



**BERKELEY CITY COUNCIL AGENDA & RULES COMMITTEE  
SPECIAL MEETING**

**WEDNESDAY, SEPTEMBER 28, 2022**

**2:30 P.M.**

Committee Members:

Mayor Jesse Arreguin, Councilmembers Sophie Hahn and Susan Wengraf  
Alternate: Councilmember Kate Harrison

**PUBLIC ADVISORY: THIS MEETING WILL BE CONDUCTED EXCLUSIVELY THROUGH  
VIDEOCONFERENCE AND TELECONFERENCE**

Pursuant to Government Code Section 54953(e) and the state declared emergency, this meeting will be conducted exclusively through teleconference and Zoom videoconference. The COVID-19 state of emergency continues to directly impact the ability of the members to meet safely in person and presents imminent risks to the health of the attendees. Therefore, no physical meeting location will be available.

To access the meeting remotely using the internet: Join from a PC, Mac, iPad, iPhone, or Android device: Use URL <https://us02web.zoom.us/j/82992582463>. If you do not wish for your name to appear on the screen, then use the drop down menu and click on "rename" to rename yourself to be anonymous. To request to speak, use the "raise hand" icon on the screen.

To join by phone: Dial **1-669-444-9171** or **1-833-548-0282** (Toll Free) and Enter Meeting ID: **829 9258 2463**. If you wish to comment during the public comment portion of the agenda, press \*9 and wait to be recognized by the Chair.

Written communications submitted by mail or e-mail to the Agenda & Rules Committee by 5:00 p.m. the Friday before the Committee meeting will be distributed to the members of the Committee in advance of the meeting and retained as part of the official record.

# **AGENDA**

**Roll Call**

**Public Comment**

## **Review of Agendas**

- 1. Approval of Minutes: September 12, 2022**
- 2. Review and Approve Draft Agenda:**
  - a. 10/11/22 – 6:00 p.m. Regular City Council Meeting
- 3. Selection of Item for the Berkeley Considers Online Engagement Portal**
- 4. Adjournments In Memory**

## **Scheduling**

- 5. Council Worksessions Schedule**
- 6. Council Referrals to Agenda Committee for Scheduling**
- 7. Land Use Calendar**

## **Referred Items for Review**

- 8a. Discussion Regarding Impact of COVID-19 (novel coronavirus) on Meetings of Legislative Bodies**
- 8b. Preliminary Analysis of Return to In-Person Meetings of City Legislative Bodies**

## **Unscheduled Items**

- 9. Discussion Regarding Design and Strengthening of Policy Committee Process and Structure (Including Budget Referrals)**
- 10. Strengthening and Supporting City Commissions: Guidance on the Development of Legislative Proposals**

## **Items for Future Agendas**

- Discussion of items to be added to future agendas**



## Adjournment – Next Meeting Wednesday, October 19, 2022

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### **Additional items may be added to the draft agenda per Council Rules of Procedure.**

*Rules of Procedure as adopted by Council resolution, Article III, C3c - Agenda - Submission of Time Critical Items*

*Time Critical Items. A Time Critical item is defined as a matter that is considered urgent by the sponsor and that has a deadline for action that is prior to the next meeting of the Council and for which a report prepared by the City Manager, Auditor, Mayor or council member is received by the City Clerk after established deadlines and is not included on the Agenda Committee's published agenda.*

*If the Agenda Committee finds the matter to meet the definition of Time Critical, the Agenda Committee may place the matter on the Agenda on either the Consent or Action Calendar.*

*The City Clerk shall not accept any item past the adjournment of the Agenda Committee meeting for which the agenda that the item is requested to appear on has been approved.*

*Written communications addressed to the Agenda Committee and submitted to the City Clerk Department by 5:00 p.m. the Friday before the Committee meeting, will be distributed to the Committee prior to the meeting.*

*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953 and applicable Executive Orders as issued by the Governor that are currently in effect. Members of the City Council who are not members of the standing committee may attend a standing committee meeting even if it results in a quorum being present, provided that the non-members only act as observers and do not participate in the meeting. If only one member of the Council who is not a member of the committee is present for the meeting, the member may participate in the meeting because less than a quorum of the full Council is present. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Mark Numainville, City Clerk, (510) 981-6900.*



#### COMMUNICATION ACCESS INFORMATION:

To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at (510) 981-6418 (V) or (510) 981-6347 (TDD) at least three business days before the meeting date.

\* \* \*

I hereby certify that the agenda for this special meeting of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on Thursday, September 22, 2022.



Mark Numainville, City Clerk

### **Communications**

*Communications submitted to City Council Policy Committees are on file in the City Clerk Department at 2180 Milvia Street, 1st Floor, Berkeley, CA, and are available upon request by contacting the City Clerk Department at (510) 981-6908 or [policycommittee@cityofberkeley.info](mailto:policycommittee@cityofberkeley.info).*



**BERKELEY CITY COUNCIL AGENDA & RULES COMMITTEE  
SPECIAL MEETING MINUTES**

**MONDAY, SEPTEMBER 12, 2022**

**2:30 P.M.**

Committee Members:

Mayor Jesse Arreguin, Councilmembers Sophie Hahn and Susan Wengraf

Alternate: Councilmember Kate Harrison

**PUBLIC ADVISORY: THIS MEETING WILL BE CONDUCTED EXCLUSIVELY THROUGH VIDEOCONFERENCE AND TELECONFERENCE**

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## AGENDA

**Roll Call:** 2:30 p.m. Present: Hahn, Arreguin. Absent: Wengraf.

**Public Comment** – 2 speakers.

### Review of Agendas

1. **Approval of Minutes: September 6, 2022**  
**Action:** M/S/C (Hahn/Arreguin) to approve the minutes of 9/6/22.  
**Vote:** Ayes – Hahn, Arreguin; Noes – None; Absent - Wengraf.
  
2. **Review and Approve Draft Agenda:**
  - a. 9/29/22 – 6:00 p.m. Regular City Council Meeting  
**Action:** M/S/C (Arreguin/Hahn) to approve the agenda of 9/29/22 with the revision noted below.
    - *Item Added: Presentation by Leilani Farha, former Special Rapporteur on the right to adequate housing for the United Nations – added to the Ceremonial Calendar*

Order of Items on Action  
Item 4 ZAB Appeal: 1201-1205 San Pablo Ave

**Vote:** Ayes – Hahn, Arreguin; Noes – None; Absent - Wengraf.
  
3. **Selection of Item for the Berkeley Considers Online Engagement Portal**  
- None selected
  
4. **Adjournments In Memory** – None

### Scheduling

5. **Council Worksessions Schedule**  
-The Mayor noted that a special meeting has been called for September 29, 2022 at 5:00 p.m. for the purpose of considering oversight responsibilities related to the general obligation bond on the November 8, 2022 ballot.
  
6. **Council Referrals to Agenda Committee for Scheduling** – received and filed
  
7. **Land Use Calendar** – received and filed

### Referred Items for Review

8. **Discussion Regarding Impact of COVID-19 (novel coronavirus) on Meetings of Legislative Bodies**  
  
**Action:** 0 speakers. No action taken.

**9. Preliminary Analysis of Return to In-Person Meetings of City Legislative Bodies**

**Action:** 0 speakers. No action taken.

**Unscheduled Items**

**Action:** 1 speaker. No action taken.

**10. Discussion Regarding Design and Strengthening of Policy Committee Process and Structure (Including Budget Referrals)**

**11. Strengthening and Supporting City Commissions: Guidance on the Development of Legislative Proposals**

**Items for Future Agendas**

- None

**Adjournment**

**Action:** M/S/C (Arreguin/Hahn) to adjourn the meeting.

**Vote:** Ayes – Hahn, Arreguin; Noes – None; Absent - Wengraf.

Adjourned at 2:57 p.m.

\* \* \*

I hereby certify that the foregoing is a true and correct record of the Agenda & Rules Committee meeting held on September 12, 2022.

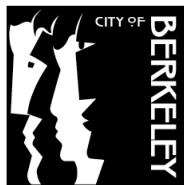
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Rose Thomsen, Deputy City Clerk

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**DRAFT AGENDA**  
**BERKELEY CITY COUNCIL MEETING**  
**Tuesday, October 11, 2022**  
**6:00 PM**

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
 DISTRICT 2 – TERRY TAPLIN  
 DISTRICT 3 – BEN BARTLETT  
 DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
 DISTRICT 6 – SUSAN WENGRAF  
 DISTRICT 7 – RIGEL ROBINSON  
 DISTRICT 8 – LORI DROSTE

**PUBLIC ADVISORY: THIS MEETING WILL BE CONDUCTED EXCLUSIVELY THROUGH VIDEOCONFERENCE AND TELECONFERENCE**

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*Live captioned broadcasts of Council Meetings are available on Cable B-TV (Channel 33) and via internet accessible video stream at [http://berkeley.granicus.com/MediaPlayer.php?publish\\_id=1244](http://berkeley.granicus.com/MediaPlayer.php?publish_id=1244).*

*To access the meeting remotely: Join from a PC, Mac, iPad, iPhone, or Android device: Please use this URL <<INSERT URL HERE>>. If you do not wish for your name to appear on the screen, then use the drop down menu and click on "rename" to rename yourself to be anonymous. To request to speak, use the "raise hand" icon by rolling over the bottom of the screen.*

*To join by phone: Dial 1-669-900-9128 or 1-877-853-5257 (Toll Free) and enter Meeting ID: <<INSERT MEETING ID HERE>>. If you wish to comment during the public comment portion of the agenda, Press \*9 and wait to be recognized by the Chair.*

*Please be mindful that the teleconference will be recorded as any Council meeting is recorded, and all other rules of procedure and decorum will apply for Council meetings conducted by teleconference or videoconference.*

*To submit a written communication for the City Council's consideration and inclusion in the public record, email [council@cityofberkeley.info](mailto:council@cityofberkeley.info).*

*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Mark Numainville, City Clerk, (510) 981-6900. The City Council may take action related to any subject listed on the Agenda. Meetings will adjourn at 11:00 p.m. - any items outstanding at that time will be carried over to a date/time to be specified.*

## Preliminary Matters

### Roll Call:

**Ceremonial Matters:** *In addition to those items listed on the agenda, the Mayor may add additional ceremonial matters.*

**City Manager Comments:** *The City Manager may make announcements or provide information to the City Council in the form of an oral report. The Council will not take action on such items but may request the City Manager place a report on a future agenda for discussion.*

**Public Comment on Non-Agenda Matters:** *Persons will be selected to address matters not on the Council agenda. If five or fewer persons wish to speak, each person selected will be allotted two minutes each. If more than five persons wish to speak, up to ten persons will be selected to address matters not on the Council agenda and each person selected will be allotted one minute each. The remainder of the speakers wishing to address the Council on non-agenda items will be heard at the end of the agenda.*

## Consent Calendar

*The Council will first determine whether to move items on the agenda for "Action" or "Information" to the "Consent Calendar", or move "Consent Calendar" items to "Action." Three members of the City Council must agree to pull an item from the Consent Calendar for it to move to Action. Items that remain on the "Consent Calendar" are voted on in one motion as a group. "Information" items are not discussed or acted upon at the Council meeting unless they are moved to "Action" or "Consent".*

*No additional items can be moved onto the Consent Calendar once public comment has commenced. At any time during, or immediately after, public comment on Information and Consent items, any Councilmember may move any Information or Consent item to "Action." Following this, the Council will vote on the items remaining on the Consent Calendar in one motion.*

*For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

**Public Comment on Consent Calendar and Information Items Only:** *The Council will take public comment on any items that are either on the amended Consent Calendar or the Information Calendar. Speakers will be entitled to two minutes each to speak in opposition to or support of Consent Calendar and Information Items. A speaker may only speak once during the period for public comment on Consent Calendar and Information items.*

*Additional information regarding public comment by City of Berkeley employees and interns: Employees and interns of the City of Berkeley, although not required, are encouraged to identify themselves as such, the department in which they work and state whether they are speaking as an individual or in their official capacity when addressing the Council in open session or workshops.*



## Consent Calendar

- 1. 2023 Tax Rate: Transportation Network Company User Tax**  
**From: City Manager**  
**Recommendation:** Adopt second reading of Ordinance No. 7,834-N.S. setting the 2023 tax rate (effective January 1, 2023) for the transportation network company at the following rates: 53.775 cents on the user for each prearranged trip that originates in the City that is not part of a pooled prearranged trip and 26.249 for each pooled prearranged trip on each user who arranges each prearranged trip that originates in the City and which comprises part of the pooled prearranged trip.  
**First Reading Vote:** All Ayes.  
**Financial Implications:** See report  
Contact: Henry Oyekanmi, Finance, (510) 981-7300
- 2. Zoning Ordinance Amendments Making Technical Edits and Corrections to Berkeley Municipal Code (BMC) Title 23**  
**From: City Manager**  
**Recommendation:** Adopt second reading of Ordinance No. 7,835-N.S. containing technical edits, corrections and other non-substantive amendments to the following sections of the Zoning Ordinance:  
-BMC Section 23.204.050 (C-C Zoning District)  
-BMC Section 23.204.080 (C-E Zoning District)  
-BMC Section 23.204.090 (C-NS Zoning District)  
-BMC Section 23.204.130 (C-DMU District)  
-BMC Section 23.206.050 (Protected Uses)  
-BMC Section 23.304.030 (Setbacks)  
-BMC Section 23.304.090 (Usable Open Space)  
-BMC Section 23.322.030 (Required Parking Spaces)  
-BMC Section 23.406.070 (Design Review)  
**First Reading Vote:** All Ayes.  
**Financial Implications:** None  
Contact: Jordan Klein, Planning and Development, (510) 981-7400
- 3. Resolution Making Required Findings Pursuant to the Government Code and Directing City Legislative Bodies to Continue to Meet Via Videoconference and Teleconference**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution making the required findings pursuant to Government Code Section 54953(e)(3) and determining that as a result of the continued threat to public health and safety posed by the spread of COVID-19, City legislative bodies shall continue to meet via videoconference and teleconference, initially ratified by the City Council on September 28, 2021, and subsequently reviewed and ratified on October 26, 2021, November 16, 2021, December 14, 2021, January 10, 2022, February 8, 2022, March 8, 2022, March 22, 2022, April 12, 2022, May 10, 2022, May 31, 2022, June 28, 2022, July 26, 2022, August 23, 2022, and September 20, 2022.  
**Financial Implications:** To be determined  
Contact: Farimah Brown, City Attorney, (510) 981-6950

## Consent Calendar

**4. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on October 11, 2022**

**From: City Manager**

**Recommendation:** Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager's threshold will be returned to Council for final approval. Total estimated cost of items included in this report is \$1,628,600.

**Financial Implications:** Various Funds - \$1,628,600

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**5. Contract No. 3220192 Amendment: Alameda County Network of Mental Health Clients**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to amend Contract No. 3220192 with Alameda County Network of Mental Health Clients, Berkeley Drop-In Center (BDIC) Community Crisis Response Services to add \$100,000 to hire one additional homeless outreach staff member and extend the contract by one year to December 31, 2023.

**Financial Implications:** See report.

Contact: Lisa Warhuus, Health, Housing, and Community Services, (510) 981-5400

**6. Revenue Grant Agreement: Funding Support from the State of California Women, Infant, Children Program**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to submit a grant agreement to the State of California, to accept the grants, and execute any resultant revenue agreements and amendments to conduct public health promotion, protection, and prevention services for the Women, Infants, and Children (WIC) program in the projected total amount of \$1,810,197 for Federal Fiscal Years (FFY) 2023 through 2025.

**Financial Implications:** See report

Contact: Lisa Warhuus, Health, Housing, and Community Services, (510) 981-5400

**7. Expand the Program Manager Series by Establishing the Principal Program Manager Classification and Salary Range**

**From: City Manager**

**Recommendation:** Adopt a Resolution to expand the Program Manager Series by establishing the Principal Program Manager classification with a monthly stepped salary range of \$12,651.60 to \$15,309.90 effective October 7, 2022.

**Financial Implications:** See report

Contact: Donald E. Ellison, Human Resources, (510) 981-6800

## Consent Calendar

**8. Classification and Salary: Establishing the Diversity, Equity, and Inclusion Officer Classification and Salary Range**

**From: City Manager**

**Recommendation:** Adopt a Resolution to expand the Diversity, Equity, and Inclusion Officer classification with a monthly stepped salary range of \$11,497.20 - \$15,107.73 effective October 7, 2022.

**Financial Implications:** See report

Contact: Donald E. Ellison, Human Resources, (510) 981-6800

**9. Classification and Salary: Assistant to the City Attorney**

**From: City Manager**

**Recommendation:** Adopt a Resolution to establish the Assistant to the City Attorney classification with a monthly stepped salary range of \$11,497.20- \$15,107.73 effective October 11, 2022.

**Financial Implications:** See report

Contact: Donald E. Ellison, Human Resources, (510) 981-6800

**10. Revision of the Tool Lending Specialist Classification to Reflect an Accurate Scope of Duties with a Four Percent (4%) Salary Increase**

**From: City Manager**

**Recommendation:** Adopt a Resolution amending Resolution No. 62,558-N.S. to approve the revision of the Tool Lending Specialist job specification to accurately reflect the scope of duties and to increase the current salary schedule by four percent (4%) effective March 16, 2021, or the employee's start date, if more recent.

**Financial Implications:** See report

Contact: Tess Mayer, Library, (510) 981-6100

**11. Contract: Abbe & Associates LLC for the development of the Integrated Zero Waste Management Strategic Plan**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute a contract and any amendments with Abbe & Associates LLC for the development of a draft and final Integrated Zero Waste Management Strategic Plan. Abbe & Associate LLC's submittal was rated as the most comprehensive and responsive proposal to the RFP, Spec. No. 22-11477-C , released April 28, 2022. The contract's total amount not to exceed is \$500,000.

**Financial Implications:** See report

Contact: Liam Garland, Public Works, (510) 981-6300

## Consent Calendar

### 12. Harriet Tubman Terrace Tenant Support

**From: Housing Advisory Commission**

**Recommendation:** Recommend City Council take the following actions:

- Review the video created by tenants about conditions at Harriet Tubman Terrace that was shown at the July 7, 2022 Housing Advisory Commission meeting;
- Direct the City Manager to investigate health and safety violations and other grievances identified by tenants at Harriet Tubman Terrace; and
- City Council request Harriet Tubman Terrace provide tenants with a dedicated tenant advocate to assist with relocation and other needs.

**Financial Implications:** See report.

Contact: Mike Uberti, Commission Secretary, (510) 981-7400

## Council Consent Items

### 13. Regulation of Autonomous Vehicles *(Reviewed by the Facilities, Infrastructure, Transportation, Environment & Sustainability Committee)*

**From: Councilmember Taplin (Author)**

**Recommendation:** Refer to the City Attorney the assessment of the legal abilities and opportunities for the City Council to regulate the operation, sale, and testing of autonomous vehicles (AVs) within the City of Berkeley and report to the Facilities, Infrastructure, Transportation, Environment and Sustainability Committee (FITES) on all findings.

*Policy Committee Recommendation: To approve the item with a positive recommendation.*

**Financial Implications:** Staff time

Contact: Terry Taplin, Councilmember, District 2, (510) 981-7120

### 14. Adopt an Ordinance Adding Chapter 13.09 to the Berkeley Municipal Code

**Prohibiting Discriminatory Reports to Law Enforcement *(Reviewed by the Public Safety Committee)***

**From: Councilmember Harrison (Author), Councilmember Hahn (Co-Sponsor)**

**Recommendation:**

1. Adopt an Ordinance Amending Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement.
2. Refer to the City Manager to report to Council within six months with anonymized data and information regarding discriminatory reports to law enforcement.

*Policy Committee Recommendation: Approve the item with a positive recommendation.*

**Financial Implications:** Staff time

Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

## Council Consent Items

- 15. Referral to the November 2022 AAO #1 Budget Process for \$50,000 in Additional Traffic Calming at MLK and Addison**  
**From: Councilmember Harrison (Author)**  
**Recommendation:** Referral to the November 2022 AAO1 Budget Process for \$50,000 in additional traffic calming at MLK and Addison.  
**Financial Implications:** \$50,000  
Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

## Action Calendar

*The public may comment on each item listed on the agenda for action as the item is taken up. For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

*The Presiding Officer will request that persons wishing to speak use the "raise hand" function to determine the number of persons interested in speaking at that time. Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. Speakers are permitted to yield their time to one other speaker, however no one speaker shall have more than four minutes. The Presiding Officer may, with the consent of persons representing both sides of an issue, allocate a block of time to each side to present their issue.*

*Action items may be reordered at the discretion of the Chair with the consent of Council.*

## Action Calendar – Public Hearings

*Staff shall introduce the public hearing item and present their comments. This is followed by five-minute presentations each by the appellant and applicant. The Presiding Officer will request that persons wishing to speak use the "raise hand" function to be recognized and to determine the number of persons interested in speaking at that time.*

*Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. The Presiding Officer may with the consent of persons representing both sides of an issue allocate a block of time to each side to present their issue.*

*Each member of the City Council shall verbally disclose all ex parte contacts concerning the subject of the hearing. Councilmembers shall also submit a report of such contacts in writing prior to the commencement of the hearing. Written reports shall be available for public review in the office of the City Clerk.*

- 16. Referral Response: Amendments to the Zoning Ordinance to clarify and streamline the permit process for Amusement Device Arcades**  
**From: City Manager**  
**Recommendation:** Conduct a public hearing and, upon conclusion, adopt the first reading of Zoning Ordinance amendments to provide consistency for the incidental use of Amusement Devices and regulate Amusement Device Arcades as Commercial Recreation Centers.  
**Financial Implications:** See report.  
Contact: Jordan Klein, Planning and Development, (510) 981-7400

## Action Calendar – Public Hearings

17. **ZAB Appeal: 2018 Blake Street, Use Permit #ZP2021-0095**  
**From: City Manager**  
**Recommendation:** Conduct a public hearing and, upon conclusion, adopt a Resolution affirming the Zoning Adjustments Board (ZAB) decision to approve Use Permit #ZP2021-0095 to construct a six-story, multi-family residential building with 12 units (including two Low-Income units), and dismiss the appeal.  
**Financial Implications:** None  
Contact: Jordan Klein, Planning and Development, (510) 981-7400

## Action Calendar – Policy Committee Track Items

18. **Residential Preferential Parking (RPP) Program Expansion for West Berkeley Neighborhoods Within Two Blocks of Commercial Corridors**  
**From: Councilmember Kesarwani (Author), Councilmember Taplin (Co-Sponsor)**  
**Recommendation:** Referral to the City Manager to expand the scope of the Residential Preferential Parking (RPP) program as originally proposed by staff during the May 14, 2019 City Council Public Hearing as a way to allow more residents to opt-in to this program.  
**Financial Implications:** See report  
Contact: Rashi Kesarwani, Councilmember, District 1, (510) 981-7110
19. **Referral to the Transportation and Infrastructure Commission and City Manager to Consider and Make Recommendations Regarding the Policy of Deploying Rectangular Rapid Flashing Beacons and Other Treatments at Dangerous or High-Collision Pedestrian and Bicycle Intersections**  
**From: Councilmember Harrison (Author)**  
**Recommendation:** Referral to the Transportation and Infrastructure Commission and City Manager to consider and make recommendations regarding the policy of deploying Rectangular Rapid Flashing Beacon (RRFB) and other treatments at dangerous or high-collision pedestrian and bicycle intersections.  
**Financial Implications:** See report  
Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

## Action Calendar – Policy Committee Track Items

**20. Land Acknowledgement Recognizing Berkeley as the Ancestral, Unceded Home of the Ohlone people**

**From: Councilmember Hahn (Author), Mayor Arreguin (Co-Sponsor)**

**Recommendation:**

1. Adopt the Land Acknowledgement Statement Resolution recognizing that Berkeley is the ancestral, unceded home of the Ohlone people.
2. Display the Land Acknowledgement in writing at all in-person or online Regular meetings of the City Council and read the Acknowledgement at the first Regular meeting of each month in which Regular City Council meetings are held.
3. Recommend to all Berkeley Commissions, Committees, Boards, and other elected and appointed City entities to consider inclusion of the Land Acknowledgement in meeting practices and direct the City Manager to convey a copy of this Item and Resolution to all such entities for reference.
4. Direct the City Manager to post the Land Acknowledgement or a prominent link to the Acknowledgement on the home page of the City's website and to create a webpage dedicated to Ohlone history and culture.
5. Now and in the future, consider additional more substantive reparative and restorative actions, including but not limited to those described under the heading "Actions/Alternatives Considered."

**Financial Implications:** See report

Contact: Sophie Hahn, Councilmember, District 5, (510) 981-7150

## Information Reports

**21. Healthy Checkout Ordinance Bi-annual Review**

**From: City Manager**

Contact: Lisa Warhuus, Health, Housing, and Community Services, (510) 981-5400

**22. Commission on Disability Fiscal Year 2022-2023 Work Plan**

**From: Commission on Disability**

Contact: Andrew Brozyna, Commission Secretary, (510) 981-6300

## Public Comment – Items Not Listed on the Agenda

## Adjournment

**NOTICE CONCERNING YOUR LEGAL RIGHTS:** *If you object to a decision by the City Council to approve or deny a use permit or variance for a project the following requirements and restrictions apply:*

*1) No lawsuit challenging a City decision to deny (Code Civ. Proc. §1094.6(b)) or approve (Gov. Code 65009(c)(5)) a use permit or variance may be filed more than 90 days after the date the Notice of Decision of the action of the City Council is mailed. Any lawsuit not filed within that 90-day period will be barred. 2) In any lawsuit that may be filed against a City Council decision to approve or deny a use permit or variance, the issues and evidence will be limited to those raised by you or someone else, orally or in writing, at a public hearing or prior to the close of the last public hearing on the project.*

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Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be made available for public inspection at the public counter at the City Clerk Department located on the first floor of City Hall located at 2180 Milvia Street as well as posted on the City's website at <https://berkeleyca.gov/>.

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and may be read at reference desks at the following locations:

City Clerk Department - 2180 Milvia Street, First Floor  
Tel: 510-981-6900, TDD: 510-981-6903, Fax: 510-981-6901  
Email: [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info)

Libraries: Main – 2090 Kittredge Street,  
Claremont Branch – 2940 Benvenue, West Branch – 1125 University,  
North Branch – 1170 The Alameda, South Branch – 1901 Russell

**COMMUNICATION ACCESS INFORMATION:**

To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at (510) 981-6418 (V) or (510) 981-6347 (TDD) at least three business days before the meeting date.



Captioning services are provided at the meeting, on B-TV, and on the Internet.

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Housing Advisory Commission

CONSENT CALENDAR  
October 11, 2022

To: Honorable Mayor and Members of the City Council  
From: Housing Advisory Commission  
Submitted by: Libby Lee-Egan, Chairperson, Housing Advisory Commission  
Subject: Harriet Tubman Terrace Tenant Support

RECOMMENDATION

Recommend City Council take the following actions:

- Review the video created by tenants about conditions at Harriet Tubman Terrace that was shown at the July 7, 2022 Housing Advisory Commission meeting;
- Direct the City Manager to investigate health and safety violations and other grievances identified by tenants at Harriet Tubman Terrace; and
- City Council request Harriet Tubman Terrace provide tenants with a dedicated tenant advocate to assist with relocation and other needs.

FISCAL IMPACTS OF RECOMMENDATION

Staff time to research, investigate, report and enforce with ongoing follow up, making sure that tenants experience continued safety, protections, reparations and compliance from the contractors, vendors, management and all responsible parties.

CURRENT SITUATION AND ITS EFFECTS

At the Housing Advisory Commission (HAC) meeting on July 7, 2022 the Commission heard and took 2 actions on an item regarding an ongoing situation at Harriet Tubman Terrace (HTT) affecting the low income seniors and disabled tenants residing there. At the meeting the Commission heard testimony and watched video evidence that showed appalling treatment and neglect of HTT's tenants by staff and subcontractors. Residents and community members created a video of the conditions at HTT that was presented at the July 7, 2022 HAC meeting. The video is available at the following link: [bit.ly/HTT-Renewal](https://bit.ly/HTT-Renewal). A Dropbox account is not required to view the video (if prompted).

At the July 7, 2022 meeting, the HAC took the following actions:

Action: M/S/C (Potter/Mendonca) to send a letter to the City Council requesting the following:

- City Council review the video created by tenants about conditions at Harriet Tubman Terrace that was shown at the July 7, 2022 Housing Advisory Commission meeting;
- City Council directs the City Manager to investigate health and safety violations and other grievances identified by tenants at Harriet Tubman Terrace;
- City Council request Harriet Tubman Terrace provide tenants with a dedicated tenant advocate to assist with relocation and other needs; and
- Council request Harriet Tubman Terrace owners/management and tenants report back to the Housing Advisory Commission in September to report progress with addressing the grievances identified by tenants.

Vote: Ayes: Lee-Egan, Mendonca, Potter, Rodriguez, and Sanidad, and Noes: None. Abstain: None. Absent: Calavita (excused), Fain (excused), Johnson (unexcused), and Simon-Weisberg (unexcused).

Action: M/S/C (Mendonca/Potter) to recommend City Council take the following actions:

- Review the video created by tenants about conditions at Harriet Tubman Terrace that was shown at the July 7, 2022 Housing Advisory Commission meeting;
- Direct the City Manager to investigate health and safety violations and other grievances identified by tenants at Harriet Tubman Terrace; and
- City Council request Harriet Tubman Terrace provide tenants with a dedicated tenant advocate to assist with relocation and other needs.

Vote: Ayes: Lee-Egan, Mendonca, Potter, Rodriguez, and Sanidad, and Noes: None. Abstain: None. Absent: Calavita (excused), Fain (excused), Johnson (unexcused), and Simon-Weisberg (unexcused).

### BACKGROUND

Staff and contractors associated with Harriet Tubman Terrace (HTT) have been relocating residents and remodeling individual units since September 2021. The residents at HTT are low income, elderly, and many are disabled. The construction work requires residents to move out of their unit with their possessions, move to another unit in the building while their original unit is under construction. Once construction is complete they are then ideally moved back into their original move-in ready unit. Relocation professionals have been hired to complete this work but accounts from residents have revealed that almost every step of this process has been handled poorly, which has caused undue stress on these elderly residents, many of whom are also disabled.

### ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

There are no identifiable environmental effects or opportunities associated with the subject of this report.

### RATIONALE FOR RECOMMENDATION

The residents of Harriet Tubman Terrace represent multiple constituencies who need protection: all are low income and elderly but many are also disabled and people of color. People in these groups can become disenfranchised and exploited by those with more power. The hope is that the investigation recommended in this report will correct and repair all violations and act as a force that will put an end to these types of abuses in our community and a disgrace to our humanity and our society's legal structures.

### ALTERNATIVE ACTIONS CONSIDERED

Commission discussion included other avenues HTT's tenants have to address these issues. Supplemental communication from HTT management referred to a grievance process but tenants' testimony implied multiple barriers for disenfranchised residents to use that effectively.

### CITY MANAGER

The City Manager takes no position on the content and recommendations of the Commission's Report.

Staff recognize the importance of ensuring the residents of Harriet Tubman Terrace are well-supported and maintain a high-quality of living. Staff also appreciate the Commission's work to understand and take action regarding the tenant concerns identified in an effort to improve the living conditions for vulnerable seniors. The following information is intended to provide additional context for Council's consideration of this matter.

Harriett Tubman Terrace is an affordable development subject to requirements from the U.S. Department of Housing and Urban Development and California's tax exempt bond program. However, it is not funded by the City through the Housing Trust Fund or other affordable housing funding and regulatory program. This means that the property is not in the Department of Health, Housing, and Community Services' Housing and Community Services Division (HHCS/HCS) monitoring portfolio and HHCS has no oversight authority.

Following notification to the HAC of the building's condition, HHCS/HCS immediately contacted the City's Building Services' Housing Code Enforcement Program, and the property ownership, Foundation Housing, to receive an update. Building Services reported that Foundation Housing complied with all of the designated City inspections and permits for the scope of rehabilitation work taking place at the property.

The Housing Code Enforcement program also indicated they conducted inspections on 17 units and the common area at this property since 2019 (Foundation Housing acquired the property in 2021 from a housing investment group that purchased the property in 2019). At the time of writing this report, there are two open cases and the remainder are closed, meaning Housing Code Enforcement found the property to be in compliance with code requirements and /or building permits related to the complaints filed. The latest request for service was received on March 2022 for Unit 401. No housing violations were observed during the inspection and the case was closed.

The two open cases are for Units 503 and 603 (both opened on July 2020) and have been assigned to a Housing Inspector. For both units, the Housing Inspector has directed the owner to correct an inoperable exhaust fan and the required building permit has been issued.

HHCS/HCS coordinated Foundation Housing representatives attendance at the July 7, 2022 to provide the HAC, Harriet Tubman Terrace residents, and public with direct updates on their work and the responses to tenant claims. Following the July meeting, Foundation Housing representatives (based in Washington, DC) flew out to visit the site and meet directly with tenants, advocates, and HAC commissioners. At the time of writing this report in August 2022, Foundation Housing representatives indicated they will attend the September 1, 2022 HAC meeting to provide additional updates on their rehabilitation work and efforts to support residents. A statement from Foundation Housing is included as Attachment 3.

All investigations into health and safety violations fall under the purview of the City's Planning and Building Services Department. Council may endorse the HAC's recommendation for HTT to provide tenants with an advocate but this is not an action HHCS/HCS has the authority to implement or enforce. Staff are encouraged by the actions taken by property ownership to correct the tenant complaints. Tenants may also seek out mediation and other services from the Rent Board if they feel their rights are not honored or treatment is discriminatory. At the time of writing this report in August 2022, HHCS/HCS is coordinating with HHCS/Aging Services to conduct outreach to HTT residents to connect them with City services and opportunities for support.

#### CONTACT PERSON

Mike Uberti, Secretary, Health, Housing and Community Services, (510) 981-5114

#### Attachments:

- 1: HAC Supplemental Communication 2022.07.07.pdf
- 2: HAC Letter to council July 2022.pdf
- 3: Statement from Foundation Housing

Date: July 6, 2022  
To: Housing Advisory Commission  
Submitted By: Cassandra Palanza, Foundation Housing on Behalf of Harriet Tubman Renewal LP (the “Owner”) of Harriet Tubman Apartments (the “Property”)

To Whom It May Concern:

We submit this for the Housing Advisory Commission (“HAC”) to have in its record in response to the recommendations made by Ms. Mendonca of District 8. We welcome open communication with any organization but ask the specifics are provided in order for us to respond appropriately. Many of the responses below are being done based on speculation of specific things we have resolved in the last few months with acknowledgement of some unresolved matters since much of the memo supplied, only intimates at things with no specificity. We hope that resources that can be spent on serving our residents are not mired in “investigations”, that we strongly believe will be unfounded based on the amount of time doing our own investigation and research in response to any previously raised issues. We recognize that sometimes, resident populations go to their local officials whom they have a relationship with and they trust. We encourage that. All we ask is that information is immediately reported to us so we may address it with as specific as possible details to ensure full resolution. Management cannot respond in generalities. We strongly feel we have a team in place that is responding to a myriad of circumstances at the Property and working with the residents is and will remain to be one of our top priorities. Our hope is over the next several weeks with additional resources being added, the residents will begin to feel more at ease with all the improvements and management of the Property.

Regarding many of the allegations, first and foremost, we take allegations of violating health and safety seriously. Any tenant that lives at Harriet Tubman that feels their life is in danger should report such danger to the police. Any tenant that experiences a grievance or is displeased with something, may submit a grievance in accordance with the Properties grievance policy attached hereto for reference. Any intimation that our residents are having crimes committed against them, specifically elder abuse, by anyone in Management or Ownership is categorically false and if a perceived crime is believed to be committed it should be reported immediately for a full investigation. Allegations of elder abuse are not taken lightly and deemed a serious matter.

Residents should feel safe in reporting anything they are displeased with and if they feel strongly about these allegations then they should be written up and provided to a trusted person who can work with Ownership on any allegations. Again, to date, we have no reported cases of elder abuse that are being investigated by any channel of authority over such matter and our hope is with continued communication the relationship between management and the residents will continue to improve, which we feel has in the last several weeks.

Violations that may exist are from the Planning and Development Department (the “PDD”). As violations are received, they are addressed. There are currently two open violations that we are aware of. We have confirmed that these matters are being repaired during the construction work and completion will be submitted to the PDD. All tenants are encouraged to report all matters to management. In order for things to be addressed timely, management should be the first point of contact. Absent substantive violations to which we can respond, which we are happy to do so, we are not aware of the allegations alleged by Ms. Mendonca in the first paragraph of her memo.

Additionally, we are in receipt of a video produced and submitted to HAC regarding the ongoing construction work at Harriet Tubman Apartments. The scope of work for the accessibility units meet the federal standard for accessibility and have been signed off on by local and state officials through our application process for Bonds and LIHTC’s. We are happy to provide the City Inspection Log wherein these units were inspected ,passed, and deemed suitable for occupancy. If a resident has a mobility impairment or need for something outside the scope of their apartment or an accessible designed apartment, they should submit a Section 504 reasonable accommodation (“RA”) request to management for management to carry out. Reasonable accommodations can be made at any time and if a resident cannot fill out the paperwork or does not want to, management will assist them. Please be aware, since this video was submitted to Management and some of the residents intimate in the video that they may or may not need accommodation, Management will reach out to them to see if we can assist in any RA request they may need. This is not a retaliatory action but required by management when a resident asserts a need for an accommodation.

Rodent, roaches and filth should absolutely be reported to management immediately. We have pest control services that can mitigate these issues. Pest control is the second Friday of the month and as needed or requested by management. We are going to schedule a 100% walk with pest control and some residents have requested frequent pest control in their units. We will continue to monitor the pest situation and if additional services are warranted we will provide them. If residents follow the grievance policy on reporting things for habitability matters and they are not resolved to the resident's satisfaction, the regulators of our property will ensure oversight so that matters are responded to. We cannot stress enough the importance of reporting all things to management first. They are our first line of defense for fixing and maintaining habitability. In addition to the Grievance Policy, if residents feel they are not being heard, at the end of this response is a communications tree for residents to work with which includes all of the contact information of management up to an owner's representative throughout the duration of construction. This does not circumvent the Grievance Policy but rather provides additional points of contact for residents to try and expedite their requests. It should be noted, while Owner is committed to rectifying all issues, if residents do not go to management first, then there could be continued delay of resolving their concerns.

To date, we have received inquiries from CAHI regarding asbestos abatement and security matters. Below is our official response to CAHI regarding asbestos concern:

“With respect to your inquiry – asbestos testing was completed prior to the work commencing. During the rehab work that is ongoing, whenever the scope of work being performed includes disturbing asbestos containing materials the work is only performed after the resident has been temporarily relocated to another unit. While the asbestos abatement work is being performed, the unit is closed and sealed off – please see attached photos. In situations in which the asbestos containing materials or suspected asbestos containing materials (“ACMs”) being disturbed are classified as “friable” ACMs, the units have air clearance testing completed by a licensed 3<sup>rd</sup> party environmental services provider prior to the containment being removed and the unit reoccupied. All ACM abatement work is being performed by contractor licensed to do this work

in CA. The abatement contractor posted all of the required notices with the state, local jurisdiction and residents prior to the abatement work at the property. Attached for your reference is the notice that was posted prior to the asbestos work beginning (please note that in this word document the date is set to automatically update to the current date on the day the document is opened).”





With respect to security in the building, Owner does not provide a security company. The building is controlled by controlled fob access and there are plans to improve the camera system within the building. Simultaneously with the issuance of this response, we are working on response to CAHI regarding security.

We empathize with the disruption that construction can cause. It can be very taxing for residents and we understand that, truly we do. We have, for the duration of construction, funded a relocation coordinator and moving company. Residents should feel that, while an inconvenience, they are only temporarily relocating to another apartment for the duration of their in-unit work. We did this plan because this property in particular has many residents with extreme quantities of contents in their apartments and it would have been challenging for our construction team to work in the units with all the belongings in there. We have consistently evaluated our relocation plan and if it makes sense to adjust it, we do. We have evaluated in recent weeks and recognize there were some hiccups and construction delays. Our accessible units, which were the most complicated to construct, were renovated first and we incurred numerous delays that we should not have going forward. Additionally, there were cosmetic issues that were not satisfactorily completed (ie. Toilet paper holder, mirror, blinds, etc) prior to returning a resident to their unit. We acknowledge and apologize for this. We have high standards for our community and strive to meet them every day. While I thought we were moving on from some of the displeasure we recognize some of the residents may still be upset or unhappy and we will work to foster that trust with more communication to them and in person meetings over the following weeks to discuss.

While we cannot address every item in the video in a written response to the Commission, at this time, we can highlight a few items that we know residents were upset with and work on a list of responses if the Commission would like additional matters answered. The electrical chord noted in the video is a cosmetic issue and not a safety issue. We are working with our construction team on a solution that limits the visibility of any chord. There is no electrical or fire hazard with respect to the chord mentioned in the video. We will communicate to residents that a solution to the chord in the kitchen light is still being figured out to provide for the best cosmetic solution this week via an FAQ that we are putting together for our residents. Management also maintains a binder of all notices sent to residents during construction and we are happy to show anyone all of the notices communicated to residents.

Blinds and screens – everyone will return to their unit with blinds. Due to shipping delays, a resident may return to their unit with their existing blinds. We have been working to have all materials stored and available at each unit being constructed but may have to return to install the blinds. Screens have been ordered and arrived damaged and are being reproduced. Again, we know this is frustrating and going forward, while not ideal, no resident will return to their unit without blinds installed. While many of these are inconvenient and hassles residents should not have to deal with, we have put processes in place with management and relocation actively communicating with our residents. We are walking units prior to each resident moving back and creating a pre-inspection report to address any concerns prior to a resident moving back as well as managing expectations. Our relocation coordinator and management agent have been empowered to push back and not accept units if they are not acceptable as well as work with our contractor to determine if there are items residents are not happy with are in the scope or routine maintenance items that should be added to the scope of work.

**Additionally, we have weekly meetings with the following positions relevant to Harriet Tubman where we discuss all things construction and relocation:**

|                                |                                                                                   |
|--------------------------------|-----------------------------------------------------------------------------------|
| <b>Foundation Housing:</b>     | Asset Manager, Director of Asset Management, Project Manager (Cassandra Palanza)  |
| <b>Development Partner:</b>    | Pennant Housing Group (2-3 individuals)                                           |
| <b>Precision Construction:</b> | Superintendent, General Contractor, Project Manager                               |
| <b>FPI Management:</b>         | Community Director, Portfolio Manager, Senior Director and Relocation Coordinator |

Our hope is the amount of staff committed to the completion of this project and its future preservation is not lost in a residents pursuit of “justice” for their concerns. Below is the contact information of personnel here to serve and respond to our residents through the duration of construction. The below team will reach out to the residents in the video supplied and confirm that all of their issues highlighted in the video are resolved. Cosmetic issue or things that a reasonable person who saw them should think to fix them (under the bathroom holes, backboard of the sink) will be addressed.

LaTonya Glover, Property Management, FPI Management  
[harriettubmanterrace.cd@fpimgt.com](mailto:harriettubmanterrace.cd@fpimgt.com), 510-843-0134

Brandon Heezen, Portfolio Manager, FPI Management  
[Brandon.heezen@fpimgt.com](mailto:Brandon.heezen@fpimgt.com)

Brandi Hutchinson, Senior Director, FPI Management  
[brandi.hutchinson@fpimgt.com](mailto:brandi.hutchinson@fpimgt.com)

Tamara Couto, Relocation Specialist, Advanced Relocation Services  
[advancedreloll@gmail.com](mailto:advancedreloll@gmail.com) / 559-903-3800

Jordan Bobb, Asset Manager, Foundation Housing  
[jordanb@foundationhousing.com](mailto:jordanb@foundationhousing.com)

Cassandra Palanza, Project Manager and Landlords Representative, Foundation Housing  
[Cassandra@foundationhousing.com](mailto:Cassandra@foundationhousing.com) /

Lastly, we are beginning to implement some things to try and assist our residents further with communication and supportive services during the rehab and after conclusion of the rehab. We have approved a TV monitor for updates and important information for residents. We are putting our resident services under review to see how many additional hours of resident services we can add to the property to give our residents additional support. We are ordering computers for a computer center for the residents to utilize. We are trying to see if we can add the layout to our scope but the approval to order these computers was granted and we look forward to giving residents access to these as soon as possible. In addition to moving assistance during the rehab, we are offering appointments with assistance for residents to go through their things and eliminate/donate unwanted items. See attached flyer. This service is completely voluntary but we recognize that there are many of our residents who lack the capability or physical strength to resolve the building amount of contents in their homes. To date, we have had three residents utilize the services and will look to establish this as an annual or semi-annual event. Rounding out all of the things we continue to work on, Management is sending out a survey to residents asking for feedback. It is voluntary and vital that we hear from everyone. Despite some of the challenges we also have many residents who are pleased with the progress this community is making and as we move forward we feel it is important to share all the information so that those stake holders involved can make informed decisions.

We recognize that in elderly populations, packing, moving, moving, unpacking is stressful. We are working to find additional resources for additional packing assistance and unpacking. No resident is asked to move anything except for their things they consider extremely valuable (jewelry, passport, documents and any other valuables that they do not want touched). If a resident feels they are not getting the assistance they need, then they should immediately notify the relocation coordinator. If the responsiveness is not there then Management should be notified followed by the Owners Representative.

To date we have completed 22 units. As of July 6, we have 5 tenants who have been temporarily relocated to other units. These residents are scheduled to return to their homes Friday, July 8, subject to management inspection and approval.

Thank you for your time. We look forward to completing this project and the residents being able to enjoy their improved community in a peaceful manner.

## Management Relations

### Grievance Procedures

Our goal at this apartment community is to provide outstanding customer service, responsive management and build good resident/management relations.

On occasion a dispute or problem may arise between a resident(s) and management. If there is a dispute, a discussion is encouraged on a one-to-one basis. If discussion does not provide a resolution, a resident may use the Grievance Procedure outlined in an effort to provide resolution.

The Grievance Procedure is designed to ensure that there is a fair and equitable process for addressing resident concerns and to ensure fair treatment of residents in the event that an action or inaction by a management representative adversely affects the resident of this apartment community.

Individuals, who feel they have been treated unfairly, may submit a grievance to management. Management will respond to valid requests involving concerns about conditions or quality of life at the apartment community. An informal review of issues and concerns will be conducted.

In order to clearly understand the issues, management will request a written statement of the issue for all parties to review. Management may need to obtain written statements from witness or other outside parties to fully review the concerns. An informal meeting will then be scheduled to review the concerns in an attempt to resolve the conflict. If this process does not resolve the matter, the resident may seek resolution through the process outlined below.

#### Example of Complaint Process

|                                                                                                                                                                                                                                                        |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Step 1.</b> Resident notifies Community Director/Manager to discuss complaint, provides complaint in writing (Form available), (Reasonable Accommodations may be made for persons with disabilities) and discusses possible solutions.</p>       | <p><b>Step 2.</b> Community Director/Manager discusses matter with resident and replies in writing to complaint within 10 working days. If dispute is not resolved, proceed to the next step.</p> | <p><b>Step 3.</b> Resident appeals to Portfolio Manager in writing within 5 working days of the receipt of the written response. (Reasonable Accommodations may be made for persons with disabilities). Portfolio Manager will contact parties within 10 working days of receiving appeal. If dispute is not resolved, proceed to the next step.</p> |
| <p><b>Step 4.</b> Portfolio Manager will discuss grievance with resident and within 10 working days, provides decision and written statement on the grievance and take any necessary action. If dispute is not resolved, proceed to the next step.</p> | <p><b>Step 5.</b> Resident appeals to the Contract Administrator within 10 days. Contract Administrator responds to the Resident. If dispute is not resolved, proceed to the next step.</p>       | <p><b>Step 6.</b> Resident appeals to the HUD office within 10 days. HUD responds to the Resident</p>                                                                                                                                                                                                                                                |

#### Contact Information

|                                                                         |                                                                                                                                                                                               |                                                            |                                       |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------|
| <p><b><u>Step One &amp; Two</u></b><br/>Community Director/Manager:</p> | <p><b><u>Step Three &amp; Four</u></b><br/>Management Agent:</p> <p><b>FPI Management, Inc.</b><br/>Regional Portfolio Manager<br/><b>800 Iron Point Road</b><br/><b>Folsom, CA 95630</b></p> | <p><b><u>Step Five</u></b><br/>Contract Administrator:</p> | <p><b><u>Step Six</u></b><br/>HUD</p> |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------|

I hereby acknowledge that I have received a copy of the Grievance Procedure and understand the process described above. I also understand that a Complaint Form is available in the Rental Office and Community Bulletin Board.

\_\_\_\_\_  
Resident Name

\_\_\_\_\_  
Resident Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Resident Name

\_\_\_\_\_  
Resident Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Management Representative

\_\_\_\_\_  
Date



Libby Lee-Egan (Chairperson) & Mari Mendonca (Vice Chairperson)  
*Berkeley Housing Advisory Commission*

July 15, 2022

Mayor Arreguín and Berkeley City Councilmembers,

We write to you today to express deep concern and inspire urgent action on an issue affecting some of Berkeley's most vulnerable residents. At the Housing Advisory Commission (HAC) meeting on July 7, 2022 we heard and took action on an item regarding an ongoing situation at Harriet Tubman Terrace (HTT) affecting the low income seniors and disabled tenants residing there. For reference, see item #5 on the [agenda](#) and supplemental communication [here](#). At the meeting the Commission heard testimony and watched [video evidence](#) that showed appalling treatment and neglect of HTT's tenants by staff and subcontractors.

Most of the grievances were related to relocation to/from and construction in individual units. Commissioners and members of the public expressed distress at what these seniors were being subjected to, including:

- Inadequate relocation services. The video shows the home of a disabled tenant whose possessions were not unpacked from their boxes and equipment necessary to help him move about his home was not installed.
- Shoddy construction and poorly-planned improvements ill-suited to each home's resident. The video shows a tenant whose newly-remodeled bathroom has a hole in the wall where a toilet paper holder should be and a bathtub that is not usable for her as someone who has had a hip replacement.
- Overall lack of trust between staff and tenants. It was clear from testimony and video that tenants do not feel comfortable submitting complaints or requests. There are many reasons for this discomfort, including fear of retaliation. This is the primary reason for our 3rd recommendation below for a tenant advocate to assist the HTT residents.

Members of the HAC also received supplemental communication and heard public comment from HTT's project manager/landlord representative which insufficiently addressed some of these concerns.

During the meeting on July 7, the Commission voted unanimously to send this letter, requesting the mayor and City Councilmembers take action:

1. [Review the video](#) created by tenants about conditions at Harriet Tubman Terrace that was shown at the July 7, 2022 Housing Advisory Commission meeting;
2. Direct the City Manager to investigate health and safety violations and other grievances identified by tenants at Harriet Tubman Terrace;

3. Request Harriet Tubman Terrace provide tenants with a dedicated tenant advocate to assist with relocation and other needs; and
4. Request Harriet Tubman Terrace owners/management and tenants report back to the Housing Advisory Commission at our regular meeting in September to report progress with addressing the grievances identified by tenants.

At the same meeting, the Commission also unanimously approved a motion to put together an official recommendation on this matter. This report is under development right now and is forthcoming. Staff advised that this could take time for this to get on the council's calendar and because these Berkeley residents need help *now*, the HAC opted to send this letter before the report is finished.

If you have any follow up questions or require any additional information, please do not hesitate to reach out to the submitter of the item and Vice Chair Mari Mendonca ([marimendonca71@gmail.com](mailto:marimendonca71@gmail.com)) and Chair Libby Lee-Egan ([libbyco@gmail.com](mailto:libbyco@gmail.com)).

Sincerely,

*Libby Lee-Egan*

*Housing Advisory Commission Chairperson*

*Mari Mendonca*

*Housing Advisory Commission Vice Chairperson*

Links:

Agenda: [bit.ly/HAC7722-Agenda](https://bit.ly/HAC7722-Agenda)

Supplemental Communication: [bit.ly/HAC7722-SuppComm](https://bit.ly/HAC7722-SuppComm)

Video: [bit.ly/HTT-Renewal](https://bit.ly/HTT-Renewal)

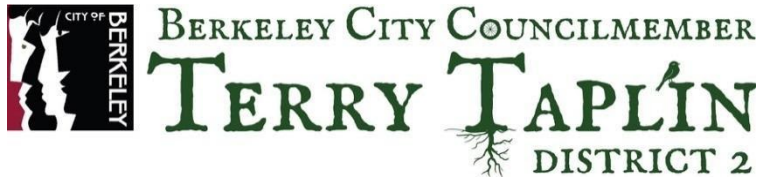
**The following update from Foundation Housing was provided by to HHCS staff via email on August 24, 2022.**

The Landlord [Foundation Housing] continues with the renovations in accordance with local, state and federal guidelines and does not have open code violations as it pertains to any of the renovations.

Landlord, in response to tenant input has addressed, in landlords opinion, most items. Where landlord and tenant(s) differ we continue to work through those matters on an individual basis with each tenant. Landlord has added services including but not limited to more than doubling the resident services contract that will begin in September, changed the cleaning contract of the building and had the building deep cleaned twice with daily cleaning occurring in all common areas and public spaces, done a 100% unit pest inspection and begun regular pest control of units identified with housekeeping issues, offered residents 2 hours of cleaning of their apartments by a cleaning company at landlords expense, offered decluttering and unloading of residents items they do not want or want to dispose of (at landlords expense), paused relocation with the exception of deemed necessity in August, hired a new relocation coordinator (AutoTemps) set to resume tenant relocation in September and continued to focus on the completion of the much needed renovations of the building.

An open item that we acknowledge and realize is not resolved is the matter pertaining to the stoves in the one bedrooms and resolution is still pending on that item. Construction continues to experience supply chain issues and we continue to accommodate as necessary to make sure units are delivered completed with little to no disruption upon returning home. The screens to the windows arrived in early August and began installation on all newly installed windows. Approximately 40% of the apartment homes are completed. Landlord and management will be available on the next Housing Advisory Council call [September 1, 2022] to take questions and give additional updates on the status of things at Harriet Tubman Apartments.



CONSENT CALENDAR

October 11th, 2022

To: Honorable Mayor and Members of the City Council

From: Councilmember Terry Taplin

Subject: Regulation of Autonomous Vehicles

RECOMMENDATION

Refer to the City Attorney the assessment of the legal abilities and opportunities for the City Council to regulate the operation, sale, and testing of autonomous vehicles (AVs) within the City of Berkeley and report to the Facilities, Infrastructure, Transportation, Environment and Sustainability Committee (FITES) on all findings.

POLICY COMMITTEE RECOMMENDATION

On July 20, 2022, the Facilities, Infrastructure, Transportation, Environment & Sustainability Policy Committee took the following action: M/S/C (Robinson/Harrison) to approve the item with a positive recommendation.

CURRENT SITUATION AND ITS EFFECTS

Autonomous vehicles, better known as driverless cars, are an emerging technology with such potential to transform our transportation system that it inspires great optimism as well as an equal amount of trepidation. Advocates and opponents of the technology agree that the full automation of personal automobiles will have enormous ripple effects throughout our society, impacting the job market, public safety, energy consumption, and our every understanding of how we design our cities and transportation systems. Those pursuing AV technology view removing the variable of human error from personal vehicle transportation as the solution to congestion, fuel efficiency, and traffic accidents themselves. Proponents of AVs also see driverless cars as a valuable resource for persons with disabilities who cannot currently drive personal vehicles, expanding the mobility options for millions.<sup>1</sup> Others are more suspicious of driverless cars.

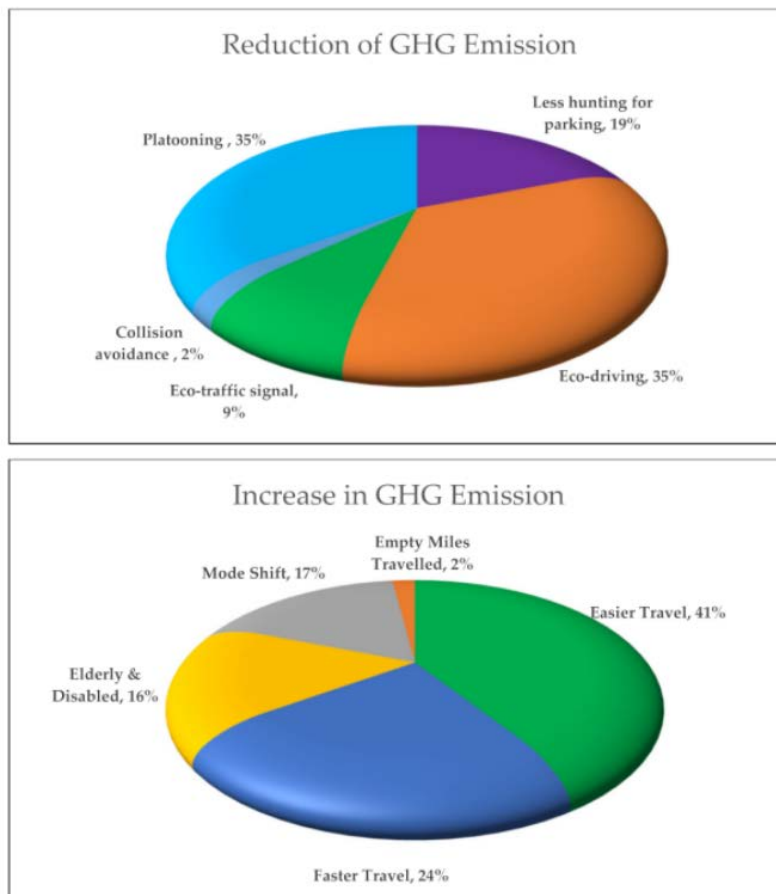
Some studies suggest any gains made by AVs in reducing congestion and traffic accidents could very well be neutralized by an induced demand for this exciting new transportation method.<sup>2</sup> Furthermore, the introduction of truly autonomous vehicles into

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<sup>1</sup> Faisal, Asif, et al. "Understanding autonomous vehicles." *Journal of transport and land use* 12.1 (2019): 45-72.

<sup>2</sup> Medina-Tapia, Marcos, and Francesc Robusté. "Implementation of connected and autonomous vehicles in cities could have neutral effects on the total travel time costs: modeling and analysis for a circular city." *Sustainability* 11.2 (2019): 482.

the market at a time when environmental and street safety advocates are pushing for a decline in all kinds of personal vehicle mode-shares could undo decades of work to reduce car dependency. Of particular concern to the City of Berkeley will be the impact that AVs have on greenhouse gas emissions. On one hand, reduced driving time searching for parking, the potential for autonomous driving to be more fuel-efficient, reduced congestion, and disruptions to the decision-making systems that encourage the unnecessary growth in size of modern personal vehicles could very well reduce emissions. On the other hand, easier and faster travel and the widening of accessibility that fully autonomous vehicles will bring may boost car mode-share beyond levels consistent with our climate needs.<sup>3</sup> While difficult to know for certain, “it is quite possible that AVs could be more energy-efficient, thereby reducing the GHG by functional unit-basis as per-passenger-mile (ppm); however, the overall gain related to transportation GHG emissions could be swamped by a surge in increased vehicle miles traveled (VMT)”<sup>4</sup>. Whether driverless cars revolutionize transportation for better or worse, policymakers must be prepared for an influx of these new vehicles.



Potential impacts of autonomous vehicles on greenhouse gas emissions.<sup>5</sup>

<sup>3</sup> Massar, Moneim, et al. "Impacts of autonomous vehicles on greenhouse gas emissions—positive or negative?." *International Journal of Environmental Research and Public Health* 18.11 (2021): 5567.

<sup>4</sup> Massar, Moneim, et al.

<sup>5</sup> Massar, Moneim, et al.

According to recent data provided by the California Department of Motor Vehicles, 2021 was a record-setting year for miles driven by test-autonomous vehicles (AVs) in California.<sup>6</sup> Despite the sudden growth in AVs on public roads in recent years, municipal governments have limited control over the regulation of AV testing and little access to basic information on the testing itself. This will pose a growing concern to local policymakers in the coming years as AV testing continues to spread. In California, AV testing oversight belongs to the DMV and the California Public Utilities Commission. This concentration of regulatory power at the state level makes it difficult to even determine the number of AV tests that have been conducted on Berkeley's streets, particularly because the DMV and CPUC do not require that AV companies report the whereabouts of their vehicles.<sup>7</sup> In order for the City to plan for the introduction of AVs onto public roads, use what limited regulatory abilities may be available, and lobby the state government to expand its oversight power, the Berkeley City Council must be made aware of all legal options for setting both AV testing rules and rules for functional AVs in a future where testing is complete and AVs are commercially available.

Beyond the testing of AVs that is expected to continue for many years, Berkeley must be prepared for a scenario where AVs are widely sold and threaten many of the City's transportation and climate goals. For the sake of safer streets and a reduction of fossil fuel emissions, the City of Berkeley is pursuing a growth in non-car transportation mode shares in its transportation, infrastructure, and planning policies. This pursuit may easily be threatened by the sudden availability of self-driving cars. The option for drivers to choose a vehicle that offers the present day convenience of an automobile with an added reduction in the actual requirement to drive the vehicle carries the possibility of undoing any progress made if no preemptive regulatory policies are made. While it will be many years before self-driving cars are available or even common on Berkeley's streets, the City must proceed with transportation planning that is cautious with AVs and committed to a future where cars are not the largest mode-share.

#### RATIONALE FOR RECOMMENDATION

It is important for the City of Berkeley to have a clear understanding of its exact responsibilities when it comes to autonomous vehicles and where state and federal bodies hold most power. With that knowledge, the City Council can lobby the state government and federal agencies both for more power over the regulation of driverless cars as well as for specific policies that Council determines should be enacted but lacks the power to do alone.

#### FISCAL IMPACTS

Staff time for the referral response.

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<sup>6</sup><https://techcrunch.com/2022/02/10/fewer-autonomous-vehicle-companies-in-california-drive-millions-more-miles-in-testing/>

<sup>7</sup> <https://www.sfexaminer.com/findings/how-san-francisco-became-an-autonomous-vehicle-test-course/>

### ENVIRONMENTAL IMPACTS

Reducing the use of automobiles on Berkeley's streets is a critical task for the reduction of the City's fossil fuel emissions, an immense share of which come from private vehicle emissions.<sup>8</sup>

### CONTACT

Terry Taplin, Councilmember, District 2, (510) 981-7120

### ATTACHMENTS

1. Understanding Autonomous Vehicles
2. Impacts of Autonomous Vehicles on Greenhouse Gas Emissions—Positive or Negative?

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<sup>8</sup><https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Climate-Action-Plan.pdf>

JTLU

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Understanding autonomous vehicles

Author(s): Asif Faisal, Md Kamruzzaman, Tan Yigitcanlar and Graham Currie

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## Understanding autonomous vehicles: A systematic literature review on capability, impact, planning and policy

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**Abstract:** Advancement in automated driving technology has created opportunities for smart urban mobility. Automated vehicles are now a popular topic with the rise of the smart city agenda. However, legislators, urban administrators, policymakers, and planners are unprepared to deal with the possible disruption of autonomous vehicles, which potentially could replace conventional transport. There is a lack of knowledge on how the new capabilities will disrupt and which policy strategies are needed to address such disruption. This paper aims to determine where we are, where we are headed, what the likely impacts of a wider uptake could be, and what needs to be done to generate desired smart urban mobility outcomes. The methodology includes a systematic review of the existing evidence base to understand capability, impact, planning, and policy issues associated with autonomous vehicles. The review reveals the trajectories of technological development, disruptive effects caused by such development, strategies to address the disruptions, and possible gaps in the literature. The paper develops a framework outlining the inter-links among driving forces, uptake factors, impacts and possible interventions. It concludes by advocating the necessity of preparing our cities for autonomous vehicles, although a wider uptake may take quite some time.

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## 1 Introduction

The convergence of technology and the city is seen as a possible remedy to overcome the challenges of urbanization such as climate change, congestion, and greenhouse gas (GHG) emissions (Yigitcanlar, 2016). Transport, as an integral part of the city, is responsible for about a quarter to one-third of GHG emissions (Kamruzzaman, Hine, & Yigitcanlar, 2015; Arbolino, Carlucci, Cira, Loppolo, & Yigitcanlar, 2017; Yigitcanlar, Foth, & Kamruzzaman, 2018). Technology in the name of smart urban mobility is

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becoming a key concept of the contemporary urban policy agenda to address the undesirable effects of transport (Creutzig et al., 2015; Perveen, Yigicanlar, Kamruzzaman, & Hayes, 2017; Perveen, Kamruzzaman, & Yigicanlar, 2017, 2018; Yigitcanlar & Kamruzzaman, 2018b).

As originally conceived within the smart cities agenda (Yigitcanlar, 2015; Lara, Costa Furlani, & Yiticanlaar, 2016; Trindade et al., 2017; Chang, Sabatini-Marques, da Costa, Selig, & Yigicanlar, 2018; Yigitcanlar et al., 2018a), the smart urban mobility concept is characterized by an integration of sustainable and smart vehicular technologies, and cooperative intelligent transport systems (ITS) through cloud-servers and big-data-based vehicular networks (Kim, Moom, & Suh, 2015). In other words, smart urban mobility is conceptualized as urban traffic services combined with smart technologies (Chun & Lee, 2015). Undoubtedly one of the most advanced applications that utilizes numerous ITS tools as a part of the smart urban transport system is autonomous vehicle (AV)—a.k.a. automated car, self-driving car or driverless car (Spyropoulou, Penttinen, Karlaftis, Vaa, & Golias, 2008; Chong et al., 2013; Olaverri-Monreal, 2016).

The basic concept of road vehicle automation refers to the replacement of some or all of the human labor of driving by electronic and/or mechanical devices (Shladover, 2018). Origins of the automated driving technology can be traced back to the early 20th century. At that time, the technology was concentrated on autonomous speed, break, lane control, and other basic cruise control aspects (Shladover, Su, & Lu, 2012; Anderson et al., 2014; Arnaout & Arnaout, 2014; Pendleton et al., 2017). However, only during the last decade or so, incubating conditions of the Digital and 4th Industrial Revolutions gave birth to rapid technological advancements in the field; resulting in numerous prototype AVs being trailed on the roads (Christie, Koymans, Chanard, Lasgouttes, & Kaufmann, 2016).

Many research articles have been published in the academic literature describing the technological advancement of AVs (Denaro, Zmud, Shladover, Smith, & Lappin, 2014). However, academic literature outlining the AV induced disruptions (both positive and negative) in cities and how policies are being introduced to promote or address various disruptive effects is fairly limited (Bagloee, Tavana, Asadi, & Oliver, 2016; Gruel & Stanford, 2016; Truong, De Gruyter, Currie, & Delbosc, 2017), despite a recent prediction suggests that by 2045, AVs would account for up to half of all road travel (Bansal & Kockelman, 2017; Litman, 2017). Even more so, there is no study, to our knowledge, in the academic literature that critically scrutinizes the state of AVs from a combined perspective focusing on its capability, impact and existing/potential policy interventions to reduce/foster the disruptive effects.

Against this backdrop, this paper aims to determine where we are at, where we are headed to, what the likely impacts of wider AV uptake could be, and what needs to be done for AVs to generate desired smart urban mobility outcomes—with a particular focus on the capability, impact and policy. In order to achieve this aim, the study undertakes a systematic review of the literature on AVs published in peer-reviewed journals. The review concentrates on the following research objectives: (a) Highlighting the main findings and contributions of the reviewed literature; (b) Mapping out the relationships among the capability, impact, planning interventions, and pre-deployment policy to accommodate AVs as well as to reduce the undesirable effects of AVs; (c) Determining the gaps in the literature and pointing out directions for prospective research. A key outcome of this research is the development of an AV driving forces, uptake factors, impacts and interventions framework.



## 2 Autonomous vehicles in a nutshell

### 2.1 Historical background

Vehicle automation was originally envisioned as early as in 1918 (Pendleton et al., 2017), and the first concept of automated vehicle was exhibited by General Motors in 1939 (Shladover, 2018). The initial phase of research and development (R&D) was jointly initiated by General Motors and Radio Corporation of America Sarnoff Laboratory in the 1950s (Shladover, 2018). From 1964 to 2003, several other R&D programs were operational in the US, Europe, and Japan under individual and joint initiatives of different government institutes and academia to develop automated bus and truck platoons, super-smart vehicle systems, and video image processing of driving scene recognition (Shladover, 2018). AV research was accelerated through the Defense Advanced Research Projects Agency's (DARPA) Grand Challenges Program in the US in 2004. The challenges resulted in AVs capable of traversing desert terrain in 2005, and in 2007. Researchers also managed to place AVs on urban roads through the DARPA's Urban Challenge Program (Pendleton et al., 2017; Shladover, 2018). Since then, R&D continued at a fast pace in both academia and industrial settings.

Volvo, for instance, started its journey to autonomous driving in 2006, introduced its full autonomous test vehicle in 2017, and has plans to bring its unsupervised AV to the market by 2021. Tech giant Google started its journey towards full AVs in 2009, and by 2017 Google's AV fleet, WAYMO, has completed three million miles driving within four US states. In 2014, TESLA announced that its car will be capable of self-driving about 90% of the time. Today, all TESLA models are equipped with self-driving capability. By 2020, Audi, BMW, Mercedes-Benz and Nissan are expecting to have their AVs in the market.

Bloomberg (2017) provides an inventory of how cities around the globe are preparing for the transition to a world with AVs. According to this study, 36 cities were hosting AV tests, or have committed to doing so in the near future; where 18 other cities are undertaking long-range surveys of the regulatory, planning, and governance issues associated with AVs, but have not yet started piloting. The inventory considers of those piloting cities that were partnering on tests of a variety of AV products, including retrofitted autos and brand-new vehicles like conveyors (small, cart-sized AVs that travel on sidewalks). Testbed locations are generally isolated places from the rest of the city, such as technology parks, college campuses, urban renewal districts, highways, and former international mega-event sites. Therefore, as stated by Bloomberg (2017), while these trials are happening, they are not yet tackling the full challenges of navigating through complex urban environments. Table 1 lists the cities that are piloting (hosting AV tests or have committed to doing so in the near future) or preparing (undertaking long-range surveys of the regulatory, planning, and governance issues raised by AVs, but have not yet started piloting) themselves for an AV uptake.



**Table 1.** List of cities testing or in preparation for AVs (Bloomberg, 2017)

| Piloting cities   | Piloting cities (continued) | Preparing cities |
|-------------------|-----------------------------|------------------|
| Adelaide, AU      | Melbourne, AU               | Auckland, NZ     |
| Amsterdam, NL     | Oslo, NO                    | Buenos Aires, AR |
| Austin, US        | Paris, FR                   | Cambridge, US    |
| Boston, US        | Pittsburgh, US              | Columbus, US     |
| Bristol, UK       | Reno, US                    | Denver, US       |
| Chandler, US      | Rotterdam, NL               | Dublin, US       |
| Chiba City, JP    | San Antonio, US             | Los Angeles, US  |
| Detroit, US       | San Francisco, US           | Montréal, CA     |
| Dubai, UAE        | San Jose, US                | Nashville, US    |
| Edmonton, CA      | Seongnam, KR                | Orlando, US      |
| Eindhoven, NL     | Singapore                   | Palo Alto, US    |
| Gothenburg, SE    | Toronto, CA                 | Portland, US     |
| Haarlem, NL       | Wageningen, NL              | Rionegro, CO     |
| Helsinki, FI      | Washington, DC, US          | Sacramento, US   |
| Las Vegas, US     | West Midlands, UK           | Santa Monica, US |
| London, UK        | Wuhan, CN                   | Seattle, US      |
| Lyon, FR          | Wuhu, CN                    | São Paulo, BR    |
| Milton Keynes, UK | Zhuzhou, CN                 | Tel Aviv, IL     |

## 2.2 Autonomous technology

In line with the automation concept, a taxonomy of 4-level of vehicle automation was developed by the National Highway Traffic Safety Administration (NHTSA) in 2013 (Wadud, MaKenzie, & Leiby, 2016), and a 5-level automation was introduced by the Society of Automotive Engineers International (SAE) in 2014—later on updated in 2016 (Coppola & Morisio, 2016; SAE, 2016a, 2016b; Snyder, 2016; Milakis, van Arem, & van Wee, 2017). In 2016, NHTSA adopted SAE's taxonomy and automation levels (NHTSA, 2016). SAE's taxonomy and automation levels have become an industry standard, and also frequently referred in the academic literature (Rubin, 2016; Scheltes & de Almeida Correia, 2017; Walker & Marchau, 2017; Shladover, 2018). Table 2 describes the operational functions included in automated driving system (ADS), and the role of human driver at each level of vehicle automation.

**Table 2.** Taxonomy of road vehicle automation derived from SAE (2016a)

| Level of automation                                                                                          | Automated driving system                                                                  |                       | Human driver                                         |                      |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------|----------------------|
|                                                                                                              | Operational function                                                                      | Capability            | Operational function                                 | Capability           |
| Level 1<br>(most functions are controlled by driver)                                                         | Control: lateral and longitudinal                                                         | In some driving modes | Localisation<br>Perception<br>Planning<br>Management | In all driving modes |
| Level 2<br>(at least one driver assistance system is automated)                                              | Control: lateral and longitudinal                                                         | In some driving modes | Localisation<br>Perception<br>Planning<br>Management | In all driving modes |
| Level 3<br>(driver is able to shift safety-critical functions to vehicle)                                    | Control: lateral and longitudinal<br>Localisation<br>Perception<br>Planning               | In some driving modes | Management                                           | In all driving modes |
| Level 4<br>(fully-autonomous, but not in every driving scenario)                                             | Control: lateral and longitudinal<br>Localisation<br>Perception<br>Planning<br>Management | In some driving modes | n/a                                                  | n/a                  |
| Level 5<br>(fully-autonomous, vehicle's performance is equal that of human driver in every driving scenario) | Control: lateral and longitudinal<br>Localisation<br>Perception<br>Planning<br>Management | In all driving modes  | n/a                                                  | n/a                  |

In theory, an automated vehicle system can only be termed as an “autonomous” system, when all the dynamic driving tasks, at all driving environment, can be performed by the vehicle’s automated system. According to the Federal Automated Vehicles Policy of the US Department of Transportation, a vehicle is denoted as AV if it has levels 3-5 automated systems (DoT, 2016). However, these levels of autonomy are not strictly maintained in the literature and any level of autonomy is referred to as autonomous (Shladover, 2018). Throughout this paper, the term AV will refer to the levels 3-5 automated systems only.

Driving requires a variety of functions, including localization, perception, planning, control, and management (Coppola & Morisio, 2016). Information acquisition is a prerequisite to localization, and perception. If all of these functions, including information acquisition, are available in a vehicle, it could definitely be termed as an AV. If any AV has to communicate with other infrastructures to collect information, or to negotiate its maneuvers, it is termed as connected autonomous vehicle (CAV) (Shladover, 2018), and when any manually driven vehicle, whether manual or automated, has to communicate with other infrastructures to collect information, or to negotiate its maneuvers, it is termed as connected vehicle (CV) (Hendrickson, Biehler, & Mashayekh, 2014; Coppola & Morisio, 2016). Therefore, CV technology is complimentary or has synergistic effect on the implementation of AV to some extent (Shladover, 2018), though connectivity is not a mandatory feature of AVs (Hendrickson et al., 2014).

### 2.3 Perceived benefits

AVs are expected to be operational both as private and as commercial vehicle (Heinrichs, 2016; Collingwood, 2017; Wadud, 2017). One of the perceived advantages and flexibility of autonomous private car over the conventional private car is that it can simultaneously be used among all members in a family. Commercial AVs could be operated as taxi, bus, and freight services. AV taxis can provide service as a combination of conventional car-sharing and taxi services, which is referred to as shared AV (SAV) or driverless taxi (Fagnant & Kockelman, 2014; Krueger, Rashidi, & Rose, 2016).

Perception prevails that driverless taxi is likely to complement/supplement traditional public transit service, and it can potentially replace the private car and conventional taxis because SAVs are expected to be relatively inexpensive and facilitating opportunity for multitasking during a ride (Malokin, Circella, & Mokhtarian, 2015; Krueger et al., 2016; Milakis, Snelder, van Arem, Homem, & van Wee, 2017). In spite of having cooperation within the fleet, conventional taxi drivers seek to maximize individual profit, overruling minimum wait time and less passenger kilometers travelled (PKT), as identified by the fleet cooperation (Boesch, Ciari, & Axhausen, 2016).

Some transport network companies (TNC), such as Uber and Lyft, have been trying to develop a model similar to SAVs in their operations. However, in this model, human drivers are still responsible for routing, relocation, operation times, and many other decision-making factors. On the contrary, 100% central control system of SAV can overcome the limitations of conventional taxi services. Thus, SAV can ensure more system-optimal and overall profit-maximizing network with a higher service level and lower empty travel cost with respect to conventional taxi services, and TNCs (Fagnant, Kockelman, & Bansal, 2015). With a comprehensive ICT integration, SAV could facilitate dynamic ridesharing (DRS). Hence, SAV can either provide service with DRS or without DRS facility (Krueger et al., 2016).

The barriers to traditional ridesharing service could be overcome through the introduction of DRS (Krueger et al., 2016) or driverless taxi (Martinez & Viegas, 2017). The concept of “mobility-as-a-service” (MaaS) can also be accommodated with the introduction of SAV and DRS. Commercial operations like taxi, bus and freight service can benefit from automation through the postponement of driver costs (Wadud, 2017). Deployment of autonomous private car or taxi may reduce parking demand at urban core locations, repurposing those spaces for the use of other economic activity and in turn, it may act to increase urban density in central business district (CBD) locations (Bagloee et al., 2016; Levine, Segev, & Thode, 2017).

In contrast, reliability, comfort, and reduced perceived value of time may encourage long commute distances, contributing to urban sprawl and influencing real-estate values in ex-urban areas (Heinrichs, 2016; Rubin, 2016; Snyder, 2016). Integration of platooning features in freight and bus services, with the help of autonomous and cooperative technology, can play a vital role in increasing road capacity. These are few prominent and divergent examples of AV, considering its diversity in use.

The technological advancement and potential benefits of AVs, as discussed above, are linked together (Heinrichs, 2016). How are these benefits likely to be translated in the form and structure of urban systems? This research compiles evidence from published literature to address this question.

## 3 Methodology

This research applies a systematic review of the literature to achieve the research aim and objectives. A systematic literature review follows an explicit protocol for higher data reliability and for shaping the diversity of knowledge in a specific research field (Rowley & Slack, 2004; Brereton, Kitchenham, Budgen, Turner, & Khalil, 2007; Bask & Rajahonka, 2017). It aims at abating bias through comprehensive literature searches and delivers an evaluation trajectory for the reviewer verdicts, procedures and inferences (Burgess, Singh, & Koroglu, 2006; Bask & Rajahonka, 2017). The review involves three major

activities: (a) Planning; (b) Realization or review; (c) Reporting and presentation (Tranfield, Denyer, & Smart, 2003; Bask & Rajahonka, 2017; Oliveira et al., 2017).

The above three activities were undertaken according to the methodological principles recommended by Oliveira, Márcio de Almeida et al. (2016) and Oliveria, Albergaria De Mello Bandeira et al. (2017): (a) Planning activity consists of identifying the need for revision (why), purpose of the review (what), and developing the protocol of the review (how, when and where); (b) Review activity including identification, selection, and inclusion of papers, evaluation of the selected papers, extraction of data and information, and synthesis of data; (c) Reporting and presentation includes preparing reports, and presenting results.

Firstly, a research plan involving the research aim and objectives, keywords, and a set of inclusion and exclusion criteria was developed. Research objectives were framed, to explore links among various aspects of AVs and thus to recognize promising areas for future research. As the keyword, we decided to use “autonomous vehicle” OR “automated vehicle” OR “driverless car” OR “self-driving car”. To focus on the research objectives, we identified the inclusion criteria—peer-reviewed research articles in English language. An online search was conducted using a university library search engine that connects to 393 different databases including ScienceDirect, Scopus, Web of Science, Wiley online library, directory of open access journals (DOAJ), and so on. Edited or authored books, articles published in other languages, grey literature such as government or industry reports and non-academic research, and editorial papers were not included in the review. The search included only peer-reviewed and full text journal articles available online—procedia papers are considered as journal articles, due to relatively limited numbers of journal articles published on the topic.

Secondly, the search was conducted in January 2018 for journal articles published between January 2000 and January 2018. The review focused on the post-2000 articles due to limited studies focused on AVs prior to this date—particularly on the impact, planning and policy issues. Several thematic searches were specified through a combination of multiple keywords. The keywords used in all thematic searches were divided into two parts: The first part (specified by first parentheses) was directed to the title of the articles, and the second part was directed to the abstract. The resultant search items were initially checked by reading the abstract and then by reading the full-text in order to verify their scope against the research objectives.

The first thematic search was conducted using the search tag of (“autonomous vehicle” OR “automated vehicle” OR “driverless car” OR “self-driving car”) AND (“control” OR “management” OR “localization” OR “lane change” OR “maneuver” OR “platooning” OR “merging” OR “crash avoidance” OR “cruise control” OR “navigation” OR “car-sharing” OR “multitasking” OR “valet parking” OR “capabilities” OR “features”) to identify studies that focus on the AV capabilities. The search resulted in 616 papers, which were reduced to 49 articles after checking the abstract and further reduced to 16 articles after reading the full-text.

The next thematic search was conducted using the search tag of (“autonomous vehicle” OR “automated vehicle” OR “driverless car” OR “self-driving car”) AND (“influence” OR “impact” OR “implication” OR “effect” OR “planning”) keywords to identify articles that focus on the AV impacts. The search resulted in 154 papers. We have gone through the abstracts of these papers and limited the selection to 51 articles. After reading the full papers to make sure that they actually fit into our scope of interest, the selection was limited to 33 journal articles.

We conducted next search in the database using the search tag of (“autonomous vehicle” OR “automated vehicle” OR “driverless car” OR “self-driving car”) AND (“policy” OR “law” OR “legislation” OR “legal”) to identify papers that focus on the AV policies. The search resulted in 159 papers in total, which were screened through by reading the abstract (resulted in 29 articles) and full-text (resulted in 12 articles).

