH, and HP programs remain the most utilized programs as it relates to capacity.

Appendix C illustrates key system performance measures, benchmarks for which are determined in coordination with community partners on an annual basis. Notable trends and highlights from the reporting period include the following:

- As shown in chart 1, the number of persons experiencing homelessness for the first time (inflow) has increased by 5% year over year. Comparatively, persons served in ES, SH, TH or PH programs has increased by 3% year over year.
- Chart 2 indicates that exits from ES, TH, and RRH housing programs to permanent housing increased system-wide from 30% to 32% over the past year; permanent
housing destinations for households served in RRH or TH increased 4% and 5% since last year, respectively.

- Chart 3 illustrates that permanent supportive housing retention remains high, exceeding the system-wide 95% benchmark over the past year and reaching the highest rate over the three-year period reported.

The lower chart in Appendix D compares the number of housing placements to the number of first-time homeless households (inflow), split by assessment score range. The number of newly homeless residents continues to outpace the county’s housing capacity; first-time homeless households eligible for a housing intervention (score ranges in PSH or RRH) exceeded monthly housing placements by an approximate average of 50%.

Appendix E provides data on returns to homelessness for households that were permanently housed through the supportive housing system. While only 5% of households served in permanent supportive housing programs returned to homelessness within two years, households that exited to permanent housing from other types of programs returned to homelessness at a higher rate. Fifteen percent of households and 26% of households exiting RRH and TH programs respectively, for example, returned to the housing system within two years. While this outcome suggests that most individuals and families remain stably housed, some households may need additional assistance achieving and maintaining housing stability after exiting the program.

Reentry Program Trends and Highlights

Appendices F through H include data related to the County’s programs for the reentry population. These include clients enrolled in the Emergency Assistance Program (EAP), which provides one-time rental or other financial assistance, or the Reentry RRH programs. Noteworthy trends and highlights from these programs include those listed below.

- For clients registering for services between July and December 2019, 40% (1,512) were literally homeless, staying in a shelter, or in a place not meant for human habitation (see Appendix F).

- Clients enrolled in the Reentry RRH program are more likely than the system-wide RRH client population to report substance abuse and mental health issues. System-wide, 10% of RRH clients reported substance abuse issues, and 17% reported mental health issues. For reentry clients, 29% and 28% reported substance use and mental health issues, respectively (see Appendix G).

- During the reporting period, 130 clients were enrolled in a reentry RRH program. Of those enrollments, 62% (80) clients were housed compared to 74% (814) clients housed in RRH programs system-wide (see Appendix G). Lower outcomes may be due
to a number of factors, such as limited housing and employment options for individuals with criminal convictions.

- Of the 154 individuals who completed the Vulnerability Index – Service Prioritization Decision Assistance Tool (VI-SPDAT) assessment at the Reentry Resource Center (RRC), 55% were assessed in the PSH range, 42% in the RRH range, and 3% in the minimal intervention range (see Appendix H). The individuals assessed at the RRC tend to have more acute needs than the general homeless population, for which approximately 35% score in the PSH range and 50% in the RRH range.

- Homeless individuals with recent jail or prison experience, including those on probation or parole, face multiple barriers to obtaining and maintaining housing. The County is continually working with the RRC and homeless system partners to strengthen the programs and services available to clients with recent involvement in the criminal justice system. The RRC and the OSH are currently working toward extending contracted services to reentry clients into the next fiscal year. Additionally, OSH recently hired a new staff person stationed at the RRC to better assist clients in accessing available housing and supportive resources.
Appendix A: Progress to Community Plan to End Homelessness Goal of 6,000 Housing Opportunities

Jan 2015 Baseline: 2,635 Housing Units/Vouchers
Goal: to add 6,000 Housing Units/Vouchers by 2020

54% to Goal

2,331 Units/Vouchers added since Jan 2015
928 Units in the Pipeline
Goal: 2,741 Units/Vouchers to be Completed by 2020

Office of Supportive Housing
Supportive Housing System Dashboard
January 1, 2019 – December 31, 2019

Goal: 2,741 Units/Vouchers to be Completed by 2020

6,000 units added since Jan 2015
928 units in the pipeline
54% of goal

Jan 2015 Baseline: 2,635 Housing Units/Vouchers
Goal: to add 6,000 Housing Units/Vouchers by 2020

