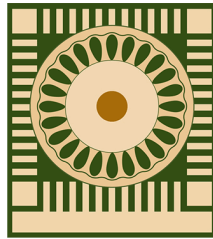


CITY OF HAYWARD

Hayward City Hall
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Agenda

Tuesday, September 17, 2019

4:30 PM

Conference Room 2A

Council Sustainability Committee

CALL TO ORDER**ROLL CALL****PUBLIC COMMENTS:**

(The Public Comment section provides an opportunity to address the City Council Committee on items not listed on the agenda as well as items on the agenda. The Committee welcomes your comments and requests that speakers present their remarks in a respectful manner, within established time limits, and focus on issues which directly affect the City or are within the jurisdiction of the City. As the Committee is prohibited by State law from discussing items not listed on the agenda, any comments on items not on the agenda will be taken under consideration without Committee discussion and may be referred to staff.)

APPROVAL OF MINUTES

1. [MIN 19-108](#) Review and Approval of the Council Sustainability Committee July 8, 2019 Meeting Minutes

Attachments: [Attachment I July 8, 2019 Meeting Minutes](#)

REPORTS/ACTION ITEMS

2. [ACT 19-174](#) E. 14th Street/Mission Boulevard and Fremont Boulevard Multimodal Corridor Project Update

Attachments: [Attachment I Staff Report](#)
[Attachment II Project Corridor and Study Area](#)
[Attachment III E. 14th Street Mission Blvd./Fremont Blvd. Fact Sheet](#)

3. [ACT 19-173](#) Draft Electrification Reach Codes for 2019 California Energy Code and California Green Building Standards Code
- Attachments:** [Attachment I Staff Report](#)
 [Attachment II Greenhouse Gas and Energy Savings and Cost-Effectiveness](#)
 [Attachment III Reach Code for Part 6 \(California Energy Code\)](#)
 [Attachment IV Reach Code for Part 11 \(California Green Building Standards Code\)](#)
4. [ACT 19-171](#) Options for Addressing Litter in Hayward
- Attachments:** [Attachment I Staff Report](#)
5. [ACT 19-179](#) Establishing Hayward's Sustainability Goals for 2025 and 2030
- Attachments:** [Attachment I Staff Report](#)
 [Attachment II City & State Focus Areas](#)
6. [ACT 19-176](#) Proposed 2019/2020 Agenda Planning Calendar
- Attachments:** [Attachment I Staff Report](#)

ORAL UPDATES**FUTURE AGENDA ITEMS****COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS****ADJOURNMENT**



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
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File #: MIN 19-108

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

Review and Approval of the Council Sustainability Committee July 8, 2019 Meeting Minutes

RECOMMENDATION

That the Committee reviews and approves the Council Sustainability Committee July 8, 2019 meeting minutes.

SUMMARY

The Council Sustainability Committee (CSC) held a meeting on July 8, 2019, and the draft minutes are attached for the Committee's review and approval.

ATTACHMENTS

Attachment I CSC 7/8/2019 Meeting Minutes

CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Hayward City Hall – Conference Room 2A
777 B Street, Hayward, CA 94541-5007
July 8, 2019
4:30 p.m. – 6:25 p.m.
MEETING MINUTES

CALL TO ORDER: Meeting called to order at 4:30 p.m. by Chair Mendall.

ROLL CALL:

Members:

- Al Mendall, City Council Member/CSC Chair
- Elisa Márquez, City Council Member
- Francisco Zermeño, City Council Member

Staff:

- Alex Ameri, Director of Public Works
- Carol Lee, Management Analyst
- Crissy Mello, Senior Secretary
- Erik Pearson, Environmental Services Manager
- Jack Steinman, Climate Corps Fellow
- Jan Lee, Water Resources Manager
- Jeff Krump, Solid Waste Program Manager
- Kait Byrne, Management Analyst
- Maria Hurtado, Assistant City Manager
- Nicole Gucky, Sustainability Specialist

Others:

- Greg Galati, Hayward Resident
- Jonathan Kelves, Senior Business Development Manager, Ameresco
- Kali Klotz, Municipal Coordinator, Waste Management of Alameda County
- Stacy Lee, Hayward Resident, Alameda County Office of Sustainability
- Virginia Harrington, Public Sector Manager, Waste Management of Alameda County

PUBLIC COMMENTS

No public comments were made.

1. Approval of Minutes of Council Sustainability Meeting May 13, 2019

The item was moved by Council Member Zermeño, seconded by Councilmember Márquez, and approved unanimously.

2. Options for Addressing Litter in Hayward

Jeff Krump, Solid Waste Program Manager, presented the report on the City's on-going challenge to address litter. Mr. Krump stated that the Maintenance Services Department will be adding four new employees to collect litter in targeted areas throughout the City

and staff is currently working on litter collection requirements for businesses, specifically those with fast food drive-throughs and other litter reduction methods such as contract collection crews and outreach campaigns.

Greg Galati thanked the City for the addition of four new Maintenance workers. He suggested that multi-family properties provide rent reduction for residents who help pick up litter.

Council Member Márquez requested an update on the single-use plastic ban ordinance. Mr. Krump answered that staff is conducting more outreach to businesses before presenting the ordinance to Council. Council Member Márquez also requested staff measure the results of the four new positions and provide a quarterly report on the visual impact of the maintenance. Additionally, she would like to see trash cans at all retail stores and restaurants. Council Member Zermeño asked that trash cans located in the Tennyson corridor be serviced more frequently.

Council Member Mendall called for a report on the amount of trash captured in storm drains. He also directed staff for a public deadline date on the single-use plastic ban ordinance and for a set of automatic conditions applied to establishments for litter collection. In addition, he requested the fiscal impact for adding trash cans to all roads that have two or more lanes in each direction. His goal is to have 1000 additional trash cans throughout the City.

It was suggested that more public outreach be conducted to educate residents on the reduction of litter. Council Members directed staff to research further and provide an update at the next Committee meeting.

3. Possible Renewable Energy Product for Municipal Facilities

Chair Mendall introduced the item and Environmental Services Manager, Erik Pearson, presented the report. Mr. Pearson detailed the new potential East Bay Community Energy (EBCE) electricity product generated from renewable energy projects in California and recapped the City's goal to be zero net energy (ZNE) by 2025.

He further explained that the City currently generates approximately 56% of the City's electricity demand and could benefit from this program to reach the City's goal by negotiating a long-term purchase agreement up to 20 years. It was recommended by staff that the City limit its purchase to 20% of its current demand as the City is on track to generating additional renewable energy from Capital Improvement Projects.

Jonathan Kelves, Senior Business Development Manager, Ameresco, commented that the City could benefit from a RFQ. He explained that Ameresco would think holistically about the best needs for the City. Upon an inquiry about the City-owned solar facility, Public Works Director, Alex Ameri, explained that PG&E tariffs have restricted the City from using the facility to its full potential. Director Ameri added that the City has a history of utilizing the types of companies Mr. Kelves has recommended for guidance.

Council Member Márquez expressed support for the initiative and for replacement of natural gas equipment. She noted importance of battery storage facilities in the event of a natural disaster such as an earthquake.

Council Member Mendall acknowledged the City's need for guidance to reach its ZNE goal and was in agreement for use of a RFQ to help achieve the City's goal. Council Member Zermeno commented on his support of the initiative and EBCE overall. Director Ameri cited the nutrient management requirements and the associated increased electrical demand it will have on the City's Water Pollution Control Facility.

Council Member Mendall acknowledged the need of more solar as the community electrifies. He directed staff to conduct more research and provide an update to the Committee at a later date.

4. Annual Update on City's Waste Reduction and Recycling Program

Jeff Krump, Solid Waste Program Manager, presented the report and detailed the mandates and goals required for diversion by the State, the County and the Franchise Agreement. He noted that staff has been working with Waste Management on educating the public to help reduce contamination of the organics and recycle bins. Mr. Krump summarized SB54 and AB1080, which are intended to reduce contamination and plastic waste.

Mr. Krump reported that business and resident subscriptions for recycling services remained the same as the previous year. However, business use of organic collection increased by 1%. Bulky collection service increased from the previous year, and there's continued effort to promote the program. Council Member Márquez recommended staff conduct outreach in the Stack and advertise on electronic billboards located in Hayward.

It was recommended that staff add an Access Hayward option of reporting overflowing trash cans. Council Member Zermeno directed staff to focus on outreach to restaurants not participating in organic service.

The item was moved by Council Member Márquez, seconded by Councilmember Márquez, and approved unanimously to recommend that Council authorize the Mayor to send letters of support for SB54 and AB1080.

5. Report of Implementation of Renewable Diesel at All City Vehicle Fueling Stations

Kait Byrne, Management Analyst, reported on the success of the renewable diesel trial period at Fire Station 1, which is the primary fueling site for seven City vehicles. Ms. Byrne stated that the drivers of the vehicles reported no difference in mileage or engine performance. Fleet staff is currently working on transitioning all ten City fueling stations to renewable diesel due to the pilot program's success. She added that the City is now researching the use of renewable diesel for emergency backup generators.

Council Member Márquez inquired about containment safety of renewable diesel in the event of an earthquake. Mr. Ameri assured Council Member Márquez that diesel storage is double-walled and meets all requirements for containment.

6. Participation in the 2019 SunShares Program

Erik Pearson, Environmental Services Manager, summarized the solar and electric vehicle discount program which the City has participated in since 2016. The program is now expanding to promote building electrification, including solar in residential homes.

Staff recommended that the City submit a letter of support to the Business Council on Climate change and commit to outreach for the program. Council Member Mendall recommended the program eventually be passed off to EBCE. Council Member Márquez asked staff to announce the Leaflet newsletter in the Stack to obtain more outreach on the program.

The item was moved by Council Member Zermeño, seconded by Councilmember Márquez, and approved unanimously.

7. SB 1383: The Short-Lived Climate Pollutants Act – New Regulations to Reduce Methane Emissions from Organic Waste

Jack Steinmann, Climate Corps Fellow, presented the report on CalRecycle's new regulations for organic waste disposal. These new regulations will require the City to implement edible food recovery and reduce disposal organic waste by 50% by 2020. Staff noted that CalRecycle is over-reaching on some of the draft regulations and asked for the Committee's support to submit a comment letter.

Council Member Zermeño expressed his concern with CalRecycle's requirement of replacing the City's current trash collection bins and the additional waste it would cause. Council Member Márquez agreed this requirement would be counterproductive.

Council Member Zermeño asked staff to add a fourth item on the comment letter to CalRecycle regarding the amount of waste the disposal of trash bins would create.

The item was moved by Council Member Márquez, seconded by Councilmember Márquez, and approved unanimously to recommend the Mayor send a comment letter to CalRecycle.

8. Proposed 2019 Agenda Planning Calendar

Erik Pearson, Environmental Services Manager, commented that the next two Committee meetings fall on holidays, and Council Members discussed availability for the month of September.

Council Member Mendall stressed to staff the need to have the Draft Reach Code ready for Council presentation by the next Council Sustainability meeting. He also asked for a report on the Green New Deal per the Mayor's request.

Council Member Zermeño asked for an update on City tree inventory and directed staff to provide an update after discussing with Maintenance Services.

9. CPUC Flyer for Convening – Preventing and Reducing Utility Disconnections

Director Ameri explained the flyer was informational with material on providing protection for utility customers from disconnection.

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS:

Council Member Zermeño announced that he would be visiting the world's biggest tree.

ADJOURNMENT: 6:25 p.m. MEETINGS

Attendance	Present 07/08/19 Meeting	Present to Date This Fiscal Year	Excused to Date This Fiscal Year	Absent to Date This Fiscal Year
Elisa Márquez	✓	1	0	0
Al Mendall*	✓	1	0	0
Francisco Zermeño	✓	1	0	0



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
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File #: ACT 19-174

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

E. 14th Street/Mission Boulevard and Fremont Boulevard Multimodal Corridor Project Update

RECOMMENDATION

That the Committee receive this update on the project and provide feedback.

SUMMARY

The Alameda County Transportation Commission (ACTC) is conducting an analysis of the East 14th Street/Mission and Fremont Boulevard corridor to develop multimodal improvements to provide more efficient transit service and close gaps in bike and pedestrian facilities. The purpose of the project is to improve mobility options in the corridor in a manner that supports existing communities and planned growth. The project team has identified conceptual near term, midterm and long-term improvements for future implementation. Two long term concepts Rapid Bus and Bus Rapid Transit (BRT), which have been developed based on detailed analysis, input from agency partners and feedback from study area stakeholders. Rapid bus is a high frequency, limited stop bus service, while BRT operates in their own exclusive lanes.

ATTACHMENTS

Attachment I	Staff Report
Attachment II	Project Corridor and Study Area
Attachment III	E. 14 th Street Mission Blvd./Fremont Blvd. Fact Sheet



DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT: E 14th Street/Mission Boulevard and Fremont Boulevard Multimodal Corridor Project Update

RECOMMENDATION

That the Committee receives this update on the project and provides feedback.

SUMMARY

The Alameda County Transportation Commission (ACTC) is conducting an analysis of the East 14th Street/Mission and Fremont Boulevard corridor to develop multimodal improvements to provide more efficient transit service and close gaps in bike and pedestrian facilities. The purpose of the project is to improve mobility options in the corridor in a manner that supports existing communities and planned growth. The project team has identified conceptual near term, midterm and long-term improvements for future implementation. Two long term concepts - Rapid Bus and Bus Rapid Transit (BRT) - have been developed based on detailed analysis, input from agency partners, and feedback from study area stakeholders. Rapid bus is a high frequency, limited stop bus service, while BRT operates in their own exclusive lanes.

BACKGROUND

ACTC is conducting an analysis of the East 14th Street/Mission and Fremont Boulevard corridor to develop multimodal improvements to provide more efficient transit service and close gaps in bike and pedestrian facilities. ACTC (Sponsoring Agency) in conjunction with Alameda County and the cities of Hayward, Union City, Fremont, , and the California Department of Transportation (Caltrans) will identify a set of implementable near-, medium-, and long-term multimodal improvements with a focus on benefits to the safety, reliability, comfort, and connectivity of the corridor's transit, bicycle, and pedestrian facilities. The Project will generally be limited to streets and pathways within ¼ to ½ mile on either side of East 14th Street/Mission Boulevard, Decoto Road, and Fremont Boulevard, and will increase the corridor's ability to move people and goods, improve access to businesses, serve residents, and build upon past planning efforts to identify improvements that are locally supported and regionally impactful.

The Project encompasses East 14th Street/Mission Boulevard from Davis Street in San Leandro through Mission Blvd in Hayward to I-680 in Fremont, Decoto Road from Mission Boulevard in Union City to Fremont Boulevard in Fremont, and tentatively Fremont Boulevard from Decoto Road to Osgood Road. Pending an existing conditions analysis, the Project may extend along Osgood Road to the Warm Springs BART station (Attachment I).

Phase 1 (Scoping) included existing conditions review, corridor segmentation, and definition of corridor limits. The current phase, Phase 2 (Concept Development), includes concept identification, concept evaluation, and concept refinement. Phase 3 (Design) of the Project will include design development, which may include Caltrans Project Initiation Documents, or local jurisdiction processes as appropriate, supporting environmental analysis/review, and more detailed design.

On September 18, 2018, Council adopted Resolution 18-190 authorizing the execution of a Project Charter as a partnering agency with ACTC for the East 14th Mission Boulevard/Fremont Boulevard Multi-modal project. The intent of this Project Charter was to memorialize ACTC's and Partnering Agencies' commitments to working cooperatively.

Each Partnering Agency will be committed to collaborating throughout the Project to identify a long-term vision for the corridor, and a set of implementable, near- and medium-term improvements, and facilitate advancing those near- and medium-term improvements through implementation. Partnering Agencies will assign a staff contact person who will serve on a Technical Advisory Committee (TAC) and will be responsible for attending Project meetings. Each Partnering Agency will also designate an appropriate elected official who can represent the agency and participate in a Policy Advisory Committee (PAC) if necessary.

ACTC will manage the Project (including management of the consultant contract, scope, budget, and schedule), provide oversight and strategic guidance to the Project, and will review and approve Project deliverables.

ACTC and Partnering Agencies will make many decisions that shape outcomes and determine the direction of the Project, ultimately leading to a set of final recommendations to present to Project stakeholders and for Partnering Agency adoption. Some decisions will be relatively simple and within the authority of assigned project management and technical staff. Other decisions may be more complex, requiring consensus among multiple internal or external stakeholders, and/or policy changes and commitments of resources by ACTC or Partner Agencies.

DISCUSSION

The purpose of the E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project (Project) is to improve mobility options in the study area in a manner that supports existing communities and planned growth. In doing so, the project team has identified conceptual near-term, mid-term, and long-term improvements to be advanced for implementation. Two long-term concepts have been developed based on the findings of the baseline

conditions analysis, input from Study Area jurisdictions, and feedback from Study Area stakeholders.

The evaluation of improvements was completed in three sequential steps, or tiers, as follows:

- The Tier 1 analysis addresses physical constraints and engineering feasibility.
- The Tier 2 analysis addresses accessibility, safety, and community input
- The Tier 3 analysis assesses the multimodal system operations and benefits

Time Horizons and Phasing

Although the recommended long-term concept represents Year 2040 conditions, it is assumed that many of the improvements included in the concept will be advanced and implemented sooner. For purposes of developing the phasing plan, the following time frames are used:

- Near-term: 0 to three years
- Mid-term: Four to seven years
- Long-term: More than seven years

The phasing for long-term improvements is based on the following factors:

Required implementation timeframe: Some improvements such as bus-only lanes and off-street Class I bike lanes will generally require a longer time for project delivery given that additional analysis and environmental clearances will be required. For more complex long-term improvements, the phasing acknowledges the time needed for project initiation and environmental review prior to construction.

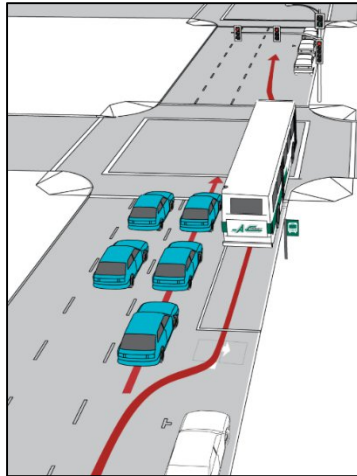
Partner agency feedback: The phasing of long-term improvements was informed by feedback from partner agencies, combined with technical analysis and the complexity of project development processes. Improvements with strong support for near-term implementation are proposed sooner, whereas improvements requiring additional community discussion and engagement are proposed for later implementation.