In total, 61 journal articles (peer-reviewed and full text available online) fulfilled our selection criteria, and these papers were then read again and reviewed. Following the selection, we categorized the reviewed papers according to subthemes. Then, we extracted data from the reviewed papers in tables, formulated according to the three subthemes (Appendix Tables A-C). Each table contained the following information against each of the selected article: name of authors, year of publication, title of the article, name of the journal, research aim/objectives, theoretical perspective/framework, method, and main findings.

Then, we discussed and linked up the individual findings of each subtheme into one. Some reviewed papers were discarded at this stage that did not match directly with the subthemes. This helped us to understand where we are at, where we are headed to, what the likely impacts of wider AV uptake are, and what needs to be done for AV to generate desired smart urban mobility outcomes.

The final stage of the review process was to write up and present our findings in the format of a literature review paper. In this process, some relevant literature, although not meeting the pre-determined selection criteria, are included as supporting material to better appreciate the background context and discuss the findings—e.g., books, book chapters, government policies, and online reports. With these, the total number of the reviewed and cited references is increased to over 150.

## 4 Results

### 4.1 General observations

In reviewing the literature, technological advancement, policy and legislation analysis, transport modelling and simulation, surveys and interviews, scenario analysis, and case study investigations were found to be the main techniques for qualitative and quantitative analyses in the reviewed 61 papers. These studies are assembled under three broad categories, namely: (a) AV capability—containing 16 studies; (b) AV impact and planning interventions—containing 33 papers; (c) AV policy—containing 12 articles. Review efforts found only 1 paper (peer-reviewed journal article) in the area of planning interventions. This indicates that there exists a gap in the literature in the planning area.

Papers in the AV capability category mainly discussed: (a) How AV operates on public roads; (b) What type of AV capabilities are currently available; (c) What sort of hardware and software are responsible for AV operation; (d) Barriers against the uptake of AV technology; (e) What type of benefits are offered by the AV capabilities.

Articles in the AV impact and planning interventions category mainly elaborated: (a) How perceived value of travel time changes; (b) What type of capacity implications might evolve; (c) How AVs will contribute to reduce road traffic accidents; (d) How AVs might increase or decrease congestion and delay; (e) Whether AVs will enhance or reduce GHG emissions; (f) How employment sector will be affected; (g) How public health can be benefited from AV deployment; (h) How SAVs can contribute in changing car ownership model; (i) How urban land use might be affected due to changes in parking demand, changes in travel time, changes in travel distance; (j) How capital investment decision will be affected. (k) What sort of planning interventions might be required to accommodate disruptions or to control disruptions. The impacts typically cover economic, societal, environmental, and political and governance aspects.

Papers in the AV policy category mainly examined: (a) How conflict can be avoided in between national/federal and state governments in formulating laws; (b) What the jurisdiction of national/federal and state governments should be; (c) How governments, industries, scholars, and professionals can negotiate and agree on formulating laws on liability and privacy; (d) Which organization should standardize or certify technology; (e) Which vehicle should get priority on the road; (f) What should be the new pricing mechanism to manage vehicle kilometers travelled (VKT).

The reviewed literature, in all categories, illustrate that research on AV is mainly limited to developed countries such as the US, the Netherlands, the UK, Canada, Australia, Israel, Germany, Italy, Singapore, Russia, Poland. This finding shows parallels with the AV piloting and preparing cities listed in Table 1. The oldest article reviewed in this study dates back to 2012 (Smith, 2012). Although there were other articles published prior to 2012, Smith's (2012) paper was the earliest published article that satisfied the selection criteria of this research. The majority of papers were published in 2016 onwards (84%)—indicating an exponential growth trend of research on this topic.

## 4.2 Capabilities

According to many, since the invention of the automobile technology about a century ago, the biggest change to personal mobility is happening right now with AVs (Volvo, 2017). In the presence of autonomous driving technology and capabilities, mobility is predicted to be safer, sustainable, and more convenient, as ADS of an AV will replace the human driver for all sort of dynamic driving tasks in some or all roadway and environmental conditions (Shladover, 2018). When AVs attain the capability of replacing human driver, it actually can perform five basic operational functions through its ADS—localization, perception, planning, control, and management (Coppola & Morisio, 2016; Pendleton et al., 2017). In doing so, AVs will possess certain technological features, advantages or capabilities over a conventional or human driven vehicle. These include platooning, fuel efficiency, eco-driving, adaptive cruise control with queue assist, crash avoidance, lane keeping, lane changing, valet parking or park assist pilot, traffic sign and signal identification, cyclist and pedestrian detection, and safe maneuvering at intersections (Anderson et al., 2014).

At a particular time, the predicted benefit offered by individual AV feature will largely depend on the AV price, acceptance, operational mode (private or shared), AV share in the traffic mix, level of automation in the traffic mix, and fuel efficiency (Diakaki, Papageorgiou, Papar]michail, & Nikolos, 2015; Davidson & Spinoulas, 2016; Daziano, Sarrias, & Leard, 2017; Piao et al., 2016; Chen, Gonder, Young, & Wood, 2017). These are seen as the influencing parameters of an AV scenario (Correia, & van Arem, 2016; Davidson & Spinoulas, 2016). AVs, however, might present a future full of nightmares resulting from different combinations within these parameters, especially if there do not exist adequate planning interventions.

A summary of the literature in this area is presented in Appendix Table A and discussed below.

- **Platooning:** Highly random and fluctuating car-following behaviors of human drivers are one of the main factors to prompt accidents, oscillations, and traffic congestion. This results in low efficiency in traffic flows and severe environmental impact in many urban regions (Hoogendoorn, van Arem, & Hoogendoorn, 2014).

To overcome these issues, Gong, Shen and Du (2016) developed a novel platoon car-following control scheme that modelled an interconnected dynamic platoon system of CAVs and AVs. Their proposed scheme effectively reduces disturbance transmission of speed errors and relative spacing from the leading vehicle to following vehicles along the platoon. This means that this scheme accomplishes the “string stability” of the platoon. In some other studies, it is also shown that the performance of the conventional cooperative adaptive cruise control (CACC) scheme is outperformed by the developed car-following control scheme in the capacity of achieving stable and smoother traffic flows and traffic oscillations reduction (van Arem, van Driel, & Visser, 2006; Gong et al., 2016).

With the help of multi-platooning of AVs, Fernandes & Nunes (2012) performed another study to address the urban traffic congestion issue. In this study, they conceptualized design of a multi-platoon communicant AVs to travel along a dedicated lane, where AVs can exit from platoons to offline station and merge back into platoons along the main track following novel



algorithms. According to the algorithms, inter-platoon leaders' constant spacing are ensured and offline station vehicles are allowed to leave and join the platoon on main track cooperatively. Simulation results of several scenarios confirmed that proposed algorithms guarantee high traffic capacity and vehicle density and reduce traffic congestion. Validation results of these features also proved that the proposed algorithms enable a clear benefit of a platooning system in comparison to bus- and light-rail-based transit systems (Fernandes & Nunes, 2012).

It is observed from the simulation models of Gong et al. (2016) and Fernandes & Nunes (2012), connectivity among the AVs within a platoon is a prerequisite to form a stable platoon string.

- **Merging or Mandatory Lane Change:** Most freeway congestion results from traffic oscillations (or stop-and-go) near freeway ramps, caused by merging activities (Zhou et al., 2017). Freeway sections near ramps are considered as the bottlenecks of the freeway system. In a merging situation, if different ratios of AVs equipped with longitudinal and lateral detecting technology, and advance cruise control (ACC) are penetrated on freeway with human driven vehicles, cooperative intelligent driver model (CIDM) of AVs could practically improve the freeway performance (Xiao & Gao, 2010; Zhou et al., 2017). The results from an experiment show that with an increased AV penetration on freeways, standard deviation of speed dispersion or oscillation caused by merged-in vehicle could be reduced progressively, i.e., road safety could be improved. It also shows that when the safe time gap is less than 1.0 second, AVs can improve travel efficiency by minimizing travel time (Zhou, Qu, & Jin, 2017).

Althe, Qian, and de la Fortelle (2017) assumed a nearer plausible traffic scenario, where all vehicles have semi-autonomous features (ACC, automated braking and accelerating, lane keeping assistance), and are driven by human drivers. In such a scenario, a supervised coordination framework can remove the risk of collision or deadlocks with vehicles arriving from sides, either at intersections or roundabouts, or when merging on freeways (Dresner & Stone, 2008; Zohdy & Rakha, 2016). This framework mainly overrides human control inputs when they would become unsafe and create blocked situation in the defined supervisory area at intersections, roundabout, or merging points.

Xie, Zhang, Gartner, & Arsava (2017) performed an optimization-based ramp control strategy in a CAV and AV environment to evaluate the performance of freeway due to presence of merging vehicle. Results of nine different combination of freeway and ramp vehicle inputs (veh/h) under three ramp control cases demonstrate that "optimal ramp control model" outperforms two other control cases: "gradual speed limit" and "do nothing" with regards to performance measurement indicators—average delay time, vehicle throughput and average speed (Xie et al., 2017). It is observed that all the three types of freeway merging algorithms, mentioned above can improve speed dispersion on freeway, road safety, travel efficiency, congestion level, average delay time, vehicle throughput, and average speed in a merging situation with the help of different level of autonomous features of AVs with or without V2V and V2I connectivity.

- **Lane Changing:** To progress towards a fully automated highway driving, the riskiest component added to the advanced driver assistance systems (ADAS) of an AV is lane changing maneuver. This maneuver is the riskiest and challenging in the sense that it involves ego vehicle's (vehicle under consideration, i.e., AV in this case) path change in the presence of other moving vehicles all around it as well as it has to consider changes in both the longitudinal and lateral velocity of the ego vehicle (Nilsson, Brannstrom, Coelingh, & Fredriksson, 2017). During the lane change attempt by a human driver, there are possibilities of collision with at least four vehicles—front and rear vehicles in the same lane, and front and following vehicles in the target lane (Bai, Quan, Fu, Gan, & Wang, 2017; Nilsson et

al., 2017). This sort of collisions can be avoided by selecting an inter-vehicle traffic gap and time instance to perform the lane change maneuver by executing a novel lane change maneuver algorithm in a mixed highway traffic environment with both human drivers and AVs with or without V2V and V2I communication (Nilsson et al., 2017), or in an AV only environment through vehicle to vehicle communication among the vehicles (Bai et al., 2017).

The collisions lead to probable consequences of loss of lives and traffic congestion. In addition to that, due to lack of determining a safe inter-vehicle gap and time instance to perform the maneuver, there exists oscillation, travel delay and capacity reduction in traffic flow (Nilsson et al., 2017). Automated lane changes can address about 4-10% of all accidents that are caused by human error (Luo, Xiang, Cao, & Li, 2015). Uncoordinated lane-changing and exiting behaviors by AVs can also considerably interrupt traffic flow by slowing down other vehicles, or even in worse scenario, by inviting accidents (Meissner, Chantem, & Heaslip, 2016; Talebpour & Mahmassani, 2016). Cooperative lane-changing of AV can ensure improvement of traffic stability, homogeneity, and efficiency, and reduction in traffic congestion (Nie et al., 2016).

- **Valet Parking:** Autonomous or valet parking is an obvious component of driver assistance technologies (Brookhuis, de Waard, & Janssen, 2001; Li & Shao, 2015). Three sequential steps- circumstance recognition, open-loop (when controller does not require verification of system output or modification of command to the system) motion planning and, closed-loop (information flows around a feedback loop) control execution, are responsible for successful autonomous parking (Lee et al., 2009; Li & Shao, 2015). AVs will not be capable of delivering its full benefits without having this feature as every trip has to be started from and end at a parking place. Relevant products have already been made available in the market by many of the original equipment manufacturers such as Tesla, Volvo, Audi, BMW, Ford, Land Rover, Mercedes-Benz, Nissan, and Toyota (Li & Shao, 2015).

Valet or auto-pilot parking features of AVs are expected to find cheap or free parking spaces after dropping off the passenger. This in turn saves travel time or cost for commuters or passengers because the passengers do not require: (a) Cruising for a parking space; (b) Walking to the vehicle to pick up; (c) Paying for costly parking (Zhang, Guhathakurta, Fang, & Zhang, 2015). Valet parking has also a number of technical advantages over traditional human-driven parking. It is capable of: (a) Avoiding dynamic obstacles; (b) Moving in the narrow passage parking areas; (c) Parking in a narrower space; (d) Ensuring optimization of gear changes; (e) Avoiding crash occurrence; (f) Finding fastest and shortest parking path; (g) Minimizing search time for parking spot (Fagnant & Kockelman, 2015).

The abovementioned significant AV capabilities have the capacity to induce or affect certain transport system variables (TSV) and as a consequence these variables will disrupt environment, investment, health, employment, infrastructure design, and land-use options. Some of the effects may contribute to the society in a better way, while society may be worse off in others. Timely control of TSV through adoption of short-, mid-, and long-term planning and policy options by concerned national, state and local governments can help in materializing wider AV deployment if this is considered appropriate (Coppola & Morisio, 2016).

#### 4.3 Impact and planning interventions

The extent of AVs' impacts to the society largely depends on their share in the total vehicle fleet (Pinjari & Menon, 2013; Litman, 2017) and level of the AV uptake and usage differentiated by—(a) Light use: private or shared (Gruel & Stanford, 2016; Heinrichs, 2016; Dia, & Javanshour, 2017); (b) Heavy use: bus (Smolnicki & Sotys, 2016) or freight (Wadud, 2017). Impacts begin with a shift in transport demand and supply variables equilibrium (Childress, Nicholos, Charlton, & Coe, 2015; Rubin, 2016), necessitating obvious adjustments in planning with new ideas, and innovations (Zakharenko, 2016).



The impacts, from a system level to societal level may have ripple effect on each other at multiple levels (Milakis, van Arem, & van Wee, 2017).

The probable areas of influence at a transport system level (either on supply side or demand side), include VKT, PKT, vehicle hours travelled (VHT), value of time (VOT), speed, capacity, headway, traffic flow, delay, travel cost, vehicle operating cost (VOC). These will further affect planning parameters in general such as infrastructure design, transport modelling, capital investment, car ownership, land use, employment, energy consumption, traffic safety and public health, environment (Dixit, Chand, & Nair, 2016). Planning authorities at local and state levels have to cope with the expected disruption in certain cases and impose planning and policy measures to control rest of the disruptions.

A summary of the literature in this area is presented in Appendix Table B and discussed below.

- **Infrastructure Design:** Road infrastructure will require new design criteria as lateral and longitudinal capacity of the roadway might be changed due to lane keeping and platooning respectively. Lane width might be reclaimed due to more accuracy in maintaining lateral alignment (Smith, 2012). To improve network performance and vehicle throughput, AVs might require dedicated road network in certain areas (Chen, He, Yin, & Du, 2017). Considering the impacts on infrastructure design, literature suggests the following planning recommendations (Hendrickson et al., 2014): (a) Pavement marking may require repainting; (b) No changes are expected in the design of clear zone; (c) Radio advisories and ITS message signs may or may not be obsolete depending on the presence of connectivity in automation; (d) Dedicated short range communications (DSRC) locations for traffic signals have to be identified and prioritized in case of automation with connectivity.
- **Car Ownership:** Flexibility of SAV and its operation would reduce operational and fixed cost and thereby reduce car ownership (Milakis, van Arem, & van Wee, 2017). The results of an agent-based modelling of different SAV scenarios indicate that each SAV can replace around eleven conventional cars (Fagnant & Kockelman, 2014). Due to exclusion of driver's talent and time, driverless taxi or autonomous car sharing program paves the way to be a cheaper travel option and may discourage traditional car ownership (Bagloee et al., 2016). Though this may be highly unlikely, some visions of pooled/shared ownership of AVs suggest that there could be no need to own private motor vehicles at all in the future (Levin & Boyles, 2015)—also see Ma, Zheng, and Wolfson (2015) for a model on real-time city-scale ridesharing. Planners may replace numbers of conventional on-street and off-street parking facilities by ensuring provision of few suburban multistory garages. They may also execute pickup and drop off points for AVs near transport hubs by eliminating existing paid and unpaid parking lots. This will promote tech- and transit-oriented developments (TTOD).
- **Employment:** Reduction of traffic congestion, travel time savings, and lower transportation costs of goods could be achieved at the expense of individuals, currently employed in building, driving, and maintenance of automobiles (Crayton & Meier, 2017). Spilling effects in labor market might be a reality due to falloffs in certain related jobs, like driver licensing, traffic policing, and insurance sales (Crayton & Meier, 2017). Moreover, a future with fewer vehicles would also lead to fewer jobs in the automotive industry as a whole (Snyder, 2016). In contrast, Gill, Kirk, Godsmark, & Flemming (2015) predicted potential employment gains in three sectors up to 15%—conversion of parking facilities related construction, roads and highways modification, and IT product and services. State or federal governments might declare rehabilitation package, especially for the abundant drivers of taxi, bus and commercial vehicles. Governments might also arrange specific training depending on the eligibility of drivers so that they can find a job in new sectors. Currently employed automobile technicians and mechanics can be trained up for new technology and this will help them to be remain in the same track without losing job. Automobile industries can also support government's novel initiatives with financial contribution.

- **Energy Consumption and Emissions:** Practically, fuel/energy consumption of any transport mode depends on travel activity performed by that mode and energy intensity (consumption per kilometer) of that particular mode, and emission is the product of energy consumption and fuel carbon content (Wadud et al., 2016). Automation might plausibly reduce road transport energy consumption and GHG emissions by approximately half—or nearly double them depending on automation level, AV features, use type, and policy intervention (Wadud et al., 2016).

Litman (2017) predicts that a major share of AVs in road transport will contribute to energy conservation by 2040–2060. Chen, He et al. (2017) indicate that vehicle automation may contribute 45% savings on fuel consumption in optimistic scenario and 30% fuel consumption in pessimistic scenario. Another study shows a 37% of energy savings is possible when AVs are used in conjunction with public transport in lieu of personal car (Moorthy, De Kleine, Keoleian, Good, & Lewis, 2017). On the other hand, large share of SAV fleet could improve fuel efficiency by abandoning highspeed and rapid acceleration of car (Milakis, van Arem, & van Wee, 2017). Liu, Kockelman, Boesch, & Ciari (2017) show that introduction of SAV systems can save 22.4% of total distance-based fuel consumption and this savings cannot be negated by extra VKT.

Large share of SAV fleet could also limit emissions by abandoning highspeed and rapid acceleration of car (Milakis, van Arem, & van Wee, 2017). Possibility of total distance-based (lifecycle and driving cycle) savings of GHG emissions is 16.8–42.7% due to introduction of SAV systems, and this savings cannot be negated by extra VKT due to AV's advancement, eco-technologies, and change in energy source (Liu et al., 2017). Another study in Lisbon city shows that replacement of conventional private car, taxi and bus by self-driving shared taxi and taxi-bus, keeping existing metro service could contribute in reducing carbon emissions (Martinez et al., 2017). It is also estimated that electric driven autonomous taxis could significantly reduce GHG emissions in 2030 with respect to current conventional and hybrid vehicles (Greenblatt & Saxena, 2015). Smith (2012) predicted reduction of emissions per VKT with an overall increase in total emissions.

It can be summarized that automation related road transport energy consumption and emission figures are still uncertain in their magnitude. This is because energy consumption and emissions are generally not a direct consequence of automation, rather it is affected by changes in vehicle operations, vehicle design, choice of energy, policy intervention, or transportation system design, which are more indirectly facilitated by automation (Wadud et al., 2016). Policymakers probably have to consider VKT based pricing to substitute earlier fuel tax, if energy source is shifted from fossil fuel to electricity. This is a step toward safeguarding government's financial revenue on the eve of electric vehicle. Government can also promote green vehicle operation by allowing less tax on vehicle purchase price and by reducing vehicle registration fee.

- **Traffic Safety and Public Health:** Until now, no empirical proof is established about the overall safety advantages of AVs (Winkle, 2016). Most of the investigation related to AVs' potential for crash protection was performed considering assumed AV deployment and market penetration scenarios. These assumptions were based on expert estimates, third-party forecasts and relevant database.

The German In-Depth Accident Study (GIDAS) and NHTSA crash databases show approximately 93% of road crashes happen due to human error, and it has been speculated that this figure might be completely ruled out in case of full automation of vehicles. Even level 0, and level 1 features of AVs have the potential to minimize one third of the traffic accidents (Bagolee et al., 2016). Daimler, manufacturer of Mercedes-Benz, published a forecasting models on vehicle-safety and crash research in 2010, which suggests increased automation can result in a reduction of crashes by 10% by 2020, 50% by 2050, 71% by 2060, and a total reduction by 2070 (Winkle, 2016). A US study projected that conversion of 10% and 90% of US vehicle

fleet to AV would respectively act to reduce annual crashes by 0.2 and 4.2 million, and it could respectively save 1,100 and 21,700 human lives annually (Collingwood, 2017).

Yet, adjustments of driving behavior in relation to levels 1-3 automation features may invite accidents in many cases (Milakis, van Arem, & van Wee, 2017). However, new crash risks may emerge due to automated system failures in certain cases, and road users may favor additional risk-taking behavior assuming the AV system's perceived and actual competencies (Litman, 2017). By assuring road safety through higher level of AVs, ripple effect of accident related tangible and intangible costs like medical costs, legal costs, insurance and administrative costs, emergency service costs, workplace losses, and property damages can be minimized (Bagolee et al., 2016). This will help federal or state governments to reconsider their budgets in the near future.

- **Capital Investment:** AVs might act to reduce proposed existing road expansion investment as platooning might significantly increase road capacity—as much as five times by one source (Fernandes & Nunes, 2012). That is why, the literature recommends re-evaluating planned road system capacity enhancement projects before making final investment decision. It has also been suggested that ITS and level of service (LOS) investment projects are assessed for compatibility with CAV fleets (Hendrickson et al., 2014).
- **Land Use:** AVs will either promote urbanization or promote suburbanization. In reality, transport network will tend to flow in between these two scenarios, depending on transport and urban planning policy, prevailing local conditions, and dissemination of different driverless mobility solutions (Smolnicki & Sołtys, 2016).

At the regional level, accessibility improvements through lower generalized cost of transport due to vehicle automation will result in ex-urbanization to remote areas of former inner city, leading to attractive green urban sprawl surrounding metropolitan regions (Bagolee et al., 2016; Crayton et al., 2017; Milakis, van Arem, & van Wee, 2017) with lower house prices (Heinrichs, 2016), and decline in rent outside CBD (Zakharenko, 2016). AVs' favor towards urban sprawl may prove transit service superfluous except for dense urban areas (Meyer, Becker, Bösch, & Axhausen, 2017). Urban sprawl is also subject to availability of land and land-use policies (Yigitcanlar & Kamruzzaman, 2014; Milakis, van Arem, & van Wee, 2017).

At the urban/local level, presence of commuting AVs and SAVs (with or without dynamic ride sharing) may free up daytime downtown on-street and off-street parking spaces (Bagolee et al., 2016; Heinrichs, 2016; Zakharenko, 2016; Milakis, van Arem, & van Wee, 2017). Different spatial distribution of urban parking demand will be evolved against different SAV operation strategies and client's preferences (Zhang et al., 2015). The results of an agent-based model show that the clients adopting SAV system in lieu of conventional private car can eliminate up to 90% of parking demand at a low market penetration rate of 2% (Zhang et al., 2015). On the other hand, SAVs have the potential to tackle the transport related-social exclusion (Duvarci, Yigitcanlar, & MizoKami, 2015; Kamruzzaman, Yigitcanlar, Yang, & Mohamed, 2016; Yigitcanlar, Mohamed, Kamruzzaman, & Piracha, 2018).

Driving robots' capability of valet parking may promote neighborhood parking zones or collective garages in the inner-city districts. The presence of auto-valet garages will allow more vehicles to be parked and creates the possibility of increasing density of urban core areas by repurposing released parking spaces due to less demand for parking in CBD areas (Heinrichs, 2016). The saved off-street parking spaces could be repurposed for infill residential and commercial development, allowing increase in economic activity to contribute to the further CBD density (Bagolee et al., 2016; Milakis, van Arem, & van Wee, 2017), and the saved on-street spaces could be transformed into HOV lanes, bus lanes, cycle lanes, or new public spaces (Milakis, van Arem, & van Wee, 2017).

Possibility of significant increase in road capacity through platooning—as much as five times (Fernandes & Nunes, 2012) could save road spaces that might be reallocated to other

travel modes—like buses, cycling and walking. In an ideal condition, where all the vehicles in roads are fully autonomous, highway capacity might increase around 100% (Farmer, 2016).

Regulatory body may think about limiting the projected increased AV traffic. Because in presence of public transit, under certain conditions AVs will connect to the transit without entering CBD (Zakharenko, 2016). Local and state government authorities have to decide whether they will allow or limit urban sprawl. It should be exclusively bounded by city's land-use policy. Moreover, most of the state and local authorities should decide reallocation of city's road space and parking spaces depending on nature of travel pattern and traffic behavior in a new form of traffic mix.

Considering too many aspects of AV impacts, Isaac (2016) recommended generalized medium- to long-term planning activities. Medium- and long-term planning activities include: (a) Updating transport model with new assumptions; (b) Forecasting financial revenues; (c) Designating traffic lanes for simultaneous operation of AV and/or conventional automobile; (d) Updating traffic signs and markings; (e) Reducing lane widths; (f) Adjusting speed limits, traffic signal locations and timing; (g) Eliminating or reducing parking spaces and add more drop off/pick up locations; (h) Reclaiming city center surface parking lots for potential future developments; (i) Reclaiming right-of-way for people and other mode of transport; (j) Doubling use of the suburb on-street parking areas as charging stations; (k) Developing new predictive models for pavement maintenance.

#### 4.4 Pre-deployment policy

Higher level of vehicle automation poses regulatory challenges for the AV manufacturing countries (Nowakowski, Shladover, Chan, & Tan 2015). The uptake of a new technology like AV should be regulated through federal and state governments' pre-deployment policy. Major regulating policies are revolving around testing and deployment, cybersecurity and privacy, liabilities and insurance, ethics, and repair/maintenance and calibration. Proactive actions in this regard may ensure rapid AV uptake in some jurisdictions and reactive or inert actions may delay the whole uptake process in some other jurisdictions. As an example, AV legislation and policies in the US, the Netherlands, the UK and Sweden are paving the way for other countries (Nowakowski et al., 2015, Vellinga, 2017). However, the first fatal crash by a self-driving UBER involving pedestrian in the US proves that more research, development, legislation and planning are needed for a safer and wider AV uptake.

A summary of the literature in this area is presented in Appendix Table C and discussed below.

- Testing and Deployment: Two main aspects in relation to AV operation, to be bounded by regulation, are testing and deployment. These two main challenges are linked with devising regulations in this particular area to ensure safety without hindering innovation, and defining meaningful requirements or standards without having such technical standards for ADS in place (Nowakowski et al., 2015). Another significant concern focuses on how to maintain legal consistency in different jurisdictions to avoid confrontation with AV manufacturers and to encourage innovation (Vellinga, 2017). Around the globe, policymakers are yet to establish such a consistent legal ground for AV design, testing and deployment. Regulating bodies and practiced legal instruments used by these bodies are also different from each other. Some authorities follow "binding regulation," some follow "non-binding regulation," and some other follow "granting exemption" (Vellinga, 2017).

In the US, technology aspects of vehicle safety are regulated by federal government agency, and other safety aspects related to vehicle registration and driver's training, evaluation, and licensing are the functions of state government (Nowakowski, Shladover, & Chan, 2016; Vellinga, 2017), but in the UK and the Netherlands, federal government agencies regulate all aspects of vehicle safety for testing and deployment (Vellinga, 2017). Currently, the US federal

government agency NHTSA and the UK Department of Transport (DoT) is in favor of non-binding test and deployment regulations for AV under the cover of national policy and code of practice respectively. On the contrary, one of the US states, California has binding legislations in place to regulate the testing and deployment of AVs. Against the backdrop of binding and non-binding regulations and policy, Dutch Vehicle Authority (RDW) granted exemptions to AV from certain laws under certain conditions.

NHTSA provides guidance for both manufacturers and states, though these are not mandatory to abide by. Manufacturers involved in designing, developing, testing and selling should follow the NHTSA policy and guidance to ensure safe testing and deployment of AVs on public roads, and states should follow the policy to prevent inconsistencies in AV laws and regulations among the states. The main exception of the UK Code of Practice over NHTSA policy is that it also addresses the requirements about the test driver. RDW grants the exemption to AV testing on public roads with test specific conditions once all the functionalities to be tested are passed on test track. Both the “binding regulations” and “exemption under conditions” are legally binding for manufacturers to ensure safety during testing (Vellinga, 2017). Though “exemption under conditions” poses legal uncertainty for manufacturers, it flourishes technical developments. On the other hand, non-binding regulation can guide manufacturers or testing organizations to adjust with continuous changes in regulation with advancement in technology (Maurer, Gerdes, Lenz, & Winner, 2016).

- Privacy and Cybersecurity: AV will essentially be equipped with tracing technology to recognize accident causing factors and consequently to mitigate product liability (Bruin, 2016). At the same time, AV equipped with such technology might have serious impact on information privacy of the persons in side or around such vehicles. Manufacturers should be held responsible if AV fails to comply with laws associated with protection of personal data (Bruin, 2016). Privacy mainly relates to control over autonomy, information, and surveillance when it comes to AV (Glancy, 2012). Personal autonomy is one’s ability to make choices independently about oneself. Use of AV inherently affect autonomy by taking over human control in the way people move one place to another (Collingwood, 2017). Personal information privacy can be violated as AV will collect, store, use, own, transfer, or destroy data/information due to improper or non-existent disclosure control (Collingwood, 2017).

As an example, transmission of present location, past travel pattern, and future travel plan could compromise privacy of AV user. Personal information collection through comprehensive legal and illegal AV tracking will affect privacy associated with surveillance. To protect the privacy associated with AV, generated data ownership pattern and limit of onward data transmission and its usage have to be finalized in the upcoming data privacy act of different countries. To protect the different privacy interests, legislators and regulators should have answers of following questions—Why it is collected, what will be the uses of personal data. How long data should be preserved. Who can and cannot have access to it. Glancy (2012) argued that, without suitable legal safeguards for privacy, AV could face challenges of “market resistance” from prospective users who recognize AV as threats to their privacy.

On the other hand, at the advent of increased computerization and networking, AVs are accumulating autonomous capabilities and are inviting cyber-threats as permanent allies (Yagdereli, Gemci, & Aktas, 2015). One of the main cause of ADS failure is cyber-attacks and software and hardware defects. Hence, this system should be equipped with such defensive system that can respond automatically and dynamically to deliberate and inadvertent attacks and defects (Yagdereli et al., 2015). A cybersecurity system should primarily safeguard on-board data storage, data sharing (Lee, 2017). Cybersecurity concerns should be bounded by regulatory action to protect consumer interests and promote future growth against autonomous unmanned system vulnerabilities. Considering rapid growth and interstate nature of AV tech-



nology, Lee (2017) emphasizes federal government to take charge of formulating nationwide regulatory framework for communications, privacy, and cybersecurity pertaining to this technology. Within the federal framework, states and industry should conduct experiment and develop self-regulation. In line with formulated regulations AV cybersecurity requirements should be determined and documented in the systems' requirements documents and it should be done before the design of the system (Yagdereli et al., 2015).

- **Liability and Insurance:** Data obtained through on-board vehicular systems and sensors of ADS can provide sufficient details of an accident to determine many liability decisions with high degree of precision (Dhar, 2016). This will help to identify "at-fault" driver or vehicle and ensure quick processing of insurance payment to victim. This accurate identification of accident related physical factors to environmental factors to human factors would eventually quash delays and litigation costs linked with tort laws and also exclude necessity for no-fault insurance, which is alive at dozens of US states at the moment.

Though emergence of AV makes fault identification accurate and smoother than before, it also raises a big question: who will be held responsible for the accident: driver (till SAE level 3), owner, operator, or manufacturer. ADS of AVs serve generally a robotic function and raises novel issues in criminal law as robot can malfunction and cause serious harm to people and property. As robotic systems are inappropriate for criminal punishment, humans who produce, program, and deploy robots should be subject to criminal punishment if the robots are intentionally used to cause harm to others (Gless, Silverman, & Weigend, 2016). However, Gless et al. (2016) advocates in favor of limiting the liability of vehicle operators, if they undermine to initiate reasonable measures to control the risk originated from ADS.

In the US, states are responsible for liability regimes and insurance (Vellinga, 2017). The Californian draft AV Express Terms suggested that the manufacturer should be held responsible in case of collision or accidents caused by AV and that has to be covered by proper insurance. The Dutch law intended to hold the possessor of AV liable for development risks as they cannot invoke the defense that can be called on by the manufacturer (Vellinga, 2017). The UK proposal discussed first party insurance option for the victim but it did not suggest any other substantial changes in liability rules (UK Parliament, 2016). In this case, victim, regardless of liability, can claim from his insurer and later, insurer can recover the amount from the manufacturer—if manufacturer is found liable. Sweden is practicing first party insurance model since 1975 (Schellekens, 2015).

If the liability of human driver or owner of the car would shift to manufacturer in case of collision, this might slow down the progress of AV development (Vellinga, 2017). In addition to this, insurance companies may become less interested to insure the high risk of AVs. This issue can be addressed by limiting the amount of damages one can claim due to the fault of AV. In parallel government could be a reinsurer to encourage the insurance companies to insure AVs (Vellinga, 2017).

## 5 Discussion and conclusion

Within the contemporary smart city debate, AVs represent a way to create an ideal city form and developments in the autonomous driving technology have the potential to bring smart mobility to our rapidly urbanizing world; but for others AV is a branding hoax (Yigitcanlar & Lee, 2014; Yigitcanlar & Kamruzzaman, 2018a). Despite a large body of recent literature on AV's, only a limited number of studies have outlined the disruptive effects that AV might bring on city planning and society in general. This paper, through a systematic review of the literature, aimed to determine the current state of research literature on AV technology, the future direction that this technology is leading to, how the changes are

likely to affect our day-to-day travel behavior and long-term changes in the structure of our cities, and what would be the likely policy tools for a smooth transitioning of the technology.

As the literature suggests, AVs' major disruptions in our cities will be in urban transport, land use, employment, parking, car ownership, infrastructure design, capital investment decisions, sustainability, mobility, and traffic safety. It is clear from this study that preparing our cities for AVs through progressive planning is critical to achieving the benefits and to address the resulting disruption. On the eve of rising AV demand, local and state governments should be equipped with better policy and planning tools to accommodate AV technology and its impacts. In parallel, timely interventions from international, national/federal and state levels in terms of regulating, standardizing and certifying this technology and approval of appropriate legislative measures to ensure testing, deployment, privacy, security, and liability issues are addressed. These are discussed in the following sub-sections in detail.

### 5.1 Driving forces, uptake factors, impacts and interventions framework

This paper has investigated the AV phenomenon from the perspectives of AV capability, impact and planning interventions, and pre-deployment policy. Research area covered under this study is only a small part of a broader framework. Based on the findings of the reviewed papers, the study synthesized a broader framework—for AV driving forces, uptake factors, impacts and interventions—illustrated in Figure 1 and discussed below.

Any new innovation demands external thrust or driving forces from social, political, economic, environmental, and technological sectors that might push forward or pull back the key factors responsible for uptake of that very new innovation. With the help of a force matrix, by awarding score against uncertainty and impact of each force, most influential forces behind the key uptake factors can be ranked. Future plausible scenarios of any new technological innovation uptake are the product of multiple combinations of the highly ranked influential driving forces. In the case of AV uptake, relevant driving forces are technological advancements, economic conditions, customer attitudes, environmental conditions, and government policies. Plausible AV scenarios emerged through any two high ranked influential forces might be termed as AVs in boom, in demand, in standby, or in doubt. The prominent uptake factors under any plausible AV scenario that might lead to changes in values of transport system level variables are AV type, AV growth trend, AV automation level, AV fuel type, AV capabilities, and so on.

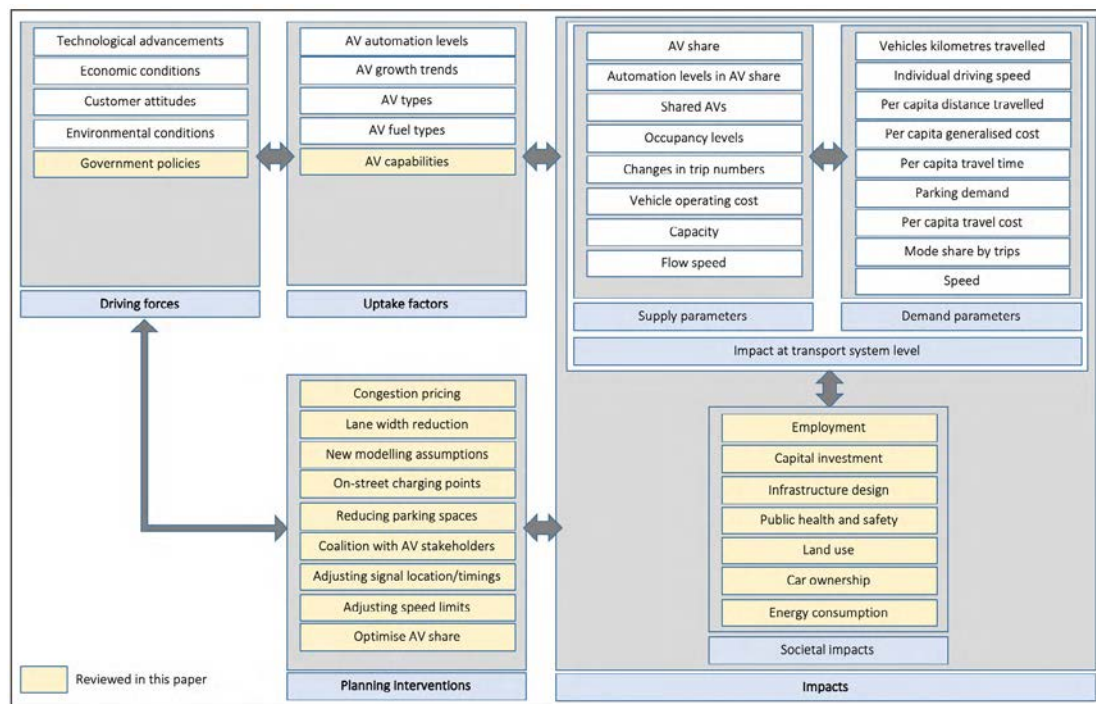
Each future plausible AV scenario generally owns a set of AV supply parameters that can act as input parameters for transport modelling. Inclusion of these new modelling input parameters in existing transport modelling exercise can signify impact of AV uptake patterns through expected changes in output parameters. From the modelling output one can identify the changes in demand parameters from scenario to scenario at transport system level. The demand parameters value might roam around VKT, individual driving speed, per capita distance travelled, per capita generalized cost, per capita travel item, parking demand, per capita travel cost, and mode share by trips. This will dictate the quantitative and qualitative changes in societal parameters—see societal impact box in Figure 1.

Finally, decision-makers and planners have to counteract with intervening planning and policy initiatives in the necessary disruptive areas so that optimum benefits from AV can be realized for a city. In this case, the framework highlights some of the prospective areas of planning and policy interest. These are congestion pricing, lane width reduction, new modelling assumptions, on-street charging points, reduction in on- and off-street parking spaces, introduction of zonal parking garages, adjusting signal location and timings, adjusting speed limits, and optimizing AV share.

As the paper investigated the AV phenomenon from the perspectives of capability, impact, planning interventions, and pre-deployment policies, it focused on few of the selective parameters from each block of the described framework. In relation to the framework, this paper mainly researched one of the

driving forces vigorously—pre-deployment government policy. The reviewed pre-deployment government policies are—testing and deployment, privacy and cybersecurity, and liability and insurance. Out of the mentioned uptake and penetration factors, we elaborated the capabilities of AV. The reviewed areas of capabilities are platooning, merging, lane changing, and valet parking. In the area of AV's societal impacts and counter measure to negotiate those impacts, the paper reviewed infrastructure design, car ownership, employment, energy consumption and emission, traffic safety and public health, capital investment, and land use.

By analyzing our research area, it is understood that pre-deployment government policy and AV capabilities have lot of contributions in assuming or estimating transport model input parameters. On the other hand, changes in model output parameters can be directly or indirectly translated into societal impact or disruptions. This will ultimately lead to short-, medium-, and, long-term planning and policy interventions at the local, regional, and state levels to address various disruptions or the impacts of AVs.



**Figure 1.** AV driving forces, uptake factors, impacts and interventions framework

## 5.2 Research implications

The review of the literature suggests that most studies to date are optimistic about the potential benefits that AVs might bring to cities. Rarely have these assumptions been critically examined. In many cases the potential benefits as being advocated are more theory than practice. For example, almost all studies accepted the crash reduction rate (by 90%) with AVs because human error is responsible for most crashes. They assume that when humans are not in charge of driving, crashes would not happen; a rather heroic assumption. These studies do not consider a myriad of issues that can might cause an AV to be involved in a crash such as software failure, factors that are not included within the AVs' artificial intelligence, failure to recognize a new street layout pattern, and so on.

Additionally, frequently claimed benefits of AVs in the literature are that they will reduce congestion through optimum use of road spaces using the platooning technology. These studies rarely consider



the scenario that an effective platooning will only work if all AVs are travelling from a defined origin to a defined destination in a dedicated lane. However, trip origins and destinations vary from person to person which implies that AVs will have to frequently change lanes for entry and exit. Moreover, if a non-AV enters into a platoon, the efficiency of platooning will reduce. More importantly, the saved road spaces are likely to be occupied by the induced trips expected to be generated by less mobile people today. Furthermore, the passenger multitasking benefits within AVs may act to increase suburbanization and urban sprawl resulting in additional VKT, and ultimately consume more road space. The prevailing implication that AV's will increase sharing including higher car occupancy also seem weak and should be explored using research on human factors and by investigating AV trial outcomes.

The findings of the review also suggest that effective policy can: (a) Reduce the reliance on traditional vehicles (including AVs); (b) Foster the use of autonomous public transport vehicles (AVPT); (c) Discourage and reduce sprawling development. These are elaborated below:

- In terms of policy to reduce traditional low occupancy private motor vehicle dependency there is a significant supporting literature (Banister, 1997; Newman & Kenworthy, 1999; Yigitcanlar, Fabian, & Coiacetto, 2008; Kamruzzaman, Yigitcanlar, Washington, & Currie, 2014). The policy and planning aspects discussed in the urban and transport planning and urban studies literatures without a specific focus on AVs are also relevant to the AV context (Firnkorner & Müller, 2015; Newman & Kenworthy, 2015). This indicates that there is still a need for further conceptual and empirical explorations for figuring out how to develop and implement AV-related policies and plans to obtain desired outcomes.
- As for the policy to increase the patronage of AVPTs, there is limited research and knowledge. Will the factors (both pull and push) influencing public transport patronage be valid for AVPTs with the widespread deployment of personal AVs or SAVs? The common logic suggests that AVPTs patronage would increase only in the case of convenience of private motor vehicle or private AV is offered. The convenience factors include access to public transport stops (Murray, Davis, Stimson, & Ferreira, 1998; Yigitcanlar, Sipe, Evens, & Pitot, 2007), weather and climatic conditions to access and use public transport (Kashfi, Bunker, & Yigitcanlar, 2015a, 2015b), travel time, cost and in-vehicle conditions (Beirão & Cabral, 2007). Owczarzak and Zak (2015) built a decision model based on the concept of public transportation on demand based on AVs. They find reliability and safety of AVPTs (unlike traditional determinants such as fare, and travel time) will be the key determinants of user acceptance and thus increased patronage (Lamondia, Fagnant, Qu, Barrett, & Kockelman, 2016; Becker & Axhausen, 2017). Similarly, Payre, Cestac, and Delhomme (2014) highlight the importance of acceptance of the technology in its wider roll out. This calls for further empirical investigations both on user confidence and policy formulation aspects of AVPTs.
- In terms of policy to discourage and reduce the sprawling urban development, there is not much research besides some warnings and speculations. For instance, Lari, Douma, and Onyiah (2015) warned us that the decreased travel costs in terms of time and energy (as may be generated by AVs) could result in people living further from urban centers, which would likely to create urban sprawl. The sprawl issue seems to be the biggest challenge for urban policy and planning, hence, there is an urgent need for empirical studies to model the impacts of AVs on our cities, and then develop competent planning policies and actions to address these challenges. Urban policy makers should take this issue seriously.

### 5.3 Limitations and research directions

The following research limitations should be considered: (a) Exclusion of literature outside the peer-reviewed full text articles available online, might limit the spectrum of the review as a relatively new field AV research has been mostly published in conference proceedings, book chapters, and white papers; (b)

Selection of the search keywords might omit inclusion of some relevant literature; (c) The authors' unconscious bias might have an impact on the execution of the review, and interpretation of the findings; (d) The methodological approach is limited to a manually handled literature review technique; further analytical techniques could have been considered—such as scientometrics, content analysis, cognitive mapping, and concept clustering—to generate a clearer picture of the investigated topic.

As indicated by Yigitcanlar, Currie, and Kamruzzaman. (2017), through the convergence of automation, electrification and ride-sharing technologies, AVs could significantly reshape real estate, urban development and city planning—as the automobile did in the last century. This transformation creates an opportunity for planners to make our cities more citizen-centered by bringing back the human-scale and walkable city practices that motor vehicle domination removed. How well prepared are urban planners, however, to mitigate the disruptive impacts on our cities? Do we yet even understand what these disruptions and their implications are? This review of the literature reveals that presently, urban planning as a profession is largely unprepared for AVs. Urban and transport planners need to be aware, smart and proactive about the potential impacts, particularly in terms of the potential for renewed urban sprawl. A future involving widespread use of AVs presents both land-use opportunities and challenges. Progressive outcomes will require an objective assessment of their complex land-use, economic and community influences on our evolving cities. We, hence, advocate the necessity of preparing our cities for AVs and generating desired smart urban mobility outcomes—through appropriate policies, timely legislations, and accurate planning standards and guidelines—even a wider uptake might take quite some time.

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## References

- Althe, F., Qian, X., & De La Fortelle, A. (2017). An algorithm for supervised driving of cooperative semi-autonomous vehicles. *IEEE Transactions on Intelligent Transportation Systems*, *18*, 3527–3539.
- Anderson, J. M., Nidhi, K., Stanley, K. D., Sorensen, P., Samaras, C., & Oluwatola, O. A. (2014). *Autonomous vehicle technology*. Santa Monica, CA: Rand Corp.
- Arbolino, R., Carlucci, F., Cira, A., Ioppolo, G., & Yigitcanlar, T. (2017). Efficiency of the EU regulation on greenhouse gas emissions in Italy. *Ecological Indicators*, *81*, 115–123.
- Arnaut, G., & Arnaut, J. P. (2014). Exploring the effects of cooperative adaptive cruise control on highway traffic flow using microscopic traffic simulation. *Transportation Planning and Technology*, *37*, 186–199.
- Bagloee, S. A., Tavana, M., Asadi, M., & Oliver, T. (2016). Autonomous vehicles. *Journal of Modern Transportation*, *24*, 284–303.
- Bai, W., Quan, J., Fu, L., Gan, X., & Wang, X. (2017). Online fair allocation in autonomous vehicle sharing. In *GLOBECOM 2017-2017 IEEE Global Communications Conference* (pp. 1-6), Singapore.
- Banister, D. (1997). Reducing the need to travel. *Environment and Planning B*, *24*, 437–449.
- Bansal, P., & Kockelman, K. M. (2017). Forecasting Americans' long-term adoption of connected and autonomous vehicle technologies. *Transportation Research Part A*, *95*, 49–63.
- Bask, A., & Rajahonka, M. (2017). The role of environmental sustainability in the freight transport mode choice: A systematic literature review with focus on the EU. *International Journal of Physical Distribution and Logistics Management*, *47*, 560–602.
- Becker, F., & Axhausen, K. W. (2017). Literature review on surveys investigating the acceptance of automated vehicles. *Transportation*, *44*, 1293–1306.
- Beirão, G., & Cabral, J. S. (2007). Understanding attitudes towards public transport and private car. *Transport Policy*, *14*, 478–489.
- Bloomberg. (2017). *Is your city getting ready for AVs?* Retrieved from <http://avsincities.bloomberg.org/global-atlas>
- Boesch, P. M., Ciari, F., & Axhausen, K. W. (2016). Autonomous vehicle fleet sizes required to serve different levels of demand. *Transportation Research Record*, *2542*, 111–119.
- Brereton, P., Kitchenham, B. A., Budgen, D., Turner, M., & Khalil, M. (2007). Lessons from applying the systematic literature review process within the software engineering domain. *Journal of Systems and Software*, *80*, 571–583.
- Brookhuis, K., de Waard, D., & Janssen, W. (2001). Behavioral impacts of advanced driver assistance systems: An overview. *European Journal of Transport and Infrastructure Research*, *1*, 245–253.
- Bruin, R. D. (2016). Autonomous intelligent cars on the European intersection of liability and privacy. *European Journal of Risk Regulation*, *7*, 485.
- Burgess, K., Singh, P. J., & Koroglu, R. (2006). Supply chain management. *International Journal of Operations and Production Management*, *26*, 703–729.
- Chang, D. L., Sabatini-Marques, J., da Costa, E. M., Selig, P. M., & Yigitcanlar, T. (2018). Knowledge-based, smart and sustainable cities. *Journal of Open Innovation*, *4*, 5.
- Chen, Y., Gonder, J., Young, S., & Wood, E. (2017). Quantifying autonomous vehicles national fuel consumption impacts. *Transportation Research Part A*. doi.org/10.1016/j.tra.2017.10.012
- Chen, Z. B., He, F., Yin, Y. F., & Du, Y. C. (2017). Optimal design of autonomous vehicle zones in transportation networks. *Transportation Research Part B*, *99*, 44–61.
- Childress, S., Nichols, B., Charlton, B., & Coe, S. (2015). Using an activity-based model to explore the potential impacts of automated vehicles. *Transportation Research Record*, *2493*, 99–106.
- Chong, Z. J., Qin, B., Bandyopadhyay, T., Wongpiromsarn, T., Rebsamen, B., Dai, P., & Ang Jr, M. H.

- (2013). Autonomy for mobility on demand. In S. Lee, H. Cho, K. J. Yoon, & J. Lee (Eds.), *Intelligent autonomous systems 12*, (pp. 671–682). Berlin: Springer, Berlin.
- Christie, D., Koymans, A., Chanard, T., Lasgouttes, J. M., & Kaufmann, V. (2016). Pioneering driverless electric vehicles in Europe. *Transportation Research Procedia*, 13, 30–39.
- Chun, B. T., & Lee, S. H. (2015). Review on ITS in smart city. *Advanced Science and Technology Letters*, 98, 52–54.
- Collingwood, L. (2017). Privacy implications and liability issues of autonomous vehicles. *Information and Communications Technology Law*, 26, 32–45.
- Coppola, R., & Morisio, M. (2016). Connected car. *ACM Computing Surveys*, 49, 46.
- Correia, G. H. de A., & van Arem, B. (2016). Solving the user optimum privately-owned automated vehicles assignment problem UO-POAVAP: A model to explore the impacts of self-driving vehicles on urban mobility. *Transportation Research Part B*, 87, 64–88.
- Crayton, T. J., & Meier, B. M. (2017). Autonomous vehicles. *Journal of Transport and Health*, 6, 245–252.
- Creutzig, F., Jochem, P., Edelenbosch, O. Y., Mattauch, L., van Vuuren, D. P., McCollum, D., & Minx, J. (2015). *Transport. Science*, 350, 911–912.
- Davidson, P., & Spinoulas, A. (2016). Driving alone versus riding together. *Road and Transport Research*, 253, 51–66.
- Daziano, R. A., Sarrias, M., & Leard, B. (2017). Are consumers willing to pay to let cars drive for them? *Transportation Research Part C*, 78, 150–164.
- Denaro, R. P., Zmud, J., Shladover, S., Smith, B. W., & Lappin, J. (2014). Automated vehicle technology. *King Coal Highway*, 292, 19–24.
- Dhar, V. (2016). Equity, safety, and privacy in the autonomous vehicle era. *Computer*, 49, 80–83.
- Dia, H., & Javanshour, F. (2017). Autonomous shared mobility-on-demand. *Transportation Research Procedia*, 22, 285–296.
- Diakaki, C., Papageorgiou, M., Papamichail, I., & Nikolos, I. (2015). Overview and analysis of vehicle automation and communication systems from a motorway traffic management perspective. *Transportation Research Part A*, 75, 147–165.
- Dixit, V. V., Chand, S., & Nair, D. J. (2016). Autonomous vehicles: *Disengagements, accidents and reaction times*. *PLoS One*, 11, e0168054.
- DoT. (2016). *Federal automated vehicles policy: Accelerating the next revolution in roadway safety*. Washington, DC: US Department of Transport (DoT).
- Dresner, K., & Stone, P. (2008). A multiagent approach to autonomous intersection management. *Journal of Artificial Intelligence Research*, 31, 591–656.
- Duvarci, Y., Yigitcanlar, T., & Mizokami, S. (2015). Transportation disadvantage impedance indexing. *Journal of Transport Geography*, 48, 61–75.
- Fagnant, D. J., & Kockelman, K. M. (2014). The travel and environmental implications of shared autonomous vehicles, using agent-based model scenarios. *Transportation Research Part C*, 40, 1–13.
- Fagnant, D. J., & Kockelman, K. (2015). Preparing a nation for autonomous vehicles: Opportunities, barriers and policy recommendations for capitalizing on self-driven vehicles. *Transportation Research Part A*, 77, 167–181.
- Fagnant, D. J., Kockelman, K. M., & Bansal, P. (2015). Operations of shared autonomous vehicle fleet for Austin, Texas, market. *Transportation Research Record*, 2536, 98–106.
- Farmer, D. L. (2016). Autonomous vehicles: The implications on urban transportation and traffic flow theory. *Institute of Transportation Engineers Journal*, 86, 34–37.
- Fernandes, P., & Nunes, U. (2012). Platooning with IVC-enabled autonomous vehicles: Strategies to

- mitigate communication delays, improve safety and traffic flow. *IEEE Transactions on Intelligent Transportation Systems*, 13, 91–106.
- Firnknorn, J., & Müller, M. (2015). Free-floating electric carsharing-fleets in smart cities. *Environmental Science and Policy*, 45, 30–40.
- Gill, V., Kirk, B., Godsmark, P., & Flemming, B. (2015). *Automated vehicles*. Ottawa: The Conference Board of Canada.
- Glancy, D. J. (2012). Privacy in autonomous vehicles. *Santa Clara Law Review*, 52, 1171–1239.
- Gless, S., Silverman, E., & Weigend, T. (2016). If robots cause harm, who is to blame? *New Criminal Law Review*, 19, 412–436.
- Gong, S., Shen, J., & Du, L. (2016). Constrained optimization and distributed computation-based car following control of a connected and autonomous vehicle platoon. *Transportation Research Part B*, 94, 314–334.
- Greenblatt, J. B., & Saxena, S. (2015). Autonomous taxis could greatly reduce greenhouse-gas emissions of US light-duty vehicles. *Nature Climate Change*, 5, 860–863.
- Gruel, W., & Stanford, J. M. (2016). Assessing the long-term effects of autonomous vehicles. *Transportation Research Procedia*, 13, 18–29.
- Heinrichs, D. (2016). Autonomous driving and urban land use. In: M. Maurer, J. C. Gerdes, B. Lenz, & H. Winner. (Eds.), *Autonomous driving: Technical, legal and social aspects* (pp. 213–231). Berlin: Springer.
- Hendrickson, C., Biehler, A., & Mashayekh, Y. (2014). *Connected and autonomous vehicles 2040 vision*. Harrisburg, PA: Pennsylvania Department of Transportation.
- Hoogendoorn, R., van Arem, B., & Hoogendoorn, S. (2014). Automated driving, traffic flow efficiency and human factors: A literature review. *Transportation Research Record*, 2422, 113–120.
- Isaac, L. (2016). How local governments can plan for autonomous vehicles. In G. Meyer & S. Beiker (Eds.), *Road vehicle automation 3*, (pp. 59-70). Berlin: Springer.
- Kamruzzaman, M., Yigitcanlar, T., Washington, S., & Currie, G. (2014). Australian baby boomers switched to more environmentally friendly modes of transport during the global financial crisis. *International Journal of Environmental Science and Technology*, 11, 2133–2144.
- Kamruzzaman, M., Hine, J., & Yigitcanlar, T. (2015). Investigating the link between carbon dioxide emissions and transport related social exclusion in rural Northern Ireland. *International Journal of Environmental Science and Technology*, 12, 3463–3478.
- Kamruzzaman, M., Yigitcanlar, T., Yang, J., & Mohamed, A. (2016). *Measures of transport-related social exclusion*. *Sustainability*, 8, 696.
- Kashfi, S., Bunker, J., & Yigitcanlar, T. (2015a). Effects of transit quality of service characteristics on daily bus ridership. *Transportation Research Record*, 2535, 55–64.
- Kashfi, S., Bunker, J., & Yigitcanlar, T. (2015b). Understanding the effects of complex seasonality on suburban daily transit ridership. *Journal of Transport Geography*, 46, 67–80.
- Kim, J., Moon, Y. J., & Suh, I. S. (2015). Smart mobility strategy in Korea on sustainability, safety and efficiency toward 2025. *IEEE Intelligent Transportation Systems Magazine*, 7, 58–67.
- Krueger, R., Rashidi, T. H., & Rose, J. M. (2016). Preferences for shared autonomous vehicles. *Transportation Research Part C*, 69, 343–355.
- Lamondia, J. J., Fagnant, D. J., Qu, H., Barrett, J., & Kockelman, K. (2016). Shifts in long-distance travel mode due to automated vehicles and travel survey analysis. *Transportation Research Record*, 2566, 1–11.
- Lara, A., Costa, E., Furlani, T., & Yigitcanlar, T. (2016). Smartness that matters: Comprehensive and human-centered characterization of smart cities. *Journal of Open Innovation*, 2, 8.
- Lari, A., Douma, F., & Onyiah, I. (2015). Self-driving vehicles and policy implications. *Minnesota Jour-*



- nal of Law Science and Technology*, 16, 735.
- Lee, C. (2017). Grabbing the wheel early: Moving forward on cybersecurity and privacy protections for driverless cars. *Federal Communications Law Journal*, 69, 25–52.
- Lee, C. K., Lin, C. L., & Shiu, B. M. (2009). Autonomous vehicle parking using hybrid artificial intelligent approach. *Journal of Intelligent and Robotic Systems*, 56, 319–343.
- Levin, M. W., & Boyles, S. D. (2015). Effects of autonomous vehicle ownership on trip, mode, and route choice. *Transportation Research Record*, 2493, 29–38.
- Levine, M. L., Segev, L. L., & Thode, S. F. (2017). A largely unnoticed impact on real estate. *Appraisal Journal*, 85, 51–59.
- Li, B., & Shao, Z. (2015). A unified motion planning method for parking an autonomous vehicle in the presence of irregularly placed obstacles. *Knowledge-Based Systems*, 86, 11–20.
- Litman, T. (2017). *Autonomous vehicle implementation predictions*. Victoria, BC: Victoria Transport Policy Institute.
- Liu, J., Kockelman, K. M., Boesch, P. M., & Ciari, F. (2017). Tracking a system of shared autonomous vehicles across the Austin, Texas, network using agent-based simulation. *Transportation*, 44, 1261–1278.
- Luo, Y., Xiang, Y., Cao, K., & Li, K. (2016). A dynamic automated lane change maneuver based on vehicle-to-vehicle communication. *Transportation Research Part C*, 62, 87–102.
- Ma, S., Zheng, Y., & Wolfson, O. (2015). Real-time city-scale taxi ridesharing. *IEEE Transactions on Knowledge and Data Engineering*, 27, 1782–1795.
- Malokin, A., Circella, G., & Mokhtarian, P. L. (2015). How do activities conducted while commuting influence mode choice? Testing public transportation advantage and autonomous vehicle scenarios. In *94th Annual Meeting of the Transportation Research Board*, Washington DC, January 11–15.
- Martinez, L. M., & Viegas, J. M. (2017). Assessing the impacts of deploying a shared self-driving urban mobility system: An agent-based model applied to the city of Lisbon, Portugal. *International Journal of Transportation Science and Technology*, 6, 13–27.
- Maurer, M., Gerdes, J. C., Lenz, B., & Winner, H. (Eds.). (2016). *Autonomous driving: Technical, legal and social aspects*. Berlin: Springer.
- Meissner, E., Chantem, T., & Heaslip, K. (2016). Optimizing departures of automated vehicles from highways while maintaining mainline capacity. *IEEE Transactions on Intelligent Transportation Systems*, 17, 3498–3511.
- Meyer, J., Becker, H., Bösch, P. M., & Axhausen, K. W. (2017). Autonomous vehicles. *Research in Transportation Economics*, 62, 80–91.
- Milakis, D., van Arem, B., & van Wee, G. (2017). Policy and society related implications of automated driving: A review of literature and directions for future research. *Journal of Intelligent Transportation Systems*, 21, 324–348.
- Milakis, D., Snelder, M., van Arem, B., Homem, G., & van Wee, G. (2017). Development and transport implications of automated vehicles in the Netherlands. *European Journal of Transport and Infrastructure Research*, 17, 63–85.
- Moorthy, A., De Kleine, R., Keoleian, G., Good, J., & Lewis, G. (2017). Shared autonomous vehicles as a sustainable solution to the last mile problem. *SAE International Journal of Passenger Cars-Electronic and Electrical Systems*, 10, 328–336.
- Murray, A. T., Davis, R., Stimson, R. J., & Ferreira, L. (1998). Public transportation access. *Transportation Research Part D*, 3, 319–328.
- Newman, P., & Kenworthy, J. (1999). *Sustainability and cities*. New York: Island Press.
- Newman, P., & Kenworthy, J. (Eds.) (2015). *The end of automobile dependence*. New York: Island Press.
- NHTSA. (2016). Federal automated vehicles policy. Retrieved from <https://www.transportation.gov/>

- AV/federal-automated-vehicles-policy-september-2016
- Nie, J., Zhang, J., Ding, W., Wan, X., Chen, X., & Ran, B. (2016). Decentralized cooperative lane-changing decision-making for connected autonomous vehicles. *IEEE Access*, 4, 9413–9420.
- Nilsson, J., Brannstrom, M., Coelingh, E., & Fredriksson, J. (2017). Lane change maneuvers for automated vehicles. *IEEE Transactions on Intelligent Transportation Systems*, 18, 1087–1096.
- Nowakowski, C., Shladover, S. E., Chan, C. Y., & Tan, H. S. (2015). Development of California regulations to govern testing and operation of automated driving systems. *Transportation Research Record*, 2489, 137–144.
- Nowakowski, C., Shladover, S. E., & Chan, C. Y. (2016). Determining the readiness of automated driving systems for public operation development of behavioral competency requirements. *Transportation Research Record*, 2559, 65–72.
- Olaverri-Monreal, C. (2016). Autonomous vehicles and smart mobility related technologies. *Infocommunications Journal*, 8, 17–24.
- Oliveira, C. M., Márcio de Almeida, D. A., de Mello, A. L., do Couto Assumpção, F., Dos Santos Gonçalves, F., & Gonçalves, D. N. (2016). Identificando os desafios e as boas práticas para o transporte urbano de cargas, por meio de uma revisão bibliográfica sistemática. *Transportes*, 24, 9–19.
- Oliveira, C. M., Albergaria De Mello Bandeira, R., Vasconcelos Goes, G., Schmitz Gonçalves, D. N., & D'Agosto, M. D. (2017). Sustainable vehicles-based alternatives in last mile distribution of urban freight transport: A systematic literature review. *Sustainability*, 9, 1324.
- Owczarzak, Ł., & Żak, J. (2015). Design of passenger public transportation solutions based on autonomous vehicles and their multiple criteria comparison with traditional forms of passenger transportation. *Transportation Research Procedia*, 10, 472–482.
- Payre, W., Cestac, J., & Delhomme, P. (2014). Intention to use a fully automated car. *Transportation Research Part F*, 27, 252–263.
- Pendleton, S. D., Andersen, H., Du, X., Shen, X., Meghjani, M., Eng, Y. H., & Ang, M. H. (2017). Perception, planning, control, and coordination for autonomous vehicles. *Machines*, 5, 6.
- Perveen, S., Yigitcanlar, T., Kamruzzaman, M., & Hayes, J. (2017). Evaluating transport externalities of urban growth. *International Journal of Environmental Science and Technology*, 14, 663–678.
- Perveen, S., Kamruzzaman, M., & Yigitcanlar, T. (2017). Developing policy scenarios for sustainable urban growth management. *Sustainability*, 9, 1787.
- Perveen, S., Kamruzzaman, M., & Yigitcanlar, T. (2018). What to assess to model the transport impacts of urban growth? A Delphi approach to review the space-time suitability of transport indicators. *International Journal of Sustainable Transportation*. doi.org/10.1080/15568318.2018.1491077
- Piao, J., McDonald, M., Hounsell, N., Graindorge, M., Graindorge, T., & Malhene, N. (2016). Public views towards implementation of automated vehicles in urban areas. *Transportation Research Procedia*, 14, 2168–2177.
- Pinjari, A. R., & Menon, N. (2013). *Highway capacity impacts of autonomous vehicles*. Tampa, FL: Center for Urban Transportation Research.
- Rowley, J., & Slack, F. (2004). Conducting a literature review. *Management Research News*, 27, 31–39.
- Rubin, J. (2016). Connected autonomous vehicles: Travel behavior and energy use. In G. Meyer & S. Beiker (Eds.), *Road vehicle automation 3*, (pp. 151–162). Berlin: Springer.
- SAE. (2016a). *Automated driving*. Retrieved from [https://www.sae.org/misc/pdfs/automated\\_driving.pdf](https://www.sae.org/misc/pdfs/automated_driving.pdf)
- SAE. (2016b). Taxonomy and definitions for terms related to driving automation systems for on-road motor vehicles. Retrieved from [http://standards.sae.org/j3016\\_201609](http://standards.sae.org/j3016_201609)
- Schellekens, M. (2015). Self-driving cars and the chilling effect of liability law. *Computer Law and Security*

- ity Review, 31, 506–517.
- Scheltes, A., & de Almeida Correia, G. H. (2017). Exploring the use of automated vehicles as last mile connection of train trips through an agent-based simulation model. *International Journal of Transportation Science and Technology*, 6, 28–41.
- Shladover, S. E., Su, D., Lu, X. Y. (2012). Impacts of cooperative adaptive cruise control on freeway traffic flow. *Transportation Research Record*, 2324, 63–70.
- Shladover, S. E. (2018). Connected and automated vehicle systems. *Journal of Intelligent Transportation Systems*, 22, 190–200.
- Smith, B. W. (2012). Managing autonomous transportation demand. *Santa Clara Law Review*, 52, 1401–1422.
- Smolnicki, P. M., & Sołtys, J. (2016). Driverless mobility. *Procedia Engineering*, 161, 2184–2190.
- Snyder, R. (2016). Implications of autonomous vehicles: A planner's perspective. *Institute of Transportation Engineers Journal*, 86, 25–28.
- Spyropoulou, I., Penttinen, M., Karlaftis, M., Vaa, T., & Golias, J. (2008). ITS solutions and accident risks: Prospective and limitations. *Transport Reviews*, 28, 549–572.
- Talebpour, A., & Mahmassani, H. S. (2016). Influence of connected and autonomous vehicles on traffic flow stability and throughput. *Transportation Research Part C*, 71, 143–163.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, 207–222.
- Trindade, E., Hinnig, M., Costa, E., Sabatini-Marques, J., Bastos, R., & Yigitcanlar, T. (2017). Sustainable development of smart cities. *Journal of Open Innovation*, 3, 11.
- Truong, L. T., De Gruyter, C., Currie, G., & Delbosc, A. (2017). Estimating the trip generation impacts of autonomous vehicles on car travel in Victoria. *Transportation*, 44, 1279–1292.
- UK Parliament. (2016). Vehicle technology and automation bill. Retrieved from [https://publications.parliament.uk/pa/bills/cbill/2016-2017/0143/cbill\\_2016-20170143\\_en\\_2.htm](https://publications.parliament.uk/pa/bills/cbill/2016-2017/0143/cbill_2016-20170143_en_2.htm)
- van Arem, B., van Driel, C., & Visser, R. (2006). The impact of co-operative adaptive cruise control on traffic flow characteristics. *IEEE Transactions on Intelligent Transportation Systems*, 7, 429–436.
- Vellinga, N. E. (2017). From the testing to the deployment of self-driving cars. *Computer Law and Security Review*, 33, 847–863.
- Volvo. (2017). Autonomous driving. Retrieved from <https://www.volvocars.com/intl/about/our-innovation-brands/intellisafe/autonomous-driving>
- Wadud, Z., MacKenzie, D., & Leiby, P. (2016). Help or hindrance? *Transportation Research Part A*, 86, 1–18.
- Wadud, Z. (2017). Fully automated vehicles. *Transportation Research Part A*, 101, 163–176.
- Walker, W. E., & Marchau, V. A. (2017). Dynamic adaptive policymaking for the sustainable city. *International Journal of Transportation Science and Technology*, 6, 1–12.
- Winkle, T. (2016). Safety benefits of automated vehicles. In M. Winner (Ed.), *Autonomous driving* (pp. 335–364). Berlin: Springer.
- Xiao, L., & Gao, F. (2010). A comprehensive review of the development of adaptive cruise control systems. *Vehicle System Dynamics*, 48, 1167–1192.
- Xie, Y., Zhang, H., Gartner, N. H., & Arsava, T. (2017). Collaborative merging strategy for freeway ramp operations in a connected and autonomous vehicles environment. *Journal of Intelligent Transportation Systems*, 21, 136–147.
- Yağdereli, E., Gemci, C., & Aktaş, A. Z. (2015). A study on cyber-security of autonomous and unmanned vehicles. *Journal of Defense Modeling and Simulation*, 12, 369–381.
- Yigitcanlar, T., Sipe, N., Evans, R., & Pitot, M. (2007). A GIS-based land use and public transport ac-



- cessibility indexing model. *Australian Planner*, 44, 30-37.
- Yigitcanlar, T., Fabian, L., & Coiacetto, E. (2008). Challenges to urban transport sustainability and smart transport in a tourist city. *Open Transportation Journal*, 1, 19–36.
- Yigitcanlar, T., & Kamruzzaman, M. (2014). Investigating the interplay between transport, land use and the environment: A review of the literature. *International Journal of Environmental Science and Technology*, 11, 2121–2132.
- Yigitcanlar, T., & Lee, S. (2014). Korean ubiquitous-eco-city. *Technological Forecasting and Social Change*, 89, 100–114.
- Yigitcanlar, T. (2015). Smart cities: An effective urban development and management model? *Australian Planner*, 52, 27–34.
- Yigitcanlar, T. (2016). *Technology and the city: Systems, applications and implications*. New York: Routledge.
- Yigitcanlar, T., Currie, G., & Kamruzzaman, M. (2017). *Driverless vehicles could bring out the best—or worst—in our cities by transforming land use*. Retrieved from <https://theconversation.com/driverless-vehicles-could-bring-out-the-best-or-worst-in-our-cities-by-transforming-land-use-84127>
- Yigitcanlar, T., & Kamruzzaman, M. (2018a). Does smart city policy lead to sustainability of cities? *Land Use Policy*, 73, 49–58.
- Yigitcanlar, T., & Kamruzzaman, M. (2018b). Smart cities and mobility: Does the smartness of Australian cities lead to sustainable commuting patterns? *Journal of Urban Technology*. doi.org/10.1080/10630732.2018.1476794
- Yigitcanlar, T., Kamruzzaman, M., Buys, L., Ioppolo, G., Sabatini-Marques, J., Costa, E., & Yun, J. (2018a). Understanding ‘smart cities’: Intertwining development drivers with desired outcomes in a multidimensional framework. *Cities*, 81, 145–160.
- Yigitcanlar, T., Foth, M., & Kamruzzaman, M. (2018b). Towards post-anthropocentric cities: Reconceptualizing smart cities to evade urban ecocide. *Journal of Urban Technology*. doi.org/10.1080/10630732.2018.1524249
- Yigitcanlar, T., Mohamed, A., Kamruzzaman, M., & Piracha, A. (2018c). Understanding transport-related social exclusion: A multidimensional approach. *Urban Research and Policy*. doi.org/10.1080/108111146.2018.1533461
- Zakharenko, R. (2016). Self-driving cars will change cities. *Regional Science and Urban Economics*, 61, 26–37.
- Zhang, W., Guhathakurta, S., Fang, J., & Zhang, G. (2015). Exploring the impact of shared autonomous vehicles on urban parking demand: An agent-based simulation approach. *Sustainable Cities and Society*, 19, 34–45.
- Zhou, M., Qu, X., & Jin, S. (2017). On the impact of cooperative autonomous vehicles in improving freeway merging. *IEEE Transactions on Intelligent Transportation Systems*, 186, 1422–1428.
- Zohdy, I. A., & Rakha, H. A. (2016). Intersection management via vehicle connectivity: The intersection cooperative adaptive cruise control system concept. *Journal of Intelligent Transportation Systems*, 20, 17–32.

## Appendix

Appendix available as a supplemental file at [www.jtlu.org/index.php/jtlu/rt/suppFiles/1405/0](http://www.jtlu.org/index.php/jtlu/rt/suppFiles/1405/0).



Review

# Impacts of Autonomous Vehicles on Greenhouse Gas Emissions—Positive or Negative?

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**Abstract:** The potential effects of autonomous vehicles (AVs) on greenhouse gas (GHG) emissions are uncertain, although numerous studies have been conducted to evaluate the impact. This paper aims to synthesize and review all the literature regarding the topic in a systematic manner to eliminate the bias and provide an overall insight, while incorporating some statistical analysis to provide an interval estimate of these studies. This paper addressed the effect of the positive and negative impacts reported in the literature in two categories of AVs: partial automation and full automation. The positive impacts represented in AVs' possibility to reduce GHG emission can be attributed to some factors, including eco-driving, eco traffic signal, platooning, and less hunting for parking. The increase in vehicle mile travel (VMT) due to (i) modal shift to AVs by captive passengers, including elderly and disabled people and (ii) easier travel compared to other modes will contribute to raising the GHG emissions. The result shows that eco-driving and platooning have the most significant contribution to reducing GHG emissions by 35%. On the other side, easier travel and faster travel significantly contribute to the increase of GHG emissions by 41.24%. Study findings reveal that the positive emission changes may not be realized at a lower AV penetration rate, where the maximum emission reduction might take place within 60–80% of AV penetration into the network.

**Keywords:** autonomous vehicle; GHG; emission; COVID-19; CLD; energy consumption; VMT



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## 1. Introduction

According to the United Nations Framework on Climate Change Convention, the transportation sector was responsible for 27% of US greenhouse gas (GHG) emissions in 2010 [1]. GHGs are one of the leading causes of the greenhouse effect worldwide [2]. They serve as artificial heat-trapping agents within the earth's atmosphere. From the perspective of road transportation, fuel sources such as diesel, natural gas, and gasoline produce different GHGs in the form of byproducts. Gaseous emissions resulting from burning these energy sources include methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O), which can last in the planet's atmosphere for several decades, causing continuous global warming [3]. These unregulated GHGs emissions disturb the natural gas cycles governing the planet and pose a significant threat to various flora and fauna types [4]. In European countries, the transport sector was responsible for 30.5% of GHG emissions and 12% contribution of GHG emissions from road transport in 2014 [5]. Another study conducted

in China by Liu et al. predicted that the transport sector alone would account for 84.7% GHG emission by the year 2040 [6]. Rising concerns about the negative environmental externalities of road transportation activity and development have urged governments worldwide to assess transportation projects' environmental impacts before implementation. The modern automobile industry trend is to move towards the development of autonomous cars [7]. Multiple considerations are driving this change, including but not limited to improved safety, greater productivity, less fuel consumption and reduced traffic congestion [8,9]. Autonomous vehicles (AVs), also known as driverless or self-driving vehicles, are those vehicles that can operate without driver control the steering, accelerate or brake; the automation ranges from 0: no automation to 5: fully automated [10].

Existing literature on connected and autonomous vehicles mostly addresses their potential impact on the likelihood of traffic safety, travel behavior and congestion, as well as energy use. The effects of partially to fully automated vehicles on traffic performance and greenhouse gas emissions are still obscure. There are many uncertainties prevailing around the actual operation of fully automated vehicles. The Information Handling Services (IHS) Automotive experts reported that it is expected to happen by 2030. HIS estimates also suggest that globally the number of fully automated vehicles (AVs) in operation will be around 21 million in 2035 [11]. Another study reported that connected vehicles would strike the 250 million mark by 2020 [12]; a quarter of a billion cars in operation. A previous study also predicted that fully AVs be offered for auction before 2020 [13]. A projection is that AVs will dominate 20–40% of vehicle market share by 2030; however, it is believed that full-scale transition to AVs is likely to happen in stages over the coming few decades [14].

AVs are mainly equipped with contemporary car technologies, allowing computers to help in various driving operations and reduce human involvement to varying degrees. With rapid advances in communication, autonomous, and car technologies that have far-reaching effects on the transportation sector, it is critical to understand these technologies' role in achieving sustainable urban mobility goals. This involves the safe and smooth operation of people and goods movement in an environmentally friendly manner. The carbon emission rate from each transport mode is significantly influenced by an array of factors, like the type of fuel, vehicle type, and age, etc. Many studies investigated the impacts of the widespread adoption of AV technology [15,16]. The impacts considered air pollutants, including GHG emissions. AVs' introduction may contribute to increased ridesharing, traffic flow smoothing, platooning, efficient driving, efficient routing, eco traffic signal, and less hunting for parking [17–21]. As a result, the energy consumption will be less, contributing to the reduction of GHG emissions. A number of previous studies have investigated the role of AVs in improving transport sustainability by compressing energy use and GHG emissions. For example, one such estimation for the full automation developed by Wadud et al. considering the shared-vehicle scenario was based on the "Strong Responses" [22]. According to this concept, the maximum energy savings through car-sharing, eco-driving, right-sizing, and platooning are wholly neutralized by maximum energy increases from new user groups and higher speeds. In their study, Greenblatt and Shaheen explored the GHG reduction benefits of driverless taxis in the US and claimed that the deployment of each such taxi in the country would cause than 87–94% fewer emissions per vehicle-km trip by the year 2030 [23]. The authors also stated that each deployed driverless taxi in the same year would also cause a 63–82% reduction in GHG emissions than traditional fuel-driven and hybrid electric vehicles. Such reduction would primarily result from variations in three aspects: higher vehicle-km/vehicle/per-year increased fuel efficiency due to re-designed lighter/smaller vehicle sizes, less air friction, and reductions in GHG emissions through electricity consumption. On the other hand, AV may generate increased trips due to faster and more comfortable driving and new trips by captive passengers, such as elderly and disabled individuals [24].

Tomás et al. investigated the GHG implications of three different AV penetration rates (10, 20, and 30%) along an urban freeway corridor in the city of Porto, Portugal [25]. Authors used vehicle-specific power (VSP) and EEA-33 (environmental emergencies member

countries) methodologies coupled with the VISSIM traffic model. It was noted that AVs yielded statistically low emission benefits at the corridor level at penetration rates less than 30%. In their study, Stasinopoulos et al. adopted a system dynamics approach and developed a stock and flow model to examine the GHG impacts of vehicle automation in various scenarios [26]. The study reported that emissions benefits of the transition to AVs might be negated by the inefficient use of AVs and induced demand. In another study, Wang et al. compared the fuel-cycle GHG emissions of AVs and vehicle electrification using an activity-based travel demand model for the Hamilton and Greater area [27]. It was concluded that full-scale induction of AVs would result in higher vehicle kilometers traveled, and hence, more GHG emissions are expected (2.5%). On the other hand, vehicle electrification may reduce vehicle emission intensities by approximately 11% and regional GHG emissions by over 5%. Hong and Zimmerman predicted that AVs can reduce GHG emissions by 20% compared to no-AV conditions in the year 2040, even under the worst-case scenario if vehicle automation provoked increased personal use with 85% vehicle fleet electrification [28]. A study conducted by Liu et al. also suggested that high AVs penetration rates in the long-term (by the year 2045) under optimistic scenarios will lead to a net reduction of GHG emissions [29].

This paper develops a landscape of multi-faceted issues related to GHG emissions from AV adoption at different levels by reviewing, synthesizing, analyzing, and comparing contrast research studies. While comparing the GHG emissions from AVs to its counterpart, fossil fuel vehicles (FFV) may have different attribute levels (e.g., gasoline-powered, eclectic, hydrogen-powered), this review study is only limited to the realm that both AVs and FFVs are only operated on fossil fuels. The study provides a causality analysis of GHG emissions from AVs from a holistic point of view. The primary objective of using a causal loop diagram (CLD) in our study is to understand the factors that can critically affect how the adoption of AVs may bring energy and GHG emission benefits to the transportation sector. CLD is used to see how these factors interact and influence the emission benefits of adopting AVs in the transport industry. Another section addressed the dynamics of GHG emissions during a global pandemic, focusing on travel behavior and how the individual vehicle ownership model may change in favor of adopting AVs.

The remainder of this paper is structured as below. Section 2 provides an overview of the study methodology. Section 3 presents a description of the causes of GHG reduction by AVs, while the possible causes of the increase of GHG emission by adopting AVs are discussed in Section 4. Section 5 illustrates the changes in GHG emission at different AV penetration levels. Section 6 covers a discussion of the relationship between energy consumption and GHG emission; two sub-sections of Section 6 shed light on the causal loops of GHG emission from AVs from a system perspective and changed travel behavior during a global pandemic, respectively. Finally, Section 7 summarizes the study findings with concluding remarks.