3362 3448
1420 1518
541 524
841 894
198 293
206 72
71 109
919 1540

Program Capacity (Units or Households)

January 2019 December 2019

Program Utilization, December 2019

90% 108%
77% 79%
65% 76%
PSH RRH TH ES CWS SP

- Program utilization is based on households who are enrolled in programs that are tracked in HMIS.
- PSH programs that are not tracked in HMIS include HUD VASH (1,222 units) and other programs which comprise 53 units. PSH capacity includes 50 units which are Permanent Housing with services (no disability required).
- For Safe Parking programs, one parking space is the equivalent of one unit of capacity with an estimated 2.5 individuals per vehicle; Shelter capacity is measured in beds.
- Rapid Rehousing and Homelessness Prevention capacity is based on the estimated number of households that agencies are expected to serve in one year.
1. **Total System Entries and Homelessness for the First Time**

- **Inflow**: People Experiencing Homelessness for the First Time*
- **Persons with Entries into ES, SH, TH, or PH**

<table>
<thead>
<tr>
<th>Period</th>
<th>Inflow</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/17-12/31/17</td>
<td>7,678</td>
<td>63%</td>
</tr>
<tr>
<td>1/1/18-12/31/18</td>
<td>7,857</td>
<td>63%</td>
</tr>
<tr>
<td>1/1/19-12/31/19</td>
<td>8,183</td>
<td>64%</td>
</tr>
</tbody>
</table>

*“First Time” per HUD = no entries in ES, SH, TH or PH in the previous 24 months

2. **Exits to Permanent Housing Destinations**

Of Persons in ES, TH, and RRH who Exited, the Percentage of Successful Exits to Permanent Housing

<table>
<thead>
<tr>
<th>Period</th>
<th>1/1/17-12/31/17</th>
<th>1/1/18-12/31/18</th>
<th>1/1/19-12/31/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total System Entries and Homelessness for the First Time</td>
<td>7,678</td>
<td>7,857</td>
<td>8,183</td>
</tr>
<tr>
<td>Inflow</td>
<td>4,852</td>
<td>4,980</td>
<td>5,209</td>
</tr>
<tr>
<td>Exits to Permanent Housing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYSTEM (40% BENCHMARK)</td>
<td>32%</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>RAPID REHOUSING (75% BENCHMARK)</td>
<td>74%</td>
<td>68%</td>
<td>72%</td>
</tr>
<tr>
<td>TRANSITIONAL HOUSING (75% BENCHMARK)</td>
<td>55%</td>
<td>43%</td>
<td>48%</td>
</tr>
<tr>
<td>EMERGENCY SHELTER (30%)</td>
<td>17%</td>
<td>22%</td>
<td>21%</td>
</tr>
</tbody>
</table>

3. **Permanent Housing Retention**

**Percentage of People in Permanent Housing Programs (excluding Rapid Rehousing) Retaining Housing during the Reporting Year (Benchmark = 95%)**

<table>
<thead>
<tr>
<th>Period</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/17-12/31/17</td>
<td>94.4%</td>
</tr>
<tr>
<td>1/1/18-12/31/18</td>
<td>92.2%</td>
</tr>
<tr>
<td>1/1/19-12/31/19</td>
<td>96.5%</td>
</tr>
</tbody>
</table>
Appendix D: Housing Placements and System Entries by Month 1/1/2019-12/31/2019

Number of Households Placed in Housing and Households Requesting Assistance for the First Time (First VI-SPDAT Assessment)

Monthly Housing Placements from Project Types (Head of Household)

- **Permanent Supportive Housing**
- **Rapid Rehousing**
- **Transitional Housing**
- **Emergency Shelter**
- **Other**
Appendix E: Returns to Homelessness

Returns to Homelessness (Within 6 Months)
After exiting to Permanent Housing Destinations, the Percentage of People who Return to Homelessness within 6 Months (N = Exits to PH between 1/2017 to 12/2017)

- SYSTEM (2019 N=2739)
- PERMANENT HOUSING (N=473)
- RAPID REHOUSING (N=865)
- TRANSITIONAL HOUSING (N=560)
- EMERGENCY SHELTER (N=810)