Ongoing corridor projects: There are several ongoing improvement projects along the corridor, such as Mission Boulevard Phase 2 and Phase 3, that are in various phases of design and construction. The phasing of long-term improvements is designed to allow ongoing local jurisdiction corridor projects to continue ahead without being delayed.

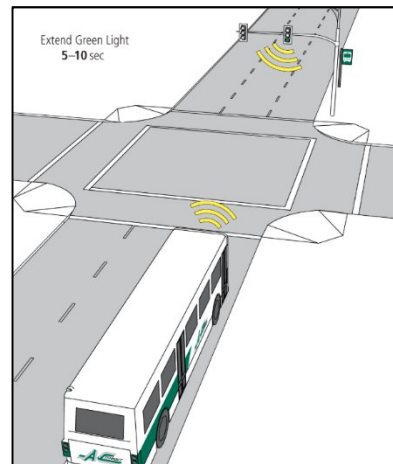
The components identified in the recommended long-term concepts include bus-only lanes, rapid bus and Class IV bike lanes.

Shared Lanes (Rapid Bus)

The goal of Rapid Bus improvements is to reduce travel time, improve reliability and increase frequency of buses while still sharing lanes with vehicles. Improvements include transit signal priority (TSP) and queue jumps. Rapid bus would overlay more frequent service (10-minute headways) with fewer stops on top of the existing local service currently provided.



Queue Jump



Transit Signal Priority

Bay Fair BART to South Hayward BART: This section is recommended for near-term Rapid Bus improvements as a first step toward bus-only lanes long term.

South Hayward BART to Warm Springs BART: This section is recommended for near-term Rapid Bus improvements.

Technical Evaluation Overview (Tiers 1 through 3)

Rapid Bus improvements result in higher long-term transit ridership when compared to Year 2040 baseline conditions. Improvements are not anticipated to result in a lane reduction or significant on-street parking loss.

Partner Agency Feedback as of August 15, 2019

- All partner agencies are supportive of Rapid Bus improvements.
- Hayward and Fremont are considering implementing a citywide TSP system, consistent with Rapid Bus improvements. TSP would reduce dwell time at signalized intersections by extending the green light or shortening the red light, resulting in shorter travel times along the corridor and improved reliability.

Bus-Only Lanes (or BRT, Bus Rapid Transit)

Bus-only lanes are a portion of the street, typically a travel lane or a parking lane, for the exclusive use of transit vehicles, which allows them to bypass traffic jams, resulting in shorter travel times and improved reliability.

Bus-only lanes were evaluated from San Leandro BART to South Hayward BART, as part of Long-Term Concept 1.

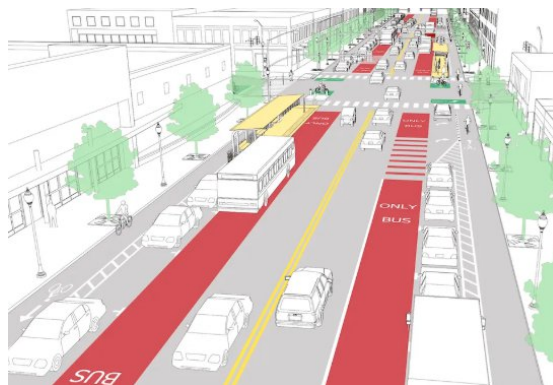
San Leandro BART to Bay Fair BART: This section is recommended to be advanced for bus-only lanes near term. Implementation would occur mid-term.

Bay Fair BART to South Hayward BART: This section is recommended for bus only lanes as a long-term improvement after the San Leandro BART to Bay Fair BART bus only lanes are completed. As part of the long-term improvement, Foothill Blvd. between Mattox Rd. and A St. should be further evaluated as an alternate alignment for bus-only lanes to address on-street parking loss along the parallel section of Mission Blvd. in Hayward.

Technical Evaluation Overview (Tiers 1 through 3):

Bus-only lanes would result in:

- Higher bus ridership for long-term conditions when compared to Rapid Bus improvements.
- A travel lane reduction for almost all of San Leandro BART to Hayward BART sections. This leads to a reduction in vehicular traffic, the majority of which is offset by the increases in bus ridership.
- A reduction in systemwide congestion as measured through vehicle hours traveled.
- A loss of on-street parking and/or the loss of a travel lane in Hayward and in areas of San Leandro where both bus-only lanes and Class IV protected bike lanes are proposed. However, on-street parking can be replaced through off-street parking lots, which would require additional local jurisdiction coordination on potential off-street parking sites.



Bus-Only Lane

Partner Agency Feedback as of August 15, 2019

- The City of Hayward has near-term improvements for Mission Blvd. Phase 3 (City boundary to A Street). The removal of on-street parking as part of Mission Blvd. Phase 3 was considered but was not well received by businesses along the corridor. The City feels additional discussion of the tradeoffs of bus-only lanes (i.e., loss of travel lanes and/or on-street parking) is needed before advancing improvements.

On-Street Class IV Bike Lanes

On-street Class IV protected bike lanes were evaluated for all segments of the Project Corridor. This type of bike lane is generally recommended throughout the project corridor to provide the highest level of safety and comfort for those accessing corridor destinations.

Recommended implementation is as follows:

- In Hayward, north of A Street, Class IV bike lanes are recommended as a near term improvement and are included, in the form of a cycle track, as part of the Mission Blvd. Phase 3 project that is in design.
- In downtown Hayward and south of downtown to Industrial Pkwy., Class IV bike lanes are recommended near-term as part of the Hayward Bicycle and Pedestrian Master Plan to address bicyclist safety concerns.
- In Hayward from Industrial Pkwy. south to the Union City boundary, Class IV bike lanes are included as part of the Mission Blvd. Phase 2 project under construction.

Technical Evaluation Overview (Tiers 1 through 3)

The demand for bicycle travel is projected to more than double throughout the corridor compared to existing conditions.

- Approximately 25 percent of the Project Corridor is part of the Countywide High-Injury Network for bicyclists.
- Portions of the corridor in San Leandro and Hayward lack bicycle lanes.

Partner Agency Feedback as of August 15, 2019

- Class IV bike lanes are included as part of near-term projects in Hayward (Mission Blvd. Phases 2 and 3).

ECONOMIC IMPACT

The Project is intended to identify specific implementable transit priority improvements. Multimodal environments with bicycle and pedestrian network connectivity strategies will be created throughout the corridor. Access to regional transit, schools, downtown areas,

merchants, and restaurants will improve and help transform the City into a more transit, pedestrian- and bicycle-friendly community, thus creating positive economic and health benefits for the Hayward community.

FISCAL IMPACT

ACTC has committed \$1.5 million of Measure BB funding for the initial three phases of the project. There is no expectation that Partnering Agencies will be asked to contribute funding to any of the first three phases of the project. Once near, mid-, and long-term alternatives have been identified and agreed upon by Partnering Agencies, in the future, there may be projects that require cost-sharing strategies to construct. Partnering Agencies will not be obligated to implement any projects without additional agreements

STRATEGIC INITIATIVES

This agenda item supports the Complete Streets Strategic Initiative. The purpose of the Complete Streets initiative is to build streets that are safe, comfortable, and convenient for everyone regardless of age or ability, including motorists, pedestrians, bicyclists and public transportation riders. This item supports the following goals and objectives:

Goal 2: Provide Complete Streets that balance the diverse needs of users of the public right of- way.

Objective 1: Increase walking, biking, transit usage, carpooling, and other sustainable modes of transportation by designing and retrofitting streets to accommodate all modes.

This agenda item also supports the Complete Communities Strategic Initiative. The purpose of the Complete Communities initiative is to create and support structures, services, and amenities to provide inclusive and equitable access with the goal of becoming a thriving and promising place to live, work, and play for all. This item supports the following goal and objectives:

Goal 1: Improve quality of life for residents, business owners, and community members in all Hayward neighborhoods.

Objective 4: Create resilient and sustainable neighborhoods.

SUSTAINABILITY FEATURES

The Project is a critical interjurisdictional initiative that will accommodate growth in the corridor by improving efficiencies and reliability while also accommodating additional patrons all within existing rights-of-way. This project is intended to reduce automobile dependency thus leading to a reduction in greenhouse gas emissions related to vehicle use.

The mobility goals established as part of the City's 2040 General Plan, include the goal of improving local circulation, which is largely dependent on the operations of the traffic network within the City. By operating and maintaining a multimodal transportation network, the local circulation goal (Goal M-4) "enhance and maintain local access and circulation, while protecting neighborhoods from through traffic" can be achieved.

PUBLIC CONTACT

ACTC has held two publicly noticed TAC meetings and one publicly noticed PAC meeting. In addition, the consultant team has received feedback from key stakeholders in the corridor. Additional TAC and PAC meetings are scheduled and will be noticed. In addition, several public outreach meetings will occur in each of the partnering agencies jurisdictions.

NEXT STEPS

ACTC has scheduled a presentation to AC Transit/City of Hayward ILC on September 19, 2019 at AC Transit's Training and Education Center in Hayward at 1:00 p.m. An overview of the proposed alternatives are scheduled to be presented to the ACTC PAC, represented by Mayor Halliday, on September 26, 2019.

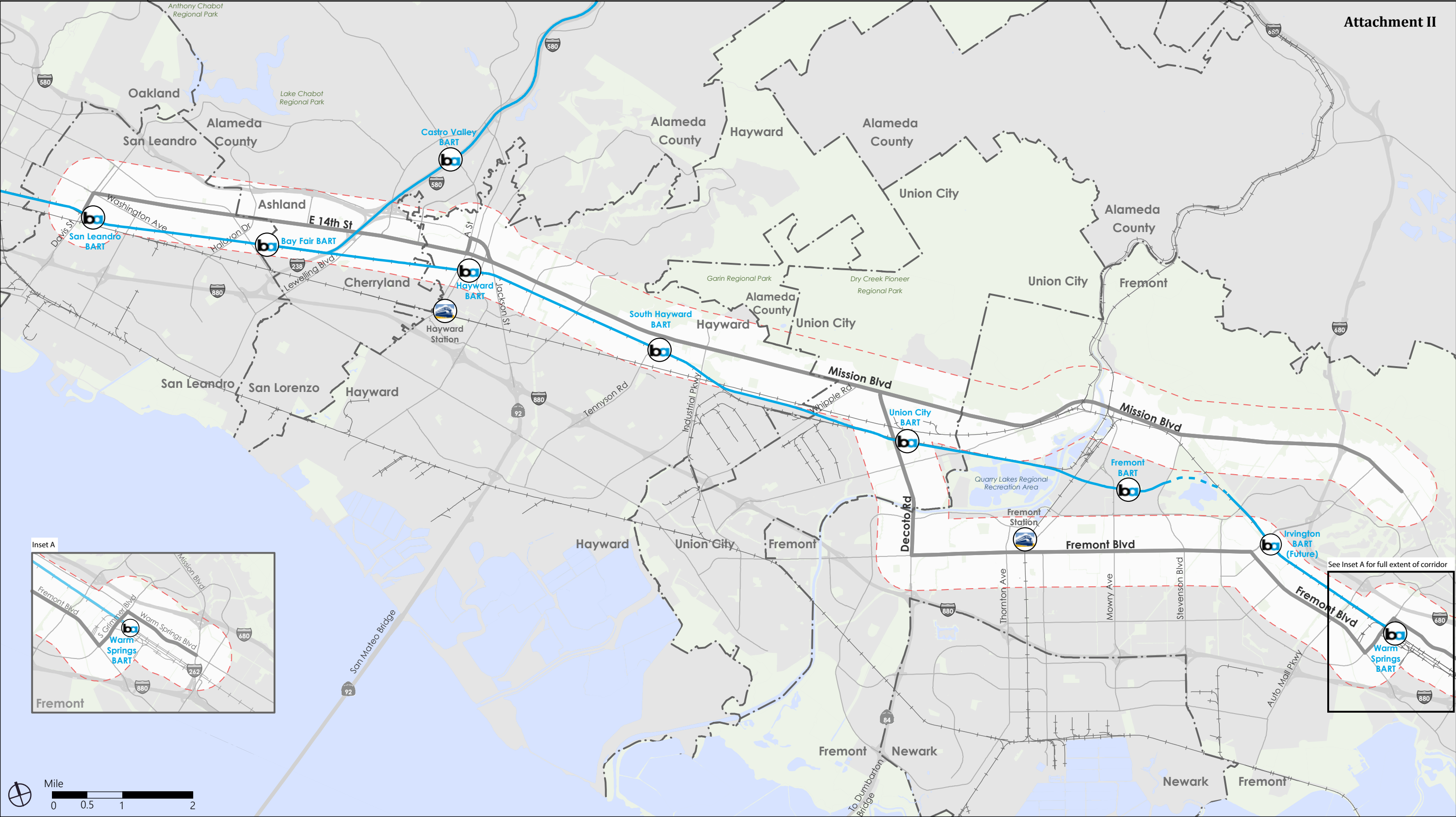
Prepared by: Fred Kelley, Transportation Division Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'K. McDoo', is written over a horizontal line.

Kelly McDoo, City Manager



Legend:

BART Station

BART Above/Below Ground

Capitol Corridor Stations

Freight Rail and Capitol Corridor Tracks

Jurisdiction Boundary

Freeway/Arterial

Water Bodies

Parks/Open Space

E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project

Project Corridor and Study Area | Figure 1-1

Project Goals

- Multimodal improvements for the Study Area will be developed to advance the following goals:
- Support planned long-term growth and economic development, including access to Study Area employment centers
 - Address the range of mobility needs for Study Area residents, businesses, workers, and visitors
 - Increase the share of trips in the Study Area that occur by transit, biking, walking, carpooling, and shared mobility services
 - Optimize the person trip throughput of existing infrastructure
 - Improve connectivity between transportation modes and transportation service providers
 - Provide a safe and convenient environment for pedestrians, bicyclists, and transit users
 - Provide flexibility for future changes in transportation technology, including connected vehicles

This Project will develop a series of recommended near-term, mid-term, and long-term improvements for project delivery.



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Oakland, CA 94607
(510) 208-7400
AlamedaCTC.org

Near-Term and Mid-Term Improvements

Near-term and mid-term improvements (0-7 years) will address existing issues related to multimodal travel in the Study Area. These improvements will include “quick fix” solutions that can offer immediate benefits without significant environmental or right-of-way impacts. Near-term and mid-term improvements will serve as building blocks for a long-term multimodal vision for the corridor.

Examples of issues to be addressed through near-term and mid-term improvements include the following:

- Pedestrian and bicyclist safety
- Sidewalk gaps and ADA compliance
- Pavement rehabilitation
- Traffic signal timing
- Bus stop amenities and service improvements

This Project will serve as the scoping phase for near-term and mid-term improvements. Following this Project, these improvements will be advanced to the design phase in coordination with ongoing transportation projects in the Study Area. Based on cost and funding availability, these improvements will then be advanced for construction.

Long-Term Improvements

Long-term improvements (7+ years) will address anticipated needs over the next 20 years within the Study Area. Long-term improvements may also address more complex issues requiring robust environmental analysis or significant funding. These long-term projects will address increased growth in residents and employees in the Study Area in support of local jurisdictions' long-term goals.

Examples of issues to be addressed through long-term improvements include the following:

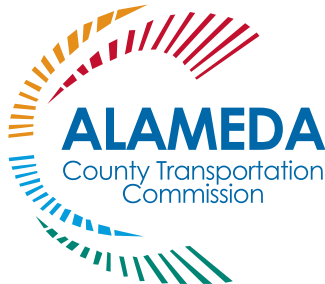
- New or expanded transit services
- First-mile and last-mile connections to BART
- Regional bicycle network connectivity



E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project
FACT SHEET

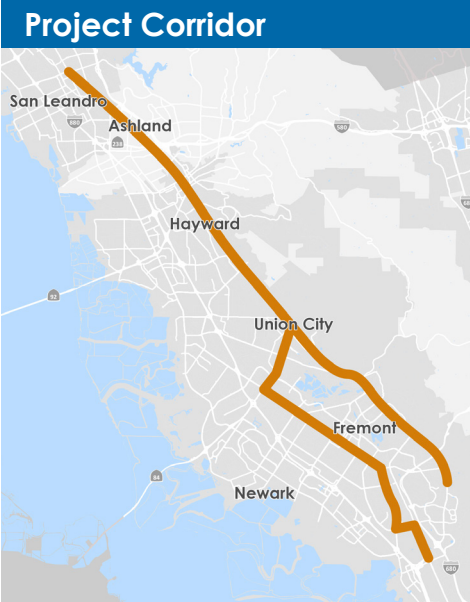
Winter 2018

Attachment III



ALAMEDA
County Transportation
Commission

Project Overview



East 14th Street, Mission Boulevard, and Fremont Boulevard connect the communities of central and southern Alameda County with regional transportation facilities, employment areas, and activity centers. The corridor extends through five jurisdictions (San Leandro, unincorporated Alameda County, Hayward, Union City, and Fremont) and provides connections throughout the inner East Bay paralleling Interstate 880 and BART.

The E. 14th St./Mission Blvd. and Fremont Blvd. Multimodal Corridor Project (Project) will identify specific near-, mid-, and long-term multimodal mobility improvements for implementation.

COORDINATION WITH ONGOING PROJECTS

Several near-term transportation projects are planned or under construction within the Study Area. Some of these projects are listed below and provide opportunities to coordinate recommended near-term improvements with ongoing efforts.

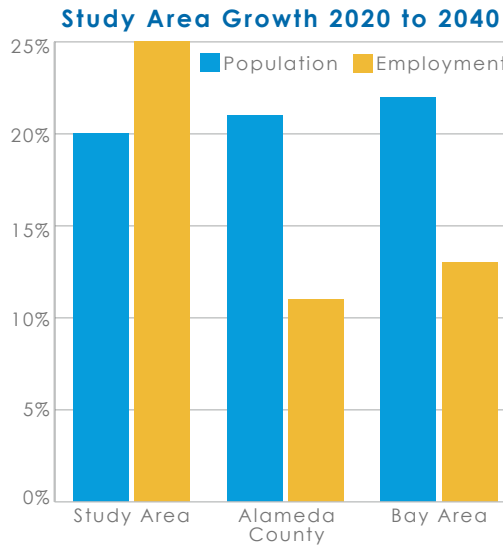
- **San Leandro** – pedestrian signals, streetscape improvements
- **Ashland/Cherryland** - E. 14th/Mission Streetscape, Phases 2 and 3
- **Hayward** - Mission Blvd. improvements, Phase 2 and Phase 3
- **Union City** – East-West Connector
- **Fremont** – Fremont Blvd. Safe and Smart Corridor
- **Caltrans** – pavement rehabilitation, ADA curb ramps
- **AC Transit** – East Bay BRT, Rapid Bus improvements in Fremont, Flex service
- **BART** – Silicon Valley extension to Santa Clara
- **Alameda CTC** - East Bay Greenway from Oakland to South Hayward BART

Study Area at a Glance

- 5 local jurisdictions
- 314,000 residents
- 90,000 employees
- 14 Priority Development Areas
- 120 signalized intersections
- 16,800 to 36,000 vehicles per day
- 2/3 of corridor with bike lanes
- 7 transit providers plus public and private shuttles
- 7 BART stations, 2 Capitol Corridor stations, 1 ACE station (shared with Amtrak)

SIGNIFICANT EMPLOYMENT GROWTH PROJECTED

Total employment in the Study Area is projected to grow by 25 percent between 2020 and 2040, double the rate for Alameda County as a whole and for the nine-county Bay Area region. Population in the Study Area is projected to grow at a rate comparable to the rest of the county and region.