## 2. Methodology

The systematic review has a formal protocol describing the strategy proposed for conducting the examination, identifying questions and methods employed to carry out the analysis [30]. The review process used in this study comprises three steps:

1. Planning: Defining the research issue, setting the criteria, identifying the limitation and development of the overall protocol.
2. Execution: Selection of research in database, categorizing useful references and bibliography, abstract of published manuscript.
3. Analysis: Summarizing the selected articles and classifying it to fit the proposed protocol.

Various guidelines could manifest a systematic literature review. One of the popular methods is demonstrated by Kitchenham and Charters, a process that entails a number of tasks, including establishing a review protocol, identifying and selecting primary studies, extracting and synthesizing data, and finally, reporting study findings [31]. This paper focused on a systematic keyword search in the topic section of literature databases from

disparate sources and repositories. The articles were searched for based on specific terms such as “autonomous vehicles,” “self-driving car,” and “driverless car” appeared in the title, keywords, and abstract in the journal database. However, care was taken to single out the articles which were not focused on autonomous driving related to extensive applications, testing, and research in robotics, underwater vehicles, unmanned aerial vehicles, etc. The effects of AV-generated GHG emissions are explicitly investigated to achieve an overall classification to identify current gaps in the scientific literature in the realm of AV-related publications for roads, traffic studies related to commuting. The year of publication timeline and number of citations were taken out of the equation in selecting the articles to maximize the number for consideration. Articles found in different databases were also identified for eliminating duplication. The flowchart presented (Figure 1) illustrates the methodology deployed in this study.

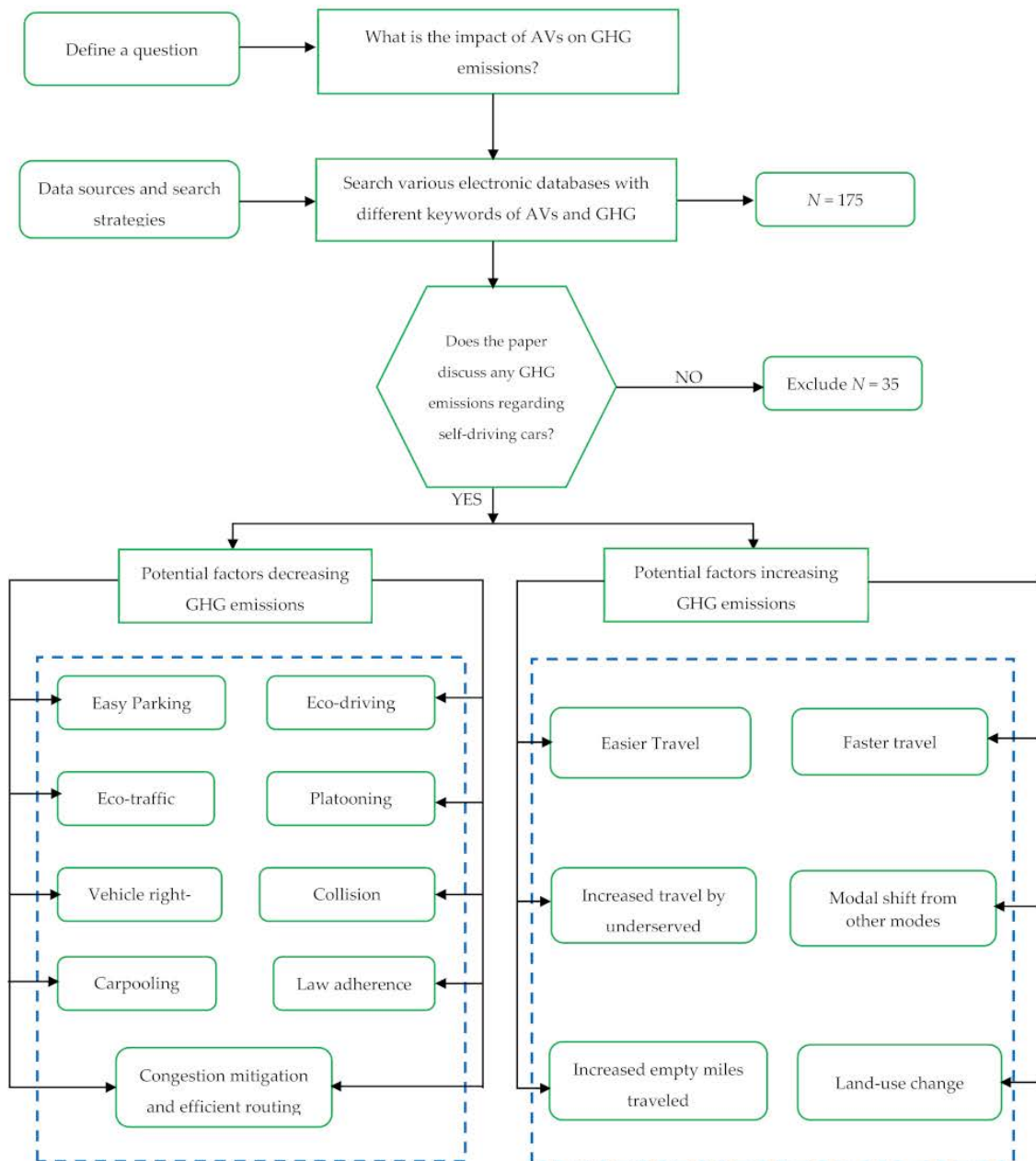


Figure 1. Methodology plan.



### 3. Causes of Reduction in GHG Emissions

This section provides a brief explanation of potential factors that are expected to reduce lower GHG emissions due to vehicle automation. Two types of vehicle automation strategies are considered, i.e., partial automation and full automation.

#### 3.1. Easy Parking

Guccione and Holland identified that drivers looking for parking are responsible for about one-third of traffic in the city [32]. From the fuel efficiency point of view, a vehicle searching for parking leads to a double threat. Being on the road consumes extra fuel for itself; the additional traffic makes the other vehicle suffer by staying more on-road and ending up using undue fuel. Roadside parking maneuver also has an important share in cities carbon emission system [33]. Shoup added to the literature with an estimation of 2–11% of total emission in a CBD being caused by parking hunt [34]. Easy parking refers to parking spaces' availability through communication technologies that allow vehicles and infrastructure to exchange information, resulting in accurate parking information. In another study, Brown et al. estimated up to 5% of emissions in an average passenger car is attributed to the search for parking. Fully automated vehicles can achieve a 5–11% emission reduction from reduced circulation for parking in the cities [35]. Moriarty and Wang also estimated that parking space could be drastically reduced, and vehicles searching for parking could be cut down by 80% with shared ownership of AVs [10]. During peak traffic hours when congestion is high and off-peak travel periods, when most parking spaces may be occupied, the same reduction may occur. Partially automated vehicles would also minimize emissions due to improved ability to locate available parking spaces correctly; however, the projected savings could be lower, considering the lack of automatic implementation. In general, the easy parking feature of vehicle automation is expected to reduce GHG emissions depending upon various other factors, due to minimum vehicle idling and searching for suitable parking locations.

#### 3.2. Eco-Driving

Eco-driving refers to efficient driving through maximizing speed and acceleration operating profiles. Eco-driving is often referred to as "Hypermiling," and is nothing but a set of driving skills practiced by enthusiastic drivers to push the fuel economy's limit by minimizing braking-acceleration cycles, as braking causes a waste of energy [15,36]. CAV technologies have the ability to leverage and extend such efficient driving benefits by enabling vehicles to incorporate eco-driving automatically. CAVs can coordinate with other vehicles with smarter communication capability to make integrated driving decisions that would optimize overall traffic flow conditions and support the entire driving platoon. Barth and Boriboonsoms deployed a traffic simulation model to determine the emission effects of coordinated eco-driving [15]. The coordinated eco-driving system takes advantage of a virtual traffic management center to monitor vehicles' speed and acceleration characteristics. They simulated a mixed fleet of vehicles on Southern California highways and estimated that carbon dioxide emissions reduction within a range of 10–20% could be achieved by eco-driving on congested highways. However, it has been noted that the reduction of emission starts to disappear as traffic approaches free flow. In a similar study, Barth demonstrated that a coordinated eco-driving system would minimize emissions by 5–10% in heavily congested road traffic [15]. Li and Gao conducted a series of micro-simulation modeling studies to investigate speed synchronization impacts in a connected environment [37]. Their primary objective was to establish an optimal control strategy to optimize fleet-level average fuel economy in a connected vehicle environment. The findings suggested that reducing 10% of GHG emissions could be achieved in such an arrangement.

Two research projects conducted at the Virginia Tech Transportation Institute estimated potential emissions impacts of vehicle-to-vehicle (V2V) communication and coordination [19,38]. The proposed method involved complex optimization models integrating road-characteristics, information of the lead vehicle, vehicle acceleration portfolio, and

microscopic fuel consumption models to produce a fuel optimal speed profile for vehicles in the network. Optimal driving cycles may reduce energy consumption by 35–50% under oversaturated conditions if these conditions exist at all in reality [39]. It is well known that frequent stops and accelerations/decelerations operations contribute to significant fuel consumption. The eco-driving attribute of AVs facilitates smooth vehicle navigation through the network, due to smart communication with other vehicles, as well as highway infrastructure, which in turn lowers the GHG emissions.

### 3.3. Eco Traffic Signal

AVs can communicate with infrastructure on their own, particularly with traffic signals at intersections. This communication offers information to vehicles, which helps them change their driving pattern, thereby minimizing the number of stops at the intersection referred to as the eco traffic signal system. Li and Gao investigated optimal signal control strategies for fuel economy in a connected vehicle environment and showed that gasoline vehicles could achieve 10% emission reduction via such strategies [37]. Rakha et al. estimated potential emission impacts of vehicle-to-vehicle communication and signal coordination, and it turned out to be 8–23% emission savings depending on the vehicles' traveling attributes [19,40].

The potential to reduce fuel consumption and GHG emission at the intersection is very high, as vehicles traveling near intersections at lower speeds tend to consume more fuel [41]. Yelchuru and Waller adopted micro-simulation models to estimate vehicle emissions under connected eco-traffic signal timing and the associated optimal signal timing plans [42]. According to the study, under a fully connected protocol, 2–6% emission reduction can be achieved in an average passenger vehicle. Zimmerman et al. compared traffic patterns before and after a user information system was introduced at different signalized intersections in Phoenix, Arizona [43]. The empirical data reported that the delay was reduced by 6.2%, resulting in a 1.8% emission reduction using vehicle speed profile and energy consumption correlation. As mentioned, signalized intersections in urban areas have the huge potential to reduce GHG emissions at the network level. AVs are equipped with different sophisticated sensors for communication with roadway surroundings that can guide the drivers/vehicles to adjust the driving patterns, minimize stops and speed variance. All these factors will reduce fuel consumption and hence vehicular emissions.

### 3.4. Collision Avoidance

Human error accounts for more than 90% of accidents [44,45]. Collision avoidance systems in AVs are designed to provide necessary information ahead of time to the vehicle by means of well-designed vehicle mount sensors to avoid collisions. The sensors track nearby vehicles and objects to warn the system of preemptive maneuvers. In addition to the obvious individual advantages of accident avoidance, the system provides collective fuel-saving and environmental benefits by eliminating the chance of traffic congestion that might have arisen at a vehicle crash scene. According to Schrank et al., nationwide, 1.9% of GHG emission by the light duty vehicle (LDV) fleet was produced, due to the traffic congestion created at the accident spot [46]. Najm et al. integrated forward collision warning and adaptive cruise control functions to develop the ACAS for LDV applications [47]. The development of ACAS was based on an operational field test of 10 vehicle fleets driven by 66 drivers among diverse age and gender groups. The ACAS system has the potential to prevent about 10% of all rear-end crashes, which is expected to bring some indirect emission benefits. The collision avoidance attribute of both partial and full automation will reduce the GHG emissions, by preventing and minimizing jams and traffic congestion causing traffic accidents.

### 3.5. Platooning

The vehicle platooning concept refers to the practice of multiple vehicles trailing closely enough to minimize aerodynamic drag to save energy and reduce vehicle emissions.

Vehicle platooning can be safely and successfully implemented by leveraging automation and connectivity technologies. This strategy is particularly attractive considering that a significant portion of fuel consumption is attributed to confronting aerodynamic resistance while driving. Kasseris estimated that aerodynamic drag accounted for 50–75% of the tractive energy requirements for driving on a highway [48]. The shape of the vehicles in the convoy, distance headway, and order of the vehicles are the variables responsible for drag reduction in platooning. Since platooning advantage is more applicable to the vehicles in the middle of the pack, average fuel saving increases with the number of vehicles in the platoon. For two sedan cars running 1 m apart, the average reduction in drag has been estimated to be 10% [49]. Drag reductions ranging from 20% to 60% have been reported for platoons consisting of mixed vehicle types [50,51]. For a 3-truck platoon of freight trucks, Tsugawa has reported a 10% reduction in energy consumption at 80 km/h, with a 20 m gap between trucks; the reduction could reach up to 15% at 5 m gap [52]. The assumption that 50% tractive energy is used to overcome drag resistance could be combined to the advantage of vehicle platooning, which may yield an overwhelming 22.5–27.5% emission reduction. Zabat et al. also examined the potential of emission reduction in vehicle platooning through experiments done in a series of wind tunnels, along with numeric simulations using a passenger van [53]. They found that the average emission reduction per vehicle ranges from 10% to 30%, depending on the vehicles' space in the platoon, number of vehicles, and other variables. Another study confirmed that when 15 vehicles are driving 6–8 m apart, they may achieve optimum fuel saving in the platoon, however, such a gap is extremely unsafe for conventional human-driven cars, but entirely within the capacities of autonomous vehicles [54]. It may be argued from the present literature that AVs vehicle platooning will lead to lower GHG transport emissions, primarily due to drag reduction and lower speed fluctuations.

### 3.6. Vehicle Right-Sizing

Automation technologies have the potential to scale down the size of automobiles without compromising safety [22]. A significant improvement in fuel efficiency could be achieved by vehicle downsizing. The LDVs are designed to run on US roads with the least capacity of holding four passengers [22,55]. However, the average occupancy of these LDVs is only 1.67 in 2009 [56]. Once individual trip requirements are fulfilled, vehicle right-sizing can significantly reduce the average energy intensity. The vehicle size appropriation works best when it is coupled with car-sharing or carpooling. A fleet of shared AVs could easily supply the right-sized vehicle to meet passenger demand and discourage over-designed cars from being under-used [57]. MacKenzie et al. tested multiple conflicting influences on vehicle weight in terms of technological changes and functional improvement [58]. They indicated that progress in energy efficiency technology had been counterbalanced by increasing vehicle size and vehicle content. In particular, their study revealed that, for an average 2011 model car in the U.S., the safety-related features accounted for a total of 7.7% of the car's weight, and dislodging them could result in a 5.5% reduction in emission. In general, a reduction of 20% in vehicular weight is attributed to a 20% increase in fuel efficiency [59]. The engine power required and amount of fuel consumed during a trip are proportional to the size of a vehicle. With AVs technologies in practice, manufacturers can scale down the vehicle sizes, leading to substantial energy and GHG emission benefits.

### 3.7. Congestion Mitigation and Efficient Routing

As intermittent traffic experiences frequent stop-and-go and idling conditions, a car driving through heavy traffic will use more fuel, thus emitting more GHG than uncongested traffic. AVs will have the ability to coordinate with other vehicles and infrastructures (V2V and V2I) at the intersection, to improve the traffic flow and reduce the crash frequency that will result in less energy use and less GHG emission [22]. Bigazzi and Clifton's study indicated that internal combustion engines (ICEs) fail to maintain fuel efficiency in slow-moving traffic at a speed of 30 miles per hour or lower [60]. In contrast, Gas electric



hybrid vehicles are less sensitive to speed variations and retain fuel efficiency roughly at 20 mph. Though vehicles with different powertrain respond differently to congestion, an AV essentially powered by electricity has a higher potential of reducing GHS.

V2I technology available in AVs could also reroute cars within the road network in case of an unexpected influx of traffic into the grid network generated from a sports/entertainment event [61]. A fully developed city's infrastructure is capable of receiving data from vehicles, anticipating traffic flows, and route vehicles with preference and faster routes given to emergency responders and school buses most efficiently [62]. Smart vehicle communication characteristics of AVs can give early warnings of traffic incidents and unanticipated traffic ahead. This will allow the vehicles to take optimal routes and smoothly flow through the network, and hence lower GHG emissions are released into the atmosphere.

### 3.8. Carpooling

The occupancy rate is a key factor for GHG emissions associated with existing car travel. Fewer passengers per vehicle will result in more vehicles running on the road than required, and this will result in emissions increasing by several folds. For instance, only 11% of Americans carpool to work, and a staggering average of 113.6 million people make solo trips to and from work daily [63]. AVs have the potential to emerge as a new paradigm of business model to leverage the benefit of ridesharing, which would bring about a modal shift from individually owned vehicles to shared mobility services. Such changes are expected to reduce transportation GHGs significantly. AVs will also provide the option of carpooling and ridesharing that can lower GHGs emissions by reducing the auto-ownership, and travel through other less convenient transport modes.

### 3.9. Traffic Law Adherence

Iglinski and Babiak believe that autonomous vehicles will more strictly adhere to traffic laws as compared to the human driver, due to their integrated onboard programming logic [64]. AVs will be more likely to travel at posted speed limits designed to cater to optimal fuel efficiency, reducing GHGs considerably. Similarly, AVs will also strictly comply with traffic signals and thus reducing the nuisance and congestion created by human traffic. GHG reduction at different levels of vehicle automation reported in the literature are listed in Table 1.

**Table 1.** Reduction of GHG emission at different levels of vehicle automation.

| Study                                | Level of Automation | Cause of Reduction in GHG               | Results   | Condition                                                          |
|--------------------------------------|---------------------|-----------------------------------------|-----------|--------------------------------------------------------------------|
| Stephens (2016) [17]                 | Partial Automation  | Driver profile and Traffic flow calming | 0–10%     | During peak hours                                                  |
|                                      | Full Automation     |                                         | 0–5%      | During non-peak hours                                              |
| Barth and Boriboonsomsin (2009) [15] | Full Automation     | Eco-driving                             | 10–21%    | During peak hours                                                  |
|                                      |                     |                                         | 5–11%     | During non-peak hours                                              |
| Xia et al. (2013) [65]               | Full Automation     | Eco-driving                             | 10–20%    | Congested highway traffic.                                         |
| Li and Gao (2013) [37]               |                     |                                         | nearly 0% | Free flow                                                          |
| Rakha (2012) [40]                    | Full Automation     | Eco-driving                             | 5–10%     | Under congested city traffic                                       |
| Yelchuru (2014) [42]                 |                     |                                         | 10%       | Under congested city traffic                                       |
| Schrank et al. (2012) [46]           | Partial automation  | Eco-traffic signal timing               | 8–23%     | Under different speed, congestion level and design characteristics |
|                                      | Full Automation     |                                         | 1.8–2%    | City driving                                                       |
| Stephens (2016) [17]                 | Partial Automation  | Collision avoidance                     | 2–6%      | City driving                                                       |
|                                      | Full Automation     |                                         | 0–0.95%   | City driving                                                       |
| Stephens (2016) [17]                 | Full Automation     | Collision avoidance                     | 0–1.9%    | City driving                                                       |

Table 1. Cont.

| Study                             | Level of Automation | Cause of Reduction in GHG                         | Results                                     | Condition                                                                       |
|-----------------------------------|---------------------|---------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------|
| Stephens (2016) [17]              | Partial Automation  | Platooning                                        | 0–12.5%                                     | During peak hours                                                               |
| Schito (2012) [50]                | Full Automation     |                                                   | 12.5–25%                                    | During non-peak hours                                                           |
|                                   |                     |                                                   | 22.5–27.5%                                  | During non-peak hours                                                           |
|                                   |                     |                                                   | 10% to 30%                                  | During peak hours                                                               |
| Zabat et al. (1995) [53]          | Full Automation     |                                                   | 20–25%                                      | During non-peak hours                                                           |
| Wadud et al. (2016) [22]          | Full Automation     | Vehicle/powertrain resizing                       | 3% to 25%                                   | During non-peak hours                                                           |
| Wadud et al. (2016) [22]          | Full Automation     | Vehicle/powertrain resizing                       | 45%–                                        | No condition mentioned                                                          |
| Burns et al. (2013) [66]          | Full Automation     |                                                   | roughly 50%                                 |                                                                                 |
| Shoup (2006) [34]                 | Full Automation     | Less Hunting for Parking                          | 2–11%                                       | During city driving                                                             |
| Brown et al. (2014) [35]          | Full Automation     |                                                   | 5–11%                                       |                                                                                 |
| Barth (2009) [15]                 | Partial Automation  |                                                   | 2–5%                                        |                                                                                 |
| Brown et al. (2014) [35]          | Full Automation     | Increase in Ridesharing                           | Roughly 12%                                 | During city driving                                                             |
| Stephens (2016) [17]              | Partial Automation  | Faster travel                                     | 0–10%                                       | During peak hours                                                               |
|                                   | Full Automation     |                                                   | 10–40%                                      | During non-peak hours                                                           |
| Haan et al. (2007) [67]           | Full Automation     |                                                   | 20–40%                                      | During non-peak hours                                                           |
| Brown et al. (2014) [35]          | Full Automation     |                                                   | 0–40%                                       | During non-peak hours                                                           |
|                                   | Partial Automation  |                                                   | 0–10%                                       | During non-peak hours                                                           |
| Stephens (2016) [17]              | Partial Automation  | Easier travel                                     | 4–13%                                       | No condition mentioned                                                          |
| Stephens (2016) [17]              | Full Automation     |                                                   | 30–156%                                     | Living farther                                                                  |
| Childress et al. (2015) [68]      | Full Automation     |                                                   | 3.6–19.6%                                   | Capacity will increase and value of travel time cost will reduce                |
| Gucwa (2014) [69]                 | Partial Automation  |                                                   | 4–8%                                        | Living farther                                                                  |
| Brown et al. (2014) [35]          | Full Automation     |                                                   | 50%                                         |                                                                                 |
| MacKenzie et al. (2014) [58]      | Partial Automation  | 4–13%                                             | Increased Travel by Underserved Populations | Elderly and disabled would travel as much as drivers without medical conditions |
| Stephens (2016) [17]              | Full Automation     | 2–40%                                             |                                             |                                                                                 |
| MacKenzie et al. (2014) [58]      | Partial Automation  | 2–10%                                             |                                             |                                                                                 |
| Harper et al. (2016) [70]         | Partial Automation  | Mode Shift from Walking, Transit and Regional Air | Up to 12%                                   | No condition mentioned                                                          |
| Brown et al. (2014) [35]          | Full Automation     |                                                   | Up to 40%                                   |                                                                                 |
| Fagnant and Kockelman (2014) [71] | Full Automation     | Increased empty miles travelled                   | 5% to 11%                                   | On city driving                                                                 |

#### 4. Causes of Increase in GHG Emissions

This section reviews some of the predominant factors that may increase GHG emissions due to vehicle automation. The impact of two-vehicle automation strategies, i.e., partial automation and full automation, will be discussed.

##### 4.1. Easier Travel

Easier travel involves reaching destinations more quickly due to capacity increases and fewer crashes, and lower travel costs. Travel may be faster and more reliable if crashes and congestion are reduced, and travel demand may increase. Capacity would effectively increase by less congestion and fewer crash delays, which could also trigger increased travel. Using activity-based travel model-generated scenarios, Childress et al. analyzed possible changes in travel patterns in the Puget Sound region [68]. These evaluated scenarios were comprised of a 30% increase in roadway capacity, resulting in a 3.6% increase in emissions, and a 35% reduction for the highest-income households in the perceived value of travel

time cost. In a different scenario, assuming everyone owned an automated vehicle (no shared one), which resulted in a 30% increase in roadway capacity and 50% less parking costs, along with a 19.6% increase in emissions. People may be more likely to drive in automated vehicles under congested conditions. Easier travel means that more and more people will be attracted to use AVs, especially during traffic congestion situations. Greater demand and increase in road capacity will ultimately lead to increased vehicular emissions.

#### 4.2. Faster Travel

CAVs will be able to navigate and respond more quickly than human drivers with the state-of-the-art communication technology available onboard; it follows that AVs will be able to ride more safely at higher speeds than human drivers. AVs are expected to leverage V2V and V2I networks that communicate charted courses seamlessly to raise the speed limits on freeways [62]. To ensure a safe driving environment that accounts for operator reaction time, vehicle design, and road limitations, speed limits were initially imposed in the US, later changed at the federal level to minimize fuel consumption [32]. Therefore, an increase in fuel consumption is expected for increasing speed limits across the country due to AVs [22]. Considering driver's value of time analysis, Wadud et al. analyzed the possible repercussions of increased highway travel speeds due to automation technologies [22]. A typical car's speed-fuel consumption relationship was used to conclude that GHG emission of the highway could increase by 20–40% [72]. According to Brown et al., the increase in highway fuel use could be as high as 40% or more as a result of faster travel [73]. Brown et al. focused on travelers' time budgets based on Schafer et al.'s observation that different societies display the same willingness to travel [35,74]. They hypothesized that if people could travel faster, they might prefer to live further away from their regular destinations, only to promote urban sprawl. Ultimately, this might trigger a possible increase in emissions by 50%. The onboard vehicle communication and sensing technologies of AVs will require a higher posted speed limit at the network level. It is established that faster travel is accompanied by greater fuel consumption, and hence the rate of GHG emissions.

#### 4.3. Increased Travel by Underserved Populations

Although access to mobility services to the disabled and people at dotage rendered by the AVs seems beneficial for society, it is likely to increase overall VMT. Due to the lack of adequate data on why some population groups travel less than others, it is difficult to forecast future travel patterns of those who are currently underserved. MacKenzie et al. observed from the 2014 National Household Travel Survey data that VMT for adults over 62 years old is much lower than the 42 years old group [58]. Fully automated vehicles could fulfill this travel demand. They estimated that increased travel could raise emissions by 2–10%. Harper et al. assumed that non-drivers would travel as much as drivers in each age group aged between 19–64; drivers with medical conditions are also expected to have similar travel patterns as drivers without medical conditions within each age group [70]. Dividing the sample population into three distinct groups of non-drivers 19 and older, elderly drivers without a medical condition, and drivers 19 and older with a medical condition, it was estimated that the underserved could increase emissions up to 12% by using fully automated vehicles. Examining data from the 2009 NHTS and the 2003 Bureau of Transportation Statistics publication "Freedom to Travel," Brown et al. estimated a 40% increase in GHG emission, If all age segments traveled close to the top decile in each segment [35]. The fact that AVs can be used by non-drivers, people without driving licenses or people with special needs will increase the road user population and hence the daily number of vehicle trips. However, although it may have several positive prospects, GHGs are expected to increase.

#### 4.4. Mode Shift

The theory of travel behavior implies that the preference to use one mode over another is influenced by several variables, including, but not limited to, socio-economic status, age, gas price, urban form, and transportation options availability. Metropolitan Area Planning Council (MAPC) conducted a study in the Boston area, in which researchers found that those who use transit passes daily, or weekly, would replace transportation network companies for transit frequently. Frequent transit users are more likely to be willing to sacrifice the service in favor of a ride-sharing opportunity, even at a large difference in cost or forfeiting the money they already paid to avail the service [75]. A ride in a driver-less, fully autonomous vehicle will likely be cheaper [76,77]. New mobility services, and eventually autonomous vehicles, on the contrary, could increase ridership by solving the first-mile/last-mile problem and serving as a complement to mass transportation, thereby increasing GHG emissions. Shifting a staggering 56.5 billion miles (according to the National Transit Database for 2013) to vehicle-miles constitutes an increase in emissions of 2.0%. If it is assumed to be in city travel only, it accounts for an increase of 3.7% in city emission. Considering the change from air transport, an estimated 79.8 billion passenger miles traveled over domestic flights of less than 500 miles. Shifting all of these passenger-mile to non-shared vehicle-mile AVs in a possible scenario reflects a rise of 2.9% in emissions. However, this condition is projected to increase emissions only on highways. With AVs in operation at relatively lower journey costs than other transport modes, more and more people will be inclined to use AVs, which will also lead to high GHG emissions.

#### 4.5. Increased Empty Miles Traveled

AVs have not been extensively studied for potential changes in vehicle travel without a passenger. A vehicle owner could send his driverless AV to pick up family members or send nearby locations beforehand to minimize wait time. An agent-based model of self-driving vehicles moving in a square grid representing an imperial city was used by Fagnant and Kockelman to investigate the travel patterns of users of a shared fleet of self-driving vehicles [71]. With some predefined available data from 2009 NHTS, they examined scenarios with varying trip generation rates, level of network congestion, neighborhood size and vehicle relocation strategies. Finally, the study concluded that almost 11 conventional vehicles could be replaced by a self-driving vehicle with an increase of 5–11% in emission for vehicle repositioning. Vehicle idling while waiting for the passengers' pick up from their destinations is the main source of increased vehicle miles traveled and resulting emissions.

#### 4.6. Land Use Change

Since individuals are liberated from the pressure of being behind the wheel and can use the time for work or recreation instead, there is a likelihood that they can accept longer commutes. For example, Cervero and Murakami observed data from 370 urbanized areas in the U.S. They deployed structural equation modeling to determine the relationship of population density with VMT per capita and found that an increase in population density leads to a decrease in per capita VMT [78]. When it comes to urban form, they pointed out a vital issue: traditionally, societies have been more reluctant to relocate residential roads or emphasize keeping the roads in the first place when built [79]. These findings indicate that if the introduction of AVs increases the pressure of growth in suburban areas, an increase in GHG emissions could result as people are concentrated in areas that facilitate more auto travel. Access of AVs to remote and sub-urban areas will encourage the public to opt for longer commutes and frequent travel, which will ultimately cause increased vehicular emissions at the network level.

### 5. Change in GHG Emissions at Different AV Penetration Levels

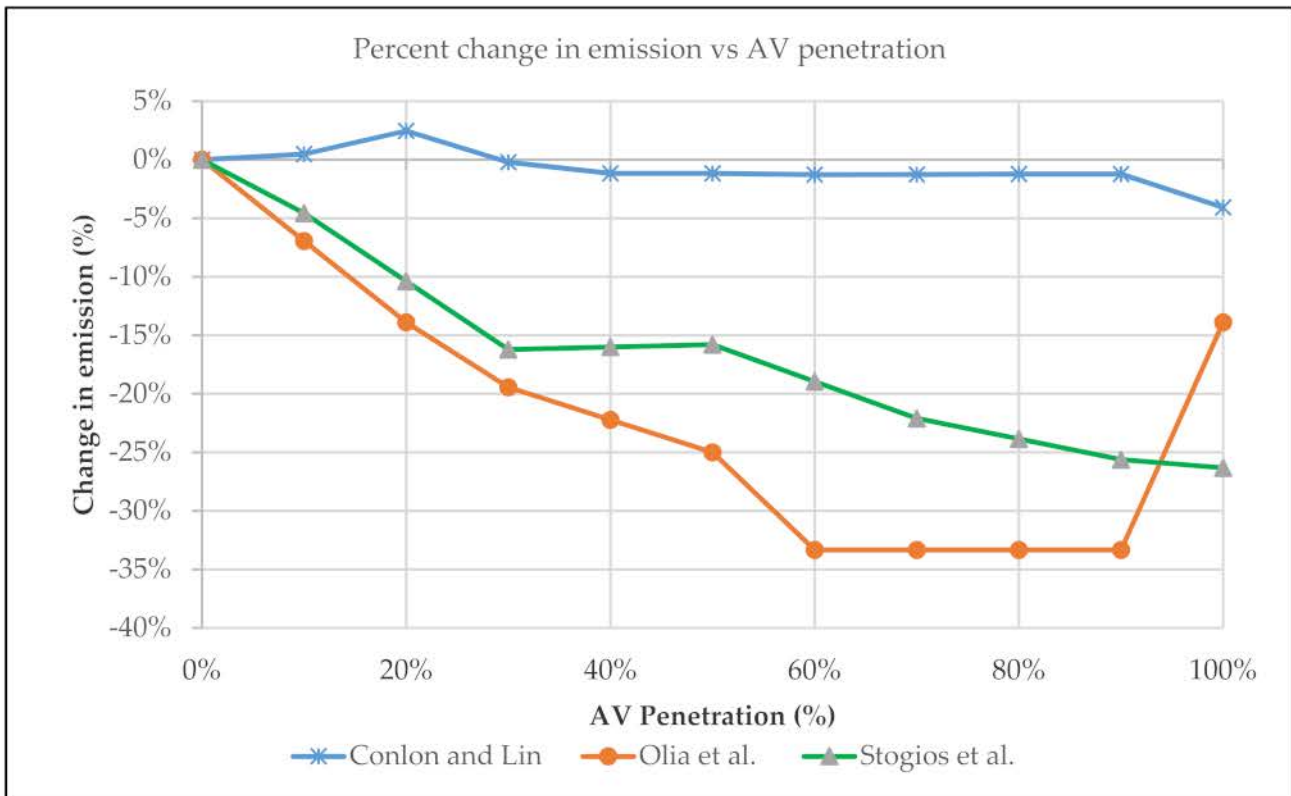
This section investigates changes in emissions at different AV penetration levels using integrated traffic microsimulation and emission models. With better operating efficiency and improved powertrain technology, AVs are expected to yield overall emission benefits.

Stogios et al. designed a study to evaluate the potential impacts that AVs could offer under varying scenarios [80]. Under interrupted and uninterrupted traffic flow conditions, high and low traffic conditions were evaluated. This study integrated the use of VISSIM microscopic software with the MOVES emission model to assess vehicular emissions. Eight inbuilt car-following and two lane-changing parameters present within the VISSIM model are investigated, representing AV driving behavior. The high traffic volume is reflected by an increase of 50% increase of the demand, while low traffic volume is produced by reducing the demand by 50%. A set of simulations is completed in the VISSIM model with 10%, 30%, 50%, 70%, and 90% of AVs penetration rate to investigate the changes in emission from the base condition. The study revealed that headway time has the highest impact on emissions and average delay than other parameters. Maximum headway time representing a cautious driving behavior resulted in a 31% increase in overall emissions, while a shorter headway time resembling aggressive driving behavior reduces the emission by 10%. The growing penetration of AVs into the network within high-traffic conditions results in minor incremental changes in emission factors and the number of stops per vehicle. In contrast, aggressive AVs reduce the average number of stops and emissions with increased market penetration. The AV penetration rate results, however, are not as evident under low traffic conditions. That is to conclude from the study that AVs will offer the maximum benefits under congested traffic conditions.

Olia et al. deployed the PARAMICS microsimulation framework integrated with CMEM emission model to measure the vehicle emission at different market penetration of connected autonomous vehicles [81]. The CMEM model is capable of continuously estimating gas emissions and fuel consumption at the microscopic level. The emission and fuel consumption in the CMEM model vary based on vehicle type, age, fuel system, and emission control technology. The vehicles in this model were divided into three categories, unfamiliar non-connected, familiar non-connected and CVs to produce emission factors for CO<sub>2</sub>, CO, NO<sub>x</sub> and HC. The results showed that with a gradual increase of CVs market penetration, the emission factors decreased. The maximum emission benefit could be realized at 50% CV penetration, where the GHG emission is reduced by 30% from the base condition.

Another study by Conlon and Lin attempted to quantify the changes in CO<sub>2</sub> emission as the AVs are gradually penetrated into a congested urban road network [82]. SUMO traffic microsimulation and Newton-based greenhouse gas model (NGM) emission model were integrated to estimate the emission for different AV penetration, ranging from 0% to 100% into the network with an interval of 10%. At an AV penetration rate lower than 30%, the total CO<sub>2</sub> emission had increased from the baseline of 0% AVs. The increase of total emission is explained by the difficulty in the interaction between human-driven vehicles (HDVs) and AVs. As the AVs penetration rate gradually increased, the study network started to realize the benefit of AVs in traffic operation, travel speed, and emission reduction. However, the emission reduction remained plateaued between a wide range of 40% to 90% AV penetration. Finally, at full AV penetration with no heterogeneity, the network was found to yield a maximum reduction of CO<sub>2</sub> emission of 4.08% from the base condition. The changes in emission at different AV penetration levels from different studies could be compared for better understanding (Figure 2). Existing literature in this regard suggests that noticeable emission benefits of AVs at the network level can be achieved at penetration rates ranging between 30% and 50%.





**Figure 2.** Emission changes by AV penetration [80–82].

## 6. Energy Consumption and GHG Emission

In recent years, the transportation sector has become the top GHG emitter surpassing electricity generation in the U.S. It accounted for approximately 28.5% of total atmospheric emissions in the country and continued to be the rapidly growing emissions source of any energy-related sector [83,84]. The global share of GHG from transportation is estimated to be around 24% of all emissions [85]. Passenger cars are accountable for 75% and 60% of transportation emissions worldwide and in the U.S., respectively [84,85]. The emergence of AVs can bring numerous energy and emission benefits, due to homogeneous traffic flows, lower highway congestion, lighter and smart vehicles shaped to minimize air resistance, minimum vehicle idling, the need for less powerful engines, etc. This would further enhance fuel efficiency and reduce emissions.

Similarly, shorter time spent searching for nearby parking and reduced needs for construction, operation, and maintenance of parking infrastructures could also bring various environmental benefits. Furthermore, the prospects that AVs serving passengers' demand for performing various activities will be larger than traditional vehicles cannot be excluded. Under such circumstances, larger vehicle sizes may somehow limit fuel efficiency gains. However, shared AVs may be programmed to continuously drive rather than looking for parking in the city's downtown until the next call for a ride, thus generating more emissions. This issue may be partially mitigated by programming the AVs to drive themselves outside of the downtown of an urban area where parking is free or relatively cheaper. However, this extra travel will lead to more energy consumption, creating more traffic congestion and subsequently producing more vehicular emissions.

In the literature, numerous studies have discussed the prospects of fuel energy saving through vehicle automation. For example, Wu et al. reported that the deployment of a fuel economy optimization system could offer the automated systems or human drivers with essential guidance about optimal deceleration/acceleration profiles, taking into account vehicle current speed and acceleration, as well as other information such as headway spac-

ing, signs, and traffic lights [86]. The authors conducted a driving simulator experiment in an urban setting through a network of signalized intersections and noted a nearly 31% reduction in fuel consumption for drivers using the system. Likewise, Khondaker and Kattan reported that a variable speed limit control algorithm resulted in approximately 16% fuel savings compared to an uncontrolled scenario [87]. The proposed control system integrated real-time intelligence about individual driver behavior (like the level of compliance with the established speed limits, acceleration/deceleration) in the situation of 100% connected vehicles (CVs) environment. However, fuel savings were only marginal at a penetration rate of CVs below 50%. In their study, Li et al. demonstrated that under automated car-following scenarios, the application of a pulse-and-gliding (PnG) controller could offer up to 20% savings in fuel compared to a conventional linear-quadratic (LQ)-based controller [88]. Other field tests and simulation studies have also shown that various types of adaptive cruise controller (ACC) and cooperative adaptive cruise controller (CACC) vehicle control algorithms could significantly reduce fuel energy consumption [89–92].

Zohdy and Rakha designed a controller equipped with CACC that can guide the optimum course of vehicles in the context of the urban road intersections network [93]. The study compared the fuel consumption for their system with various intersection geometries, and noted that on average, 11%, 45%, and 33% fuel saving were obtained compared to conventional intersection control approaches of a roundabout all-way-stop and traffic signal, respectively. In their studies, Kamalanathsharma, and Rakha; Asadi and Vahidi, and Ala et al. reported that the CACC that uses vehicles to infrastructure (V2I) communication to optimize vehicle trajectories in the vicinity could lead to a reduction in a fuel energy saving of about 47%, 30%, and 19%, respectively [94–96]. A recent study conducted by Manzie et al. also reported that a road-vehicle environment where vehicles can exchange traffic flow information via inter-vehicle communication and sensors could achieve about 15–25% savings in fuel consumptions [97]. They further stated that this number could reach as high as 33%, depending on the amount and quality of traffic information that they can process and exchange.

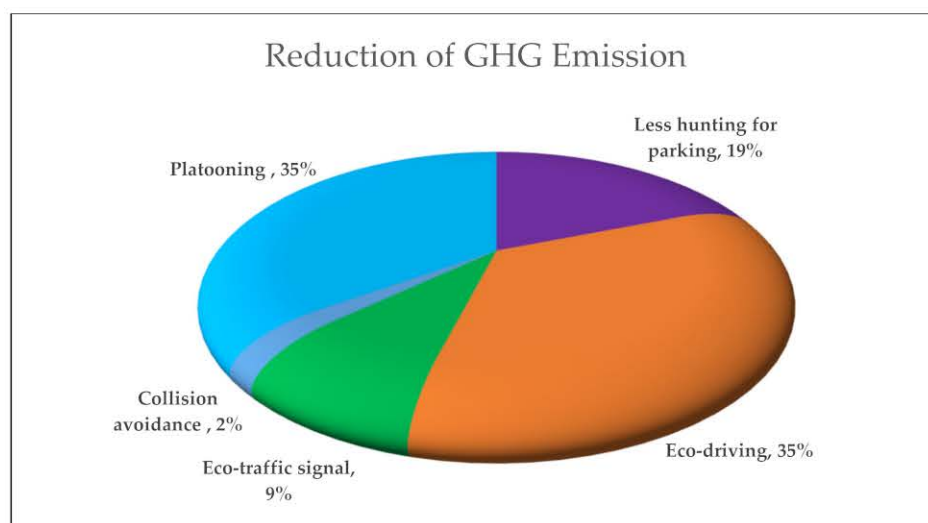
Similarly, in another study, Wang et al. observed that a higher penetration rate of intelligent vehicles equipped with a longitudinal vehicle controller was associated with lower NO<sub>x</sub> emissions in a congested platoon [98]. Bose and Ioannou reported that a fleet containing only 10% ACC-equipped vehicles could lower NO<sub>x</sub> emissions by 1.5% CO and CO<sub>2</sub> emissions by up to 60% [99]. Choi and Bae examined the CO<sub>2</sub> emissions profiles for manual and CVs under lane changing operations [100]. The study found that CVs can lead to 7.1% less CO<sub>2</sub> emission, while lane change can maneuver faster to a slower lane. Likewise, lane change operations for CVs from a slower to a faster lane were associated with around 11.8% CO<sub>2</sub> emissions benefits. Fagnant and Kockelman conducted a larger-scale agent-based study. They replicated a mid-sized city scenario where nearly 3.5% of the total trips on a given day are undertaken by shared AVs [71].

These researchers observed that autonomous vehicles could have a significant positive effect on reducing various pollutants (i.e., SO<sub>2</sub>, CO, NO<sub>x</sub>, volatile organic compounds (VOC), PM<sub>10</sub>, and GHG). VOCs and CO emissions were reduced the most, mainly due to the lower frequency of the vehicle's cold start. Effects on the particulate matter with a diameter less than 10 μm (PM<sub>10</sub>) and GHG were comparatively insignificant due to the need for additional trips that shared vehicles have to make to pick up and drop off passengers from different locations. However, it is worth mentioning that this simulation study was limited by the assumptions that automated vehicles in the fleet are not essentially powered by electricity, hybrid-electric, or running on alternative fuel and passengers would not make trips more frequently. The long-term effect of automated vehicle-related emission reduction could realize a very optimistic level, as indicated in a study by Greenblatt and Saxena that estimated the emission of shared electric autonomous taxis. The study found that the GHG reduction per vehicle per mile in 2030 could be 87–94% less than the emissions of gasoline-based internal combustion vehicles in 2014 and 63–82% less compared to hybrid-electric vehicle emissions in 2030 [101].

Brown et al. also predicted considerable energy-saving up to 91% per automated vehicle in 2030 in a framework that accounted for the highest impact of energy-saving factors (e.g., efficient travel, electrification and optimized vehicle weight) and increased energy use (e.g., increased travel distance by dependent traveler) [35]. However, the factors and to what extent they will offer emission benefit in the future remains an open question. As a result, the trade-off between energy savings and increased energy use from automated vehicles might fluctuate substantially.

Few studies have also argued that the benefit in emission reduction by AVs could be fully offset by increased travel, due to lower costs involved in travelling. A study by Taiebat et al. used microeconomic modeling and applied econometric techniques to analyze the travel and energy impacts of CAVs with respect to the price of fuel and travel time [102]. While increased fuel economy in CAVs reduces the amount of energy required per mile traveled, it also decreases the cost of travel, encouraging additional travel and leading to an energy “rebound effect.” The elasticities of VMT demand with respect to fuel and time costs were estimated using the developed microeconomic model under income and time constraints. The forecasted travel demand for a typical household was estimated to increase by 2–47%. Numerous plausible scenarios involving changes in fuel economy and time costs resulted in an overall increase in energy consumption. In higher-income quantiles, backfire is more likely as the reduction in time cost is less appreciated in this class, only to offset the energy savings from CAVs. On average, a 38% reduction in time costs completely offsets a 20% increase in fuel economy provided by CAVs. Numerous researchers have also pointed out that the higher penetration of automated vehicles may actually increase the vehicle fleet number and contribute to the rise of GHGs in the environment [103]. The burgeoning number of automated on-demand mobility or ride-hailing services may lead to an enlargement of the number of vehicles in the fleet, increased VMTs and road congestion, and thereby increased fuel consumption and GHG emissions.

Synthesizing the result of all the previous studies, some charts could be developed to better understand and visualize the results of the level of GHG decrease or increase. The first graph (Figure 3) shows the factors that will increase emissions, while others are for the factors that will reduce the emission (Figure 4). In the last chart, Figure 5 demonstrates the result ranges for all research studies.



**Figure 3.** Average contribution of the causes on GHG emission reduction.



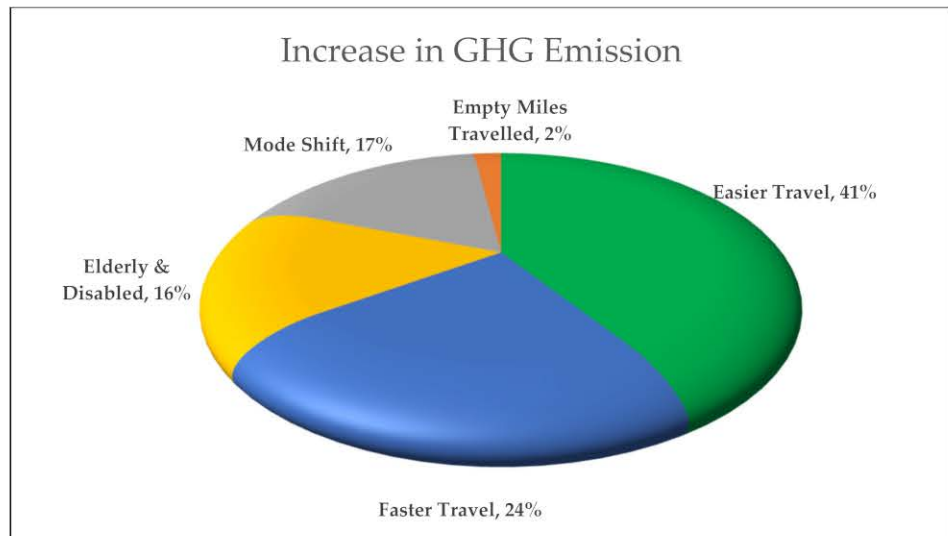


Figure 4. Average contribution of the causes on GHG emission increase.

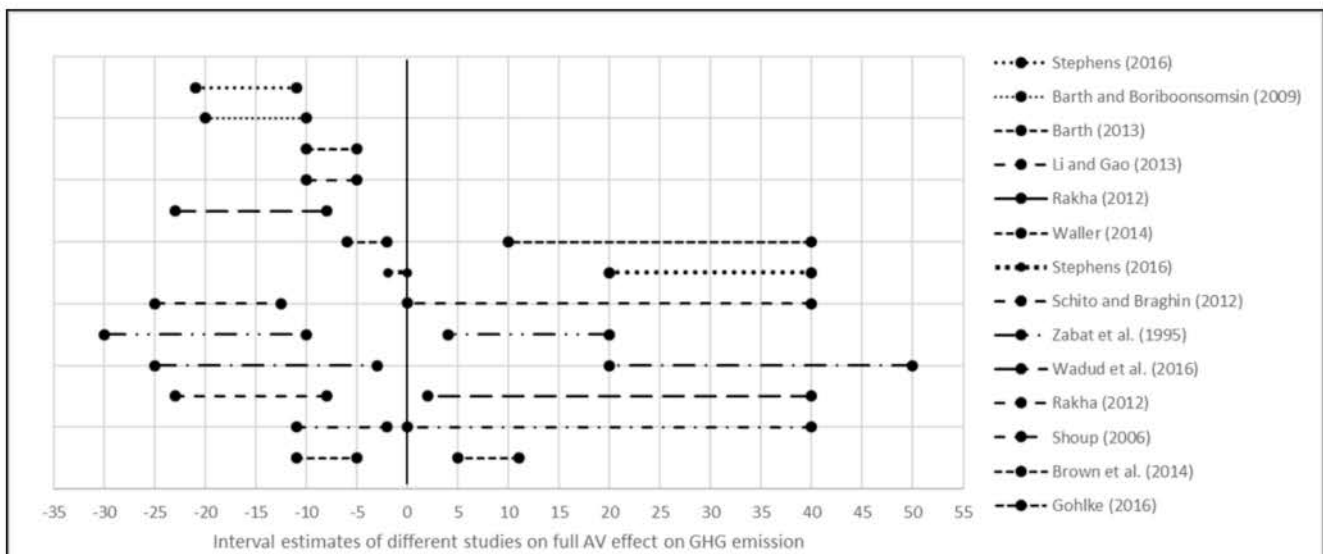


Figure 5. Interval estimates of different studies on full AV effects on GHG emission.

### 6.1. Causal Loop Diagram (CLD) of the AV's Effect on GHG Emission

In transport studies, system dynamics have been applied, as the feedback and connections provided by these models are useful for defining interactions of variables within the transport system. Shepherd provided a review of the different system dynamics modeling approaches used in transport systems [104]. In his study, he mentioned that the causal loop diagram (CLD) is the primary technique used to analyze the qualitative relationships between various aspects of the system within system dynamics modeling. CLD is a helpful tool to explore possible sources of dissent to strategies, synergies, and repercussions within the system. Such prospects will then help identify potential problem statements that can be addressed by quantitative modeling. A CLD illustrates how important variables of the system interrelate with each other by using text, arrows and symbols. Arrow running from the “cause” to the “effect” with a polarity represents the interaction between two variables, known as a causal connection. A positive polarity indicates that deviations in the “causal” variable would result in deviations in the “effect” variable in the same direction, assuming all other influences remain constant in the system. Similarly, a negative arrow shows that

changes in one variable cause the other to change in the opposite direction, given that all other conditions are fixed.

The feedback loops created by the causal relationship are termed as balancing (B) or reinforcing (R) based on the polarity sign, which represents positive or negative feedbacks, respectively within the system [105].

A CLD is developed based on the literature to depict the interactions of different root causes and variables with the GHG emissions from AVs (Figure 6). The CLD starts with the gradual penetration or increased market share of AVs within the transportation system. This system dynamic model assumes that both the non-AVs and AVs use fossil fuel for power generation. Since the AVs are fuel-efficient, there is a substantial chance that the demand for AVs increases, with all its benefits in terms of traffic safety, operation, and management. However, since the AVs are expected to offer several benefits to the transport system, the introductory retail price of it might be some fold higher than the conventional non-AVs. A higher retail price of AV will impart a negative effect on AV's market share.

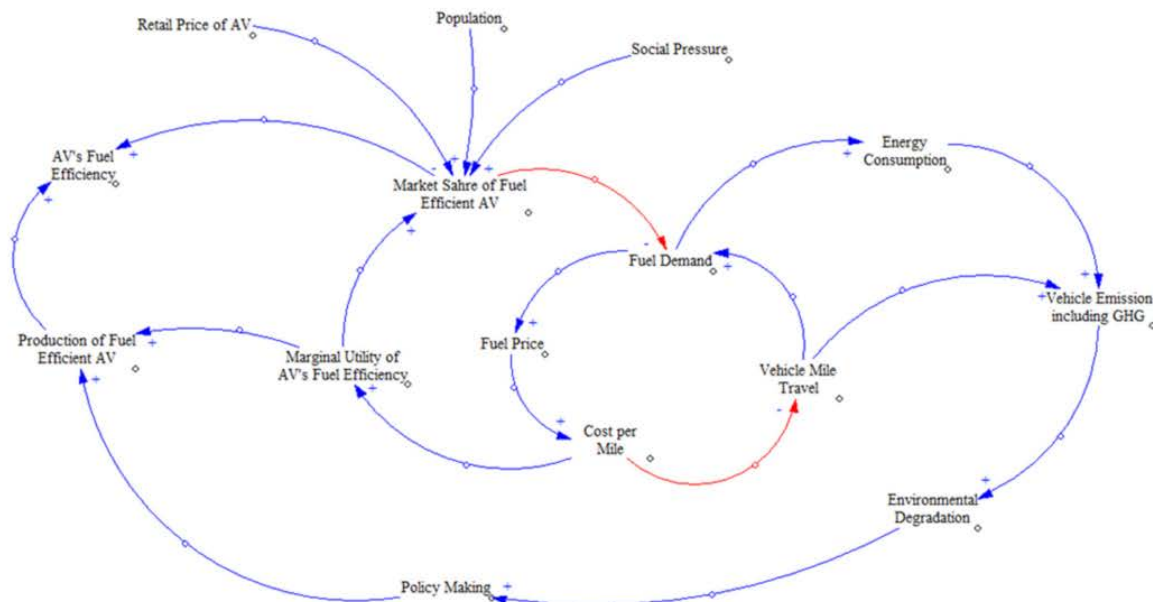


Figure 6. Causal Loop Diagram of the influence of fuel-efficient AVs on GHG emissions (inspired by [106,107]).

Nevertheless, the increase in population and social pressure to purchase AVs will positively affect the AV's penetration rate to the market. In this context, it is predicted that the number of cars in the city will increase as the population increases, causing road congestion as well. Congestion reduces the efficiency of automobile engines, contributing to increased fuel consumption and leading to higher rates of pollution [107]. An increased market share of fuel-efficient AVs will reduce the fuel demand as a whole. The reduced fuel demand initiates a balancing loop; a shortfall of demand will push the fuel price to increase and increase travel cost per mile, only to be balanced by less miles traveled. The price of gasoline is a wobble that can play either in favor or against AVs. As observed today, gasoline prices have not prevented the ownership and use of fossil fuel vehicles (FFV) in general, but if prices go up, FFV use could fall as people move to more affordable choices, given the limited nature of petrol resources. However, an increase in the cost/miles travel will observe fuel-efficient AVs' marginal utility as people will enjoy the added benefit by buying an additional AV unit.

A reinforcing loop will also generate fuel demand. In the event of increased demand, energy consumption will also escalate, giving rise to vehicle emission or GHG emission. Implementing pollution reduction policies that cause environmental degradation should be balanced in this loop, though there is a delay in this cycle that prevents it from performing

as planned. The mounting pressure on policy regulation to control the environmental degradation will possibly deter the growing AV production. More capital is expected to be invested within the automobile industry to make the AVs more fuel-efficient.

#### *6.2. AVs Potential Impact on Reducing GHG Emission during a Global Pandemic*

On 30 January 2020, the World Health Organization (WHO) announced the respiratory coronavirus disease outbreak 2019 (COVID-19) and subsequently, on 13 March, declared a global pandemic. While government policies in most countries reduced mobility, travel also declined in response to the number of local cases in the respective country. This shows how people adapted their travel behavior depending on the level of information available on the outbreak. Not only did people restrict their travel, but destinations were often avoided that had more infected cases. The automotive and transport industries are closely observing how consumer behavior changes will impact AV technologies in key aspects of the economy and daily life, given that numerous changes have been imposed upon people's daily lives due to the global COVID-19 pandemic.

COVID-19 is overhauling the consumer's perceptions towards public transit in ways that are likely to support AV technology in the longer run. As the pandemic has spread across the world, people have generally remained home, either by choice or by local directives. Hence, transit ridership has declined substantially, barring essential and emergency support workers. Major cities like New York, Washington, D.C., and San Francisco of the US have seen the ridership plummeted by a staggering 70–90% in August 2020 compared to the same time in the previous year [108]. While the decrease in ridership is attributed to home-based work, the closure of educational institutes, and local travel bans, consumers have become more interested in personal motor vehicle ownership than ever before. While the potential car customer might be putting new purchases on hold, McKinsey's recent survey reported that "20 percent of people in the United States who do not possess a vehicle under their name, now considering buying one" [108]. This group mainly includes people who live in cities and rely on public transportation for mobility. While the customer demands for new and used cars may have temporarily postponed adopting AV systems in the consumer sector, the COVID-19 pandemic per se warranted the important role of AV in day-to-day business and, most importantly, to deal with the risks posed by COVID-19.

Over the past decade, the automotive industry has had to adapt to changing attitudes to mobility, with global car ownership predicted to peak in 2034 before beginning its decline. However, with many still reluctant to use public transport due to the risk of infection, the prospect of owning a car may seem more inviting in the context of the unprecedented COVID-19 pandemic. This change in attitudes towards mobility is already evident in the adoption of micro-mobility solutions, while some have predicted that autonomous vehicles, capable of driving with some to no human input, may see an acceleration in terms of development, deployment and public interest. With industrial activity forced to slow down, flight and car journeys decreasing, greenhouse gas emissions around the world have plummeted. Consumers will get used to these changes, which is likely to see an increase in the adoption of autonomous vehicles in the future. These new vehicles are meant to be fuel-efficient, affordable, clean and green and a natural feature in smart cities and interactive communities—and will forever change the future of mobility. One of the key barriers to autonomous vehicle rollout is public perception, with a 2018 survey by OpenText revealing that 52% of consumers would not buy a driverless car. However, the COVID-19 pandemic may have contributed to changing attitudes. When weighing up the risk of COVID-19 infection presented by public transport or shared mobility, it is possible that the public will look more favorably on driverless cars. The current pandemic has had a significant impact on transport demand and mode, with a shift away from shared mobility, and in particular public transport, because of worries over public health.

## 7. Conclusions

Net effects of vehicle automation on emissions across a variety of illustrative examples show that automation could theoretically reduce GHG emissions and energy usage plausibly by almost half—or double-fold—depending on the implications that would come to the fore [22]. It is believed that reductions in GHG emissions through AVs' adoption will be negated to an unascertained extent, mainly due to increased car travel, facilitated by other factors such as lower perceived travel time and costs per km/trip, probable loss of public transport patronage, and possible increases in car ownership. Thus, it is quite possible that AVs could be more energy-efficient, thereby reducing the GHG by functional unit-basis as per-passenger-mile (ppm); however, the overall gain related to transportation GHG emissions could be swamped by a surge in increased vehicle miles traveled (VMT).

The effect of AV adoption on consumer travel patterns could be more pronounced from environmental aspects rather than technical attributes. While it is challenging to accurately estimate the behavioral fronts to AV adoption, a more tangible consideration of the relationship between different AV adoption models and anticipated travel behavior is vital for estimating AVs' environmental impacts. It may be argued from the discussion presented herein that if AVs are deployed within less approbatory areas or if the road transportation sector is continued to be dominated by privately owned vehicles, it is likely that AVs may escalate the transport-related GHG emissions. Hence, adoption tendencies like vehicle ownership models are also expected to largely influence whether AVs will decrease or increase the overall VMT as well as the subsequent GHG emissions. Few studies have indicated that the positive emission changes may not be realized at lower AV penetration rate, where the maximum emission reduction might take place within the 60–80% AV penetration rate.

Impacts of autonomous vehicles on GHG emission are highly dependent on continuous technological development and evolution, market reaction, and regulatory actions, making it challenging to confidently predict the overall benefits expected to deliver by AVs to the transportation systems in terms of GHG emission. With long-term land-use adjustments, the role of policy, welfare and equity yet to be explored and the potential effects of AVs remain unknown; it is unlikely that we can anticipate long-term effects on GHG emission with certainty. Moreover, the overwhelming COVID-19 global pandemic has also posed challenges to some of the well-perceived mode choice models, which may force the policymaker to adopt suitable mobility alternatives that ensure public health and safety. Therefore, it is of paramount importance to develop appropriate methodologies, tools, and techniques to better understand the impact of GHG emissions for AV adoption at different levels by harnessing an appropriate system approach.

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## References

1. Vahidi, A.; Sciarretta, A. Energy Saving Potentials of Connected and Automated Vehicles. *Transp. Res. Part C Emerg. Technol.* **2018**, *95*, 822–843. [[CrossRef](#)]
2. Facts, E.F. *US Transportation Sector Greenhouse Gas Emissions 1990–2013*; US Environmental Protection Agency: Washington, DC, USA, 2015.



3. National Academies of Sciences, Engineering, and Medicine. *Commercial Motor Vehicle Driver Fatigue, Long-Term Health, and Highway Safety: Research Needs*; National Academies Press: Washington, DC, USA, 2016; ISBN 0-309-39252-7.
4. Metcalf, G.E. Market-Based Policy Options to Control US Greenhouse Gas Emissions. *J. Econ. Perspect.* **2009**, *23*, 5–27. [[CrossRef](#)]
5. Andrés, L.; Padilla, E. Driving Factors of GHG Emissions in the EU Transport Activity. *Transp. Policy* **2018**, *61*, 60–74. [[CrossRef](#)]
6. Liu, D.; Yang, D.; Huang, A. LEAP-Based Greenhouse Gases Emissions Peak and Low Carbon Pathways in China's Tourist Industry. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1218. [[CrossRef](#)]
7. Crayton, T.J.; Meier, B.M. Autonomous Vehicles\_ Developing a Public Health Research Agenda to Frame the Future of Transportation Policy. *J. Transp. Health* **2017**, *6*, 245–252. [[CrossRef](#)]
8. Newman, P.; Kenworthy, J. *Sustainability and Cities: Overcoming Automobile Dependence*; Island Press: Washington, DC, USA, 1999.
9. Mersky, A.C.; Samaras, C. Fuel Economy Testing of Autonomous Vehicles. *Transp. Res. Part C* **2016**, *65*, 31–48. [[CrossRef](#)]
10. Moriarty, P.; Wang, S.J. Could Automated Vehicles Reduce Transport Energy? In *Energy Procedia*; Elsevier Ltd.: Amsterdam, The Netherlands, 2017; Volume 142, pp. 2109–2113.
11. Markit, I. *Autonomous Vehicle Sales Forecast to Reach 21 Mil. Globally in 2035, According to IHS Automotive*; IHS Markit: London, UK, 2016.
12. Rivera, J.; van der Meulen, R. *Gartner Says 4.9 Billion Connected 'Things' Will Be in Use in 2015*; Gartner: Barcelona, Spain, 2014.
13. Alexander-Kearns, M.; Peterson, M.; Cassidy, A. The Impact of Vehicle Automation on Carbon Emissions. Center for American Progress. Available online: <https://www.americanprogress.org/issues/green/reports/2016/11/18/292588/theimpact-of-vehicle-automation-on-carbon-emissions-where-uncertainty-lies> (accessed on 11 November 2020).
14. Litman, T. *Safer Than You Think!: Revising the Transit Safety Narrative*; TRID: Victoria, BC, Canada, 2016.
15. Barth, M.; Boriboonsomsin, K. Energy and Emissions Impacts of a Freeway-Based Dynamic Eco-Driving System. *Res. Part D Transp.* **2009**, *14*, 400–410. [[CrossRef](#)]
16. Chen, T.; Kockelman, K.; Hanna, J.P. Operations of a Shared, Autonomous, Electric Vehicle Fleet: Implications of Vehicle & Charging Infrastructure Decisions. *Transp. Res. Part A Policy Pract.* **2016**, *94*, 243–254.
17. Stephens, T.; Gonder, J.; Chen, Y.; Lin, Z.; Liu, C.; Gohlke, D. *Estimated Bounds and Important Factors for Fuel Use and Consumer Costs of Connected and Automated Vehicles*; National Renewable Energy Lab.(NREL): Golden, CO, USA, 2016.
18. Barkenbus, J.N. *Author's Personal Copy Eco-Driving: An Overlooked Climate Change Initiative*; Elsevier: Amsterdam, The Netherlands, 2009. [[CrossRef](#)]
19. Rakha, H.; Kamalanathsharma, R.K. *Eco-Driving at Signalized Intersections Using V2I Communication*; IEEE: Piscataway, NJ, USA, 2011; pp. 341–346.
20. Psaraki, V.; Pagoni, I.; Schafer, A. Techno-Economic Assessment of the Potential of Intelligent Transport Systems to Reduce CO2 Emissions. *IET Intell. Transp. Syst.* **2012**, *6*, 355–363. [[CrossRef](#)]
21. Pettigrew, S.; Fritschi, L.; Norman, R. The Potential Implications of Autonomous Vehicles in and around the Workplace. *Int. J. Environ. Res. Public Health* **2018**, *15*, 1876. [[CrossRef](#)] [[PubMed](#)]
22. Wadud, Z.; MacKenzie, D.; Leiby, P. Help or Hindrance? The Travel, Energy and Carbon Impacts of Highly Automated Vehicles. *Transp. Res. Part A Policy Pract.* **2016**, *86*, 1–18. [[CrossRef](#)]
23. Greenblatt, J.B.; Shaheen, S. Automated Vehicles, On-Demand Mobility, and Environmental Impacts. *Curr. Sustain. Renew. Energy Rep.* **2015**, *2*, 74–81. [[CrossRef](#)]
24. Anderson, J.; Nidhi, K.; Stanley, K.; Sorensen, P. *Autonomous Vehicle Technology: A Guide for Policymakers*; Rand Corporation: Santa Monica, CA, USA, 2014.
25. Tomás, R.F.; Fernandes, P.; Macedo, E.; Bandeira, J.M.; Coelho, M.C. Assessing the Emission Impacts of Autonomous Vehicles on Metropolitan Freeways. *Transp. Res. Procedia* **2020**, *47*, 617–624. [[CrossRef](#)]
26. Stasinopoulos, P.; Shiwakoti, N.; Beining, M. Use-Stage Life Cycle Greenhouse Gas Emissions of the Transition to an Autonomous Vehicle Fleet: A System Dynamics Approach. *J. Clean. Prod.* **2021**, *278*, 123447. [[CrossRef](#)]
27. Wang, A.; Stogios, C.; Gai, Y.; Vaughan, J.; Ozonder, G.; Lee, S.; Posen, I.D.; Miller, E.J.; Hatzopoulou, M. Automated, Electric, or Both? Investigating the Effects of Transportation and Technology Scenarios on Metropolitan Greenhouse Gas Emissions. *Sustain. Cities Soc.* **2018**, *40*, 524–533. [[CrossRef](#)]
28. Le Hong, Z.; Zimmerman, N. Air Quality and Greenhouse Gas Implications of Autonomous Vehicles in Vancouver, Canada. *Transp. Res. Part D Transp. Environ.* **2021**, *90*, 102676. [[CrossRef](#)]
29. Liu, F.; Zhao, F.; Liu, Z.; Policy, H.H.-E. *Can Autonomous Vehicle Reduce Greenhouse Gas Emissions? A Country-Level Evaluation*; Elsevier: Amsterdam, The Netherlands, 2019.
30. de Souza Melaré, A.V.; González, S.M.; Faceli, K.; Casadei, V. Technologies and Decision Support Systems to Aid Solid-Waste Management: A Systematic Review. *Waste Manag.* **2017**, *59*, 567–584. [[CrossRef](#)] [[PubMed](#)]
31. Kitchenham, B.; Charters, S. *Guidelines for Performing Systematic Literature Reviews in Software Engineering*; Technical report, Ver. 2.3 EBSE Technical Report; EBSE: Keele, UK, 2007.
32. Guccione, L.; Holland, B. *Car & (No) Driver*; Rocky Mountain Institute (RMI): Basalt, CO, USA, 2013.
33. Wang, W.; Zhong, H.; Zeng, Y.; Liu, Y.; Chen, J. A Carbon Emission Calculation Model for Roadside Parking. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1906. [[CrossRef](#)] [[PubMed](#)]
34. Shoup, D.C. Cruising for Parking. *Transp. Policy* **2006**, *13*, 479–486. [[CrossRef](#)]

35. Brown, A.; Gonder, J.; Repac, B. *An Analysis of Possible Energy Impacts of Automated Vehicles*; Springer: Berlin/Heidelberg, Germany, 2014; pp. 137–153.
36. Torbert, R.; Herrschaft, B. *Driving Miss Hazy: Will Driverless Cars Decrease Fossil Fuel Consumption?* Rocky Mountain Institute: Basalt, CO, USA, 2016.
37. Li, J.-M.; Gao, Z. Exploring the Impact of Speed Synchronization through Connected Vehicle Technology on Fleet-Level Fuel Economy. *SAE Int. J. Passeng. Cars Electron. Electr. Syst.* **2013**, *6*, 213–221. [CrossRef]
38. Rakha, H.A.; Ahn, K.; Park, S. AERIS: Eco-Driving Application Development and Testing (No. FHWA). 2012. Available online: <https://vtechworks.lib.vt.edu/handle/10919/55092> (accessed on 11 November 2020).
39. He, Y.; Rios, J.; Chowdhury, M.; Pisu, P.; Bhavsar, P. Forward Power-Train Energy Management Modeling for Assessing Benefits of Integrating Predictive Traffic Data into Plug-in-Hybrid Electric Vehicles. *Transp. Res. Part D Transp. Environ.* **2012**, *17*, 201–207. [CrossRef]
40. Rakha, H.; Kamalanathsharma, R.; Ahn, K. *AERIS: Eco-Vehicle Speed Control at Signalized Intersections Using I2V Communication Final Report*; Virginia Polytechnic Institute and State University: Blacksburg, VA, USA, 2012.
41. Al-Turki, M.; Jamal, A.; Al-Ahmadi, H.M.; Al-Sughaiyer, M.A.; Zahid, M. On the Potential Impacts of Smart Traffic Control for Delay, Fuel Energy Consumption, and Emissions: An NSGA-II-Based Optimization Case Study from Dhahran, Saudi Arabia. *Sustainability* **2020**, *12*, 7394. [CrossRef]
42. Yelchuru, B.; Waller, T. Preliminary Eco-Traffic Signal Timing Modeling Results. 2014. Available online: <https://www.itsbenefits.its.dot.gov/ITS/benecost.nsf/SummID/B2014-00912> (accessed on 11 November 2020).
43. Zimmerman, C.; Marks, J.; Jenq, J.; Cluett, C.; DeBlasio, A. *Phoenix Metropolitan Model Deployment Initiative Evaluation Report (Draft)*; TRID: Washington, DC, USA, 2000.
44. NHTSA. *Fatality Analysis Reporting System*; National Highway Traffic Safety Administration; NHTSA, US Department of Transportation: Washington, DC, USA, 2008.
45. Zahid, M.; Chen, Y.; Khan, S.; Jamal, A.; Ijaz, M.; Ahmed, T. Predicting Risky and Aggressive Driving Behavior among Taxi Drivers: Do Spatio-Temporal Attributes Matter? *Int. J. Environ. Res. Public Health* **2020**, *17*, 3937. [CrossRef] [PubMed]
46. Schrank, D. *TTI's 2012 Urban Mobility Report*; Texas A&M Transportation Institute, The Texas A&M University System: Bryan, TX, USA, 2012.
47. Najm, W.; Stearns, M.; Howarth, H.; Koopmann, J.; Hitz, J. *Evaluation of an Automotive Rear-End Collision Avoidance System*; Department of Transportation, National Highway Traffic Safety Administration: Cambridge, MA, USA, 2006.
48. Kasseris, E.P. *Comparative Analysis of Automotive Powertrain Choices for the Near to Mid-Term Future*; Massachusetts Institute of Technology: Cambridge, MA, USA, 2006.
49. Zhu, H.; Yang, Z. *Simulation of the Aerodynamic Interaction of Two Generic Sedans Moving Very Closely*; IEEE: Piscataway, NJ, USA, 2011; pp. 2595–2600.
50. Schito, P. Numerical and Experimental Investigation on Vehicles in Platoon. *SAE Int. J. Commer. Veh.* **2012**, *5*, 63–71. [CrossRef]
51. Duan, K.; Mcdaniel, C.; Muller, A.; Yokota, B.; Kleissl, J. *Effects of Highway Slipstreaming on California Gas Consumption*; University of California: San Diego, CA, USA, 2007.
52. Tsugawa, S. An Overview on an Automated Truck Platoon within the Energy ITS Project. *Ifac Proc. Vol.* **2013**, *46*, 41–46. [CrossRef]
53. Zabat, M.; Stabile, N.; Farascaroli, S. *UC Berkeley Research Reports Title the Aerodynamic Performance of Platoons*; California PATH Research Report; California PATH: Oakland, CA, USA, 1995; 8p. Available online: <https://escholarship.org/uc/item/8ph187fw> (accessed on 15 December 2020). California PATH Research Report.
54. Dávila, A.; Nombela, M. *Sartre-Safe Road Trains for the Environment Reducing Fuel Consumption through Lower Aerodynamic Drag Coefficient*; SAE Technical Paper; SAE: Warrendale, PA, USA, 2011.
55. Mccarthy, J.F. *Sustainability of Self-Driving Mobility: An Analysis of Carbon Emissions Between Autonomous Vehicles and Conventional Modes of Transportation*; Harvard University: Cambridge, MA, USA, 2017.
56. Davis, S.; Diegel, S.; Boundy, R. *Transportation Energy Data Book Edition 31*; Oak Ridge National Laboratory: Oak Ridge, TN, USA, 2012.
57. Organisation for Economic Co-Operation and Development. *Urban Mobility System Upgrade: How Shared Self-Driving Cars Could Change City Traffic*; International Transport Forum (ITF): Paris, France, 2015.
58. MacKenzie, D.; Zoepf, S.; Heywood, J. Determinants of US Passenger Car Weight. *Int. J. Veh. Des.* **2014**, *65*, 73–93. [CrossRef]
59. Joost, W.J. Reducing Vehicle Weight and Improving US Energy Efficiency Using Integrated Computational Materials Engineering. *Jom* **2012**, *64*, 1032–1038. [CrossRef]
60. Bigazzi, A.Y.; Clifton, K.J. Modeling the Effects of Congestion on Fuel Economy for Advanced Power Train Vehicles. *Transp. Plan. Technol.* **2015**, *38*, 149–161. [CrossRef]
61. Dey, K.C.; Rayamajhi, A.; Chowdhury, M.; Bhavsar, P.; Martin, J. Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) Communication in a Heterogeneous Wireless Network—Performance Evaluation. *Transp. Res. Part C Emerg. Technol.* **2016**, *68*, 168–184. [CrossRef]
62. Porter, C.; Brown, A.; DeFlorio, J.; McKenzie, E.; Tao, W. *Effects of Travel Reduction and Efficient Driving on Transportation: Energy Use and Greenhouse Gas Emissions*; Transportation Energy Futures Series: Washington, DC, USA, 2013; (DOE/GO-102013-3704).
63. Shaheen, S.; Cohen, A.; Bayen, A. *The Benefits of Carpooling*; University of California: San Diego, CA, USA, 2018.

64. Igliński, H.; Babiak, M. Analysis of the Potential of Autonomous Vehicles in Reducing the Emissions of Greenhouse Gases in Road Transport. *Procedia Eng.* **2017**, *192*, 353–358. [CrossRef]
65. Xia, H.; Wu, G.; Boriboonsomsin, K.; Barth, M.J. Development and Evaluation of an Enhanced Eco-Approach Traffic Signal Application for Connected Vehicles. In Proceedings of the 16th International IEEE Conference on Intelligent Transportation Systems (ITSC 2013), The Hague, The Netherlands, 6–9 October 2013; pp. 296–301.
66. Burns, L. Sustainable Mobility: A Vision of Our Transport Future. *Nature* **2013**, *497*, 181. [CrossRef]
67. De Haan, P.; Peters, A.; Scholz, R.W. Reducing Energy Consumption in Road Transport through Hybrid Vehicles: Investigation of Rebound Effects, and Possible Effects of Tax Rebates. *J. Clean. Prod.* **2007**, *15*, 1076–1084. [CrossRef]
68. Childress, S.; Nichols, B.; Charlton, B.C.-T. Using an Activity-Based Model to Explore the Potential Impacts of Automated Vehicles. *Transp. Res. Rec.* **2015**, *2493*, 99–106. [CrossRef]
69. Gucwa, M. Mobility and Energy Impacts of Automated Cars. In Proceedings of the Automated Vehicles Symposium, San Francisco, CA, USA, 15–17 July 2014.
70. Harper, C.D.; Hendrickson, C.T.; Mangones, S.; Samaras, C. *Estimating Potential Increases in Travel with Autonomous Vehicles for the Non-Driving, Elderly and People with Travel-Restrictive Medical Conditions*; Elsevier: Amsterdam, The Netherlands, 2016. [CrossRef]
71. Fagnant, D.J.; Kockelman, K.M. *The Travel and Environmental Implications of Shared Autonomous Vehicles, Using Agent-Based Model Scenarios*; Elsevier: Amsterdam, The Netherlands, 2014. [CrossRef]
72. Berry, I.M. *The Effects of Driving Style and Vehicle Performance on the Real-World Fuel Consumption of U.S. Light-Duty Vehicles*; Massachusetts Institute of Technology: Cambridge, MA, USA, 2007.
73. Thomas, J.; Hwang, H.-L.; West, B.; Huff, S. Predicting Light-Duty Vehicle Fuel Economy as a Function of Highway Speed. *Sae Int. J. Passeng. Cars Mech. Syst.* **2013**, *6*, 859–875. [CrossRef]
74. Schäfer, A.; Heywood, J.; Jacoby, H.; Waitz, I. *Transportation in a Climate-Constrained World*; MIT Press: Cambridge, MA, USA, 2009.
75. Gehrke, S.; Felix, A.; Metropolitan Area Planning Council. Fare Choices: A Survey of Ride-Hailing Passengers in Metro Boston. 2018. Available online: [https://pdxscholar.library.pdx.edu/trec\\_seminar/152/](https://pdxscholar.library.pdx.edu/trec_seminar/152/) (accessed on 15 December 2020).
76. Whitney, J. *Autonomous Vehicles: How US Cities Are Preparing*; University of Oregon: Eugene, OR, USA, 2018.
77. Ullah, I.; Jamal, A.; Subhan, F. Public Perception of Autonomous Car: A Case Study for Pakistan. *Adv. Transp. Stud.* **2019**, *49*, 145–154.
78. Cervero, R.; Murakami, J. Effects of Built Environments on Vehicle Miles Traveled: Evidence from 370 US Urbanized Areas. *Environ. Plan. A* **2010**, *42*, 400–418. [CrossRef]
79. Barrington-Leigh, C.; Millard-Ball, A. More Connected Urban Roads Reduce US GHG Emissions. *Environ. Res. Lett.* **2017**, *12*, 044008. [CrossRef]
80. Stogios, C.; Kasraian, D.; Roorda, M.J.; Hatzopoulou, M. Simulating Impacts of Automated Driving Behavior and Traffic Conditions on Vehicle Emissions. *Transp. Res. Part D Transp. Environ.* **2019**, *76*, 176–192. [CrossRef]
81. Olia, A.; Abdelgawad, H.; Abdulhai, B.; Razavi, S.N. Assessing the Potential Impacts of Connected Vehicles: Mobility, Environmental, and Safety Perspectives. *J. Intell. Transp. Syst.* **2016**, *20*, 229–243. [CrossRef]
82. Conlon, J.; Lin, J. Greenhouse Gas Emission Impact of Autonomous Vehicle Introduction in an Urban Network. *Transp. Res. Rec.* **2019**, *2673*, 142–152. [CrossRef]
83. *Bloomberg New Energy Finance*; New Energy Outlook 2018; Bloomberg New Energy Finance: New York, NY, USA, 2018; Available online: <https://about.bnef.com/new-energy-outlook/> (accessed on 15 December 2020).
84. EPA. *US Transportation Sector Greenhouse Gas Emissions: 1990–2011*; Office of Transportation and Air Quality EPA-420-F-13-033a; EPA: Washington, DC, USA, 2013.
85. *Global Energy & CO<sub>2</sub> Status Report 2017*; IEA: Paris, France, 2018.
86. Wu, C.; Zhao, G.; Ou, B. A Fuel Economy Optimization System with Applications in Vehicles with Human Drivers and Autonomous Vehicles. *Transp. Res. Part D Transp. Environ.* **2011**, *16*, 515–524. [CrossRef]
87. Khondaker, B.; Kattan, L. Variable Speed Limit: A Microscopic Analysis in a Connected Vehicle Environment. *Transp. Res. Part C Emerg. Technol.* **2015**, *58*, 146–159. [CrossRef]
88. Li, S.E.; Peng, H.; Li, K.; Wang, J. Minimum Fuel Control Strategy in Automated Car-Following Scenarios. *IEEE Trans. Veh. Technol.* **2012**, *61*, 998–1007. [CrossRef]
89. Kamal, M.A.S.; Taguchi, S.; Yoshimura, T. Efficient Driving on Multilane Roads under a Connected Vehicle Environment. *IEEE Trans. Intell. Transp. Syst.* **2016**, *17*, 2541–2551. [CrossRef]
90. Luo, L.; Liu, H.; Li, P.; Wang, H. Model Predictive Control for Adaptive Cruise Control with Multi-Objectives: Comfort, Fuel-Economy, Safety and Car-Following. *J. Zhejiang Univ. Sci. A* **2010**, *11*, 191–201. [CrossRef]
91. Rios-Torres, J.; Malikopoulos, A.A. Automated and Cooperative Vehicle Merging at Highway On-Ramps. *IEEE Trans. Intell. Transp. Syst.* **2016**, *18*, 780–789. [CrossRef]
92. Wang, M.; Daamen, W.; Hoogendoorn, S.; Van Arem, B. Potential Impacts of Ecological Adaptive Cruise Control Systems on Traffic and Environment. *Int. J. Intell. Transp. Syst.* **2014**, *8*, 77–86. [CrossRef]
93. Zohdy, I.H.; Rakha, H.A. Intersection Management via Vehicle Connectivity: The Intersection Cooperative Adaptive Cruise Control System Concept. *J. Intell. Transp. Syst.* **2016**, *20*, 17–32. [CrossRef]
94. Kamalanathsharma, R.K.; Rakha, H.A. Leveraging Connected Vehicle Technology and Telematics to Enhance Vehicle Fuel Efficiency in the Vicinity of Signalized Intersections. *J. Intell. Transp. Syst.* **2016**, *20*, 33–44. [CrossRef]

95. Asadi, B.; Vahidi, A. Predictive Cruise Control: Utilizing Upcoming Traffic Signal Information for Improving Fuel Economy and Reducing Trip Time. *Ieee Trans. Control Syst. Technol.* **2010**, *19*, 707–714. [[CrossRef](#)]
96. Ala, M.V.; Yang, H.; Rakha, H. Modeling Evaluation of Eco-Cooperative Adaptive Cruise Control in Vicinity of Signalized Intersections. *Transp. Res. Rec.* **2016**, *2559*, 108–119. [[CrossRef](#)]
97. Manzie, C.; Watson, H.; Halgamuge, S. Fuel Economy Improvements for Urban Driving: Hybrid vs. Intelligent Vehicles. *Transp. Res. Part C Emerg. Technol.* **2007**, *15*, 1–16. [[CrossRef](#)]
98. Wang, Z.; Chen, X.; Ouyang, Y.; Li, M. Emission Mitigation via Longitudinal Control of Intelligent Vehicles in a Congested Platoon. *Comput. Aided Civ. Infrastruct. Eng.* **2015**, *30*, 490–506. [[CrossRef](#)]
99. Bose, A.; Ioannou, P. Evaluation of the Environmental Effects of Intelligent Cruise Control Vehicles. *Transp. Res. Rec.* **2001**, *1774*, 90–97. [[CrossRef](#)]
100. Choi, J.-E.; Bae, S.-H. Development of a Methodology to Demonstrate the Environmental Impact of Connected Vehicles under Lane-Changing Conditions. *Simulation* **2013**, *89*, 964–976. [[CrossRef](#)]
101. Greenblatt, J.B.; Saxena, S. Autonomous Taxis Could Greatly Reduce Greenhouse-Gas Emissions of US Light-Duty Vehicles. *Nat. Clim. Chang.* **2015**, *5*, 860–863. [[CrossRef](#)]
102. Taiebat, M.; Stolper, S.; Xu, M. Forecasting the Impact of Connected and Automated Vehicles on Energy Use: A Microeconomic Study of Induced Travel and Energy Rebound. *Appl. Energy* **2019**, *247*, 297–308. [[CrossRef](#)]
103. Kopelias, P.; Demiridi, E.; Vogiatzis, K.; Skabardonis, A.; Zafiropoulou, V. Connected & Autonomous Vehicles—Environmental Impacts—A Review. *Sci. Total Environ.* **2020**, *712*, 135237. [[PubMed](#)]
104. Shepherd, S.P. A Review of System Dynamics Models Applied in Transportation. *Transp. B Transp. Dyn.* **2014**, *2*, 83–105. [[CrossRef](#)]
105. Sterman, J. *System Dynamics: Systems Thinking and Modeling for a Complex World*; Massachusetts Institute of Technology: Cambridge, MA, USA, 2002.
106. Stepp, M.D.; Winebrake, J.J.; Hawker, J.S.; Skerlos, S.J. Greenhouse Gas Mitigation Policies and the Transportation Sector: The Role of Feedback Effects on Policy Effectiveness. *Energy Policy* **2009**, *37*, 2774–2787. [[CrossRef](#)]
107. Andrea, P.; Conor, H.; Veronica, P. *The Influence of Transport on GHG Emission in Brisbane*; The University of Queensland: Brisbane, Australia, 2014.
108. Boll, C. The Impact of COVID-19 on Adoption of Autonomous Vehicle Technology. 2020. Available online: <https://www.foley.com/en/insights/publications/2020/08/covid-19-adoption-autonomous-vehicle-technology> (accessed on 11 November 2020).