Returns to Homelessness (Within 1 Year)
After exiting to Permanent Housing Destinations, the Percentage of People who Return to Homelessness within 1 Year (N = Exits to PH between 1/2017 to 12/2017)

- SYSTEM (2019 N=2606)
- PERMANENT HOUSING (N=456)
- RAPID REHOUSING (N=814)
- TRANSITIONAL HOUSING (N=539)
- EMERGENCY SHELTER (N=777)

Returns to Homelessness (Within 2 Years)
After exiting to Permanent Housing Destinations, the Percentage of People who Return to Homelessness within 2 Years (N = Exits to PH between 1/2017 to 12/2017)
Appendix F: Reentry Resource Center (RRC) Client Housing Status and EAP Program Utilization
July 2019 to December 2019

Housing Status of Clients Registering for Services at the Reentry Resource Center

LITERALLY HOMELESS: HOMELESS SHELTER, STREET, VEHICLE, BUS STATION, MOTEL VOUCHER, ETC.

TRANSITIONAL SITUATION: HOTEL/MOTEL THAT CLIENT PAYS FOR, TRANSITIONAL HOUSING FOR HOMELESS PEOPLE, FRIENDS/FAMILY, ETC.

PERMANENT SITUATION: HOME THAT CLIENT OWNS/RENTS OR SUBSIDIZED HOUSING (RENTAL ASSISTANCE OR VETERANS ASSISTANCE)

INSTITUTIONAL SITUATION: HOSPITAL/MEDICAL FACILITY, PSYCHIATRIC FACILITY, NURSING HOME, FOSTER CARE, SLE, ETC.

NO ANSWER

EAP - FY20 (July 19 - Dec 19)
Average Assistance per Client

EAP – Assistance Amounts by Category
(Total Spent = $108,893)
Appendix G: Reentry RRH Program Enrollment Data (Head of Household) - July to December 2019

**Enrollment Data**

- **ALL OTHER RRH PROGRAMS**
  - Annual Capacity: 1330
  - Enrolled: 1106
  - Housed: 814

- **REENTRY RRH PROGRAMS**
  - Annual Capacity: 130
  - Enrolled: 130
  - Housed: 80

**Exit Destinations after Housing**

- **PERMANENT HOUSING**
  - All Other RRH Clients (n=303 Exits): 85%
  - Reentry RRH Clients (n=25 exits): 76%

- **TEMPORARY**
  - All Other RRH Clients: 7%
  - Reentry RRH Clients: 12%

- **UNKNOWN/ PLACE NOT MEANT FOR HABITATION**
  - All Other RRH Clients: 9%
  - Reentry RRH Clients: 12%

**Percentage of Clients with Disabilities**

- **Substance Abuse**
  - All Other RRH Clients (N=1106): 10%
  - Reentry RRH Clients (N=130 Exits): 29%

- **Mental Health**
  - All Other RRH Clients: 17%
  - Reentry RRH Clients: 28%

- **Chronic Health**
  - All Other RRH Clients: 13%
  - Reentry RRH Clients: 18%

- **Developmental**
  - All Other RRH Clients: 4%
  - Reentry RRH Clients: 3%

**Percent with Exit/Last Updated Income Greater than Living Wage**

- **ALL OTHER RRH CLIENTS** (N=419)
  - 17%

- **REENTRY RRH CLIENTS** (N=34 EXITS)
  - 21%

**Notes:**
- Reentry RRH programs consist of the following three HomeFirst programs: Re-Entry Minimal to RRH, Re-Entry RRH, and Re-Entry RRH Exceptions.
- Out of the 130 households enrolled in RRH Reentry Programs from July to December 2019, 53 (41%) had taken a VI-SPDAT assessment at the Reentry Resource Center at some point and 40 out of the 53 had taken their most recent assessment at the RRC. The remaining assessments were conducted by other agencies and faith-based partners.
Appendix H: Reentry Resource Center (RRC) Assessments, July to December 2019
Demographics and Outcomes of Clients who took the VI-SPDAT Assessment at the RRC