Source – Play Bay Area 2040

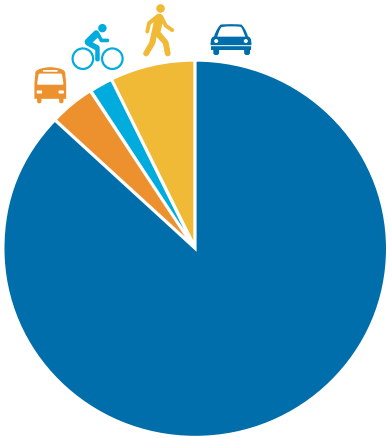
Travel Markets

Most trips made by auto

Trips by auto (including drive-alone plus rideshare) make up almost 90 percent of trips for the Study Area.

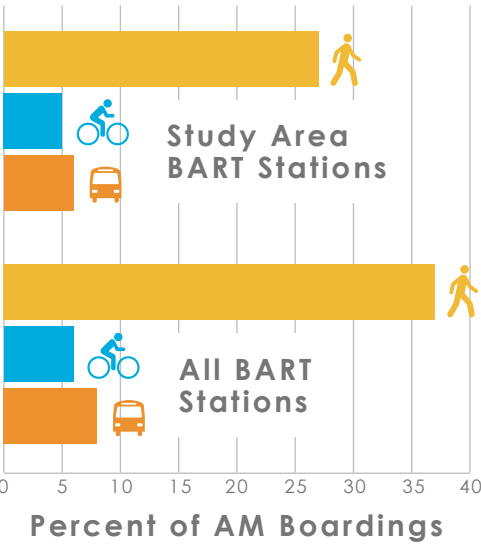


Source – Alameda Countywide Model, 2018



BART mode of access

Within the Study Area, a smaller share of BART passengers walk and take the bus to reach the station as compared to the BART system as a whole.



Source – 2015 BART Customer Satisfaction Survey

Local Trip Patterns

The corridor is used for shorter-distance travel versus end-to-end trips. More than half of trips in the Study Area are five miles or less, and almost no trips travel end to end along the corridor between San Leandro and Fremont.

- **28%** - Study Area trips that are 2 miles or less
- **55%** - Study Area trips that are 5 miles or less
- **90%** - Trips along the corridor that begin or end in a Study Area jurisdiction
- **<0.05%** - Trips along the corridor that travel end to end

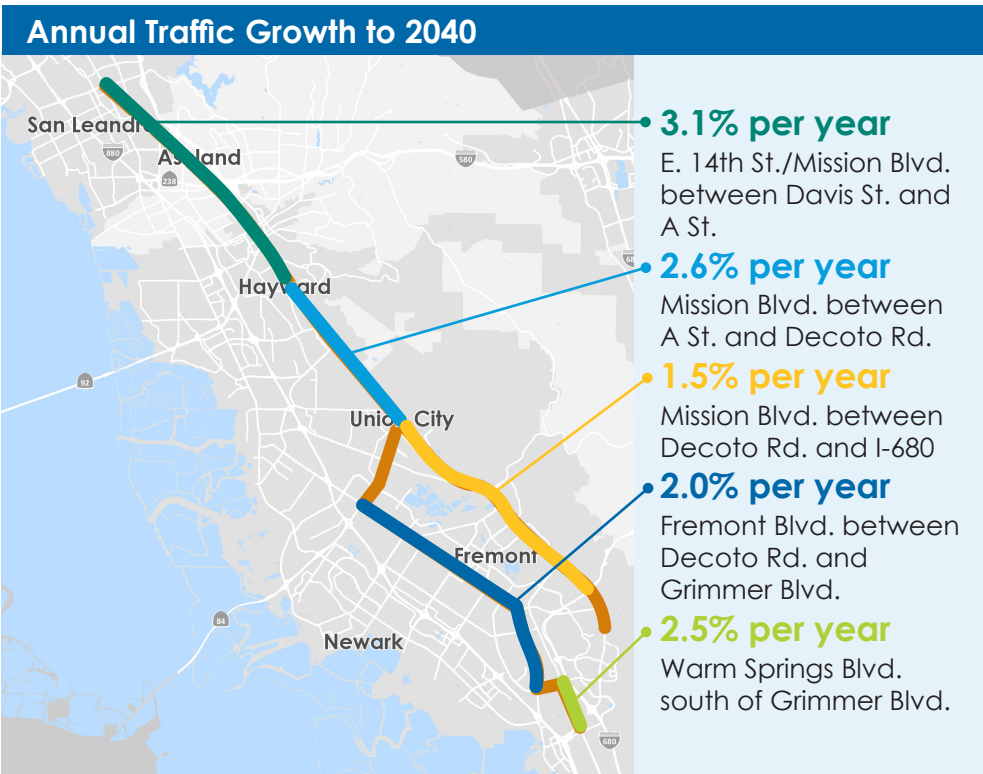
Traffic Operations

Six intersections currently operate over capacity:

- Foothill Blvd. and A St.
- Mission Blvd. and Niles Canyon Rd./Niles Blvd.
- Mission Blvd. and Mowry Ave.
- Mission Blvd. and I-680 southbound ramps
- Fremont Blvd. and Decoto Rd.
- Fremont Blvd. and Automall Pkwy.

Future traffic growth to 2040

- Year 2040 forecasts show substantial growth in the northern portion of the corridor, likely due to increased traffic diversion from Interstate 880.
- Traffic growth in the Warm Springs area would be due to planned employment growth.



Bicycle and Pedestrian

- **67%** of the corridor has existing Class II bike lanes
- **65%** of the corridor has planned long-term improvements to Class IV protected bike lanes
- **15%** of the corridor lacks sidewalks on one or both sides



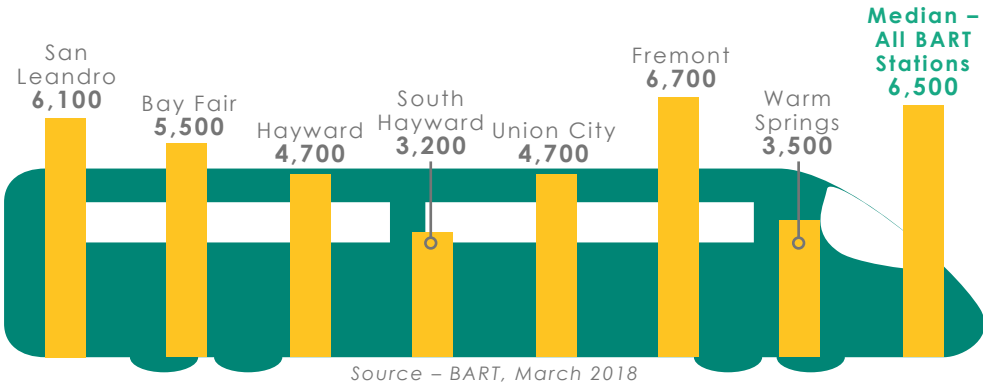
Safety

Fatal and Severe Injury Collisions	Countywide High-Injury Network
84 fatal or severe injury collisions over five years	40% of the corridor is part of the high-injury PEDESTRIAN network
32 involving pedestrians	25% of the corridor is part of the high-injury BICYCLIST network
10 involving bicyclists	
Between June 2012 and May 2017, half of fatal and severe collisions involved a pedestrian or bicyclist.	The 2019 Countywide Active Transportation Plan identifies several portions of the corridor as part of the countywide high-injury network.

Transit

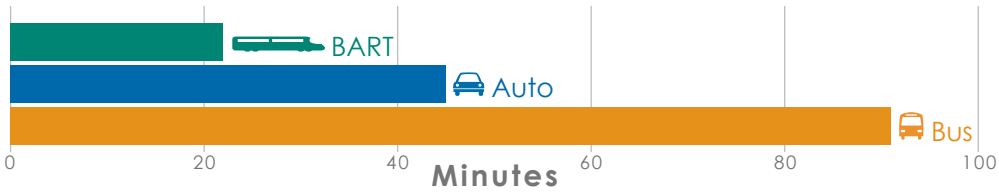
BART ridership

Ridership at BART stations in the Study Area is generally lower than for the BART system as a whole.



Travel Time Comparison – San Leandro to Fremont

BART is currently twice as fast as driving for end-to-end travel during the PM peak. This highlights the need for strong connections to BART to leverage its travel time advantage.



Bus Ridership Facts

- Bus service frequencies along the corridor are as high as 13 buses per hour, accounting for multiple transit providers and service types.
- AC Transit Lines 10 and 99 have the highest bus ridership in the Study Area. Each carries more than 3,000 riders per day.
- 40% of bus passengers in the Study Area board at a BART station.





CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-173

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

Draft Electrification Reach Codes for 2019 California Energy Code and California Green Building Standards Code

RECOMMENDATION

That the Committee reviews and comments on this report and recommends to Council adoption of the draft Reach Code.

SUMMARY

This report presents draft ordinances to address the electrification of buildings and vehicles related to new construction. Every three years, the California Building Code undergoes a full update and the 2019 Code will be in effect on January 1, 2020. Local jurisdictions can implement codes that are more stringent than the State Code. These “Reach Codes” can address the electrification of buildings and vehicles at the time of construction of new buildings.

The proposed Reach Codes would modify Part 6 (California Energy Code) and Part 11 (California Green Building Standards Code, aka CALGreen) of the California Building Code (Title 24 of the California Code of Regulations). This report includes an overview of the Statewide cost-effectiveness study, details findings, and provides language recommended for the associated reach codes for the 2019 building cycle. The draft ordinances would require that new buildings be either: constructed as all-electric (with no natural gas plumbing); or constructed as mixed fuel with extra energy efficiency, solar, and battery storage. As discussed in this report, the Committee may recommend that mixed -fuel be removed from the reach code as an option for low-rise residential (single-family and multi-family up to three stories).

ATTACHMENTS

Attachment I	Staff Report
Attachment II	Greenhouse Gas and Energy Savings and Cost-Effectiveness
Attachment III	Reach Code for Part 6 (California Energy Code)
Attachment IV	Reach Code for Part 11 (California Green Building Standards Code)



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BACKGROUND

All-electric buildings are one of the key strategies to decarbonizing the state’s building stock. The state’s electric system is rapidly becoming cleaner, driven by escalating renewable portfolio standards and cleaner product offerings by the utilities and community choice energy programs including East Bay Community Energy (EBCE).

In addition, advances in electric heat pumps and other electrical equipment are yielding much higher overall efficiencies than their natural gas counterparts. Electric heat pumps, unlike traditional electric resistance heaters, do not generate heat, but concentrate and transfer it for end uses such as space conditioning/heating and water heating. This process uses less primary energy and emits much less carbon, particularly when it is powered by renewable energy. In addition, induction cooktops are gaining popularity and are significantly more efficient than gas stoves. According to EBCE, on a BTU basis, electricity is approximately three times more expensive than natural gas. However, some heat pump equipment is approximately three times more efficient than similar natural gas-powered equipment. The more significant cost savings associated with building electrification come from the avoided infrastructure and plumbing needed to serve a building with natural gas.

Reach Code Adoption Process

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. This regular update is referred to as a “code cycle.” The last code cycle was adopted in 2016 and was effective as of January 1, 2017. The next code cycle was adopted in 2019 and will be effective January 1, 2020. Cities and counties can adopt reach codes that require items that are above minimum state code requirements. However, these reach codes must be filed with the State.

In addition, the California Energy Commission (CEC) requires that a cost-effectiveness study be conducted and filed in the case of local amendments to the Energy Code (Title 24, Part 6). It is required that the City demonstrate to the CEC, using a cost-effectiveness study, that the amendments to the code are financially responsible and do not represent an unreasonable burden to the non-residential and residential applicants. A cost-effectiveness study is not required for amendments to the Green Building Code (Title 24, Part 11).

Funded by the California investor-owned utilities, the California Statewide Codes and Standards Program led the development of a cost-effectiveness study¹ for Energy Code reach codes that examined different performance-based approaches for new construction of low-rise residential (single-family and multi-family up to 3 stories) and non-residential building types. A study for high-rise multi-family has yet to be completed. The results of the study are summarized in the Economic Impacts section of this report and in Attachment II.

Sustainability Committee Meetings

On July 16, 2018, the Committee considered a report titled Building Electrification & Reducing Natural Gas Use². The Committee recommended supporting and encouraging East Bay Community Energy (EBCE) to address electrification of existing buildings. The Committee also expressed support for phasing out the use of natural gas in new construction and,

¹ <https://localenergycodes.com/content/2019-local-energy-ordinances/>

² Report is available at <https://hayward.legistar.com/LegislationDetail.aspx?ID=3551018&GUID=718DCC1C-13F6-41D0-8833-C72B0B86DCE5&Options=&Search=>

eventually, no longer permitting new natural gas lines for new construction. The Committee noted that heat pump water heaters in new construction may be a good place to start and that any new regulations should come with sufficient advance notice to developers and builders.

On January 14, 2019, the Committee considered a report titled *Natural Gas Use in New Construction*³, which described the current regional effort to develop a reach code that would encourage all-electric construction. The Committee supported the idea of a reach code and asked staff to engage with local builders and developers and noted that a reach code would be most effective if all cities in the area would adopt the same requirements.

On May 13, 2019, the Committee considered a report titled *Update on Possible Reach Code for Building and Vehicle Electrification*⁴ which included a summary of the cost-effectiveness studies prepared by the California Energy Codes and Standards program. The Committee indicated support for not allowing natural gas in new single-family and low-rise (up to three stories) multi-family homes. For non-residential, the Committee prefers that buildings be all-electric, but mixed fuel buildings should be allowed where flexibility is needed for certain building types. The Committee also supported requiring electric vehicle (EV) charging infrastructure in new construction.

DISCUSSION

For multiple reasons including health, safety, economics and environmental benefits, there is growing interest in all-electric new construction, or “building electrification,” which means that the buildings would not have any fossil fuel services. All-electric buildings have electric appliances for space heating, water heating, clothes-drying, and cooking. A major reason to encourage building electrification stems from the fact that East Bay Community Energy is providing carbon-free electricity and eliminating the use of natural gas can greatly reduce greenhouse gas emissions from the building sector.

As noted in previous reports to the Committee, in order to adopt a reach code that will be effective on January 1, 2020, local ordinances must be adopted in September 2019 to allow time for filing with and review by the California Energy Commission and the California Building Standards Commission by the end of 2019. However, in order to allow for stakeholder outreach and accommodate the timelines associated with internal review and approval processes, many cities will not have their reach codes effective January 1, 2020. Many cities expect to have their reach codes in effect by March 2020.

The proposed ordinance is similar to the approach other local governments are considering. It is based on a model ordinance developed through a collaborative effort involving the City staff, California Energy Commission, the State’s major utilities, several

³ Report is available at <https://hayward.legistar.com/LegislationDetail.aspx?ID=3834310&GUID=B84DE7FD-6A5A-43D6-A042-26992FFF031C&Options=&Search=>

⁴ Report is available at <https://hayward.legistar.com/LegislationDetail.aspx?ID=3946057&GUID=61EEA528-55E8-4C6D-BAD3-24211EC64ABA&Options=&Search=>

community choice aggregators including EBCE and representatives from local governments and energy policy agencies.

The cities of San Mateo, Menlo Park and San Luis Obispo have adopted reach codes that, pending approval by the CEC, will be effective January 1, 2020. The cities of Fremont, San Jose, Oakland, Berkeley, and Albany are developing reach codes that could be adopted by the end of 2019 and would be effective in early 2020. Staff is working with EBCE and the other cities in Alameda County to develop similar codes. Also, keeping Hayward's adoption schedule similar to that of surrounding cities will allow for more consistency between codes, which will help to simplify implementation.

The City of Berkeley, on July 16, 2019, adopted a ban on the installation of natural gas infrastructure in new buildings. The ban, effective January 1, 2020, is not amendment of the Energy Code (Title 24, Part 6), but is incorporated into the city's health and safety code and will be implemented as conditions of approval during the planning approval process. Because some development proposals do not require formal planning approval prior to submittal of a building permit application, the City of Berkeley is also preparing to adopt a reach code, which will apply to projects that do not require a planning permit or a zoning certificate.

Staff has worked closely with EBCE's consultants to interpret the study's results and infer what options may or may not be cost-effective for the building types that are prevalent in Hayward. EBCE has also provided consultant support to assist cities in understanding the cost-effectiveness study results and adopting reach codes. The proposed reach codes meet the requirements of the CEC for cost-effectiveness, and are also a cost-effective approach for constituents, contractors, and developers pursuing new construction with the city limits. In addition, the analysis results show that all-electric buildings are typically less expensive to construct. Costs include incremental capital costs, and, in some cases higher energy costs. In general, the first costs of an all-electric building are lower than a mixed fuel building due to the lack of gas plumbing. More detail about the cost-effectiveness of the proposed reach code is included in the Economic Impact section of this report and in Attachment II.

Recommended reach code requirements for newly constructed buildings are:

Single-family Residential

- An all-electric home must meet the basic requirements of the state's 2019 Code, which includes some solar photovoltaics.
- Mixed-fuel building must either:
 - Meet a minimum EDR⁵ margin of 10 (performance approach); or

⁵ Energy Design Rating – According to the California Energy Commission, the Energy Design Rating (EDR) is a way to express the energy performance of a building using a scoring system where 100 represents the energy performance of a home designed to meet the 2006 Energy Code and 0 represents the energy performance of a home that combines high levels of energy efficiency with renewable generation to “zero out” its time-dependent value (TDV) of energy.