Kate Harrison  
Councilmember District 4

CONSENT CALENDAR  
October 11, 2022

To: Honorable Mayor and Members of the City Council  
From: Councilmember Harrison (Author) and Councilmember Hahn (Co-sponsor)  
Subject: Adopt an Ordinance Adding Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement

RECOMMENDATION

1. Adopt an Ordinance Amending Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement.
2. Refer to the City Manager to report to Council within six months with anonymized data and information regarding discriminatory reports to law enforcement.

POLICY COMMITTEE RECOMMENDATION

On September 19, 2022, the Public Safety Policy Committee adopted the following action: M/S/C (Taplin/Kesarwani) to approve the item with a positive recommendation.  
Vote: All Ayes.

CURRENT SITUATION, EFFECTS, AND RATIONALE FOR RECOMMENDATION

As the City of Berkeley addresses disparate policing outcomes, it is critical to consider potential bias stemming from community-initiated calls for service. Over the past year, there have been numerous high-profile instances, including in the Bay Area, of people allegedly calling law enforcement on innocent people on purely discriminatory grounds. It is likely that numerous additional instances go unreported each year. Such incidents cause serious harm to the person falsely accused of a crime, contribute to defamation, cause anxiety and distrust among people of color and other people, and put an unnecessary strain on law enforcement officers responding to frivolous and false calls. Berkeley is not immune to such discriminatory calls and therefore it is the public interest to explicitly expand existing laws regarding false police reports such that it is explicitly unlawful to engage in such behavior and that any aggrieved person may seek restitution through civil means.

BACKGROUND

Adopt an Ordinance Adding Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement

This Ordinance is modelled upon the City and County of San Francisco's recently unanimously adopted 2020 Caution Against Racially and Exploitative Non-Emergencies (CAREN) Act. A similar bill also passed in the State of Virginia.<sup>1</sup>

These laws were passed in the wake of the global protest movement in response to the murder of George Floyd, which highlighted discriminatory calls to law enforcement, including notable incidents in New York City's Central Park and Oakland's Lake Merritt.<sup>2</sup>

In addition to causing serious harm to the person(s) falsely accused of a crime, anxiety and distrust among people of color and other groups, such incidents put an unnecessary strain on law enforcement officers responding to frivolous and false calls. However, this ordinance is not intended to discourage individuals from contacting law enforcement when they are facing real danger or desire to report a crime.

The Berkeley Police Review Commission's 2017 "To Achieve Fairness and Impartiality: Report and Recommendations" cited a number of anecdotal reports from community members alleging discriminatory calls for law enforcement service, including:

- A racially-mixed family was having pizza at Bobby G's on University. Another diner called police saying that the mixed couple were "abusing their child by drinking beer and wine in front of their child." Two police cars arrived with lights flashing. The owner attested that the family were regulars, and were minding their own business watching a football game. Police interrogated the African American father for one hour in a hallway at the restaurant.
- An African American man, a security guard in uniform with a licensed gun, was talking with a Caucasian female on the corner of Bonar and Allston Way after a ceremony at the Berkeley Youth Association. A Caucasian man drove by, parked the car, got out and started videotaping the couple. The African American man asked the driver to stop videotaping. The man answered that it was his right to do so and started making statements such as "don't bring a gun into my neighborhood." After a heated back-and-forth, the driver called the police. Eight cars arrived. The lead officer reviewed the credentials of the African-American man, was satisfied and departed. One of the remaining officers stayed and continue to ask the same questions for another 15 minutes. The African American security guard registered that he felt he was "unduly questioned" and was being "badgered."
- The owners of "44 Restaurant and Lounge" lodged a complaint with NAACP and police. During happy hour to 8p.m.the guests that frequent the bar are a racially mixed crowd. After 8p.m.the guests are predominantly African American. After a minor complaint to police from a resident, the police parked a car with lights off across the street from the establishment for a period of four months. "44" has no history of rowdiness or spillover from bar patrons onto the sidewalk or the street. The bar down the street, Nick's Lounge, has spillover into the street

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<sup>1</sup> Ebrahimji, Alisha, and Amanda Jackson, "San Francisco's 'CAREN Act,' Making Racially Biased 911 Calls Illegal, Is One Step Closer to Becoming a Law," *CNN*, October 21, 2020, [www.cnn.com/2020/10/20/us/caren-act-911-san-francisco-board-passes-first-read-trnd/index.html](http://www.cnn.com/2020/10/20/us/caren-act-911-san-francisco-board-passes-first-read-trnd/index.html).

<sup>2</sup> Nir, Sarah Maslin, "How 2 Lives Collided in Central Park, Rattling the Nation," *The New York Times*, June 14, 2020, [www.nytimes.com/2020/06/14/nyregion/central-park-amy-cooper-christian-racism.html](http://www.nytimes.com/2020/06/14/nyregion/central-park-amy-cooper-christian-racism.html); Fearnow, Benjamin, "A Black Family's Sunday Barbecue Was Interrupted after a Woman Called out Their Charcoal Grill and Phoned the Cops," *Newsweek*, May 10, 2018, [www.newsweek.com/lake-merritt-bbq-barbecue-video-oakland-racist-charcoal-east-bay-black-family-919355](http://www.newsweek.com/lake-merritt-bbq-barbecue-video-oakland-racist-charcoal-east-bay-black-family-919355).

Adopt an Ordinance Adding Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement

almost every night. The owners of “44” and the NAACP observed there is no police presence at Nick’s.<sup>3</sup>

The Berkeley Police Review Commission’s 2017 report was not exhaustive and it is likely that there were numerous additional unreported incidents involving individuals contacting law enforcement to report innocuous behavior as suspicious, or to falsely report alleged criminal behavior, for what appear to be solely discriminatory reasons. Berkeley Police Department staff also cited biased calls for service as a potential factor in racially disparate policing outcomes during the Mayor’s Fair and Impartial Working Group meetings. The intent of this ordinance and referral is to prohibit and daylight these incidents, and to provide an avenue for restitution through the court system.

The misuse of law enforcement by members of the public to discriminate against others is intolerable. Creating a civil cause of action for damages will also discourage this type of behavior and provide a tangible compensation for victims.

Berkeley Municipal Code 13.08 already prohibits persons from knowingly reporting or causing to be reported:

“any false or fictitious request for protection or assistance, or any false or fictitious information indicating that a crime has been or is about to be committed, or to knowingly cause the Police Department to respond to any such false or fictitious report, or to request any assistance or investigation in connection with or as a result of any such false or fictitious report or false or fictitious information.”

This ordinance expands the scope of this existing law to explicitly prohibit false or frivolous reports involving individuals who contact law enforcement to report innocuous behavior as suspicious, or to falsely report alleged criminal behavior, for what appear to be solely discriminatory reasons. Discriminatory calls are defined as those that are made on the basis of a person’s actual or perceived race, color, ancestry, ethnicity, national origin, place of birth, sex, age, religion, creed, disability, sexual orientation, gender identity, weight, or height, and with the intent to do any of the following:

- (1) Infringe upon the person’s rights under either the California Constitution or the United States Constitution;
- (2) Discriminate against the person;
- (3) Cause the person to feel harassed, humiliated, or embarrassed;
- (4) Cause the person to be expelled from a place in which the person is lawfully located;
- (5) Damage the person’s reputation or standing within the community; or
- (6) Damage the person’s financial, economic, consumer, or business prospects or interests.

In addition, any aggrieved person may enforce the provisions of this ordinance by means of a civil action, including special, general and punitive damages.

### FINANCIAL IMPLICATIONS

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<sup>3</sup> Berkeley Police Review Commission, “To Achieve Fairness and Impartiality: Report and Recommendations from the Berkeley Police Review Commission,” November 15, 2017, [https://www.cityofberkeley.info/uploadedFiles/Police\\_Review\\_Commission/Level\\_3\\_-\\_General/FAIR%20%20IMPARTIAL%20POLICING%20REPORT%20final.pdf](https://www.cityofberkeley.info/uploadedFiles/Police_Review_Commission/Level_3_-_General/FAIR%20%20IMPARTIAL%20POLICING%20REPORT%20final.pdf)

Adopt an Ordinance Adding Chapter 13.09 to the Berkeley Municipal Code Prohibiting Discriminatory Reports to Law Enforcement

Staff time will be necessary to implement and enforce this ordinance. However, this ordinance already in part tracks existing law and practices regarding false police reports.

ENVIRONMENTAL SUSTAINABILITY

No immediately identifiable environmental impact.

CONTACT

Councilmember Kate Harrison  
kharrison@cityofberkeley.info | 510-981-7140

ATTACHMENTS:

1. Ordinance

ORDINANCE NO. -N.S.

ADDING A NEW CHAPTER 13.09 TO THE BERKELEY MUNICIPAL CODE  
PROHIBITING DISCRIMINATORY REPORTS TO LAW ENFORCEMENT

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. The Berkeley Municipal Code Chapter 13.09 is added to read as follows:

**Chapter 13.09**  
**Discriminatory Reports to Law Enforcement**

**Sections:**

**13.09.010 Findings and Purpose.**

**13.09.020 Discriminatory Reports to Law Enforcement Prohibited.**

**13.09.030 Civil Cause of Action.**

**13.09.040 Undertaking for the General Welfare.**

**13.09.050 Severability.**

**13.09.010 Findings and Purpose.**

The Council finds and expressly declares as follows:

- A. There have been numerous incidents across the country involving individuals contacting law enforcement to report innocuous behavior as suspicious, or to falsely report alleged criminal behavior, for what appear to be solely discriminatory reasons. Discriminatory law enforcement reports against people of color for racially motivated reasons are common enough that many people of color have experienced one or more incident of being contacted by law enforcement when engaging in normal day-to-day activities. These incidents cause serious harm to the person falsely accused of a crime, cause anxiety and distrust among people of color, and put an unnecessary strain on law enforcement officers responding to frivolous and false calls.
- B. The misuse of law enforcement by members of the public to discriminate against others should not be tolerated and the City should take action to stop such behavior in every way possible. Creating a means for people who suffer this kind of discrimination to seek redress from those who have targeted them through a civil cause of action for damages will discourage this type of behavior and provide a tangible way for these victims to be compensated for this wrong.
- C. This ordinance is not intended to discourage individuals from contacting law enforcement when they are facing real danger or desire to report a crime. It will allow individuals who have been reported to law enforcement for unfair and unnecessary reasons to seek justice and restitution, and will motivate people who contact law enforcement to consider the reasons they are making the report.

**13.09.020 Discriminatory Reports to Law Enforcement Prohibited.**

(a) It shall be unlawful to knowingly make a false or frivolous call to police to cause a peace officer to arrive at a location to contact a person, with the specific intent to do any of the following on the basis of the person's actual or perceived race, color, ancestry, ethnicity, national origin, place of birth, sex, age, religion, creed, disability, sexual orientation, gender identity, weight, or height:

- (1) Infringe upon the person's rights under either the California Constitution or the United States Constitution;
- (2) Discriminate against the person;
- (3) Cause the person to feel harassed, humiliated, or embarrassed;
- (4) Cause the person to be expelled from a place in which the person is lawfully located;
- (5) Damage the person's reputation or standing within the community; or
- (6) Damage the person's financial, economic, consumer, or business prospects or interests.

**13.09.030 Civil Cause of Action.**

(a) Any aggrieved person may enforce the provisions of this Section by means of a civil action.

- (1) A person found to have violated Section 13.09.020 (a) in a cause of action under subsection (a) shall be liable to the aggrieved person for special and general damages, but in no case less than \$1,000 plus attorneys' fees and the costs of the action. In addition, punitive damages may be awarded in a proper case.
- (2) Nothing in this Section shall preclude any person from seeking any other remedies, penalties, or procedures provided by law.

**13.09.040 Undertaking for the General Welfare.**

In enacting and implementing this ordinance, the City is assuming an undertaking only to promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an obligation for breach of which it is liable in money damages to any person who claims that such breach proximately caused injury.

**13.09.050 Severability.**

If any section, subsection, sentence, clause, phrase, or word of this Chapter, or any application thereof to any person or circumstance, is held to be invalid or unconstitutional by a decision of a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions or applications of this Chapter. The Council of the City of Berkeley hereby declares that it would have passed this Chapter and each and every section, subsection, sentence, clause, phrase, and word not declared invalid or unconstitutional without regard to whether any other portion of this Chapter or application thereof would be subsequently declared invalid or unconstitutional.

Section 2. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.







Kate Harrison  
Vice Mayor, District 4

CONSENT CALENDAR  
October 11, 2022

To: Honorable Mayor and Members of the City Council  
From: Vice Mayor Harrison  
Subject: Referral to the November 2022 AAO #1 Budget Process for \$50,000 in Additional Traffic Calming at MLK and Addison

RECOMMENDATION

Referral to the November 2022 AAO1 Budget Process for \$50,000 in additional traffic calming at MLK and Addison.

CURRENT SITUATION, EFFECTS, AND RATIONALE FOR RECOMMENDATION

In 2022, the City of Berkeley installed a median and RRFB at the intersection of Martin Luther King Jr. Way (MLK) and Addison Street as a key feature of converting Addison Street into a Bike Boulevard. A few weeks after installation was completed, a driver tragically collided with a senior couple while they were crossing MLK on Addison.<sup>1</sup>

The City of Berkeley is committed to an equity-focused, data-driven effort to eliminate traffic deaths and severe injury collisions by 2028<sup>2</sup> and has described how it is going to achieve this in the 2017 Bicycle, 2019 Vision Zero Action, and 2020 Pedestrian Plans. Despite these documents and recent efforts to enhance pedestrian and bike infrastructure in the City, traffic violence remains a serious issue. According to the Berkeley Police Department, 2021 was deadliest year for road users in Berkeley since at least 1984. In 2021 alone, 433 collisions resulted in injuries—a 37% increase from 2020.<sup>3</sup>

The MLK and Addison intersection is of critical citywide importance for thousands of Berkeley residents. This intersection serves as an important corridor for seniors, elementary, middle, high school and college students, shoppers, those accessing government services, and inhabitants of existing and new housing. This referral

<sup>1</sup> Emilie Raguso, “Major injuries after driver strikes older married couple in Berkeley crosswalk,” Bekeleyside, July 10, 2022, <https://www.berkeleyside.org/2022/07/10/driver-strikes-older-married-couple-berkeley-crosswalk-major-injuries>.

<sup>2</sup> Berkeley Vision Zero Plan, <https://berkeleyca.gov/your-government/our-work/adopted-plans/vision-zero-action-plan>.

<sup>3</sup> Emilie Raguso, “8 people died in Berkeley crashes in 2021, overall collisions were up 34%,” Bekeleyside, February 25, 2022, <https://www.berkeleyside.org/2022/02/25/berkeley-traffic-collisions-fatalities-up-2021-police-data>.

recommends that \$50,000 in additional traffic calming at MLK and Addison be added to the November 2022 AAO #1 budget process.

## BACKGROUND

The United States, including Berkeley, has relied almost exclusively on driver “education” for decades to make streets safer, while peer countries in Europe and Asia have invested in physical infrastructure to boost safety. Traffic fatalities in the United States rose to just under 43,000 in 2021,<sup>4</sup> while fatalities in Europe have dramatically decreased.<sup>5</sup> Likewise, deaths on Berkeley’s roads are at a 37 year high.<sup>6</sup> Americans are not more prone to making mistakes than their counterparts. The City of Berkeley understands this well and has been undertaking serious efforts to improve the safety of roadways through infrastructure improvements.

At the same time, the climate crisis continues to worsen. Drought, wildfire, extreme weather and heat, and sea-level rise are occurring.<sup>7</sup> Given an estimated 60% of Berkeley’s emissions come from transportation, the City has committed to decreasing reliance on polluting private motor vehicle by improving bike and pedestrian infrastructure.

According to the 2017 Bicycle Plan, a four beacon RRFB, like the one installed at MLK and Addison, can raise vehicle yielding compliance to 88%.<sup>8</sup> Yet, this requires pedestrians and cyclists to always remember to hit the button. At MLK and Addison, despite being a designated bike boulevard, cyclists must dismount, walk onto the sidewalk, hit the button, move off the sidewalk, and resume biking and could choose to remain on the bike and cross without activating the flashing beacons. For pedestrians, we were reminded from the horrible collision on July 9, 2022, that the median and flashing beacons can be insufficient at protecting vulnerable road users from bodily harm.

There are many additional intersection treatments detailed in the 2017 Bicycle Plan that can improve safety for all road users. For instance, to ensure RRFB activation, the city could install pedestrian and cyclist detection systems, the latter of which is commonly used throughout the city already. Witnesses report that the RRFB was not activated by the pedestrians who were hit when crossing this intersection. A speed table or raised crosswalks could also further slow cars—these have been shown to reduce vehicle/pedestrian crashes by 45%, however staff note that Council policy discourages

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<sup>4</sup> National Highway Traffic Safety Administration, “Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021,” <https://www.nhtsa.gov/press-releases/early-estimate-2021-traffic-fatalities>.

<sup>5</sup> Frank Jacobs, “U.S. road deaths far outnumber those in Europe. Why?,” Big Think, June 1, 2022, <https://bigthink.com/strange-maps/road-deaths-us-eu/>.

<sup>6</sup> Emilie Raguso, February 25, 2022.

<sup>7</sup> City of Berkeley, Climate Action Plan, <https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Climate-Action-Plan.pdf>

<sup>8</sup> Berkeley Bicycle Facility Design Toolbox, [https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Bicycle-Plan-2017\\_AppendixF\\_Facility%20Design%20Toolbox.pdf](https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Bicycle-Plan-2017_AppendixF_Facility%20Design%20Toolbox.pdf).

speed tables on arterials, emergency response routes, and bus routes.<sup>9</sup> In addition, the RRFB could be converted into a pedestrian hybrid beacon requiring motorists to make a complete stop. This item does not specific treatments but defers to staff's expertise to determine the highest impact treatments. It is vital and in the public interest that the City finds the right policy solutions so future tragic collisions at the MLK and Addison intersection can be avoided.

FISCAL IMPACTS OF RECOMMENDATION

\$50,000 for traffic safety improvements at the intersection of Martin Luther King Jr. Way and Addison Street.

ENVIRONMENTAL SUSTAINABILITY

Transportation accounts for a substantial portion of Berkeley's total emissions. The City is committed to increasing the modal share of walking and biking to reduce vehicle miles traveled.

CONTACT PERSON

Vice Mayor Kate Harrison, (510) 981-7140

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<sup>9</sup> Ibid.





Rashi Kesarwani  
Councilmember, District 1

CONSENT CALENDAR  
OCTOBER 11, 2022

TO: Honorable Mayor and Members of the City Council

FROM: Councilmember Rashi Kesarwani (Author), Councilmember Terry Taplin (Co-Sponsor)

SUBJECT: Residential Preferential Parking (RPP) Program Expansion for West Berkeley Neighborhoods Within Two Blocks of Commercial Corridors

RECOMMENDATION

Referral to the City Manager to expand the scope of the Residential Preferential Parking (RPP) program as originally proposed by staff during the May 14, 2019 City Council Public Hearing<sup>1</sup> as a way to allow more residents to opt-in to this program.

Expansion of this program should consider:

- Raising permit fees for cost neutrality of the program while increasing both parking enforcement staff and equipment to enable expanded RPP enforcement;
- Adopting a graduated fee increase as recommended by Councilmember Kesarwani in 2019 and presented to Council during the September 10, 2019 City Council meeting<sup>2</sup> whereby each additional permitted vehicle associated with a particular address pays a higher fee—up to three permits (see Table 1);
- Conducting an analysis of Fiscal Year (FY) 2022 Residential Preferential Parking (RPP) Program costs and revenues and returning to Council with an updated fee increase proposal to be effective in the new fiscal permit year for the program.

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<sup>1</sup> May 14, 2019 City Council Meeting Public Hearing: Residential Preferential Parking Program Reform & Expansion Phase II: Recommendations for Increased Enforcement Staffing, Enhanced Football Game Day Enforcement Operations, and Expansion (attached)

<sup>2</sup> September 10, 2019 City Council Meeting: Residential Preferential Parking (RPP) Program: Summer 2019 Update, p. 5 (attached)

**Table 1. Proposed alternate fee structure conceptually suggested by Councilmember Kesarwani in 2019**

| Permit Type                                                                                          | Current Fee | Proposed Fee                                                                       | Change from Current                                      |
|------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------|----------------------------------------------------------|
| Annual Residential & In-Home Care                                                                    | \$66        | <b>\$66</b> first permit<br><b>\$96</b> second permit<br><b>\$126</b> third permit | 0% first permit<br>45% second permit<br>91% third permit |
| Semi-Annual Residential & In-Home Care                                                               | \$33        | <b>\$33</b> first permit<br><b>\$48</b> second permit<br><b>\$63</b> third permit  | “ “                                                      |
| 1-Day Visitor                                                                                        | \$3         | <b>\$3</b>                                                                         | N/A                                                      |
| 14-Day Visitor                                                                                       | \$34        | <b>\$34</b>                                                                        | N/A                                                      |
| 1-Day Senior Center                                                                                  | \$1         | <b>\$1</b>                                                                         | N/A                                                      |
| Community-Serving Facility                                                                           | \$83        | <b>\$108</b>                                                                       | 30%                                                      |
| Merchant                                                                                             | \$185       | <b>\$241</b>                                                                       | 30%                                                      |
| Surcharge per Additional Annual Residential Permit Over Maximum of 3 per Address, if Waiver Approved | \$100       | <b>\$100</b> , applied to 3 <sup>rd</sup> permit fee (\$126)                       | N/A                                                      |

Table taken from the September 10, 2019 City Council Agenda: RPP Summer 2019 Update, p. 5

Eligibility areas to be considered for expansion should also follow the guidelines established in the May 14, 2019 Public Hearing on recommended changes to the RPP program. Specifically, neighbors and neighborhoods would need to satisfy the below requirements in order to opt-in to this program:

- Petitioners obtaining agreement of +51 percent of all housing units in the area;
- Staff verifying limited parking availability in the mid-morning and mid-afternoon;
- Parcel location within two blocks of a major commercial corridor, or adjacent to existing RPP boundaries; and
- In residentially-zoned areas, at least one full block (both sides of a street) must be included in the petition.<sup>3</sup>

## CURRENT SITUATION AND ITS EFFECTS

***The City's parking enforcement team is under-resourced and unable to meet the growing demand for services.*** According to the staff Information Report presented to Council on May 14, 2019, while demands on parking enforcement have increased over the years, staffing levels have remained static. The result has been

<sup>3</sup> May 14, 2019 City Council Meeting Public Hearing: Residential Preferential Parking Program Reform & Expansion Phase II: Recommendations for Increased Enforcement Staffing, Enhanced Football Game Day Enforcement Operations, and Expansion, p. 8

parking enforcement officers (PEOs) being unable to enforce parking restrictions in any given area more than once daily rendering our parking enforcement mechanism weak, at best.<sup>4</sup> The report notes that 18 PEOs patrol geographic areas that include both parking meters and RPP time-limited parking areas, enforcing parking restrictions on more than 1,000 blockfaces with two-hour time limit restrictions, 460 blockfaces with meters of varying time limits, in addition to all other time-limited parking areas throughout the city. Roughly half of parking enforcement time is spent conducting RPP time-limited patrols while the rest is spent enforcing time meters, other time-limited areas, school zones, travel time and dealing with emergencies, such as traffic collisions. Staff do not have the capacity to make multiple visits to a given area on a daily basis. Any new block opting into the RPP program—either in the existing zone or in the possible expanded zone—further reduces the capacity for enforcement.

***Current areas of eligibility for RPP permits exclude most of West Berkeley.*** The current RPP eligibility map on the City of Berkeley’s website (below) shows that the RPP eligibility areas are mostly concentrated east of Sacramento Street, surrounding the University of California, Berkeley. The RPP program was instituted in 1980 to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic, presumably from students at the university and employees associated with both neighborhood and student-oriented businesses.

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<sup>4</sup> May 14, 2019 Information Report to Berkeley City Council: Residential Preferential Parking Program: Spring 2019 Update (attached).





Current RPP Eligibility Map, taken from the City of Berkeley website, August, 2022. Areas outlined in bold indicate boundary lines.

Residents in close proximity to *any* commercial corridor, however, feel the impacts of non-resident-related traffic and difficulties parking close to one's residence. University and San Pablo Avenues, for instance, host establishments drawing high customer volumes, such as Acme Bread, Thai Table, and Casa de Cultura whose popularity compels people to drive in from various parts of the City and beyond, resulting in parking impacts on residential streets. The District 1 office has also received numerous complaints over the years from residents living within a couple blocks of San Pablo Avenue regarding parking impacts from some of the many automotive businesses that use residential street parking for both employees and customer cars, despite prohibitions against doing so. Residents in these areas are unable to opt-in to the RPP program and have no recourse to combat some of the parking and traffic issues.

***Parking demands in residential areas adjacent to San Pablo Avenue are likely to increase as development along the corridor increases.*** In the District 1 portion

of San Pablo Avenue, north of University Avenue, the below developments are already well underway in the planning and entitlement stages:

- 1740 San Pablo Avenue: 54 units
- 1701 San Pablo Avenue: 110 units
- 1201-1205 San Pablo Avenue: 66 units

The above numbers constitute a total of 230 additional housing units that will be built within a 10 block stretch of San Pablo Avenue and added to the area within the next couple of years. Two additional locations, 1835 and 1200 San Pablo Avenue, have at times had project proposals, though the projects have since stalled. The neighborhood blocks around San Pablo Avenue are currently ineligible to opt-in to the RPP program, and this item seeks to give these blocks an opportunity to opt-in to RPP if they so choose. We note that it is current City policy for residents of new developments to be ineligible for the RPP program.

#### BACKGROUND

The RPP program, established in 1980, was intended to 1) protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; 2) help maintain the quality of life in residential areas; and 3) to provide neighborhood parking for residents living on that street. The program limits most non-permit holders to parking for up to two hours, thus keeping more daytime spaces available for residents on a given block, between 9 a.m. and 7 p.m. Monday through Friday, and on some blocks Saturday.

On March 11, 2014, City Council directed staff to evaluate expansion of the RPP program beyond its then-current boundaries.<sup>5</sup> During a September 19, 2017 City Council Worksession, staff discussed some challenges with the RPP program, notably that it was operating at a deficit, and proposed some solutions to be implemented over the next several years.<sup>6</sup> On February 27, 2018, staff returned to Council with suggested policy reforms that were all passed:

- Increase permit fees for program cost neutrality;
- Limit annual permits to three per address;
- Expand RPP eligibility to two new zones in West Berkeley<sup>7</sup>

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<sup>5</sup> March 11, 2014 City Council Agenda: Expansion of Permit Parking to Impacted Areas (attached)

<sup>6</sup> September 19, 2017 City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations (attached)

<sup>7</sup> February 27, 2018 City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion (attached)

On May 14, 2019, staff recommended an Ordinance amendment to Berkeley Municipal Code Chapter 14.72 to allow RPP in areas zoned Mixed Use-Light Industrial; adoption of a resolution to expand and enhance the RPP program by raising permit fees for cost neutrality while increasing parking enforcement staff and equipment to augment enforcement and improve UC Berkeley home football gameday parking enforcement; adoption of a resolution modifying parking restrictions in specified RPP zones on UC Berkeley home football game days; and adoption of a resolution establishing a new Parking Fine Schedule. That same day, staff also presented an information report updating the Council about the effects of the 2018 RPP Program adjustments. Notably, while the fee adjustment did help reduce the operational deficit, it did not eliminate it. The Ordinance amendment as well as the two resolutions were passed during the May 14, 2019 meeting, while Council recommended the fee increase be referred to the Agenda and Rules Committee for future scheduling and discussion. It was scheduled for the July 23, 2019 City Council Agenda, held over again, and rescheduled for the September 10, 2019 City Council Agenda. During the September 10, 2019 meeting, staff recommended conducting an analysis of Fiscal Year (FY) 2020 Residential Preferential Parking (RPP) Program costs and revenues and returning to Council in early 2020 with updated fee increase proposal(s) to be effective the following fiscal year for program enhancement and expansion. Due to the pandemic, this issue never returned to a Council agenda. This current recommendation simply re-establishes a staff process that had already been set into motion but was abruptly halted due to the pandemic and its effects.

### FISCAL IMPACT

There will be costs associated with the RPP Program expansion as well as offsets to those costs. According to the May 14, 2019 Public Hearing, those costs were projected as follows:

Annual cost of \$909,972 from the general fund for:

- Six (6) Parking Enforcement Officers (\$124,818 per FTE; total \$748,907/year)
- One (1) Parking Enforcement Supervisor (\$138,065/year);
- New RPP sign installation, including labor and materials, at \$23,000/year

And, one time costs of \$680,178 for:

- Six (6) parking enforcement vehicles (\$210,000 total)
- Six (6) automated license plate recognition (ALPR) systems (\$78,363 each, \$470,178 total)

These fees would be offset by permit fee increases as well as an increase of revenue from citations. The May 14, 2019 proposed fee increase is shown in Table 2 below:

**Table 2. Proposed Permit Fee Increase as presented during the May 14, 2019 Public Hearing, p. 4**

| Permit Type                                                                   | Current Fee | Proposed Fee | \$ Increase | % Increase |
|-------------------------------------------------------------------------------|-------------|--------------|-------------|------------|
| Annual Residential & In-Home Care                                             | \$66.00     | \$90.00      | \$24.00     | 36.4%      |
| 1-Day Visitor                                                                 | \$3.00      | \$4.00       | \$1.00      | 33.3%      |
| 14-Day Visitor                                                                | \$34.00     | \$47.00      | \$13.00     | 38.2%      |
| Semi-Annual Residential & In-Home Care                                        | \$33.00     | \$45.00      | \$12.00     | 36.4%      |
| Community-Serving Facility                                                    | \$83.00     | \$114.00     | \$31.00     | 37.3%      |
| Merchant                                                                      | \$185.00    | \$253.00     | \$68.00     | 36.8%      |
| 1-Day Senior Center                                                           | \$1.00      | \$1.00       | N/A         | N/A        |
| Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits | \$15.00     | \$21.00      | \$6.00      | 40.0%      |

Considerable time has elapsed between that meeting and today which is why an updated fiscal analysis is part of the current recommendation. These numbers and table above have been provided to give an approximation of costs for the RPP program expansion.

#### ENVIRONMENTAL IMPACTS

The RPP program two-hour time limits and other enforced timed-parking restrictions may encourage some drivers to use alternate modes of travel resulting in reduced parking demand and congestion.

#### CONTACT

Councilmember Rashi Kesarwani, District 1

(510) 981-7110

#### Attachments:

- 1) September 10, 2019 City Council Agenda: Residential Preferential Parking (RPP) Program: Summer 2019 Update
- 2) May 14, 2019 City Council Agenda, item #50: Residential Preferential Parking Program Reform and Expansion Phase II: Recommendations for Increased Staffing, Enhanced Football Game Day Enforcement, and Expansion
- 3) May 14, 2019 City Council Agenda, item #61: Residential Preferential Parking: Spring 2019 Update

- 4) February 27, 2018 City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion
- 5) September 19, 2017 City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations
- 6) March 11, 2014 City Council Agenda: Expansion of Permit Parking to Impacted Areas





Office of the City Manager

ACTION CALENDAR  
September 10, 2019  
(Continued from July 23, 2019)

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip Harrington, Director, Public Works  
Subject: Residential Preferential Parking (RPP) Program: Summer 2019 Update

RECOMMENDATION

Direct staff to conduct analysis of Fiscal Year (FY) 2020 Residential Preferential Parking (RPP) Program costs and revenues and return to Council early 2020 with updated fee increase proposal(s) to be effective April 1, 2020 for the FY 2021 permit year, for Program enhancement and expansion.

FISCAL IMPACTS OF RECOMMENDATION

Staff time associated with the ongoing analysis is included in the FY 2020 & FY 2021 Biennial Budget as it is part of the baseline RPP Program.

CURRENT SITUATION AND ITS EFFECTS

This report summarizes changes to the RPP Program since the May 14, 2019 Council Meeting, at which staff presented a package of “mid-term” reforms to the RPP Program.<sup>1</sup> A summary of Council action at this meeting is provided in the Background section below, and the full report is included as Attachment 2.

RPP Program Operations

In July 2019, the City began processing annual RPP permit renewals, visitor permit sales, and new permit applications for FY 2020 using the new Passport parking and citation management system.<sup>2</sup> This system allows RPP customers to use their license plates as permits, removing the need for bumper permits, and streamlines new RPP permit applications by allowing customers to check their eligibility and submit required documentation online. Fees for FY 2020 permits remained unchanged from FY 2019.

To answer a question from Councilmember Kesarwani, staff also prepared an analysis evaluating the potential of a graduated pricing model for annual RPP permits, whereby

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<sup>1</sup> May 14, 2019 *City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion Phase II: Recommendations for Increased Staffing, Enhanced Football Game Day Enforcement, and Expansion* <http://bit.ly/2ZW6Ee5>

<sup>2</sup> October 16, 2018 *City Council Agenda: Contract: Passport Labs Incorporated for a Parking Management System* <http://bit.ly/2LtRN6N>

the costs for each additional permit up to the limit of three (3) would increase incrementally. The analysis showed that this pricing model could generate revenue on par with the original staff recommendation. Graduated pricing would be more equitable since those who own more cars and have more impact on neighborhood parking would pay a greater share of the Program cost. Implementing such a pricing model is now possible using the Passport system. A summary of this proposal is provided as Attachment 2.

Unfortunately, expanding the RPP Program beyond its current boundaries is not financially possible at this time. As discussed at the May 14, 2019 meeting, additional staff are required to enforce any new areas. Permit fees are an important revenue source supporting the RPP Program, as residents and other permit holders directly benefit from the parking availability resulting from time limit enforcement. With permit renewals currently underway, the window of opportunity to affect FY 2020 permit fees has closed.

#### BACKGROUND

The RPP Program began in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 8:00 a.m. and 7:00 p.m. Monday through Friday, and in some areas Saturday.

In March 2014,<sup>3</sup> Council directed staff to evaluate expanding the RPP Program beyond its then-current geographic boundaries. At a September 2017 Council Worksession, staff proposed incremental changes to be implemented over a three-year period.<sup>4</sup> In February 2018, staff returned to Council with a first set of “short-term” policy reforms, including increased permit fees for Program cost neutrality, a limit of three (3) annual permits per address, and an expansion of RPP eligibility to two new zones in West Berkeley.<sup>5</sup>

At the May 14, 2019 Council Meeting, staff presented a package of “mid-term” reforms to the RPP Program. These recommendations included increasing permit fees to pay for new staff and equipment that would enhance enforcement in existing Program areas, particularly on UC Berkeley home football game days, and allowing expansion to new areas. Council took the following action:

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<sup>3</sup> March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas*: <http://bit.ly/2vTgnqD>

<sup>4</sup> September 19, 2017 *City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations*: <https://bit.ly/2iWaPDa>

<sup>5</sup> February 27, 2018 *City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion*: <https://bit.ly/2Yq6tYB>.



- Amended the Berkeley Municipal Code via ordinance to allow residents in areas zoned Mixed Use-Light Industrial and who meet all other requirements applicable to Mixed Use-Residential zoned areas to submit an opt-in petition to the RPP Program, which would be enforced upon hiring new enforcement staff;
- Established via resolution “Enhanced Fine Areas” in portions of RPP zones B, D, F, G, and I to prohibit parking without a valid RPP permit on UC Berkeley home football game days; and
- Established via resolution a new Parking Fine Schedule including parking fines of \$225 for not displaying a valid RPP permit in new Enhanced Fine Areas.

Council did not approve a new fee schedule for RPP permits, which would have increased all permit fees by an average of 37% to generate additional revenue for six (6) new Parking Enforcement Officers, one (1) new supervisor, and associated equipment. These staff positions would allow for enhanced enforcement in existing RPP Program areas, particularly during staff shortages on Cal football game days, and enforcing restrictions in new areas not currently within RPP Program boundaries.

Improving the effectiveness of the RPP Program is a Strategic Plan Priority Project, advancing the City’s goals to:

- Provide an efficient and financially-healthy City government; and
- Be a customer-focused organization that provides excellent, timely, easily-accessible service and information to the community.

ENVIRONMENTAL SUSTAINABILITY

This item has no discernible environmental effects.

RATIONALE FOR RECOMMENDATION

For continued RPP Program cost neutrality, staff seek to present cost and revenue analyses that reflect the most recent available data. Both the original RPP permit fee increase proposal and the alternative model are based on FY 2019 revenues. RPP revenues fluctuate from year to year, and as the City transitions to the new Passport parking management system, any permit fee increase proposals will require an assessment of FY 2020 costs and revenues to maximize accuracy and applicability.

ALTERNATIVE ACTIONS CONSIDERED

Council could schedule a public hearing to approve fee increase proposals based on FY 2019 data, but any authorized changes at this time would have no meaningful fiscal effect until the FY 2021 permit renewal period in spring 2020.

CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
Gordon Hansen, Senior Planner, Public Works (510) 981-7064

**Attachments:**

- 1: Alternative Graduated RPP Fee Increase Model (Based on FY 2019 Revenues)
- 2: May 14, 2019 Council Report: "Residential Preferential Parking Program Reform and Expansion Phase II: Recommendations for Increased Staffing, Enhanced Football Game Day Enforcement and Expansion"

Proposed Alternate FY 2020 Fee Structure

The fee structure below was developed in response to an inquiry from Councilmember Kesarwani. The analysis is based in part on FY 2019 permit revenues.

| Permit Type                                                                                          | Current Fee | Proposed Fee                                                                       | Change from Current                                      |
|------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------|----------------------------------------------------------|
| Annual Residential & In-Home Care                                                                    | \$66        | <b>\$66</b> first permit<br><b>\$96</b> second permit<br><b>\$126</b> third permit | 0% first permit<br>45% second permit<br>91% third permit |
| Semi-Annual Residential & In-Home Care                                                               | \$33        | <b>\$33</b> first permit<br><b>\$48</b> second permit<br><b>\$63</b> third permit  | “ “                                                      |
| 1-Day Visitor                                                                                        | \$3         | <b>\$3</b>                                                                         | N/A                                                      |
| 14-Day Visitor                                                                                       | \$34        | <b>\$34</b>                                                                        | N/A                                                      |
| 1-Day Senior Center                                                                                  | \$1         | <b>\$1</b>                                                                         | N/A                                                      |
| Community-Serving Facility                                                                           | \$83        | <b>\$108</b>                                                                       | 30%                                                      |
| Merchant                                                                                             | \$185       | <b>\$241</b>                                                                       | 30%                                                      |
| Surcharge per Additional Annual Residential Permit Over Maximum of 3 per Address, if Waiver Approved | \$100       | <b>\$100</b> , applied to 3 <sup>rd</sup> permit fee (\$126)                       | N/A                                                      |

Revenue Estimates

In the May 14, 2019 Council Report, the proposed permit fees resulted in a cost-neutral program. According to staff estimates, the alternate fee structure would result in the same.

| RPP Fee Proposal         | Description                                                                             | Estimated Revenue Generated |
|--------------------------|-----------------------------------------------------------------------------------------|-----------------------------|
| <b>Original 5/14/19</b>  | Raise all RPP permit fees by an average of 37%                                          | \$1,305,240                 |
| <b>Alternate 6/2019</b>  | Adopt graduated pricing for annual permits & 30% increase for other annual permit types | \$1,304,649                 |
| Difference from original |                                                                                         | (\$591)                     |

Relevant Statistics

Of nearly 9,500 accounts issued annual residential permits in FY 2019...

- 66% had one (1) permit
- 25% had two (2) permits
- 8% had three (3) permits
- Just over 1% had four (4) or more permits





Office of the City Manager

PUBLIC HEARING  
May 14, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Phillip Harrington, Director, Public Works  
 Subject: Residential Preferential Parking Program Reform and Expansion Phase II: Recommendations for Increased Staffing, Enhanced Football Game Day Enforcement, and Expansion

RECOMMENDATION

Conduct a public hearing and upon conclusion:

1. Adopt first reading of an Ordinance amending Berkeley Municipal Code Chapter 14.72 to allow Residential Preferential Parking (RPP) in areas zoned Mixed Use-Light Industrial;
2. Adopt a Resolution to expand and enhance the RPP Program, raising permit fees for cost neutrality while increasing parking enforcement staff and equipment to augment RPP enforcement, improving UC Berkeley home football game parking enforcement, allowing more residents to opt-in, and rescinding Resolution 68,344-N.S.;
3. Adopt a Resolution modifying parking restrictions in specified RPP Zones on UC Berkeley home football game days as follows: establish “Enhanced Fine Areas” to prohibit parking without a valid RPP permit in portions of RPP Zones B, D, F, G, and I; and install new RPP signs in zones B, D, F, G, and I to clearly indicate UC Berkeley home football game day parking prohibitions; and
4. Adopt a Resolution establishing a new Parking Fine Schedule, including parking fines of \$225 per violation of BMC 14.40.090 in new Enhanced Fine Areas on posted UC football game days, and rescinding Resolution No. 68,466-N.S.

SUMMARY

The recommended actions constitute a package of “mid-term” changes to the RPP Program, developed in response to previous Council direction. These changes include: 1) hiring (7) seven more parking enforcement personnel to augment enforcement in existing and new RPP Zones, particularly on UC Berkeley home football game days; 2) instituting new parking restrictions and increased fines on football game days; 3) allowing blocks currently ineligible for RPP to opt-in to the Program; and 4) increasing permit fees to make the Program cost-neutral.

**FISCAL IMPACTS OF RECOMMENDATION**

The recommendation would provide staffing to increase enforcement of RPP Program parking restrictions, including during UC Berkeley football games, and allow many currently ineligible residents to opt-in to the Program. The capital and operational cost and revenue elements associated with these changes are summarized below. These are new obligations, in addition to existing costs to operate the program.

**Football Game Day Enforcement Cost**

Implementing the recommendation for the 2019 football season will incur a one-time capital cost of \$80,000, including:

- Approximately 500 new Residential Preferential Parking (RPP) signs specifying new parking restrictions, at a unit cost of \$100 per sign, and 250 person hours to install the new signs for a one-time labor cost of \$25,000; and
- Approximately 500 decals to identify football game dates (replaced annually) at cost of \$5,000. Initial decal installation included with sign installation cost. Annual decal replacement requires 100 person hours at a cost of \$10,000.

Staff calculates the ongoing cost to be \$15,000 annually. Initial and annual costs are summarized in the table below:

|              |           | <b>Initial Cost</b>            | <b>Ongoing Annual Cost</b> |
|--------------|-----------|--------------------------------|----------------------------|
| Signs        | Materials | \$50,000                       | N/A                        |
|              | Labor     | \$25,000                       | N/A                        |
| Decals       | Materials | \$5,000                        | \$5,000                    |
|              | Labor     | Included in sign installation. | \$10,000                   |
| <b>Total</b> |           | <b>\$80,000</b>                | <b>\$15,000</b>            |

Currently, the UC Berkeley Athletics Department reimburses the City for signs produced and installed to manage football game day traffic. The current signs are over 20 years old; in 2017, UC paid approximately \$18,600 for sign and decal maintenance costs. Staff recommend that City leadership coordinate with UC Berkeley to fund the recommended one-time signage/decal upgrades, plus ongoing annual costs.<sup>1</sup>

**RPP Program Enforcement Enhancement and Expansion Cost**

The fiscal impact of all of these recommendations will be realized in the General Fund (011). All permit fees and citation revenues, including revenue from new enforcement staff, will be deposited in the General Fund. In turn, all new staff and equipment costs will come out of the General Fund. Costs include:

- Six (6) Parking Enforcement Officers (\$124,818 per FTE; total \$748,908/year), and one (1) Parking Enforcement Supervisor at \$138,065/year;

<sup>1</sup> If UC Berkeley is unable to pay this cost, then the funding would come from the General Fund.



- Six (6) parking enforcement vehicles (\$210,000 total), each equipped with standard automated license plate recognition (ALPR) systems at \$78,363 each (\$470,178), annualized over a five-year period;<sup>2</sup> and
- New RPP sign installation, including labor and materials, at \$23,000 per year.<sup>3</sup>

#### Estimated New Revenue

During the 2018 season, football-related RPP citations resulted in \$49,100 in revenue, and staff anticipates the new “Enhanced Fine Areas” to generate an additional \$31,650. More significantly, hiring six (6) more PEOs is expected to increase citation revenue in both new and existing RPP areas. Staff estimate that each new PEO would issue up to \$75,000/year in RPP citations, for a total of \$450,000/year.

#### Incremental Fiscal Impact in FY 2020

Hiring of new PEOs and procurement of associated enforcement equipment would take place over the course of FY 2020, resulting in incremental increases in new citation revenue as new staff are selected, trained, and deployed. Similarly, each opt-in petition for new areas will take time to verify and bring to Council for approval, resulting in delayed revenues from permits purchased in expansion areas. Therefore, the full fiscal impact of the Program’s expansion and enhancement will not be seen in FY 2020. Staff will continue to monitor the Program’s costs and revenues as new enforcement staff are hired.

#### User Fee Increases for Cost Neutrality

Per Council Budget Policies,<sup>4</sup> the RPP Program should pay for itself. As of March 2019, the RPP Program still runs a deficit of approximately \$124,675. The deficit has shrunk by \$71,125 since FY 2017, when the deficit was approximately \$195,800. This deficit reduction, but not elimination, may be due in part to a decline in permit revenues following the 20% fee increase on April 1, 2018. Customers may also have reevaluated their needs in light of the new maximum of three (3) annual permits per address.

The proposed fee structure would go into effect June 1, 2019, to support increasing enforcement in FY 2020. It is estimated to generate approximately \$368,280 of additional revenue, including \$21,600 from annual permit sales in potential new opt-in areas, for the General Fund (Fund 011). The following table reflects increases for each type of permit in the RPP fee structure to result in a cost-neutral Program.

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<sup>2</sup> Proposed permit fees incorporate half of PEO salary costs, and half of the one-time vehicle and equipment costs, as RPP enforcement accounts for approximately half of all parking enforcement duties. Remaining costs are expected to be covered by new revenues resulting from new staff enforcing other duties, such as street sweeping, parking meter payments, and school zones.

<sup>3</sup> Up to twenty blocks in new areas would be allowed to join the Program per year. Staff assumes six RPP signs per block (three signs on each side of the block), and approximately \$1,150 per block.

<sup>4</sup> “Council Budget Policies”: <http://bit.ly/2z4UiFY>

| Permit Type                                                                   | Current Fee | Proposed Fee | \$ Increase | % Increase |
|-------------------------------------------------------------------------------|-------------|--------------|-------------|------------|
| Annual Residential & In-Home Care                                             | \$66.00     | \$90.00      | \$24.00     | 36.4%      |
| 1-Day Visitor                                                                 | \$3.00      | \$4.00       | \$1.00      | 33.3%      |
| 14-Day Visitor                                                                | \$34.00     | \$47.00      | \$13.00     | 38.2%      |
| Semi-Annual Residential & In-Home Care                                        | \$33.00     | \$45.00      | \$12.00     | 36.4%      |
| Community-Serving Facility                                                    | \$83.00     | \$114.00     | \$31.00     | 37.3%      |
| Merchant                                                                      | \$185.00    | \$253.00     | \$68.00     | 36.8%      |
| 1-Day Senior Center                                                           | \$1.00      | \$1.00       | N/A         | N/A        |
| Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits | \$15.00     | \$21.00      | \$6.00      | 40.0%      |

The proposed fee structure is estimated to generate approximately \$1,305,240 in revenue for the General Fund in FY 2021, once all new staff have been hired and anticipated expansion has occurred. This increase of \$368,280 in revenue would close the projected deficit, resulting in a cost-neutral Program (the \$600 difference is within the margin of approximation). With the proposed fee increase, the total Program revenue is projected to be \$3.41 million including revenue resulting from an increase in RPP-related citations due to higher staffing levels and new football fines.

| RPP Program Financial Components      | April 2018-March 2018 Actuals | FY 2021 Projections |
|---------------------------------------|-------------------------------|---------------------|
| Total RPP Permit Fee Revenue          | \$936,960                     | \$1,305,240         |
| RPP-Related Citation Revenue          | \$1,573,840                   | \$2,023,840         |
| Football RPP-Related Citation Revenue | \$49,100                      | \$80,750            |
| <b>Total Revenue</b>                  | <b>\$2,559,910</b>            | <b>\$3,409,830</b>  |
| <b>Total RPP Program Costs</b>        | <b>\$2,684,580</b>            | <b>\$3,409,230</b>  |
| <b>RPP Program Deficit/Surplus</b>    | <b>(\$124,670)</b>            | <b>\$600</b>        |

CURRENT SITUATION AND ITS EFFECTS

This report represents “mid-term” changes to the RPP Program as part of ongoing RPP Program Reform & Expansion. Building on the initial “short-term” changes enacted by Council in February 2018, described in the accompanying Information Report on this Agenda, this report recommends “mid-term” changes that respond to remaining resident requests and Council referrals.

UC Berkeley Football Game Day Parking Demand

The UC Berkeley football season typically spans twelve (12) games between September and November. Up to seven (7) games per year are played at California



Memorial Stadium (“stadium”), near the eastern end of Bancroft Avenue. Most home games occur on Saturday afternoons or evenings. Neighborhoods surrounding UC Berkeley currently have RPP. South of campus, RPP Zones A, B, D, and K are enforced Monday to Saturday, with the exception of Zones I (Telegraph) and L (Claremont), which are not enforced on Saturday. North of campus, RPP Zones F and G are enforced Monday through Friday.

Game attendees who drive and park in surrounding neighborhoods can make it difficult for some residents to find parking near their homes during games. In fall 2017, the City analyzed game day parking south of campus.<sup>5</sup> The analysis found that parking occupancy in the study area increased by about 25% on a game day compared to a non-game day, with increases of approximately 35-50% closest to campus (RPP Zones B, D, and I). Anecdotal evidence from residents also suggests poor parking by visitors may impede access to residential driveways at times.

Existing Game Day Parking Restrictions

Special parking restrictions and enforcement on football game days currently includes:

- Increased fines for certain parking violations<sup>6</sup> within the boundaries of Cedar Street (north), Berkeley-Oakland city limits (south and east), and Oxford and Fulton Streets (west), with double fines in RPP Zones A, B, and D; and
- Tow-away zones for all vehicles on certain streets close to campus,<sup>7</sup> and additional no-parking areas at metered parking spaces in the Southside and Northside areas.

The Berkeley Police Department (BPD) requires substantial staff time and resources for football game day duties. BPD typically assigns sworn officers on overtime to patrol areas near the stadium to discourage bad behavior.<sup>8</sup> Any staffing gap is filled by parking enforcement personnel. Between five and seven PEOs may be reassigned to game day duty, with one PEO specifically assigned to regulate access to the Panoramic Hill neighborhood (RPP Zone K). That leaves between two and four PEOs to enforce meter payments, curb markings, or RPP time limits elsewhere in the City. As shown in the table below, the City does not have enough PEOs to provide regular Saturday enforcement in addition to football duties on game days.

| Enforcement Duties | Number of Assigned PEOs |
|--------------------|-------------------------|
|--------------------|-------------------------|

<sup>5</sup> Specifically, Zones A, B, D, I, and L. While not explicitly studied, staff assume neighborhoods north of campus experience similar game day parking demand patterns.

<sup>6</sup> Football game day defined as 9:30 a.m. to 11 p.m., regardless of game start time. Most football game day citation rates are 150% of non-game day citation rates. For example, a citation for a vehicle parked in a No Parking Zone (red curb) that is normally \$64 costs \$96 on a game day.

<sup>7</sup> For example: Piedmont Avenue between the stadium and Channing Way, Bancroft Way between Warring Street and Bowditch Street, and College Avenue between Bancroft Way and Dwight Way.

<sup>8</sup> UC Berkeley reimburses the City for BPD overtime costs.

|                                             | <b>Non-Game Days</b> | <b>Football Game Days</b> |
|---------------------------------------------|----------------------|---------------------------|
| Game Day Activities                         | 0                    | 5-7                       |
| Parking Meters, Curbs, Time Limits, and RPP | 7-9                  | 2-4                       |

Requests for Further Program Expansion

In the past year, staff received four (4) opt-in requests from residents outside of the current RPP eligibility area, all of them in northwest Berkeley.<sup>9</sup> In the previous five years, staff have received another five (5) requests from residents outside of the program boundaries.<sup>10</sup> A map depicting these requests is provided as Attachment 5.

Recommendation: Increase and Enhance RPP Enforcement, Including on Football Game Days, and Expand RPP Eligibility

1. Enhanced Enforcement in Existing RPP Areas

Due to staffing constraints discussed in the accompanying Information Report on this Agenda, enforcement in existing RPP areas occurs only once per day. Staff recommend hiring sufficient parking enforcement staff to resume morning and afternoon patrols of existing RPP areas. This will help reinforce RPP time limits, particularly on streets near popular destinations such as public facilities or commercial districts. Increased patrols may also reduce the amount of one-off requests from residents who do not observe enforcement as frequently, which reduce PEOs’ ability to conduct regularly-scheduled beat patrols.

To further increase parking enforcement capacity, staff also recommend that PEOs should no longer accompany street sweeping vehicles. Instead, beat officers would enforce restrictions during the three-hour restriction window, before the sweeper cleans the street, to allow time for other responsibilities.<sup>11</sup> Additionally, staff strongly recommend against introducing additional permit types for resident services, e.g., ‘nanny permits’, or ‘gardener permits’, which serve as exemptions from RPP restrictions. In addition to further increasing already high parking demand in some areas, adding new permits for non-residents dilutes the Program’s effectiveness for all existing permit holders and encourages more driving, which is contrary to the City’s

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<sup>9</sup> Requests received in FY 2019 include: 10th Street between Cedar and Jones Streets; 10th Street from University Avenue to Allston Way, Addison Street from 10th Street to San Pablo Avenue, and Allston Way from 10th Street to San Pablo Avenue; Camelia Street from 7th to 8th Street; and Page Street from 8th to 9th Street.

<sup>10</sup> Requests received prior to FY 2019 include: Campus Drive from Avenida Drive to the Berkeley Lab Campus; Spruce Street from Los Angeles Avenue to Eunice Street; Stannage Avenue between Gilman Street and Harrison Street; Stanton Street from Ashby Avenue to Prince Street; and various areas adjacent to Solano Avenue.

<sup>11</sup> In the future, street sweeping vehicles may be equipped with GPS beacons, which would allow residents to check when streets reopen for parking in real-time.



Climate Action Plan goals of reducing vehicular emissions.

2. Enhanced Game Day Parking Management and Enforcement

In response to Council referrals, staff has prepared a proposal for the 2019 football season to improve parking availability for residents in neighborhoods closest to campus. Illustrated in Attachment 6, this proposal builds on existing game day restrictions by adding tougher penalties for non-residents closer to the stadium:

- **New tow-away areas for vehicles without a valid RPP permit** on streets within one quarter-mile of the stadium (including portions of RPP Zones D and I), where demand was heaviest on the game day analyzed in fall 2017.
- **New “Enhanced Fine Areas”** on streets within one half-mile of the stadium (including portions of RPP Zones F and G north of campus and portions of Zones B and D south of campus), where vehicles without a valid RPP permit will be subject to a one-time fine of \$225.<sup>12</sup>

This proposal maximizes game day staff capacity and effectiveness in areas where residents experience the most inconvenience. While current enforcement requires two passes to determine whether a non-permitted vehicle exceeds the time limit, under this proposal a PEO will need to check only once to verify whether a vehicle has a permit.

Signage is critical to effective enforcement of parking restrictions. In addition to clearly defining expectations for visitors, signage justifies the issuance of citations that violate posted restrictions. Details about the costs and content of new signage required to implement this proposal is provided in the Fiscal Impacts section of this report.

3. Additional Strategies to Increase Parking Availability on Game Days

While some street parking spaces near the stadium are restricted on game days, metered parking is available for visitors in Downtown, Southside/Telegraph, and the Northside area.<sup>13</sup> Staff will return to Council later this year with options for special events, including adjusting special event rate setting ability at City parking garages, and piloting demand-responsive special event pricing at goBerkeley parking meters.

4. Further Expansion of RPP Program Eligibility

Although there have been relatively few opt-in requests from outside the current Program boundary, they still represent a customer need that the City cannot meet with existing staffing levels. To maximize enforcement resources, currently ineligible residents would be able to opt-in under the following conditions:

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<sup>12</sup> Staff are sensitive to low income residents and visitors who may not be able to afford this fine. Options include a payment plan (AB 503), as well as applying to perform Community Service in lieu of paying for parking citations.

<sup>13</sup> Meters operate 9 a.m. to 6 p.m. Monday to Saturday. On the Northside, Hearst Avenue between Euclid Avenue and La Loma Avenue is a tow-away zone on game days.

- A. Meet all existing requirements, including petitioner obtaining agreement of 51+% of all housing units in an area, and staff verifying limited parking availability in the mid-morning and mid-afternoon;
- B. Parcels must be located within two (2) blocks of a major commercial corridor (e.g., San Pablo Avenue or Gilman Street); or be adjacent to existing RPP boundaries; and
- C. In residentially-zoned areas, at least one full block (i.e., two sides of a street) must be included in the petition.

Petitioners in areas zoned Mixed Use-Residential or Mixed-Use Light Industrial will be subject to restrictions approved by Council in 2018 for Mixed Use Area P, including a reduced maximum of two (2) annual permits available per address. While slightly more restrictive than current requirements, this expansion approach would allow all petitioners who have submitted opt-in requests to date to be eligible for RPP.

**5. Staffing Requirements**

Enhanced enforcement, including new football game day restrictions, requires five (5) new PEOs and one (1) Parking Enforcement Supervisor, plus standard equipment. Expansion requires one (1) additional PEO for every twenty full blocks (i.e., both sides of a street) added to the Program, plus standard equipment.

**BACKGROUND**

The RPP Program began in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00 a.m. and 7:00 p.m. Monday through Friday, and on some blocks Saturday.

In March 2014,<sup>14</sup> Council directed staff to evaluate expanding the RPP Program beyond its then-current geographic boundaries. At a September 2017 Council Worksession, staff discussed several challenges with the RPP Program, and proposed incremental solutions to be implemented over the next three years.<sup>15</sup> In February 2018, staff returned to Council with a first set of “short-term” policy reforms, including increased permit fees for Program cost neutrality, a limit of three (3) annual permits per address, and an expansion of RPP eligibility to two new zones in West Berkeley.<sup>16</sup> Improving the effectiveness of the RPP Program is a Strategic Plan Priority Project, advancing the City’s goals to:

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<sup>14</sup> March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas:* <http://bit.ly/2vTgnqD>

<sup>15</sup> September 19, 2017 *City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations:* <https://bit.ly/2iWaPDa>

<sup>16</sup> February 27, 2018 *City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion:* <https://bit.ly/2Yq6tYB>.



- Provide an efficient and financially-healthy City government; and
- Be a customer-focused organization that provides excellent, timely, easily-accessible service and information to the community.

### Football Game Day Enforcement

On April 5, 2016, Councilmembers Capitelli, Droste, and Wengraf sponsored a Referral to the Transportation Commission to review game day parking fines in RPP areas around campus, and to recommend higher fees to deter visitors from parking in those areas.<sup>17</sup> On July 25, 2017, the Transportation Commission submitted a Council Report recommending an increase of game day parking fines to \$300 for vehicles without a valid RPP permit in Zones A, B, and D south of campus, but Council did not adopt the Commission's recommendation.<sup>18</sup> On September 25, 2018, Councilmembers Droste, Wengraf, and Mayor Arreguin submitted a referral to the City Manager to implement game day parking restrictions similar to the Transportation Commission's 2017 proposal, but taking into account additional concerns such as parking on the north side of campus.<sup>19</sup>

### ENVIRONMENTAL SUSTAINABILITY

Increasing parking fines for vehicles without valid RPP permits on football game days should increase parking availability for residents in neighborhoods near campus, reducing traffic congestion and vehicle emissions as drivers spend less time searching for parking. Increased fines may also encourage the use of alternative forms of transportation to UC football games.

Expansion of the RPP Program may encourage some drivers who work in commercial areas adjacent to proposed RPP areas to consider using other modes of travel, potentially reducing parking demand and congestion. While use of these other transportation modes may result in a corresponding reduction in traffic and greenhouse gases, staff anticipate the "two-hour shuffle" (i.e., moving a vehicle every two hours to avoid a ticket) may also begin to occur in new RPP areas among commuters who continue to drive. This behavior would have an adverse impact on traffic congestion, air quality, and excess fuel consumption.

### RATIONALE FOR RECOMMENDATION

At the September 19, 2017 Worksession, Council expressed support for a roadmap for RPP reform and expansion, including short-, mid-, and long-term changes to the

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<sup>17</sup> April 5, 2016 *City Council Agenda: Refer to Transportation Commission to Reassess UC Berkeley Game Day Parking Fines in RPP Areas A, B, D, F and G Surrounding Campus* <https://bit.ly/2GRoSzi>

<sup>18</sup> July 25, 2017 *City Council Agenda: Referral Response: Reassess UC Berkeley Game Day Parking Fines in RPP Areas A, B, D, F, and G Surrounding Campus* <https://bit.ly/2fwXaEj>

<sup>19</sup> September 25, 2018 *City Council Agenda: Refer to the City Manager UC Berkeley Game Day Parking Restrictions and Fines in RPP Surrounding Campus* <https://bit.ly/2EwSnfS>

Program. Short-term recommendations were approved by Council in February 2018. The proposals contained in this report comprise staff's "mid-term" recommendations.

In their September 25, 2018 referral, Councilmembers Droste, Wengraf, and Mayor Arreguin supported increasing parking fines to increase parking availability for residents affected by football game demand. Previously, the Transportation Commission has also supported higher fines.

ALTERNATIVE ACTIONS CONSIDERED

The following table summarizes four alternatives considered by staff:



| Alternative                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Estimated Annual Permit Fee |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <u>Option 1: Staff Recommendation, Enhanced RPP and Football Enforcement, and Expansion, Without Changing Saturday Enforcement.</u>                                                                                                                                                                                                                                                                                                                                                      | \$90/year<br>(+36% / +\$24) |
| <u>Option 2: Saturday Enforcement in All Areas, Enhanced RPP and Football Enforcement, and Expansion</u> <ul style="list-style-type: none"> <li>• Implement Saturday patrols of all RPP Zones,<sup>20</sup> plus increased RPP and football enforcement, and expansion as in Option 1</li> <li>• Increase permit fees to eliminate deficit and add seven (7) PEOs and one (1) supervisor for increased RPP enforcement, one (1) PEO per twenty new blocks/year, and equipment</li> </ul> | \$97/year<br>(+47% / +\$31) |
| <u>Option 3: Expansion and Enhanced Football Enforcement</u> <ul style="list-style-type: none"> <li>• Implement enhanced football enforcement and expansion as in Option 1</li> <li>• No change to existing RPP enforcement levels/frequency</li> <li>• Increase permit fees to eliminate deficit and add three (3) PEOs and one (1) supervisor for football, one (1) PEO per twenty new blocks/year, and equipment</li> </ul>                                                           | \$88/year<br>(+34% / +\$22) |
| <u>Option 4: Expansion Only</u> <ul style="list-style-type: none"> <li>• Expand RPP Program eligibility per guidelines in Option 1</li> <li>• No changes to existing RPP and football enforcement levels</li> <li>• Increase permit fees to eliminate deficit and add one (1) new PEO and equipment per twenty new blocks/year</li> </ul>                                                                                                                                                | \$82/year<br>(+24% / +\$16) |

Council could also reject all options, which would maintain the status quo RPP Program, including its structural deficit.

**CONTACT PERSON**

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 Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
 Gordon Hansen, Senior Planner, Public Works (510) 981-7064

**Attachments:**

- 1: Ordinance
- 2: Resolution: Fees: Residential Preferential Parking Permits
- 3: Resolution: Establish “Enhanced Fine Area” and Double Fine Locations
- 4: Resolution: Modify Parking Violation Fine Schedule
  - Exhibit A: Schedule of Fines and Late Payment Penalties for Parking Violations
  - Exhibit B: List of New Parking Violations

<sup>20</sup> Adding enforcement at streets with RPP restrictions in Zones C, E, F, G, H, I, J, L, M, O, and P.

- 5: Public Hearing Notice
- 6: FY 2019 and Prior Out of Area RPP Opt-In Requests
- 7: Proposed 2019 UC Berkeley Football Game Day Parking Restrictions

ORDINANCE NO. #,###-N.S.

AMENDING BERKELEY MUNICIPAL CODE CHAPTER 14.72 TO ALLOW FURTHER EXPANSION OF THE RESIDENTIAL PREFERENTIAL PARKING (RPP) PROGRAM

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Section 14.72.030 is amended to read as follows:

**14.72.030 Definitions.**

A. "Designated residential parking permit area" means any contiguous area upon which the Council imposes parking limitations pursuant to the authority granted by this chapter.

B. "Block front" means all of the property on one side of a street between two consecutive intersecting streets.

BC. "Mixed use" means the use of a lot or building with two or more different land uses including, but not limited to, residential, commercial, retail, office or manufacturing, in a single structure or a group of physically integrated structures; in a neighborhood context, it means blocks containing single-use residences interspersed with other land uses, such as commercial or industrial.

DG. "Mixed Use-Residential" and "Mixed Use-Light Industrial" refers to the zoning designations so defined in Berkeley Municipal Code Chapters 23E.84 and 23E.80, respectively.-

ED. "Assessor's Use Code" means the code used by the Alameda County Assessor to assess property for property tax purposes. These codes cover a range of building descriptions and uses, including a variety of residential uses.

FE. "Nonresidential vehicle" means a motor vehicle not eligible to be issued a residential parking permit, pursuant to the terms and conditions of this chapter, for the specific area in which it is parked. However, it could be eligible for a local business parking permit, or any other parking permit the council shall designate.

GF. "Residential parking permit" means a permit issued under this chapter which, when displayed upon a vehicle, as described herein, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.

HG. "Local business parking permit" means a permit issued under this chapter which, when displayed upon a motor vehicle, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.

IH. "Trapped resident" means: 1) any resident whose dwelling is on a block that may not legally opt-in because less than 80% of the block fronts are residentially zoned and



either: a) whose address is on a block front adjacent to and/or surrounded by block fronts that are already included in the RPP program; or b) whose address is within the general boundary of a designated RPP area; or 2) any resident whose dwelling abuts controlled curb parking and either: a) whose address is on a block front adjacent to and/or surrounded by RPP areas; or b) whose address is within the general boundary of a designated RPP area.

**JJ.** "Neighborhood-service community facility" means churches, schools and senior centers located wholly within the general boundary of an RPP designated area.

**KJ.** "Neighborhood-serving business and establishment" means any business or establishment located in a neighborhood commercial district as defined in the Zoning Ordinance Section Cl a, Cl b, Cl c, Cl b(E).

**LK.** "One-day visitor permit" means a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions pursuant to this chapter, for the date indicated upon the face of said permit.

**LM.** "Two-week visitor permit" shall mean a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions established pursuant to this chapter for a period of 14 consecutive calendar days, beginning upon the date indicated upon the face of said permit.

**NM.** "Motor vehicle" shall be an automobile, truck, motorcycle or other self-propelled form of transportation not in excess of 8,000 pounds gross weight and not in excess of 20 feet in length. A trailer, trailer coach, utility trailer, motor home/(RV), or any other type of vehicle as defined in the California Vehicle Code that is not self-propelled, is not eligible for an RPP permit.

**ON.** "Controlled curb parking" means any on-street parking with existing parking limitations, such as meters, time restrictions, red zone, etc.

**PO.** "Schools" shall mean any school or other place of learning providing a pre-school, elementary or secondary level of study, and which regularly employs a staff of at least 15 certificated persons regularly employed as a classroom teacher.

**QP.** "Senior centers" means the three senior centers affiliated with the City: North Berkeley Senior Center, South Berkeley Senior Center and the West Berkeley Senior Center.

Section 2. That Berkeley Municipal Code Section 14.72.050 is amended to read as follows:

**14.72.050 Designation of a residential permit parking area.**

A. There shall be two alternative processes by which City Council could consider any area for designation as a residential permit parking area:

1. Residents petition. The City Council shall consider for designation as a residential permit parking area any proposed area for which a petition has been submitted which meets and satisfies the following requirements:

a. Prior to obtaining signatures, neighborhood organizers shall consult with City staff to assure that the proposed area meets guidelines set in the administrative regulations for the establishment of permit parking boundaries.

b. The petition shall contain a description or a map showing the proposed residential permit parking area.

c. Said description or map shall be followed in the petition by a statement describing the residential permit parking program and the current residential permit fees.

d. The statement shall be followed by a signature, printed name, address, and date of signing of the application by a number of adult residents including at least 51% of the housing units within the area.

e. For applicants in areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, a petition shall only be deemed valid if at least 51% of the housing units on each block ~~face-front~~ have an address that has a residential Assessor's Use Code.

f. All petitions shall be the same as the standard petition form developed by City staff. Any petition form different from the standard petition form shall be deemed invalid for the purposes of this chapter.

g. In the proposed residential permit parking area, at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

h. In areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

2. City Council initiation. City Council shall consider for designation as a residential permit parking area any area for which the following requirements have been met:

a. City Council shall initiate the area as a residential permit parking area.

b. For areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, Council shall only initiate the area as a residential permit parking area if at least 51% of the housing



units on each block face-front have an address that has a residential Assessor's Use Code.

c. In the proposed residential permit parking area at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m. or unlimited on-street parking is projected to be impacted by parking spillover from a more congested residential permit parking area.

d. In areas zoned Mixed Use-Residential or Mixed Use-Light Industrial, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

e. A notice of intent to establish permit parking shall be sent to all addresses within the proposed residential parking permit area.

B. Upon receipt by the City Council of a petition as described in subsection A.1 of this section, or after Council has initiated a residential permit parking area as described in subsection A.2 of this section, the Council shall:

1. Undertake or cause to be undertaken such surveys or studies which it deems necessary.

2. Cause to be drafted a resolution which would establish a residential permit parking area based upon the aforementioned proposal and studies, including all regulations and time restrictions determined by the Council to be reasonable and necessary in such area.

C. The Council shall thereafter conduct a public hearing on said draft resolution. Notice of the hearing shall be posted at least ten days prior to the hearing on all block fronts proposed to be included in the residential permit parking area. Following the hearing, the City Council may enact, amend or reject said draft resolution in any manner, including but not limited to, modification of boundaries of the proposed area and the restrictions imposed on such proposed area. In order to grant permit parking designation, Council shall find that the designation will not be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing in the area of designation. In reaching this decision, consideration shall be given to the residents' support for residential permit parking, the existing parking conditions, the expected effectiveness of residential permit parking in improving parking conditions, and the location and size of the residential permit parking area.

Section 3. That Berkeley Municipal Code Section 14.72.090 is amended to read as follows:

**14.72.090 Residential parking permit.**



A. The City Manager and/or his/her designee shall issue residential parking permits with a term not to exceed one year to motor vehicles which comply with the requirements set forth in this section.

1. No more than three (3) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.

2. In areas zoned Mixed Use-Residential (MU-R) or Mixed Use-Light Industrial (MULI), no more than two (2) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.

3. The City Traffic Engineer is authorized to issue such rules and regulations necessary to grant waivers to the annual permit limits.

B. A residential parking permit may be issued for a motor vehicle only upon application of the following person:

1. The applicant must demonstrate that he or she is currently a resident of the area for which the permit is to be issued; and

2. The applicant must demonstrate that he or she has ownership or continuing custody of the motor vehicle for which the permit is to be issued; and

3. Any motor vehicle to be issued a permit must have a vehicle registration indicating registration within the area for which the permit is to be issued.

C. A residential parking permit may in addition be issued for any vehicle in the area regularly utilized by a person who owns or leases commercial property and actively engages in business activity within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular residential permit parking involved area, may be issued for each business establishment for a motor vehicle registered to or under the control of such a person.

D. A residential parking permit may be issued for any vehicle utilized in the area by a nonresidential nonbusiness enterprise, such as a church, school, or hospital, located wholly or partially within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular permit parking area involved, may be issued for each such enterprise within each permit area for a motor vehicle registered to or under the control of such an enterprise.

E. Any person to whom a residential parking permit has been issued pursuant to this section shall be deemed a permit holder.

Section 4. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

RESOLUTION NO. ##,###-N.S.

FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS

WHEREAS, on February 27, 2018, Council adopted Resolution No. 68,344-N.S., establishing a revised fee schedule for parking permits for annual residential preferential parking; 1-Day Visitors, 2-Week Visitors, and annual in-home care, annual community-serving facility, annual merchant, 1-Day Senior Center, Semi-annual residential, and Semi-annual in-home care permits issued for the Residential Preferential Parking (RPP) Program, and rescinded Resolution No. 66,895-N.S.; and

WHEREAS, the current RPP Program is operating at an annual deficit of at least \$124,675; and

WHEREAS, staffing for the RPP Program will be increased to allow for enhanced enforcement activities in existing Program areas, a comprehensive overhaul of University of California, Berkeley football game day parking, and actively managed expansion of opt-in eligibility; and

WHEREAS, increased staffing will incur additional yearly costs, but will also deliver new citation revenue;

WHEREAS, it is necessary to increase RPP permit fees in order to operate the RPP Program as a cost-neutral program in accordance with Council Budget Policies.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following fees for the RPP Program are hereby established:

| Permit Type                                                                                 | Permit Fees |
|---------------------------------------------------------------------------------------------|-------------|
| Annual Residential & In-Home Care                                                           | \$90.00     |
| 1-Day Visitor                                                                               | \$4.00      |
| 14-Day Visitor                                                                              | \$47.00     |
| Semi-Annual Residential & In-Home Care                                                      | \$45.00     |
| Community-Serving Facility                                                                  | \$114.00    |
| Merchant                                                                                    | \$253.00    |
| 1-Day Senior Center                                                                         | \$1.00      |
| Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits               | \$21.00     |
| Surcharge Per Additional Annual Residential Permit Over Maximum, Only If Waiver is Approved | \$100.00    |

BE IT FURTHER RESOLVED that these fees shall be effective June 1, 2019 for FY 2020 permit purchases and shall be deposited into the General Fund.

BE IT FURTHER RESOLVED that Resolution No. 68,344-N.S. is hereby rescinded effective June 1, 2019.



RESOLUTION NO. ##,###-N.S.

ESTABLISHING THE ZONES FOR “ENHANCED FINE AREAS” AND FOOTBALL GAME DAY VIOLATIONS, AND AUTHORIZING THE CITY MANAGER TO MAKE AN ANNUAL DETERMINATION AND NOTICE OF DATES ON WHICH FOOTBALL DAY VIOLATIONS WILL BE ISSUED

WHEREAS, City Council Resolution No. 65,813-N.S. restated the geographic area for football game day citations; and

WHEREAS, University of California football games attract a large number of visitors who drive to the game and park in residential neighborhoods to the north and south of campus, which typically makes it difficult for residents to find parking in close proximity to their homes on football game days; and

WHEREAS, current enforcement of the two-hour time limit for vehicles without a valid permit in portions of Residential Preferential Parking (RPP) Zones closest to the stadium is time intensive, reducing the ability of Parking Enforcement to maximize limited staff capacity on game days; and

WHEREAS, the permanent double parking fine program established by Resolution No. 63,800-N.S. has not deterred extended game day parking in portions of RPP Zones B and D, particularly in comparison to private off-street facilities in the vicinity of the stadium offering game day parking for up to \$100; and

WHEREAS, staff have confirmed with Parking Enforcement leadership that new “Enhanced Fine Areas,” in which vehicles without a valid RPP permit would not be permitted to park on football game days, would maximize limited enforcement capacity on football game days; and

WHEREAS, concurrent with this Resolution, the Council is considering adoption of another Resolution establishing a new schedule of parking violations and fines for parking violations, including in new “Enhanced Fine Areas;” and

WHEREAS, the existing “double parking fine” program would continue to be in effect on football game days in addition to the new “Enhanced Fine Areas;” and

WHEREAS, the schedule of parking violations and fines for parking violations may be revised in the future without affecting established zones for football day citations and Enhanced Fine Areas and the City Manager’s authorization to determine and provide public noticing of dates for these violations.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the established zone for the northerly Enhanced Fine Area is north to (not including) Cedar Street, west to (not including) Shattuck Avenue, south to Hearst Avenue, and east to the existing boundary of RPP Zones F and G.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for the southerly Enhanced Fine Area is north to Dwight Way between Telegraph Avenue and Regent Street, north to Haste Street between Regent Street and Bowditch Street, north to Dwight Way between Bowditch Street and College Avenue; east to (but not including) College Avenue between Dwight Way and Parker Street; north to (but not including) Parker Street between College Avenue and Warring Street; east to Warring Street between Parker Street and Derby Street; north to Derby Street between Warring Street and Belrose Avenue; east to (but not including) Belrose Avenue/Claremont Boulevard between Derby Street and Russell Street; south to (but not including) Russell Street between Belrose Avenue/Claremont Boulevard and Telegraph Avenue; and west to (but not including) Telegraph Avenue between Russell Street and Dwight Way.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for the easterly Enhanced Fine Area is north to the southern boundary of RPP Zone K between Channing Way and the Berkeley-Oakland city limits; east to the Berkeley-Oakland city limits; south to (but not including) Dwight Way between the Berkeley-Oakland city limits and Prospect Street; and west to (but not including) Prospect Street between Dwight Way and Channing Way.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for football day citations is north to (not including) Cedar Street, south and east to the Berkeley-Oakland city limits, and west to Oxford and Fulton Streets (including both sides of these streets).

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the City Manager is directed to annually determine the dates during which there are higher parking fines for football day citations, and provide reasonable notice to the public of these dates.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that Resolution No. 65,813-N.S. is hereby rescinded.



RESOLUTION NO. ##,###-N.S.

ESTABLISHING A NEW SCHEDULE OF PARKING VIOLATIONS AND FINES FOR PARKING VIOLATIONS AND LATE PAYMENT PENALTIES; AND RESCINDING RESOLUTION NO. 68,466-N.S.