Gender

- **MALE**: 79%
- **FEMALE**: 19%
- **TRANSGENDER/GENDER NON-CONFORMING**: 2%

Race

- **MULTI-RACIAL**: 2%
- **ASIAN**: 4%
- **NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER**: 5%
- **AMERICAN INDIAN OR ALASKA NATIVE**: 7%
- **BLACK OR AFRICAN AMERICAN**: 20%
- **CLIENT DOESN'T KNOW/NOT SPECIFIED**: 25%
- **WHITE**: 37%

Ethnicity

- **HISPANIC/LATINO**: 55%
- **NON-HISPANIC/NON-LATINO**: 43%
- **CLIENT REFUSED/DATA NOT COLLECTED**: 2%

Outcomes from VI-SPDATs Completed at the RRC, July to December 2019

- **VI-SPDATS COMPLETED AT THE REENTRY RESOURCE CENTER**: 154
- **REFERRALS TO THE COMMUNITY QUEUE**: 112
- **PROGRAM REFERRALS**: 19
- **ENROLLED IN HOUSING PROGRAMS (PSH, RRH)**: 8
- **HOUSED (MOVE IN DATE OR EXIT TO PERMANENT HOUSING)**: 14

Level of Need for Clients who took the VI-SPDAT at the RRC

- **MINIMAL INTERVENTION (SCORE 0 TO 3)**: 3%
- **RAPID REHOUSING (SCORE 4 TO 7 SINGLE ADULT, 4 TO 8 FAMILY)**: 42%
- **PERMANENT SUPPORTIVE HOUSING (SCORE 8+ SINGLE, 9+ FAMILY)**: 55%
1. Call to Order.

Chairperson Wasserman called the meeting to order at 10:02 a.m. A quorum was present.

<table>
<thead>
<tr>
<th>Attendee Name</th>
<th>Title</th>
<th>Status</th>
<th>Arrived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Wasserman</td>
<td>Chairperson</td>
<td>Present</td>
<td></td>
</tr>
<tr>
<td>S. Joseph Simitian</td>
<td>Vice Chairperson</td>
<td>Present</td>
<td></td>
</tr>
</tbody>
</table>

2. Public Comment. (ID# 100037)

Three individuals addressed the Committee, and one individual submitted written comments for the record.

3. Approve Consent Calendar and changes to the Committee's Agenda. (ID# 100114)

One individual addressed the Committee.

RESULT: APPROVED [UNANIMOUS]
MOVER: S. Joseph Simitian, Vice Chairperson
SECONDER: Mike Wasserman, Chairperson
AYES: Wasserman, Simitian

Regular Agenda - Items for Discussion

4. Receive report from the Roads and Airports Department relating to airport compliance findings identified in October 18, 2019 letter from the Federal Aviation Administration. (ID# 99895)

Chairperson Wasserman requested that Administration report to the Committee on March 19, 2020 relating to conditions at Reid-Hillview and San Martin Airports, including current estimated costs and prioritization of capital improvements for the Airports. Chairperson Wasserman also expressed an expectation that unsafe conditions at the Airports, if any, will be immediately addressed with Department funding or a request from General Funds.
4 RESULT: RECEIVED

Consent Calendar

5. Receive report from the Consumer and Environmental Protection Agency relating to the construction and funding of a new County Animal Services Center. (ID# 99902)

5 RESULT: RECEIVED

6. Consider recommendations relating to Supportive Housing System of Care reports. (Office of Supportive Housing) (ID# 99925)

   Possible action:
   a. Receive monthly report relating to Supportive Housing System Dashboard.
   b. Receive semi-annual report relating to Homelessness Prevention programs.

6 RESULT: RECEIVED

7. Approve minutes of the December 19, 2019 Regular Meeting.

7 RESULT: APPROVED [UNANIMOUS]
MOVER: S. Joseph Simitian, Vice Chairperson
SECONDER: Mike Wasserman, Chairperson
AYES: Wasserman, Simitian

Adjourn

8. Adjourn to the next regular meeting on Thursday, February 20, 2020 at 10:00 a.m. in the Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, San Jose.

Chairperson Wasserman adjourned the meeting at 10:41 a.m.

Respectfully submitted,

Peggy Doyle
Deputy Clerk