- Comply with a prescriptive list of requirements including extra energy efficiency measures, a solar photovoltaic system meeting 100% of the building's estimated annual electrical usage, and battery energy storage system.
- Free-standing accessory dwelling units less than 400 square feet are exempt, which means they can include natural gas appliances for water heating, space heating, etc.⁶

Multi-family Residential (up to 3 stories)⁷

- An all-electric building must meet the basic requirements of the state's 2019 Code.
- Mixed-fuel building must either:
 - Meet a minimum EDR margin of 10 (performance approach); or
 - Comply with a prescriptive list of requirements including extra energy efficiency measures, a solar photovoltaic system meeting 100% of the building's estimated annual electrical usage, and battery energy storage system.

Non-residential

- An all-electric building must meet the basic requirements of the state's 2019 Code.
- Mixed-fuel building must:
 - Install solar panels on the entire Solar Zone⁸; and
 - Meet a minimum EDR margin of 10% (or 15% for office and retail); or
 - Comply with a prescriptive list of energy efficiency requirements

For non-residential buildings, staff feels it is important to allow the flexibility that the mixed-fuel option provides. There are certain commercial and industrial building types that would be very challenging or infeasible to build as all-electric. For residential construction (single-family and multi-family up to three stories), the mixed-fuel option may not be necessary. At the direction of the Committee, staff could modify the draft ordinance to simply require all-electric buildings in all new low-rise residential construction. Other cities, including the City of Oakland, may be considering this requirement in their reach code.

The full text of the recommended amendments to the Energy Code (California Building Code, Title 24, Part 6) is included as Attachment III.

Reach Code for Electric Vehicle Charging Infrastructure

Local residents are showing a significant interest in electric vehicles. It is widely known that availability of EV charging infrastructure is a critical component to EV adoption. Meanwhile, it is significantly more expensive to install charging infrastructure as a retrofit than it is during new construction. As such, ensuring that newly constructed residential and non-residential parking has ample EV charging capability will reduce long-term costs of EV infrastructure installation, while helping to increase EV adoption and decrease transportation-related

⁶ A home of this size may not have the space needed for a heat pump water heater and may be connected to the main panel of the primary dwelling, which may have capacity constraints.

⁷ The cost-effectiveness study for high-rise residential (four stories and higher) has yet to be completed.

⁸ Solar Zone – The Energy Code defines the solar zone as an allocated space that is unshaded, unpenetrated, and free of obstructions. It serves as a suitable place that solar panels can be installed at a future date.

greenhouse gas emissions. While California's new minimum requirements are a step forward, it is unlikely that the requirements for multi-family dwellings and non-residential buildings are enough to keep pace with expected EV growth looking towards 2030. The Statewide Program's team reviewed approaches to increase the amount of EV infrastructure in new construction buildings, while keeping construction costs as low as possible.

Unlike amendments to the Energy Code, a cost-effectiveness study is not required for amendments to Title 24, Part 11, or the Green Building Code "CALGreen" which covers items such as electric vehicle (EV) charging infrastructure. However, to evaluate the financial impact on first costs, PCE/SVCE commissioned an analysis of the total cost of implementing various EV infrastructure measures. Staff worked closely with East Bay Community Energy, and the Statewide Program's team to establish new construction EV requirements which are more in-line with local EV adoption trends, while providing flexibility for the builder and keeping construction costs as low as possible.

Electric Vehicle (EV) charging requirements in California can generally be broken into three categories:

- EV Charging Installed: all supply equipment is installed at a parking space, such that an EV can charge without additional equipment. (Staff does not recommend installation of charging equipment. EVs and EV charger technologies are evolving rapidly and unused installations could become outdated quickly.)
- EV Ready: Parking space is provided with all power supply and associated outlet, such that a charging station can be plugged in and a vehicle can charge.
- EV Capable: Conduit is installed to parking space, and building electrical system has ample capacity to serve future load. An electrician would be required to complete the circuit before charging is possible.

EV charging capacity and speed can be summarized as three categories:

- Level 1: Capable of charging at 120V, 20A. This is equivalent to a standard home outlet. (Staff is not recommending requirements for Level 1 chargers as they are not expected to be useful as technology advances. In the near future, EVs are expected to have larger capacity batteries, which will take a very long time to charge using a Level 1 charger.
- Level 2: Capable of charging at 240V, 30-40A. This is the service capacity typically used for larger appliance loads in homes
- Level 3 (DC Fast Charging): Capable of charging at 20-400kW. This is the type of charger used for Tesla Superchargers and DC Fast Chargers at some shopping centers (and there are two at the City Hall parking structure).

The 2019 California Green Building Code Update (Title 24, Part 11) increases requirements for electric vehicle charging infrastructure in new construction; including:

- New one- and two-family dwellings and townhouses with attached private garages: must be Level 2 EV-capable
- Multi-family dwellings: 10% of parking spaces must be Level 2 EV-capable
- Non-residential: 6% of parking spaces must be Level 2 EV-capable

Recommended reach code requirements for EV infrastructure are:

Residential

- Single Family Dwelling: For each dwelling unit, install two dedicated Level 2 EV Ready circuits.
 - Exception: For each dwelling unit with only one parking space, install one Level 2 EV Ready circuit
- Multi-Unit Dwelling, <20 units: Per unit, a single Level 2 EV Ready circuit
 - Exception: Not required for units without parking
- Multi-Unit Dwelling, >20 units: 75% of the units, a single Level 2 EV Ready circuit per unit; 25% of the units, a single Level 2 EV Capable circuit per unit
 - Exception: Not required for units without parking

Non-Residential Office

- 20% of the parking spaces, Level 2 EV Ready circuit
- 30% of the parking spaces EV Capable at the “pinch points” utilizing at least Level 2-sized conduit with panel capacity for 2kW per EV capable parking space. Pinch points are defined as the areas where conduit should be installed at the time of new construction so that future installations do not require walls to be opened or asphalt dug up.

Non-Residential, Non-Office

- 15% of the parking spaces, Level 2 EV Ready circuit
- For parking lots with more than 100 spaces, first hundred spaces must adhere to Level 2 requirements, with option to install a single DC fast charger (Level 3) for each subsequent set of 100 spaces.

The full text of the recommended amendments to CALGreen (California Building Code, Title 24, Part 11) is included as Attachment IV.

ECONOMIC IMPACT

A reach code may only be adopted if it is determined that the proposed requirements are cost-effective. Cost-effectiveness is measured considering lifecycle costs using a 30-year timeframe. Generally, electric appliances are not more expensive compared to those fueled by natural gas. When considering the avoided cost of installing gas infrastructure (piping), in most cases, all-electric construction is cost-effective. The CEC requires that the cost-effectiveness analysis incorporate the time-dependent valuation (TDV) of energy so that the costs for the construction and operation of the building can be accurately calculated⁹. In addition to TDV, the studies also present cost-effectiveness in terms of the on-bill customer lifecycle benefit-to-

⁹ As defined in the cost-effectiveness studies, the TDV calculation is “intended to capture the “societal value or cost” of energy use including long-term projected costs such as the cost of providing energy during peak periods of demand and other societal costs such as projected costs for carbon emissions, as well as grid transmission and distribution impacts. This metric values energy use differently depending on the fuel source (gas, electricity, and propane), time of day, and season. Electricity used (or saved) during peak periods has a much higher value than electricity used (or saved) during off-peak periods (Horii et al., 2014). This is the methodology used by the Energy Commission in evaluating cost-effectiveness for efficiency measures in Title 24, Part 6.”

cost ratio. The on-bill method shows that a new all-electric single-family home is not cost-effective when meeting the minimum 2019 state code requirements. This is because the study assumed appliances that meet minimum federal efficiency standards. In most cases, more efficient appliances are installed, which would cause the project to be cost-effective.

Two studies were completed; one for single-family and low-rise residential and one for non-residential construction. In general, the studies found that all-electric construction is cost effective for new construction for several building prototypes including: single-family home, low-rise multi-family building, medium office and medium retail. The complete cost effectiveness studies are available on the California Energy Codes and Standards program website¹⁰ and are summarized in Attachment II.

FISCAL IMPACT

The proposed energy performance amendments parallel the structure and terms of the State code and as such any incremental plan check and inspection time should be minimal. The electric readiness provisions will require plan checkers and inspectors to apply additional check lists to mixed-fuel buildings. These items are not expected to require very much additional staff time. Any incremental costs of administering these requirements will be covered through existing permit fees.

East Bay Community Energy (EBCE) is assisting its member jurisdictions with community outreach and development of local ordinances. EBCE will provide a grant of \$10,000 to each city that presents an ordinance to its council as compensation for the staff time spent on the effort. Before a reach code is adopted, staff will evaluate the potential impacts that implementation would have on the General Fund.

STRATEGIC INITIATIVES

This agenda item does not directly relate to one of Council's three Strategic Initiatives.

SUSTAINABILITY FEATURES

Meeting the City's long-term GHG reduction goal of 82.5% by 2050 will require that the use of natural gas be significantly curtailed throughout the community. Eliminating the use of natural gas in new construction would be a step toward meeting this goal. Furthermore, a reach code that encourages all-electric construction is consistent with the following General Plan policy:

Natural Resources Policy 2.6: Greenhouse Gas Reduction in New Development
The City shall reduce potential greenhouse gas emissions by discouraging new development that is primarily dependent on the private automobile; promoting infill development and/or new development that is compact, mixed use, pedestrian

¹⁰ <https://localenergycodes.com/content/2019-local-energy-ordinances/>

friendly, and transit oriented; promoting energy-efficient building design and site planning; and improving the regional jobs/housing balance ratio.

ENVIRONMENTAL DETERMINATION

Adoption of the proposed Reach Codes is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15308 of the CEQA Guidelines, Actions by Regulatory Agencies for the Protection of the Environment.

PUBLIC CONTACT

East Bay Community Energy is coordinating the preparation of draft reach codes and stakeholder engagement for its member agencies. EBCE has developed a website¹¹ with information and resources. On April 23 and 24, EBCE held four meetings in Fremont and Berkeley. Each location had one meeting for city staff and one for community members and stakeholders. In total, more than 100 people attended, including city staff from at least seven EBCE jurisdictions. On May 3, 2019, staff met with the Chamber of Commerce's Government Relations Council where staff from EBCE presented an overview of the need for and the benefits of a reach code. Comments received at the April and May meetings were summarized in the report presented to the Committee on May 13, 2019.

Recent Stakeholder Engagement

On August 26, 2019, staff partnered with BayREN to offer a workshop to local plumbing contractors to provide code compliance information related to heat pump water heaters. During the meeting staff informed attendees that the City is developing a reach code, which could require heat pump water heaters in new construction.

Staff created a webpage dedicated to the reach code effort. It includes links to previous Committee reports as well as links to external resources.

In September, staff mailed and emailed letters to hundreds of developers and contractors with information about the reach code development, including information about the September 17 Committee meeting.

Finally, an article about the Reach code will be published in Leaflet on September 24, 2019.

NEXT STEPS

Upon a recommendation from the Committee, staff may present the draft reach codes to Council in October or November. Additional steps would be as follows:

Sept. – November October 30	Continue Stakeholder Engagement Sustainability Committee Meeting (if needed)
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¹¹ <https://ebce.org/reach/>

November 19
December 3
January 2020

Council Meeting (Public Hearing and First Reading of Ordinance)
Council Meeting (Second Reading and Adoption of Ordinance)
Submit Reach Code to CEC for Approval

The reach codes would become effective upon approval by the CEC. The CEC currently requires a 60-day public review period. Effective January 1, 2020, the review period will be only 15 days. Staff intends to submit the reach codes in January after the shorter review period is in effect.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', is written over a horizontal line.

Kelly McAdoo, City Manager

Greenhouse Gas, Energy and Cost Savings

The California Statewide Codes and Standards Program led the development of a cost-effectiveness study¹ for Energy Code reach codes that examined different performance-based approaches for new construction of low-rise residential (single-family and multi-family up to 3 stories) and non-residential building types. The study finds that all-electric buildings, even those with no other energy performance enhancements, provide significant greenhouse gas (GHG) reductions. The addition of energy efficiency and more solar can drive net energy use to nearly zero from some building types and GHG emissions to less than a third of a mixed-fuel 2019 State code compliant building.

The charts below compare total GHG emissions and net energy consumption (after onsite generation) of various strategies for typical building types.