WHEREAS, the State of California Vehicle Code Section 40203.5 states “the schedule of parking penalties for parking violations and late payment penalties shall be established by the governing body of the jurisdiction where the notice of violation is issued;” and

WHEREAS, University of California football games attract a large number of visitors who drive to the game and park in residential neighborhoods to the north and south of campus, which typically makes it difficult for residents to find parking in close proximity to their homes on football game days; and

WHEREAS, concurrent with this Resolution, the Council is considering adoption of another Resolution establishing new “Enhanced Fine Areas” in portions of Residential Preferential Parking (RPP) Zones F and G north of campus, and in portions of RPP Zones B, D, and I south of campus, wherein vehicles without a valid RPP permit would not be permitted to park on football game days; and

WHEREAS, in May 2018, the City Council adopted Resolution No. 68,466-N.S. establishing a new schedule of fines for parking violations to enable the City to properly cite vehicles in violation of new laws managing parking for electric vehicles.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that a new schedule of parking violations and late payment penalties is established, as set forth in Exhibit A, which includes fines and late penalties for violations of BMC Section 14.40.090 pertaining to parking restrictions in new “Enhanced Fine Areas” in effect on football game days only; and

BE IT FURTHER RESOLVED that Resolution No. 68,466-N.S. is hereby rescinded.

Exhibits

- A: Schedule of Fines and Late Payment Penalties for Parking Violations
- B: List of New Parking Violations

Exhibit A: Schedule of Fines and Late Payment Penalties for Parking Violations

| Code | Section     | Violation Description<br>(For citations issued to a vehicle)<br>FD = Football Game Days 9 a.m. to 11 p.m.<br>FD fines = 50% higher on most violations &<br>100% higher for violations in RPP Zones A,<br>B, D | Fine<br>Amount | On Day 28<br>+\$30 | On Day 47<br>+\$50 |
|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------------------|
| BMC  | 6.24.020    | Off-St Rsrv Pkg No Permit Displayed                                                                                                                                                                           | \$48           | \$78               | \$128              |
| BMC  | 6.24.020    | FD Off-St Rsrv Pkg No Permit Displayed                                                                                                                                                                        |                |                    |                    |
| BMC  | 6.24.020    | Non-Electric Vehicle Parked in Electric Vehicle Space                                                                                                                                                         | \$35           | \$65               | \$115              |
| BMC  | 6.24.060    | Electric Vehicle Exceeding EV Parking Space Time Limit                                                                                                                                                        | \$30           | \$60               | \$110              |
| BMC  | 6.24.020    | Electric Vehicle Not Actively Charging in EV Parking Space                                                                                                                                                    | \$35           | \$65               | \$115              |
| BMC  | 6.24.093    | P&D Dispensing Mach Tkt Not Displayed                                                                                                                                                                         | \$43           | \$73               | \$123              |
| BMC  | 6.24.093    | FD P&D Dispensing Mach Tkt Not Displayed                                                                                                                                                                      | \$65           | \$95               | \$145              |
| BMC  | 6.24.096    | Improper Display of P&D Disp Mach Tkt                                                                                                                                                                         | \$43           | \$73               | \$123              |
| BMC  | 6.24.096    | FD Improper Display of P&D Disp Mach Tkt                                                                                                                                                                      | \$65           | \$95               | \$145              |
| BMC  | 6.24.100 B  | P&D Station Expired Time                                                                                                                                                                                      | \$43           | \$73               | \$123              |
| BMC  | 6.24.100 B  | FD P&D Station Expired Time                                                                                                                                                                                   | \$65           | \$95               | \$145              |
| BMC  | 6.24.103 B  | Time Limits Enforced at Inoperable P&D Sta                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 6.24.103 B  | FD Time Limits Enforced at Inoperable P&D Sta                                                                                                                                                                 | \$65           | \$95               | \$145              |
| BMC  | 6.24.130    | Off-St Facility: Motorcycle Zone Only                                                                                                                                                                         | \$48           | \$78               | \$128              |
| BMC  | 6.24.130    | Off-St Facility: Pkg Outside Markings                                                                                                                                                                         | \$48           | \$78               | \$128              |
| BMC  | 6.24.130    | FD Off-St Facility: Pkg Outside Markings                                                                                                                                                                      | \$72           | \$102              | \$152              |
| BMC  | 6.24.130    | Off-St Facility: Disabled Zone                                                                                                                                                                                | \$288          | \$318              | \$368              |
| BMC  | 6.24.130    | FD Off-St Facility: Disabled Zone                                                                                                                                                                             | \$288          | \$318              | \$368              |
| BMC  | 6.24.130    | Off-St Facility: Restricted Load Zone                                                                                                                                                                         | \$48           | \$78               | \$128              |
| BMC  | 6.24.130    | FD Off-St Facility: Restricted Load Zone                                                                                                                                                                      | \$72           | \$102              | \$152              |
| BMC  | 6.24.130    | Off-St Facility: Unmarked Space                                                                                                                                                                               | \$48           | \$78               | \$128              |
| BMC  | 6.24.130    | FD Off-St Facility: Unmarked Space                                                                                                                                                                            | \$72           | \$102              | \$152              |
| BMC  | 6.24.140    | Off-St Facility: Backed-In                                                                                                                                                                                    | \$48           | \$78               | \$128              |
| BMC  | 9.52.140    | Unattended Taxi Over 5 Min                                                                                                                                                                                    | \$91           | \$121              | \$171              |
| BMC  | 13.52.040   | Unauth Pkg on Private Property                                                                                                                                                                                | \$41           | \$71               | \$121              |
| BMC  | 14.24.070   | Unauth Vehicle on Private Prop                                                                                                                                                                                | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 A | No Parking on Divisnl Islands                                                                                                                                                                                 | \$55           | \$85               | \$135              |
| BMC  | 14.36.030 A | FD No Parking on Divisnl Islands                                                                                                                                                                              | \$83           | \$113              | \$163              |
| BMC  | 14.36.030 C | No Parking Zone (Sign Posted)                                                                                                                                                                                 | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 C | FD No Parking Zone (Sign Posted)                                                                                                                                                                              | \$96           | \$126              | \$176              |
| BMC  | 14.36.030 C | No Parking Zone (Red Curb)                                                                                                                                                                                    | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 C | FD No Parking Zone (Red Curb)                                                                                                                                                                                 | \$96           | \$126              | \$176              |



| Code | Section     | Violation Description<br>(For citations issued to a vehicle)<br>FD = Football Game Days 9 a.m. to 11 p.m.<br>FD fines = 50% higher on most violations &<br>100% higher for violations in RPP Zones A,<br>B, D | Fine<br>Amount | On Day 28<br>+\$30 | On Day 47<br>+\$50 |
|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------------------|
| BMC  | 14.36.030 D | No Parking Street Sweeping (sign)                                                                                                                                                                             | \$49           | \$79               | \$129              |
| BMC  | 14.36.030 E | No Parking on Railroad Tracks                                                                                                                                                                                 | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 F | Hazard Obstructing Traffic                                                                                                                                                                                    | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 F | FD Hazard Obstructing Traffic                                                                                                                                                                                 | \$96           | \$126              | \$176              |
| BMC  | 14.36.030 G | Construct: No Permit on Dashboard                                                                                                                                                                             | \$64           | \$94               | \$144              |
| BMC  | 14.36.030 G | FD Construct: No Permit on Dashboard                                                                                                                                                                          | \$96           | \$126              | \$176              |
| BMC  | 14.36.050   | On Street 72 or More Consec hrs                                                                                                                                                                               | \$60           | \$90               | \$140              |
| BMC  | 14.36.060   | Repair Vehicle on Street                                                                                                                                                                                      | \$52           | \$82               | \$132              |
| BMC  | 14.36.080   | Vehicle Parked in School Zone                                                                                                                                                                                 | \$51           | \$81               | \$131              |
| BMC  | 14.36.090   | Pkg on Grade Brake/Block Wheels                                                                                                                                                                               | \$55           | \$85               | \$135              |
| BMC  | 14.36.110   | Emerg Prkg w/o Permit (Tow CVC<br>22651)                                                                                                                                                                      | \$52           | \$82               | \$132              |
| BMC  | 14.40.010   | 3 min Limit Zone Overtime                                                                                                                                                                                     | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | FD 3 min Limit Zone Overtime                                                                                                                                                                                  | \$65           | \$95               | \$145              |
| BMC  | 14.40.010   | 5 min Limit Zone Overtime                                                                                                                                                                                     | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | FD 5 min Limit Zone Overtime                                                                                                                                                                                  | \$65           | \$95               | \$145              |
| BMC  | 14.40.010   | 10 min Limit Zone Overtime                                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | FD 10 min Limit Zone Overtime                                                                                                                                                                                 | \$65           | \$95               | \$145              |
| BMC  | 14.40.010   | 12 min Limit Zone Overtime                                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | 15 min Limit Zone Overtime                                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | 24 min Limit Zone Overtime                                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 14.40.010   | FD 24 min Limit Zone Overtime                                                                                                                                                                                 | \$65           | \$95               | \$145              |
| BMC  | 14.40.020   | 30 min Limit Zone Overtime                                                                                                                                                                                    | \$43           | \$73               | \$123              |
| BMC  | 14.40.020   | FD 30 min Limit Zone Overtime                                                                                                                                                                                 | \$65           | \$95               | \$145              |
| BMC  | 14.40.030   | 1 hr Limit Zone Overtime                                                                                                                                                                                      | \$43           | \$73               | \$123              |
| BMC  | 14.40.030   | FD 1 hr Limit Zone Overtime                                                                                                                                                                                   | \$65           | \$95               | \$145              |
| BMC  | 14.40.030   | Faulty Meter Over 1 hr Limit                                                                                                                                                                                  | \$43           | \$73               | \$123              |
| BMC  | 14.40.040   | 2 hr Limit Zone Overtime                                                                                                                                                                                      | \$43           | \$73               | \$123              |
| BMC  | 14.40.040   | FD 2 hr Limit Zone Overtime                                                                                                                                                                                   | \$65           | \$95               | \$145              |
| BMC  | 14.40.040   | Faulty Meter Over 2 hr Limit                                                                                                                                                                                  | \$43           | \$73               | \$123              |
| BMC  | 14.40.050 A | Parallel Pkg Veh Outside Markers                                                                                                                                                                              | \$48           | \$78               | \$128              |
| BMC  | 14.40.050 B | Veh Facing Wrong Way 1-way St                                                                                                                                                                                 | \$48           | \$78               | \$128              |
| BMC  | 14.40.050 B | FD Veh Facing Wrong Way 1-way St                                                                                                                                                                              | \$72           | \$102              | \$152              |
| BMC  | 14.40.050 B | Pkg Over 18" from Curb 1-way St                                                                                                                                                                               | \$51           | \$81               | \$131              |
| BMC  | 14.40.050 B | FD Pkg Over 18" fr Curb 1-way St                                                                                                                                                                              | \$77           | \$107              | \$157              |
| BMC  | 14.40.060 A | Diagonal Pkg Veh Outside Markers                                                                                                                                                                              | \$51           | \$81               | \$131              |
| BMC  | 14.40.060 B | Diagonal Pkg FW Over 6" from Curb                                                                                                                                                                             | \$51           | \$81               | \$131              |
| BMC  | 14.40.070 A | No Stopping 4-6pm (Tow CVC 22651)                                                                                                                                                                             | \$64           | \$94               | \$144              |
| BMC  | 14.40.070 A | FD No Stopping 4-6pm (Tow CVC<br>22651)                                                                                                                                                                       | \$96           | \$126              | \$176              |
| BMC  | 14.40.070 A | No Stopping 7-9am (Tow CVC 22651)                                                                                                                                                                             | \$64           | \$94               | \$144              |

| Code | Section     | Violation Description<br>(For citations issued to a vehicle)<br>FD = Football Game Days 9 a.m. to 11 p.m.<br>FD fines = 50% higher on most violations &<br>100% higher for violations in RPP Zones A,<br>B, D | Fine<br>Amount | On Day 28<br>+\$30 | On Day 47<br>+\$50 |
|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------------------|
| BMC  | 14.40.070 A | No Stopping 9pm-6am (Tow CVC 22651)                                                                                                                                                                           | \$64           | \$94               | \$144              |
| BMC  | 14.40.070 A | Posted No Stopping Tow Away                                                                                                                                                                                   | \$64           | \$94               | \$144              |
| BMC  | 14.40.090   | RPP Zone No RPP Permit Displayed                                                                                                                                                                              | \$49           | \$79               | \$129              |
| BMC  | 14.40.090   | FD RPP Zone A,B,D No Permit Dsply                                                                                                                                                                             | \$98           | \$128              | \$178              |
| BMC  | 14.40.090   | RPP Zone K No Permit Displayed                                                                                                                                                                                | \$57           | \$87               | \$137              |
| BMC  | 14.40.090   | RPP Zone RPP Permit Expired                                                                                                                                                                                   | \$49           | \$79               | \$129              |
| BMC  | 14.40.090   | FD RPP Zone A,B,D Permit Expired                                                                                                                                                                              | \$98           | \$128              | \$178              |
| BMC  | 14.40.090   | RPP Zone Permit Improper Display                                                                                                                                                                              | \$49           | \$79               | \$129              |
| BMC  | 14.40.090   | FD RPP A,B,D Permit Impropr Dsply                                                                                                                                                                             | \$98           | \$128              | \$178              |
| BMC  | 14.40.090   | No RPP Permit Displayed in Enhanced Fine Area (Football Game Days)                                                                                                                                            | \$225          | \$255              | \$305              |
| BMC  | 14.40.130   | Pkg/Standing in City Lots/Spaces                                                                                                                                                                              | \$55           | \$85               | \$135              |
| BMC  | 14.40.130 A | City Lot No Permit Displayed                                                                                                                                                                                  | \$57           | \$87               | \$137              |
| BMC  | 14.40.130 C | Reserved Pkg No Permit Displayed                                                                                                                                                                              | \$49           | \$79               | \$129              |
| BMC  | 14.40.130 E | Reserved City Hall Pkg Towable                                                                                                                                                                                | \$64           | \$94               | \$144              |
| BMC  | 14.40.150 A | Car Parking in Motorcycle Area                                                                                                                                                                                | \$51           | \$81               | \$131              |
| BMC  | 14.40.150 B | Motorcycle Zone Overtime                                                                                                                                                                                      | \$51           | \$81               | \$131              |
| BMC  | 14.40.160   | DbI-Pkd Commer Vehicle Center St                                                                                                                                                                              | \$60           | \$90               | \$140              |
| BMC  | 14.44.020 B | Commer Zone No Permit (yellow)                                                                                                                                                                                | \$57           | \$87               | \$137              |
| BMC  | 14.44.020 B | FD Commer Zone No Permit (yellow)                                                                                                                                                                             | \$86           | \$116              | \$166              |
| BMC  | 14.44.020 A | Commercial Zone Overtime                                                                                                                                                                                      | \$57           | \$87               | \$137              |
| BMC  | 14.44.020 A | FD Commercial Zone Overtime                                                                                                                                                                                   | \$86           | \$116              | \$166              |
| BMC  | 14.44.030   | Passenger Load Zone (white curb)                                                                                                                                                                              | \$57           | \$87               | \$137              |
| BMC  | 14.44.030   | FD Passgr Load Zone (white curb}                                                                                                                                                                              | \$86           | \$116              | \$166              |
| BMC  | 14.44.040   | No Stopping Bicycle Zone                                                                                                                                                                                      | \$55           | \$85               | \$135              |
| BMC  | 14.44.040   | FD No Stopping Bicycle Zone                                                                                                                                                                                   | \$83           | \$113              | \$163              |
| BMC  | 14.44.050   | Special Passenger Load Zone only                                                                                                                                                                              | \$57           | \$87               | \$137              |
| BMC  | 14.44.060   | Parking in Coach (bus) Zone                                                                                                                                                                                   | \$64           | \$94               | \$144              |
| BMC  | 14.44.060   | FD Parking in Coach (bus) Zone                                                                                                                                                                                | \$96           | \$126              | \$176              |
| BMC  | 14.44.070   | Unauthorized Use of Funeral Zone                                                                                                                                                                              | \$51           | \$81               | \$131              |
| BMC  | 14.44.080   | Taxicab Parking Only                                                                                                                                                                                          | \$51           | \$81               | \$131              |
| BMC  | 14.44.080   | Unauthorized Taxicab Stand Pkg                                                                                                                                                                                | \$51           | \$81               | \$131              |
| BMC  | 14.46.040 B | Non-Electric Vehicle Parked in EV Space                                                                                                                                                                       | \$49           | \$79               | \$129              |
| BMC  | 14.46.050 B | Electric Vehicle Exceeding EV Space Time Limit                                                                                                                                                                | \$43           | \$73               | \$123              |
| BMC  | 14.46.050 C | Electric Vehicle Not Actively Charging in EV Space                                                                                                                                                            | \$43           | \$73               | \$123              |
| BMC  | 14.52.050 A | Meter Street: Expired Meter                                                                                                                                                                                   | \$43           | \$73               | \$123              |
| BMC  | 14.52.050 A | FD Meter Street: Expired Meter                                                                                                                                                                                | \$65           | \$95               | \$145              |
| BMC  | 14.52.050 B | Pay & Display Station Expired Time                                                                                                                                                                            | \$43           | \$73               | \$123              |



| Code | Section     | Violation Description<br>(For citations issued to a vehicle)<br>FD = Football Game Days 9 a.m. to 11 p.m.<br>FD fines = 50% higher on most violations &<br>100% higher for violations in RPP Zones A,<br>B, D | Fine<br>Amount | On Day 28<br>+\$30 | On Day 47<br>+\$50 |
|------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------------------|
| BMC  | 14.52.050 B | FD Pay & Display Sta Expired Time                                                                                                                                                                             | \$65           | \$95               | \$145              |
| BMC  | 14.52.060 A | Meter St: Extending Meter Time                                                                                                                                                                                | \$43           | \$73               | \$123              |
| BMC  | 14.52.060 A | FD Meter St: Extending Meter Time                                                                                                                                                                             | \$65           | \$95               | \$145              |
| BMC  | 14.52.060 B | Pay & Display Station Extend Time                                                                                                                                                                             | \$43           | \$73               | \$123              |
| BMC  | 14.52.060 B | FD Pay & Display Sta Extend Time                                                                                                                                                                              | \$65           | \$95               | \$145              |
| BMC  | 14.52.063   | P&D Dispensing Mach Tkt Not Displayed                                                                                                                                                                         | \$43           | \$73               | \$123              |
| BMC  | 14.52.063   | FD P&D Dispens Mach Tkt Not Displayed                                                                                                                                                                         | \$65           | \$95               | \$145              |
| BMC  | 14.52.066   | Improper Display of P&D Disp Mach Tkt                                                                                                                                                                         | \$43           | \$73               | \$123              |
| BMC  | 14.52.066   | FD Improper Display of P&D Disp Mach Tkt                                                                                                                                                                      | \$65           | \$95               | \$145              |
| CVC  | 4000        | No Evidence Current Registration                                                                                                                                                                              | \$50           | \$80               | \$130              |
| CVC  | 4000        | Expired Registration                                                                                                                                                                                          | \$50           | \$80               | \$130              |
| CVC  | 4461 B      | Improper Lending of DP Placard or Plate                                                                                                                                                                       | \$550          | \$580              | \$630              |
| CVC  | 4461 C      | Improper Display of DP Placard or Plate                                                                                                                                                                       | \$550          | \$580              | \$630              |
| CVC  | 4461 D      | Improper Use of DP Placard or Plate                                                                                                                                                                           | \$550          | \$580              | \$630              |
| CVC  | 4463 C      | Use of Forged, Counterfeit, or False DP Placard or Plate                                                                                                                                                      | \$550          | \$580              | \$630              |
| CVC  | 5200        | Missing License Plates                                                                                                                                                                                        | \$25           | \$55               | \$105              |
| CVC  | 5201        | Lic Plates Improperly Positioned                                                                                                                                                                              | \$25           | \$55               | \$105              |
| CVC  | 5202        | Hanging/Detached License Plate                                                                                                                                                                                | \$25           | \$55               | \$105              |
| CVC  | 5204 A      | Expired Tags (read back)                                                                                                                                                                                      | \$25           | \$55               | \$105              |
| CVC  | 5204 A      | Missing Tags                                                                                                                                                                                                  | \$25           | \$55               | \$105              |
| CVC  | 21113 A     | Parking on Public Grounds                                                                                                                                                                                     | \$54           | \$84               | \$134              |
| CVC  | 21211 B     | Vehicle Blocking Bicycle Lane                                                                                                                                                                                 | \$54           | \$84               | \$134              |
| CVC  | 21718       | Parking on Freeway                                                                                                                                                                                            | \$54           | \$84               | \$134              |
| CVC  | 22500 A     | Parking in an Intersection                                                                                                                                                                                    | \$60           | \$90               | \$140              |
| CVC  | 22500 A     | FD Parking in an Intersection                                                                                                                                                                                 | \$86           | \$116              | \$166              |
| CVC  | 22500 B     | Parking in Crosswalk                                                                                                                                                                                          | \$60           | \$90               | \$140              |
| CVC  | 22500 B     | FD Parking in Crosswalk                                                                                                                                                                                       | \$90           | \$120              | \$170              |
| CVC  | 22500 C     | Parking in Safety Zone                                                                                                                                                                                        | \$60           | \$90               | \$140              |
| CVC  | 22500 C     | FD Parking in Safety Zone                                                                                                                                                                                     | \$90           | \$120              | \$170              |
| CVC  | 22500 D     | Parking within 15' of Fire Station                                                                                                                                                                            | \$60           | \$90               | \$140              |
| CVC  | 22500 D     | FD Parking within 15' of Fire Station                                                                                                                                                                         | \$90           | \$120              | \$170              |
| CVC  | 22500 E     | Parking in Driveway                                                                                                                                                                                           | \$60           | \$90               | \$140              |
| CVC  | 22500 E     | FD Parking in Driveway                                                                                                                                                                                        | \$90           | \$120              | \$170              |
| CVC  | 22500 F     | Parking On/Across Sidewalk                                                                                                                                                                                    | \$60           | \$90               | \$140              |
| CVC  | 22500 F     | FD Parking On/Across Sidewalk                                                                                                                                                                                 | \$90           | \$120              | \$170              |
| CVC  | 22500 G     | Parking Construction No Permit                                                                                                                                                                                | \$60           | \$90               | \$140              |
| CVC  | 22500 G     | FD Parking Construction No Permit                                                                                                                                                                             | \$90           | \$120              | \$170              |
| CVC  | 22500 H     | Double-Parked                                                                                                                                                                                                 | \$60           | \$90               | \$140              |



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|------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------------------|
| CVC  | 22500 H   | FD Double-Parked                                                                                                                                                                                              | \$90           | \$120              | \$170              |
| CVC  | 22500 I   | Parking/Stopping in Coach Zone                                                                                                                                                                                | \$263          | \$293              | \$343              |
| CVC  | 22500 I   | FD Parking/Stopping in Coach Zone                                                                                                                                                                             | \$263          | \$293              | \$343              |
| CVC  | 22500 J   | Parking in Tunnel                                                                                                                                                                                             | \$54           | \$84               | \$134              |
| CVC  | 22500 K   | Parking on Bridge                                                                                                                                                                                             | \$54           | \$84               | \$134              |
| CVC  | 22500 L   | Blocking Disabled Ramp                                                                                                                                                                                        | \$288          | \$318              | \$368              |
| CVC  | 22502 A   | Parking Over 18" from Curb 2-Way St                                                                                                                                                                           | \$69           | \$99               | \$149              |
| CVC  | 22502 A   | FD Parking Over 18" from Curb 2-Way St                                                                                                                                                                        | \$104          | \$134              | \$184              |
| CVC  | 22503 E   | Parking Over 10" from Curb 1-Way St                                                                                                                                                                           | \$58           | \$88               | \$138              |
| CVC  | 22507.8 A | Parking in Disabled Zone                                                                                                                                                                                      | \$317          | \$347              | \$397              |
| CVC  | 22507.8 B | Obstructing Access Disabled Zone                                                                                                                                                                              | \$317          | \$347              | \$397              |
| CVC  | 22507.8 B | FD Obstructing Access Disabled Zone                                                                                                                                                                           | \$317          | \$347              | \$397              |
| CVC  | 22514 a   | Parking within 15' of Fire Hydrant                                                                                                                                                                            | \$78           | \$108              | \$158              |
| CVC  | 22514 a   | FD Parking within 15' of Fire Hydrant                                                                                                                                                                         | \$117          | \$147              | \$197              |
| CVC  | 22521     | Parking within 7.5' of Railroad Tracks                                                                                                                                                                        | \$54           | \$84               | \$134              |
| CVC  | 22522     | Parking within 3' of Wheelchair Ramp                                                                                                                                                                          | \$317          | \$347              | \$397              |
| CVC  | 22522     | FD Parking within 3' of Wheelchair Ramp                                                                                                                                                                       | \$317          | \$347              | \$397              |
| CVC  | 22523 a   | Abandon Vehicle on Highway                                                                                                                                                                                    | \$168          | \$198              | \$248              |
| CVC  | 22523 b   | Abandon Vehicle on Pub/Prvt Prop                                                                                                                                                                              | \$168          | \$198              | \$248              |

Note: In addition to citation placed on vehicle, "Notice of Violation" is mailed to registered owner seven (7) days after citation and indicated when the fine penalty increases will occur: On Day 28 after citation issuance, the fine increases by \$30. If payment is not received within 45 days after issuance, on Day 47, the fine increases by an additional \$50.

Exhibit B: List New Parking Violations

| <b>Code</b> | <b>Section</b> | <b>Violation Description</b><br>(For citations issued to a vehicle)<br>FD = Football Game Days 9 a.m. to 11 p.m.<br>FD fines = 50% higher on most violations &<br>100% higher for violations in RPP Zones A,<br>B, D | <b>Fine Amount</b> | <b>On Day 28<br/>+\$30</b> | <b>On Day 47<br/>+\$50</b> |
|-------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------|----------------------------|
| BMC         | 14.40.090      | No RPP Permit Displayed in Enhanced Fine Area (Football Game Days)                                                                                                                                                   | \$225              | \$255                      | \$305                      |

**NOTICE OF PUBLIC HEARING  
BERKELEY CITY COUNCIL**

**FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS**

Notice is hereby given by the City Council of the City of Berkeley that a public hearing will be conducted by said city council of the City of Berkeley at which time and place all persons may attend and be heard upon the following:

The Department of Public Works is proposing to increase the cost of annual Residential Preferential Parking (RPP) permits, effective June 1, 2019, for permits purchased for FY 2020, as summarized below:

| <b>Permit Type</b>                                                                  | <b>Current Fee</b> | <b>Proposed Fee</b> |
|-------------------------------------------------------------------------------------|--------------------|---------------------|
| Annual Residential & In-Home Care                                                   | \$66.00            | \$90.00             |
| 1-Day Visitor                                                                       | \$3.00             | \$4.00              |
| 14-Day Visitor                                                                      | \$34.00            | \$47.00             |
| Semi-Annual Residential & In-Home Care                                              | \$33.00            | \$45.00             |
| Community-Serving Facility                                                          | \$83.00            | \$114.00            |
| Merchant                                                                            | \$185.00           | \$253.00            |
| 1-Day Senior Center                                                                 | \$1.00             | \$1.00              |
| Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits       | \$15.00            | \$21.00             |
| Surcharge Per Additional Annual Residential Permit Over Maximum, If Waiver Approved | \$100.00           | \$100.00            |

The hearing will be held on Tuesday, May 14, 2019 at 6:00 p.m. in the School District Board Room, 1231 Addison Street.

For further information, please contact Farid Javandel, Transportation Division Manager, at (510) 981-7061.

A copy of the agenda material for this hearing will be available on the City’s website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of May 2, 2019.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City’s electronic records, which are accessible through the City’s website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become**

**part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

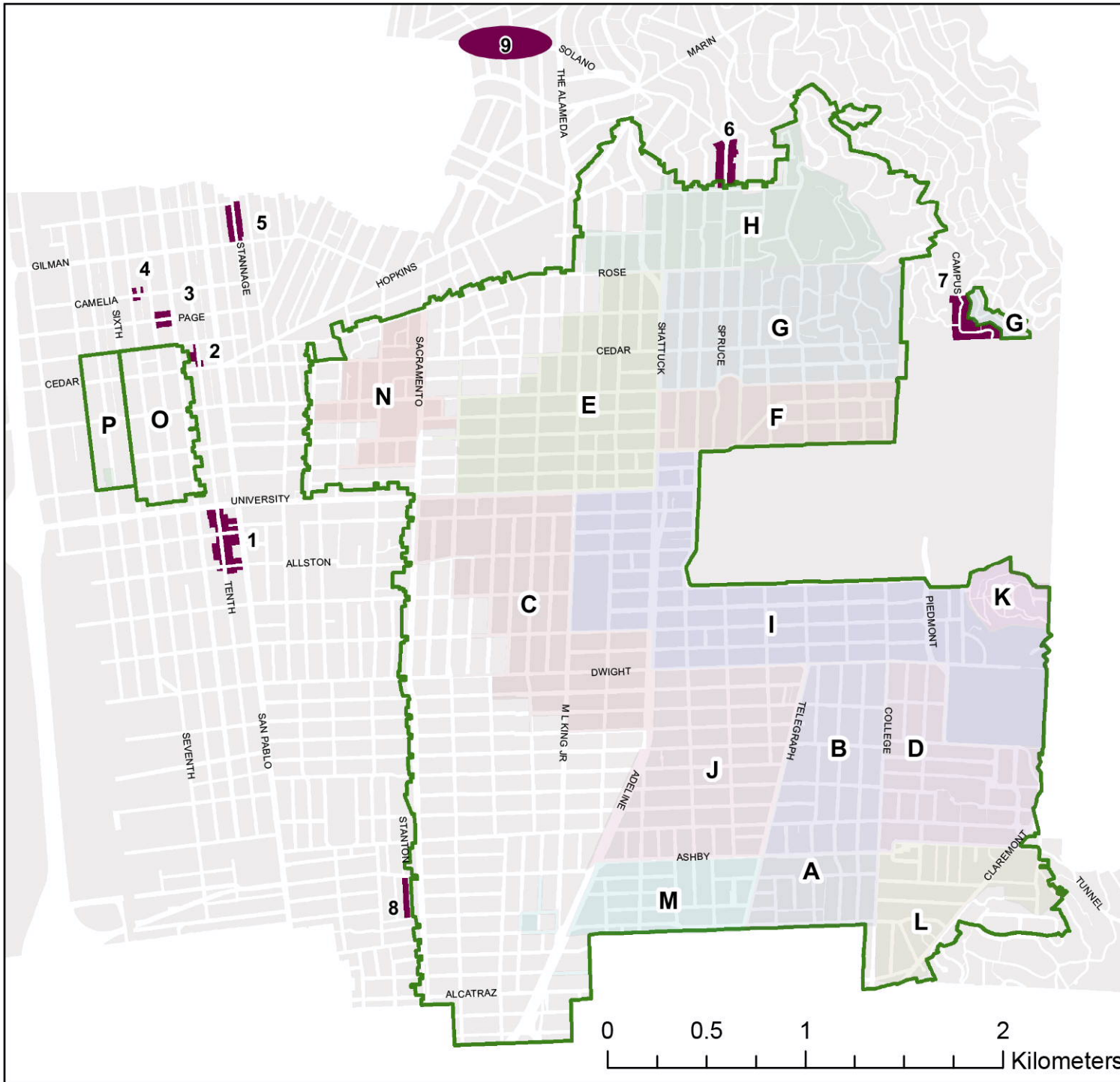
If you challenge the above in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Berkeley at, or prior to, the public hearing. Background information concerning this proposal will be available at the City Clerk Department and posted on the City of Berkeley webpage at least 12 days prior to the public hearing.

**Published:** May 3 and May 10, 2019 – The Berkeley Voice

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I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City’s website, on May 2, 2019.

\_\_\_\_\_  
Mark Numainville, City Clerk





# ATTACHMENT 6

## EXISTING ELIGIBILITY AND INELIGIBLE OPT-IN REQUESTS

- Existing RPP Area Extents
- Current Eligibility Boundary
- Out of Area Opt-In Requests

### FY 2019 Requests

1. 10th between University and Allston with adjacent side streets
2. 10th between Jones and Cedar
3. Page between 8th and 9th
4. Camelia between 7th and 8th

### Requests Prior to FY 2019

5. Stannage between Gilman and Harrison
6. Spruce between Los Angeles to Eunice
7. Campus between Avenita and LBL Campus
8. Stanton between Ashby and Prince
9. Multiple requests from Solano neighborhood

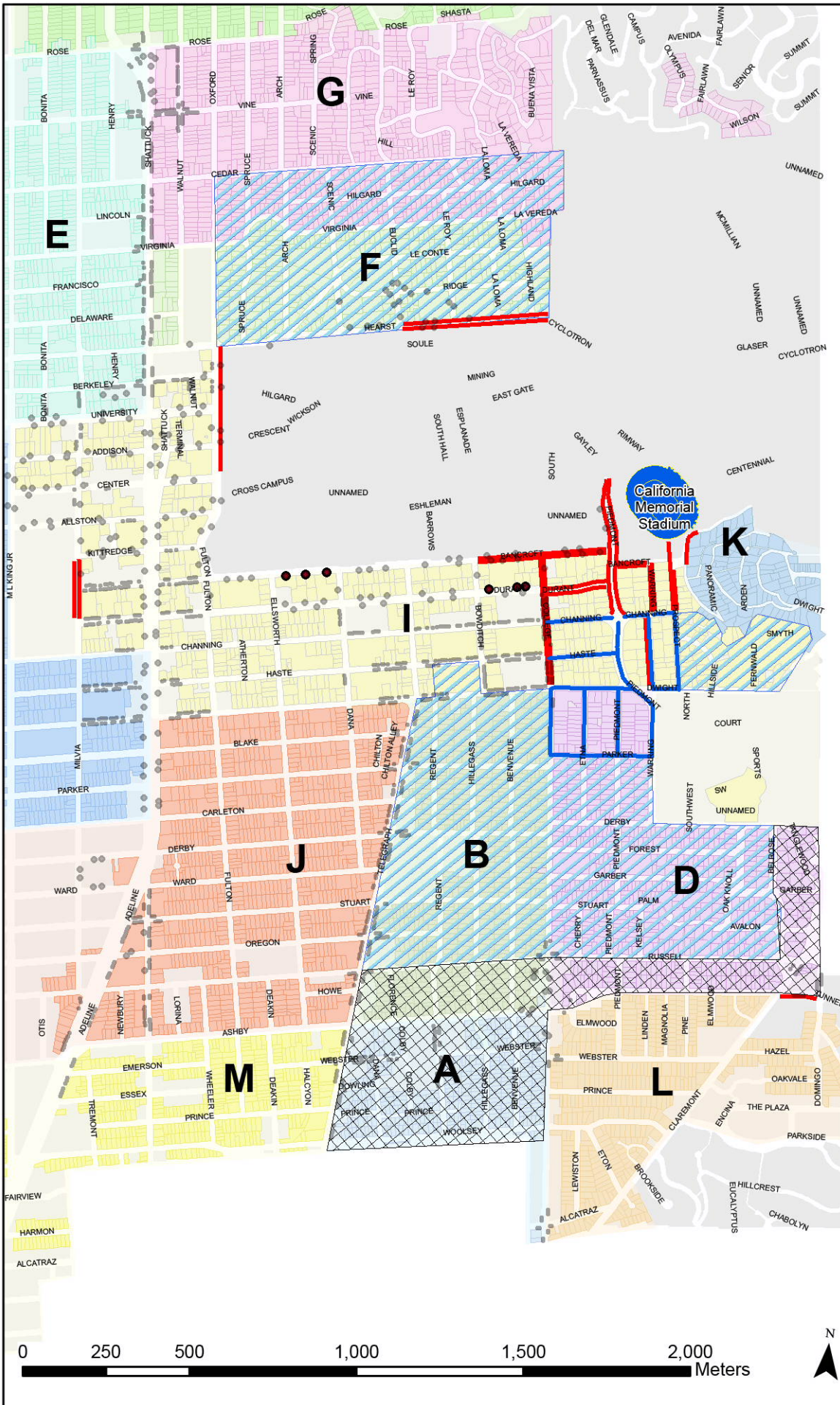
This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
March 20, 2019





# ATTACHMENT 7: PROPOSED 2019 UC BERKELEY FOOTBALL GAME DAY PARKING RESTRICTIONS



### Existing Restrictions

- Single Space Meters (9AM-6PM)
- Pay And Display Meters (9AM-6PM)
- Meters With Additional No Parking Restrictions
- ▨ Double Fine Area (200%)
- Existing Football Tow Zones

### Proposed Restrictions

- ▨ Enhanced Fine Area for Non-Permit Holders (\$225)
- Proposed New Tow Zone For Non-Permit Holders

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
March 20, 2019







Office of the City Manager

PUBLIC HEARING  
May 14, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip Harrington, Director, Public Works  
Subject: Residential Preferential Parking Program Reform and Expansion Phase II: Recommendations for Increased Staffing, Enhanced Football Game Day Enforcement, and Expansion

RECOMMENDATION

Conduct a public hearing and upon conclusion:

1. Adopt first reading of an Ordinance amending Berkeley Municipal Code Chapter 14.72 to allow Residential Preferential Parking (RPP) in areas zoned Mixed Use-Light Industrial;
2. Adopt a Resolution to expand and enhance the RPP Program, raising permit fees for cost neutrality while increasing parking enforcement staff and equipment to augment RPP enforcement, improving UC Berkeley home football game parking enforcement, allowing more residents to opt-in, and rescinding Resolution 68,344-N.S.;
3. Adopt a Resolution modifying parking restrictions in specified RPP Zones on UC Berkeley home football game days as follows: establish “Enhanced Fine Areas” to prohibit parking without a valid RPP permit in portions of RPP Zones B, D, F, G, and I; and install new RPP signs in zones B, D, F, G, and I to clearly indicate UC Berkeley home football game day parking prohibitions; and
4. Adopt a Resolution establishing a new Parking Fine Schedule, including parking fines of \$225 per violation of BMC 14.40.090 in new Enhanced Fine Areas on posted UC football game days, and rescinding Resolution No. 68,466-N.S.

SUMMARY

The recommended actions constitute a package of “mid-term” changes to the RPP Program, developed in response to previous Council direction. These changes include: 1) hiring (7) seven more parking enforcement personnel to augment enforcement in existing and new RPP Zones, particularly on UC Berkeley home football game days; 2) instituting new parking restrictions and increased fines on football game days; 3) allowing blocks currently ineligible for RPP to opt-in to the Program; and 4) increasing permit fees to make the Program cost-neutral.

**FISCAL IMPACTS OF RECOMMENDATION**

The recommendation would provide staffing to increase enforcement of RPP Program parking restrictions, including during UC Berkeley football games, and allow many currently ineligible residents to opt-in to the Program. The capital and operational cost and revenue elements associated with these changes are summarized below. These are new obligations, in addition to existing costs to operate the program.

**Football Game Day Enforcement Cost**

Implementing the recommendation for the 2019 football season will incur a one-time capital cost of \$80,000, including:

- Approximately 500 new Residential Preferential Parking (RPP) signs specifying new parking restrictions, at a unit cost of \$100 per sign, and 250 person hours to install the new signs for a one-time labor cost of \$25,000; and
- Approximately 500 decals to identify football game dates (replaced annually) at cost of \$5,000. Initial decal installation included with sign installation cost. Annual decal replacement requires 100 person hours at a cost of \$10,000.

Staff calculates the ongoing cost to be \$15,000 annually. Initial and annual costs are summarized in the table below:

		<b>Initial Cost</b>	<b>Ongoing Annual Cost</b>
Signs	Materials	\$50,000	N/A
	Labor	\$25,000	N/A
Decals	Materials	\$5,000	\$5,000
	Labor	Included in sign installation.	\$10,000
<b>Total</b>		<b>\$80,000</b>	<b>\$15,000</b>

Currently, the UC Berkeley Athletics Department reimburses the City for signs produced and installed to manage football game day traffic. The current signs are over 20 years old; in 2017, UC paid approximately \$18,600 for sign and decal maintenance costs. Staff recommend that City leadership coordinate with UC Berkeley to fund the recommended one-time signage/decal upgrades, plus ongoing annual costs.<sup>1</sup>

**RPP Program Enforcement Enhancement and Expansion Cost**

The fiscal impact of all of these recommendations will be realized in the General Fund (011). All permit fees and citation revenues, including revenue from new enforcement staff, will be deposited in the General Fund. In turn, all new staff and equipment costs will come out of the General Fund. Costs include:

- Six (6) Parking Enforcement Officers (\$124,818 per FTE; total \$748,908/year), and one (1) Parking Enforcement Supervisor at \$138,065/year;

<sup>1</sup> If UC Berkeley is unable to pay this cost, then the funding would come from the General Fund.



- Six (6) parking enforcement vehicles (\$210,000 total), each equipped with standard automated license plate recognition (ALPR) systems at \$78,363 each (\$470,178), annualized over a five-year period;<sup>2</sup> and
- New RPP sign installation, including labor and materials, at \$23,000 per year.<sup>3</sup>

#### Estimated New Revenue

During the 2018 season, football-related RPP citations resulted in \$49,100 in revenue, and staff anticipates the new “Enhanced Fine Areas” to generate an additional \$31,650. More significantly, hiring six (6) more PEOs is expected to increase citation revenue in both new and existing RPP areas. Staff estimate that each new PEO would issue up to \$75,000/year in RPP citations, for a total of \$450,000/year.

#### Incremental Fiscal Impact in FY 2020

Hiring of new PEOs and procurement of associated enforcement equipment would take place over the course of FY 2020, resulting in incremental increases in new citation revenue as new staff are selected, trained, and deployed. Similarly, each opt-in petition for new areas will take time to verify and bring to Council for approval, resulting in delayed revenues from permits purchased in expansion areas. Therefore, the full fiscal impact of the Program’s expansion and enhancement will not be seen in FY 2020. Staff will continue to monitor the Program’s costs and revenues as new enforcement staff are hired.

#### User Fee Increases for Cost Neutrality

Per Council Budget Policies,<sup>4</sup> the RPP Program should pay for itself. As of March 2019, the RPP Program still runs a deficit of approximately \$124,675. The deficit has shrunk by \$71,125 since FY 2017, when the deficit was approximately \$195,800. This deficit reduction, but not elimination, may be due in part to a decline in permit revenues following the 20% fee increase on April 1, 2018. Customers may also have reevaluated their needs in light of the new maximum of three (3) annual permits per address.

The proposed fee structure would go into effect June 1, 2019, to support increasing enforcement in FY 2020. It is estimated to generate approximately \$368,280 of additional revenue, including \$21,600 from annual permit sales in potential new opt-in areas, for the General Fund (Fund 011). The following table reflects increases for each type of permit in the RPP fee structure to result in a cost-neutral Program.

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<sup>2</sup> Proposed permit fees incorporate half of PEO salary costs, and half of the one-time vehicle and equipment costs, as RPP enforcement accounts for approximately half of all parking enforcement duties. Remaining costs are expected to be covered by new revenues resulting from new staff enforcing other duties, such as street sweeping, parking meter payments, and school zones.

<sup>3</sup> Up to twenty blocks in new areas would be allowed to join the Program per year. Staff assumes six RPP signs per block (three signs on each side of the block), and approximately \$1,150 per block.

<sup>4</sup> “Council Budget Policies”: <http://bit.ly/2z4UiFY>

Permit Type	Current Fee	Proposed Fee	\$ Increase	% Increase
Annual Residential & In-Home Care	\$66.00	\$90.00	\$24.00	36.4%
1-Day Visitor	\$3.00	\$4.00	\$1.00	33.3%
14-Day Visitor	\$34.00	\$47.00	\$13.00	38.2%
Semi-Annual Residential & In-Home Care	\$33.00	\$45.00	\$12.00	36.4%
Community-Serving Facility	\$83.00	\$114.00	\$31.00	37.3%
Merchant	\$185.00	\$253.00	\$68.00	36.8%
1-Day Senior Center	\$1.00	\$1.00	N/A	N/A
Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits	\$15.00	\$21.00	\$6.00	40.0%

The proposed fee structure is estimated to generate approximately \$1,305,240 in revenue for the General Fund in FY 2021, once all new staff have been hired and anticipated expansion has occurred. This increase of \$368,280 in revenue would close the projected deficit, resulting in a cost-neutral Program (the \$600 difference is within the margin of approximation). With the proposed fee increase, the total Program revenue is projected to be \$3.41 million including revenue resulting from an increase in RPP-related citations due to higher staffing levels and new football fines.

RPP Program Financial Components	April 2018-March 2018 Actuals	FY 2021 Projections
Total RPP Permit Fee Revenue	\$936,960	\$1,305,240
RPP-Related Citation Revenue	\$1,573,840	\$2,023,840
Football RPP-Related Citation Revenue	\$49,100	\$80,750
<b>Total Revenue</b>	<b>\$2,559,910</b>	<b>\$3,409,830</b>
<b>Total RPP Program Costs</b>	<b>\$2,684,580</b>	<b>\$3,409,230</b>
<b>RPP Program Deficit/Surplus</b>	<b>(\$124,670)</b>	<b>\$600</b>

CURRENT SITUATION AND ITS EFFECTS

This report represents “mid-term” changes to the RPP Program as part of ongoing RPP Program Reform & Expansion. Building on the initial “short-term” changes enacted by Council in February 2018, described in the accompanying Information Report on this Agenda, this report recommends “mid-term” changes that respond to remaining resident requests and Council referrals.

UC Berkeley Football Game Day Parking Demand

The UC Berkeley football season typically spans twelve (12) games between September and November. Up to seven (7) games per year are played at California



Memorial Stadium (“stadium”), near the eastern end of Bancroft Avenue. Most home games occur on Saturday afternoons or evenings. Neighborhoods surrounding UC Berkeley currently have RPP. South of campus, RPP Zones A, B, D, and K are enforced Monday to Saturday, with the exception of Zones I (Telegraph) and L (Claremont), which are not enforced on Saturday. North of campus, RPP Zones F and G are enforced Monday through Friday.

Game attendees who drive and park in surrounding neighborhoods can make it difficult for some residents to find parking near their homes during games. In fall 2017, the City analyzed game day parking south of campus.<sup>5</sup> The analysis found that parking occupancy in the study area increased by about 25% on a game day compared to a non-game day, with increases of approximately 35-50% closest to campus (RPP Zones B, D, and I). Anecdotal evidence from residents also suggests poor parking by visitors may impede access to residential driveways at times.

Existing Game Day Parking Restrictions

Special parking restrictions and enforcement on football game days currently includes:

- Increased fines for certain parking violations<sup>6</sup> within the boundaries of Cedar Street (north), Berkeley-Oakland city limits (south and east), and Oxford and Fulton Streets (west), with double fines in RPP Zones A, B, and D; and
- Tow-away zones for all vehicles on certain streets close to campus,<sup>7</sup> and additional no-parking areas at metered parking spaces in the Southside and Northside areas.

The Berkeley Police Department (BPD) requires substantial staff time and resources for football game day duties. BPD typically assigns sworn officers on overtime to patrol areas near the stadium to discourage bad behavior.<sup>8</sup> Any staffing gap is filled by parking enforcement personnel. Between five and seven PEOs may be reassigned to game day duty, with one PEO specifically assigned to regulate access to the Panoramic Hill neighborhood (RPP Zone K). That leaves between two and four PEOs to enforce meter payments, curb markings, or RPP time limits elsewhere in the City. As shown in the table below, the City does not have enough PEOs to provide regular Saturday enforcement in addition to football duties on game days.

Enforcement Duties	Number of Assigned PEOs
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<sup>5</sup> Specifically, Zones A, B, D, I, and L. While not explicitly studied, staff assume neighborhoods north of campus experience similar game day parking demand patterns.

<sup>6</sup> Football game day defined as 9:30 a.m. to 11 p.m., regardless of game start time. Most football game day citation rates are 150% of non-game day citation rates. For example, a citation for a vehicle parked in a No Parking Zone (red curb) that is normally \$64 costs \$96 on a game day.

<sup>7</sup> For example: Piedmont Avenue between the stadium and Channing Way, Bancroft Way between Warring Street and Bowditch Street, and College Avenue between Bancroft Way and Dwight Way.

<sup>8</sup> UC Berkeley reimburses the City for BPD overtime costs.

	<b>Non-Game Days</b>	<b>Football Game Days</b>
Game Day Activities	0	5-7
Parking Meters, Curbs, Time Limits, and RPP	7-9	2-4

Requests for Further Program Expansion

In the past year, staff received four (4) opt-in requests from residents outside of the current RPP eligibility area, all of them in northwest Berkeley.<sup>9</sup> In the previous five years, staff have received another five (5) requests from residents outside of the program boundaries.<sup>10</sup> A map depicting these requests is provided as Attachment 5.

Recommendation: Increase and Enhance RPP Enforcement, Including on Football Game Days, and Expand RPP Eligibility

1. Enhanced Enforcement in Existing RPP Areas

Due to staffing constraints discussed in the accompanying Information Report on this Agenda, enforcement in existing RPP areas occurs only once per day. Staff recommend hiring sufficient parking enforcement staff to resume morning and afternoon patrols of existing RPP areas. This will help reinforce RPP time limits, particularly on streets near popular destinations such as public facilities or commercial districts. Increased patrols may also reduce the amount of one-off requests from residents who do not observe enforcement as frequently, which reduce PEOs’ ability to conduct regularly-scheduled beat patrols.

To further increase parking enforcement capacity, staff also recommend that PEOs should no longer accompany street sweeping vehicles. Instead, beat officers would enforce restrictions during the three-hour restriction window, before the sweeper cleans the street, to allow time for other responsibilities.<sup>11</sup> Additionally, staff strongly recommend against introducing additional permit types for resident services, e.g., ‘nanny permits’, or ‘gardener permits’, which serve as exemptions from RPP restrictions. In addition to further increasing already high parking demand in some areas, adding new permits for non-residents dilutes the Program’s effectiveness for all existing permit holders and encourages more driving, which is contrary to the City’s

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<sup>9</sup> Requests received in FY 2019 include: 10th Street between Cedar and Jones Streets; 10th Street from University Avenue to Allston Way, Addison Street from 10th Street to San Pablo Avenue, and Allston Way from 10th Street to San Pablo Avenue; Camelia Street from 7th to 8th Street; and Page Street from 8th to 9th Street.

<sup>10</sup> Requests received prior to FY 2019 include: Campus Drive from Avenida Drive to the Berkeley Lab Campus; Spruce Street from Los Angeles Avenue to Eunice Street; Stannage Avenue between Gilman Street and Harrison Street; Stanton Street from Ashby Avenue to Prince Street; and various areas adjacent to Solano Avenue.

<sup>11</sup> In the future, street sweeping vehicles may be equipped with GPS beacons, which would allow residents to check when streets reopen for parking in real-time.



Climate Action Plan goals of reducing vehicular emissions.

2. Enhanced Game Day Parking Management and Enforcement

In response to Council referrals, staff has prepared a proposal for the 2019 football season to improve parking availability for residents in neighborhoods closest to campus. Illustrated in Attachment 6, this proposal builds on existing game day restrictions by adding tougher penalties for non-residents closer to the stadium:

- **New tow-away areas for vehicles without a valid RPP permit** on streets within one quarter-mile of the stadium (including portions of RPP Zones D and I), where demand was heaviest on the game day analyzed in fall 2017.
- **New “Enhanced Fine Areas”** on streets within one half-mile of the stadium (including portions of RPP Zones F and G north of campus and portions of Zones B and D south of campus), where vehicles without a valid RPP permit will be subject to a one-time fine of \$225.<sup>12</sup>

This proposal maximizes game day staff capacity and effectiveness in areas where residents experience the most inconvenience. While current enforcement requires two passes to determine whether a non-permitted vehicle exceeds the time limit, under this proposal a PEO will need to check only once to verify whether a vehicle has a permit.

Signage is critical to effective enforcement of parking restrictions. In addition to clearly defining expectations for visitors, signage justifies the issuance of citations that violate posted restrictions. Details about the costs and content of new signage required to implement this proposal is provided in the Fiscal Impacts section of this report.

3. Additional Strategies to Increase Parking Availability on Game Days

While some street parking spaces near the stadium are restricted on game days, metered parking is available for visitors in Downtown, Southside/Telegraph, and the Northside area.<sup>13</sup> Staff will return to Council later this year with options for special events, including adjusting special event rate setting ability at City parking garages, and piloting demand-responsive special event pricing at goBerkeley parking meters.

4. Further Expansion of RPP Program Eligibility

Although there have been relatively few opt-in requests from outside the current Program boundary, they still represent a customer need that the City cannot meet with existing staffing levels. To maximize enforcement resources, currently ineligible residents would be able to opt-in under the following conditions:

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<sup>12</sup> Staff are sensitive to low income residents and visitors who may not be able to afford this fine. Options include a payment plan (AB 503), as well as applying to perform Community Service in lieu of paying for parking citations.

<sup>13</sup> Meters operate 9 a.m. to 6 p.m. Monday to Saturday. On the Northside, Hearst Avenue between Euclid Avenue and La Loma Avenue is a tow-away zone on game days.

- A. Meet all existing requirements, including petitioner obtaining agreement of 51+% of all housing units in an area, and staff verifying limited parking availability in the mid-morning and mid-afternoon;
- B. Parcels must be located within two (2) blocks of a major commercial corridor (e.g., San Pablo Avenue or Gilman Street); or be adjacent to existing RPP boundaries; and
- C. In residentially-zoned areas, at least one full block (i.e., two sides of a street) must be included in the petition.

Petitioners in areas zoned Mixed Use-Residential or Mixed-Use Light Industrial will be subject to restrictions approved by Council in 2018 for Mixed Use Area P, including a reduced maximum of two (2) annual permits available per address. While slightly more restrictive than current requirements, this expansion approach would allow all petitioners who have submitted opt-in requests to date to be eligible for RPP.

**5. Staffing Requirements**

Enhanced enforcement, including new football game day restrictions, requires five (5) new PEOs and one (1) Parking Enforcement Supervisor, plus standard equipment. Expansion requires one (1) additional PEO for every twenty full blocks (i.e., both sides of a street) added to the Program, plus standard equipment.

**BACKGROUND**

The RPP Program began in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00 a.m. and 7:00 p.m. Monday through Friday, and on some blocks Saturday.

In March 2014,<sup>14</sup> Council directed staff to evaluate expanding the RPP Program beyond its then-current geographic boundaries. At a September 2017 Council Worksession, staff discussed several challenges with the RPP Program, and proposed incremental solutions to be implemented over the next three years.<sup>15</sup> In February 2018, staff returned to Council with a first set of “short-term” policy reforms, including increased permit fees for Program cost neutrality, a limit of three (3) annual permits per address, and an expansion of RPP eligibility to two new zones in West Berkeley.<sup>16</sup> Improving the effectiveness of the RPP Program is a Strategic Plan Priority Project, advancing the City’s goals to:

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<sup>14</sup> March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas*: <http://bit.ly/2vTgnqD>

<sup>15</sup> September 19, 2017 *City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations*: <https://bit.ly/2iWaPDa>

<sup>16</sup> February 27, 2018 *City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion*: <https://bit.ly/2Yq6tYB>.



- Provide an efficient and financially-healthy City government; and
- Be a customer-focused organization that provides excellent, timely, easily-accessible service and information to the community.

Football Game Day Enforcement

On April 5, 2016, Councilmembers Capitelli, Droste, and Wengraf sponsored a Referral to the Transportation Commission to review game day parking fines in RPP areas around campus, and to recommend higher fees to deter visitors from parking in those areas.<sup>17</sup> On July 25, 2017, the Transportation Commission submitted a Council Report recommending an increase of game day parking fines to \$300 for vehicles without a valid RPP permit in Zones A, B, and D south of campus, but Council did not adopt the Commission’s recommendation.<sup>18</sup> On September 25, 2018, Councilmembers Droste, Wengraf, and Mayor Arreguin submitted a referral to the City Manager to implement game day parking restrictions similar to the Transportation Commission’s 2017 proposal, but taking into account additional concerns such as parking on the north side of campus.<sup>19</sup>

ENVIRONMENTAL SUSTAINABILITY

Increasing parking fines for vehicles without valid RPP permits on football game days should increase parking availability for residents in neighborhoods near campus, reducing traffic congestion and vehicle emissions as drivers spend less time searching for parking. Increased fines may also encourage the use of alternative forms of transportation to UC football games.

Expansion of the RPP Program may encourage some drivers who work in commercial areas adjacent to proposed RPP areas to consider using other modes of travel, potentially reducing parking demand and congestion. While use of these other transportation modes may result in a corresponding reduction in traffic and greenhouse gases, staff anticipate the “two-hour shuffle” (i.e., moving a vehicle every two hours to avoid a ticket) may also begin to occur in new RPP areas among commuters who continue to drive. This behavior would have an adverse impact on traffic congestion, air quality, and excess fuel consumption.

RATIONALE FOR RECOMMENDATION

At the September 19, 2017 Worksession, Council expressed support for a roadmap for RPP reform and expansion, including short-, mid-, and long-term changes to the

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<sup>17</sup> April 5, 2016 *City Council Agenda: Refer to Transportation Commission to Reassess UC Berkeley Game Day Parking Fines in RPP Areas A, B, D, F and G Surrounding Campus* <https://bit.ly/2GRoSzi>

<sup>18</sup> July 25, 2017 *City Council Agenda: Referral Response: Reassess UC Berkeley Game Day Parking Fines in RPP Areas A, B, D, F, and G Surrounding Campus* <https://bit.ly/2fwXaEj>

<sup>19</sup> September 25, 2018 *City Council Agenda: Refer to the City Manager UC Berkeley Game Day Parking Restrictions and Fines in RPP Surrounding Campus* <https://bit.ly/2EwSnfS>



Program. Short-term recommendations were approved by Council in February 2018. The proposals contained in this report comprise staff's "mid-term" recommendations.

In their September 25, 2018 referral, Councilmembers Droste, Wengraf, and Mayor Arreguin supported increasing parking fines to increase parking availability for residents affected by football game demand. Previously, the Transportation Commission has also supported higher fines.

ALTERNATIVE ACTIONS CONSIDERED

The following table summarizes four alternatives considered by staff:

Alternative	Estimated Annual Permit Fee
<u>Option 1: Staff Recommendation, Enhanced RPP and Football Enforcement, and Expansion, Without Changing Saturday Enforcement.</u>	\$90/year (+36% / +\$24)
<u>Option 2: Saturday Enforcement in All Areas, Enhanced RPP and Football Enforcement, and Expansion</u> <ul style="list-style-type: none"> <li>• Implement Saturday patrols of all RPP Zones,<sup>20</sup> plus increased RPP and football enforcement, and expansion as in Option 1</li> <li>• Increase permit fees to eliminate deficit and add seven (7) PEOs and one (1) supervisor for increased RPP enforcement, one (1) PEO per twenty new blocks/year, and equipment</li> </ul>	\$97/year (+47% / +\$31)
<u>Option 3: Expansion and Enhanced Football Enforcement</u> <ul style="list-style-type: none"> <li>• Implement enhanced football enforcement and expansion as in Option 1</li> <li>• No change to existing RPP enforcement levels/frequency</li> <li>• Increase permit fees to eliminate deficit and add three (3) PEOs and one (1) supervisor for football, one (1) PEO per twenty new blocks/year, and equipment</li> </ul>	\$88/year (+34% / +\$22)
<u>Option 4: Expansion Only</u> <ul style="list-style-type: none"> <li>• Expand RPP Program eligibility per guidelines in Option 1</li> <li>• No changes to existing RPP and football enforcement levels</li> <li>• Increase permit fees to eliminate deficit and add one (1) new PEO and equipment per twenty new blocks/year</li> </ul>	\$82/year (+24% / +\$16)

Council could also reject all options, which would maintain the status quo RPP Program, including its structural deficit.

**CONTACT PERSON**

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
 Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
 Gordon Hansen, Senior Planner, Public Works (510) 981-7064

**Attachments:**

- 1: Ordinance
- 2: Resolution: Fees: Residential Preferential Parking Permits
- 3: Resolution: Establish “Enhanced Fine Area” and Double Fine Locations
- 4: Resolution: Modify Parking Violation Fine Schedule
  - Exhibit A: Schedule of Fines and Late Payment Penalties for Parking Violations
  - Exhibit B: List of New Parking Violations

<sup>20</sup> Adding enforcement at streets with RPP restrictions in Zones C, E, F, G, H, I, J, L, M, O, and P.

- 5: Public Hearing Notice
- 6: FY 2019 and Prior Out of Area RPP Opt-In Requests
- 7: Proposed 2019 UC Berkeley Football Game Day Parking Restrictions

ORDINANCE NO. #,###-N.S.

AMENDING BERKELEY MUNICIPAL CODE CHAPTER 14.72 TO ALLOW FURTHER EXPANSION OF THE RESIDENTIAL PREFERENTIAL PARKING (RPP) PROGRAM

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Section 14.72.030 is amended to read as follows:

**14.72.030 Definitions.**

A. "Designated residential parking permit area" means any contiguous area upon which the Council imposes parking limitations pursuant to the authority granted by this chapter.

B. "Block front" means all of the property on one side of a street between two consecutive intersecting streets.

BC. "Mixed use" means the use of a lot or building with two or more different land uses including, but not limited to, residential, commercial, retail, office or manufacturing, in a single structure or a group of physically integrated structures; in a neighborhood context, it means blocks containing single-use residences interspersed with other land uses, such as commercial or industrial.

DG. "Mixed Use-Residential" and "Mixed Use-Light Industrial" refers to the zoning designations so defined in Berkeley Municipal Code Chapters 23E.84 and 23E.80, respectively.-

ED. "Assessor's Use Code" means the code used by the Alameda County Assessor to assess property for property tax purposes. These codes cover a range of building descriptions and uses, including a variety of residential uses.

FE. "Nonresidential vehicle" means a motor vehicle not eligible to be issued a residential parking permit, pursuant to the terms and conditions of this chapter, for the specific area in which it is parked. However, it could be eligible for a local business parking permit, or any other parking permit the council shall designate.

GF. "Residential parking permit" means a permit issued under this chapter which, when displayed upon a vehicle, as described herein, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.

HG. "Local business parking permit" means a permit issued under this chapter which, when displayed upon a motor vehicle, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.

IH. "Trapped resident" means: 1) any resident whose dwelling is on a block that may not legally opt-in because less than 80% of the block fronts are residentially zoned and



either: a) whose address is on a block front adjacent to and/or surrounded by block fronts that are already included in the RPP program; or b) whose address is within the general boundary of a designated RPP area; or 2) any resident whose dwelling abuts controlled curb parking and either: a) whose address is on a block front adjacent to and/or surrounded by RPP areas; or b) whose address is within the general boundary of a designated RPP area.

**JJ.** "Neighborhood-service community facility" means churches, schools and senior centers located wholly within the general boundary of an RPP designated area.

**KJ.** "Neighborhood-serving business and establishment" means any business or establishment located in a neighborhood commercial district as defined in the Zoning Ordinance Section Cl a, Cl b, Cl c, Cl b(E).

**LK.** "One-day visitor permit" means a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions pursuant to this chapter, for the date indicated upon the face of said permit.

**LM.** "Two-week visitor permit" shall mean a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions established pursuant to this chapter for a period of 14 consecutive calendar days, beginning upon the date indicated upon the face of said permit.

**NM.** "Motor vehicle" shall be an automobile, truck, motorcycle or other self-propelled form of transportation not in excess of 8,000 pounds gross weight and not in excess of 20 feet in length. A trailer, trailer coach, utility trailer, motor home/(RV), or any other type of vehicle as defined in the California Vehicle Code that is not self-propelled, is not eligible for an RPP permit.

**ON.** "Controlled curb parking" means any on-street parking with existing parking limitations, such as meters, time restrictions, red zone, etc.

**PO.** "Schools" shall mean any school or other place of learning providing a pre-school, elementary or secondary level of study, and which regularly employs a staff of at least 15 certificated persons regularly employed as a classroom teacher.

**QP.** "Senior centers" means the three senior centers affiliated with the City: North Berkeley Senior Center, South Berkeley Senior Center and the West Berkeley Senior Center.

Section 2. That Berkeley Municipal Code Section 14.72.050 is amended to read as follows:

**14.72.050 Designation of a residential permit parking area.**

A. There shall be two alternative processes by which City Council could consider any area for designation as a residential permit parking area:

1. Residents petition. The City Council shall consider for designation as a residential permit parking area any proposed area for which a petition has been submitted which meets and satisfies the following requirements:

a. Prior to obtaining signatures, neighborhood organizers shall consult with City staff to assure that the proposed area meets guidelines set in the administrative regulations for the establishment of permit parking boundaries.

b. The petition shall contain a description or a map showing the proposed residential permit parking area.

c. Said description or map shall be followed in the petition by a statement describing the residential permit parking program and the current residential permit fees.

d. The statement shall be followed by a signature, printed name, address, and date of signing of the application by a number of adult residents including at least 51% of the housing units within the area.

e. For applicants in areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, a petition shall only be deemed valid if at least 51% of the housing units on each block ~~face-front~~ have an address that has a residential Assessor's Use Code.

f. All petitions shall be the same as the standard petition form developed by City staff. Any petition form different from the standard petition form shall be deemed invalid for the purposes of this chapter.

g. In the proposed residential permit parking area, at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

h. In areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

2. City Council initiation. City Council shall consider for designation as a residential permit parking area any area for which the following requirements have been met:

a. City Council shall initiate the area as a residential permit parking area.

b. For areas zoned ~~Mixed Use-Residential~~ or Mixed Use-Light Industrial, Council shall only initiate the area as a residential permit parking area if at least 51% of the housing



units on each block face-front have an address that has a residential Assessor's Use Code.

c. In the proposed residential permit parking area at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m. or unlimited on-street parking is projected to be impacted by parking spillover from a more congested residential permit parking area.

d. In areas zoned Mixed Use-Residential or Mixed Use-Light Industrial, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.

e. A notice of intent to establish permit parking shall be sent to all addresses within the proposed residential parking permit area.

B. Upon receipt by the City Council of a petition as described in subsection A.1 of this section, or after Council has initiated a residential permit parking area as described in subsection A.2 of this section, the Council shall:

1. Undertake or cause to be undertaken such surveys or studies which it deems necessary.

2. Cause to be drafted a resolution which would establish a residential permit parking area based upon the aforementioned proposal and studies, including all regulations and time restrictions determined by the Council to be reasonable and necessary in such area.

C. The Council shall thereafter conduct a public hearing on said draft resolution. Notice of the hearing shall be posted at least ten days prior to the hearing on all block fronts proposed to be included in the residential permit parking area. Following the hearing, the City Council may enact, amend or reject said draft resolution in any manner, including but not limited to, modification of boundaries of the proposed area and the restrictions imposed on such proposed area. In order to grant permit parking designation, Council shall find that the designation will not be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing in the area of designation. In reaching this decision, consideration shall be given to the residents' support for residential permit parking, the existing parking conditions, the expected effectiveness of residential permit parking in improving parking conditions, and the location and size of the residential permit parking area.

Section 3. That Berkeley Municipal Code Section 14.72.090 is amended to read as follows:

**14.72.090 Residential parking permit.**

A. The City Manager and/or his/her designee shall issue residential parking permits with a term not to exceed one year to motor vehicles which comply with the requirements set forth in this section.

1. No more than three (3) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.

2. In areas zoned Mixed Use-Residential (MU-R) or Mixed Use-Light Industrial (MULI), no more than two (2) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.

3. The City Traffic Engineer is authorized to issue such rules and regulations necessary to grant waivers to the annual permit limits.

B. A residential parking permit may be issued for a motor vehicle only upon application of the following person:

1. The applicant must demonstrate that he or she is currently a resident of the area for which the permit is to be issued; and

2. The applicant must demonstrate that he or she has ownership or continuing custody of the motor vehicle for which the permit is to be issued; and

3. Any motor vehicle to be issued a permit must have a vehicle registration indicating registration within the area for which the permit is to be issued.

C. A residential parking permit may in addition be issued for any vehicle in the area regularly utilized by a person who owns or leases commercial property and actively engages in business activity within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular residential permit parking involved area, may be issued for each business establishment for a motor vehicle registered to or under the control of such a person.

D. A residential parking permit may be issued for any vehicle utilized in the area by a nonresidential nonbusiness enterprise, such as a church, school, or hospital, located wholly or partially within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular permit parking area involved, may be issued for each such enterprise within each permit area for a motor vehicle registered to or under the control of such an enterprise.

E. Any person to whom a residential parking permit has been issued pursuant to this section shall be deemed a permit holder.



Section 4. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

RESOLUTION NO. ##,###-N.S.

FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS

WHEREAS, on February 27, 2018, Council adopted Resolution No. 68,344-N.S., establishing a revised fee schedule for parking permits for annual residential preferential parking; 1-Day Visitors, 2-Week Visitors, and annual in-home care, annual community-serving facility, annual merchant, 1-Day Senior Center, Semi-annual residential, and Semi-annual in-home care permits issued for the Residential Preferential Parking (RPP) Program, and rescinded Resolution No. 66,895-N.S.; and

WHEREAS, the current RPP Program is operating at an annual deficit of at least \$124,675; and

WHEREAS, staffing for the RPP Program will be increased to allow for enhanced enforcement activities in existing Program areas, a comprehensive overhaul of University of California, Berkeley football game day parking, and actively managed expansion of opt-in eligibility; and

WHEREAS, increased staffing will incur additional yearly costs, but will also deliver new citation revenue;

WHEREAS, it is necessary to increase RPP permit fees in order to operate the RPP Program as a cost-neutral program in accordance with Council Budget Policies.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following fees for the RPP Program are hereby established:

Permit Type	Permit Fees
Annual Residential & In-Home Care	\$90.00
1-Day Visitor	\$4.00
14-Day Visitor	\$47.00
Semi-Annual Residential & In-Home Care	\$45.00
Community-Serving Facility	\$114.00
Merchant	\$253.00
1-Day Senior Center	\$1.00
Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits	\$21.00
Surcharge Per Additional Annual Residential Permit Over Maximum, Only If Waiver is Approved	\$100.00

BE IT FURTHER RESOLVED that these fees shall be effective June 1, 2019 for FY 2020 permit purchases and shall be deposited into the General Fund.

BE IT FURTHER RESOLVED that Resolution No. 68,344-N.S. is hereby rescinded effective June 1, 2019.

RESOLUTION NO. ##,###-N.S.

ESTABLISHING THE ZONES FOR “ENHANCED FINE AREAS” AND FOOTBALL GAME DAY VIOLATIONS, AND AUTHORIZING THE CITY MANAGER TO MAKE AN ANNUAL DETERMINATION AND NOTICE OF DATES ON WHICH FOOTBALL DAY VIOLATIONS WILL BE ISSUED

WHEREAS, City Council Resolution No. 65,813-N.S. restated the geographic area for football game day citations; and

WHEREAS, University of California football games attract a large number of visitors who drive to the game and park in residential neighborhoods to the north and south of campus, which typically makes it difficult for residents to find parking in close proximity to their homes on football game days; and

WHEREAS, current enforcement of the two-hour time limit for vehicles without a valid permit in portions of Residential Preferential Parking (RPP) Zones closest to the stadium is time intensive, reducing the ability of Parking Enforcement to maximize limited staff capacity on game days; and

WHEREAS, the permanent double parking fine program established by Resolution No. 63,800-N.S. has not deterred extended game day parking in portions of RPP Zones B and D, particularly in comparison to private off-street facilities in the vicinity of the stadium offering game day parking for up to \$100; and

WHEREAS, staff have confirmed with Parking Enforcement leadership that new “Enhanced Fine Areas,” in which vehicles without a valid RPP permit would not be permitted to park on football game days, would maximize limited enforcement capacity on football game days; and

WHEREAS, concurrent with this Resolution, the Council is considering adoption of another Resolution establishing a new schedule of parking violations and fines for parking violations, including in new “Enhanced Fine Areas;” and

WHEREAS, the existing “double parking fine” program would continue to be in effect on football game days in addition to the new “Enhanced Fine Areas;” and

WHEREAS, the schedule of parking violations and fines for parking violations may be revised in the future without affecting established zones for football day citations and Enhanced Fine Areas and the City Manager’s authorization to determine and provide public noticing of dates for these violations.



NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the established zone for the northerly Enhanced Fine Area is north to (not including) Cedar Street, west to (not including) Shattuck Avenue, south to Hearst Avenue, and east to the existing boundary of RPP Zones F and G.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for the southerly Enhanced Fine Area is north to Dwight Way between Telegraph Avenue and Regent Street, north to Haste Street between Regent Street and Bowditch Street, north to Dwight Way between Bowditch Street and College Avenue; east to (but not including) College Avenue between Dwight Way and Parker Street; north to (but not including) Parker Street between College Avenue and Warring Street; east to Warring Street between Parker Street and Derby Street; north to Derby Street between Warring Street and Belrose Avenue; east to (but not including) Belrose Avenue/Claremont Boulevard between Derby Street and Russell Street; south to (but not including) Russell Street between Belrose Avenue/Claremont Boulevard and Telegraph Avenue; and west to (but not including) Telegraph Avenue between Russell Street and Dwight Way.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for the easterly Enhanced Fine Area is north to the southern boundary of RPP Zone K between Channing Way and the Berkeley-Oakland city limits; east to the Berkeley-Oakland city limits; south to (but not including) Dwight Way between the Berkeley-Oakland city limits and Prospect Street; and west to (but not including) Prospect Street between Dwight Way and Channing Way.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the established zone for football day citations is north to (not including) Cedar Street, south and east to the Berkeley-Oakland city limits, and west to Oxford and Fulton Streets (including both sides of these streets).

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that the City Manager is directed to annually determine the dates during which there are higher parking fines for football day citations, and provide reasonable notice to the public of these dates.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that Resolution No. 65,813-N.S. is hereby rescinded.



RESOLUTION NO. ##,###-N.S.

ESTABLISHING A NEW SCHEDULE OF PARKING VIOLATIONS AND FINES FOR PARKING VIOLATIONS AND LATE PAYMENT PENALTIES; AND RESCINDING RESOLUTION NO. 68,466-N.S.

WHEREAS, the State of California Vehicle Code Section 40203.5 states “the schedule of parking penalties for parking violations and late payment penalties shall be established by the governing body of the jurisdiction where the notice of violation is issued;” and

WHEREAS, University of California football games attract a large number of visitors who drive to the game and park in residential neighborhoods to the north and south of campus, which typically makes it difficult for residents to find parking in close proximity to their homes on football game days; and

WHEREAS, concurrent with this Resolution, the Council is considering adoption of another Resolution establishing new “Enhanced Fine Areas” in portions of Residential Preferential Parking (RPP) Zones F and G north of campus, and in portions of RPP Zones B, D, and I south of campus, wherein vehicles without a valid RPP permit would not be permitted to park on football game days; and

WHEREAS, in May 2018, the City Council adopted Resolution No. 68,466-N.S. establishing a new schedule of fines for parking violations to enable the City to properly cite vehicles in violation of new laws managing parking for electric vehicles.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that a new schedule of parking violations and late payment penalties is established, as set forth in Exhibit A, which includes fines and late penalties for violations of BMC Section 14.40.090 pertaining to parking restrictions in new “Enhanced Fine Areas” in effect on football game days only; and

BE IT FURTHER RESOLVED that Resolution No. 68,466-N.S. is hereby rescinded.