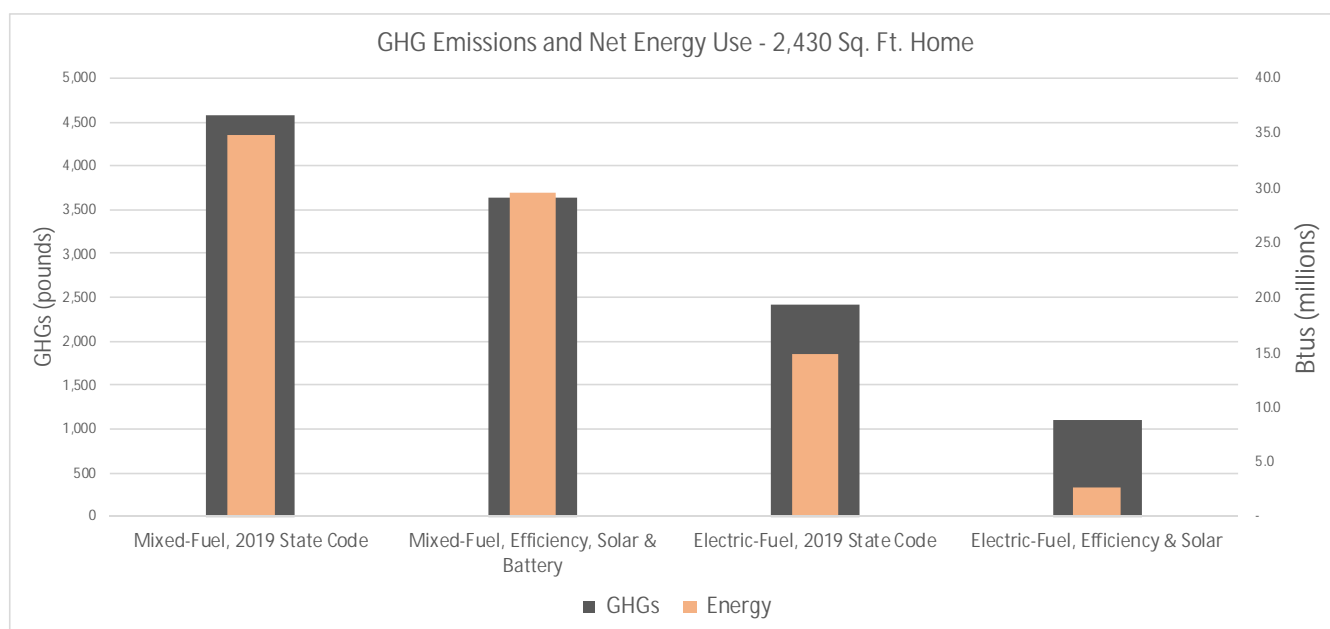


Figure 1: GHG and Energy Impact, Single Family Home

¹ <https://localenergycodes.com/content/2019-local-energy-ordinances/>

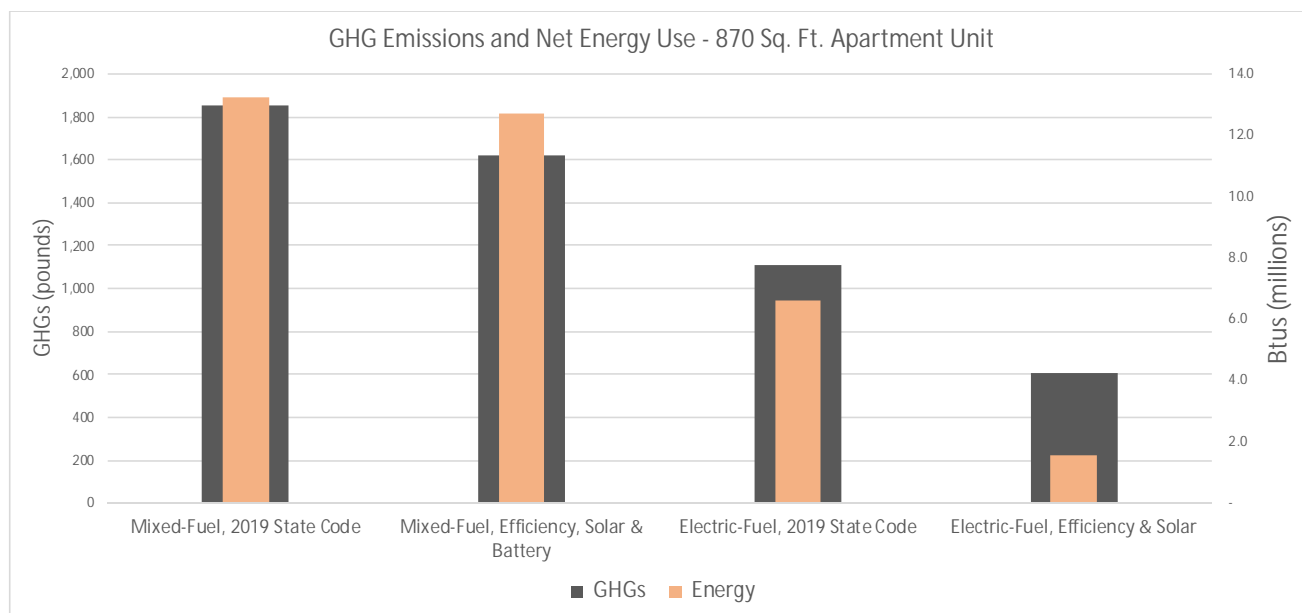


Figure 2: GHG and Energy Impacts, Low-Rise Multifamily Unit

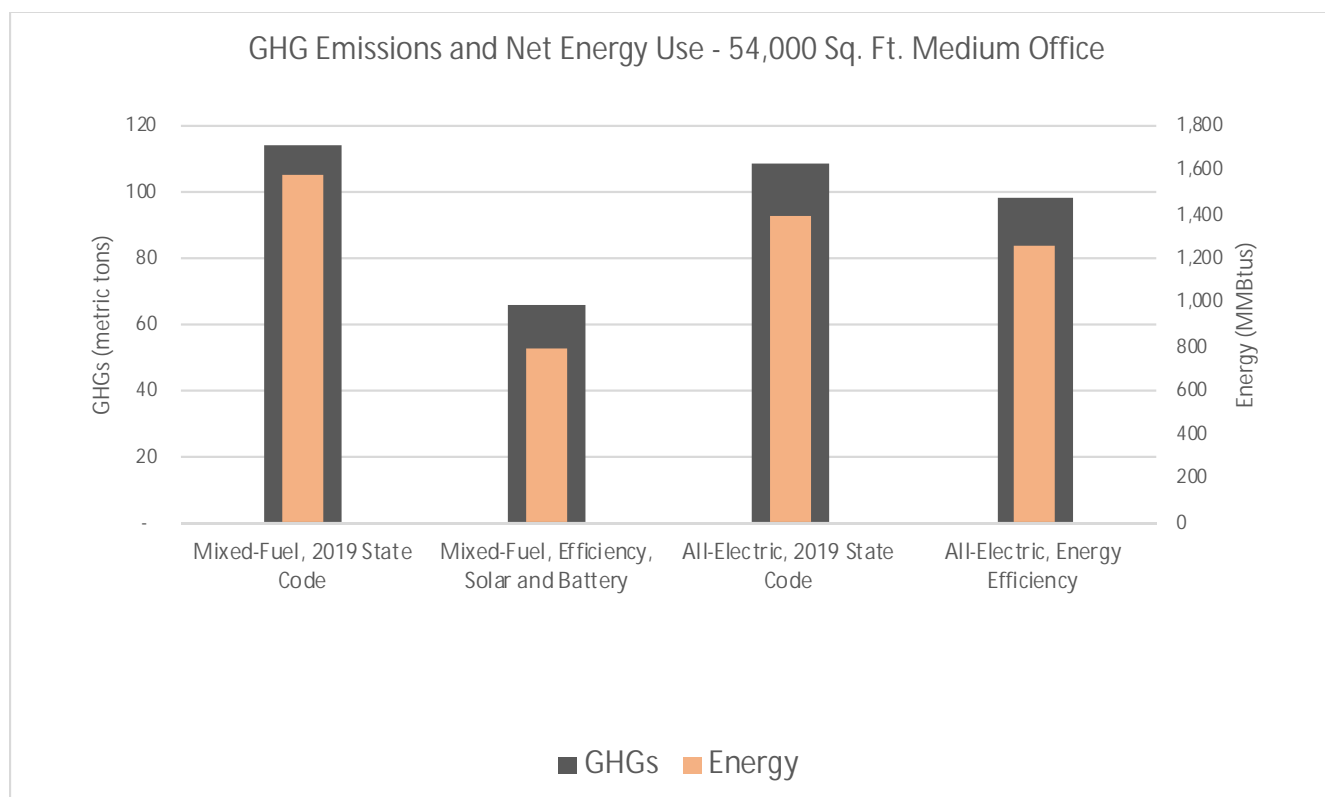


Figure 3: GHG and Energy Impact, Medium Office Building

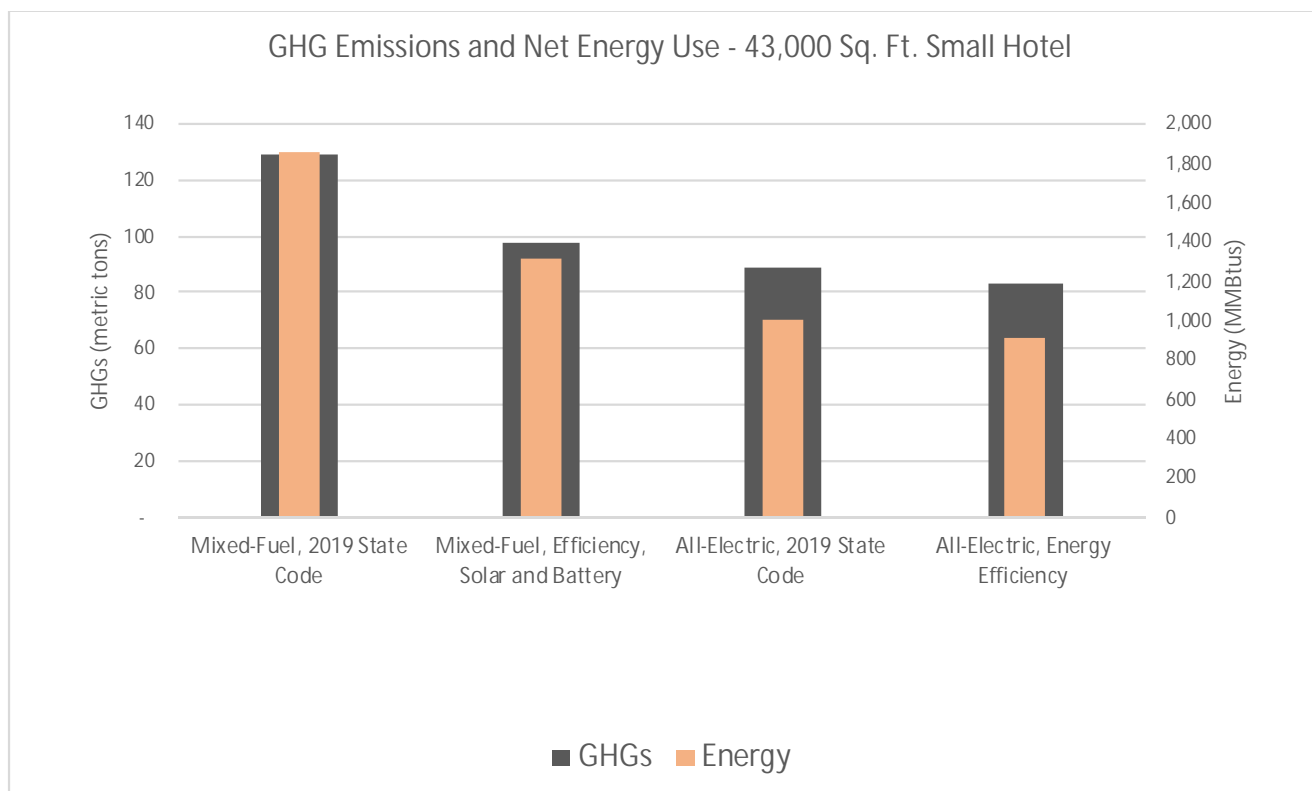


Figure 4: GHG and Energy Impact Small Hotel

Economic Impacts

All-electric buildings are generally cheaper to build due to the elimination of running gas plumbing to the building. These lower first costs generally make all-electric construction more cost-effective on a life-cycle basis. This is particularly true for low-rise residential buildings, where it is also often increasingly more cost-effective for the owner to exceed the code by improving efficiency and adding solar. In fact, if one invests the savings from the gas infrastructure in additional PV capacity to offset more of the electricity load, in many cases the building is cost-effective for the owner and society from day one, meaning the building is both less expensive to build and cheaper to operate. This is shown as the “Neutral Cost” scenario in row 13 of Figure 6 below.

The charts below depict the incremental net present value costs and savings of various designs relative to a State-code-complaint mixed-fuel design. Note, each building type is examined from two perspectives: one from the owners/operator’s point of view; the other from society’s point of view². The latter reflects benefits that accrue to other ratepayers and society.

² The societal point of view incorporates the time-dependent valuation (TDV) of energy, which is required by the CEC when determining cost-effectiveness.

In the following charts, Cost values less than zero indicate lower capital cost. Savings values less than zero indicate higher energy costs. “Mixed-Fuel, PV & Batter” corresponds with row 5 in the table; “Electric-Fuel, 2019 State Code” corresponds with row 11; and “Electric-Fuel, Efficiency & Solar” corresponds with row 12.

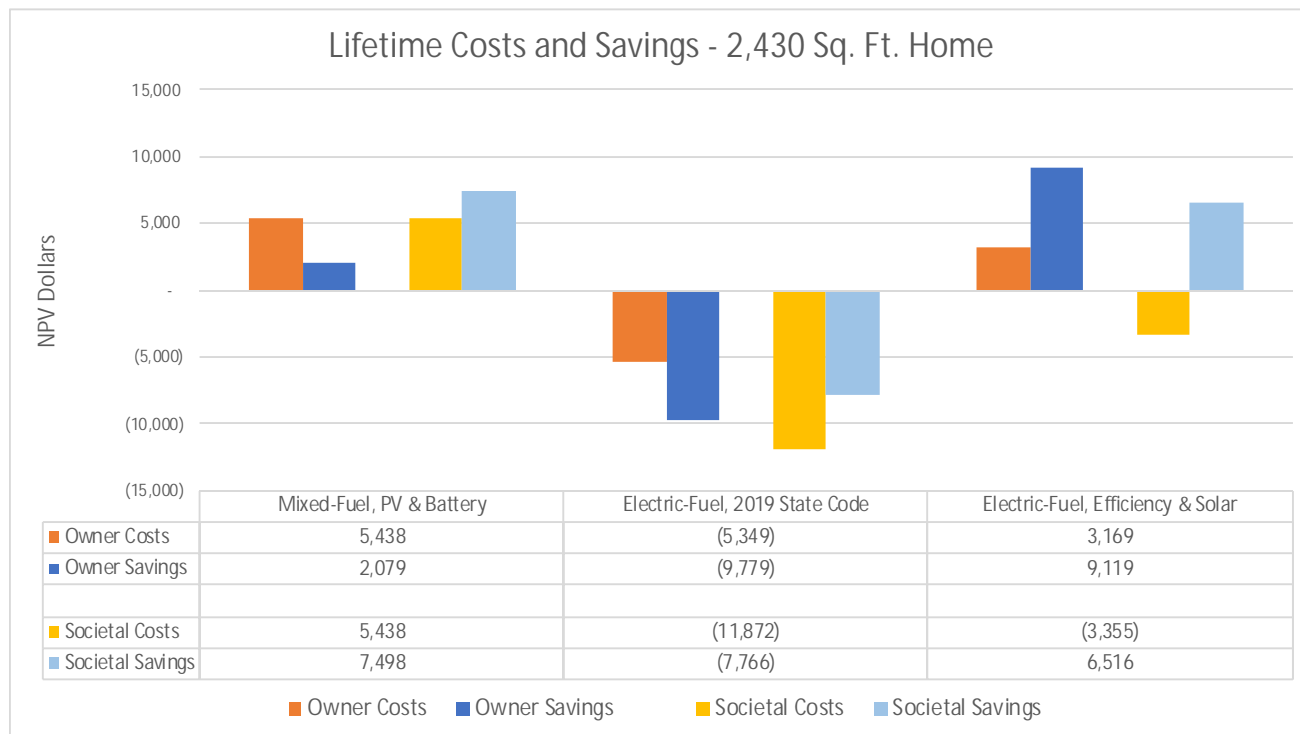


Figure 5: Costs and Benefits - Single-Family Home

1	Climate Zone 3 PG&E Single Family		Annual Net kWh	Annual therms	EDR Margin ⁴	PV Size Change (kW) ⁵	CO2-Equivalent Emissions (lbs/sf)		NPV of Lifetime Incremental Cost (\$)	Benefit to Cost Ratio (B/C)	
2	Mixed Fuel ¹	Code Compliant	(0)	348	n/a	n/a	1.88	n/a	n/a	n/a	n/a
3		Efficiency-Non-Preempted	(0)	296	2.5	(0.03)	1.63	0.26	\$1,552	1.28	1.31
4		Efficiency-Equipment	(0)	273	4.0	(0.03)	1.52	0.37	\$1,448	1.91	1.97
5		Efficiency & PV/Battery	(20)	296	10.0	0.07	1.50	0.38	\$5,438	0.38	1.38
6	All-Electric ²	Code Compliant	4,355	0	n/a	n/a	1.00	n/a	n/a	n/a	n/a
7		Efficiency-Non-Preempted	3,584	0	4.5	0.00	0.85	0.15	\$1,519	2.60	2.36
8		Efficiency-Equipment	3,670	0	4.0	0.00	0.86	0.14	\$2,108	1.76	1.62
9		Efficiency & PV	790	0	18.0	1.77	0.46	0.54	\$8,517	2.22	1.68
10		Efficiency & PV/Battery	(12)	0	29.0	2.37	0.23	0.76	\$14,380	1.50	1.58
11	Mixed Fuel to All-Electric ³	Code Compliant	4,355	0	0.0	0.00	1.00	0.89	(\$5,349)	0.55	1.53
12		Efficiency & PV	790	0	18.0	1.77	0.46	1.43	\$3,169	2.88	>1
13		Neutral Cost	2,217	0	10.5	1.35	0.70	1.18	\$0	>1	>1

Figure 6: Benefit to Cost Ratios - Single-Family Home

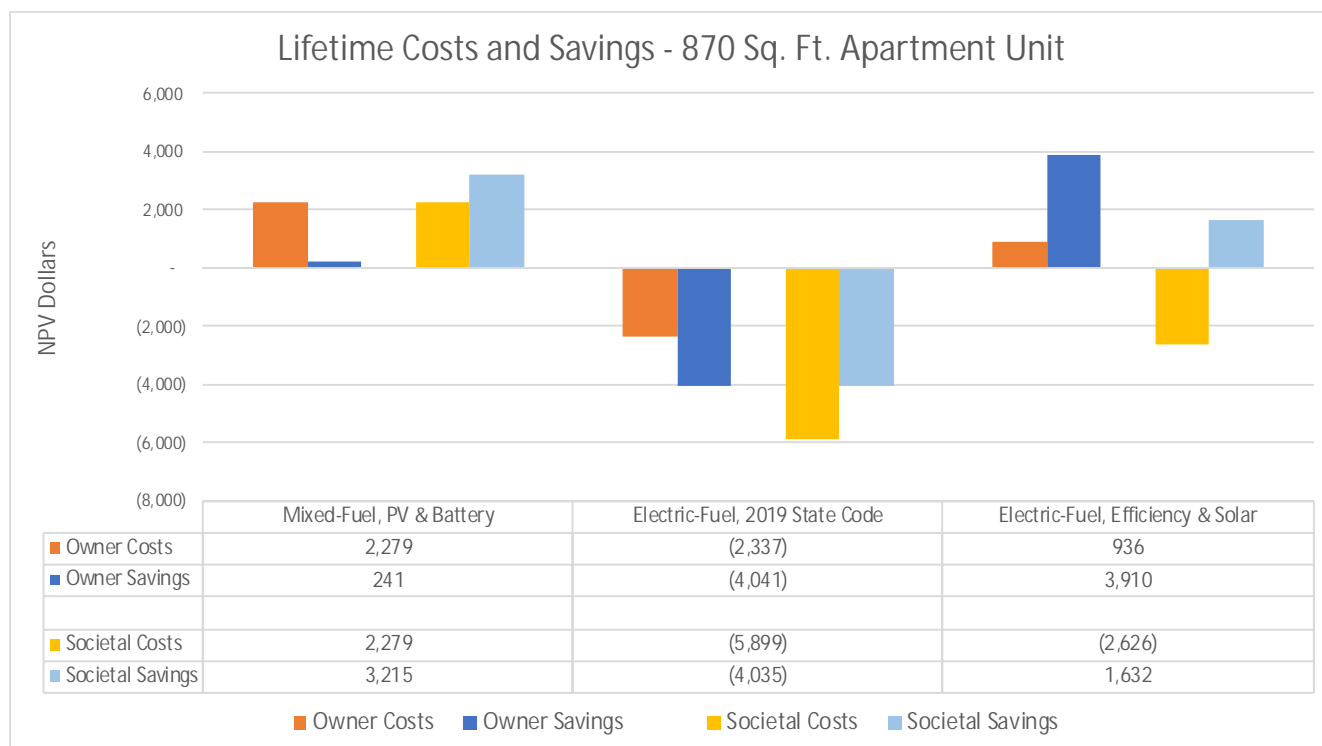


Figure 7 Costs and Benefits - Low-Rise Multifamily Unit

Climate Zone 3 PG&E Multifamily		Annual Net kWh	Annual therms	EDR Margin ⁴	PV Size Change (kW) ⁵	CO2-Equivalent Emissions (lbs/sf)		NPV of Lifetime Incremental Cost (\$)	Benefit to Cost Ratio (B/C)	
						Total	Reduction		On-Bill	TDV
Mixed Fuel ¹	Code Compliant	(0)	133	n/a	n/a	2.13	n/a	n/a	n/a	n/a
	Efficiency-Non-Preempted	(0)	127	0.5	(0.00)	2.06	0.07	\$175	1.00	1.11
	Efficiency-Equipment	(0)	119	1.5	(0.00)	1.94	0.19	\$403	1.11	1.23
	Efficiency & PV/Battery	(10)	127	10.0	0.05	1.86	0.27	\$2,279	0.11	1.41
All-Electric ²	Code Compliant	1,944	0	n/a	n/a	1.27	n/a	n/a	n/a	n/a
	Efficiency-Non-Preempted	1,944	0	0.0	0.00	1.27	0.00	\$0	-	-
	Efficiency-Equipment	1,698	0	2.5	0.00	1.13	0.14	\$795	1.73	1.58
	Efficiency & PV	457	0	16.0	0.92	0.69	0.58	\$3,272	2.43	1.73
	Efficiency & PV/Battery	(7)	0	29.5	1.26	0.33	0.94	\$6,344	1.32	1.64
Mixed Fuel to All-Electric ³	Code Compliant	1,944	0	0.0	0.00	1.27	0.86	(\$2,337)	0.58	1.46
	Efficiency & PV	57	0	16.0	0.92	0.69	1.43	\$936	4.18	>1
	Neutral Cost	845	0	11.5	0.70	0.85	1.28	\$0	>1	>1

¹All reductions and incremental costs relative to the **mixed fuel** code compliant home.

²All reductions and incremental costs relative to the **all-electric** code compliant home.

³All reductions and incremental costs relative to the **mixed fuel** code compliant home except the EDR Margins are relative to the Standard Design for each case which is the **all-electric** code compliant home. Incremental costs for these packages reflect the costs used in the On-Bill cost effectiveness methodology. Costs differ for the TDV methodology due to differences in the site gas infrastructure costs (see Section 2.6).

⁴This represents the Efficiency EDR Margin for the Efficiency-Non-Preempted and Efficiency-Equipment packages and Total EDR Margin for the Efficiency & PV, Efficiency & PV/Battery, and Neutral Cost packages.

⁵Positive values indicate an increase in PV capacity relative to the Standard Design.

Figure 8 Benefit to Cost Ratios - Low-Rise Multifamily Unit

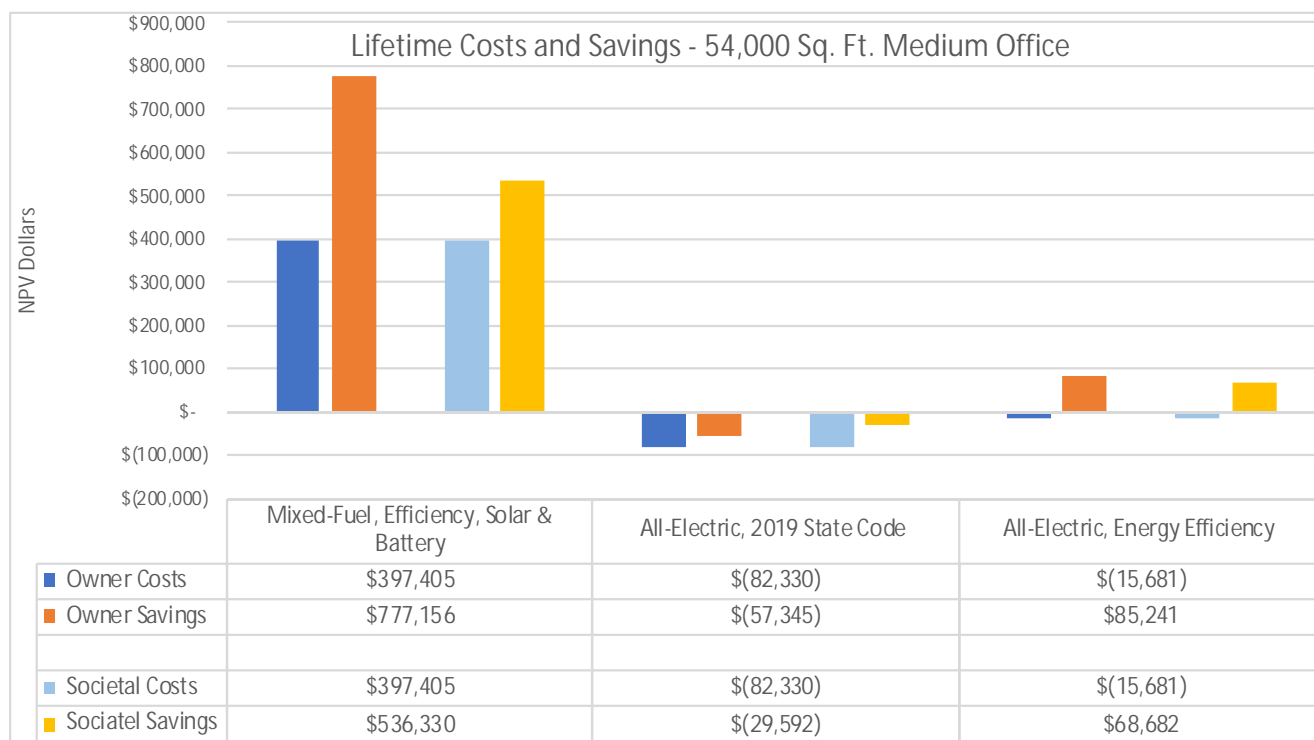


Figure 9: Costs and Benefits - Medium Office

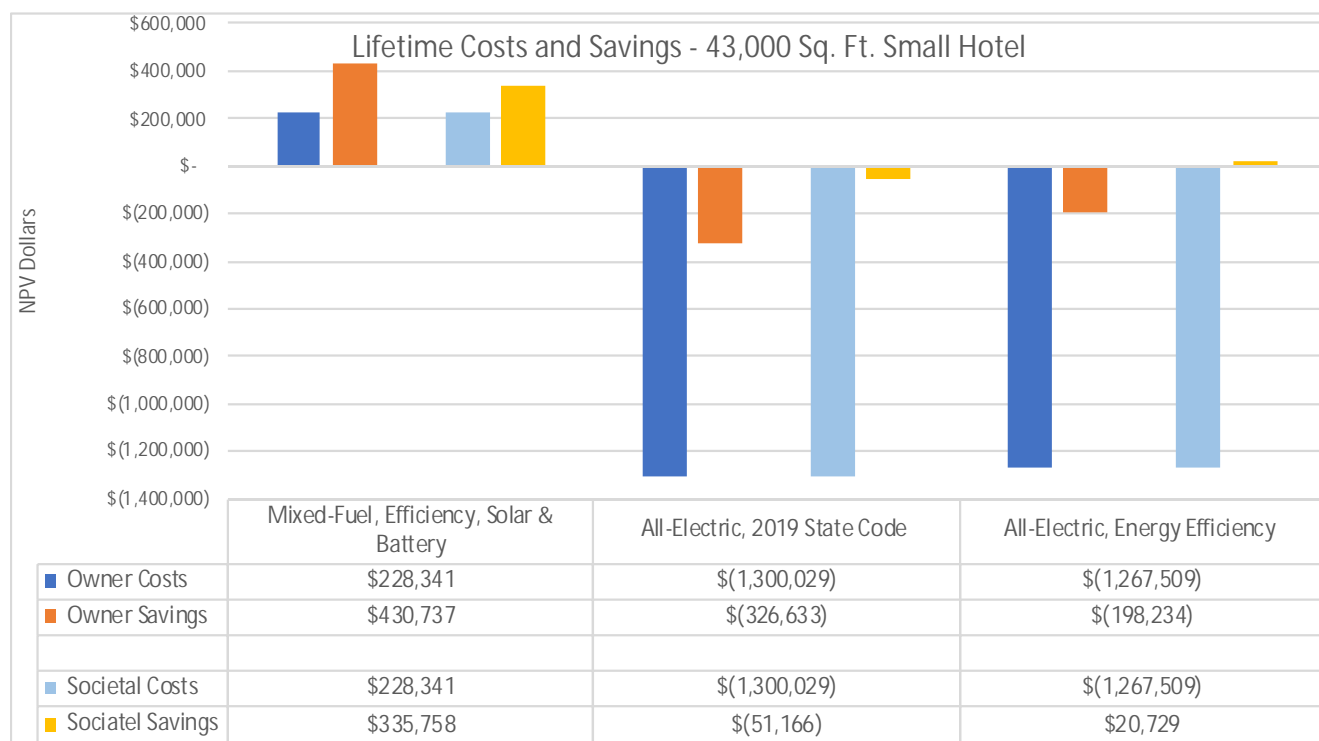


Figure 10: Costs and Benefits - Small Hotel

SECTION 1. Recitals. The City Council finds and determines the preceding recitals to be true and correct and an integral part of the Council's decision, and hereby adopts and incorporates them into this Ordinance.

SECTION 2. California Environmental Quality Act. This ordinance is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15308 of the CEQA Guidelines, Actions by Regulatory Agencies for the Protection of the Environment.

SECTION 3: Purpose and Intent. It is the purpose and intent of this Ordinance to expressly enact local amendments to Sections 100.0, 100.1, 140.0, 140.1 and 150.1 of the 2019 California Building Code applicable to new construction to provide standards for new buildings to improve community health and safety while reducing greenhouse gas emissions.

SECTION 4. Enactment of Local Amendments to The California Building Code, Title 24, Part 6 (Amendments to Chapter ____ of the _____ Municipal Code). The local amendments to Sections 100.0, 100.1, 140.0, 140.1 and 150.1 of the 2019 California Building Code, Title 24, Part 6, are hereby enacted. The local amendments being enacted amend _____ Municipal Code Chapter _____ to add Sections _____ through _____ as follows (additions are shown in double underline and deletions are shown as ~~strikethrough~~):

Section 100.0 is modified to add a new section (i) as follows:

(i) Energy Reach Code - Purpose and Intent.

In addition to all requirements of the California Energy Code applicable to new construction, the following shall apply:

1. New low-rise residential buildings, other than accessory dwelling units that are no greater than 400 square feet, which are designed to utilize mixed-fuel (natural gas or propane in addition to electricity) shall be required to either comply with the prescriptive requirements of Section 150.1(c), as amended herein, or meet a Total Energy Design Rating (EDR) margin, as defined by the California Energy Code, of 10. The performance requirements may be reduced, but not below the requirements for the Standard Design Building, if sufficient solar access is not available.
2. New nonresidential buildings that are designed to utilize mixed-fuel (natural gas or propane in addition to electricity) shall be required to install solar panels on the entire Solar Zone, as defined in Section 110.10, and comply with either the prescriptive requirements of Section 140.2, as amended herein, or have compliance margins, as defined in Section 140.1, that meet or exceed the Standard Design Building by the amounts below:

- A. Office and retail occupancies: 15%
 - B. Hotel/Motel and High-Rise Residential occupancies: 10%
 - C. All other occupancies in buildings with both indoor lighting and mechanical systems: 10%
 - D. All other occupancies in buildings with indoor lighting or mechanical systems but not both: 10%
3. If a Certified Energy Analyst prepares the Certificate of Compliance, the design shall be credited with one (1) EDR point or one (1) percent of compliance margin, to the extent that the resultant energy budget is no greater than the energy budget for the Standard Building Design.

Section 100.1 (b) is modified by adding the following definitions:

ALL-ELECTRIC BUILDING is a building that has no natural gas or propane plumbing installed within the building, and that uses electricity as the source of energy for its space heating, water heating, cooking, and clothes drying appliances. An All-Electric Building may include solar thermal collectors.

CERTIFIED ENERGY ANALYST is a person registered as a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10-103.

FREE STANDING ACCESSORY DWELLING UNIT is a detached building that is not intended for sale separate from the primary residence, on a lot that is zoned for single family or multifamily use, located on the same lot as an existing dwelling, and does not exceed 1,200 square feet of total floor area.

MIXED-FUEL BUILDING is a building that is plumbed for the use of natural gas or propane as fuel for space heating, water heating, cooking, and/or clothes drying appliances.

Section 150.1 (b) is modified as follows:

- (b) Performance Standards. A building complies with the performance standards if the energy consumption for the Proposed Design Building is no greater than the energy budget calculated for the Standard Design Building using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual. Mixed-Fuel Buildings must additionally reach an Energy Design Rating margin above the Standard Design in order to comply with performance standards.

Sections 150.1 (b) 1 and 2 are modified as follows:

1. Newly Constructed Buildings. The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Rating, which is based on TDV energy. The Energy Design Rating (EDR) has two components, the

Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The Solar Electric Generation and Demand Flexibility Design Rating shall be subtracted from the Energy Efficiency Design Rating to determine the Total Energy Design Rating. The Proposed Building shall separately comply with the Energy Efficiency Design Rating and the Total Energy Design Rating.

A. An All-Electric Building or a Free Standing Accessory Dwelling Unit no greater than 400 square feet complies with the performance standards if both the Total Energy Design Rating and the Energy Efficiency Design Rating for the Proposed Building are no greater than the corresponding Energy Design Ratings for the Standard Design Building.

B. A Mixed-Fuel Building complies with the performance standards if:

- i. The Energy Efficiency Design Rating of the Proposed Building is no greater than the Energy Efficiency Design Rating for the Standard Design Building; and
- ii. The Total Energy Design Rating for the Proposed Building is at least 10 points less than the Total Energy Design Rating for the Standard Design Building.

EXCEPTION 1 to Section 150.1(b)1.B.ii. If the Certificate of Compliance is prepared and signed by a Certified Energy Analyst and the Total Energy Design Rating of the Proposed Design is no greater than the Standard Design Building, the Total Energy Rating of the Proposed Building complies with this section if it is at least nine (9) points less than the Total Energy Design Rating for the Standard Design Building.

EXCEPTION to Section 150.1(b)1. A community shared solar electric generation system, or other renewable electric generation system, and/or community shared battery storage system, which provides dedicated power, utility energy reduction credits, or payments for energy bill reductions, to the permitted building and is approved by the Energy Commission as specified in Title 24, Part 1, Section 10-115, may offset part or all of the solar electric generation system Energy Design Rating required to comply with the Standards, as calculated according to methods established by the Commission in the Residential ACM Reference Manual.

The first paragraph of Section 150.1 (c) is modified as follows:

Prescriptive Standards/Component Package. Buildings that comply with the prescriptive standards shall be designed, constructed, and equipped to meet all of the requirements for the appropriate Climate Zone shown in TABLE 150.1-A or B as well as all of the requirements of Sections 150.1(c)15 and 16, whichever are more stringent. In TABLE 150.1-A and TABLE 150.1-B, a NA (not allowed) means that feature is not permitted in a particular Climate

Zone and a NR (no requirement) means that there is no prescriptive requirement for that feature in a particular Climate Zone. Installed components shall meet the following requirements:

New Sections 150.1(c) 15 and 16 are added as follows:

15. Additional Prescriptive Requirements for Single Family Mixed-Fuel Buildings.

- A. Duct System Sealing and Leakage Testing. The total duct system leakage shall not exceed 2 percent of the nominal system air handler air flow.
- G. Slab insulation. Slab floor perimeter insulation shall be installed with an R-value equal to or greater than R10. The minimum depth of concrete-slab floor perimeter insulation shall be 16 inches or the depth of the footing of the building, whichever is less.
- H. Compact Hot Water. The hot water distribution system shall be designed and installed to meet minimum requirements for the basic compact hot water distribution credit according to the procedures outlined in the 2019 Reference Appendices RA4.4.6.
- I. Ducted Central Forced Air Heating Systems. Central Fan Integrated Ventilation Systems. The duct distribution system shall be designed to reduce external static pressure to meet a maximum fan efficacy equal to:
Gas Furnaces: 0.35 Watts per cfm
Heat Pumps: 0.45 Watts per cfm,
according to the procedures outlined in the 2019 Reference Appendices RA3.3.
- J. Solar photovoltaic. A PV system meeting the minimum qualification requirements as specified in Joint Appendix JA11, with annual electrical output, as determined by Equation 150.1-C in Section 150.1(c)14, of no less than 100% of the dwelling's estimated annual electrical usage. The plans shall include calculations for the estimated electricity load and PV production.
- K. Energy Storage. A battery energy storage system with a minimum capacity equal to 5 kWh shall be installed. The system shall have automatic controls programmed to have the ability to charge anytime PV generation is greater than the building load and discharge to the electric grid, during the highest priced time of use hours of the day.

16. Additional Prescriptive Requirements for Multifamily Mixed-Fuel Buildings.

- A. Slab insulation. Slab floor perimeter insulation shall be installed with an R-value of equal to or greater than R10. The minimum depth of concrete-slab floor perimeter insulation shall be 16 inches or the depth of the footing of the building, whichever is less.

- B. Compact Hot Water. The hot water distribution system shall be designed and installed to meet minimum requirements for the basic compact hot water distribution credit according to the procedures outlined in the 2019 Reference Appendices RA4.4.6.
- F. Central Fan Integrated Ventilation Systems. Central forced air system fans used to provide outside air, shall have an air-handling unit fan efficacy less than or equal to 0.35 W/CFM. The airflow rate and fan efficacy requirements in this section shall be confirmed through field verification and diagnostic testing in accordance with all applicable procedures specified in Reference Residential Appendix RA3.3. Central Fan Integrated Ventilation Systems shall be certified to the Energy Commission as Intermittent Ventilation Systems as specified in Reference Residential Appendix RA3.7.4.2.
- G. Solar photovoltaic. A PV system meeting the minimum qualification requirements as specified in Joint Appendix JA11 sized to offset 100% of the estimated site electricity load shall be installed. The plans shall include calculations for the electricity load and PV production.
- H. Energy Storage. A battery energy storage system with a capacity equivalent to the PV system shall be installed. The system shall have automatic controls programmed to have the ability to charge anytime PV generation is greater than the building load and discharge to the electric grid, during the highest priced time of use hours of the day.

Nonresidential and High-Rise Residential Buildings

Mandatory Measures

SECTION 140.0(b) is modified as follows:

- (b) The requirements of Sections 120.0 through 130.5 (mandatory measures for nonresidential, high-rise residential and hotel/motel buildings)- and for all newly constructed buildings and additions, including new equipment installed to serve additions:
 - 1. The entire solar zone, as specified in Section 110.10, shall have a solar PV system installed that meets the minimum qualification requirements as specified in Joint Appendix JA11, subject to the exceptions in Section 110.10.
- EXCEPTION to 140.0(b)1. Additions.

SECTION 140.1 is modified as follows:

SECTION 140.1 – PERFORMANCE APPROACH: ENERGY BUDGETS

A newly constructed All-Electric Building complies with the performance approach if the energy budget calculated for the Proposed Design Building under Subsection (b) is no greater than the energy budget calculated for the Standard Design Building under Subsection (a).

A newly constructed Mixed-Fuel Building complies with the performance approach if the energy budget calculated for the Proposed Design Building under Subsection (b) has a compliance margin, relative to the energy budget calculated for the Standard Design Building under Subsection (a), of at least the value specified for the corresponding occupancy type in Table 140.1-A below.

Table 140.1-A MIXED-FUEL BUILDING COMPLIANCE MARGINS

<u>Occupancy Type</u>	<u>Compliance Margins</u>
<u>Office/Retail</u>	<u>15%</u>
<u>Hotel/Motel and High-Rise Residential</u>	<u>10%</u>
<u>All other occupancies in buildings with both indoor lighting and mechanical systems</u>	<u>10%</u>
<u>All other occupancies in buildings with indoor lighting or mechanical systems but not both</u>	<u>10%</u>

- (a) Energy Budget for the Standard Design Building. The energy budget for the Standard Design Building is determined by applying the mandatory and prescriptive requirements to the Proposed Design Building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation, service water heating, and covered process loads.
- (b) Energy Budget for the Proposed Design Building. The energy budget for a Proposed Design Building is determined by calculating the TDV energy for the Proposed Design Building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation and service water heating and covered process loads.
- (c) Calculation of Energy Budget. The TDV energy for both the Standard Design Building and the Proposed Design Building shall be computed by Compliance Software certified for this use by the Commission. The processes for Compliance Software approval by the Commission are documented in the ACM Approval Manual.

EXCEPTION to Section 140.1. For newly constructed buildings, if the Certificate of Compliance is prepared and signed by a Certified Energy Analyst and the energy budget for the Proposed Design is no greater than the Standard Design Building, the required compliance margin is reduced by 1%.

NOTE: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25943, Public Resources Code.

SECTION 140.2 is modified as follows:

To comply using the prescriptive approach, a building shall be designed with and shall have constructed and installed systems and components meeting the applicable requirements of Sections 140.3 through 140.9 and additionally the

following measures as applicable intended to exceed the remaining prescriptive requirements:

(a) Mixed-Fuel Buildings of Hotel, Motels or High-Rise Multifamily Occupancies

1. Install fenestration with a solar heat gain coefficient no less than 0.45 in both common spaces and guest rooms.
2. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums.
3. Include economizers and staged fan control in air handlers with a mechanical cooling capacity $\geq 33,000$ Btu/h.
4. Reduce the lighting power density (Watts/ft²) by ten percent (10%) from that required from Table 140.6-C.
5. In common areas, improve lighting without claiming any Power Adjustment Factor credits:
 - A. Control to daylight dimming plus off per Section 140.6(a)2.H; and
 - B. Perform Institutional Tuning per Section 140.6(a)2.J
6. Install one drain water heat recovery device per every three guest rooms that is field verified as specified in the Reference Appendix RA3.6.9.