Exhibits

- A: Schedule of Fines and Late Payment Penalties for Parking Violations
- B: List of New Parking Violations

Exhibit A: Schedule of Fines and Late Payment Penalties for Parking Violations

Code	Section	Violation Description (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	Fine Amount	On Day 28 +\$30	On Day 47 +\$50
BMC	6.24.020	Off-St Rsrv Pkg No Permit Displayed	\$48	\$78	\$128
BMC	6.24.020	FD Off-St Rsrv Pkg No Permit Displayed			
BMC	6.24.020	Non-Electric Vehicle Parked in Electric Vehicle Space	\$35	\$65	\$115
BMC	6.24.060	Electric Vehicle Exceeding EV Parking Space Time Limit	\$30	\$60	\$110
BMC	6.24.020	Electric Vehicle Not Actively Charging in EV Parking Space	\$35	\$65	\$115
BMC	6.24.093	P&D Dispensing Mach Tkt Not Displayed	\$43	\$73	\$123
BMC	6.24.093	FD P&D Dispensing Mach Tkt Not Displayed	\$65	\$95	\$145
BMC	6.24.096	Improper Display of P&D Disp Mach Tkt	\$43	\$73	\$123
BMC	6.24.096	FD Improper Display of P&D Disp Mach Tkt	\$65	\$95	\$145
BMC	6.24.100 B	P&D Station Expired Time	\$43	\$73	\$123
BMC	6.24.100 B	FD P&D Station Expired Time	\$65	\$95	\$145
BMC	6.24.103 B	Time Limits Enforced at Inoperable P&D Sta	\$43	\$73	\$123
BMC	6.24.103 B	FD Time Limits Enforced at Inoperable P&D Sta	\$65	\$95	\$145
BMC	6.24.130	Off-St Facility: Motorcycle Zone Only	\$48	\$78	\$128
BMC	6.24.130	Off-St Facility: Pkg Outside Markings	\$48	\$78	\$128
BMC	6.24.130	FD Off-St Facility: Pkg Outside Markings	\$72	\$102	\$152
BMC	6.24.130	Off-St Facility: Disabled Zone	\$288	\$318	\$368
BMC	6.24.130	FD Off-St Facility: Disabled Zone	\$288	\$318	\$368
BMC	6.24.130	Off-St Facility: Restricted Load Zone	\$48	\$78	\$128
BMC	6.24.130	FD Off-St Facility: Restricted Load Zone	\$72	\$102	\$152
BMC	6.24.130	Off-St Facility: Unmarked Space	\$48	\$78	\$128
BMC	6.24.130	FD Off-St Facility: Unmarked Space	\$72	\$102	\$152
BMC	6.24.140	Off-St Facility: Backed-In	\$48	\$78	\$128
BMC	9.52.140	Unattended Taxi Over 5 Min	\$91	\$121	\$171
BMC	13.52.040	Unauth Pkg on Private Property	\$41	\$71	\$121
BMC	14.24.070	Unauth Vehicle on Private Prop	\$64	\$94	\$144
BMC	14.36.030 A	No Parking on Divisnl Islands	\$55	\$85	\$135
BMC	14.36.030 A	FD No Parking on Divisnl Islands	\$83	\$113	\$163
BMC	14.36.030 C	No Parking Zone (Sign Posted)	\$64	\$94	\$144
BMC	14.36.030 C	FD No Parking Zone (Sign Posted)	\$96	\$126	\$176
BMC	14.36.030 C	No Parking Zone (Red Curb)	\$64	\$94	\$144
BMC	14.36.030 C	FD No Parking Zone (Red Curb)	\$96	\$126	\$176



Code	Section	Violation Description (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	Fine Amount	On Day 28 +\$30	On Day 47 +\$50
BMC	14.36.030 D	No Parking Street Sweeping (sign)	\$49	\$79	\$129
BMC	14.36.030 E	No Parking on Railroad Tracks	\$64	\$94	\$144
BMC	14.36.030 F	Hazard Obstructing Traffic	\$64	\$94	\$144
BMC	14.36.030 F	FD Hazard Obstructing Traffic	\$96	\$126	\$176
BMC	14.36.030 G	Construct: No Permit on Dashboard	\$64	\$94	\$144
BMC	14.36.030 G	FD Construct: No Permit on Dashboard	\$96	\$126	\$176
BMC	14.36.050	On Street 72 or More Consec hrs	\$60	\$90	\$140
BMC	14.36.060	Repair Vehicle on Street	\$52	\$82	\$132
BMC	14.36.080	Vehicle Parked in School Zone	\$51	\$81	\$131
BMC	14.36.090	Pkg on Grade Brake/Block Wheels	\$55	\$85	\$135
BMC	14.36.110	Emerg Prkg w/o Permit (Tow CVC 22651)	\$52	\$82	\$132
BMC	14.40.010	3 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	FD 3 min Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.010	5 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	FD 5 min Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.010	10 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	FD 10 min Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.010	12 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	15 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	24 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.010	FD 24 min Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.020	30 min Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.020	FD 30 min Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.030	1 hr Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.030	FD 1 hr Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.030	Faulty Meter Over 1 hr Limit	\$43	\$73	\$123
BMC	14.40.040	2 hr Limit Zone Overtime	\$43	\$73	\$123
BMC	14.40.040	FD 2 hr Limit Zone Overtime	\$65	\$95	\$145
BMC	14.40.040	Faulty Meter Over 2 hr Limit	\$43	\$73	\$123
BMC	14.40.050 A	Parallel Pkg Veh Outside Markers	\$48	\$78	\$128
BMC	14.40.050 B	Veh Facing Wrong Way 1-way St	\$48	\$78	\$128
BMC	14.40.050 B	FD Veh Facing Wrong Way 1-way St	\$72	\$102	\$152
BMC	14.40.050 B	Pkg Over 18" from Curb 1-way St	\$51	\$81	\$131
BMC	14.40.050 B	FD Pkg Over 18" fr Curb 1-way St	\$77	\$107	\$157
BMC	14.40.060 A	Diagonal Pkg Veh Outside Markers	\$51	\$81	\$131
BMC	14.40.060 B	Diagonal Pkg FW Over 6" from Curb	\$51	\$81	\$131
BMC	14.40.070 A	No Stopping 4-6pm (Tow CVC 22651)	\$64	\$94	\$144
BMC	14.40.070 A	FD No Stopping 4-6pm (Tow CVC 22651)	\$96	\$126	\$176
BMC	14.40.070 A	No Stopping 7-9am (Tow CVC 22651)	\$64	\$94	\$144

Code	Section	Violation Description (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	Fine Amount	On Day 28 +\$30	On Day 47 +\$50
BMC	14.40.070 A	No Stopping 9pm-6am (Tow CVC 22651)	\$64	\$94	\$144
BMC	14.40.070 A	Posted No Stopping Tow Away	\$64	\$94	\$144
BMC	14.40.090	RPP Zone No RPP Permit Displayed	\$49	\$79	\$129
BMC	14.40.090	FD RPP Zone A,B,D No Permit Dsply	\$98	\$128	\$178
BMC	14.40.090	RPP Zone K No Permit Displayed	\$57	\$87	\$137
BMC	14.40.090	RPP Zone RPP Permit Expired	\$49	\$79	\$129
BMC	14.40.090	FD RPP Zone A,B,D Permit Expired	\$98	\$128	\$178
BMC	14.40.090	RPP Zone Permit Improper Display	\$49	\$79	\$129
BMC	14.40.090	FD RPP A,B,D Permit Impropr Dsply	\$98	\$128	\$178
BMC	14.40.090	No RPP Permit Displayed in Enhanced Fine Area (Football Game Days)	\$225	\$255	\$305
BMC	14.40.130	Pkg/Standing in City Lots/Spaces	\$55	\$85	\$135
BMC	14.40.130 A	City Lot No Permit Displayed	\$57	\$87	\$137
BMC	14.40.130 C	Reserved Pkg No Permit Displayed	\$49	\$79	\$129
BMC	14.40.130 E	Reserved City Hall Pkg Towable	\$64	\$94	\$144
BMC	14.40.150 A	Car Parking in Motorcycle Area	\$51	\$81	\$131
BMC	14.40.150 B	Motorcycle Zone Overtime	\$51	\$81	\$131
BMC	14.40.160	Dbi-Pkd Commer Vehicle Center St	\$60	\$90	\$140
BMC	14.44.020 B	Commer Zone No Permit (yellow)	\$57	\$87	\$137
BMC	14.44.020 B	FD Commer Zone No Permit (yellow)	\$86	\$116	\$166
BMC	14.44.020 A	Commercial Zone Overtime	\$57	\$87	\$137
BMC	14.44.020 A	FD Commercial Zone Overtime	\$86	\$116	\$166
BMC	14.44.030	Passenger Load Zone (white curb)	\$57	\$87	\$137
BMC	14.44.030	FD Passgr Load Zone (white curb}	\$86	\$116	\$166
BMC	14.44.040	No Stopping Bicycle Zone	\$55	\$85	\$135
BMC	14.44.040	FD No Stopping Bicycle Zone	\$83	\$113	\$163
BMC	14.44.050	Special Passenger Load Zone only	\$57	\$87	\$137
BMC	14.44.060	Parking in Coach (bus) Zone	\$64	\$94	\$144
BMC	14.44.060	FD Parking in Coach (bus) Zone	\$96	\$126	\$176
BMC	14.44.070	Unauthorized Use of Funeral Zone	\$51	\$81	\$131
BMC	14.44.080	Taxicab Parking Only	\$51	\$81	\$131
BMC	14.44.080	Unauthorized Taxicab Stand Pkg	\$51	\$81	\$131
BMC	14.46.040 B	Non-Electric Vehicle Parked in EV Space	\$49	\$79	\$129
BMC	14.46.050 B	Electric Vehicle Exceeding EV Space Time Limit	\$43	\$73	\$123
BMC	14.46.050 C	Electric Vehicle Not Actively Charging in EV Space	\$43	\$73	\$123
BMC	14.52.050 A	Meter Street: Expired Meter	\$43	\$73	\$123
BMC	14.52.050 A	FD Meter Street: Expired Meter	\$65	\$95	\$145
BMC	14.52.050 B	Pay & Display Station Expired Time	\$43	\$73	\$123



Code	Section	Violation Description (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	Fine Amount	On Day 28 +\$30	On Day 47 +\$50
BMC	14.52.050 B	FD Pay & Display Sta Expired Time	\$65	\$95	\$145
BMC	14.52.060 A	Meter St: Extending Meter Time	\$43	\$73	\$123
BMC	14.52.060 A	FD Meter St: Extending Meter Time	\$65	\$95	\$145
BMC	14.52.060 B	Pay & Display Station Extend Time	\$43	\$73	\$123
BMC	14.52.060 B	FD Pay & Display Sta Extend Time	\$65	\$95	\$145
BMC	14.52.063	P&D Dispensing Mach Tkt Not Displayed	\$43	\$73	\$123
BMC	14.52.063	FD P&D Dispens Mach Tkt Not Displayed	\$65	\$95	\$145
BMC	14.52.066	Improper Display of P&D Disp Mach Tkt	\$43	\$73	\$123
BMC	14.52.066	FD Improper Display of P&D Disp Mach Tkt	\$65	\$95	\$145
CVC	4000	No Evidence Current Registration	\$50	\$80	\$130
CVC	4000	Expired Registration	\$50	\$80	\$130
CVC	4461 B	Improper Lending of DP Placard or Plate	\$550	\$580	\$630
CVC	4461 C	Improper Display of DP Placard or Plate	\$550	\$580	\$630
CVC	4461 D	Improper Use of DP Placard or Plate	\$550	\$580	\$630
CVC	4463 C	Use of Forged, Counterfeit, or False DP Placard or Plate	\$550	\$580	\$630
CVC	5200	Missing License Plates	\$25	\$55	\$105
CVC	5201	Lic Plates Improperly Positioned	\$25	\$55	\$105
CVC	5202	Hanging/Detached License Plate	\$25	\$55	\$105
CVC	5204 A	Expired Tags (read back)	\$25	\$55	\$105
CVC	5204 A	Missing Tags	\$25	\$55	\$105
CVC	21113 A	Parking on Public Grounds	\$54	\$84	\$134
CVC	21211 B	Vehicle Blocking Bicycle Lane	\$54	\$84	\$134
CVC	21718	Parking on Freeway	\$54	\$84	\$134
CVC	22500 A	Parking in an Intersection	\$60	\$90	\$140
CVC	22500 A	FD Parking in an Intersection	\$86	\$116	\$166
CVC	22500 B	Parking in Crosswalk	\$60	\$90	\$140
CVC	22500 B	FD Parking in Crosswalk	\$90	\$120	\$170
CVC	22500 C	Parking in Safety Zone	\$60	\$90	\$140
CVC	22500 C	FD Parking in Safety Zone	\$90	\$120	\$170
CVC	22500 D	Parking within 15' of Fire Station	\$60	\$90	\$140
CVC	22500 D	FD Parking within 15' of Fire Station	\$90	\$120	\$170
CVC	22500 E	Parking in Driveway	\$60	\$90	\$140
CVC	22500 E	FD Parking in Driveway	\$90	\$120	\$170
CVC	22500 F	Parking On/Across Sidewalk	\$60	\$90	\$140
CVC	22500 F	FD Parking On/Across Sidewalk	\$90	\$120	\$170
CVC	22500 G	Parking Construction No Permit	\$60	\$90	\$140
CVC	22500 G	FD Parking Construction No Permit	\$90	\$120	\$170
CVC	22500 H	Double-Parked	\$60	\$90	\$140

Code	Section	Violation Description (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	Fine Amount	On Day 28 +\$30	On Day 47 +\$50
CVC	22500 H	FD Double-Parked	\$90	\$120	\$170
CVC	22500 I	Parking/Stopping in Coach Zone	\$263	\$293	\$343
CVC	22500 I	FD Parking/Stopping in Coach Zone	\$263	\$293	\$343
CVC	22500 J	Parking in Tunnel	\$54	\$84	\$134
CVC	22500 K	Parking on Bridge	\$54	\$84	\$134
CVC	22500 L	Blocking Disabled Ramp	\$288	\$318	\$368
CVC	22502 A	Parking Over 18" from Curb 2-Way St	\$69	\$99	\$149
CVC	22502 A	FD Parking Over 18" from Curb 2-Way St	\$104	\$134	\$184
CVC	22503 E	Parking Over 10" from Curb 1-Way St	\$58	\$88	\$138
CVC	22507.8 A	Parking in Disabled Zone	\$317	\$347	\$397
CVC	22507.8 B	Obstructing Access Disabled Zone	\$317	\$347	\$397
CVC	22507.8 B	FD Obstructing Access Disabled Zone	\$317	\$347	\$397
CVC	22514 a	Parking within 15' of Fire Hydrant	\$78	\$108	\$158
CVC	22514 a	FD Parking within 15' of Fire Hydrant	\$117	\$147	\$197
CVC	22521	Parking within 7.5' of Railroad Tracks	\$54	\$84	\$134
CVC	22522	Parking within 3' of Wheelchair Ramp	\$317	\$347	\$397
CVC	22522	FD Parking within 3' of Wheelchair Ramp	\$317	\$347	\$397
CVC	22523 a	Abandon Vehicle on Highway	\$168	\$198	\$248
CVC	22523 b	Abandon Vehicle on Pub/Prvt Prop	\$168	\$198	\$248

Note: In addition to citation placed on vehicle, "Notice of Violation" is mailed to registered owner seven (7) days after citation and indicated when the fine penalty increases will occur: On Day 28 after citation issuance, the fine increases by \$30. If payment is not received within 45 days after issuance, on Day 47, the fine increases by an additional \$50.

Exhibit B: List New Parking Violations

Code	Section	<b>Violation Description</b> (For citations issued to a vehicle) FD = Football Game Days 9 a.m. to 11 p.m. FD fines = 50% higher on most violations & 100% higher for violations in RPP Zones A, B, D	<b>Fine Amount</b>	<b>On Day 28 +\$30</b>	<b>On Day 47 +\$50</b>
BMC	14.40.090	No RPP Permit Displayed in Enhanced Fine Area (Football Game Days)	\$225	\$255	\$305



**NOTICE OF PUBLIC HEARING  
BERKELEY CITY COUNCIL**

**FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS**

Notice is hereby given by the City Council of the City of Berkeley that a public hearing will be conducted by said city council of the City of Berkeley at which time and place all persons may attend and be heard upon the following:

The Department of Public Works is proposing to increase the cost of annual Residential Preferential Parking (RPP) permits, effective June 1, 2019, for permits purchased for FY 2020, as summarized below:

Permit Type	Current Fee	Proposed Fee
Annual Residential & In-Home Care	\$66.00	\$90.00
1-Day Visitor	\$3.00	\$4.00
14-Day Visitor	\$34.00	\$47.00
Semi-Annual Residential & In-Home Care	\$33.00	\$45.00
Community-Serving Facility	\$83.00	\$114.00
Merchant	\$185.00	\$253.00
1-Day Senior Center	\$1.00	\$1.00
Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits	\$15.00	\$21.00
Surcharge Per Additional Annual Residential Permit Over Maximum, If Waiver Approved	\$100.00	\$100.00

The hearing will be held on Tuesday, May 14, 2019 at 6:00 p.m. in the School District Board Room, 1231 Addison Street.

For further information, please contact Farid Javandel, Transportation Division Manager, at (510) 981-7061.

A copy of the agenda material for this hearing will be available on the City’s website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of May 2, 2019.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City’s electronic records, which are accessible through the City’s website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become**



**part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

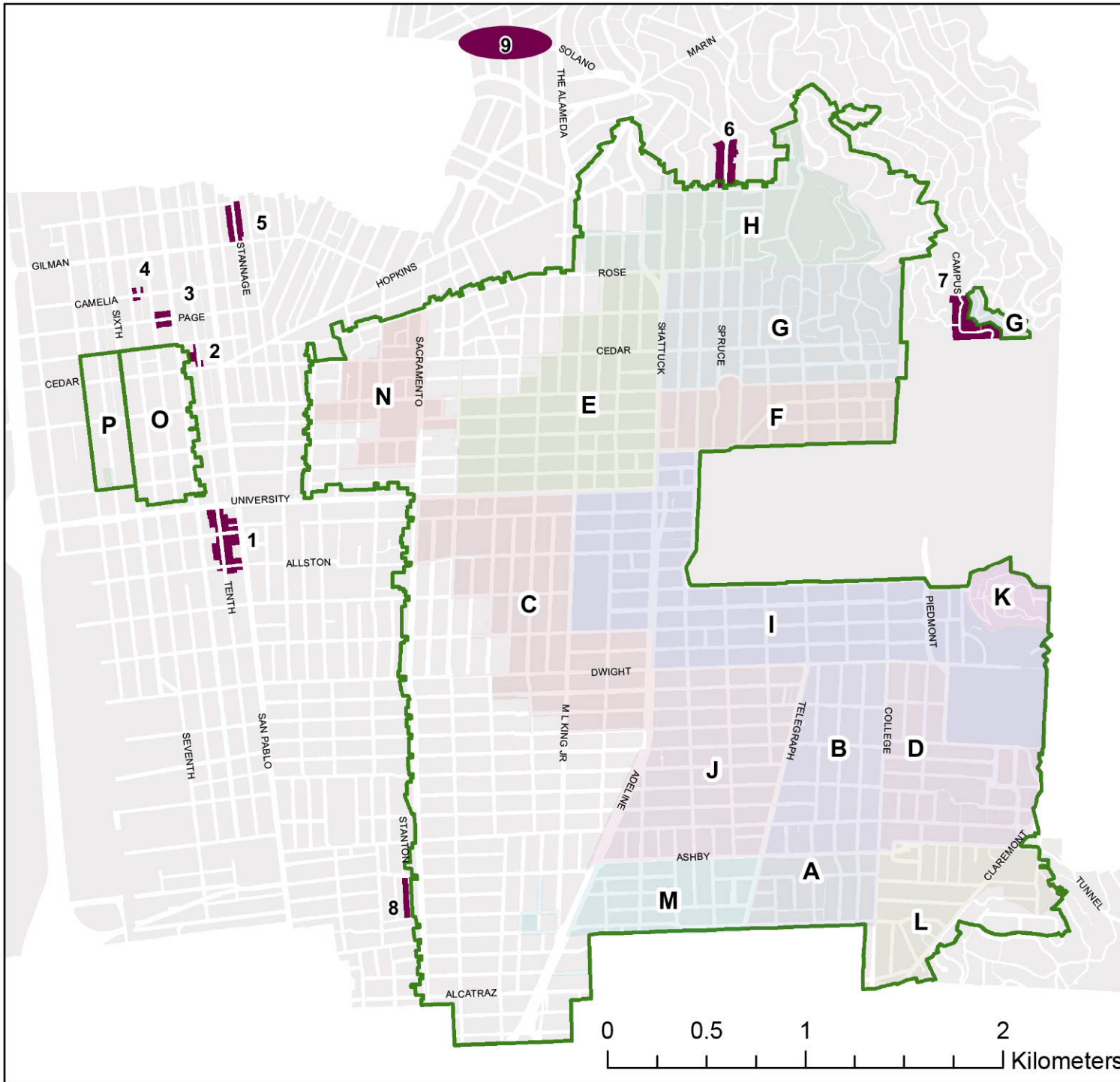
If you challenge the above in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Berkeley at, or prior to, the public hearing. Background information concerning this proposal will be available at the City Clerk Department and posted on the City of Berkeley webpage at least 12 days prior to the public hearing.

**Published:** May 3 and May 10, 2019 – The Berkeley Voice

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I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on May 2, 2019.

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Mark Numainville, City Clerk



# ATTACHMENT 6

## EXISTING ELIGIBILITY AND INELIGIBLE OPT-IN REQUESTS

- Existing RPP Area Extents
- Current Eligibility Boundary
- Out of Area Opt-In Requests

### FY 2019 Requests

1. 10th between University and Allston with adjacent side streets
2. 10th between Jones and Cedar
3. Page between 8th and 9th
4. Camelia between 7th and 8th

### Requests Prior to FY 2019

5. Stannage between Gilman and Harrison
6. Spruce between Los Angeles to Eunice
7. Campus between Avenita and LBL Campus
8. Stanton between Ashby and Prince
9. Multiple requests from Solano neighborhood

This map is for reference purposes only.

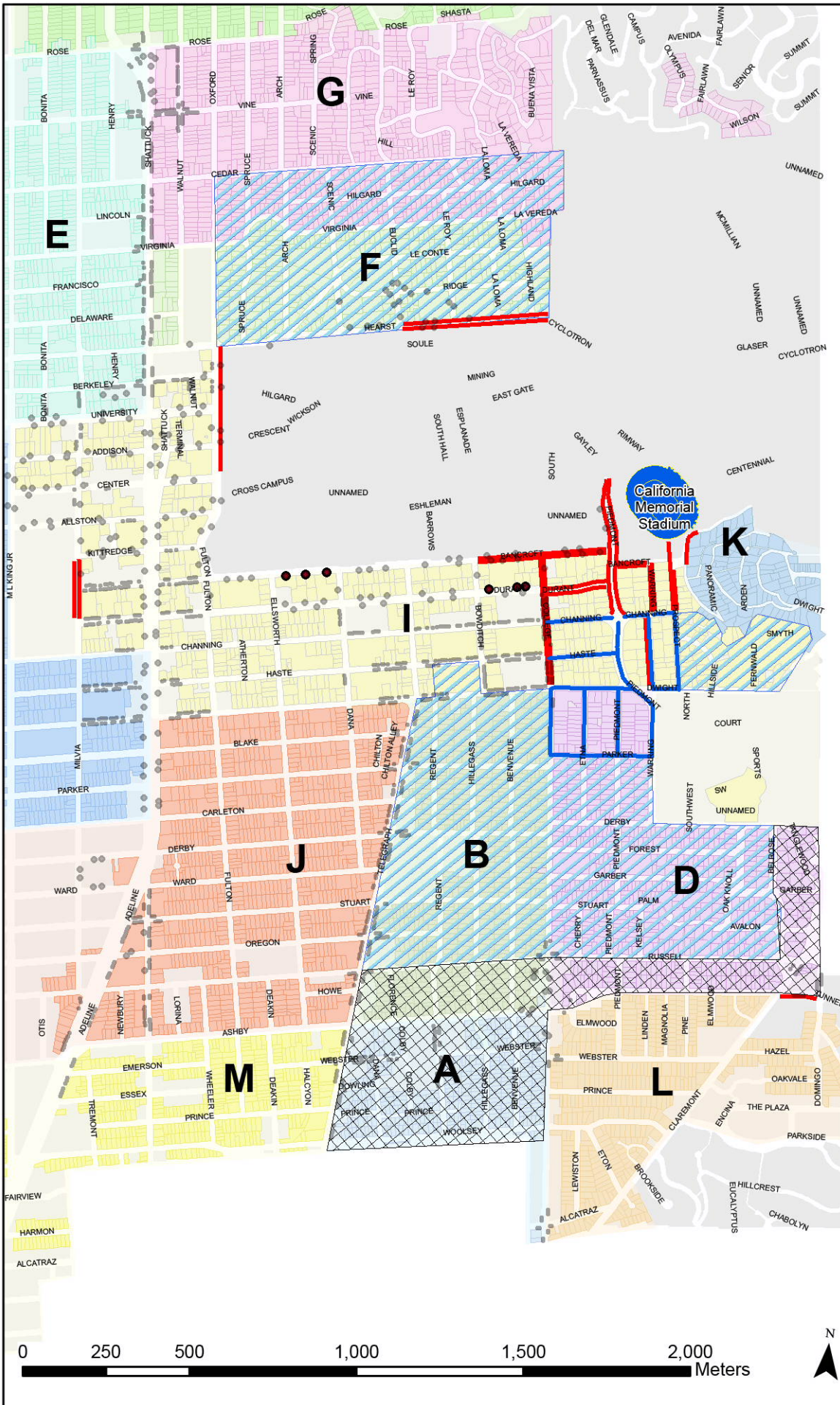
Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
March 20, 2019



**CITY OF BERKELEY**  
 Transportation Division  
 1947 Center Street  
 Berkeley CA 94704



# ATTACHMENT 7: PROPOSED 2019 UC BERKELEY FOOTBALL GAME DAY PARKING RESTRICTIONS



### Existing Restrictions

- Single Space Meters (9AM-6PM)
- Pay And Display Meters (9AM-6PM)
- Meters With Additional No Parking Restrictions
- ▨ Double Fine Area (200%)
- Existing Football Tow Zones

### Proposed Restrictions

- ▨ Enhanced Fine Area for Non-Permit Holders (\$225)
- Proposed New Tow Zone For Non-Permit Holders

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
March 20, 2019







Office of the City Manager

INFORMATION CALENDAR

May 14, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip Harrington, Director, Public Works

Subject: Residential Preferential Parking Program: Spring 2019 Update

INTRODUCTION

This report provides an update on the effects of the 2018 “short-term” adjustments to the Residential Preferential Parking Program (RPP). An accompanying Public Hearing Report, also on the May 14, 2019 agenda, provides a road map for continued strategic reform and expansion of the Program in the “mid-term” timeframe (Fiscal Years 2020-2021).

CURRENT SITUATION AND ITS EFFECTS

On February 13, 2018, Council approved staff recommendations to expand eligibility for Residential Preferential Parking to two new areas in West Berkeley (Area O and Area P, in the area zoned Mixed-Use Residential); authorize new meters in West Berkeley to manage commercial parking adjacent to residences in mixed-use areas; add a limit of three (3) annual permits available for purchase at most residential addresses; and increase permit fees to eliminate the Program’s operating deficit. Since these recommendations were approved, the following has occurred:

- Increased RPP Program fiscal solvency. Effective July 1, 2018, RPP permit fees increased and the annual permit cap (3 permits per address) was implemented. As of March 2019, revenues from RPP permit sales were 12% lower than the previous year, with 9% fewer permits sold.<sup>1</sup> Due in part to these lower than expected revenues, the Program continues to operate at a deficit of approximately \$124,675. Nevertheless, this represents a reduction of \$71,125 in the Program deficit since FY 2017, when the structural deficit totaled \$195,800.
- Implementation of annual permit maximum. As part of the February 2018 action, Council approved a new maximum of three (3) annual permits in most areas. Customers needing more than the maximum are able to apply for a waiver to the limit. As of March 1, 2019, a total of 105 waiver forms were received, with 93 approved for a permit. Per the BMC, these “additional permits” incur a \$100 surcharge on the base permit fee. Initially created to facilitate the waiver process,

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<sup>1</sup> Analysis for Fiscal Year 2019 included the most recent twelve months of available data at the time of writing: April 2018 through March 2019.



a new email address, [RPP@cityofberkeley.info](mailto:RPP@cityofberkeley.info), has provided the public a new way to submit questions about the RPP Program.

- Despite the introduction of two new RPP areas, few residents in these areas have taken advantage of access to RPP Program protections. After Council approved the expansion of RPP opt-in eligibility in February 2018, staff sent a letter to each residential address in the new West Berkeley Areas O and P (and the expansion of existing Area L) announcing the decision and explaining how to opt-in to the RPP Program. As of March 1, 2019, only four (4) out of a total of 537 newly-eligible residential parcels successfully submitted an opt-in request, which was approved by Council on January 29, 2019.<sup>2</sup>
- Enforcement of street sweeping restrictions has not changed. See “Update: Parking Enforcement Operations” section below.

Update: Permit Saturation Analysis

To better understand the Program’s role in mitigating parking demand between residents and visitors, staff performed an analysis of “permit saturation,” i.e., the ratio of permits issued per permitted parking space. This type of analysis, which was also conducted by the San Francisco Municipal Transportation Agency (SFMTA) in its recent *San Francisco Residential Permit Parking Evaluation and Reform Project*,<sup>3</sup> sheds light on demand for parking in different RPP Program areas.

This analysis included annual permits issued for FY 2019 in the Southside and Elmwood neighborhoods (Areas A, B, D, I, and L).<sup>4</sup> As summarized in the table below and depicted in Attachment 1, annual permits issued in each area account for 72% to more than 100% of permitted parking spaces in these neighborhoods. In Area B, more annual permits are issued than permitted parking spaces are available, and in Area I, the saturation rate is nearly 100%.

| RPP Area | On-Street Permit Parking Supply, 2017 | Annual RPP Permits Issued for FY 2019 | Permit Saturation % |
|----------|---------------------------------------|---------------------------------------|---------------------|
| B        | 1009                                  | 1142                                  | 113%                |
| I        | 990                                   | 973                                   | 98%                 |
| A        | 497                                   | 425                                   | 86%                 |
| D        | 1318                                  | 1067                                  | 81%                 |
| L        | 923                                   | 667                                   | 72%                 |

<sup>2</sup> January 29, 2019 City Council Agenda: Implement Residential Preferential Parking (RPP) Program on Sections of Fifth Street and Martin Luther King Jr. Way: <https://bit.ly/2SXCEiW>

<sup>3</sup> San Francisco Residential Permit Parking Evaluation and Reform Project, <https://bit.ly/2tXwxfJ>

<sup>4</sup> Note: This analysis does not account for any visitor, community facility, and/or Gig car-share permits issued for FY 2019, which further contribute to variable parking demand in these neighborhoods. Likewise, it does not account for actual usage of the parking permits, e.g., the variability in parking demand on a block-to-block level, or parking occupancy of permit holders over the course of a day.

While this analysis is only a snapshot of parking conditions in some RPP areas, it indicates that there is significant competing parking demand among permitted residents, let alone from non-permitted visitors who are subject to the two-hour time limit, which the Program was originally designed to mitigate.

Additional data collection and analysis on the RPP Program in the Southside and Elmwood neighborhoods will be conducted as part of the grant-funded Residential Shared Parking Pilot (RSPP) project, which will begin later this year.<sup>5</sup> This pilot project will also examine alternatives to permit-based management of non-resident parking demand.

#### Update: Parking Enforcement Operations

Since staff provided Council with the “Phase I” RPP Reform and Expansion update in early 2018, there have been no substantive changes to parking enforcement operations. Eighteen (18) Parking Enforcement Officers (PEOs) patrol geographic “beats” that include a mix of parking meters and RPP time-limited parking areas. Within these beats, PEOs enforce parking restrictions on over 1,000 blockfaces<sup>6</sup> with RPP two-hour time limit restrictions, 460 blockfaces with parking meters of varying time limits, and all other time-limited parking areas.

Three (3) more PEOs are solely assigned to enforce street sweeping restrictions. In areas with street sweeping, posted signs prohibit parking during three-hour windows, e.g., 9:00 a.m. to 12:00 p.m., or 12:30 p.m. to 3:30 p.m. These three-hour windows are designed to maximize flexibility for street sweeping activities, which may be delayed due to localized issues such as heavy leaf falls in areas with thick tree canopies.

Enforcement of street sweeping parking restrictions consists of driving street sweeping routes immediately in front of the sweeper and issuing citations to vehicles in violation of parking restrictions. When the sweeper’s hopper is full, the PEO must wait for the sweeper to empty its load at the City’s Solid Waste Management and Transfer station, then return to the route before continuing enforcement activities. If the sweeper and its accompanying PEO have completed a blockface prior to the end of the three-hour window, vehicles are *de facto* allowed to park on the street in violation of posted restrictions. While providing a convenience to adjacent residents, the current street sweeping enforcement practice reduces the capacity of PEOs to conduct other duties.

In all, approximately half of parking enforcement time is spent conducting RPP time limit patrols. The remaining half includes enforcing parking meters, time limited areas, school zones, travel time, and being pulled away for emergencies (e.g., traffic collisions). As demands on parking enforcement increased over the past several years while staffing

<sup>5</sup> July 24, 2018 *City Council Agenda: Contract: Nelson\Nygaard for Parking Data Collection and Analysis Services for the goBerkeley Residential Shared Parking Pilot* <https://bit.ly/2nFcqQ2>

<sup>6</sup> A blockface is defined as one side of one street, e.g., the west side of Milvia Street between Allston Way and Center Street.



levels remained constant, PEOs no longer conduct both morning and afternoon patrols of time limits in RPP areas—depending on daily duties, a blockface may be patrolled either in the morning or in the afternoon. Similarly, each new resident “opt-in” petition approved by Council further reduces the frequency and availability of enforcement for existing parking areas.

### BACKGROUND

The RPP Program began in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00 a.m. and 7:00 p.m. Monday through Friday, and on some blocks Saturday.

In March 2014,<sup>7</sup> Council directed staff to evaluate expanding the RPP Program beyond its then-current geographic boundaries. At a September 2017 Council Worksession, staff discussed several challenges with the RPP Program, and proposed incremental solutions to be implemented over the next three years.<sup>8</sup> In February 2018, staff returned to Council with a first set of “short-term” policy reforms, including increased permit fees for Program cost neutrality, a limit of three (3) annual permits per address, and an expansion of RPP eligibility to two new zones in West Berkeley.<sup>9</sup> Improving the effectiveness of the RPP Program is a Strategic Plan Priority Project, advancing the City’s goals to:

- Provide an efficient and financially-health City government; and
- Be a customer-focused organization that provides excellent, timely, easily-accessible service and information to the community.

### ENVIRONMENTAL SUSTAINABILITY

The presence of two-hour time limits for non-residents as part of the RPP Program may encourage some commuters to use other modes of travel, potentially reducing parking demand and congestion. However, other commuters may continue to drive despite the restrictions, and move their cars every two hours to avoid being ticketed. This behavior has an adverse impact on traffic congestion, air quality, and excess fuel consumption.

### POSSIBLE FUTURE ACTION

This report is accompanied by a RPP Public Hearing Report, also on the May 14, 2019 agenda, which provides recommendations for enhancing and expanding the RPP Program over the next several years.

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<sup>7</sup> March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas*: <http://bit.ly/2vTgngD>

<sup>8</sup> September 19, 2017 *City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations*: <https://bit.ly/2iWaPDa>

<sup>9</sup> February 27, 2018 *City Council Agenda: Residential Preferential Parking (RPP) Program Reform and Expansion*: <https://bit.ly/2Yq6tYB>.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Please refer to the Fiscal Impacts section of the accompanying report for more information.

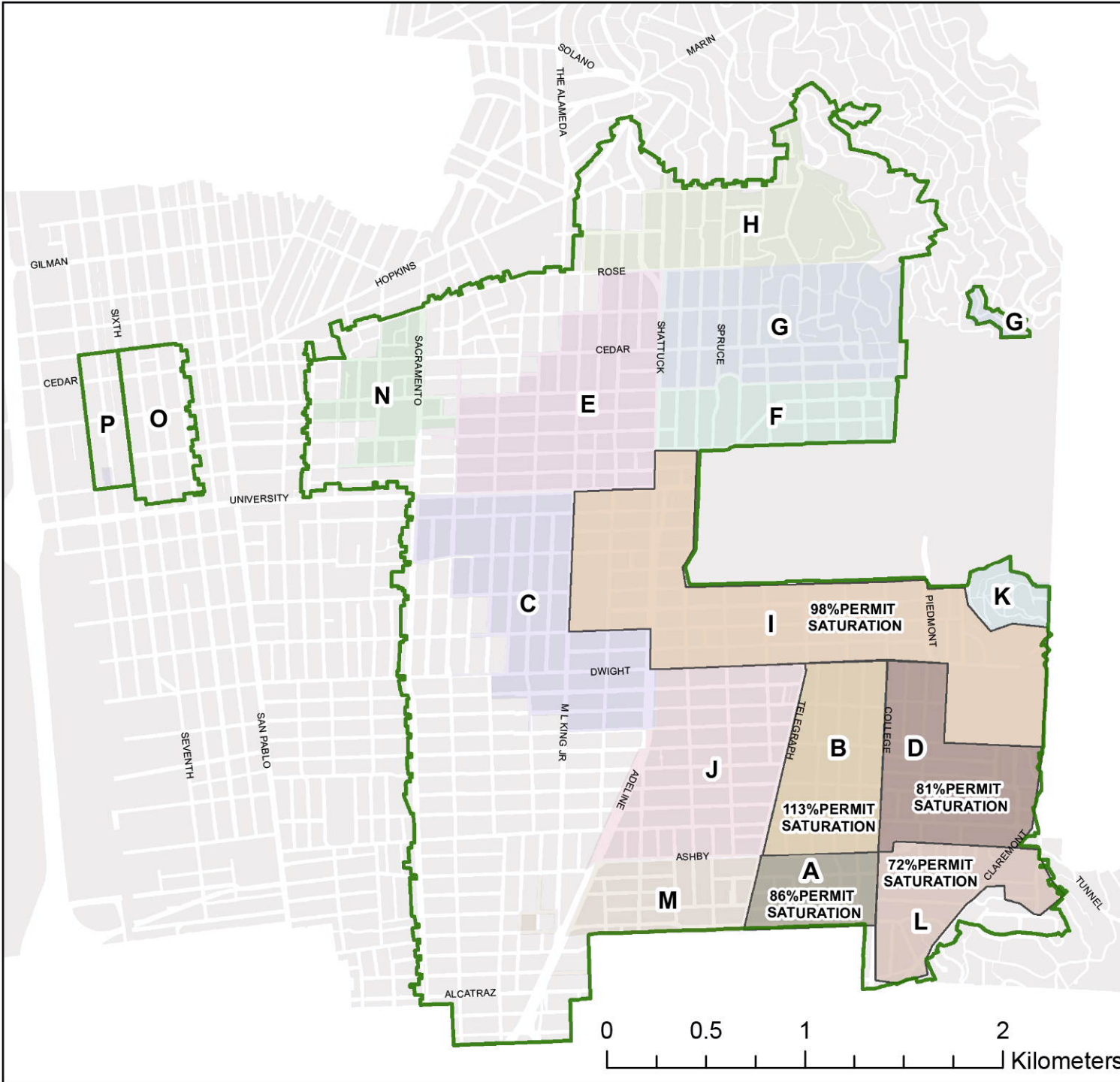
CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
Gordon Hansen, Senior Planner, Public Works (510) 981-7064

**Attachments:**

1: FY 2019 Permit Saturation





# ATTACHMENT 1

## FY 2019 PERMIT SATURATION

- Existing RPP Area Extents
- Current Eligibility Boundary

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
March 20, 2019



**CITY OF BERKELEY**  
 Transportation Division  
 1947 Center Street  
 Berkeley CA 94704



Office of the City Manager

PUBLIC HEARING  
February 27, 2018  
(Continued from February 13, 2018)

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Public Works  
Subject: Residential Preferential Parking (RPP) Program Reform and Expansion

RECOMMENDATION

Conduct a public hearing and upon conclusion:

1. Adopt second reading of Ordinance No. 7,589-N.S. amending Berkeley Municipal Code Title 14 to expand eligibility for Residential Preferential Parking to specified areas, allow Residential Preferential Parking in areas zoned Mixed Use Residential, authorize new meters in West Berkeley to manage commercial parking adjacent to residences in mixed-use areas, add a cap on the number of annual permits residents may purchase, and
2. Adopt a Resolution raising permit fees to eliminate the Program's operating deficit and rescinding Resolution No. 66,895-N.S. effective March 1, 2018.

SUMMARY

The recommended actions constitute a package of short-term changes to the RPP Program, developed in response to Council feedback at the September 19, 2017 Residential Preferential Parking (RPP) Program Recommendations Worksession.<sup>1</sup> The changes include: 1) expanding the RPP Program to three new areas in the City by strategically reallocating Parking Enforcement resources currently assigned to street sweeping; 2) implementing the RPP Program in mixed-use areas near Fourth Street in West Berkeley, under a new set of guidelines specifically developed for mixed-use areas; and 3) strengthening the RPP Program's effectiveness by increasing permit fees to make the program cost-neutral and setting a maximum number of residential permits per address available for purchase in a year.

FISCAL IMPACTS OF RECOMMENDATION

Per established Council Budget Policies,<sup>2</sup> the RPP Program should pay for itself. Following the September 19, 2017 Residential Preferential Parking (RPP) Program Recommendations Worksession with Council, staff completed the Fiscal Year (FY)

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<sup>1</sup> September 19, 2017 *City Council Agenda: Residential Preferential Parking (RPP) Program Recommendations*: <http://bit.ly/2iWaPDa>

<sup>2</sup> "Council Budget Policies": <http://bit.ly/2z4UiFY>



2017 RPP Program analysis, which found the Program’s structural annual deficit decreased to approximately \$195,800.

The proposed fee structure is projected to generate approximately \$196,400 of additional revenue for the General Fund (Fund 010) beginning March 1, 2018. The following table reflects increases for each type of permit in the RPP fee structure to result in a cost-neutral Program.

| Permit Type                                                                   | Current Fee | Proposed Fee | \$ Increase | % Increase |
|-------------------------------------------------------------------------------|-------------|--------------|-------------|------------|
| Annual Residential & In-Home Care                                             | \$55.00     | \$66.00      | \$11.00     | 20%        |
| 1-Day Visitor                                                                 | \$2.75      | \$3.00       | \$0.25      | 9%         |
| 14-Day Visitor                                                                | \$28.50     | \$34.00      | \$5.50      | 19%        |
| Semi-Annual Residential & In-Home Care                                        | \$27.50     | \$33.00      | \$5.50      | 20%        |
| Community-Serving Facility                                                    | \$69.00     | \$83.00      | \$14.00     | 20%        |
| Merchant                                                                      | \$154.00    | \$185.00     | \$31.00     | 20%        |
| 1-Day Senior Center                                                           | \$1.25      | \$1.00       | -\$0.25     | -20%       |
| Replacement of Annual, 14-Day, Community-Serving Facility, & Merchant Permits | \$12.50     | \$15.00      | \$2.50      | 20%        |

The proposed fee structure will generate approximately \$1,199,400 in revenue for the General Fund in FY 2019. This increase of \$196,400 in revenue would close the current deficit, resulting in a cost-neutral Program (the \$600 difference is within the margin of approximation). With the proposed fee increase, the total Program revenue is projected to be \$2.53 million including the revenue resulting from RPP-related citations.

| RPP Program Financial Components   | FY 2017 Actuals    | FY 2019 Projections |
|------------------------------------|--------------------|---------------------|
| Total RPP Permit Fee Revenue       | \$1,003,000        | \$1,199,400         |
| RPP-Related Citation Revenue       | \$1,332,400        | \$1,332,400         |
| <b>Total Revenue</b>               | <b>\$2,335,400</b> | <b>\$2,530,900</b>  |
| <b>Total RPP Program Costs</b>     | <b>\$2,531,200</b> | <b>\$2,531,800</b>  |
| <b>RPP Program Deficit/Surplus</b> | <b>(\$195,800)</b> | <b>\$600</b>        |

These revenue projections are based on the RPP Program at its current geographic extents. While RPP revenues are assumed to increase as residents opt-in and purchase permits in new areas (discussed below), actual amounts of new permit purchases and citations are unknown, making future revenues difficult to forecast.

Program Expansion Costs

Program expansion costs primarily consist of new sign installation (labor and materials), which is approximately \$1,150 per block.<sup>3</sup> Assuming thirty-two new blocks opt-in, the total cost of expansion will be approximately \$36,800. Within the special West Berkeley Mixed-Use area, new parking meters will cost approximately \$87,040. Funding for the Program expansion will be recommended for appropriation through the FY 2018 Second Amendment to the FY 2018 Annual Appropriations Ordinance from the Parking Meter Fund 840-5505-431.11-01 and 840-5505-431.55-20 (\$36,800), and 840-4940-431.71-41 and 840-4940-431.70-41 (\$87,040). The costs and revenues associated with the parking meters relate to the Parking Meter Fund, not the RPP Program.

Enforcement in the expansion areas will not incur new staff costs, pursuant to a strategic reallocation of labor on street sweeping routes, as discussed in more detail below. Staff expect the modest costs of expansion will be covered by new revenues, particularly with the increase in permit fees. Staff will continue to monitor the costs and revenues of the RPP Program as it expands.

CURRENT SITUATION AND ITS EFFECTS

Parking in residential areas is currently managed through two separate programs: the street sweeping program, which cleans most residential streets in the flat areas of the City; and the RPP Program currently in effect in fourteen zones to the north, west, and south of the University of California at Berkeley (UC-Berkeley) campus. Under the street sweeping program, parking is prohibited on applicable streets for a three-hour window once per month. Streets included in the RPP Program have two-hour time limits for vehicles without an applicable RPP permit. Parking Enforcement staff regularly monitor these areas to ensure motorists consistently adhere to posted street sweeping restrictions and RPP time limits.

Fifteen Parking Enforcement Officers (PEOs) patrol geographic “beats” that include a mix of meters and RPP time limited parking areas. Three more PEOs are solely assigned to enforce street sweeping restrictions, which consists of driving street sweeping routes immediately in front of the sweeper and issuing citations to vehicles in violation of parking restrictions. Under current business practices, when the sweeper reaches maximum rubbish capacity, the PEO must wait for the sweeper to empty its load at the City’s Solid Waste Management and Transfer station, then return to the route before continuing enforcement activities. These three PEOs could be used to enforce additional RPP areas, thus allowing the City to modestly but strategically expand the RPP Program in the short-term without hiring additional PEO staff.<sup>4</sup>

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<sup>3</sup> Staff assumes six RPP signs per block (three signs on each side of the block).

<sup>4</sup> Under this proposal, PEOs would no longer accompany street sweeping vehicles, but beat officers would enforce restrictions during the three-hour restriction window, before the sweeper cleans the street, and allow time for other pending responsibilities. This recommendation was developed in collaboration with Police and Parking Enforcement staff. In the future, street sweeping vehicles may be equipped with GPS beacons, which would allow residents to check when streets reopen for parking in real-time.



Staff Proposal: Targeted Expansion of the Existing RPP Program

Based on recent requests by residents to join the RPP Program, staff recommend expanding the existing RPP Program to two areas in the short-term:

1. Expansion of Area L (Claremont). Up to eight blocks of Encina Place, Oakvale Avenue, The Plaza Drive, Parkside Drive, and Nogales Street would be able to petition for Area L RPP designation and right to purchase permits.
2. New West Berkeley Area. Up to sixteen blocks in the residential area bounded by Jones Street, University Avenue, Sixth Street, and Ninth Street would be able to petition for RPP permits.

Residents in these areas would be able to opt-in to the Program under existing guidelines as set forth in BMC Section 14.72,<sup>5</sup> and would be restricted in the number of permits they are able to purchase per reforms recommended in this report. See Attachment 5 for a map of these targeted expansion areas.

Staff Proposal: RPP Expansion to the Mixed-Use Areas of West Berkeley

Parts of West Berkeley are zoned as Mixed-Use Residential.<sup>6</sup> In practice, mixed-use development may consist of buildings with ground-floor commercial or retail space and residences in upper floors, or may also manifest as blocks containing residences interspersed with commercial or industrial spaces (or vice versa).

Because the standard RPP Program was developed for implementation in “residentially zoned” neighborhoods only (defined as primarily single- or multi-family homes), a modified approach is needed for the Mixed-Use Residential zone adjacent to the Fourth Street commercial area in West Berkeley.<sup>7</sup> Presently, curb parking in this mixed-use area is largely unregulated, with a few time-limited spaces adjacent to some businesses. Preliminary observations suggest parking availability during the day is severely constrained and appears to be very popular with local area employees. Staff is sensitive to potential conflicts between employees and residents, and are designing an approach that includes:

- Leveraging existing parking management tools wherever possible, including parking meters for increasing parking availability adjacent to commercial land uses, and standard RPP time-limit restrictions adjacent to residences. Depending on local needs, meter time limits could extend to four or eight hours.
- In blocks with residences interspersed among other uses, designating up to one-half of that block’s curb space for RPP time-limited parking if a majority of these residences petition to opt-in to the Program, leaving the other parking spaces available for other uses. In standard RPP areas, entire block faces adjacent to

<sup>5</sup> Berkeley Municipal Code Section 14.72: <http://bit.ly/2C0Oob0>

<sup>6</sup> Berkeley Municipal Code Chapter 23E.84: <http://bit.ly/2zd09sB>

<sup>7</sup> This area roughly includes Fourth and Fifth Streets between Jones Street and Hearst Avenue. See Attachment 5 for a map showing this area.

residences are typically included in the Program, because of the homogenous nature of these residentially-zoned areas.

- Phasing in the installation of meters on mixed-use blocks, contingent on residential opt-ins, to reduce the impact of “spillover” parking on residents while providing for employee and customer parking.
- Limiting the number of available residential permits to two per address, given on-street supply constraints. In standard RPP areas, the recommended cap is three per address.

Other cities have approached mixed-use areas in different ways: While some (like Oakland) have embraced merchant or employee permits, others (like San Francisco) have focused more on bolstering the use of meters and long time limits to ensure permit parking privileges are not diluted.

#### Staff Proposal: RPP Program Management Reform

Subsequent to Council’s support at the September 19, 2017 Residential Preferential Parking (RPP) Program Recommendations Worksession, staff will implement a cap for FY 2019 permits where three residential permits per address will be available for purchase in one year. In special circumstances, applicants may request a waiver to this limit. If the waiver is approved by the Traffic Engineer, each additional permit above the cap will incur a surcharge of \$100, in addition to the base annual fee. Any resulting reduction in the number of annual permits sold per each address will increase the Finance Department’s capacity to fulfill permits and provide customer service for an expanding RPP Program.

The attached Ordinance also modifies BMC Chapter 14.72.030 to clarify the definition of a “trapped resident.”

#### Staff Proposal: RPP Permit Fee Increase

Council last set RPP permit fees via Resolution No. 66,895 on December 16, 2014<sup>8</sup> with the goal of reducing the program deficit and with the expectation that the remaining deficit would be eliminated through a future Council action. At this time fees do not cover the costs associated with administering the Program. Current fees only partially support: Parking Enforcement staffing costs to enforce parking restrictions in RPP areas; Finance Revenue Collection and Customer Service costs for printing, postage, and processing renewals; and Public Works Transportation costs to manage the Program. As discussed in the Fiscal Impacts section, the current RPP Program operates at a deficit of approximately \$195,800. Staff has proposed an increase of approximately 20% for all permit fees to close the funding gap.

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<sup>8</sup> December 16, 2014: *City Council Agenda: Fees: New Rate Schedule for Residential Preferential Parking Permits*: <http://bit.ly/2DQsKXP>



Next Steps

If these recommendations are approved, staff will begin processing opt-in requests immediately, and will fully implement the targeted expansion in the FY 2019 permit year. Effective March 1, 2018, all FY 2019 permits will be sold at the new rates proposed in the attached resolution.

Staff intend to bring additional mid-term recommendations to Council in coming months, after new Automated License Plate Recognition (ALPR) systems are in full operation. These recommendations will include proposals for staffing, additional RPP Program expansion areas, consistent Monday-Saturday enforcement, and a UC-Berkeley Football Game Day Special Event Permit proposal.

BACKGROUND

In March 2014,<sup>9</sup> Council asked staff to evaluate the costs and benefits of allowing the RPP Program to expand beyond its then-current geographic boundaries. At the September 19, 2017 Council Worksession, staff presented a comprehensive analysis of challenges to the RPP Program, and proposed solutions to these challenges to be implemented in stages over the next three years. This report responds to Council’s comments at that Worksession, particularly in Attachment 4, and provides a road map for strategic reform and expansion of the existing Program in the short-term timeframe (FY 2018-2019).

The RPP Program was instituted in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00a.m. and 7:00p.m. Monday through Friday, and on some blocks Saturday.

ENVIRONMENTAL SUSTAINABILITY

Expansion of the RPP Program may encourage some drivers who work in commercial areas adjacent to proposed RPP areas to consider using other modes of travel, thereby potentially reducing parking demand and congestion. Implementing a limit on the number of available permits may also encourage residents to consider alternatives to driving and parking for trips within the City. While use of other transportation modes may result in a reduction in vehicle traffic and a corresponding reduction in greenhouse gases, based, however, upon feedback from merchants adjacent to existing RPP Program areas, staff anticipate the “two-hour shuffle” may also begin to occur in RPP expansion areas. This behavior would have an adverse impact on traffic congestion, air quality, and excess fuel consumption.

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<sup>9</sup> March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas:*  
<http://bit.ly/2vTgnqD>

RATIONALE FOR RECOMMENDATION

At the September 19, 2017 Worksession, Council consensus was for staff to begin expansion of the RPP Program, impose caps on the number of available residential permits, and reduce the Program deficit. The recommendations contained in this report address these requests.

ALTERNATIVE ACTIONS CONSIDERED

Council could reject these recommendations, which would keep the status quo RPP Program, including its ongoing operating deficit.

CONTACT PERSON

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Attachments:

- 1: Ordinance for Second Reading
- 2: Resolution
- 3: Public Hearing Notice
- 4: Response to Council Questions from September 19, 2017 Worksession
- 5: Map of Targeted Expansion Areas



ORDINANCE NO. 7,589-N.S.

AMENDING BERKELEY MUNICIPAL CODE TITLE 14 TO EXPAND METERED AREAS  
IN WEST BERKELEY AND REFORM AND EXPAND THE RESIDENTIAL  
PREFERENTIAL PARKING (RPP) PROGRAM

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Section 14.52.010 amended to read as follows:

**14.52.010 Parking meter zones.**

A. Parking meter zones are those streets or portions of streets in the City hereinafter described as zones within which the parking of motor vehicles shall be controlled, regulated and inspected with the aid of parking meters, pay-and-display stations and/or a City-approved software application that processes pay-by-phone payments from a mobile phone, consisting of:

Acton Street, both sides, from 150 feet north of University Avenue to University Avenue.

Adeline Street, east side, from Ward to Stuart Street.

Adeline Street, both sides, from Stuart Street to Oregon Street.

Adeline Street, east side, from Oregon Street to Russell Street.

Adeline Street, both sides, from Russell Street to Ashby Avenue.

Alcatraz Avenue, south side, from 75 feet east of College Avenue to College Avenue.

Ashby Avenue, both sides, from Domingo Avenue to Claremont Avenue.

Blake Street, both sides, from Telegraph Avenue to 125 feet west of Telegraph Avenue.

Bonar Street, east side, from University Avenue to 150 feet south of University Avenue.

Bonar Street, west side, from University Avenue to Addison Street.

California Street, both sides, from 100 feet north of University Avenue to 100 feet south of University Avenue.

Camelia Street, north side, from Ninth Street to Tenth Street.

Camelia Street, north side, from San Pablo Avenue to 100 feet west of San Pablo Avenue.

Claremont Avenue, east side, from Russell Street to Ashby Avenue.

Claremont Avenue, west side, from Russell Street to Claremont Boulevard.

Colby Street, west side, from Webster Street to South Hospital Drive.

College Avenue, east side, from 150 feet north of Alcatraz Avenue to Berkeley-Oakland city limits south of Alcatraz Avenue.

College Avenue, west side, from Alcatraz Avenue to Berkeley-Oakland city limit, south of Alcatraz Avenue.

Colusa Avenue, east side, from 225 feet south of Solano Avenue to Catalina Avenue.

Colusa Avenue, west side, from 180 feet south of Solano Avenue to Catalina Avenue.

Curtis Street, both sides, from 100 feet north of University Avenue to University Avenue.

Derby Street, north side, from 150 feet east of Telegraph Avenue to 50 feet west of Telegraph Avenue.

Derby Street, south side, from 150 feet east of Telegraph Avenue to Telegraph Avenue.

Derby Street, south side from Milvia Street to 300 feet east of Milvia Street.

Domingo Avenue, both sides, from Berkeley-Oakland city limit to Ashby Avenue.

Dwight Way, north side, from San Pablo Avenue extending 40 feet east of San Pablo Avenue.

Ensenada Avenue, east side, from 90 feet south of Solano Avenue, to 66 feet north of Solano Avenue.

Euclid Avenue, west side, beginning at Hearst Avenue and extending 130 feet north of Ridge Road.

Euclid Avenue, east side, beginning at Hearst Avenue and extending 135 feet north of Ridge Road.

Francisco Street, both sides, from Shattuck Avenue to 100 feet west of Shattuck Avenue.

Fresno Avenue, east side, from 69 feet south of Solano Avenue to Solano Avenue.

Grayson Street, south side, from San Pablo Avenue extending 60 feet west of San Pablo Avenue.

Grove Street, both sides, from Allston Way to Berkeley Way.

Hearst Avenue, north side, from Scenic Avenue to LaLoma Avenue.

Hearst Avenue, north side, from Third Street to Fifth Street.

Hearst Avenue, south side, from Euclid Avenue to Gayley Road.

Hearst Avenue, south side, from Oxford Street to Arch Street

Hearst Avenue, south side, from Third Street to Sixth Street.

LaLoma Avenue, both sides, from Hearst Avenue to Ridge Road.

LeRoy Avenue, both sides, from Hearst Avenue to Ridge Road.

Lincoln Street, south side, from Shattuck Avenue to 150 feet west of Shattuck Avenue.

McKinley Avenue, east side, from approximately 110 feet from Allston Way to 155 feet, Monday through Friday, nine a.m. to six p.m.

Milvia Street, east side from Derby Street to Ward Street.

Modoc Street, east side, from 90 feet south of Solano Avenue to Solano Avenue.

Modoc Street, west side, from 66 feet south of Solano Avenue to Solano Avenue.

Oregon Street, north side, from 75 feet east of Telegraph Avenue to 50 feet west of Telegraph Avenue.

Oregon Street, south side, from 175 feet east of Telegraph Avenue to Telegraph Avenue.

Oregon Street, both sides, from Adeline Street to Shattuck Avenue.

Page Street, north side, from San Pablo Avenue to Tenth Street.

Pardee Street, south side, from San Pablo Avenue extending 60 feet west of San Pablo Avenue.

Parker Street, both sides, from 200 feet west of Regent Street to 100 feet west of Telegraph Avenue.

Peralta Avenue, both sides, from Solano Avenue to Capistrano Avenue.

Regent Street, west side, from Ashby Avenue to South Hospital Drive.

Regent Street, east side, from Ashby Avenue to 125 feet south of Webster Street.

Ridge Road, north side, beginning 120 feet west of Euclid Avenue and extending 100 feet east of Euclid Avenue.

Ridge Road, south side, from 180 feet west of Euclid Avenue to LeRoy Avenue.

Rose Street, north side, from 100 feet east of Shattuck Avenue to 100 feet west of Henry Street.

Rose Street, south side, from Walnut Street to Shattuck Place.

Russell Street, south side, from 75 feet east of Telegraph Avenue to 100 feet west of Telegraph Avenue.



San Pablo Avenue, both sides, from Hearst Avenue to Allston Way.  
San Pablo Avenue, both sides, from Harrison Street to Gilman Street.  
San Pablo Avenue, east side, from Gilman Street to Camelia Street.  
San Pablo Avenue, both sides, from Camelia Street to Virginia Street.  
San Pablo Avenue, both sides, from Virginia Street to Delaware Street.  
San Pablo Avenue, both sides, from Delaware Street to Hearst Avenue.  
San Pablo Avenue, both sides, from Allston Way to Channing Way.  
San Pablo Avenue, east side, from Channing Way to Parker Street.  
San Pablo Avenue, both sides, from Parker Street to Heinz Street.  
San Pablo Avenue, east side, from Russell Street to Burnett Street.  
San Pablo Avenue, west side, from Bancroft Way to Ashby Avenue.  
Scenic Avenue, east side, from Hearst Avenue to Ridge Road.  
Shattuck Avenue, both sides, from 100 feet north of Rose Street to Hearst Street.  
Shattuck Avenue, east side, from Rose Street to Vine Street.  
Shattuck Avenue, east side, from Ward Street to Stuart Street.  
Shattuck Avenue, west side, from 200 feet south of Ward Street to Stuart Street.  
Shattuck Avenue, both sides, from Stuart Street to Oregon Street.  
Shattuck Avenue, east side, from Oregon Street to Russell Street.  
Shattuck Avenue, both sides, from Russell Street to Ashby Avenue.  
Shattuck Avenue, west side, from Ward Street to Ashby Avenue.  
Shattuck Place, west side, from Rose Street to Shattuck Avenue.  
Solano Avenue, both sides, from Tulare Avenue to The Alameda.  
Solano Avenue, north side, from 140 feet to 184 feet east of The Alameda.  
South Hospital Drive, south side, from Colby Street to 75 feet west of Colby Street.  
Stuart Street, south side, from 50 feet east of Telegraph Avenue to Telegraph Avenue.  
Stuart Street, north side, from Adeline Street to 70 feet east of Shattuck Avenue.  
Tacoma Avenue, both sides, from Solano Avenue to 66 feet north of Solano Avenue.  
Telegraph Avenue, west side, from Dwight Way to Prince Street.  
Telegraph Avenue, east side, from Dwight Way to Woolsey Street.  
The Alameda, east side, from Los Angeles Avenue to Solano Avenue.  
Tenth Street, both sides, from Gilman Street to Camelia Street.  
The Alameda, west side, from 220 feet north of Los Angeles Avenue to 90 feet north of Solano Avenue.  
Tulare Avenue, east side, from 90 feet south of Solano Avenue to Solano Avenue.  
University Avenue, both sides, from McGee Avenue to Third Street.  
Vine Street, north side, from 75 feet east of Walnut Street to 100 feet east of Henry Street.  
Vine Street, south side, from 100 feet east of Henry Street to 150 feet east of Walnut Street.  
Virginia Street, north side, from 150 feet east of Shattuck Avenue to 150 feet west of Shattuck Avenue.  
Virginia Street, south side, from Shattuck Avenue to 125 feet west of Shattuck Avenue.  
Walnut Street, both sides, from University Avenue to Berkeley Way.  
Walnut Street, west side, from Rose Street to 200 feet south of Vine Street.  
Walnut Street, east side, from 75 feet north of Vine Street to 125 feet south of Vine Street.  
Ward Street, north side from Milvia Street to 300 feet east of Milvia Street.  
Webster Street, north side, from Bateman Street to Regent Street.



Webster Street, north side, from Colby Street to 150 feet west of Telegraph Avenue.  
Webster Street, south side, from Colby Street to 100 feet west of Telegraph Avenue.  
Fifth Street, both sides, from Addison Street to Hearst Avenue.  
Fifth Street, west side, from Hearst Street to Virginia Street.  
Fourth Street, east side, from Addison Street to Virginia Street.  
Fourth Street, west side, from Addison Street to Cedar Street.  
Sixth Street, east side, Addison Street to University Avenue.  
Seventh Street, east side, from University Avenue to 150 feet south of University Avenue.  
Eighth Street, west side, from 100 feet north of University Avenue to 200 feet south of University Avenue.  
Ninth Street, west side, from 75 feet north of University Avenue to 150 feet south of University Avenue.  
Ninth Street, east side from Gilman Street to 300 feet north of Gilman Street.  
Tenth Street, east side, from 100 feet north of University Avenue to 100 feet south of University Avenue.  
Tenth Street, west side from Gilman Street to 300 feet north of Gilman Street.

B. goBerkeley Program parking meter zones are those streets or portions of streets in the City located within the goBerkeley Areas hereinafter described as zones within which the parking of motor vehicles shall be controlled, regulated and inspected with the aid of parking meters, pay-and-display stations, and/or a City-approved software application that processes pay-by-phone payments from a mobile phone at fees set in 14.52.120(B):

Addison Street, north side, from Martin Luther King Jr. Way to 170 feet west of Martin Luther King Jr. Way.  
Allston Way, both sides, from Harold Way to Shattuck Avenue.  
Allston way, south side, from Oxford Street to Martin Luther King Jr. Way.  
Ashby Avenue, north side, from College Avenue to Benvenue Avenue.  
Ashby Avenue, south side, from Benvenue Avenue to Elmwood Avenue.  
Ashby Place, east side, from Ashby Avenue to a point 80 feet north of Ashby Avenue.  
Bancroft Way, both sides, from Piedmont Avenue to Fulton Street.  
Bancroft Way, both sides, from Fulton Street to Milvia Street.  
Benvenue Avenue, west side, from Ashby Avenue to 100 feet south of Ashby Avenue.  
Berkeley Way, south side, from Oxford Street to 385 feet west of Shattuck Avenue.  
Berkeley Way, north side, from Oxford Street to Henry Street.  
Blake Street, south side, from 80 feet west of Shattuck Avenue to Shattuck Avenue.  
Bonita Avenue, east side, from University Avenue to Berkeley Way.  
Bowditch Street, east side, from Bancroft Way to Dwight Way.  
Center Street, north side, from Oxford Street to Martin Luther King Jr. Way.  
Center Street, south side, from Oxford Street to Martin Luther King Jr. Way.  
Channing Way, north side, from 200 feet west of Dana Street to College Avenue.  
Channing Way, north side, beginning 250 feet west of Shattuck Avenue to Shattuck Avenue.  
College Avenue, east side, from 75 feet south of Webster Street to 175 feet north of Russell Street.  
College Avenue, west side, from 140 feet north of Russell Street to Webster Street.



College Avenue, east side, from Bancroft Way to 200 feet south of Dwight Way.  
College Avenue, west side, from Bancroft Way to Dwight Way.  
Dana Street, west side, between Bancroft Way and Channing Way.  
Dana Street, west side, from Haste Street to 150 feet south of Haste Street.  
Durant Avenue, north side, from Ellsworth Street to College Avenue.  
Durant Avenue, south side, from Ellsworth Street to College Avenue.  
Durant Avenue, both sides, from Milvia Street to Fulton Street.  
Dwight Way, both sides, from Milvia Street to Fulton Street.  
Dwight Way, south side, from Hillegass Avenue to Benvenue Street.  
Dwight Way, north side, from 300 feet east of Dana Street to 300 feet east of Telegraph Avenue.  
Dwight Way, south side, beginning 325 feet west of Telegraph Avenue and extending 125 feet east of Regent Street.  
Dwight Way, north side, from Bowditch Street to College Avenue.  
Grant Street, both sides, from 100 feet north of University Avenue to 100 feet south of University Avenue.  
Fulton Street, both sides, from Bancroft Way to Kittredge Street.  
Fulton Street, west side, beginning at Durant Avenue and extending south for 80 feet.  
Fulton Street, east side, from Bancroft Way to Durant Avenue.  
Harold way, both sides, from Allston Way to Kittredge Street  
Haste Street, both sides, from Milvia Street to 250 feet east of Shattuck Avenue.  
Haste Street, north side, from College Avenue to Dana Street.  
Haste Street, south side, beginning 350 feet west of Telegraph Avenue to 300 feet east of Telegraph Avenue.  
Haste Street, south side, from Bowditch Street to College Avenue.  
Hearst Avenue, north side, from Oxford Street to Shattuck Avenue.  
Hearst Avenue, south side, from Shattuck Avenue to Oxford Street  
Kittredge Street, both sides, from Shattuck Avenue to Oxford Street.  
Martin Luther King Jr. Way, both sides, from Center Street to Addison Street.  
Milvia Street, both sides, from Berkeley Way to Addison Street.  
Oxford Street, west side, from Hearst Avenue to University Avenue.  
Russell Street, north side, from 85 feet east of College Avenue to 175 feet west of College Avenue.  
Russell Street, south side, from 200 feet west of College Avenue to 120 feet east of College Avenue.  
Shattuck Avenue, both sides, from Hearst Street to University Avenue.  
Shattuck Avenue, both sides, of the west roadway, from University Avenue to Addison Street (Shattuck Square).  
Shattuck Avenue, both sides, of the east roadway, from University Avenue to Addison Street (Shattuck Square).  
Shattuck Avenue, both sides, of the west roadway, from Addison Street to Center Street (Berkeley Square).  
Shattuck Avenue, both sides, of the east roadway, from Addison Street to Center Street (Berkeley Square).  
University Avenue, both sides, from Oxford Street to McGee Avenue.

Webster Street, north side, from 125 feet east of College Avenue to 100 feet west of College Avenue.

Webster Street, south side, from 100 feet west of College Avenue to 125 feet east of College Avenue.

Addison Street, both sides, from Milvia Street to Oxford Street.

Allston Way, both sides, from MLK Jr. Way to Oxford Street.

Berkeley Square, both sides, from Addison Street to Center Street.

Center Street, both sides, from MLK Jr. Way to Oxford Street.

Harold Way, both sides, from Allston Way to Kittredge Street.

Kittredge Street, both sides, from Milvia Street to Shattuck Avenue.

Milvia Street, east side, from Kittredge Street to Center Street.

Milvia Street, both sides, from Center Street to Addison Street.

MLK Jr. Way, both sides, from Center Street to Allston Way.

Oxford Street, both sides, from University Avenue to Kittredge Street.

Oxford Street, east side, from Hearst Street to University Avenue.

Parker Street, both sides, from 100 feet west of Shattuck Avenue to Shattuck Avenue.

Parker Street, north side, from 100 feet east of Shattuck Avenue to Shattuck Avenue.

Shattuck Avenue, both sides, from Center Street to Carleton Street.

Telegraph Avenue, both sides, from Dwight Way to Bancroft Way.

C. The City Traffic Engineer shall cause parking meters and pay-and-display stations to be installed and maintained in all parking meter zones and goBerkeley Program parking meter zones.

Section 2. That Berkeley Municipal Code Section 14.72.030 amended to read as follows:

**14.72.030 Definitions.**

A. "Designated residential parking permit area" means any contiguous area upon which the Council imposes parking limitations pursuant to the authority granted by this chapter.

B. "Mixed use" means the use of a lot or building with two or more different land uses including, but not limited to, residential, commercial, retail, office or manufacturing, in a single structure or a group of physically integrated structures; in a neighborhood context, it means blocks containing single-use residences interspersed with other land uses, such as commercial or industrial.

C. "Mixed Use-Residential" refers to the zoning designation so defined in Berkeley Municipal Code Chapter 23E.84.

D. "Assessor's Use Code" means the code used by the Alameda County Assessor to assess property for property tax purposes. These codes cover a range of building descriptions and uses, including a variety of residential uses.

E. "Nonresidential vehicle" means a motor vehicle not eligible to be issued a residential parking permit, pursuant to the terms and conditions of this chapter, for the specific area in which it is parked. However, it could be eligible for a local business parking permit, or any other parking permit the council shall designate.

F. "Residential parking permit" means a permit issued under this chapter which, when displayed upon a vehicle, as described herein, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.



G. "Local business parking permit" means a permit issued under this chapter which, when displayed upon a motor vehicle, shall exempt said vehicle from parking time restrictions established pursuant to this chapter.

H. "Trapped resident" means: 1) any resident whose dwelling is on a block that may not legally opt-in because less than 80% of the block fronts are residentially zoned and either: a) whose address is on a block front adjacent to and/or surrounded by block fronts that are already included in the RPP program; or b) whose address is within the general boundary of a designated RPP area; or 2) any resident whose dwelling abuts controlled curb parking and either: a) whose address is on a block front adjacent to and/or surrounded by RPP areas; or b) whose address is within the general boundary of a designated RPP area.

I. "Neighborhood-service community facility" means churches, schools and senior centers located wholly within the general boundary of an RPP designated area.

J. "Neighborhood-serving business and establishment" means any business or establishment located in a neighborhood commercial district as defined in the Zoning Ordinance Section Cla, Clb, Clc, Clb(E).

K. "One-day visitor permit" means a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions pursuant to this chapter, for the date indicated upon the face of said permit.

L. "Two-week visitor permit" shall mean a parking permit issued pursuant to this chapter or an ordinance enacted pursuant to authority granted herein, which shall exempt the vehicle from parking time restrictions established pursuant to this chapter for a period of 14 consecutive calendar days, beginning upon the date indicated upon the face of said permit.

M. "Motor vehicle" shall be an automobile, truck, motorcycle or other self-propelled form of transportation not in excess of 8,000 pounds gross weight and not in excess of 20 feet in length. A trailer, trailer coach, utility trailer, motor home/(RV), or any other type of vehicle as defined in the California Vehicle Code that is not self-propelled, is not eligible for a RPP permit.

N. "Controlled curb parking" means any on-street parking with existing parking limitations, such as meters, time restrictions, red zone, etc.

O. "Schools" shall mean any school or other place of learning providing a pre-school, elementary or secondary level of study, and which regularly employs a staff of at least 15 certificated persons regularly employed as a classroom teacher.

P. "Senior centers" means the three senior centers affiliated with the City: North Berkeley Senior Center, South Berkeley Senior Center and the West Berkeley Senior Center.

Section 3. That Berkeley Municipal Code Section 14.72.050 amended to read as follows:

**14.72.050 Designation of a residential permit parking area.**

A. There shall be two alternative processes by which City Council could consider any area for designation as a residential permit parking area:



1. Residents petition. The City Council shall consider for designation as a residential permit parking area any proposed area for which a petition has been submitted which meets and satisfies the following requirements:
  - a. Prior to obtaining signatures, neighborhood organizers shall consult with City staff to assure that the proposed area meets guidelines set in the administrative regulations for the establishment of permit parking boundaries.
  - b. The petition shall contain a description or a map showing the proposed residential permit parking area.
  - c. Said description or map shall be followed in the petition by a statement describing the residential permit parking program and the current residential permit fees.
  - d. The statement shall be followed by a signature, printed name, address, and date of signing of the application by a number of adult residents including at least 51% of the housing units within the area.
  - e. For applicants in areas zoned Mixed-Use Residential, a petition shall only be deemed valid if at least 51% of the housing units on each block face have an address that has a residential Assessor's Use Code.
  - f. All petitions shall be the same as the standard petition form developed by City staff. Any petition form different from the standard petition form shall be deemed invalid for the purposes of this chapter.
  - g. In the proposed residential permit parking area at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.
  - h. In areas zoned Mixed-Use Residential, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.
2. City Council initiation. City Council shall consider for designation as a residential permit parking area any area for which the following requirements have been met:
  - a. City Council shall initiate the area as a residential permit parking area.
  - b. For areas zoned Mixed Use-Residential, Council shall only initiate the area as a residential permit parking area if at least 51% of the housing units on each block face have an address that has a residential Assessor's Use Code.
  - c. In the proposed residential permit parking area at least 80% of the block fronts with unlimited on-street parking must be residentially zoned, and at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m. or unlimited on-street parking is projected to be impacted by parking spillover from a more congested residential permit parking area.
  - d. In areas zoned Mixed Use-Residential, at a minimum, 75% of all unlimited on-street parking spaces within the proposed area must be occupied during any two one-hour periods between 10:00 a.m. and 4:00 p.m.
  - e. A notice of intent to establish permit parking shall be sent to all addresses within the proposed residential parking permit area.



B. Upon receipt by the City Council of a petition as described in subsection A.1 of this section, or after Council has initiated a residential permit parking area as described in subsection A.2 of this section, the Council shall:

1. Undertake or cause to be undertaken such surveys or studies which it deems necessary.
2. Cause to be drafted a resolution which would establish a residential permit parking area based upon the aforementioned proposal and studies, including all regulations and time restrictions determined by the Council to be reasonable and necessary in such area.

C. The Council shall thereafter conduct a public hearing on said draft resolution. Notice of the hearing shall be posted at least ten days prior to the hearing on all block fronts proposed to be included in the residential permit parking area. Following the hearing, the City Council may enact, amend or reject said draft resolution in any manner, including but not limited to, modification of boundaries of the proposed area and the restrictions imposed on such proposed area. In order to grant permit parking designation, Council shall find that the designation will not be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing in the area of designation. In reaching this decision consideration shall be given to the residents' support for residential permit parking, the existing parking conditions, the expected effectiveness of residential permit parking in improving parking conditions, and the location and size of the residential permit parking area.

Section 4. That Berkeley Municipal Code Section 14.72.090 amended to read as follows:

**14.72.090 Residential parking permit.**

A. The City Manager and/or his/her designee shall issue residential parking permits with a term not to exceed of one year to motor vehicles which comply with the requirements set forth in this section.

1. No more than three (3) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.
2. In areas zoned Mixed Use-Residential (MU-R), no more than two (2) permits may be purchased for each residential address. Applicants may request a waiver if additional permits are needed.
3. The City Traffic Engineer is authorized to issue such rules and regulations necessary to grant waivers to the annual permit limits.

B. A residential parking permit may be issued for a motor vehicle only upon application of the following person:

1. The applicant must demonstrate that he or she is currently a resident of the area for which the permit is to be issued; and
2. The applicant must demonstrate that he or she has ownership or continuing custody of the motor vehicle for which the permit is to be issued; and
3. Any motor vehicle to be issued a permit must have a vehicle registration indicating registration within the area for which the permit is to be issued.

C. A residential parking permit may in addition be issued for any vehicle in the area regularly utilized by a person who owns or leases commercial property and actively engages in business activity within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular residential permit parking involved area, may be issued for each business establishment for a motor vehicle registered to or under the control of such a person.

D. A residential parking permit may be issued for any vehicle utilized in the area by a nonresidential nonbusiness enterprise, such as a church, school, or hospital, located wholly or partially within the particular residential permit parking area. However, no more than one parking permit, or any greater number which the City Council may determine appropriate for the particular permit parking area involved, may be issued for each such enterprise within each permit area for a motor vehicle registered to or under the control of such an enterprise.

E. Any person to whom a residential parking permit has been issued pursuant to this section shall be deemed a permit holder.

Section 5. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on February 13, 2018, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Harrison, Maio, Wengraf, Worthington and Arreguin.

Noes: None.

Absent: None.



RESOLUTION NO. ##,###-N.S.

FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS

WHEREAS, on December 16, 2014, Council adopted Resolution No. 66,895-N.S., establishing a revised fee schedule for parking permits for annual residential preferential parking; 1-Day Visitors, 2-Week Visitors, and annual in-home care, annual community-serving facility, annual merchant, 1-Day Senior Center, Semi-annual residential, and Semi-annual in-home care permits issued for the Residential Preferential Parking (RPP) Program, and rescinded Resolution No. 66,075-N.S.; and

WHEREAS, the current RPP Program is operating at an annual deficit of at least \$195,800; and

WHEREAS, it is necessary to increase RPP permit fees in order to operate the RPP Program as a cost-neutral program in accordance with Council Budget Policies.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following fees for the RPP Program are hereby established:

| Permit Type                                                                                          | Permit Fees |
|------------------------------------------------------------------------------------------------------|-------------|
| Annual Residential & In-Home Care                                                                    | \$66.00     |
| Semi-Annual Residential & In-Home Care                                                               | \$33.00     |
| 1-Day Visitor                                                                                        | \$3.00      |
| 14-Day Visitor                                                                                       | \$34.00     |
| Community-Serving Facility                                                                           | \$83.00     |
| Merchant                                                                                             | \$185.00    |
| 1-Day Senior Center                                                                                  | \$1.00      |
| Replacement Fee for Annual, 14-Day, Community-Serving Facility, & Merchant Permits                   | \$15.00     |
| Surcharge Per Additional Annual Residential Permit Over Cap of Three (3), Only If Waiver is Approved | \$100.00    |

BE IT FURTHER RESOLVED that these fees shall be effective March 1, 2018 for FY 2019 permit purchases and shall be deposited into the General Fund.

BE IT FURTHER RESOLVED that Resolution No. 66,895-N.S. is hereby rescinded effective March 1, 2018.

**NOTICE OF PUBLIC HEARING – BERKELEY CITY COUNCIL  
CITY COUNCIL CHAMBERS, 2134 MARTIN LUTHER KING JR. WAY**

**FEES: RESIDENTIAL PREFERENTIAL PARKING PERMITS  
TUESDAY, FEBRUARY 27, 2018 AT 6:00 P.M.**

Notice is hereby given by the City Council of the City of Berkeley that a public hearing will be conducted by said city council of the City of Berkeley at which time and place all persons may attend and be heard upon the following:

The Department of Public Works is proposing to increase the cost of annual Residential Preferential Parking (RPP) permits, effective March 1, 2018, for permits purchased for FY 2019, as summarized below:

| <b>Permit Type</b>                                                                                   | <b>Current Fee</b> | <b>Proposed Fee</b> |
|------------------------------------------------------------------------------------------------------|--------------------|---------------------|
| Annual Residential & In-Home Care                                                                    | \$55.00            | \$66.00             |
| Semi-Annual Residential & In-Home Care                                                               | \$27.50            | \$33.00             |
| 1-Day Visitor                                                                                        | \$2.75             | \$3.00              |
| 14-Day Visitor                                                                                       | \$28.25            | \$34.00             |
| Community-Serving Facility                                                                           | \$69.00            | \$83.00             |
| Merchant                                                                                             | \$154.00           | \$185.00            |
| 1-Day Senior Center                                                                                  | \$1.25             | \$1.00              |
| Replacement Fee for Annual, 14-Day, Community-Serving Facility, & Merchant Permits                   | \$12.50            | \$15.00             |
| Surcharge Per Additional Annual Residential Permit Over Cap of Three (3), Only If Waiver is Approved | N/A                | \$100.00            |

The hearing will be held on February 27, 2018, at 6:00 p.m. in the City Council Chambers, 2134 Martin Luther King, Jr. Way.

A copy of the agenda material for this hearing will be available on the City’s website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of **February 15, 2018**.

For further information, please contact Farid Javandel, Transportation Division Manager, at (510) 981-7061.

This meeting is being held in a wheelchair accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services Specialist at 981-6418 (V) or 981-6347



(TDD) at least three business days before the meeting date. Please refrain from wearing scented products to this meeting.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City’s electronic records, which are accessible through the City’s website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

**Published:** February 16 and February 23, 2018 – The Berkeley Voice

Pursuant to Government Code Section 6062a

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I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way, as well as on the City’s website, on February 15, 2018.

\_\_\_\_\_  
Mark Numainville, City Clerk

**City of Berkeley, Public Works Department, Transportation Division  
Responses to Council Questions at City of Berkeley Council Worksession,  
September 19, 2017**

The Mayor and other Councilmembers asked a number of specific questions of staff at the September 19, 2017 Worksession concerning the Residential Preferential Parking (RPP) Program. This document summarizes staff's responses to these questions.

**Question 1: How do we prioritize phasing in blocks? (Mayor Arreguin)**

*Answer: There are two ways blocks can opt-in, either by resident petition or City Council initiation. (BMC [14.72.050](#)) Resident petitions are addressed in the order they are received.*

**Question 2: Can we require residents to park one vehicle on their property? (Hahn)**

*Answer: Likely not, as streets are public property. We can, however, institute caps on the number of permits households can purchase. Neighboring cities have conducted parking inventory studies and indicated which parcels can accommodate off-street parking, and have subsequently reduced the caps to account for driveways, etc.*

**Question 3: Why do certain commercial areas not have meters? (Wengraf)**

*Answer: Parking meters may not be appropriate for all commercial areas, particularly if parking is generally available even at peak times. Due to a combination of historic pushback from businesses, as well as limited staff and materials resources, staff have typically waited for businesses or business districts to request the installation of meters to increase (or maintain) customer parking availability.*

**Question 4: How would you assess [whether visitors have paid to park in RPP areas, under a program wherein non-permitholders are required to pay]? (Maio)**

*Answer: One suggested methodology would be to require payment if a valid RPP permit is not displayed. Pay by phone technology will make it easy to pay to park without meters at every space, and pay stations can be installed at the ends of blocks to ensure those without smartphones can pay as well.*

**Question 5: How do you guarantee enforcement? (Davila)**

*Answer: Public Works/Transportation cannot guarantee enforcement alone. The Parking Enforcement Unit is overseen by the Berkeley Police Department. However, a service level agreement could help to ensure certain levels of enforcement activity are spent on RPP areas.*

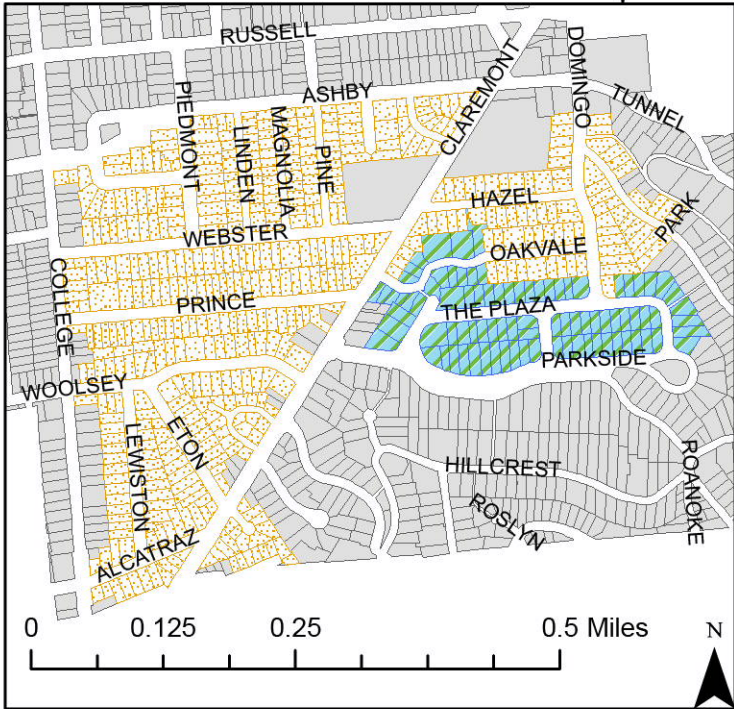
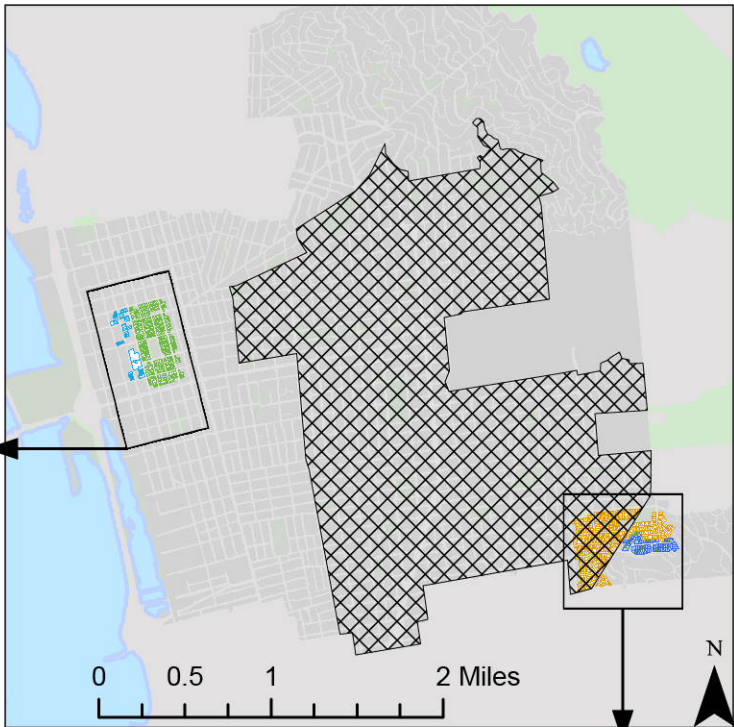
**Question 6: How do you opt-out of the RPP program? (Davila)**

*Answer: By petition. A minimum of 51% of the housing units must sign the petition to exclude their block from residential permit parking designation. (BMC [14.72.060](#))*

**Question 7: Is there a breakdown between revenue from permit purchases and revenue from enforcement? (Wengraf)**

*Answer: Yes. Gross RPP permit revenue for FY 2017 was approximately \$1m. Gross Parking Citation revenue collected for RPP citations during FY 2017 totaled approximately \$1.3m.*





# ATTACHMENT 5: MAP OF TARGETED EXPANSION AREAS

- XXXX Existing RPP Area Boundary
- Proposed Mixed Use Eligible
- Proposed New Area Eligible
- Currently Opted into Area L
- Proposed Eligible to Opt In

This map is for reference purposes only.  
Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
January 17, 2018







Office of the City Manager

WORKSESSION  
September 19, 2017

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip L. Harrington, Director, Department of Public Works

Subject: Residential Preferential Parking (RPP) Program Recommendations

### INTRODUCTION

This worksession shall discuss the origins of the Residential Preferential Parking (RPP) Program including related City policies; challenges facing the current RPP Program; recommendations for improving Program operation in the existing 14 RPP areas, and applying those improvements to new RPP areas as the Program expands.

### CURRENT SITUATION AND ITS EFFECTS

At the May 31, 2016 Work Session,<sup>1</sup> staff presented an update to City Council on the feasibility of expanding the RPP Program citywide. As a follow-up, staff conducted a comprehensive FY 2016 analysis of the City's RPP Program. That analysis reviewed the Program's fiscal solvency, considered its efficacy in meeting City policy goals (summarized in Attachment 1), and identified several existing challenges:

1. The RPP Program operates at a deficit. In FY 2016, the Program accrued an operational deficit of \$290,354, meaning the General Fund effectively subsidizes 11% of the Program. This does not satisfy Council-adopted fiscal policies, which call for "developing long-term strategies to reduce unfunded liabilities," and if the RPP Program is to be expanded, "requiring...new programs to pay for themselves."<sup>2</sup>
2. There are no limits on annual permit purchases, meaning residents may purchase as many permits as they want. Berkeley is an outlier as most cities with residential permit programs, including San Francisco and Oakland, have a cap on the number of annual permits available per year to discourage individual overuse of shared on-street parking resources.<sup>3</sup>
3. The two-hour time limit for non-permit holders results in adverse impacts within neighborhoods. Anecdotal evidence from merchants and residents

<sup>1</sup>May 31, 2016 Council Work Session: *Citywide Residential Preferential Parking Expansion* at <http://bit.ly/2k6uGkG>

<sup>2</sup>City of Berkeley Budget Office: Council Budget Policies: <http://bit.ly/2k5n2b7>

<sup>3</sup>A summary of policies guiding permit maximums in San Francisco, Oakland, and Walnut Creek is provided as Attachment 2.



- indicates that the current two-hour time limit leads to the “two-hour shuffle,” as nonresidents (e.g., employees of nearby commercial districts) move their cars every two hours to avoid the risk of a citation. This behavior causes increased congestion, noise, and greenhouse gas emissions.
4. The RPP Program may not fully reflect new transportation options, current resident needs, or Council priorities and goals. Berkeley has changed in the nearly 40 years since the RPP Program was first implemented, and a larger conversation about the goals and strategies of the RPP Program is needed to ensure it continues to effectively and equitably address the City’s needs.
  5. Football game day parking poses a unique, infrequent but perennial challenge in certain RPP areas. At the July 25, 2017 Council Meeting, staff presented a recommendation from the Transportation Commission summarizing current problems with non-resident parking in RPP areas surrounding the University of California-Berkeley (UC Berkeley) campus on football game days. Staff recommended new resident-only permit restrictions, and a \$300 fine for others parking in RPP areas during these events.<sup>4</sup> While a more robust strategy is needed to address this issue, the specific nature of this problem calls for a targeted strategy independent of the RPP Program at large (i.e., football games occur six days per year, while the RPP Program is in effect 313 days per year).

## BACKGROUND

The RPP Program was instituted in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic (2) to assure continued quality of life for residents, and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00a.m. and 7:00p.m. Monday through Friday, and on some blocks Saturday.

There are currently fourteen RPP zones (Zones A-N) that cover central Berkeley and lie largely adjacent to commercial areas and/or the UC Berkeley campus. Eligible streets are added to the RPP Program when residents on an eligible block submit a qualifying number of signatures exceeding 51% on petitions to “opt-in” to the RPP Program, and a parking survey shows at least 75% of available on-street parking spaces of the subject blocks are occupied during mid-morning and mid-afternoon.

In March 2014,<sup>5</sup> Council asked staff to evaluate the costs and benefits of allowing the RPP Program to expand beyond its current geographic boundaries. Staff has

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<sup>4</sup>July 25, 2017 *City Council Agenda: Referral Response: Reassess UC Berkeley Game Day Parking Fines in RPP Areas A, B, D, F, and G Surrounding Campus* at <http://bit.ly/2fwXaEj>

<sup>5</sup>March 11, 2014 *City Council Agenda: Expansion of Permit Parking to Impacted Areas* <http://bit.ly/2vTgnqD>

periodically returned to Council since then to solicit feedback on expanding the Program.

#### ENVIRONMENTAL SUSTAINABILITY

Expansion of the RPP Program may encourage some drivers who work in commercial areas adjacent to proposed RPP areas to consider using other modes of travel, thereby potentially reducing parking demand and congestion. However, based upon feedback from merchants adjacent to existing RPP Program areas, staff anticipate the “two-hour shuffle” may also begin to occur in RPP expansion areas. This behavior would have an adverse impact on traffic congestion, air quality, and excess fuel consumption. Implementing limits on the number of available permits, and progressive rates for purchasing more than one permit, may also encourage residents to consider alternatives to driving and parking for trips within the City.

#### POSSIBLE FUTURE ACTION

Staff recommends three tiers of adjustments to the RPP Program that would be implemented over the next several years:

##### Short-Term Recommendations (FY 2018): Strengthen Existing RPP Program

- **Increase permit costs to eliminate the Program deficit.** Cost neutrality is achievable by increasing all permit costs by 31%, with the annual residential permit increasing to \$72/year.
- **Implement a cap on the number of annual permits that can be purchased by a single address/household.** Staff recommends a maximum of three (3) permits, with a waiver available for special circumstances. Permit maximums could also be variable by RPP area depending on demand and available supply.
- **Implement progressive rates for multiple permits.** Under this model, residents would pay more for a second and third annual permit, with a similar model established for visitor permits.
- **Evaluate the feasibility of providing low-income permits while maintaining Program cost neutrality.**

##### *Develop Targeted Strategy for Game Day Parking in Campus-Adjacent RPP Areas*

- **Implement a “Special Event Permit” overlay in parts of RPP areas surrounding the UC Berkeley campus.** The Transportation Commission recommendation to solve game day parking issues represented a “stick” (i.e., largely punitive) approach to addressing resident concerns. By contrast, Staff recommend a “carrot” approach which would include increasing game day fines and offering a limited number of strategically priced game-time permits allowing visitors to park in residential areas near the stadium. Under this program, revenue from the visitor permits would help support the overall RPP Program, and non-residents needing to park in residential areas for non-game reasons (i.e., employees for a shift) would not be unduly penalized. Staff plan to collect data during upcoming games to better understand parking



availability constraints and recommend where to implement the special event overlay.

#### Mid-Term Recommendations (FY 2019): Strategically Expand RPP Program

- **Incrementally expand RPP Program “citywide,” increasing permit fees commensurately to maintain cost neutrality.** Staff recommend initially allowing either 50 or 125 new blocks to opt into the Program. Based on staff’s analysis, the annual permit price should be set at \$79/year for up to 50 new blocks, or \$87/year for up to 125 new blocks to maintain cost neutrality.
- **Consider a longer time limit for non-residents in some areas to reduce the frequency of the “two-hour shuffle.”**
- **Reassess the RPP Program’s fiscal solvency on a yearly basis.**

#### Long-Term Recommendations (FY 2018-2021): Reassess Overall RPP Program

- **Conduct a full assessment of the RPP Program.** In 2015, the San Francisco Municipal Transportation Agency launched a comprehensive review of its 40-year old Residential Parking Permit program.<sup>6</sup> Staff recommends a similar evaluation of our RPP Program, which would include setting new goals and metrics to track effectiveness. The upcoming Residential Shared Parking Pilot program may assist this process, modeling stakeholder outreach, goal setting, and new strategies in pilot RPP areas around the Elmwood and Southside.

#### FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Revenue supporting the RPP Program comes from permit sales and RPP-related parking citations. While staff assumes revenue increases with new Special Event Permits for football game days, and as the Program expands to new blocks, actual amounts of new permit purchases and citations are unknown, making future revenues difficult to forecast. Nevertheless, increasing permit fees to eliminate the ongoing operational deficit at existing and future geographic extents will result in a cost-neutral Program, allowing permit issuance and parking enforcement services to continue without depriving other City programs of needed General Fund support. Further evaluation of recommended policy adjustments will require an undetermined amount of staff time and resources.

#### CONTACT PERSON

Farid Javandel, Transportation Division Manager (510) 981-7061

Danette Perry, Parking Services Manager (510) 981-7057

Gordon Hansen, Senior Planner (510) 981-7064

#### Attachments:

1: Summary of Adopted City Policies Related to RPP

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<sup>6</sup>San Francisco Municipal Transportation Agency: Residential Parking Permit Evaluation & Reform Project  
<http://bit.ly/1OSUmw6>



2: Summary of Peer City Residential Parking Permit Policies

## City Policies Related to the Residential Preferential Parking (RPP) Program

This document summarizes adopted City plans and other policies that address the Residential Preferential Parking (RPP) Program, driving and parking behavior in Berkeley, and/or City fiscal policies. These plans/policies include:

1. Berkeley Municipal Code
2. City of Berkeley General Plan
3. Berkeley Climate Action Plan
4. Southside Plan
5. West Berkeley Circulation Master Plan: Transportation Demand Management (TDM) Plan Report
6. Council Budget Priorities

### 1. Berkeley Municipal Code

The Berkeley Municipal Code (BMC) sets forth the laws of the City of Berkeley. It is periodically modified by Council Ordinance.

Chapter 14.72 of the BMC outlines the premise, purpose, and methods of the RPP Program. Chapters 14.72, 14.76, and 14.80 provide specific guidance on RPP Areas A (Bateman), B (Willard), and C (Magna), respectively.

These BMC sections are too long to include in this summary in full, so only certain provisions are excerpted here. The full BMC is available here:

<http://www.codepublishing.com/CA/Berkeley/>

#### Section 14.72.010 Legislative Purpose.

This chapter is enacted in response to the serious adverse effects caused in certain areas and neighborhoods of Berkeley by motor vehicle congestion, particularly the long-term parking of motor vehicles on the streets of such areas and neighborhoods by nonresidents thereof. As set forth in more specific detail in Section 14.72.020, such long term parking by nonresidents threatens the health, safety and welfare of all of the residents of Berkeley. In order to protect and promote the integrity of these areas and neighborhoods, it is necessary to enact parking regulations restricting unlimited parking by nonresidents therein, while providing the opportunity for residents to park near their homes. Uniform parking regulations restricting residents and nonresidents alike would not serve the public interest, rather such regulations would contribute to neighborhood decline while ignoring the public transit alternatives to automobile travel available to nonresidents. For the reasons set forth in this chapter, a system of preferential resident parking is enacted hereby for the City of Berkeley (Ord. 5908-NS § I, 1989; Ord. 5803-NS § 2, (part), 1987)

#### Section 14.72.020 Legislative Findings

A. General Finding. The City Council finds as a result of public testimony, evidence generated by both professional urban planning studies and derived from other sources, that the continued vitality of Berkeley depends on the preservation of safe, healthy and attractive neighborhoods and other residential areas therein. The Council further finds that one factor that has detracted from the safety, health and attractiveness of neighborhoods and other residential areas of the City is the excessive and burdensome



practice of nonresidents of certain areas and neighborhoods parking their motor vehicles for extended periods of time therein. Since there is in Berkeley at any one time a large surplus of motor vehicles over available on and off-street parking spaces, this condition detracts from a healthy and complete urban environment. A system of preferential resident parking will serve to reduce a number of strains on residents of the City and thus promote the general public welfare.

B. Specific Findings. The following specific legislative findings of the City Council in support of preferential resident parking are set forth as illustrations only and do not exhaust the subject of the factual basis supporting its adoption:

1. The safety, health, and welfare of the residents of Berkeley can be greatly enhanced by maintenance of the attractiveness and livability of its neighborhoods and other residential areas.
2. A large portion of Berkeley residents possess automobiles and, as a result, are daily faced with the need to store these automobiles in or near their residences.
3. Certain neighborhoods and areas of Berkeley do not have sufficient on or off-street space to accommodate the convenient parking of motor vehicles by residents thereof in the vicinity of their homes. To the extent that such facilities do exist, the program set forth herein is designed to encourage the maximum feasible utilization of off-street parking facilities.
4. Such areas as described above are often further burdened by influxes of motor vehicles owned by nonresidents which compete for the inadequate available on-street parking spaces.
5. There further exist certain parking "attractors" within Berkeley, such as hospital and university complexes, employment centers, BART stations, and locations convenient for commute parking, which further exacerbate resident parking problems.
6. Unnecessary vehicle miles, noise, pollution, and strains on interpersonal relationships caused by the conditions set forth herein work unacceptable hardships on residents of these neighborhoods and other residential areas by causing the deterioration of air quality, safety, tranquility, and other values available in an urban residential environment.
7. If allowed to continue unchecked, these adverse effects on the residents of Berkeley will contribute to a further decline of the living conditions therein, a reduction in the attractiveness of residing within Berkeley, and consequent injury to the general public welfare.
8. The system of residential permit parking as enacted by this chapter will serve to promote the safety, health and welfare of all the residents of Berkeley by (a) reducing unnecessary personal motor vehicle travel, noise, and pollution, and (b) promoting improvements in air quality, the convenience and attractiveness of urban residential living, and the increased use of public mass transit facilities available now and in the future. (Ord. 5908-NS § 1, 1989; Ord. 5803-NS § 2 (part), 1987)



Section 14.72.040 Permit Parking Exemption.

A. A motor vehicle on which is displayed a valid residential parking permit as provided for herein shall be permitted to stand or be parked in the residential permit parking areas for which the permit has been issued without being limited by time restrictions established pursuant to this chapter or any resolution thereunder. Additionally, a motor vehicle displaying a valid local business parking permit or a valid neighborhood-serving community facility permit as provided herein shall be permitted to stand or park in a designated residential permit parking area for which the permit has been issued without being limited by time restrictions established pursuant to this chapter. Any vehicle which does not display a valid parking permit shall be subject to the preferential parking regulation and consequent penalties in effect for such area.

B. A residential or local business parking permit or any other permit as designated by council shall not guarantee or reserve to the holder thereof an on-street parking space within the designated residential permit parking area.

C. This chapter shall not be interpreted or applied in a manner which shall abridge or alter regulations established by authority other than this chapter. (Ord. 5908-NS § 1, 1989; Ord. 5803-NS § 2, (part), 1987)

2. City of Berkeley General Plan: A Guide for Public Decision-Making (2001)

The Berkeley General Plan (Plan) is a comprehensive, long-range statement of community priorities and values developed to guide public decision-making. The Plan's goals, objectives, and policies serve as a guide for day-to-day decisions that are essential for responsive government. It was last updated in 2001. The following excerpts are from the "Transportation Element" of the General Plan, which establishes policies for the movement of people, goods, and vehicles through the City.

The full Plan is available here: <http://bit.ly/2uKUvZr>

The Transportation Element is available here: <http://bit.ly/2fx0v6l>

Policy T-10 Trip Reduction

To reduce automobile traffic and congestion and increase transit use and alternative modes in Berkeley, support, and when appropriate require, programs to encourage Berkeley citizens and commuters to reduce automobile trips, such as:

6. "Car-sharing" programs.

8. Programs to encourage neighborhood-level initiatives to reduce traffic by encouraging residents to combine trips, carpool, telecommute, reduce the number of cars owned, shop locally, and use alternative modes.

9. Programs to reward Berkeley citizens and neighborhoods that can document reduced car use.

Policy T-12 Education and Enforcement

Support, and when possible require, education and enforcement programs to encourage carpooling and alternatives to single-occupant automobile use, reduce speeding, and increase pedestrian, bicyclist, and automobile safety.

Actions:

A. Consider developing a program that rewards households, block groups, or neighborhood organizations that can document their reduction in automobile use. Consider discounts on electric bicycles to reward automobile use reduction.

Policy T-13 Major Public Institutions

Work with other agencies and institutions, such as the University of California, the Berkeley Unified School District, Lawrence Berkeley Laboratory, Vista Community College, the Alameda County Court, and neighboring cities to promote Eco-Pass and to pursue other efforts to reduce automobile trips. (Also see Land Use Policy LU-39.)

Actions:

F. Continue limiting the number of residential parking permits given to BUSD faculty and staff.

Policy T-31 Residential Parking

Regulate use of on-street parking in residential areas to minimize parking impacts on neighborhoods. (Also see Land Use Policy LU-10.)

Actions:

A. Improve enforcement of the Residential Preferential Parking Program.

B. Restrict Residential Parking Permits to residents of the district and further limit the number of guest passes that can be issued to a single address.

C. Correct abuses of 14-day and 1-day Residential Preferential Parking visitor permits.

D. Do not issue parking permits to residents of new car-free housing developments or to residents of projects which have been granted variances to reduce required off-street parking.

E. Discourage use of on-street parking for long-term storage of cars.

F. Enforce regulations against parking on lawns and sidewalks.

G. Ensure provision of adequate off-street parking for new projects in low-density residential areas.

H. Add information on transit alternatives on parking tickets.



I. Allow the expansion of RPP areas if it is found that additional residential streets are being used for employee and other commercial parking or vehicle storage.

J. Revise the RPP program to further restrict the number of permits issued to institutional users and set clear standards for issuance of RPP permits to institutions that include requirements for on-site transportation demand management programs and transportation alternatives.

#### Policy T-40 Parking Impacts

When considering parking impacts under the California Environmental Quality Act for residential projects with more than two units located in the Avenue Commercial, Downtown, or High Density Residential land use classifications, any significant parking impacts identified that result from the project should be mitigated by improving alternatives to automobile travel and thereby reducing the need for parking. Examples include improvements to public transportation, pedestrian access, car sharing programs, and bicycle facility improvements. Parking impacts for these projects should not be mitigated through the provision of additional parking on the site. The City finds that:

1. Parking supply and demand may easily be adjusted by changing local pricing policies and by changing how the supply is managed.
2. As the parking supply increases or parking costs decrease, automobile use becomes a more attractive transportation alternative and demand for parking increases. As parking supply decreases and its price increases, demand decreases.
3. Increasing the parking supply increases automobile use, which causes a measurably negative impact on the environment.

### **3. Berkeley Climate Action Plan (2009)**

In 2006, Berkeley voters approved ballot Measure G, which set forth a mandate to reduce the city's greenhouse gas emissions by 80% below 2000 levels by 2050. The Berkeley Climate Action Plan was written through a community-wide process and was adopted by City Council on June 2, 2009. The community's target for the year 2020 is to reduce community-wide GHG emissions 33% (below 2000 levels).

#### Chapter 3: Sustainable Transportation & Land Use: Pricing Strategies

As well as encouraging residents to choose an alternative to the car, it is important that those who choose or need to drive a car pay the full costs, including environmental costs, of doing so. This is especially true for individuals who drive alone. Examples of how these costs may be addressed in Berkeley include:

- Expanding parking pricing (e.g., meters and/or permit zones) to certain areas where parking is currently free
- Implementing a parking fee that would make it more expensive for individuals to own multiple cars



- Increasing parking costs associated with existing on- and off-street parking facilities

As well as serving as a disincentive to driving, such fees also serve to build revenue that can be used to provide enhanced, more sustainable mobility options in Berkeley and in the region. Action must be taken to ensure that any additional fees do not negatively affect low-income households. On the contrary, fees should be structured and employed to improve access to a range of transportation modes. (pp. 19-20)

### Chapter 3: Sustainable Transportation & Land Use: Goal #3: Manage Parking More Effectively to Minimize Driving Demand and to Encourage and Support Alternatives to Driving

a. Policy: Design and implement parking strategies to create disincentives for driving – especially for single-occupancy commuting – and, where possible, to build revenue for transportation services.

#### Implementing Actions

- Identify areas in Berkeley in which increased parking rates would effectively discourage driving and generate new revenue while not having a significant negative effect on local businesses. Such neighborhoods should be well served by alternative transportation options.
- Identify areas in Berkeley in which extending parking meter hours of enforcement would effectively discourage driving and build new revenue while not having a significant negative effect on local businesses.
- Evaluate the feasibility and efficacy of redesigning the Residential Preferential Parking (RPP) Program so as to apply it citywide (in every neighborhood) and utilize the revenue to design programs and infrastructure that make alternative transportation options more accessible, convenient, and attractive.
- Structure RPP permit costs so that each additional permit acquired by a given household escalates in cost.
- Consider setting RPP permit prices based on the fuel efficiency of the vehicle for which the permit is being acquired.
- Install RPP permit holder-exempt parking meters in some RPP zones. (pp. 35-36)

#### 4. Southside Plan (2001/2011)

Strategic Statement: Overarching goal #2: Reduce the number of trips to, from, and through the Southside made in single occupant automobiles (p. 67)

Policy T-E3: Rigorously enforce the Residential Preferential Parking Program. Make changes to the visitor/guest permits to eliminate abuses of 14-day and 1-day visitor/guest permits. Consider increasing the cost of these temporary permits; placing a limit on the number that can be purchased at one time and over the course of a year; replacing 14-day permits with 7-day permits; and/or making them more difficult to counterfeit. (p.95)

## 5. West Berkeley Circulation Master Plan: Transportation Demand Management (TDM) Plan Report (2009)

### Program Integration Goals

**Development of a Parking Strategy that Makes Transit User Costs Lower than Single Occupancy Vehicle Parking Costs.** Parking is perhaps the most critical “background condition” within the TDM modeling that significantly increases the effectiveness of many individual TDM measures. It is recommended that the City take on a proactive monitoring effort to target areas where parking management is necessary and work with local residents, business owners and stakeholders to identify strategies that make the cost of driving and/or parking more expensive than the transit alternative. Different strategies should be developed for the different user groups and types of new development in the area. For residents, this plan should consider a residential parking permit (RPP) zone to preserve existing parking for West Berkeley residents and enforced meters or time-restrictions to manage auto trips made by employees or visitors. While on-street pricing may be used to effectively discourage employee travel to West Berkeley, its implementation should balance the needs of all users in West Berkeley to ensure retail uses are not negatively impacted.

## 6. Council Budget Policies

The City Council has established budget policies which guide the development of the City’s budget. These policies have been established to help manage financial pressures to address growing demands upon City resources, while preserving long-term fiscal stability.

The fiscal policies adopted by the Council include:

- Focusing on the long-term fiscal health of the City by adopting a two-year budget and conducting multi-year planning;
- Building a prudent reserve;
- Developing long-term strategies to reduce unfunded liabilities;
- Controlling labor costs while minimizing layoffs;
- Allocating one-time revenue for one-time expenses;
- Requiring enterprise and grant funds to balance and new programs to pay for themselves;
- Any new expenditure requires revenue or expenditure reductions; and
- New policy: no new capital projects until current program is funded.



## Summary of Peer City Residential Parking Permit Policies

Oakland, San Francisco, and Walnut Creek all have Residential Parking Permit programs. Each one of these cities also has rules limiting the maximum number of permits that residents may purchase. This document summarizes these policies in comparison with Berkeley's current policies.

### City of Berkeley

- Annual Residential Permits (\$55):
  - The City currently imposes no caps on the number of annual RPP permits.
- Visitor Permits (\$2.75 for 1-Day, \$28.50 for 14-Day):
  - Residents may purchase up to 20 1-Day Visitor Permits in a permit year.
  - Residents may purchase three (3) 14-Day Visitor Permits in a permit year.
- Other Permits:
  - Annual In-Home Care Permit (\$55): If customers require 24-hour, in-home care services, they may purchase up to a maximum of three (3) In-Home Care Permits.
  - Annual Merchant Parking Permit (\$154): Businesses within a designated Merchant Permit address range may purchase one (1) Merchant Parking Permit annually.
  - Annual Neighborhood-Serving Community Facility Permit (\$69): The total number of permits issued must not exceed 60% of the enterprise's employees.
  - One-Day Senior Event Permit (\$1): The total number of permits issued must not exceed 60% of the senior event group's membership.

### City of Oakland

- Annual Residential Permits (\$82 all areas except Area M; Area M \$160): There are limits to the number of residential permits issued per address by RPP area:
  - Area F: One (1) permit
  - Areas A, B, C, D, E, G, I, J, K, and L: Three (3) permits
  - Area M: No limit
  - Area N: Two (2) permits
- Visitor Permits (\$5 for 1-day; \$50 for 2-week):
  - Residents may purchase up to five (5) 1-day and/or 2-week temporary permits on any calendar day.
- Merchant Permits (\$96 all areas except Area M):
  - Merchants receive one transferable hanging permit. The maximum number of merchants that can be issued per business license is either one (1) permit or two (2) stickers.

*Note: Some sections of some RPP areas in Oakland have first year "free" permits.*



## City of San Francisco

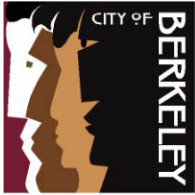
- Annual Permit for Residents (\$128 passenger vehicle, \$96 motorcycle):
  - A maximum of four (4) annual residential permits may be issued to a single address. In special circumstances, residents may request a waiver to this limit.
- Short-Term Permits: The City limits the number of visitor permits that can be purchased with a yearly maximum and a progressive rate structure:
  - One-Day Permits: Up to 20 one-day permits per address are available for purchase with the following rates:
    - 1-5 permits per calendar year: \$6.00 per permit
    - 6-15 permits per calendar year: \$8.00 per permit
    - 16-20 permits per calendar year: \$11.00 per permit
  - Weekly Permits: Two-week increment permits may be purchased with the following rates – maximum 32 weeks allowed per calendar year per address:
    - Two weeks: \$45.00
    - Four weeks: \$65.00
    - Six weeks: \$84.00
    - Eight weeks: \$109.00
- Other Permits:
  - Business Permit (\$128):
    - Commercial property owners operating a business on an RPP zoned block may obtain one (1) parking permit for a personal vehicle per postal address.
    - Up to three (3) additional permits may be purchased for delivery vehicles with commercial license plates that are registered to the business address.
  - Annual Permit for Medical Caregiver (\$128): Up to three (3) permits may be issued for use by the resident’s health care provider.
  - Annual Permit for Child Caregiver (\$128): One (1) transferable parking permit for use by persons who provide childcare for a minor 12 years of age and under. This permit is counted towards the maximum four (4) permits allowed per address.
  - Teacher/Fire Station/Foreign Consulate Permits: A limited number of parking permits are available by special request.

## City of Walnut Creek

- Annual Residential Permit (\$15):
  - Up to three (3) permits per dwelling unit for specific vehicles owned by residents of that dwelling unit.
  - Up to two (2) guest permits per dwelling unit for residents of such unit for visitors. One (1) additional guest permit may be issued to nonresident

property owners for properties owned in that RPP area upon submission of proof of ownership.

- A maximum of ten (10) free one (1) day guest parking permits, per special event by special request.



CITY COUNCIL  
Linda Maio

CONSENT CALENDAR  
March 11, 2014

TO: Honorable Mayor and Members of the City Council  
FROM: Councilmembers Linda Maio and Darryl Moore  
SUBJECT: Expansion of Permit Parking to Impacted Areas

RECOMMENDATION:

Refer to the City Manager the expansion of Residential Permit Parking to impacted areas beyond "The Donut," an expansion that is sensitive to the mix of uses that are both residential and commercial, such as exist in West Berkeley.

BACKGROUND:

As intensification of commercial uses grows in West Berkeley, residential neighbors who have no off-street parking find themselves in a hardship situation. They are unable to park near enough to their homes to manage groceries and children, or disability needs. Employees of commercial uses who commute park all day on these streets. Given that many of the properties for both residential and commercial are historic and lack on-site parking, street parking becomes highly competitive. Residents I have heard from are sensitive to the fact that they live in a mixed use area and know the businesses need parking as well. Some have suggested that they can "share the block" and have at least half be residential permit parking. This matter will ultimately go to the Transportation Commission but is being referred to the City Manager, as the first step is to conduct appropriate studies for implementing permit parking.

What follows are excerpts from an email that is typical of those I have been receiving:

*Ms. Maio,*

*I have lived on Cedar Street between 5th and 6th, since 1981. During this time I have seen many positive changes in our neighborhood, and a few that are not so great. Perhaps the most noticeable and constant problems are traffic and parking. Many of my neighbors have no driveways at all, and often find it impossible to park in front of, or even near their homes. This presents special difficulties for the elderly, the handicapped, and those with young children.*

FINANCIAL IMPLICATIONS:

Staff time to identify impacted areas and appropriate studies.

CONTACT:

Councilmember Linda Maio, District 1, 510-981-7110, lmaio@cityofberkeley.info







Kate Harrison  
Vice Mayor, District 4

CONSENT CALENDAR  
October 11, 2022

To: Honorable Mayor and Members of the City Council

From: Vice Mayor Harrison

Subject: Referral to the Transportation and Infrastructure Commission and City Manager to Consider and Make Recommendations Regarding the Policy of Deploying Rectangular Rapid Flashing Beacons and Other Treatments at Dangerous or High-Collision Pedestrian and Bicycle Intersections

RECOMMENDATION

Referral to the Transportation and Infrastructure Commission and City Manager to consider and make recommendations regarding the policy of deploying Rectangular Rapid Flashing Beacon (RRFB) and other treatments at dangerous or high-collision pedestrian and bicycle intersections.

CURRENT SITUATION, EFFECTS, AND RATIONALE FOR RECOMMENDATION

The City of Berkeley is committed to an equity-focused, data-driven effort to eliminate traffic deaths and severe injury collisions by 2028<sup>1</sup> and has described how it is going to achieve this in the 2017 Bicycle, 2019 Vision Zero Action, and 2020 Pedestrian Plans. Despite these documents and recent efforts to enhance pedestrian and bike infrastructure in the City, traffic violence remains a serious issue. According to the Berkeley Police Department, 2021 was deadliest year for road users in Berkeley since at least 1984. In 2021 alone, 433 collisions resulted in injuries—a 37% increase from 2020.<sup>2</sup>

As part of bike and pedestrian implementation plans, staff have begun installing RRFB at various dangerous intersections, likely resulting in relative safety improvements. Such intersections connect various neighborhoods, and are corridors for seniors, students, shoppers, those accessing government services, and inhabitants of existing and new housing. However, recent tragic incidents, the advent of the City's vision zero plan, and ongoing efforts to revise the Bike Plan should prompt the City to consider whether more passive treatments are appropriate for the most dangerous intersections.

<sup>1</sup> Berkeley Vision Zero Plan, <https://berkeleyca.gov/your-government/our-work/adopted-plans/vision-zero-action-plan>.

<sup>2</sup> Emilie Raguso, "8 people died in Berkeley crashes in 2021, overall collisions were up 34%," *Berkeleyside*, February 25, 2022, <https://www.berkeleyside.org/2022/02/25/berkeley-traffic-collisions-fatalities-up-2021-police-data>.

This referral asks the newly established Transportation and Infrastructure Commission and the City Manager to consider and make recommendations regarding RRFB and other traffic safety treatments impacting pedestrians and bicyclists at high-collision intersections.

## BACKGROUND

The United States, including Berkeley, has relied almost exclusively on driver “education” for decades to make streets safer, while peer countries in Europe and Asia have invested in physical infrastructure to boost safety. Traffic fatalities in the United States rose to just under 43,000 in 2021,<sup>3</sup> while fatalities in Europe have dramatically decreased.<sup>4</sup> Likewise, deaths on Berkeley’s roads are at a 37 year high.<sup>5</sup> Americans are not more prone to making mistakes than their counterparts. The City of Berkeley understands this well and has been undertaking serious efforts to improve the safety of roadways through infrastructure improvements.

According to the 2017 Bicycle Plan, a four beacon RRFB, like the one installed at MLK and Addison, can raise vehicle yielding compliance to 88%.<sup>6</sup> Yet, this raises the question about the remaining times when there is not yielding compliance, and the fact that RRFB requires pedestrians and cyclists to always remember to hit the button. Is 88% compliance acceptable in a Vision Zero City? We were reminded from the horrible collision on July 9, 2022, that the median and flashing beacons can be insufficient at protecting vulnerable road users from bodily harm.

There are many additional intersection treatments detailed in the 2017 Bicycle Plan that can improve safety for all road users. For instance, to ensure RRFB activation, the city could install pedestrian and cyclist detection systems, the latter of which is commonly used throughout the city already. A speed table or raised crosswalks could also further slow cars—these have been shown to reduce vehicle/pedestrian crashes by 45%.<sup>7</sup> In addition, the RRFB could be converted into a pedestrian hybrid beacon requiring motorists to make a complete stop.

This referral does not favor any treatment. Rather it asks its newly established Transportation and Infrastructure Commission and City staff to as appropriate consider and make recommendations about the appropriateness of various options in light of recent trends and best practices. This is particularly important as the City is updating its

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<sup>3</sup> National Highway Traffic Safety Administration, “Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021,” <https://www.nhtsa.gov/press-releases/early-estimate-2021-traffic-fatalities>.

<sup>4</sup> Frank Jacobs, “U.S. road deaths far outnumber those in Europe. Why?,” Big Think, June 1, 2022, <https://bigthink.com/strange-maps/road-deaths-us-eu/>.

<sup>5</sup> Emilie Raguso, February 25, 2022.

<sup>6</sup> Berkeley Bicycle Facility Design Toolbox, [https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Bicycle-Plan-2017\\_AppendixF\\_Facility%20Design%20Toolbox.pdf](https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Bicycle-Plan-2017_AppendixF_Facility%20Design%20Toolbox.pdf).

<sup>7</sup> Ibid.



Referral to the Transportation and Infrastructure Commission and City Manager to Consider and Make Recommendations Regarding the Policy of Deploying Rectangular Rapid Flashing Beacons and Other Treatments at Dangerous or High-Collision Pedestrian and Bicycle Intersections

CONSENT CALENDAR  
October 11, 2022

now five-year-old Bike Plan and has a numerous dangerous bike boulevard and pedestrian intersections similar to MLK and Addison. At the same time, pedestrian and bicycle traffic has increased and is expected to increase in coming years and the Council placed a significant bond on the ballot to fund affordable housing and infrastructure, including various bicycle and pedestrian upgrades. It is vital and in the public interest that the City finds the right policy solutions so future tragic collisions can be avoided.

FISCAL IMPACTS OF RECOMMENDATION

Staff time will be needed to develop recommendations to improve traffic safety policy at the high-collision intersections.

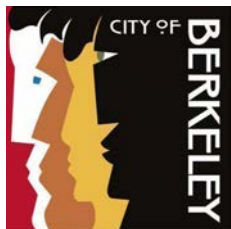
ENVIRONMENTAL SUSTAINABILITY

Transportation accounts for a significant portion of Berkeley's total emissions. The City is committed to increasing the modal share of walking and biking to reduce vehicle miles traveled.

CONTACT PERSON

Vice Mayor Kate Harrison, (510) 981-7140





Councilmember Sophie Hahn  
City of Berkeley, District 5

**ACTION CALENDAR**

October 11, 2022

**To:** Honorable Mayor and Members of the City Council  
**From:** Councilmember Hahn (Author)  
Mayor Jesse Arreguín (Co-Sponsor)  
**Subject:** Land Acknowledgement Recognizing Berkeley as the Ancestral,  
Unceded Home of the Ohlone people.

**RECOMMENDATION**

1. Adopt the Land Acknowledgement Statement Resolution recognizing that Berkeley is the ancestral, unceded home of the Ohlone people.
2. Display the Land Acknowledgement in writing at all in-person or online Regular meetings of the City Council and read the Acknowledgement at the first Regular meeting of each month in which Regular City Council meetings are held.
3. Recommend to all Berkeley Commissions, Committees, Boards, and other elected and appointed City entities to consider inclusion of the Land Acknowledgement in meeting practices and direct the City Manager to convey a copy of this Item and Resolution to all such entities for reference.
4. Direct the City Manager to post the Land Acknowledgement or a prominent link to the Acknowledgement on the home page of the City's website and to create a webpage dedicated to Ohlone history and culture.
5. Now and in the future, consider additional more substantive reparative and restorative actions, including but not limited to those described under the heading "Actions/Alternatives Considered."

**SUMMARY**

Acknowledging that the City of Berkeley rests upon the ancestral lands of the Chochenyo speaking Lisjan Ohlone people brings attention to their centuries of resistance to colonial violence and reminds our City and community of the need to take concrete restorative actions.

The settlers of California, primarily Europeans seeking religious converts, agricultural land and economic opportunity during the gold rush, committed one of the most egregious genocides in history. Settlers murdered 80 percent of Indigenous people in the state from



1846 to 1873 through massacre by state-directed militias, enslavement in mining and agricultural production, displacement causing starvation, and compulsory assimilation.<sup>1</sup>

Land acknowledgment is a traditional custom that dates back centuries in many Native nations and communities. Today, land acknowledgments are used by Native Peoples and non-Natives to recognize Indigenous Peoples who are the original stewards of the lands on which we now live.<sup>2</sup> To begin public meetings, dozens of localities across the United States including Denver (CO), Portland (OR), and Phoenix (AZ) now share official land acknowledgements. Many public agencies, including the National Park Service, the National Aeronautics and Space Administration (NASA), read these acknowledgements as well. The practice has been common for nearly a decade in Canada, New Zealand, and Australia.<sup>3</sup>

Locally, many public and public-facing private institutions have also adopted land acknowledgement statements including UC Berkeley, Mills College, Chabot Las Positas Community College District, California College of the Arts, UCSF, Stanford, and recently, Berkeley's Rent Stabilization Board.

However impactful these statements may be, it's important to consider that land acknowledgements have been criticized as appropriating the Indigenous practice of acknowledging the ancestral roots of land without taking concrete action against ongoing oppression.<sup>4</sup> According to University of Oklahoma Professor of Native American Cultural Studies Dustin Tahmahkera, "To acknowledge Indigenous homelands and to return those lands are related, but the former alone allows for rhetoric without further action."<sup>5</sup>

Dr. Duke Redbird, an Elder of the Saugeen First Nation in Ontario recently noted that Canada has invited non-Indigenous territories such as Prince Edward Island into the government's confederation, giving them lawmaker representation in parliament, while excluding millions of Indigenous people from the same opportunity:<sup>6</sup>

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<sup>1</sup> Madley, B. (2016). *An American Genocide. The United States and the California Indian Catastrophe*. Yale University Press. Print. p. 10, 12. Note: approximately, one in ten of these 125,000 deaths were the result of direct violence, often perpetuated by volunteer militias. Others resulted indirectly through displacement and disease.

<sup>2</sup> Smithsonian National Museum of the American Indian, Honoring Original Indigenous Inhabitants: Land Acknowledgment. [Web](#).

<sup>3</sup> Dewey, C. (2021). Growing Number of Cities Weigh Tribal 'Land Acknowledgements.' Pew Research Trust. [Web](#).

<sup>4</sup> Kaur, H. (2021). Land acknowledgments are often an empty gesture, some Indigenous people say. CNN. [Web](#).

<sup>5</sup> Wood, G. (2021). 'Land Acknowledgments' Are Just Moral Exhibitionism. The Atlantic. [Web](#).

<sup>6</sup> Museum of Toronto (2020). Ask an Elder: What do Land Acknowledgements represent? [Web](#).

*To get up in government and give a land acknowledgement without even inviting us into confederation, we were left out. What is the land acknowledgement supposed to represent? Give us a feeling that we should be grateful? Grateful for what?*

Naomi Bob, an Indigenous Youth Wellness Project Coordinator with the Snaw'naw'as and Nanoose First Nation, shared his perspective:<sup>7</sup>

*I'm seeing land acknowledgements done in a way that is tokenizing and minimizes responsibility and our history... It's really easy to list off your host nations you found off of a google search but I want to hear how you as an individual have ended up on their land and I want to hear about the work you're doing to reconcile responsibilities you have inherited . . .*

One of the leading advocacy groups for land acknowledgement, the Native Governance Center, acknowledges this issue of “optical allyship,” asking that local governments and community groups craft land acknowledgements that go beyond a mere statement, by providing research on the history of Indigenous peoples and offering concrete actions to support them. The organization’s Guide to Indigenous Land Acknowledgement states “every moment spent agonizing over land acknowledgement wording is time that could be used to actually support indigenous people... an apology or an acknowledgement is one thing, but what are you going to do next?”<sup>8</sup>

At an April 2022 Berkeley Rent Stabilization Board meeting Lisjan Ohlone Chairperson Corrina Gould spoke in support of their land acknowledgment and emphasized that we must acknowledge not only the past but also the future. She stressed that land acknowledgements are “a way to create goals together so there is an ongoing partnership taking care of the lands, and waters, and places that we live.”<sup>9</sup> The City of Berkeley should honor this intention and use this resolution and the Land Acknowledgement practice as a first step to bring attention to these histories and as a foundation for further concrete actions.

This item asks for the Land Acknowledgement to be formally adopted, displayed, and spoken by the City Council at the start of proceedings, and asks other appointed and elected governmental bodies in Berkeley to consider adopting similar Land

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<sup>7</sup> CFSC Video (2020). Why are land acknowledgments important? Naomi Bob - Indigenous Voices on Reconciliation. [Web](#).

<sup>8</sup> Native Governance Center (2019), quoting Dr. Kate Beane of the Falandreau Santee Dakota and Muskogee Creek as well as Robert Larson of the Sioux Indian Community. A Guide to Indigenous Land Acknowledgement. [Web](#).

<sup>9</sup> City of Berkeley (2022). Berkeley Rent Board Adopts Land Acknowledgement Statement. [Web](#).

Acknowledgement practices. More importantly, *it is intended to serve as a starting point for further restorative and reparative work our City and community must engage in*, not as an end in and of itself.

## **BACKGROUND**

The United States, the State of California, and the City of Berkeley came into being through the deliberate and sustained genocide of Indigenous people, and modern forms of this colonial violence continue to this day both here in Berkeley and across the country and globe. This history is often obscured or erased. Schools for decades have failed to teach the truth about this legacy, replacing hard and ugly facts with a variety of convenient myths and misrepresentations. Surviving Native Americans endured forced reeducation at boarding schools that suppressed oral history transmission, and fear of violence and murder drove many to hide their Indigenous ancestry, further eroding culture and memory.<sup>10</sup> But Lisjan Ohlone and other Native American people found ways to survive this murderous and cultural genocide, and many are with us today.

To contextualize this painful history, honor the Indigenous people who have survived and resisted this violence, and chart a new path forward for our community, this item briefly recounts elements of this history to understand the present.

The Ohlone are a group of around 50 separate tribes, who for 10,000 years lived on ancestral lands that spanned the coast of what is now known as San Francisco through Monterey Bay to the lower Salinas Valley.<sup>11</sup> There were eight different nations in the Bay Area alone, including the Lisjan; many came to adopt the term Ohlone in solidarity with other nations to push back against the Spanish colonizers' blanket name of "Costanoan."<sup>12</sup>

The territory xučyun (Huchiun), extending from what is now known as the Berkeley Hills to the Bay Shore from West Oakland to El Cerrito, is the home territory of the Chochenyo speaking Ohlone people. The cities of Alameda, Berkeley, Emeryville, El Cerrito, and most of Oakland were created on this ancestral territory. Nearly 310,000 Indigenous people across the region lived in what is now called California, speaking as many as 100 languages.<sup>13</sup>

Spain began colonizing these lands in 1769, establishing military forts and religious "mission" outposts across the region, including Mission San Jose in Fremont and

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<sup>10</sup> Madley, B. (2016). Ibid. p. 10.

<sup>11</sup> UC Berkeley, n.d. Berkeley sits in the territory of xučyun. [Web](#).

<sup>12</sup> Gould, Corrina. (2021). Berkeley's Ohlone History. Peralta Community Garden. [Web](#).

<sup>13</sup> Madley, B. (2016). Ibid. p. 23.



Mission Dolores in San Francisco, that enslaved the ancestors of some modern-day Berkeley and East Bay Ohlone people.<sup>14</sup> <sup>15</sup>Spain used slavery, rape, and torture of Indigenous people to secure silver mines to compete against colonial powers like Russia and Britain and “spiritually conquer” the region in the name of Catholicism.<sup>16</sup> In this period, Spain claimed ownership of the land and granted use rights to some ranchers and farmers.<sup>17</sup>

In 1818, the Spanish soldier Luis Peralta petitioned the Spanish authorities to be granted 48,000 acres extending from modern day San Leandro Creek to El Cerrito. This area, encapsulating modern day Berkeley, was known as “Rancho San Antonio.” Two of Peralta’s four sons, Domingo and Vicente (for which streets are named today), administered the territory for nearly two decades, through the transfer of the region to Mexico from Spain. Ranching appropriated and destroyed native landscapes and diverted streams for irrigation at great cost to native peoples, some of whom found ways to survive amid ongoing Spanish oppression.<sup>18</sup>

Following Mexican independence in 1821, the new Mexican government granted private land rights to individual “ranchos” through the Missions: these land grant settlers began occupying prime agricultural lands across the state, but remained less than 20 percent of California’s population – the remainder being Native American.<sup>19</sup> The Peralta family soon had company in the form of other landed “aristocratic” families, which replaced the missionary friars as the most powerful people across the region.<sup>20</sup>

Amid the 1850’s Gold Rush, U.S. soldiers victorious over Mexico and other squatters began to make legal claims to the Peralta lands. Federal judges of the California Land Commission in 1851, not well prepared for their tasks, attempted to resolve these numerous land disputes, but the Peraltas were overwhelmed by lawyers’ bills and property taxes, eventually selling off much of their lands to pay their debts.<sup>21</sup> Meanwhile the violent occupation of settlers as well as the spread of European diseases like smallpox reduced the Indigenous population to only 150,000 people by the time the United States had taken legal control of what is now California in 1846, during the Mexican-American war.<sup>22</sup>

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<sup>14</sup> Novan, K. (2021). California Agriculture: Dimensions and Issues, 2nd Edition: Chapter 3, California’s Evolving Landscape. University of California: Giannini Foundation of Agricultural Economics. [Web](#). p. 59.

<sup>15</sup> Gould, Corrina. (2021). Ibid.

<sup>16</sup> Novan, K. (2021). Ibid. p. 59.

<sup>17</sup> Madley, B. (2016). Ibid. p. 27 - 38.

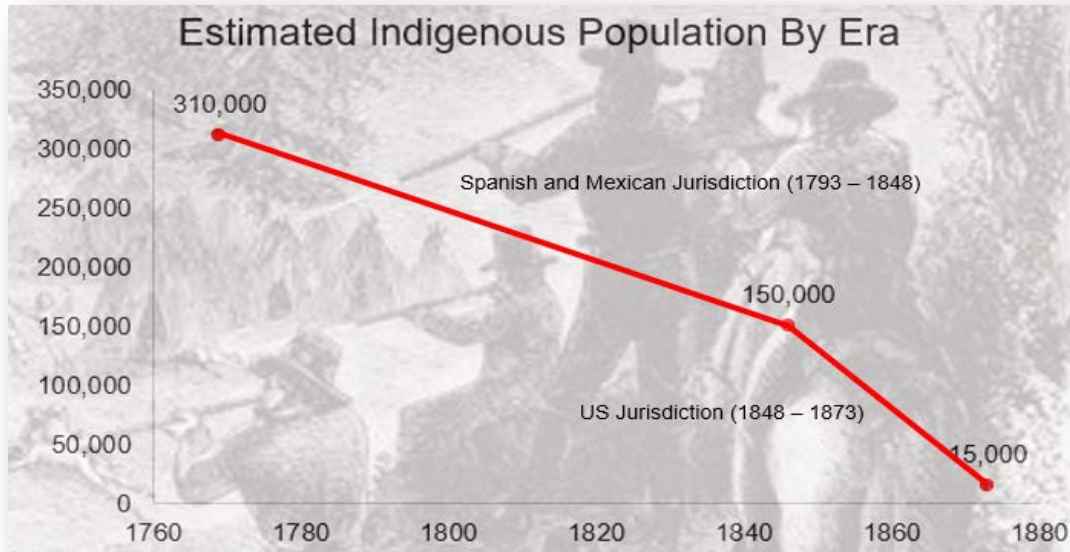
<sup>18</sup> Wollenberg, C. (2008). Berkeley: A City in History. Chapter One: First Settlers. UC Press. p. 8. [Web](#).

<sup>19</sup> Novan, K. (2021). Ibid. p. 60. / Lindsay, B.C. (2012), p. 131

<sup>20</sup> Wollenberg, C. (2008). Ibid. P. 8

<sup>21</sup> Wollenberg, C. (2008). Ibid. P. 14

<sup>22</sup> Madley, B. (2016). Ibid. p. 3, 12



So began the era of more affirmative, state-sponsored genocide that led US Indian Affairs Commissioner John Collier to declare in 1935 that “The world’s annals contain few comparable instances of swift depopulation— practically, of racial massacre—at the hands of a conquering race.”<sup>23</sup> Brenden C. Lindsay, Associate Professor of History at Sacramento State and author of *Murder State: California’s Native American Genocide*, concludes that “northern California’s Native population faced a genocidal assault perhaps unrivaled in North America in terms of its ferocity, bloodiness, and loss of human life,” this violence was executed through state-sponsored and state-tolerated violence, enslavement, and displacement.<sup>24</sup>

It was just not just a select few who engaged in this violence. European settlers flooding into Northern California in search of gold came with a manufactured fear of Indigenous people, due to repetitive, sensationalized, and false storytelling in newspapers and other reports. Deaths from disease, natural causes, and even suicide were attributed to Indigenous people while actual violence by Indigenous people against settlers was quite rare. For example, contrary to popular myths, only 115 of nearly 90,000 new settlers were killed in conflicts with Indigenous people during the 1840s.<sup>25</sup> This manufactured fear, which translated into hatred, provided pretext for California Governors John

<sup>23</sup> Madley, B.

<sup>24</sup> Lindsay, B.C. (2012) *Murder State: California’s Native American Genocide, 1846-1873*. University of Nebraska Press. Print. p. 177

<sup>25</sup> Lindsay, B.C. (2012). *Ibid.* p. 9, 23, 31, 39, 120.

McDougal and Peter Burnett to legally sanction volunteer militias tasked with pushing Indigenous people off farming and ranching lands in the most economically efficient way possible: massacre.<sup>26</sup> Justifying this genocide with slurs like “digger,” Indigenous people were equated with animals for the purpose of literally hunting them with guns.<sup>27</sup>

Many Indigenous people were enslaved for labor as well. Prominent State Senators and ranchers during California’s early years pushed the Governor to create reservations where Indigenous people could be used for hard labor but kept separate from whites. Legislation was also passed echoing legislation in southern States to reduce Indigenous people to non-legal entities who could be legally enslaved.<sup>28</sup> If Indigenous people were found drunk on Sundays, they were arrested and enslaved: the Los Angeles Star reported one instance where a jail door fell down because the cell was so crowded with imprisoned native people.<sup>29</sup> These and similar atrocities precipitated the unsuccessful pan-Indigenous “Garra Revolt” during the 1850s.

This enslavement also went hand in hand with displacement from ranching, which led to extreme poverty and starvation, with many Indigenous people desperate for work to survive. Ranching throughout California depended on the labor of enslaved Indigenous people as quests for gold by settlers drained the labor force.<sup>30</sup> Ranchers hunted deer and elk that competed for food with their cows and horses, devastating wild herds. Domesticated animals like cows, pigs, and sheep ate thousands of acres of plants Indigenous people depended on for food.<sup>31</sup> This environmental devastation drove some Indigenous people such as the Paiutes to attack cows and horses (though even this tactic of survival was exaggerated by settlers, who often attributed the natural deaths of domesticated animals to Indigenous people).<sup>32</sup> In an ironic twist, Indigenous peoples who killed domesticated animals tended to receive more in reservation funding, as this act of resistance created heavy costs for the ranchos.

The legal system, disguised with the veneer of “democratic will,” barred Indigenous people from testifying in court against settlers: in practice, legalizing their murder.<sup>33</sup> The Treaty of Guadalupe-Hidalgo, which ended the Mexican-American War, was violated as California took Indigenous affairs, a federal responsibility, into local hands following

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<sup>26</sup> Lindsay, B.C. (2012). *Ibid.* p. 151, 170.

<sup>27</sup> Lindsay, B.C. (2012). *Ibid.* p. 133, 185

<sup>28</sup> Lindsay, B.C. (2012). *Ibid.* p. 146-148

<sup>29</sup> Lindsay, B.C. (2012). *Ibid.* p. 23, 153

<sup>30</sup> Lindsay, B.C. (2012). *Ibid.* p. 31, 136, 153

<sup>31</sup> Lindsay, B.C. (2012). *Ibid.* p. 176, 181, 183, 186

<sup>32</sup> Lindsay, B.C. (2012). *Ibid.* p. 17, 136, 186

<sup>33</sup> Lindsay, B.C. (2012). *Ibid.* p. 27, 28, 132, 168,



statehood.<sup>34</sup> For its part, however, the federal government reimbursed the cost of volunteer militias with millions in funding, effectively bankrolling massacre. It also issued a decree allowing soldiers from the Mexican-American war to claim up to 160 acres of land in California as a bounty, another factor in the demise of Ranchos and the establishment of “land rights” - to land that was stolen once from Indigenous peoples and a second time from the “owners” of formerly Spanish and later Mexican Ranchos.

The Sogorea Te’ Land Trust is an urban Indigenous women-led land trust based in the Bay Area that facilitates the return of Indigenous land to Indigenous people. The Trust’s website includes a short history of the Lisjan Ohlone, which parallels the history recounted in other sources.

“The Lisjan people have lived in the territory of Huchiun since the beginning of time. For thousands of years, hundreds of generations, the Lisjan Ohlone people have lived on the land that is now known as the East Bay in the San Francisco Bay Area. We did not own the land, we belonged to it. Generation after generation, we have cultivated reciprocal relationships with the plants and animals we share this place with, and developed beautiful and powerful cultural practices that keep us in balance.

The Confederated Villages of Lisjan are one of many Ohlone nations, each with its own geography and history. Our tribes, cultures and languages are as diverse as the ecosystems we live within. When the Spanish invaded in the late 1700s, in their ignorance they called us Costanoan, people of the coast. In the 1960s and 70s, inspired by the Black Power and American Indian Movements, we organized and renamed ourselves Ohlone. The different nations of Ohlone people are connected but have different territories and languages. The Confederated Villages of Lisjan speak the language Chochenyo.

The Lisjan are made up of the six nations that were directly enslaved at Mission San Jose in Fremont, CA and Mission Dolores in San Francisco, CA: Lisjan (Ohlone), Karkin (Ohlone), Bay Miwok, Plains Miwok, Delta Yokut and Napien (Patwin). Our territory includes 5 Bay Area counties; Alameda, Contra Costa, Solano, Napa and San Joaquin, and we are directly tied to the “Indian Town” census of the 1920s and the Verona Band.

The colonization of this land began with the reign of terror inflicted by Spanish soldiers and missionaries who sought to convert all Indigenous people into Catholic subjects of Spain and steal their land. The Missions were plantations, built by slave

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<sup>34</sup> Lindsay, B.C. (2012). Ibid. p. 28, 140-143

labor and sustained through brutal physical violence and extractive land practices. The Spanish brought deadly diseases, invasive species, and Christian ideology, based on human dominion of the natural world, causing devastating consequences for the Lisjan people and all living beings we have shared the land with.

After a brief but harrowing Mexican rancho period, Lisjan survivors faced extermination policies by the United States that aimed to eliminate California Indians entirely. In a climate of virulent racial discrimination and state-sponsored vigilante killings, most Lisjan families survived by isolating themselves and concealing their identities. Cultural and spiritual traditions were forced into dormancy or secrecy, and much knowledge perished with the passing of generations.

Despite these concerted efforts to erase our history and identity, the Lisjan community forms a diverse and vibrant constellation of tribes and families. Utilizing a wide array of survival strategies to navigate a profoundly altered 21st century world, we continue to revitalize our cultural practices and uphold our responsibilities to protect and care for our ancestral homeland.

We have survived over two centuries of genocide and colonization during the Spanish, Mexican and American eras. Today, we continue to inhabit our ancestral homeland, fight for our sacred sites and revitalize our cultural practices.”<sup>35</sup>

Despite the incredible strength it has taken to survive the repeated onslaughts of slavery, disease, environmental destruction, land appropriation, and state-sponsored physical and cultural genocide, centuries of trauma from colonization manifest themselves in ongoing struggles for Indigenous People in California and beyond. The nearly two million Indigenous people living under U.S. jurisdiction suffer the highest rate of poverty of any racial group—almost twice the national average. Rates of suicide, alcoholism, gang membership, and sexual abuse are also far higher than that of the non-Indigenous population, with challenges particularly acute on reservations.<sup>36</sup>

By restoring sovereignty and land to Indigenous people, with negotiated environmental protections and meaningful economic opportunity, is one way to help repair deeply scarred communities.

As Standing Rock and other pipeline opposition campaigns have shown, Indigenous peoples living under U.S. jurisdiction continue to stand up against pipelines, oil extraction,

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<sup>35</sup> Sogorea Te' Land Trust, Lisjan (Ohlone) History & Territory. [Web](#).

<sup>36</sup> Riley, N.S. (2016). One Way to Help Native Americans: Property Rights. The Atlantic. [Web](#).

and other desecrations that destroy their limited lands and poison communities with cancer and polluted water. The petroleum industry has demolished sacred sites and confronts individuals who resist with rubber bullets, attack dogs, and other war-like practices.<sup>37</sup> While Indigenous People are anything but a monolith, this common cause against extraction, pollution and desecration unites many. As Dallas Goldtooth of the Dakota Nation and Indigenous Environmental Network has described:

*[Resistance] resonates across the diaspora of Indigenous Peoples. This is a critical moment we find ourselves in on this planet, not just in the sense for addressing climate change, but also a sense for social justice, a sense of just overall justice for all species. Indigenous Peoples tend to be, and rightfully are, on the frontline of those fights and those struggles. That's encapsulated by this idea of us rising together.*

This connection even extends internationally, as the state of California plays an outsized role in the extraction and destruction of Indigenous homelands in the Amazon as well. In turn, the deforestation of the Amazon destroys moisture distribution that contains wildfires across North America, and California in particular.<sup>38</sup> A recent investigation demonstrated that California consumes more oil extracted from the Western Amazon than any other region on earth, refining it for airports, Amazon, PepsiCo and COSTCO.<sup>39</sup>

In another example of the enduring nexus between our State and community and forces of destruction to Indigenous lands, a federal investigation found the largest animal production company in the world, JBS, has been implicated in the continued deforestation of the Amazon as well as the torture and murder of Indigenous people of the Amazon.<sup>40 41</sup> Several of Europe's largest supermarket chains have responded by banning JBS beef products, acknowledging that animal feed crops and animal grazing drives 80 percent of Amazon deforestation.<sup>42 43</sup> Through our consumption here in Berkeley, we literally fuel practices that continue to destroy Indigenous People and the lands on which they survive.

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<sup>37</sup> Buntin, A.C. (2017). Indigenous Resistance: The Big Picture behind Pipeline Protests. Cultural Survival. [Web](#).

<sup>38</sup> Lazard, O. (2020). One Answer to California's Fires Lies in the Amazon. Carnegie Europe. [Web](#).

<sup>39</sup> Amazon Watch. Linked Fates: How California's Oil Imports Affect the Future of the Amazon Rainforest. [Web](#).

<sup>40</sup> Mano, A. (2021). Brazil's JBS bought 301,000 cattle from 'irregular' farms in the Amazon, audit finds. Reuters. [Web](#).

<sup>41</sup> Phillips, D. (2020). Brazilian meat companies linked to farmer charged with 'massacre' in Amazon. The Guardian. [Web](#).

<sup>42</sup> Spring, J. and Deutsch, A. (2021). European supermarkets stop selling Brazil beef over deforestation links. Reuters. [Web](#).

<sup>43</sup> Butler, R. (2009). Controlling the Ranching Boom that Threatens the Amazon. Yale School of the Environment. [Web](#).



With knowledge of these connections between the meat we eat and petroleum we consume to continued oppression of Indigenous People and desecration of their lands, we should consider actions like the boycotts undertaken in European countries.

Thoughtfully acknowledging our own history and current aspirations for local and other Indigenous Peoples prior to public deliberation offers hope for more permanent and meaningful restorative action in Berkeley as well as statewide, nationally, and across the globe.

### **REVIEW OF EXISTING PLANS PROGRAMS, POLICIES, AND LAWS**

The City of Berkeley has a legacy of acknowledging the oppression and genocide of Indigenous people and taking concrete steps to support their struggle against institutions that grew out of settler-colonialist ideology as well as oppressive actions that persist today.

In 1992, Berkeley became the first city in the United States to rename as Indigenous Peoples' Day the federal holiday formerly recognized as Columbus Day. This action motivated changes to BUSD's history curriculum and undermined a long-standing revisionist history that European colonizer Christopher Columbus was a hero instead of a violent leader whose arrival led to the murder, enslavement, rape, and disease-related deaths of millions of Indigenous People.<sup>44</sup> Since then, nearly 130 cities nationwide and 20 states have acknowledged this day of recognition as well.

In 2000, the City of Berkeley officially designated the West Berkeley Shellmound, one of 425 ceremonial burial mounds that ringed San Francisco Bay to honor ancestors, as a landmark. The site is also recognized by the State of California and is eligible for listing on the National Register of Historic Places, meaning it meets all of the criteria for such listing. In 2020, the National Trust for Historic Preservation designated the Berkeley Shellmound and Village Site one of the 11 Most Endangered Historic Places in the United States.<sup>45</sup>

Regarding the significance of the Shellmound and Village historic district, the "Shellmound - Ohlone Heritage Site and Sacred Ground" website documents that:

"For thousands of years, the people of this original village on the East Bay shore thrived on the abundant resources of land and sea, developing a sophisticated maritime culture. Towering over the village was a great mound, estimated to have been at least 20 feet high and hundreds of feet long, one of the largest of the 425

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<sup>44</sup> Associated Press (1992). In Berkeley, Day for Columbus Is Renamed. New York Times. [Web](#).

<sup>45</sup> Dinkelspiel, F. (2020). West Berkeley Shellmound is now considered one of the U.S.'s 11 most endangered historic places. Berkeleyside. [Web](#).

shellmound funerary monuments that once lined the shores of San Francisco Bay. These mounds are older than the pyramids in Egypt and most of the major cities in the world.

Archaeologists have long recognized the importance of the West Berkeley Shellmound site, also known as the “West Berkeley Site,” or CA-ALA-307. The site has been determined eligible for listing on the National Register of Historic Places under all four criteria, and is listed on the California Register of Historical Resources. Archaeological evidence from the West Berkeley Site has fundamentally shaped understandings of the early human history of the San Francisco Bay Area, and ongoing research continues to enrich and reinterpret an amazing historical narrative.

Eminent UC Berkeley archaeologist Kent Lightfoot describes the West Berkeley Site as a fishing village where “an active port was maintained over hundreds of years,” with dozens of tule balsa canoes going out on fishing and hunting expeditions, or ferrying people and goods across the Bay. Large nets were used to catch fish such as sturgeon, salmon, thresher sharks, jacksmelt and surfperch. Hunters pursued antelope, deer, tule elk, dolphins, porpoises, otters, sea birds and other quarry, cooking their catch in underground ovens and hearths.

A unique 40-foot long oval-shaped building at the site is thought to have functioned as a center for ceremonies, dances and special meetings. Charmstones, abalone pendants and other ritual items have been recovered from the site. Hundreds of human burials have been recorded, as well as ritual burials of coyotes and a California condor.”<sup>46</sup>

In May of 2009, the City Council adopted a resolution recognizing and endorsing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), a statement of values denouncing forced assimilation, land removal, violent exploitation, cultural genocide, and other actions abridging Indigenous People’s right to self-determination.<sup>47</sup> In 2015, the Council later delivered a letter to the UN Secretary General and US Ambassador to the UN urging this declaration to be adopted as a convention, which would be legally binding.

In January of 2016, the City Council adopted a resolution formally recognizing the Ohlone Peoples as the original inhabitants of Berkeley and referred to the Berkeley Shellmound landmark.<sup>48</sup> The latter affirmed the City’s commitment to the “defense of Indigenous rights,

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<sup>46</sup> Shellmound – Ohlone Heritage Site and Sacred Grounds. [Web](#).

<sup>47</sup> United Nations General Assembly (2007). United Nations Declaration on the Rights of Indigenous Peoples. [Web](#).

<sup>48</sup> Berkeley Resolution No. 67,352-N.S. Recognizing the Ohlone Peoples. [Web](#).

culture, and dignity” as an official value, committing that “free, prior, and informed consent of the Ohlone and other Indigenous people should be integral to any alteration planning for the Berkeley Shellmound sacred site...”<sup>49</sup> The success of this measure underscores how Indigenous groups including Ohlone members and conservation activists have organized in spreading awareness throughout the community about their homeland and sacred sites in Berkeley and the Bay Area.

In January 2018, Council adopted a policy changing Berkeley's City Limits signs to read "Welcome to Berkeley - Ohlone Territory." In October 2018, the City Council took further action and adopted a similar measure replacing all existing Welcome to Berkeley signs to signs including "Ohlone Territory." As part of their deliberations, the City Council decided that in addition to recognizing the Ohlone People through signage, there was a need for more learning opportunities to add historical context, including a special Council session on Ohlone history and culture, a webpage on the City of Berkeley website linking to cultural and historic information, and inviting representatives of the Ohlone to speak at a City Council meeting.

On June 9, 2020 the City Council passed an item to paint the words “Black Lives Matter” and “Ohlone Territory” on streets adjacent to Berkeley’s City Hall.

At its January 20, 2022 meeting, the Berkeley Rent Board unanimously voted to adopt a land acknowledgement statement to be read out loud at all future board and committee meetings.<sup>50</sup>

In the spirit of continuing to demonstrate and deepen the City of Berkeley’s commitment to recognition and inclusion of the Ohlone People we bring the proposal for an official land acknowledgment forward, including consideration of concrete actions that may follow from public deliberation.

### **ACTIONS/ALTERNATIVES CONSIDERED:**

The City of Berkeley should consult with Lisjan Ohlone leadership regarding any decisions related to restorative, reparative, or other supportive actions. Some actions the City may wish to consult on include:

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<sup>49</sup> Berkeley Resolution No. 67,353-N.S. Honor Berkeley Shellmound Indigenous Sacred Site, UC Berkeley Return Ancestral Remains to Ohlone Peoples. [Web](#).

<sup>50</sup>City of Berkeley (2022). Berkeley Rent Board Adopts Land Acknowledgement Statement. [Web](#).



**Create Easements and/or Return City land:** The Sogorea Te' Land Trust and the City of Oakland on September 8, 2022 announced a visionary, historic plan to return approximately five acres of land owned by the City to Indigenous stewardship.

The Oakland City Council will hold hearings to consider conveying the site, known as Sequoia Point, to the Sogorea Te' Land Trust, and the East Bay Ohlone tribe, Confederated Villages of Lisjan Nation. The City would grant a cultural conservation easement in perpetuity to the Land Trust, allowing the Land Trust to immediately use the land for natural resource restoration, cultural practices, public education, and to plan for additional future uses.

What started out with a casual conversation between Oakland Mayor Libby Schaaf and tribal Chairperson Corrina Gould in 2018, grew into a partnership between the City and the Land Trust to begin to address the historic harms of Oakland's founding.

In the short term, the easement would allow the Land Trust to immediately begin tending to the land, gather Native plants and foods, clean up the area, and perform environmental and natural habitat restoration. The long-term vision of this project is to create a thriving, beautiful, ceremonial gathering place and structure where Indigenous people and their guests can come together and share cultural information and celebrations.

"I am committed to returning land to Indigenous stewardship, to offer some redress for past injustices to Native people," said Mayor Schaaf. "I hope the work we are doing in Oakland with the Sogorea Te' Land Trust can serve as a model for other cities working to return Indigenous land to the Indigenous community we stole it from."

In recognition of this historic moment, tribal Chairperson Corrina Gould said, "This agreement will restore our access to this important area, allowing a return of our sacred relationship with our ancestral lands in the hills. The easement allows us to begin to heal the land and heal the scars that have been created by colonization for the next generations."<sup>51</sup>

Berkeley should consider this or similar actions to return land to Ohlone ownership and/or stewardship.

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<sup>51</sup> Sogorea Te' Land Trust and City of Oakland Announce Plan to Return Land to Indigenous Stewardship. [Web](#).

**Local Support for Land Transfers:** As part of the land acknowledgement process, the City of Berkeley might consider encouraging residents to donate land to indigenous stakeholders such as the Sogorea Te' Land Trust that partners with dozens of local food justice and environmental groups to protect our shared environment.<sup>52</sup> The Council could recognize donations of land or actions taken by community members to donate land through wills. The City could also partner to distribute information on the Sogorea Te' Land Trust and include information about the Trust on its website, including a guide to these types of donations produced by the Sustainable Economies Law Center, a copy of which is attached.<sup>53 54</sup>

**Local support for Voluntary Land Taxes:** The City of Berkeley may consider further means to encourage residents to donate Indigenous causes through payment of voluntary land taxes, "Shuumi," that support the return of Indigenous land to Indigenous people.<sup>55</sup> The Sogorea Te' Land Trust, located in the East Bay, has such a program, and a similar program allows residents of the Humboldt Bay region to pay a voluntary tax to the Wiyot people. In Seattle, nearly 4,300 residents have signed up to pay the Duwamish Tribe symbolic rent.<sup>56</sup>

**Support for Statewide Indigenous Land Sovereignty:** The City of Berkeley may continue its consideration of support letters, resolutions, and education campaigns that highlight exploitation of ancestral Indigenous people and lands.

Future efforts could support action to return land or pay restitution to Indigenous people. Returning land to Indigenous sovereignty or using restitution funds for Indigenous-led sustainability initiatives acknowledges the leading role that the securing of land had in the genocide of Indigenous people across the region.<sup>57</sup>

Berkeley further may consider statements of support for giving Indigenous people sovereignty over national and local parks, acknowledging the acts of violence and genocide that drove them from these locations. Precedent exists in New Zealand and Australia.

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<sup>52</sup> Sogorea Te' Land Trust. Return the Land / Land Return. [Web](#).

<sup>53</sup> Sustainable Economies Law Center. Options for Transferring Land. [Web](#).

<sup>54</sup> Note: for lands outside this region, individuals can often find information on donations by searching "Tribal Historic Preservation Officer" along with the name of the nation they wish to give to.

<sup>55</sup> Sogorea Te' Land Trust. Shuumi Land Tax. [Web](#).

<sup>56</sup> Singh, M. (2019). Native American 'land taxes': a step on the roadmap for reparations. The Guardian. [Web](#).

<sup>57</sup> Lindsay, B.C. (2012) Murder State: California's Native American Genocide, 1846-1873. University of Nebraska Press. Print. P. 147- 186.

Indigenous communities are already stakeholders in park management, with a century of experience managing the layers of bureaucracy involved in managing these lands.<sup>58</sup>

### **CONSULTATION/OUTREACH OVERVIEW AND RESULTS**

Much like the process the Rent Stabilization Board pursued, the wording and intentions behind this land acknowledgement were developed in close consultation with Ohlone representatives. Academic and Native American sources underly the brief historical overview.

### **RATIONALE FOR RECOMMENDATION**

The City of Berkeley has a moral obligation to acknowledge local and broader atrocities against Indigenous people, and continued injustices. The regular repetition of the Land Acknowledgement, coupled with opportunities for deeper learning, will serve as a constant reminder of our responsibilities, and open the door to further restorative actions by the City and members of the community.

### **IMPLEMENTATION, ADMINISTRATION & ENFORCEMENT**

Very little staff time or expense is needed to carry out the requirements of this referral. For Zoom meetings, a written version of the Acknowledgement will need to be prepared for screening prior to Council meetings, and the Agenda Committee will need to add the reading of the Acknowledgement to the Ceremonial Agenda of the first Regular City Council meeting of each month. For in-person meetings, a poster-sized version of the Land Acknowledgement should be produced for display in a prominent location in the Council chambers. This likely can be accomplished for under \$100.

Staff will further need to convey a copy of this item and resolution to the secretaries and chairs of each appointed or elected body in Berkeley, with a note that the City Council has requested such bodies to consider incorporating the acknowledgement into their meeting practices.

Posting the Land Acknowledgement on the City's website homepage and completing the new Ohlone history webpage is a limited expense and should be completed as quickly as possible. Other jurisdictions and organizations that practice the reading of Land Acknowledgements often also include pages about the history of local Indigenous People on their websites. These can serve as examples. Consultation with Lisjan Ohlone representatives is central to ensuring what is posted is complete and accurate.

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<sup>58</sup> Treuer, D. (2021). Return the National Parks to the Tribes. The Atlantic. [Web](#).

### **ENVIRONMENTAL SUSTAINABILITY**

This resolution raises awareness of how genocide and exploitation of land and other natural resources intersects with climate change, wildfire, food insecurity, and other major challenges our community – and planet - face. It will also raise awareness of the local conservation and environmental work of the Ohlone people.

### **FISCAL IMPACT**

See Section in Implementation, Administration, and Enforcement for a description of de minimus associated costs.

### **OUTCOMES & EVALUATION**

The City Council should partner with the Ohlone to develop and carry out more substantive acts of education, partnership, and restitution. This will prevent the land acknowledgement statement from becoming a mere “check-box of optical allyship.”

### **CONTACT PERSON**

Councilmember Sophie Hahn, [shahn@cityofberkeley.info](mailto:shahn@cityofberkeley.info); 510-682-5905

#### Attachments

1. Land Acknowledgement Statement
2. Land Acknowledgement Resolution
3. Sustainable Economies Law Center Options for Transferring Land – A Brief Guide



## ATTACHMENT 1

### Land Acknowledgement Statement

*The City of Berkeley recognizes that the community we live in was built on the territory of xučyun (Huchiun (Hooch-yoon)), the ancestral and unceded land of the Chochenyo (Cho-chen-yo)-speaking Ohlone (Oh-low-nee) people, the ancestors and descendants of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to all of the Ohlone Tribes and descendants of the Verona Band. As we begin our meeting tonight, we acknowledge and honor the original inhabitants of Berkeley, the documented 5,000-year history of a vibrant community at the West Berkeley Shellmound, and the Ohlone people who continue to reside in the East Bay. We recognize that Berkeley's residents have and continue to benefit from the use and occupation of this unceded stolen land since the City of Berkeley's incorporation in 1878. As stewards of the laws regulating the City of Berkeley, it is not only vital that we recognize the history of this land, but also recognize that the Ohlone people are present members of Berkeley and other East Bay communities today. The City of Berkeley will continue to build relationships with the Lisjan Tribe and to create meaningful actions that uphold the intention of this land acknowledgement.*

**ATTACHMENT 2 - RESOLUTION**

RESOLUTION #####-N.S.

RECOGNIZING THAT BERKELEY IS THE ANCESTRAL, UNCEDED HOME OF THE  
OHLONE PEOPLE AND ADOPTING AN OFFICIAL CITY OF BERKELEY LAND  
ACKNOWLEDGEMENT AND PRACTICES

WHEREAS Acknowledging that the City of Berkeley rests upon the ancestral lands of the Chochochenyo speaking Lisjan Ohlone people brings attention to their centuries of resistance to colonial violence and reminds our City and community of the need to take concrete restorative actions; and

WHEREAS Land acknowledgment is a traditional custom that dates back centuries in many Native nations and communities, land acknowledgments continue to be used by Native Peoples and non-Natives to recognize Indigenous Peoples who are the original stewards of the lands on which we now live; and

WHEREAS To begin public meetings, localities across the United States including Denver (CO), Portland (OR), and Phoenix (AZ) now share official land acknowledgements as well as many public agencies, including the National Park Service, the National Aeronautics and Space Administration (NASA); and

WHEREAS Many public and public-facing private institutions have also adopted land acknowledgement statements including UC Berkeley, Mills College, Chabot Las Positas Community College District, California College of the Arts, UCSF, Stanford, and recently, Berkeley's Rent Stabilization Board; and

WHEREAS One of the leading advocacy groups for land acknowledgement, the Native Governance Center, asks that land acknowledgements go beyond a mere statement, by providing research on the history of indigenous peoples and offering concrete actions to support them; and

WHEREAS The settlers of California, primarily Europeans seeking religious converts, agricultural land, and economic opportunity during the gold rush committed one of the most egregious genocides in history, murdering 80 percent of Indigenous people in the state from 1846 to 1873 through massacre by state-directed militias, enslavement in mining and agricultural production, displacement causing starvation, and compulsory assimilation; and

WHEREAS The Lisjan people have lived in the territory of Huchiun, the land that is now known as the East Bay in the San Francisco Bay Area, since the beginning of time and for thousands of years and hundreds of generations; and

WHEREAS the Lisjan people did not own the land, *they belonged to it*, and generation after generation they have cultivated reciprocal relationships with plants and animals and developed beautiful and powerful cultural practices that keep us in balance; and

WHEREAS The Confederated Villages of Lisjan are one of many Ohlone nations, each with its own geography and history, whose tribes, cultures and languages are as diverse as the ecosystems we live within; and

WHEREAS The Lisjan are made up of the six nations that were directly enslaved at Mission San Jose in Fremont, CA and Mission Dolores in San Francisco, CA: Lisjan (Ohlone), Karkin (Ohlone), Bay Miwok, Plains Miwok, Delta Yokut and Napian (Patwin); and

WHEREAS The colonization of the land where Berkeley is located began with the reign of terror inflicted by Spanish soldiers and missionaries who sought to convert all Indigenous people into Catholic subjects of Spain and steal their land; and

WHEREAS The Missions were plantations, built by slave labor and sustained through brutal physical violence and extractive land practices, and the Spanish also brought deadly diseases, invasive species, and Christian ideology based on human dominion of the natural world, causing devastating consequences for the Lisjan people and all living beings they shared the land with; and

WHEREAS After a brief but harrowing Mexican rancho period, Lisjan survivors faced extermination policies by the United States that aimed to eliminate California Indians entirely; and

WHEREAS In a climate of virulent racial discrimination and state-sponsored vigilante killings, most Lisjan families survived by isolating themselves and concealing their identities, and cultural and spiritual traditions were forced into dormancy or secrecy resulting in much knowledge perishing with the passing of generations; and

WHEREAS Despite these concerted efforts to erase Lisjan history and identity, the Lisjan community forms a diverse and vibrant constellation of tribes and families that utilizes a wide array of survival strategies to navigate a profoundly altered 21st century

world, and the Lisjan continue to revitalize their cultural practices and uphold their responsibilities to protect and care for their ancestral homeland; and

WHEREAS Having survived over two centuries of genocide and colonization during the Spanish, Mexican and American eras, the Lisjan continue to inhabit their ancestral homeland, fight for their sacred sites, and revitalize their cultural practices; and

WHEREAS The City of Berkeley has a legacy of acknowledging the oppression and genocide of Indigenous people and taking both symbolic and concrete steps to support their struggle against institutions that grew out of settler-colonialist ideology as well as steps to address oppressive actions that persist today; and

WHEREAS In 1992, Berkeley became the first city in the United States to rename as Indigenous Peoples' Day the federal holiday formerly recognized as Columbus Day, which motivated changes to BUSD's history curriculum and undermined a long-standing revisionist history that European colonizer Christopher Columbus was a hero instead of a violent leader whose arrival led to the murder, enslavement, rape, and disease-related deaths of millions of Indigenous People; and

WHEREAS In 2000, the City of Berkeley officially designated the West Berkeley Shellmound, one of 425 ceremonial burial mounds that ringed San Francisco Bay to honor ancestors, as an official Landmark, and the site is also recognized by the State of California and is eligible for listing on the National Register of Historic Places, meaning it meets all of the criteria for such listing; and

WHEREAS In 2020, the National Trust for Historic Preservation designated the Berkeley Shellmound and Village Site one of the 11 Most Endangered Historic Places in the United States; and

WHEREAS In May of 2009, the City Council adopted a resolution recognizing and endorsing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), a statement of values denouncing forced assimilation, land removal, violent exploitation, cultural genocide, and other actions abridging Indigenous People's right to self-determination and in 2015 the Council delivered a letter to the UN Secretary General and US Ambassador to the UN urging this declaration to be adopted as a convention, which would be legally binding; and

WHEREAS In January of 2016, the City Council adopted a resolution formally recognizing the Ohlone Peoples as the original inhabitants of Berkeley and affirmed the City's commitment to the "defense of Indigenous rights, culture, and dignity" as an official value,



committing that “free, prior, and informed consent of the Ohlone and other Indigenous people should be integral to any alteration planning for the Berkeley Shellmound sacred site...”; and

WHEREAS In January 2018, the City Council adopted a policy changing Berkeley's City Limits signs to read "Welcome to Berkeley - Ohlone Territory" and in October 2018, the City Council took further action and adopted a similar measure replacing all existing Welcome to Berkeley signs to signs including "Ohlone Territory;" and

WHEREAS During deliberations to recognize the Ohlone on City Limit Signs, the City Council decided that in addition to recognizing the Ohlone People through signage, there was a need for more learning opportunities to add historical context, including a special Council session on Ohlone history and culture, a webpage on the City of Berkeley website linking to cultural and historic information, and inviting representatives of the Ohlone to speak at a City Council meeting; and

WHEREAS On June 9, 2020 the City Council passed an item to paint the words “Black Lives Matter” and “Ohlone Territory” on streets adjacent to Berkeley’s City Hall; and

WHEREAS At its January 20, 2022 meeting, the Berkeley Rent Board unanimously voted to adopt a land acknowledgement statement to be read out loud at all future board and committee meetings, providing an important example for the City to follow.