(b) All Other Nonresidential Mixed-Fuel Buildings

1. Install fenestration with a solar heat gain coefficient no greater than 0.22.
2. Limit the fenestration area on east-facing and west-facing walls to one-half of the average amount of north-facing and south-facing fenestration.
3. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums where VAV systems are installed.
4. Include economizers and staged fan control in air handlers with a mechanical cooling capacity $\geq 33,000$ Btu/h.
5. Reduce the lighting power density (Watts/ft²) by ten percent (10%) from that required from Table 140.6-C.
6. Improve lighting without claiming any Power Adjustment Factor credits:
 - A. Perform Institutional Tuning per Section 140.6(a)2.J, and
 - B. In office spaces, control to daylight dimming plus off per Section 140.6(a)2.H, and
 - C. Install Occupant Sensing Controls in Large Open Plan Offices per Section 140.6(a)2.I.

SECTION 5: Violations. Violation of the requirements of this Chapter shall be considered an infraction of the _____ Municipal Code, punishable by all the sanctions prescribed in [cite local reference to infractions].

SECTION 5. Severability. The provisions of this Ordinance are severable, and if any clause, sentence, paragraph, provision, or part of this Ordinance, or the application of this Ordinance to any person, is held to be invalid or preempted by state or federal law, such holding shall not impair or invalidate the remainder of this Ordinance. If any provision of this Ordinance is held to be inapplicable, the provisions of this Ordinance shall nonetheless continue to apply with respect to all other covered development projects and applicants. It is hereby declared to be the legislative intent of the City Council that this Ordinance would have been adopted had such provisions not been included or such persons or circumstances been expressly excluded from its coverage.

SECTION 6. Effective and Operative Dates. This Ordinance shall become effective on and after its adoption by sufficient affirmative votes of the Council of the City of _____, as provided in the Charter of the City of _____, Section _____. This Ordinance shall take effect and be in full force on and after _____, 2020. The Ordinance shall not apply to building/construction related permits already issued and not yet expired.

SECTION 7. Directions to the Building Official. Upon final passage of this Ordinance, the Building Official is hereby directed to transmit this Ordinance, along with the companion Resolution, to the State Building Standards Commission pursuant to the applicable provisions of State law.

Electric Vehicle Infrastructure 2019 Reach Code Language CALGreen Format

Definitions:

EV Capable: A parking space linked to a listed electrical panel with sufficient capacity to provide at least 110/120 volts and 20 amperes to the parking space. Raceways linking the electrical panel and parking space only need to be installed in spaces that will be inaccessible in the future, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits. Raceways must be at least 1" in diameter and may be sized for multiple circuits as allowed by the California Electrical Code. The panel circuit directory shall identify the overcurrent protective device space(s) reserved for EV charging as "EV CAPABLE." Construction documents shall indicate future completion of raceway from the panel to the parking space, via the installed inaccessible raceways.

Level 1 EV Ready Circuit: A parking space served by a complete electric circuit with a minimum of 110/120 volt, 20-ampere capacity including electrical panel capacity, overprotection device, a minimum 1" diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled "Electric Vehicle Outlet" with at least a ½" font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE).

Level 2 EV Ready Circuit: A parking space served by a complete electric circuit with 208/240 volt, 40-ampere capacity including electrical panel capacity, overprotection device, a minimum 1" diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled "Electric Vehicle Outlet" with at least a ½" font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

Electric Vehicle Charging Station (EVCS): A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes connected to a Level 2 EV Ready Circuit. EVCS installation may be used to satisfy a Level 2 EV Ready Circuit requirement.

SECTION 4 RESIDENTIAL MANDATORY MEASURES

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers.

Electric Vehicle Infrastructure 2019 Reach Code Language CALGreen Format

Exceptions:

1. Where there is no commercial power supply.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities, unless the electrical panel is upgraded, or a new panel is installed in which case only the electrical capacity requirements apply.

4.106.4.1 New one- and two-family dwellings and town- houses with attached private garages.

For each dwelling unit, install two Level 2 EV Ready Circuits.

Exception: For each dwelling unit with only one parking space, install a Level 2 EV Ready Circuit.

4.106.4.2 New multifamily dwellings. The following requirements apply to all new multifamily dwellings:

1. For multifamily buildings with less than or equal to 20 dwelling units, one parking space per dwelling unit with parking shall be provided with a Level 2 EV Ready Circuit.
2. When more than 20 multifamily dwelling units are constructed on a building site:
 - a. 75% of the dwelling units with parking space(s) shall be provided with at least one Level 2 EV Ready Circuit. Calculations for the required minimum number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number.
 - b. In addition, each remaining dwelling unit with parking space(s) shall be provided with at least a Level 2 EV Capable Circuit.

Notes:

1. Load balancing systems may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum required. Load balancing does not allow installing less electrical panel capacity than would be required without load balancing.
2. Installation of Level 2 EV Ready Circuits above the minimum number required level may offset the minimum number Level 1 EV Ready Circuits required on a 1:1 basis.

Electric Vehicle Infrastructure 2019 Reach Code Language CALGreen Format

3. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.

4.106.4.2.1.1 Electric vehicle charging stations (EVCS). When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: The Division of the State Architect provides guidance on exemptions from Chapter 11B EV infrastructure accessibility requirements, such as buildings that are not subject to Chapter 11B and assigned parking spaces at buildings that are subject to Chapter 11B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units

4.106.4.2.3 Good Design Practices. For all projects subject to California Code of Regulations Title 24, Part 2, Chapter 11B, construction documents shall indicate how many accessible EVCS would be required as per Title 24, Chapter 11B to convert all Level 2 EV Ready Circuits required under section 4.106.4 to EVCS. Construction documents shall also demonstrate that the facility is

Electric Vehicle Infrastructure 2019 Reach Code Language CALGreen Format

designed such that compliance with accessibility standards, including Chapter 11B accessible routes, will be feasible for the required accessible EVCS at the time of EVCS installation. Surface slope for any area designated for accessible EVCS shall meet slope requirements in Chapter 11B and vertical clearance requirements in Chapter 11B at the time of original building construction.¹

Note: Section 11B-812 of the 2016 California Building Code requires that a facility providing EVCS for public and common use also provides one or more accessible EVCS as specified in Table 11B-228.3.2.1. Chapter 11B applies to certain facilities including, but not limited to, public accommodations and publicly funded housing (see Section 1.9 of Part 2 of the California Building Code). Section 11B-812 requires that "Parking spaces, access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2489 mm) minimum." It also requires that parking spaces and access aisles meet maximum slope requirements of 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction at the time of new building construction or renovation. Section 11B-812.5 contains accessible route requirements. In addition, Title 24 Part 11 Section 4.106.4.2 requires that developers meet certain aspects of accessibility requirements at the time of new construction for a limited number of parking spaces.

SECTION 5

NONRESIDENTIAL MANDATORY MEASURES

5.106.5.3 Electric vehicle (EV) charging. New construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation and use of EV chargers.

Exception: Where there is no commercial power supply.

Notes:

1. Load balancing systems may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. The option does not allow for installing less electrical panel capacity than would be required without load balancing.

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5.106.5.3.1 Office buildings: In nonresidential new construction buildings designated primarily for office use:

1. When 10 or more parking spaces are constructed, 20% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 30% shall be at least Level 2 EV Capable.

Calculations for the required minimum number of spaces equipped with Level 2 EVCS, Level 1 EV Ready spaces and EV Capable spaces shall all be rounded up to the nearest whole number

Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1" and sufficient for installation of EVCS at all required Level 1 EV Ready and EV Capable spaces; Electrical calculations shall substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to simultaneously charge EVs at all required EV spaces including Level 1 V Ready and EV Capable spaces; and service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.2 Other nonresidential buildings: In nonresidential new construction buildings that are not designated primarily for office use, such as retail or institutional uses:

1. When 10 or more parking spaces are constructed, 15% of the available parking spaces on site shall be equipped with Level 2 EV Ready;

Calculations for the required minimum number of spaces equipped with Level 2 EV Ready spaces shall be rounded up to the nearest whole number

Exception: Installation of each Direct Current Fast Charger with the capacity to provide at least 80 kW output may substitute for 15 EV Ready spaces after a minimum of 15 Level 2 EV Ready spaces are installed.

5.106.5.3.3 Good Design Practices. For all projects subject to Title 24, Part 2, Chapter 11B, construction documents shall indicate how many accessible EVCS would be required under the California Code of Regulations Title 24, Chapter 11B, if applicable, in order to convert Level 1 EV Ready infrastructure to EVCS. Construction documents shall also demonstrate that the facility is designed such that compliance with accessibility standards, including Chapter 11B accessible routes, will be feasible for the required accessible EVCS at the time of EVCS installation. Surface slope for any area designated for accessible EVCS shall meet

Electric Vehicle Infrastructure 2019 Reach Code Language CALGreen Format

slope requirements in Chapter 11B and vertical clearance requirements in Chapter 11B at the time of original building construction.

5.106.5.3.5 Clean Air Vehicle Parking Designation. EVCS qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.
2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.
4. Section 11B-812 of the 2016 California Building Code requires that a facility providing EVCS for public and common use also provide one or more accessible EVCS as specified in Table 11B-228.3.2.1. Chapter 11B applies to certain facilities including, but not limited to, public accommodations and publicly funded housing (see section 1.9 of Part 2 of the California Building Code). Section 11B-812 requires that "Parking spaces, access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2489 mm) minimum." It also requires that parking spaces and access aisles meet maximum slope requirements of 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction at the time of new building construction or renovation. Section 11B-812.5 contains accessible route requirements.



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-171

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

Options for Addressing Litter in Hayward

RECOMMENDATION

That the Committee reviews and comments on this report and provides policy direction to staff.

SUMMARY

This is the latest in a series of reports that review options for dealing with litter, especially from take-out food and beverage establishments. At the direction of the Committee from the July 8, 2019 Council Sustainability Committee meeting, this report: provides a suggested timeline and phased approach for implementing a ban on single-use plastic foodware; examines possible requirements on existing take-out food establishments to reduce litter; and analyzes the costs of increasing the number of public litter cans in Hayward. These options can help ensure the City implements a multi-faceted approach to litter abatement.

ATTACHMENTS

Attachment I Staff Report



DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT: Options for Addressing Litter in Hayward

RECOMMENDATION

That the Committee reviews and comments on this report and provides policy direction to staff.

SUMMARY

This is the latest in a series of reports that review options for dealing with litter, especially from take-out food and beverage establishments. At the direction of the Committee from the July 8, 2019 Council Sustainability Committee meeting, this report: provides a suggested timeline and phased approach for implementing a ban on single-use plastic foodware; examines possible requirements on existing take-out food establishments to reduce litter; and analyzes the costs of increasing the number of public litter cans in Hayward. These options can help ensure the City implements a multi-faceted approach to litter abatement.

BACKGROUND

One of Council's primary priorities is to keep the City clean. Therefore, the City allocates significant resources to remove litter throughout the community. Efforts include several full-time employees who spend the majority of their time removing dumped trash. Several more City employees are dedicated to street sweeping and cleaning storm drains. The City also sponsors weekend clean-up events, the annual clean-up day at Weekes Park, and the Adopt a Block Program. Altogether, the City spends more than \$2 million per year on litter collection. Furthermore, the City's Maintenance Services Department is currently in the process of filling four new full-time positions dedicated to collecting litter. During the July 8 meeting, the Committee expressed a desire to receive reports documenting the litter collected by the new employees.

To address the issue of plastic pollution in Hayward, in July of 2011, Council enacted a ban on the use of polystyrene packaging for take-out food, adopting Chapter 5, Article 11 of the Hayward Municipal Code "Polystyrene Foam Disposable Food Service Ware Prohibited;

Recyclable or Compostable Food Service Ware Required.” In 2012, Council adopted the County-wide ordinance banning single-use plastic bags. However, litter remains an issue in Hayward.

Litter reduction has been discussed by Council, the Sustainability Committee, the Keep Hayward Clean and Green Task Force, and the City Council Budget and Finance Committee. Summaries of some of those discussions held since 2015 were provided in the July 8, 2019 [Staff Report](#)¹. At the July 8, 2019, Council Sustainability Committee meeting, the Committee expressed concerns about the length of time it was taking to create a County-wide ordinance restricting single-use plastic foodware and requested staff return with a recommended timeline for Hayward to implement its own ban on single-use plastic foodware. The Committee also requested staff analyze the cost to increase the number of public litter cans in Hayward and that staff consider placing a can at every cross street of every arterial street in the City, which could be up to 1,000 new public litter cans. The Committee also wished to learn more about the current number of restaurants and take-out food establishments with conditions of approval requiring litter collection.

DISCUSSION

This report reviews three strategies for dealing with litter, especially from take-out food and beverage establishments. The options include placing new requirements on existing take-out food establishments to reduce litter, implementing a ban on food establishments offering single-use plastic foodware, and increasing the number of public litter cans in Hayward. Many other possible methods for reducing litter have been presented in earlier reports and are not discussed here in detail. This report focuses on the alternatives requested by the Committee at their July 8, 2019 meeting.

Requirements for Take-Out Food Establishments

A common method to address litter generated by certain types of businesses is to place conditions of approval upon the property when use permits are approved, or to pass ordinances requiring certain actions by property owners. Hayward often includes a condition when issuing permits to fast food restaurants requiring the operator pick up trash within 300 feet of the property perimeter.

Newer establishments have use permits on file, but older restaurants do not. A deemed-approved ordinance, such as the one adopted by Council in November 2013 for alcoholic beverage outlets, could allow for such conditions or performance standards to be applied to existing establishments that do not have use permits. A deemed-approved ordinance could also apply to establishments that have use permits and add requirements to pick up litter or place addition garbage cans on their property, where such requirements do not already exist. Section 10-1.2769 of the Zoning Ordinance includes eight performance standards that apply to all deemed approved alcoholic beverage establishments.

¹ <https://hayward.legistar.com/MeetingDetail.aspx?ID=707046&GUID=15522BD2-9DF6-496F-86A6-4C37741D990C&Options=&Search=>

Adopting a deemed-approved ordinance can increase requirements for existing food establishments, however City resources needed for enforcement of such an ordinance would need to be identified.

Regardless of whether or not a property has an approved use permit, the following three sections of Hayward's Municipal Code address litter but are not actively enforced due to limited resources.

- Hayward Municipal Code Section 11-5.22 (Reduction of Pollutants in Stormwater) addresses litter that has the potential to enter the storm drain system. The article prohibits littering and requires property owners to keep sidewalks and parking lots free of litter.
- The Zoning Ordinance (Section 10-1.1045j3b), sets minimum performance standards for drive-in establishments, including:

The premises shall be kept clean, and the operator shall make all reasonable efforts to see that no trash or litter originating from the use is deposited on adjacent properties. For drive-in restaurants or other uses which typically generate trash or litter, adequate trash containers, as determined by the Planning Director, shall be required and employees shall be required daily to pick up trash or litter originating from the site upon the site and within 300 feet of the perimeter of the property.

- Hayward Municipal Code Section 5-7.20 (Public Nuisance) requires property owners to avoid the existence of any of the following conditions on the property: accumulation of garbage, litter, bins, boxes, construction debris, bags, dirt, used motor oil, or other debris. Should one of these conditions exist, the property constitutes a public nuisance.

Enforcement of an ordinance can have significant impacts to staffing and workloads. For example, when Council adopted new regulations for tobacco retail sales establishments in 2014, the ordinance required Code Enforcement staff to conduct annual compliance checks for each of the 143 tobacco shops, which required the hiring of new staff. Any new program or ordinance, or increased enforcement of an existing ordinance will need to be carefully considered for impacts to existing staff.

Bans of, or Fees on Material Types or Products

Staff is currently working on a draft expansion of the polystyrene ordinance to include limiting the distribution of single-use plastic foodware to customers of food vendors. When Staff presented a draft single-use plastic foodware ordinance to the Council Sustainability Committee in March 2019, Staff expressed a desire to gather more input from businesses before bringing an ordinance to Council. In August 2019, Staff disseminated a survey to Hayward businesses regarding a ban on single use foodware. Results of the survey are expected by the end of 2019. At the July 11, 2019 meeting of StopWaste's Single-Use Disposable Foodware Task Force, the Task Force proposed implementing a two-phase,

County-wide disposable foodware ordinance over approximately the next 18 months. Alameda County jurisdictions would have the option to opt out of the ordinance. The task force's proposal suggested StopWaste would provide messaging and outreach materials to help implement the ordinance, but StopWaste would not provide enforcement.

Phase one of the proposed County-wide disposable foodware ordinance would prohibit all dining facilities from providing customers single-use disposable foodware except upon the specific request of the customer, or at self-serve kiosks. Phase one would likely be passed before the end of calendar year 2019.

Phase two would prohibit facilities from using disposable foodware for dine-in customers, and also require all to-go disposable foodware be as environmentally friendly as possible. The level of environmental impacts attributed to various types of foodware has yet to be determined by StopWaste. Alameda County jurisdictions could decide to take additional measures, such as charging for disposable cups, charging for to-go containers, or requiring vendors participate in reusable to-go cup programs. StopWaste would prepare an environmental impact report for phase two of the proposed County-wide ordinance. StopWaste estimates phase two would go into effect in late 2020 at the earliest.

Hayward's current ordinance banning the use of polystyrene packaging for take-out food includes language exempting single use disposable straws, utensils, and hot cup lids from the ban. These exemptions would need to be removed from the ordinance to align with a County-wide single-use foodware ban. Staff recommends preparing to adopt the County's phase one disposable foodware ordinance in December of 2019 and amending Chapter 5, Article 11 of the Hayward Municipal Code "Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required" such that the exemptions of certain single-use disposable foodware are removed from the ordinance. Should the County delay implementation of phase one of its disposable foodware ordinance, Staff recommends Hayward implement its own ordinance in December 2019, prohibiting all dining facilities from providing customers single-use disposable foodware except upon the specific request of the customer, or at self-serve kiosks; and also amending Hayward's polystyrene ban ordinance.

Some cities have hired contractors to help businesses manage the transition from using disposable foodware to reusable foodware. The non-profit environmental organization Clean Water Action runs a program called ReThink Disposable that specializes in offering businesses technical assistance to switch from using disposables to offering dine-in customers reusable dishware instead. Since 1990, ReThink Disposables has worked with more than 1,000 food business in the San Francisco Bay Area to help the businesses reduce waste and realize cost savings. The City of Alameda received a grant that allowed Alameda to hire ReThink Disposable to help businesses change their operations to use reusable dishes, and the businesses that switched now serve as a model that others can imitate. The City of Berkeley worked with ReThink Disposable to survey businesses before implementing Berkeley's ban on disposable foodware.

StopWaste works with ReThink Disposable to offer Alameda County businesses and schools assistance switching from disposable to reusable dishes, including offering a \$500 rebate for the purchase of reusables. ReThink Disposable has created several [case studies](#)² showing the environmental and economic benefits realized by most businesses after switching from disposable to reusable foodware. Hiring a contractor like ReThink Disposable could help Hayward businesses switch from using disposable foodware to reusable foodware, and also help the City improve its outreach regarding a ban on single-use disposable foodware. Staff intends to research the appropriate scope of work and cost for a consultant to perform outreach to businesses in Hayward and can return to the Committee with a draft scope of work. If supported by the Committee, staff would then seek Council authorization to release a request for proposals to select a consultant to perform technical assistance and outreach.

Increase the Number of Public Litter Cans

The Committee requested at the July 8, 2019 Council Sustainability Committee meeting that staff analyze vastly increasing the number of public litter cans in Hayward. Currently Hayward has about 300 public litter cans dispersed throughout the City. The number of cans varies as some are damaged and removed, and others added to new areas needing service. There are three styles of can: aggregate heavy concrete cans, black metal cans, and the Big Belly dual recycling and trash cans. The aggregate cans cost about \$1,150 per can. The black metal cans cost about \$1,700 per can. The Big Belly cans cost about \$3,350 per dual recycling and trash can. The majority of the public litter cans are serviced by Waste Management of Alameda County as part of their franchise agreement with Hayward. About half of the cans are serviced every Monday through Friday, and half are serviced three days per week, Mondays, Wednesdays, and Fridays.

The cost of purchasing 1,000 new public litter cans could range from \$1.2 to \$3.4 million. The capital costs for these cans do not include annual operational expenses. Staff has asked WMAC for an estimate of those costs. There are approximately 124 miles of arterial and collector streets in Hayward. Adding two public litter cans (one on each side of the street) at the intersection of every block (about every quarter mile) of every arterial and collector street in Hayward would entail adding 992 cans. Staff is currently reviewing the effectiveness of public litter cans. In some cases, staff observes litter very close to public cans and in some cases, the cans seem to attract the dumping of household trash. Staff intends to continue to monitor selected cans and can return to the Committee with more information.

Bus shelters in Hayward usually include a small public litter can for riders to use. The shelters and cans in Hayward are maintained by a contractor hired by the AC Transit joint powers agreement (JPA). The maintenance of the shelters in Hayward has often not been satisfactory. However, the JPA is completing an RFP process to hire a new service provider, and a new contractor should be providing service in 2020.

ECONOMIC/FISCAL IMPACTS

Cleaner public spaces can create a positive economic impact. Providing clean, pleasant areas

² <http://www.rethinkdisposable.org/businesses>

for people to visit can increase the vitality of an area, and the potential of visitors patronizing local businesses. The removal of litter has the potential to benefit local businesses, especially retail, economically. Most of the options listed in this report would have a fiscal impact on the General Fund. Depending on the preferred options from the Committee, staff would develop more specific plans with associated costs.

STRATEGIC INITIATIVES

This agenda item supports the Complete Communities Strategic Initiative. The purpose of the Complete Communities initiative is to create and support structures, services, and amenities to provide inclusive and equitable access with the goal of becoming a thriving and promising place to live, work and play for all. This item supports the following goal and objectives:

Goal 1: Improve quality of life for residents, business owners, and community members in all Hayward neighborhoods.

Objective 2: Foster a sense of place and support neighborhood pride.

Objective 3: Increase collaboration with businesses, non-profits and neighborhood groups on placemaking projects.

SUSTAINABILITY FEATURES

Litter reduction can have the following sustainability features or benefits:

Water: Efficiency and conservation. Reducing litter will not minimize the use of water but will result cleaner water flowing to creeks and the Bay.

Solid Waste: Waste reduction and diversion. Reducing litter will not directly minimize the volume of material sent to a landfill.

PUBLIC CONTACT

Staff has mailed letters soliciting feedback from food-related businesses in 2017 and in 2015. Staff also met with two businesses in 2017 and received an email from another business. Staff is currently disseminating a survey on disposable foodware both in person and on the City website.

NEXT STEPS

Upon direction from the Committee, staff will:

- Prepare an amendment to the Hayward polystyrene ban ordinance, Chapter 5, Article 11 of the Hayward Municipal Code “Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required”

and also present Council an ordinance to adopt phase one of the County's disposable foodware ordinance; and/or

- Develop a deemed-approved ordinance to initiate requirements upon older food establishments to reduce litter as well as options for enforcement of the ordinance; and/or
- Research the scope of work and cost to hire a consultant to conduct outreach and offer technical assistance to Hayward businesses to help them switch from using disposable foodware to reusable foodware.
- Research cost-effective method to place adequate number of public litter cans in areas most-affected by litter in the City.

Prepared by: Jeff Krump, Solid Waste Program Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

A handwritten signature in dark ink, appearing to read 'K. McAdoo', is written over a horizontal line.

Kelly McAdoo, City Manager



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-179

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

Establishing Hayward's Sustainability Goals for 2025 and 2030

RECOMMENDATION

That the Committee reviews and comments on this report and provides direction to staff regarding the development of sustainability goals.

SUMMARY

Many cities across the U.S. have adopted goals related to sustainability or climate action. Several have recently adopted goals or policy statements inspired by the Green New Deal (GND), proposed by Representative Alexandria Ocasio-Cortez and Senator Edward Markey. Hayward's Climate Action Plan, adopted years before the GND, includes broad goals for greenhouse gas emissions reductions beyond 2020. However, more detailed goals and programs are needed to guide efforts for the coming decade. Staff seeks the Committee's direction on the development of new sustainability-related goals for 2025 and 2030.

ATTACHMENTS

Attachment I	Staff Report
Attachment II	City and State Green New Deal Focus Areas



DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT: Establishing Hayward's Sustainability Goals for 2025 and 2030

RECOMMENDATION

That the Committee reviews and comments on this report and provides direction to staff regarding the development of sustainability goals.

SUMMARY

Many cities across the U.S. have adopted goals related to sustainability or climate action. Several have recently adopted goals or policy statements inspired by the Green New Deal (GND), proposed by Representative Alexandria Ocasio-Cortez and Senator Edward Markey. Hayward's Climate Action Plan, adopted years before the GND, includes broad goals for greenhouse gas emissions reductions beyond 2020. However, more detailed goals and programs are needed to guide efforts for the coming decade. Staff seeks the Committee's direction on the development of new sustainability-related goals for 2025 and 2030.

BACKGROUND

On February 7, 2019, Representative Alexandria Ocasio-Cortez (D-NY) and Senator Edward Markey (D-MA) released a 14-page resolution, which would address the twin crises of climate change and inequality through a 10-year mobilization of the U.S. economy and workforce. The mobilization effort, named the Green New Deal (GND), calls for: net-zero greenhouse gas emissions by 2050; the creation of a national smart power grid supplied by 100% carbon free electricity; the elimination of as much carbon from U.S. manufacturing, agriculture, and transportation as technologically feasible; the creation of high-quality apprenticeship programs and a federal job guarantee program offering family-wages and union protections; and for all people of the U.S. to have access to high-quality health care, safe and affordable housing, economic security, clean water, clean air, healthy and affordable food, and nature.¹ Although the resolution was voted down in the U.S. Senate, awareness of the GND's goals and principles have lead states and cities across the country to set and adopt their own social, economic, and environmental sustainably goals, passing resolutions and enacting new implementation policies.

¹ <https://www.congress.gov/bill/116th-congress/house-resolution/109/text>

Most of Hayward's goals related to sustainability or climate action are included in the Hayward 2040 General Plan, which was adopted by Council in 2014. Additional goals have been adopted by Council including:

ZNE Policy for New and Retrofitted City Buildings – On May 17, 2016, Council adopted [Resolution 16-082](#) requiring that any new or significant retrofits of City buildings that begin design after January 1, 2017 be constructed as ZNE buildings.

ZNE Goal for Municipal Portfolio – On December 6, 2016, Council adopted [Resolution 16-219](#) establishing the goal of achieving ZNE for electricity and natural gas use for the City's portfolio of facilities by 2025.

Other significant Council actions since 2014 include Hayward's participation in East Bay Community Energy and the decision to make Brilliant 100 (100% carbon free electricity) the default energy product in Hayward.

DISCUSSION

Since the release of the GND resolution, cities and states have drawn from the GND's principles to create their own local goals. The most common elements among these local GND-inspired goals include:

1. The creation of inclusive commissions or task forces charged to direct climate action investment and policy decisions
2. Carbon neutrality or zero-net GHG emission targets
3. Carbon-free or renewable energy procurement goals
4. Building electrification and energy efficiency goals
5. Waste and consumption reduction goals
6. Investment in sustainable transportation
7. Municipal decarbonization and electrification commitments

Attachment II includes a summary of comprehensive plans adopted since the release of the Ocasio-Cortez/Markey resolution including plans from San Francisco, Los Angeles, New York, and Milwaukee. In addition, the City of Fremont, on February 19, 2019, adopted a goal of achieving carbon neutrality by 2045, mirroring California Governor Brown's Executive Order B-55-18. Fremont also committed to updating its Climate Action Plan and adopted a "Framework for a Post-Carbon Community."

Hayward's Sustainability Goals – Much has changed since 2014 when Council adopted the Hayward 2040 General Plan, which included an updated Climate Action Plan. The Plan includes policies and programs intended to reduce GHG emissions to meet the City's 2020 goal of a 20% GHG emission reduction below Hayward's 2005 baseline. The Plan also includes policies with GHG reduction goals for 2040 and 2050; however, the programs do not provide a clear path toward meeting these longer-range goals. Staff recommends the development of a comprehensive set of sustainability goals including new targets for both 2025 and 2030. The Committee has recommended an interim goal of reducing emissions by 40 percent below 2005 baseline levels by 2030 and this could be included in the comprehensive list. Once the new goals or targets are adopted, the General Plan may need

to be revised to incorporate them into the policies. The Plan may also need new programs in order to meet the goals for 2030 and beyond. Staff is seeking the Committee's input on the following list of potential topics:

- GHG Reduction
 - Goals for 2030 and beyond
 - Support California's goal of carbon neutrality by 2045
- Transportation
 - Electrification of the City's vehicle fleet
 - Electric vehicle charging infrastructure
 - Active transportation (bicycle & pedestrian infrastructure)
 - Public transportation improvements (efficiency, reliability, accessibility, increase in ridership)
 - Reduce vehicle miles traveled by single-occupant vehicles
- Buildings
 - All-electric design for new buildings
 - Electrification of existing buildings (at certain stages of renovation)
- Renewable Energy
 - East Bay Community Energy (increase the use of renewable energy)
 - Solar for City facilities
 - Solar for the community
- Water
 - Water conservation
 - Bay-Friendly landscaping
 - Stormwater quality
- Waste & Recycling
 - Composting
 - Carbon lifecycle of materials and products
 - Product bans
 - Compliance with SB 1383 (food rescue)
 - Consumption reduction
 - Landfill diversion (Developing goals related to landfill diversion will need to include discussions about the future of recycling and recycling markets.)
- Adaptation
 - Preparation for sea level rise
 - Wildfire and air quality impacts from wildfires
 - Community vulnerability to extreme heat
- Tree planting/Urban canopy

Goals established for the above topics may be incorporated into the development of the Citywide Strategic Plan and may also require the City's General Plan be revised to incorporate new programs to meet established goals.

ECONOMIC IMPACT

Climate change is expected to negatively impact national and local economies. Updating Hayward's climate action and sustainability goals and programs will help make Hayward's economy more resilient to climate change.

FISCAL IMPACT

Developing new sustainability goals will require significant staff time. Depending on the direction from the Committee and Council, this effort may entail amendments to the City's General Plan, including the implementation programs contained in the General Plan. In conjunction with the development of the goals, staff will work to identify the potential impacts on staff time for both the development and implementation of the goals.

STRATEGIC INITIATIVES

Setting new climate action goals would indirectly advance all three of the City's Strategic Initiatives and resonates with the Council's Green priority.

SUSTAINABILITY FEATURES

The development of new sustainability goals for 2025 and 2030 would help Hayward meet its longer term GHG reduction goals. Meeting these goals will improve energy efficiency, increase the use of renewable energy, and reduce vehicle-related emissions; all of which will result in cleaner air for Hayward residents and for the region.

PUBLIC CONTACT

There will be opportunities at this Committee meeting and other venues for public participation as the goals are developed.

NEXT STEPS

Upon direction from Committee, staff will refine the list of topics for new sustainability goals for 2025 and 2030 and develop a work plan for the effort for presentation at future Committee meetings.

Prepared by: Jack Steinmann, Climate Corps Fellow
Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:



Kelly McAdoo, City Manager

CITY AND STATE GREEN NEW DEAL FOCUS AREAS

		Jurisdiction								
		State of Maine LD 1282: An Act to Establish a Green New Deal for Maine	State of New York Climate Leadership and Communities Protection Act	San Francisco, CA Vision 2030	Fremont, CA Carbon Neutrality Resolution	New York, NY Climate Mobilization Act	Los Angeles, CA L.A. Green New Deal	Seattle, WA Seattle Green New Deal Resolution	Milwaukee, MN Resolution Establishing the City-County Task Force on Climate and Economic Equity	Ithaca, NY Ithaca Green New Deal Resolution
Areas of Focus	Net-Zero GHG Emission/Carbon Neutrality Targets		Net-Zero by 2050 (85% GHG reduction, 15% local offsets)	Net-Zero Emission by 2050	Carbon Neutrality by 2045		Carbon Neutral by 2050	Zero GHG by 2030	Net-zero emissions by 2050	Carbon neutral by 2030
	Energy Procurement Standards / Goals	80% Renewables by 2040	100% Carbon-free by 2040	100% Renewable by 2030	NS		100% carbon-free by 2045	NS		
	GND Task Force Representing Diverse range of community groups	Green New Deal Task Force	Climate Action Council				Climate Emergency Commission	NS	Task Force on Climate and Economic Equity	
	Local Job Creation Targets	NS	NS			Hundreds of Thousands by 2050	300,000 by 2035; 400,000 by 2050	NS	As Many as Possible	
	New Job Quality Standards	NS				NS	NS	Stable, Well-Paying, Unionized Jobs	Family-Wage	
	Municipal Electrification/ Emission Reduction Commitments		NS	100% EE and Electric Buildings by 2050	Commit to Update City's Climate Action Plan	NS	New Buildings & Retrofits 100% Electric; Carbon Neutrality by 2045	NS		NS
	Goal or Requirement to Address Income or Racial Inequity	State Low-Carbon Economy Just Transition Commission	35% of all Renewable Energy and Energy Efficiency Fund to go to disadvantaged communities		NS	NS	Improve CalEnviroScreen Scores in LA communities by 50% by 2035; Reduce childhood asthma emergency room visits by 2035; End Houselessness by 2028; Create 50,000 rent-controlled affordable housing units by 2035	NS	NS	
	Building Electrification or Carbon Neutrality Programs/Goals			3% Building retrofits/year 100% EE & Electrification by 2050	NS	Large Buildings reduce emissions by 80% by 2050	All buildings carbon neutral by 2050	NS		NS
	Job Training Programs	NS			NS	NS	NS	NS	NS	
	Urban Forestry / Increase Access to Green Spaces			50,000 Additional street trees by 2040	NS	NS	90,000 Trees by 2021	NS		
	Transit Oriented Development Targets						NS	NS		
	Public Transit Targets			80% sustainable rides by 2030 25% of all single passenger vehicles electric by 2030	NS	NS	NS	NS		
	Renter Protections/ Housing Affordability					NS	NS	NS		
	Waste Reduction Goals			15% reduction of consumption and 50% reduction in disposal by 2030	NS	NS	Zero material to landfills by 2050			

KEY	Green Shading = Area of Focus	Red Shading = Not an area of focus	NS = Focus area with nonspecific goals
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CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-176

DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT

Proposed 2019/2020 Agenda Planning Calendar

RECOMMENDATION

That the Committee reviews and comments on this report.

SUMMARY

For the Committee's consideration, staff suggests the following tentative agenda for 2019 and 2020.

ATTACHMENTS

Attachment I Staff Report



DATE: September 17, 2019

TO: Council Sustainability Committee

FROM: Director of Public Works

SUBJECT: Proposed 2019/2020 Agenda Planning Calendar

RECOMMENDATION

That the Committee reviews and comments on this report.

DISCUSSION

For the Committee's consideration, staff suggests the following tentative agenda topics for 2019/2020.

Tuesday, September 10, 2019 (Listed for reference. Meeting rescheduled to 9/17)
Green New Deal¹
Standard Conditions of Approval for New Development
<u>Sustainability Goals for 2025 and 2030²</u>
Draft Reach Code to Encourage Building Electrification
Implementation of Solar Projects to Meet 2025 ZNE Goal
Wednesday, October 30, 2019 (November meeting was rescheduled to this date)
<u>Implementation of Solar Projects to Meet 2025 ZNE Goal</u>
<u>BAWSCA Pilot Water Transfer</u>
Update on Preparation of Shoreline Master Plan
<u>Single-Use Plastics – Draft Ordinance</u>
<u>SB 998 - Discontinuation of Residential Water Service Requirements</u>
Greenhouse Gas Inventory Update
Monday, January 13, 2020
<u>Sustainability Goals for 2025 and 2030</u>
<u>Renewal of the Municipal Regional Stormwater Permit</u>

¹ Staff Recommends Strike Out Items be removed or rescheduled from previously Approved CSC Planning Calendar

² Staff Recommends Underlined Items be added (new) or rescheduled from previously Approved CSC Planning Calendar

<u>Possible Approaches to a new Solid Waste Franchise Agreement</u>
<u>Semi-Annual Update on City's Waste Reduction and Recycling Programs</u>
<u>Greenhouse Gas Inventory Update</u>

Unscheduled Items
Sustainable Groundwater Plan
City Tree Inventory & Urban Forest (to be considered with Sustainability Goals)
<u>Long Term Water Conservation Framework</u> (previously scheduled for 10/30)
Pilot Water Transfer
<u>Regional Water Bill Savings Program</u>
<u>Multifamily Building Energy Efficiency</u> (previously scheduled for 10/30)

NEXT STEPS

Upon direction from the Committee, staff will revise the above list and schedule items accordingly for 2019 and 2020.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:



Kelly McAdoo, City Manager