NOW THEREFORE, BE IT RESOLVED In the spirit of continuing to demonstrate and deepen the City of Berkeley’s recognition, inclusion, restitution, and repair towards the Lisjan Ohlone, whose ancestral home lies where the City of Berkeley is located, and who have survived centuries of cultural, physical, and environment genocide at the hands of Spanish, Mexican, and American colonists, the Council of the City of Berkeley hereby adopts the following Land Acknowledgement:

*The City of Berkeley recognizes that the community we live in was built on the territory of xučyun (Huchiun (Hooch-yoon)), the ancestral and unceded land of the Chochenyo (Cho-chen-yo)-speaking Ohlone (Oh-low-nee) people, the ancestors and descendants of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to all of the Ohlone Tribes and descendants of the Verona Band. As we begin our meeting tonight, we acknowledge and honor the original inhabitants of Berkeley, the documented 5,000-year history of a vibrant community at the West Berkeley Shellmound, and the Ohlone people who continue to reside in the East Bay. We recognize that Berkeley’s residents have and continue to benefit from the use and occupation of*

*this unceded stolen land since the City of Berkeley's incorporation in 1878. As stewards of the laws regulating the City of Berkeley, it is not only vital that we recognize the history of this land, but also recognize that the Ohlone people are present members of Berkeley and other East Bay communities today. The City of Berkeley will continue to build relationships with the Lisjan Tribe and to create meaningful actions that uphold the intention of this land acknowledgement.*

BE IT FURTHER RESOLVED That the Land Acknowledgement shall be displayed in writing at all Regular Meetings of the Berkeley City Council and shall be read out loud during the Ceremonial portion of the first Regular City Council Meeting of each month.



## **OPTIONS FOR TRANSFERRING LAND**

### *A BRIEF GUIDE*

This short guide summarizes various options for landowners interested in transferring land to another person, group, or community. Landowners who are particularly interested in transferring ownership to nonprofit land trusts, indigenous tribes, and community-based organizations will find this guide most useful.

Because we have written this guide with landowners in mind, we also provide a brief consideration of the advantages and disadvantages of each option from that perspective. Having said that, we think it is essential that landowners consider their own goals as well as the goals and needs of the party or community to whom they would like to transfer land.

Four key questions to consider as you read through this guide focus on the *financial* and *use* needs of the parties.

1. What are the **financial needs** of the transferring party?
2. What are the **financial needs** of the receiving party?
3. What are the **use needs** of the transferring party after the transfer?
4. What are the **use needs** of the receiving party after the transfer?

The land transfer mechanisms covered in this guide include:

- Full Value Sale
- Charitable (Bargain) Sale
- Full Donation
- Donation of a Remainder Interest
- Revocable Transfer on Death (Lady Bird Deed)
- Donation by Bequest
- Sale or Donation of an Easement

**In any situation, we strongly recommend that you seek individualized tax, legal, and estate planning advice to determine which of these options is best suited to your circumstances. Laws vary from state to state, so having appropriate counsel where the land is located is critical.**



### **Full Value Sale**

This is likely the kind of transfer of ownership that most people are familiar with. In this scenario, the landowner sells to the buyer at a price determined by a third-party appraisal. The buyer pays the full value and receives title to the property. For many people, including nonprofits and other community-based organizations, a full value sale is not an affordable option. However, there are ways to make this option more affordable by delaying payment in two ways.

1. **Installment Sale:** An installment sale allows the buyer to make payments over several years at intervals and amounts that are agreeable to both parties. The landowner would retain title to the property until the final payment. The parties could agree to provide the buyer with use of the land at any point during the payment period, including at the first payment or after payment has been made in full.
2. **Seller Financing:** Alternatively, the landowner could provide seller financing, meaning that title immediately transfers to buyer, and in exchange, the landowner gets a promissory note in which the buyer promises to pay the landowner over time, with or without interest. A deed of trust is recorded on the property to secure payment of the promissory note.

#### **Advantages of this option:**

- Fee simple ownership of land gives the buyer the greatest ability to fulfill their mission and ensure secure tenure over the long term.

#### **Disadvantages of this option:**

- The landowner will have to pay income tax on the capital gain if the land has appreciated in value since it was originally purchased.
- This is the least financially feasible option for buyers, particularly nonprofit organizations with a limited budget and limited capacity to raise capital.
- An installment sale may limit the buyer's uses of the land until the transfer is complete.





### **Charitable (Bargain) Sale**

A charitable, or bargain, sale occurs when the landowner sells land to a *tax-exempt nonprofit* organization for less than market value. This kind of sale makes the land more affordable to the buying nonprofit, and can offer tax deduction benefits to the selling landowner. The parties can also use the **Installment Sale** or **Seller Financing** options discussed above in this situation as well, if affordability is still a concern for the nonprofit buying the land.

#### **Advantages of this option:**

- The difference between full market value and the sale price can qualify the landowner for an income tax deduction and capital gains tax reduction for that portion of the value. This can offset the income taxes and capital gains taxes the landowner will incur from the sale of the property, after reducing ordinary income.
- If the land has significantly increased in value since the seller purchased it, this option can offset a large amount of the resulting capital gains liability for the increased value.
- The nonprofit buyer will be more likely to afford the purchase price of the land.

#### **Disadvantages of this option:**

- The landowner does not realize the full income from the market value of the property.
- This may not be the best strategy if the landowner would otherwise qualify for public benefits in the next several years. Recently transferred assets like land can negatively impact eligibility for benefits.



### **Full Donation**

This is the simplest way to transfer land to another party and is the most affordable option for receiving nonprofits or community-based organizations to advance their mission to protect, preserve, and steward land in the long term.

#### **Advantages of this option:**

- Fee simple donation to an eligible tax-exempt organization would give the landowner the greatest immediate income tax benefits, sometimes for the full appraised value of the land, in addition to relief from property taxes, and potential estate tax benefits.
- The receiving party would not require financing in order to receive the land.
- The land would be immediately available to the receiving party.

#### **Disadvantages of this option:**

- The landowner does not realize the full income from the market value of the property.
- This may not be the best strategy if the landowner would otherwise qualify for public benefits in the next several years. Recently transferred assets like land can negatively impact eligibility for benefits.



### **Donation of a Remainder Interest**

If the landowner would like to donate the land to an eligible tax-exempt nonprofit organization but retain the ability to live on the land during their, or their family members', lifetime, they can donate what is called a "remainder interest" in the land while retaining what is called a "life estate."

#### **Advantages of this option:**

- Full transfer to the receiving party will occur immediately upon the landowner's death. Upon the landowner's, or their designated family members', death, this kind of transfer avoids the expense and delay of probate.
- The landowner may be able to receive an immediate income tax deduction for the value of the property that was donated (determined by an appraisal).
- This may be a good option for landowners who receive public benefits. The state can make a claim for repayment of these benefits against an estate and place a lien on property after death. However, because donating a remainder interest is irrevocable, the property will not be part of the estate at death.
- The land will not be subject to capital gains tax on appreciated value.
- The property will not be part of the donor's taxable estate, where the donor (and/or the donor's spouse) are the only life tenants.

#### **Disadvantages of this option:**

- The landowner will need to pay the property taxes on the land while retaining use of the property.
- The landowner does not realize the full income from the market value of the property.
- The receiving party would not require financing in order to receive the land.
- Without another agreement, the land will not be immediately available for use by the receiving party.



### **Revocable Transfer on Death Deed (Lady Bird Deed)**

Lady Bird Deeds, which are only available in some states, are similar to deeds described above that create a life estate and donate a remainder interest, except that Lady Bird Deeds are revocable, meaning that the landowner can, during their lifetime, revoke the transfer. This gives more control to the landowner, but can put the receiving party in an uncertain position. Lady Bird Deeds are available in California until 2021, unless legislation is introduced to extend the law.

#### **Advantages of this option:**

- Transfer of title will occur immediately upon the landowner's death, so the donation will not be subject to the expense and delay of probate.
- The land donation will not be subject to capital gains tax on appreciated value.
- The landowner can revoke the deed at any time during their lifetime.

#### **Disadvantages of this option:**

- Because the deed is revocable, the landowner does not receive an income tax deduction available with other land donations.
- Without another agreement, the land will not be immediately available to the receiving party.
- The receiving party would not require financing in order to receive the land.
- This kind of transfer does not provide reliable certainty to the receiving party since the transfer can be revoked during the landowner's lifetime.





### **Donation by Will or Living Trust (Bequest)**

A landowner can donate land in a will or through a revocable living trust. Both strategies allow the landowner to retain full use of the land during their lifetime.

#### **Advantages of this option:**

- Reduces estate or inheritance taxes.
- Can be changed or revoked at any time during landowner's lifetime.
- The receiving party would not require financing in order to receive the land.

#### **Disadvantages of this option:**

- The landowner will still be responsible for paying property taxes for the entire property during their lifetime.
- Without another agreement, the land will not be immediately available to the receiving party.



### **Agricultural, Conservation, or Cultural Easement Donation**

An *easement* is an agreement between the landowner and a third party that affects the landowner's rights on the land covered by the easement. Easements are generally recorded on the deed of the property and are therefore permanent. Conservation, agricultural, and cultural easements are specific kinds of agreements that can be entered into with eligible organizations or tribes that can also qualify as a charitable contribution if donated by the landowner.

- A *conservation easement* permanently restricts uses on the land that interfere with the ecological conservation of that land.
- An *agricultural easement* permanently protects farmland by setting limitations on the use of the land.
- A *cultural easement*, available in some states, grants indigenous communities certain access rights to lands for continuing and preserving cultural heritage.

Easements can be sold or donated. The party holding the easement cannot also be the party that holds title to the land.

#### **Advantages of this option:**

- The landowner can retain ownership of the land and convey the land to their heirs.
- If the easement meets IRS criteria, the landowner may be able to deduct the value of any donated portion of the easement up to 50% of their adjusted gross income, or 100% if they are a farmer, for up to 15 years.
- Affirmative easements (those requiring certain uses) can increase the value of the easement and reduce the overall value of the land, making it more affordable if the easement is sold instead of donated
- In addition to an income tax deduction, the easement may reduce property taxes and estate taxes.

#### **Disadvantages of this option:**

- Easements do not convey an ownership interest in the land to the party holding the easement. This may not align with the intent of either or both parties.
- Easements can be expensive to enforce, thus creating a financial liability for the easement-holding party.
- Easements, alone, do not preserve long-term affordability of land, because an easement only reduces the relative market value of the land, but does not immunize the land value from increasing through speculation and other market forces.





Commission on Disability

## INFORMATION CALENDAR

October 11, 2022

To: Honorable Mayor and Members of the City Council  
 From: Commission on Disability  
 Submitted by: Michai Freeman Chairperson, Commission on Disability  
 Subject: Commission on Disability Fiscal Year 2022-2023 Work Plan

### INTRODUCTION

The Commission on Disability is submitting the fiscal year 2022-2023 Work Plan.

### CURRENT SITUATION AND ITS EFFECTS

#### **Commission on Disability - Fiscal Year 2022 Annual Workplan**

#### **1. COVID Management and Recovery**

Track developments and impacts from the Covid-19 pandemic, including but not limited to: disproportionate health impacts for people disabilities; consequences for health care providers; disruptions in disability supports (e.g. reduction in small businesses providing necessary products and services); increase in Berkeley residents with long-term disabilities due to post-Covid complications; and reduction in city budgets for services and infrastructure improvements (e.g. sidewalk repair efforts). Engage relevant city departments, request presentations and gather community feedback. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

#### **2. Improved Transportation and Mobility**

Continue efforts related to the “navigable cities” framework for safe, accessible pedestrian pathways and other transportation infrastructure, including appropriate street layouts in redesigned transportation corridors. Also ensure universal accessibility of relevant applications, kiosks, ride-sharing services, Transportation Network Companies (TNCs), bikes and scooters (including shared mobility), and “emerging technology” such as automated vehicles (ATVs). Address public transportation concerns and safety, including budgets and onboard safety related to the Covid-19 pandemic. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

#### **3. Public Input and Public Outreach for COD**

Implement communication channels with other city Commissions; pursue “cross-membership” with other commissions, where COD members request to be appointed to other commissions with vacancies; prioritize commissions whose coverage affects



people with disabilities (e.g. peace & justice, zero waste, planning, homelessness, etc.). Raise awareness of COD within the disability community and relevant stakeholders (e.g. neighborhood and business associations) and invite community members and stakeholders to attend COD meetings. Outreach should include opportunities for community members to request accessibility modifications, including for remote meetings (e.g. captioning on Zoom). Develop a consistent process and timeframe for community engagement. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

#### **4. Engagement and Advisory Role for City Processes**

Increase outreach and requests for timely presentations and information from City of Berkeley staff and other relevant officials (e.g. at the county or regional levels). Utilize the Commission on Disability as a public forum and oversight body, especially in the face of unprecedented challenges during the continuing Covid-19 pandemic and recovery therefrom. Utilize COD as an advisory & monitoring body to increase accessibility & accountability in city efforts and other areas of influence. Partner with other commissions; advocate for new sub-committees and cross-membership for relevant goals. Commissioners commit to actively and regularly engage with appointing Council members. Ensure that COD review city policies to avoid direct decisions by Council, City Manager, and other city entities without disability input. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

#### **5. Accessible and Affordable Housing**

Explore the expansion and improved availability of accessible housing for people with disabilities, including going beyond baseline ADA access requirements in new construction (e.g. adding automatic door openers, units with roll-in showers and other universal access features, etc.). Recognize a likely slowdown in new construction and increase efforts at encouraging accessibility retrofits of existing buildings, whether single-family homes or multi-unit apartments/condominiums. Address affordability as a key factor for housing, especially given the disconnect between affordability and accessibility (given newer buildings are more accessible but also tend to have higher rents). Partner with senior community and advocates for mutual areas of interest. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

#### **6. Homeless people with Disabilities**

Support Berkeley's population of homeless residents with disabilities. Collaborate with local service providers to address disability-related needs, such as access to healthcare or repairs of medical equipment (wheelchairs, scooters, walkers, etc.). Address timely issues, such as pandemic safety, extreme heat events and air quality (including wildfire smoke). Access to electricity and energy resources. Advocate for permanent accessible housing, including creative solutions (e.g. tiny homes). Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

## **7. Emergency/Disaster Preparedness**

Receive information and ongoing updates, participate and make recommendations as appropriate about Berkeley's BEACON and CERT programs. Address increasing frequency of Red Flag Warning events, wildfire danger, Public Safety Power Shutoffs, poor air quality days, and extreme heat vents. Maintain oversight and efforts around earthquake safety. Increase training opportunities for disability awareness & management, including FAST trainings. Advertise disaster resources for PWDs (e.g. information, backup supplies, organizations and designated accessible shelters), including lists of trained staff and volunteers. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

## **8. Student Life and Disability Awareness**

Improve communication and collaboration with Berkeley's many students with disabilities, providing community engagement and leadership opportunities and supports for independent living. Address all populations including students with disabilities in elementary through high school, Berkeley City College, UC Berkeley, and private entities. Advocate for city-supported services and resources for youth, young adults and other students w/ disabilities. Increase affordability of and access to education, training, recreation and life resources (e.g. housing and transportation) for students. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

## **9. Accessibility in City Events, Meetings, Communications & Information Technology**

Work with city staff, commissions, and other relevant partners to guarantee inclusion and accessibility of events, meetings and communications. Guarantee access to multiple media, taking into account a diversity of disabilities and the overall digital divide (i.e. disproportionate access to Information Technology and related services); this can include printed (paper) communications and information items, as well as those items in accessible (e.g. Braille or large-print) format. Ensure that all meetings and events are accessible through the Internet for those who cannot attend; this is especially important considering health and wellness in light of the Covid-19 pandemic and its ongoing effects. Emphasize plain language and multiple media in city resources and initiatives to reach the widest audience possible. Utilize free media (i.e. city websites, newspapers, PSAs, Berkeley TV, social media, etc.) and partnerships (e.g. with nonprofits, community organizations, and faith-based organizations) to engage as many people as possible. Ensure equitable and accessible opportunities to participate in city efforts, programs, meetings and initiatives.

The Commission on Disability Fiscal Year 2022-2023 Work Plan supports the Strategic Plan goal to champion and demonstrate social and racial equity.

BACKGROUND

The Work Plan was approved by the Commission on August 3, 2022 Motion: Freeman, Second: Walsh: Singer: Excused Absence

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

There are no identifiable environmental effects, climate impacts, or sustainability opportunities associated with the subject of this report.

POSSIBLE FUTURE ACTION

Unknown.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Unknown.

CONTACT PERSON

Andrew Brozyna, Deputy Director of Public Works, (510) 981-6396

Upcoming Worksessions and Special Meetings <i>start time is 6:00 p.m. unless otherwise noted</i>	
Scheduled Dates	
Sept. 29	1. Oversight Responsibilities for General Obligation Bond Measure (special meeting, start time 5:00 p.m.)
October 11	1. Measure O Report and Update (start time 4:00 p.m.)

Unscheduled Workshops
None

Unscheduled Presentations (City Manager)
1. Civic Arts Grantmaking Process & Capital Grant Program 2. Fire Facilities Study Report 3. African American Holistic Resource Center (November 15)

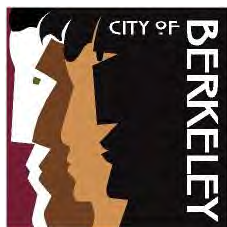


	<b>City Council Referrals to the Agenda &amp; Rules Committee and Unfinished Business for Scheduling</b>
	None

CITY CLERK DEPARTMENT			
WORKING CALENDAR FOR SCHEDULING LAND USE MATTERS BEFORE THE CITY COUNCIL			
Address	Board/ Commission	Appeal Period Ends	Public Hearing
<b>NOD – Notices of Decision</b>			
<b>Public Hearings Scheduled</b>			
1201-1205 San Pablo Avenue (construct mixed-use building)	ZAB		9/29/2022
2018 Blake Street (construct multi-family residential building)	ZAB		10/11/2022
1643-47 California St (new basement level and second story)	ZAB		11/3/2022
<b>Remanded to ZAB or LPC</b>			
1205 Peralta Avenue (conversion of an existing garage)			
<b>Notes</b>			

9/21/2022





Office of the City Manager

## **SUPPLEMENTAL AGENDA MATERIAL for Supplemental Packet 2**

**Meeting Date:** November 10, 2020

**Item Number:** 20

**Item Description:** Annual Commission Attendance and Meeting Frequency Report

**Submitted by:** Mark Numainville, City Clerk

The attached memo responds to issues and questions raised at the October 26 Agenda & Rules Committee Meeting and the October 27 City Council Meeting regarding the ability of city boards and commissions to resume regular meeting schedules.





Office of the City Manager

November 9, 2020

To: Mayor and Council  
From: Dee Williams-Ridley, City Manager  
Subject: Commission Meetings Under COVID-19 Emergency (Item 20)

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This memo provides supplemental information for the discussion on Item 20 on the November 10, 2020 Council agenda. Below is a summary and update of the status of meetings of Berkeley Boards and Commissions during the COVID-19 emergency declaration and the data collected by the City Manager on the ability of commissions to resume meetings in 2021.

On March 10, 2020 the City Council ratified the proclamation of the Director of Emergency Services for a state of local emergency related to the COVID-19 pandemic. The emergency proclamation has been renewed twice by the Council and remains in effect.

On March 17, 2020 the City Council adopted Resolution No. 69,331-N.S. which placed limitations of the meetings of City legislative bodies, including all boards and commissions. The resolution allows for commissions to meet to conduct time-sensitive, legally mandated business with the authorization of the City Manager. Since that time, several commissions have obtained this approval and held meetings; many other commissions have not met at all since March.

The City Manager has periodically reviewed the status of commission meetings with the City Council Agenda & Rules Committee. Recently, at the October 12, 2020 Agenda & Rules Committee meeting, the City Manager presented a proposal to allow all commissions to meet under limited circumstances. The Committee voted to endorse the City Manager's recommendation.

Effective October 12, 2020, all City boards and commissions may meet once to develop and finalize their work plan for 2021 and to complete any Council referrals directly related to the COVID-19 pandemic response. A second meeting may be held to

complete this work with specific authorization by the City Manager. It is recommended that the meeting(s) occur by the end of February 2021.

Commissions that have been granted permission to meet under Resolution No. 69,331-N.S. may continue to meet pursuant to their existing authorization, and may also meet to develop their 2021 work plan.

Commissions that have not requested meetings pursuant to the Resolution No. 69,331-N.S. may meet pursuant to the limitations listed above.

In response to questions from the Agenda & Rules Committee and the Council, the City Manager polled all departments that support commissions to obtain information on their capacity to support the resumption of regular commission meetings. The information in Attachment 1 shows the information received from the departments and notes each commission's ability to resume a regular, or semi-regular, meeting schedule in 2021.

In summary, there are 24 commissions that have staff resources available to support a regular meeting schedule in 2021. Seven of these 24 commissions have been meeting regularly during the pandemic. There are five commissions that have staff resources available to support a limited meeting schedule in 2021. There are seven commissions that currently do not have staff resources available to start meeting regularly at the beginning of 2021. Some of these seven commissions will have staff resources available later in 2021 to support regular meetings. Please see Attachment 1 for the full list of commissions and their status.

With regards to commission subcommittees, there has been significant discussion regarding the ability of staff to support these meetings in a virtual environment. Under normal circumstances, the secretary's responsibilities regarding subcommittees is limited to posting the agenda and reserving the meeting space (if in a city building). With the necessity to hold the meetings in a virtual environment and be open to the public, it is likely that subcommittee meetings will require significantly more staff resources to schedule, train, manage, and support the work of subcommittees on Zoom or a similar platform. This additional demand on staff resources to support commission subcommittees is not feasible for any commission at this time.

One possible option for subcommittees is to temporarily suspend the requirement for ad hoc subcommittees of city commissions to notice their meetings and require public participation. Ad hoc subcommittees are not legislative bodies under the Brown Act and are not required to post agendas or allow for public participation. These requirements are specific to Berkeley and are adopted by resolution in the Commissioners' Manual. If it is the will of the Council, staff could introduce an item to temporarily suspend these

requirements which will allow subcommittees of all commissions to meet as needed to develop recommendations that will be presented to the full commission.

The limitations on the meetings of certain commissions are due to the need to direct staff resources and the resources of city legislative bodies to the pandemic response. Some of the staff assigned as commission secretaries are engaged in work with the City Emergency Operations Center or have been assigned new duties specifically related to the impacts of the pandemic.

Meeting frequency for boards and commissions will continue to be evaluated on a regular basis by the City Manager and the Health Officer in consultation with Department Heads and the City Council.

Attachments:

1. List of Commissions with Meeting Status
2. Resolution 69,331-N.S.

<u>Boards and Commissions</u>	<u>Meetings Held Under COVID March - Oct</u>	<u>Regular Mtg. Date</u>	<u>Secretary</u>	<u>Dept.</u>	<u>Resume Regular Schedule in January 2021?</u>	<u>Note</u>
Fair Campaign Practices Commission	9	3rd Thur.	Sam Harvey	CA	YES	Have been meeting regularly under COVID Emergency
Open Government Commission	6	3rd Thur.	Sam Harvey	CA	YES	Have been meeting regularly under COVID Emergency
Animal Care Commission	0	3rd Wed.	Amelia Funghi	CM	YES	
Police Review Commission	10	2nd & 4th Wed.	Katherine Lee	CM	YES	Have been meeting regularly under COVID Emergency
Disaster and Fire Safety Commission	4	4th Wed.	Keith May	FES	YES	
Community Health Commission	0	4th Thur.	Roberto Terrones	HHCS	YES	
Homeless Commission	0	2nd Wed.	Josh Jacobs	HHCS	YES	
Homeless Services Panel of Experts	5	1st Wed	Josh Jacobs	HHCS	YES	
Human Welfare & Community Action Commission	0	3rd Wed.	Mary-Claire Katz	HHCS	YES	
Mental Health Commission	1	4th Thur.	Jamie Works-Wright	HHCS	YES	
Sugar-Sweetened Beverage Product Panel of Experts	0	3rd Thur.	Dechen Tsering	HHCS	YES	
Civic Arts Commission	2	4th Wed.	Jennifer Lovvorn	OED	YES	
Elmwood BID Advisory Board	1	Contact Secretary	Kieron Slaughter	OED	YES	
Loan Administration Board	0	Contact Secretary	Kieron Slaughter	OED	YES	
Solano Avenue BID Advisory Board	2	Contact Secretary	Eleanor Hollander	OED	YES	
Design Review Committee	6	3rd Thur.	Anne Burns	PLD	YES	Have been meeting regularly under COVID Emergency
Energy Commission	0	4th Wed.	Billi Romain	PLD	YES	
Landmarks Preservation Commission	6	1st Thur.	Fatema Crane	PLD	YES	Have been meeting regularly under COVID Emergency
Planning Commission	3	1st Wed.	Alene Pearson	PLD	YES	Have been meeting regularly under COVID Emergency
Zoning Adjustments Board	11	2nd & 4th Thur.	Shannon Allen	PLD	YES	Have been meeting regularly under COVID Emergency
Parks and Waterfront Commission	4	2nd Wed.	Roger Miller	PRW	YES	
Commission on Disability	0	1st Wed.	Dominika Bednarska	PW	YES	
Public Works Commission	4	1st Thur.	Joe Enke	PW	YES	
Zero Waste Commission	0	4th Mon.	Heidi Obermeit	PW	YES	
Commission on the Status of Women	0	4th Wed.	Shallon Allen	CM	YES - LIMITED	Secretary has intermittent COVID assignments



<u>Boards and Commissions</u>	<u>Meetings Held Under COVID March - Oct</u>	<u>Regular Mtg. Date</u>	<u>Secretary</u>	<u>Dept.</u>	<u>Resume Regular Schedule in January 2021?</u>	<u>Note</u>
Commission on Aging	0	3rd Wed.	Richard Castrillon	HHCS	REDUCED FREQUENCY	Significant Dept. resources assigned to COVID response
Housing Advisory Commission	0	1st Thur.	Mike Uberti	HHCS	REDUCED FREQUENCY	Significant Dept. resources assigned to COVID response
Measure O Bond Oversight Committee	0	3rd Monday	Amy Davidson	HHCS	REDUCED FREQUENCY	Significant Dept. resources assigned to COVID response
Transportation Commission	2	3rd Thur.	Farid Javandel	PW	REDUCED FREQUENCY	Staff assigned to COVID response
Children, Youth, and Recreation Commission	0	4th Monday	Stephanie Chu	PRW	NO - SEPT 2021	Staff assigned to COVID response
Youth Commission	0	2nd Mon.	Ginsi Bryant	PRW	NO - SEPT 2021	Staff assigned to COVID response
Community Environmental Advisory Commission	0	2nd Thur.	Viviana Garcia	PLD	NO - JUNE 2021	Staff assigned to COVID response
Cannabis Commission	0	1st Thur.	VACANT	PLD	NO - JAN. 2022	Staff vacancy
Peace and Justice Commission	0	1st Mon.	VACANT	CM	NO	Staff vacancy
Commission on Labor	0	3rd Wed., alternate mon	Kristen Lee	HHCS	NO	Staff assigned to COVID response
Personnel Board	1	1st Mon.	La Tanya Bellow	HR	NO	Staff assigned to COVID response

## RESOLUTION NO. 69,331-N.S.

RATIFYING THE RECOMMENDATIONS ISSUED BY THE DIRECTOR OF EMERGENCY SERVICES AND THE PUBLIC HEALTH OFFICER REGARDING MEETINGS OF BERKELEY LEGISLATIVE BODIES IN RESPONSE TO THE COVID-19 (NOVEL CORONAVIRUS) PANDEMIC

WHEREAS, on March 3, 2020, pursuant to Berkeley Municipal Code section 2.88.040, the City Manager, serving as the Director of Emergency Services, proclaimed the existence of a local emergency; and

WHEREAS, the proclamation was warranted by virtue of the extreme peril to the safety of persons and property in the City caused by pandemic in the form of the global spread of a severe acute respiratory illness caused by a novel (new) coronavirus ("COVID-19"), including confirmed cases in California and the San Francisco Bay Area, and presumed cases in Alameda County prompting the County to declare a local health emergency; and

WHEREAS, the proclamation of the Director of Emergency Services was ratified by the City Council on March 10, 2020; and

WHEREAS, the continued spread of COVID-19 and increase in community transmission cases in surrounding counties warrant further measures be taken by the City to protect the community; and

WHEREAS, the Public Health Officer has issued guidelines for limiting mass gatherings; and

WHEREAS, certain limitations on the meetings of legislative bodies in the City of Berkeley is warranted; and

WHEREAS, the continued essential functions of the City and certain legislative bodies must continue for time-sensitive, legally mandated actions; and

WHEREAS, the Director of Emergency Services presented recommendations to the Agenda & Rules Committee on March 12, 2020 regarding the meetings of legislative bodies; and

WHEREAS, the Agenda & Rules Committee recommended that said recommendations be forwarded to the City Council for acknowledgement and ratification.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following recommendations issued by the Director of Emergency Services and the Public Health Officer regarding limitations and practices for legislative bodies of the City of Berkeley are hereby acknowledged and ratified:

Section 1. Boards and Commissions

Commissions listed below may continue to meet only if they have time-sensitive, legally mandated business to complete, as determined by the Director of Emergency Services. The City may consider teleconferencing for these commissions, if feasible.

Design Review Committee  
Fair Campaign Practices Commission  
Housing Advisory Commission (limited to quasi-judicial activities)  
Joint Subcommittee on the Implementation of State Housing Laws  
Landmarks Preservation Commission  
Open Government Commission  
Personnel Board  
Planning Commission  
Police Review Commission  
Zoning Adjustments Board

Commissions in Category B shall not meet for a period of 60 days. This will be re-evaluated at the Agenda & Rules Committee meeting on April 13, 2020. A Commission in Category B may convene a meeting if it has time-sensitive, legally-mandated business to complete, as determined by the Director of Emergency Services.

Category B

Animal Care Commission  
Cannabis Commission  
Civic Arts Commission  
Children, Youth, and Recreation Commission  
Commission on Aging  
Commission on Disability  
Commission on Labor  
Commission on the Status of Women  
Community Environmental Advisory Commission  
Community Health Commission  
Disaster and Fire Safety Commission  
Elmwood Business Improvement District Advisory Board  
Energy Commission  
Homeless Commission  
Homeless Services Panel of Experts  
Housing Advisory Commission  
Human Welfare and Community Action Commission  
Measure O Bond Oversight Committee  
Mental Health Commission  
Parks and Waterfront Commission  
Peace and Justice Commission  
Public Works Commission  
Solano Avenue Business Improvement District Advisory Board  
Sugar-Sweetened Beverage Product Panel of Experts

Transportation Commission  
Youth Commission  
Zero Waste Commission  
Loan Administration Board

Section 2. City Council Policy Committees

The Agenda & Rules Committee and the Budget & Finance Committee may continue to meet to fulfill their legislative and advisory responsibilities. All other Policy Committees (Facilities, Infrastructure, Transportation, Environment & Sustainability, Public Safety, Land Use, Housing & Economic Development, and Health, Life Enrichment Equity & Community) are suspended indefinitely. The 120-day deadline to consider an item will be tolled during the suspension of business.

Section 3. City Council


For City Council meetings, the City will continue to advise and implement social distancing by limiting the capacity of the Council Chambers, providing an overflow room, attempting to limit the duration of the meeting, only conducting essential business, and limiting or suspending ceremonial items. The City will adhere to and implement the provisions of the Governor's Executive Order #N-25-20 related to the Brown Act and the utilization of technology to facilitate participation.

The foregoing Resolution was adopted by the Berkeley City Council on March 17, 2020 by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Harrison, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: None.

  
\_\_\_\_\_  
Jesse Arreguin, Mayor

Attest:   
\_\_\_\_\_  
Mark Numalville, City Clerk





Office of the City Manager

October 22, 2020

To: Berkeley Boards and Commissions

From: *DWR* Dee Williams-Ridley, City Manager

Subject: Commission Meetings During COVID-19 Emergency

This memo serves to provide a summary and update of the status of meetings of Berkeley Boards and Commissions during the COVID-19 emergency declaration.

On March 10, 2020, the City Council ratified the proclamation of the Director of Emergency Services for a state of local emergency related to the COVID-19 pandemic. The emergency proclamation has been renewed twice by the Council and remains in effect.

On March 17, 2020, the City Council adopted Resolution No. 69,331-N.S. which placed limitations of the meetings of City legislative bodies, including all boards and commissions. The resolution allows for commissions to meet to conduct time-sensitive, legally mandated business with the authorization of the City Manager. Since that time, several commissions have obtained this approval and held meetings; many other commissions have not met at all since March.

The City Manager has periodically reviewed the status of commission meetings with the City Council Agenda & Rules Committee. Recently, at the October 12, 2020, Agenda & Rules Committee meeting, the City Manager presented a proposal to allow all commissions to meet under limited circumstances. The Committee voted to endorse the City Manager's recommendation.

Effective October 12, 2020, all City boards and commissions may meet once to develop and finalize their work plan for 2021 and to complete any Council referrals directly related to the COVID-19 pandemic response. A second meeting may be held to complete this work with specific authorization by the City Manager. It is recommended that the meeting(s) occur by the end of February 2021.

Commissions that have been granted permission to meet under Resolution No. 69,331-N.S. may continue to meet pursuant to their existing authorization, and may also meet to develop their 2021 work plan.

Commissions that have not requested meetings pursuant to the Resolution No. 69,331-N.S. may meet pursuant to the limitations listed above.

Page 2  
October 22, 2020  
Re: Commission Meetings During COVID-19 Emergency

To assist commissions with the development of their work plan and to provide the City Council with a consistent framework to review the work plans, the City Manager has developed the following items to consider in developing the work plan that is submitted to the City Council agenda.

Prompts for Commissions to use in work plan:

- What commission items for 2021 have a direct nexus with the COVID-19 response or are the result of a City Council referral pertaining to COVID-19?
- What commission items for 2021 are required for statutory reasons?
- What commission items for 2021 are required for budgetary or fund allocation reasons?
- What commission items for 2021 support council-adopted or voter-adopted mission critical projects or programs?
- What are the anticipated staff demands (above and beyond baseline) for analysis, data, etc., to support commission work in 2021 (baseline duties = posting agendas, creating packets, attend meetings, minutes, etc.)?

The limitations on commission meetings are due to the need to direct staff resources and the resources of city legislative bodies to the pandemic response. Many of the staff assigned as commission secretaries are engaged in work with the City Emergency Operations Center or have been assigned new specific duties related to the impacts of the pandemic.

Meeting frequency for boards and commissions will continue to be evaluated on a regular basis by the City Manager in consultation with Department Heads and the City Council. More frequent meetings by commissions will be permitted as the conditions under COVID-19 dictate.

Thank you for your service on our boards and commissions. The City values the work of our commissions and we appreciate your partnership and understanding as we address this pandemic as a resilient and vibrant community.

Attachments:

1. Resolution 69,331-N.S.
2. List of Commissions with Meeting Data

cc: Mayor and City Councilmembers  
Senior Leadership Team

RESOLUTION NO. 69,331-N.S.

RATIFYING THE RECOMMENDATIONS ISSUED BY THE DIRECTOR OF EMERGENCY SERVICES AND THE PUBLIC HEALTH OFFICER REGARDING MEETINGS OF BERKELEY LEGISLATIVE BODIES IN RESPONSE TO THE COVID-19 (NOVEL CORONAVIRUS) PANDEMIC

WHEREAS, on March 3, 2020, pursuant to Berkeley Municipal Code section 2.88.040, the City Manager, serving as the Director of Emergency Services, proclaimed the existence of a local emergency; and

WHEREAS, the proclamation was warranted by virtue of the extreme peril to the safety of persons and property in the City caused by pandemic in the form of the global spread of a severe acute respiratory illness caused by a novel (new) coronavirus ("COVID-19"), including confirmed cases in California and the San Francisco Bay Area, and presumed cases in Alameda County prompting the County to declare a local health emergency; and

WHEREAS, the proclamation of the Director of Emergency Services was ratified by the City Council on March 10, 2020; and

WHEREAS, the continued spread of COVID-19 and increase in community transmission cases in surrounding counties warrant further measures be taken by the City to protect the community; and

WHEREAS, the Public Health Officer has issued guidelines for limiting mass gatherings; and

WHEREAS, certain limitations on the meetings of legislative bodies in the City of Berkeley is warranted; and

WHEREAS, the continued essential functions of the City and certain legislative bodies must continue for time-sensitive, legally mandated actions; and

WHEREAS, the Director of Emergency Services presented recommendations to the Agenda & Rules Committee on March 12, 2020 regarding the meetings of legislative bodies; and

WHEREAS, the Agenda & Rules Committee recommended that said recommendations be forwarded to the City Council for acknowledgement and ratification.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following recommendations issued by the Director of Emergency Services and the Public Health Officer regarding limitations and practices for legislative bodies of the City of Berkeley are hereby acknowledged and ratified:

Section 1. Boards and Commissions

Commissions listed below may continue to meet only if they have time-sensitive, legally mandated business to complete, as determined by the Director of Emergency Services. The City may consider teleconferencing for these commissions, if feasible.

Design Review Committee  
Fair Campaign Practices Commission  
Housing Advisory Commission (limited to quasi-judicial activities)  
Joint Subcommittee on the Implementation of State Housing Laws  
Landmarks Preservation Commission  
Open Government Commission  
Personnel Board  
Planning Commission  
Police Review Commission  
Zoning Adjustments Board

Commissions in Category B shall not meet for a period of 60 days. This will be re-evaluated at the Agenda & Rules Committee meeting on April 13, 2020. A Commission in Category B may convene a meeting if it has time-sensitive, legally-mandated business to complete, as determined by the Director of Emergency Services.

Category B

Animal Care Commission  
Cannabis Commission  
Civic Arts Commission  
Children, Youth, and Recreation Commission  
Commission on Aging  
Commission on Disability  
Commission on Labor  
Commission on the Status of Women  
Community Environmental Advisory Commission  
Community Health Commission  
Disaster and Fire Safety Commission  
Elmwood Business Improvement District Advisory Board  
Energy Commission  
Homeless Commission  
Homeless Services Panel of Experts  
Housing Advisory Commission  
Human Welfare and Community Action Commission  
Measure O Bond Oversight Committee  
Mental Health Commission  
Parks and Waterfront Commission  
Peace and Justice Commission  
Public Works Commission  
Solano Avenue Business Improvement District Advisory Board  
Sugar-Sweetened Beverage Product Panel of Experts



Transportation Commission  
Youth Commission  
Zero Waste Commission  
Loan Administration Board

Section 2. City Council Policy Committees

The Agenda & Rules Committee and the Budget & Finance Committee may continue to meet to fulfill their legislative and advisory responsibilities. All other Policy Committees (Facilities, Infrastructure, Transportation, Environment & Sustainability, Public Safety, Land Use, Housing & Economic Development, and Health, Life Enrichment Equity & Community) are suspended indefinitely. The 120-day deadline to consider an item will be tolled during the suspension of business.

Section 3. City Council


For City Council meetings, the City will continue to advise and implement social distancing by limiting the capacity of the Council Chambers, providing an overflow room, attempting to limit the duration of the meeting, only conducting essential business, and limiting or suspending ceremonial items. The City will adhere to and implement the provisions of the Governor's Executive Order #N-25-20 related to the Brown Act and the utilization of technology to facilitate participation.

The foregoing Resolution was adopted by the Berkeley City Council on March 17, 2020 by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Harrison, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: None.

  
\_\_\_\_\_  
Jesse Arreguin, Mayor

Attest:   
\_\_\_\_\_  
Mark Numalville, City Clerk





## Hybrid Meeting Policies for City Council Meetings Revised May 2022

The policy below covers the conduct of hybrid City Council meetings (in-person and remote participation) held in accordance with the Government Code and any relevant Executive Orders or State declared emergencies. These administrative policies supplement the City Council Rules of Procedure and Order.

City Council policy committees and city boards and commissions will continue to meet in a virtual-only setting until the City Council makes the required findings under state law that in-person meetings may resume.

### I. Vaccination Status

Prior to entry, all in-person attendees at the meeting location must present valid proof of “up-to-date” COVID-19 vaccination or a verified negative test conducted within one day prior for an antigen test or two days prior for a PCR test. An attendee is “up-to-date” with their vaccinations if:

- It has been less than 2 months after receiving the initial dose of their Johnson & Johnson Vaccine.
- It has been less than 5 months after receiving the second dose of their two-dose Pfizer or Moderna initial series.
- The attendee has received a booster.

#### *Pre-entry negative testing*

*Definition: Testing must be conducted within one day for an antigen test and within two days for a PCR test prior to entry into an event. Results of the test must be available prior to entry into the facility or venue. Children under 2 years of age are exempt from the testing requirement, consistent with [CDC guidance](#).*

*Verification: See current [CDPH Updated Testing Guidance](#) and [CDPH Over-the-Counter Testing Guidance](#) for acceptable methods of proof of negative COVID-19 test result and information on Over-the-Counter tests. Note: Self-attestation may not be used to verify negative test result, even when using Over-the-Counter (or at home tests) for entry into Indoor Mega Events.*

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Beyond-Blueprint-Framework.aspx>

### II. Health Status Precautions

If a person who desires to attend the meeting in-person is feeling sick, including but not limited to, cough, shortness of breath or difficulty breathing,



fever or chills, muscle or body aches, vomiting or diarrhea, or new loss of taste or smell, they will be advised to attend the meeting remotely.

If an in-person attendee has been in close contact, as defined below, with a person who has tested positive for COVID-19 in the past five days, they are advised to attend the meeting remotely.

Close contact is defined as being within approximately 6 feet for greater than 15 minutes over 24 hours within 2 days before symptoms appear (or before a positive test for asymptomatic individuals); or having contact with COVID-19 droplets (e.g., being coughed on while not wearing recommended personal protective equipment).

A voluntary sign in sheet will be available at the meeting entry for in-person attendees. This will assist with contact tracing in case of COVID-19 contact resulting from the meeting.

### **III. Face Coverings/Mask**

Face coverings or masks that cover both the nose and mouth are required for all attendees at an in-person City Council meeting. Face coverings will be provided by the City and available for attendees to use at the meeting. Members of the City Council, city staff, and the public are required to wear a mask at all times, except when speaking publicly from the dais or at the public comment podium.

If an attendee at a Council meeting is not wearing a mask, a mask will be offered to them to use. If the attendee refuses to wear a mask, a recess will be called in order to provide guidance to the attendee on the requirement and their options for attending remotely and in-person.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

### **IV. Physical Distancing**

Currently, there are no physical distancing requirements in place by the State of California or the Local Health Officer for an indoor event similar to a Council meeting.

Audience seating capacity will be at regular allowable levels per the Fire Code. The relevant capacity limits will be posted at the meeting location. However, all attendees are requested to be respectful of the personal space of other attendees. An area of the public seating area will be designated as “distanced seating” to accommodate persons with a medical status that

requires distancing and for those that choose to distance for personal health reasons.

Conference room capacity is limited to 15 persons.

City staff will present remotely in order to reduce the number of persons in the Boardroom and back conference area.

Distancing is encouraged for the dais and partitions will be used as needed for the seating positions on the dais.

**V. Protocols for Remote Participation by Mayor or Councilmembers**

Upon the repeal of the state-declared emergency, all standard Brown Act requirements will be in effect for members of the Council participating remotely. For the Mayor and Councilmembers participating remotely, the remote location must be accessible to the public and the public must be able to participate and give public comment from the remote location.

- A Councilmember at a remote location will follow the same policies as the Boardroom with regards to vaccination status and testing requirements, health status precautions, and masking requirements.
- A Councilmember at a remote location may impose reasonable capacity limits at their location.

**VI. Hand Washing/Sanitizing**

There are hand sanitizing stations placed at the entry and strategically throughout the Boardroom. The bathrooms have soap and water for handwashing.

**VII. Air Flow/Circulation/Sanitizing**

Berkeley Unified Facilities Staff performs a vigorous cleaning process after each use of the Boardroom. BUSD upgraded all HVAC filtration to MERV13, and with the inclusion of Needlepoint BiPolar Ionization, is achieving a rating that is closer to MERV18. Additionally, BUSD installed indoor air quality monitoring sensors in all facilities that constantly monitor Volatile Organic Compounds, CO<sub>2</sub>, Relative Humidity, and Temperature. The sensors and alarms allow BUSD to ensure that all systems are working properly and as designed. If a sensor trips an alarm, a work order request is generated immediately to ensure the system is repaired expeditiously.

**VIII. Overflow in Gymnasium**

An overflow indoor seating area will be available at the West Campus Gymnasium if staff determines that attendance is likely to exceed the capacity of the Boardroom. The capacity of the gymnasium is 200 persons. The

overflow area will have a broadcast of the meeting in progress to allow participants to follow the proceedings and move to the Boardroom at the appropriate time to provide public comment if desired. This area will be monitored by the BUSD security personnel.

**IX. Food Provided for Elected Officials and Designated Staff**

- No buffet dinner provided. Box lunches only. Maximum of 16 (Mayor & Council [9], City Manager, City Attorney, City Clerk [2], Deputy City Managers [2], BCM Staff)
- Individually packaged snacks will be provided on a common table and drinks will be available in the refrigerator.

**X. In-Meeting Procedures**

**Revised and Supplemental Materials**

All revised and supplemental materials for items on the agenda submitted after 12:00pm (noon) the day prior to the meeting must be submitted to the City Clerk in both paper AND electronic versions.

- Paper: 42 copies delivered to the Boardroom (distributed per normal procedure)
- Electronic: e-mailed to the Agenda Inbox (posted online)

**Communications from the Public**

The public may submit communications in hard copy at the Boardroom or electronically to [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info). To ensure that both in-person and remote Councilmembers receive the communication, the public should submit 10 copies at the Boardroom and send the electronic version to the e-mail listed above.

## Hybrid Meeting Policies for City Council Meetings Revised May 2022

The policy below covers the conduct of hybrid City Council meetings (in-person and remote participation) held in accordance with the Government Code and any relevant Executive Orders or State declared emergencies.

City Council policy committees and city boards and commissions will continue to meet in a virtual-only setting until the City Council makes the required findings under state law that in-person meetings may resume.

### I. Vaccination Status

Prior to entry, all in-person attendees at the meeting location must present valid proof of “up-to-date” COVID-19 vaccination or a verified negative test conducted within one day prior for an antigen test or two days prior for a PCR test. An attendee is “up-to-date” with their vaccinations if:

- It has been less than 2 months after receiving the initial dose of their Johnson & Johnson Vaccine.
- It has been less than 5 months after receiving the second dose of their two-dose Pfizer or Moderna initial series.
- The attendee has received a booster.

#### *Pre-entry negative testing*

*Definition: Testing must be conducted within one day for an antigen test and within two days for a PCR test prior to entry into an event. Results of the test must be available prior to entry into the facility or venue. Children under 2 years of age are exempt from the testing requirement, consistent with [CDC guidance](#).*

*Verification: See current [CDPH Updated Testing Guidance](#) and [CDPH Over-the-Counter Testing Guidance](#) for acceptable methods of proof of negative COVID-19 test result and information on Over-the-Counter tests. Note: Self-attestation may not be used to verify negative test result, even when using Over-the-Counter (or at home tests) for entry into Indoor Mega Events.*

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Beyond-Blueprint-Framework.aspx>

### II. Health Status Precautions

If a person who desires to attend the meeting in-person is feeling sick, including but not limited to, cough, shortness of breath or difficulty breathing,



fever or chills, muscle or body aches, vomiting or diarrhea, or new loss of taste or smell, they will be advised to attend the meeting remotely.

If an in-person attendee has been in close contact, as defined below, with a person who has tested positive for COVID-19 in the past five days, they will be advised to attend the meeting remotely.

Close contact is defined as being within approximately 6 feet for greater than 15 minutes over 24 hours within 2 days before symptoms appear (or before a positive test for asymptomatic individuals); or having contact with COVID-19 droplets (e.g., being coughed on while not wearing recommended personal protective equipment).

A voluntary sign in sheet will be available at the meeting entry for in-person attendees. This will assist with contact tracing in case of COVID-19 contact resulting from the meeting.

### **III. Face Coverings/Mask**

Face coverings or masks that cover both the nose and mouth are required for all attendees at an in-person City Council meeting. Face coverings will be provided by the City and available for attendees to use at the meeting. Members of the City Council, city staff, and the public are required to wear a mask at all times, except when speaking publicly from the dais or at the public comment podium.

If an attendee at a Council meeting is not wearing a mask, a mask will be offered to them to use. If the attendee refuses to wear a mask, a recess will be called in order to provide guidance to the attendee on the requirement and their options for attending remotely and in-person.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

### **IV. Physical Distancing**

Currently, there are no physical distancing requirements in place by the State of California or the Local Health Officer for an indoor event similar to a Council meeting.

Audience seating capacity will be at regular allowable levels per the Fire Code. However, all attendees are requested to be respectful of the personal space of other attendees. An area of the public seating area will be designated as

“distanced seating” to accommodate persons with a medical status that requires distancing and for those that choose to distance for personal health reasons.

Conference room capacity is limited to 15 persons. The relevant capacity limits will be posted at the meeting location.

City staff will present remotely in order to reduce the number of persons in the Boardroom and back conference area.

Distancing is encouraged for the dais and partitions will be used as needed for the seating positions on the dais.

**V. Protocols for Remote Participation by Mayor or Councilmembers**

Upon the repeal of the state-declared emergency, all standard Brown Act requirements will be in effect for members of the Council participating remotely. For the Mayor and Councilmembers participating remotely, the remote location must be accessible to the public and the public must be able to participate and give public comment from the remote location.

- A Councilmember at a remote location will follow the same policies as the Boardroom with regards to vaccination status and testing requirements, health status precautions, and masking requirements.
- A Councilmember at a remote location may impose reasonable capacity limits at their location.

**VI. Hand Washing/Sanitizing**

There are hand sanitizing stations placed at the entry and strategically throughout the Boardroom. The bathrooms have soap and water for handwashing.

**VII. Air Flow/Circulation/Sanitizing**

Berkeley Unified Facilities Staff performs a vigorous cleaning process after each use of the Boardroom. BUSD upgraded all HVAC filtration to MERV13, and with the inclusion of Needlepoint BiPolar Ionization, is achieving a rating that is closer to MERV18. Additionally, BUSD installed indoor air quality monitoring sensors in all facilities that constantly monitor Volatile Organic Compounds, CO<sub>2</sub>, Relative Humidity, and Temperature. The sensors and alarms allow BUSD to ensure that all systems are working properly and as designed. If a sensor trips an alarm, a work order request is generated immediately to ensure the system is repaired expeditiously.

**VIII. Overflow in Gymnasium**

An overflow indoor seating area will be available at the West Campus Gymnasium for every meeting. The capacity of the gymnasium is 200 persons. The overflow area will have a broadcast of the meeting in progress to allow participants to follow the proceedings and move to the Boardroom at the appropriate time to provide public comment if desired. This area will be monitored by the BUSD security personnel.

**IX. Food Provided for Elected Officials and Designated Staff**

- No buffet dinner provided. Box lunches only. Maximum of 16 (Mayor & Council [9], City Manager, City Attorney, City Clerk [2], Deputy City Managers [2], BCM Staff)
- Individually packaged snacks will be provided on a common table and drinks will be available in the refrigerator.

**X. In-Meeting Procedures**

**Revised and Supplemental Materials from Staff and Council**

All revised and supplemental materials for items on the agenda submitted after 12:00pm (noon) the day prior to the meeting must be submitted to the City Clerk in both paper AND electronic versions.

- Paper: 42 copies delivered to the Boardroom (distributed per normal procedure)
- Electronic: e-mailed to the Agenda Inbox (posted online)

**Communications from the Public**

A communication submitted by the public during the City Council meeting may be shared as follows.

- Paper: If requested by the Presiding Officer, the document can be displayed in the Boardroom and screen shared on the Zoom.
- Electronic: If requested by the Presiding Officer, the document can be displayed in the Boardroom and screen shared on the Zoom.



Office of the City Attorney

Date: March 3, 2021  
To: Agenda and Rules Committee  
From: Office of the City Attorney  
Re: Continuing Use of Teleconferencing for Public Meetings

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Assembly Bill 361 amended the Ralph M. Brown act to authorize the City to continue to hold teleconferenced meetings during a Governor-declared state of emergency without complying with a number of requirements ordinarily applicable to teleconferencing. For example, under AB 361, the City may hold teleconferenced meetings without:

1. Posting agendas at all teleconference locations
2. Listing each teleconference location in the notice and agenda for the meeting
3. Allowing the public to access and provide public comment from each teleconference location
4. Requiring a quorum of the body to teleconference from locations within City boundaries

(Cal. Gov. Code § 549539(b)(3) & (e)(1).)

Under AB 361, the City can continue to hold teleconferenced meetings without adhering to the above practices as long as the state of emergency continues and either (1) “state or local officials have imposed or recommended measures to promote social distancing,” or (2) the City determines that “meeting in person would present imminent risks to the health or safety of attendees.” (Cal. Gov. Code § 54953(e)(1).)

Every thirty days, the City must review and determine that either of the above conditions continues to exist. (Cal. Gov. Code § 54953(e)(3).) Since September 28, 2021, the City Council has passed a recurring resolution every thirty days determining that both of the above conditions continue to exist and therefore teleconferencing under AB 361 is warranted. The Council may continue to renew the teleconferencing resolution every thirty days, and thereby continue to hold teleconferenced meetings under the procedures it has used throughout the pandemic, until the state of emergency ends. (See Cal. Gov. Code § 54953(e)(3)(A).)

The state of emergency for COVID-19 has been in effect since it was issued by the Governor on March 4, 2020. There is no clear end date for the state of emergency at this time. As recently as February 17, 2022, the Governor stated that, for now, the state will continue to operate under the state of emergency, but that his goal is “to unwind the state



March 2, 2022

Page 2 Re: Continuing Use of Teleconferencing for Public Meetings

of emergency as soon as possible.”<sup>1</sup> Additionally, per a February 25, 2022 *Los Angeles Times* article, Newsom administration officials have indicated that the state of emergency is necessary for the State’s continued response to the pandemic, including measures such as waiving licensing requirements for healthcare workers and clinics involved in vaccination and testing.<sup>2</sup>

On March 15, 2022, the California State Senate Governmental Organization Committee will consider a resolution (SCR 5) ending the state of emergency.<sup>3</sup> Some reporting suggests that the Republican-sponsored resolution is unlikely to pass. Notably, Senate Leader Toni Atkins’ statement on the Senate’s consideration of SCR 5 articulates strong support for the state of emergency.<sup>4</sup>

The Governor has issued an executive order (N-1-22) which extends to March 31, 2022 sunset dates for teleconferencing for state legislative bodies (under the Bagley-Keene Open Meeting Act) and student body organizations (under the Gloria Romero Open Meetings Act).<sup>5</sup> Executive Order N-1-22 does not affect the Brown Act teleconferencing provisions of AB 361, which have a sunset date of January 1, 2024. Therefore, until January 1, 2024, the City may utilize the teleconferencing provisions under AB 361 as long as the state of emergency remains in effect.

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<sup>1</sup> *New York Times*, California Lays Out a Plan to Treat the Coronavirus as a Manageable Risk Not an Emergency (Feb. 17, 2022), <https://www.nytimes.com/2022/02/18/us/california-lays-out-a-plan-to-treat-the-coronavirus-as-a-manageable-risk-not-an-emergency.html>.

<sup>2</sup> *Los Angeles Times*, Newsom scales back some special pandemic rules, but not California’s state of emergency (Feb. 25, 2022), <https://www.latimes.com/california/story/2022-02-25/newsom-scales-back-special-pandemic-rules-but-not-california-state-of-emergency>.

<sup>3</sup> Text of SCR 5 available at: [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=202120220SCR5](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SCR5).

<sup>4</sup> Press release: Senator Toni G. Atkins, Senate Leader Atkins Issues Statement on SCR 5 and the State of Emergency (Feb. 17, 2022), <https://sd39.senate.ca.gov/news/20220217-senate-leader-atkins-issues-statement-scr-5-and-state-emergency>.

<sup>5</sup> Text of Executive Order N-1-22 available at: <https://www.gov.ca.gov/wp-content/uploads/2022/01/1.5.22-Bagley-Keene-waiver-EO.pdf>.

## Hybrid Meeting Policies for City Council Meetings Revised April 2022

The policy below covers the conduct of hybrid City Council meetings (in-person and remote participation) held in accordance with the Government Code and any relevant Executive Orders or State declared emergencies.

### I. Vaccination Status

Prior to entry, all in-person attendees at the meeting location must present valid proof of “up-to-date” COVID-19 vaccination or a verified negative test conducted within one day prior for an antigen test or two days prior for a PCR test. An attendee is “up-to-date” with their vaccinations if:

- It has been less than 2 months after receiving the initial dose of their Johnson & Johnson Vaccine.
- It has been less than 5 months after receiving the second dose of their two-dose Pfizer or Moderna initial series.
- The attendee has received a booster.

#### *Pre-entry negative testing*

*Definition: Testing must be conducted within one day for an antigen test and within two days for a PCR test prior to entry into an event. Results of the test must be available prior to entry into the facility or venue. Children under 2 years of age are exempt from the testing requirement, consistent with [CDC guidance](#).*

*Verification: See current [CDPH Updated Testing Guidance](#) and [CDPH Over-the-Counter Testing Guidance](#) for acceptable methods of proof of negative COVID-19 test result and information on Over-the-Counter tests. Note: Self-attestation may not be used to verify negative test result, even when using Over-the-Counter (or at home tests) for entry into Indoor Mega Events.*

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Beyond-Blueprint-Framework.aspx>

### II. Health Status Precautions

If a person who desires to attend the meeting in-person is feeling sick, including but not limited to, cough, shortness of breath or difficulty breathing, fever or chills, muscle or body aches, vomiting or diarrhea, or new loss of taste or smell they will be advised to attend the meeting remotely.

If an in-person attendee has been in close contact, as defined below, with a person who has tested positive for COVID-19 in the past five days, they will be advised to attend the meeting remotely.

Close contact is defined as being within approximately 6 feet for greater than 15 minutes over 24 hours within 2 days before symptoms appear (or before a positive test for asymptomatic individuals); or having contact with COVID-19 droplets (e.g., being coughed on while not wearing recommended personal protective equipment relative to employees' duties and responsibilities).

A voluntary sign in sheet will be available at the meeting entry for in-person attendees. This will assist with contact tracing in case of COVID contact resulting from the meeting.

### **III. Face Coverings/Mask**

Following the State of California and Local Health Officer Guidance, face coverings or masks that cover both the nose and mouth are required for all attendees at an in-person City Council meeting. Face coverings will be provided by the City and available for attendees to use at the meeting. Members of the City Council, city staff, and the public are required to wear a mask at all times, including when speaking publicly at the meeting.

If an attendee at a Council Meeting is not wearing a mask, a mask will be offered to them to use. If the attendee refuses to wear a mask, a recess will be called in order to provide guidance to the attendee on the requirement and their options for attending remotely and in-person.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

### **IV. Physical Distancing**

Currently, there are no physical distancing requirements in place by the State of California or the Local Health Officer for an indoor event similar to a council meeting.

Audience seating capacity will be at regular allowable levels per the Fire Code. However, all attendees are requested to be respectful of the personal space of other attendees. An area of the public seating area will be designated as "distanced seating" to accommodate persons with a medical status that requires distancing and for those that choose to distance for personal health reasons.

Conference room capacity is limited to 15 persons. The relevant capacity limits will be posted at the meeting location.

City staff will present remotely in order to reduce the number of persons in the Boardroom and back conference area.

**V. Protocols for Remote Participation by Mayor or Councilmembers**

Upon the repeal of the state-declared emergency, all standard Brown Act requirements will be in effect for members of the Council participating remotely. For the Mayor and Councilmembers participating remotely, the remote location must be accessible to the public and the public must be able to participate and give public comment from the remote location.

- A Councilmember at a remote location will follow the same policies as the Boardroom with regards to vaccination status and testing requirements, health status precautions, and masking requirements.
- A Councilmember at a remote location may impose reasonable capacity limits at their location.

**VI. Hand Washing/Sanitizing**

There are hand sanitizing stations placed at the entry and strategically throughout the Boardroom. The bathrooms have soap and water for handwashing.

**VII. Air Flow/Circulation/Sanitizing**

BUSD Facilities Staff performs a vigorous cleaning process after each use of the Boardroom. BUSD upgraded all HVAC filtration to MERV13, and with the inclusion of Needlepoint BiPolar Ionization, is achieving a rating that is closer to MERV18. Additionally, BUSD installed indoor air quality monitoring sensors in all facilities that constantly monitor VOC's CO2, Relative Humidity, and Temperature. The sensors and alarms allow BUSD to ensure that all systems are working properly and as designed. If a sensor trips an alarm, a work order request is generated immediately to ensure the system is repaired expeditiously.

**VIII. Overflow in Gymnasium**

An overflow indoor seating area will be available at the West Campus Gymnasium for every meeting. The capacity of the gymnasium is 200 persons. The overflow area will have a broadcast of the meeting in progress



to allow participants to follow the proceedings and move to the Boardroom at the appropriate time to provide public comment if desired. The broadcast audio and video will be provided to attendees in the overflow area. This area will be monitored by the BUSD security personnel.

**IX. Food Provided for Elected Officials and Designated Staff**

- No buffet dinner provided. Box lunches only. Maximum of 16 (Mayor & Council [9], City Manager, City Attorney, City Clerk [2], Deputy City Managers [2], BCM Staff)
- Individually packaged snacks will be provided on a common table and drinks will be available in the refrigerator.

## Hybrid Meeting Procedures for BUSD Boardroom (~~November 2021~~February 2022)

The policy below covers the conduct of hybrid City Council meetings (in-person and remote participation) held in accordance with the Government Code and any relevant Executive Orders or State declared emergencies.

### I. **Vaccination Status**

Prior to entry, all in-person attendees at the meeting location must present valid proof of “up-to-date” COVID-19 vaccination or a verified negative test conducted within one day prior for an antigen test or two days prior for a PCR test. An attendee is “up-to-date” with their vaccinations if:

- It has been less than 2 months after receiving the initial dose of their Johnson & Johnson Vaccine.
- It has been less than 5 months after receiving the second dose of their two-dose Pfizer or Moderna initial series.
- The attendee has received a booster.

~~No requirement for vaccination to attend a Council meeting. Staff and Officials will not inquire about vaccination status for any attendees.~~

### II. **Health ~~Check~~Status Precautions**

If an in-person attendee is feeling sick, including but not limited to, cough, shortness of breath or difficulty breathing, fever or chills, muscle or body aches, vomiting or diarrhea, or new loss of taste or smell they will be advised to attend the meeting remotely.

If an in-person attendee has been in close contact, as defined below, with a person who has tested positive for COVID-19 in the past five days, they will be advised to attend the meeting remotely.

Close contact is defined as being within approximately 6 feet for greater than 15 minutes over 24 hours within 2 days before symptoms appear (or before a positive test for asymptomatic individuals); or having contact with COVID-19 droplets (e.g., being coughed on while not wearing recommended personal protective equipment relative to employees’ duties and responsibilities).

~~A walk-up temperature check device will be located at the entry to the in-person meeting location. All persons entering the in-person meeting location are required to perform a temperature check upon entering. A handheld non-touch thermometer will be available for individuals with disabilities. Private security personnel will be at the entry location for the duration of the meeting to monitor the temperature check station and mask requirement.~~

~~Attendees showing a fever will be directed to attend the meeting via remote participation (Zoom). If an attendee refuses to have their temperature~~

## Hybrid Meeting Procedures for BUSD Boardroom (~~November 2021~~February 2022)

~~checked, guidance will be provided to the attendee on the requirement and their options for attending remotely and in-person.~~

~~Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.~~

### III. Face Coverings/Mask

Following the State of California and Local Health Officer Guidance, face coverings or masks that cover both the nose and mouth are required for all attendees at an in-person City Council meeting. Face coverings will be provided by the City and available for attendees to use at the meeting.

If an attendee at a Council Meeting is not wearing a mask, a mask will be offered to them to use. If the attendee refuses to wear a mask, a recess will be called in order to provide guidance to the attendee on the requirement and their options for attending remotely and in-person.

Members of the City Council, city staff, and the public are required to wear a mask at all times, including when speaking publicly at the meeting.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

### IV. Physical Distancing

Currently, there are no physical distancing requirements in place by the State of California or the Local Health Officer for an indoor event similar to a council meeting.

Audience seating capacity will be at regular allowable levels per the Fire Code. However, all attendees are requested to be respectful of the personal space of other attendees. An area of the public seating area will be designated as "distanced seating" to accommodate persons with a medical status that requires distancing and for those that choose to distance for personal health reasons.

~~Relevant CalOSHA requirements for the workplace will be followed as is feasible. Capacity in the audience seating area (including members of the media and staff) at the BUSD Boardroom is limited to 40 persons due to~~

## Hybrid Meeting Procedures for BUSD Boardroom (~~November 2021~~February 2022)

~~uncertainty about vaccination status of attendees and limiting attendance at indoor events to ensure the comfort and safety of attendees.~~ Conference room capacity is limited to ~~42-15~~ persons. The relevant capacity limits will be posted on the city council agenda and at the meeting location.

City staff will present remotely in order to reduce the number of persons in the Boardroom and back conference area.

### V. **Protocols for Remote Participation by Mayor or Councilmembers**

Upon the repeal of the state-declared emergency, all standard Brown Act requirements will be in effect for members of the Council participating remotely. For the Mayor and Councilmembers participating remotely, the remote location must be accessible to the public and the public must be able to participate and give public comment from the remote location.

- A Councilmember at a remote location will follow the same policies as the Boardroom with regards to vaccination status and testing requirements, health status precautions, temperature checks, and masking requirements.
- A Councilmember at a remote location may impose reasonable capacity limits at their location.

### VI. **Hand Washing/Sanitizing**

There are hand sanitizing stations placed at the entry and strategically throughout the Boardroom. The bathrooms have soap and water for handwashing.

### VII. **Air Flow/Circulation/Sanitizing**

BUSD Facilities Staff performs a vigorous cleaning process after each use of the Boardroom. BUSD upgraded all HVAC filtration to MERV13, and with the inclusion of Needlepoint BiPolar Ionization, is achieving a rating that is closer to MERV18. Additionally, BUSD installed indoor air quality monitoring sensors in all facilities that constantly monitor VOC's CO2, Relative Humidity, and Temperature. The sensors and alarms allow BUSD to ensure that all systems are working properly and as designed. If a sensor trips an alarm, a work order request is generated immediately to ensure the system is repaired expeditiously.



## Hybrid Meeting Procedures for BUSD Boardroom (~~November 2021~~February 2022)

### VIII. Overflow in Gymnasium

An overflow indoor seating area will be available at the West Campus Gymnasium for every meeting. The capacity of the gymnasium is ~~100~~200 persons. The overflow area will have a broadcast of the meeting in progress to allow participants to follow the proceedings and move to the Boardroom at the appropriate time to provide public comment if desired. The broadcast audio and video will be provided to attendees in the overflow area. This area will be monitored by the BUSD security personnel.

### IX. Food Provided for Elected Officials and Designated Staff

- No buffet dinner provided.
- Box lunches only. Maximum of 16 (Mayor & Council [9], City Manager, City Attorney, City Clerk [2], Deputy City Managers [2], BCM Staff)
- Individually packaged snacks will be provided on a common table and drinks will be available in the refrigerator.

## Hybrid Meeting Procedures for BUSD Boardroom (November 2021)

The policy below covers the conduct of hybrid City Council meetings (in-person and remote participation) held in accordance with the Government Code and any relevant Executive Orders or State declared emergencies.

### I. **Vaccination Status**

No requirement for vaccination to attend a Council meeting. Staff and Officials will not inquire about vaccination status for any attendees.

### II. **Health Check**

A walk-up temperature check device will be located at the entry to the in-person meeting location. All persons entering the in-person meeting location are required to perform a temperature check upon entering. A handheld non-touch thermometer will be available for individuals with disabilities. Private security personnel will be at the entry location for the duration of the meeting to monitor the temperature check station and mask requirement.

Attendees showing a fever will be directed to attend the meeting via remote participation (Zoom). If an attendee refuses to have their temperature checked, guidance will be provided to the attendee on the requirement and their options for attending remotely and in-person.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

### III. **Face Coverings/Mask**

Following the State of California and Local Health Officer Guidance, face coverings or masks that cover both the nose and mouth are required for all attendees at an in-person City Council meeting. Face coverings will be provided by the City and available for attendees to use at the meeting.

If an attendee at a Council Meeting is not wearing a mask, a mask will be offered to them to use. If the attendee refuses to wear a mask, a recess will be called in order to provide guidance to the attendee on the requirement and their options for attending remotely and in-person.

Members of the City Council, city staff, and the public are required to wear a mask at all times, including when speaking publicly at the meeting.

Private security personnel will be the primary person for requesting compliance. If removal of a non-compliant person is needed, law enforcement personnel will perform this task.

## Hybrid Meeting Procedures for BUSD Boardroom (November 2021)

### IV. Physical Distancing

Currently, there are no physical distancing requirements in place by the State of California or the Local Health Officer for an indoor event similar to a council meeting. Relevant CalOSHA requirements for the workplace will be followed as is feasible. Capacity in the audience seating area (including members of the media and staff) at the BUSD Boardroom is limited to 40 persons due to uncertainty about vaccination status of attendees and limiting attendance at indoor events to ensure the comfort and safety of attendees. Conference room capacity is limited to 12 persons. The relevant capacity limits will be posted on the city council agenda and at the meeting location.

### V. Protocols for Remote Participation by Mayor or Councilmembers

Upon the repeal of the state-declared emergency, all standard Brown Act requirements will be in effect for members of the Council participating remotely. For the Mayor and Councilmembers participating remotely, the remote location must be accessible to the public and the public must be able to participate and give public comment from the remote location.

- A Councilmember at a remote location will follow the same policies as the Boardroom with regards to vaccination status, temperature checks, and mask requirements.
- A Councilmember at a remote location may impose reasonable capacity limits at their location.

### VI. Hand Washing/Sanitizing

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### VIII. Overflow in Gymnasium

An overflow indoor seating area will be available at the West Campus Gymnasium for every meeting. The capacity of the gymnasium is 100 persons. The overflow area will have a broadcast of the meeting in progress

## Hybrid Meeting Procedures for BUSD Boardroom (November 2021)

to allow participants to follow the proceedings and move to the Boardroom at the appropriate time to provide public comment if desired. The broadcast audio and video will be provided to attendees in the overflow area. This area will be monitored by the BUSD security personnel.

### **IX. Food Provided for Elected Officials and Designated Staff**

- No buffet dinner provided.
- Box lunches only. Total of 18 (Mayor & Council [9], City Manager, City Attorney, City Clerk [2], Deputy City Managers [2], BCM Staff, Extras [2])
- Individually packaged snacks will be provided on a common table and drinks will be available in the refrigerator.





# URGENT ITEM AGENDA MATERIAL

Government Code Section 54954.2(b)  
Rules of Procedure Chapter III.C.5

**THIS ITEM IS NOT YET AGENDIZED AND MAY OR MAY NOT BE ACCEPTED FOR THE AGENDA AS A LATE ITEM, SUBJECT TO THE CITY COUNCIL’S DISCRETION ACCORDING TO BROWN ACT RULES**

**Meeting Date: September 28, 2021**

**Item Description: Resolution Making Required Findings Pursuant to the Government Code and Directing City Legislative Bodies to Continue to Meet Via Videoconference and Teleconference**

This item is submitted pursuant to the provision checked below:

- Emergency Situation (54954.2(b)(1) - majority vote required)  
*Determination by a majority vote of the legislative body that an emergency situation exists, as defined in Section 54956.5.*
- Immediate Action Required (54954.2(b)(2) - two-thirds vote required)  
*There is a need to take immediate action and the need for action came to the attention of the local agency subsequent to the agenda for this meeting being posted.*

Once the item is added to the agenda (Consent or Action) it must be passed by the standard required vote threshold (majority, two-thirds, or 7/9).

**Facts supporting the addition of the item to the agenda under Section 54954.2(b) and Chapter III.C.5 of the Rules of Procedure:**

Assembly Bill 361 (Rivas) was signed by the Governor on September 16, 2021. This bill allows local legislative bodies to meet using videoconference technology while maintaining the Brown Act exemptions in Executive Order N-29-20 for noticing and access to the locations from which local officials participate in the meeting. Local agencies may only meet with the exemption if there is a state declared emergency.

The bill also requires that local legislative bodies meeting only via videoconference under a state declared emergency to make certain findings every 30-days regarding the need to meet in a virtual-only setting.

The agenda for the September 28, 2021 was finalized and published prior to the Governor signing AB 361 in to law. Thus, the need to take action came to the attention of the local agency after the agenda was distributed. This item qualifies for addition to the agenda with a two-thirds vote of the Council under Government Code Section 54954.2(b)(2).



Office of the City Attorney

CONSENT CALENDAR  
September 28, 2021

To: Honorable Mayor and Members of the City Council  
Madame City Manager

From: Farimah Faiz Brown, City Attorney

Subject: Resolution Making Required Findings Pursuant to the Government Code and Directing City Legislative Bodies to Continue to Meet Via Videoconference and Teleconference

RECOMMENDATION

Adopt a resolution making the required findings pursuant to Government Code Section 54953(e)(3) and determining that as a result of the continued threat to public health and safety posed by the spread of COVID-19, City legislative bodies shall continue to meet via videoconference and teleconference.

FISCAL IMPACT OF RECOMMENDATION

To be determined.

CURRENT SITUATION AND ITS EFFECTS

Pursuant to California Government Code section 8630 and Berkeley Municipal Code Chapter 2.88.040, on March 3, 2020, the City Manager, in her capacity as Director of Emergency Services, proclaimed a local emergency due to conditions of extreme peril to the safety of persons and property within the City as a consequence of the global spread of a severe acute respiratory illness caused by a novel (new) coronavirus (COVID-19), including a confirmed case in the City of Berkeley. As a result of multiple confirmed and presumed cases in Alameda County, the County has declared a local health emergency. On March 4, 2020, Governor Gavin Newsom issued a Proclamation of a State of Emergency due to the spread of COVID-19. On March 10, 2020, the City Council ratified the Proclamation of Local Emergency with the passage of Resolution No. 69-312.

On March 17, 2020, Governor Newsom signed Executive Order N-29-20, which suspended certain portions of the Ralph M. Brown Act (Cal. Gov. Code § 54950 et seq.) related to the holding of teleconferenced meetings by City legislative bodies. Among other things, Executive Order N-29-20 suspended requirements that each location from which an official accesses a teleconferenced meeting be accessible to the public.

These changes were necessary to allow teleconferencing to be used as a tool for ensuring social distancing. City legislative bodies have held public meetings via videoconference and teleconference pursuant to these provisions since March 2020. These provisions of Executive Order N-29-20 will expire on September 30, 2021.

COVID-19 continues to pose a serious threat to public health and safety. There are now over 4,700 confirmed cases of COVID-19 and at least 55 deaths in the City of Berkeley. Additionally, the SARS-CoV-2 B.1.617.2 (“Delta”) variant of COVID-19 that is currently circulating nationally and within the City is contributing to a substantial increase in transmissibility and more severe disease.

As a result of the continued threat to public health posed by the spread of COVID-19, state and local officials continue to impose or recommend measures to promote social distancing, mask wearing and vaccination. Holding meetings of City legislative bodies in person would present imminent risks to the health and safety of the public and members of legislative bodies, and therefore public meetings cannot safely be held in person at this time

Assembly Bill 361 (Rivas), signed into law by Governor Newsom on September 16, 2021, amended a portion of the Brown Act (Government Code Section 54953) to authorize the City Council, during the state of emergency, to determine that, due to the spread of COVID-19, holding in-person public meetings would present an imminent risk to the health or safety of attendees, and therefore City legislative bodies must continue to meet via videoconference and teleconference. Assembly Bill 361 requires that the City Council must review and ratify such a determination every thirty (30) days. Therefore, if the Council passes this resolution on September 28, 2021, the Council will need to review and ratify the resolution by October 28, 2021.

This item requests that the Council review the circumstances of the continued state of emergency posed by the spread of COVID-19, and find that the state of emergency continues to directly impact the ability of the public and members of City legislative bodies to meet safely in person, that holding public meetings of City legislative bodies in person would present imminent risks to the health and safety of attendees, and that state and local officials continue to promote social distancing, mask wearing and vaccination. This item further requests that the Council determine that City legislative bodies, including but not limited to the City Council and its committees, and all commissions and boards, shall continue to hold public meetings via videoconference and teleconference, and that City legislative bodies shall continue to comply with all provisions of the Brown Act, as amended by SB 361.

#### BACKGROUND

On March 1, 2020, Alameda County Public Health Department and Solano County Public Health Department reported two presumptive cases of COVID-19, pending confirmatory testing by the Centers for Disease Control (CDC), prompting Alameda County to declare a local health emergency.

On March 3, 2020, the City's Director of Emergency Services proclaimed a local emergency due to the spread of COVID-19, including a confirmed case in the City of Berkeley and multiple confirmed and presumed cases in Alameda County.

On March 4, 2020, Governor Gavin Newsom issued a Proclamation of a State of Emergency due to the spread of COVID-19.

On March 10, 2020, the City Council ratified the Proclamation of Local Emergency. Since that date, there have been over 4,700 confirmed cases of COVID-19 and at least 57 deaths in the City of Berkeley.

On March 17, 2020, Governor Newsom signed Executive Order N-29-20 which suspended certain portions of the Ralph M. Brown Act (Cal. Gov. Code § 54950 et seq.) to allow teleconferencing of public meetings to be used as a tool for ensuring social distancing. As a result, City legislative bodies have held public meetings via teleconference throughout the pandemic. The provisions of Executive Order N-29-20 allowing teleconferencing to be used as a tool for social distancing will expire on September 30, 2021.

#### ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Not applicable.

#### RATIONALE FOR RECOMMENDATION

The Resolution would enable the City Council and its committees, and City boards and commissions to continue to hold public meetings via videoconference and teleconference in order to continue to socially distance and limit the spread of COVID-19.

#### ALTERNATIVE ACTIONS CONSIDERED

None.

#### CONTACT PERSON

Farimah Brown, City Attorney, City Attorney's Office (510) 981-6998  
Mark Numainville, City Clerk, (510) 981-6908

#### Attachments:

1: Resolution Directing City Legislative Bodies to Continue to Meet Via Videoconference and Teleconference



RESOLUTION NO. –N.S.

RESOLUTION MAKING THE REQUIRED FINDINGS PURSUANT TO GOVERNMENT CODE SECTION 54953(E)(3) AND DIRECTING CITY LEGISLATIVE BODIES TO CONTINUE TO MEET VIA VIDEOCONFERENCE AND TELECONFERENCE

WHEREAS, in accordance with Berkeley Municipal Code section 2.88.040 and sections 8558(c) and 8630 of the Government Code, which authorize the proclamation of a local emergency when conditions of disaster or extreme peril to the safety of persons and property within the territorial limits of a City exist, the City Manager, serving as the Director of Emergency Services, beginning on March 3, 2020, did proclaim the existence of a local emergency caused by epidemic in the form of the global spread of a severe acute respiratory illness caused by a novel (new) coronavirus (“COVID-19”), including confirmed cases in California and the San Francisco Bay Area, and presumed cases in Alameda County prompting the County to declare a local health emergency; and

WHEREAS, on March 10, 2020, the City Council ratified the Proclamation of Local Emergency with the passage of Resolution No. 69-312; and

WHEREAS, on March 4, 2020, Governor Gavin Newsom issued a Proclamation of a State of Emergency pursuant to the California Emergency Services Act, in particular, Government Code section 8625; and

WHEREAS, the Proclamation of a State of Emergency issued by Governor Newsom on March 4, 2020 continues to be in effect; and

WHEREAS, on September 16, 2021, Governor Newsom signed into law AB 361, which authorizes the City Council to determine that, due to the continued threat to public health and safety posed by the spread of COVID-19, City legislative bodies shall continue to meet via videoconference and teleconference; and

WHEREAS, the City Council does find that the aforesaid conditions of extreme peril continue to exist, and now include over 4,700 confirmed cases of COVID-19 and at least 55 deaths in the City of Berkeley; and

WHEREAS, the City Council recognizes that the SARS-CoV-2 B.1.617.2 (“Delta”) variant of COVID-19 that is currently circulating nationally and within the City is contributing to a substantial increase in transmissibility and more severe disease; and

WHEREAS, as a result of the continued threat to public health posed by the spread of COVID-19, state and local officials continue to impose or recommend measures to promote social distancing, mask wearing and vaccination; and

WHEREAS, holding meetings of City legislative bodies in person would present imminent risks to the health and safety of the public and members of legislative bodies, and therefore public meetings cannot safely be held in person at this time; and

WHEREAS, the City Council will need to again review the need for the continuing necessity of holding City legislative body meetings via videoconference and teleconference by October 28, 2021.

NOW, THEREFORE BE IT RESOLVED by the Council of the City of Berkeley that, pursuant to Government Code section 54953, the City Council has reviewed the circumstances of the continued state of emergency posed by the spread of COVID-19, and finds that the state of emergency continues to directly impact the ability of the public and members of City legislative bodies to meet safely in person, that holding public meetings of City legislative bodies in person would present imminent risks to the health and safety of attendees, and that state and local officials continue to promote social distancing, mask wearing and vaccination; and

BE IT FURTHER RESOLVED that City legislative bodies, including but not limited to the City Council and its committees, and all commissions and boards, shall continue to hold public meetings via videoconference and teleconference; and

BE IT FURTHER RESOLVED that all City legislative bodies shall comply with the requirements of Government Code section 54953(e)(2) and all applicable laws, regulations and rules when conducting public meetings pursuant to this resolution.



OFFICE OF THE GOVERNOR

June 2, 2021

**VIA EMAIL**

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RE: Transition Period Prior to Repeal of COVID-related Executive Orders

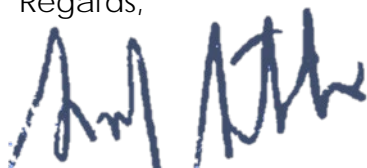
Dear Mr. Knaus, Ms. Miller, Ms. Hurst, Ms. Preston, Ms. Heaton, Ms. King, Ms. Coleman, Ms. Blacet-Hyden, Mr. McCormick, Mr. Anderson, and colleagues,

Thank you for your correspondence of May 18, 2021, inquiring what impact the anticipated June 15 termination of the Blueprint for a Safer Economy will have on Executive Order N-29-20, which provided flexibility to state and local agencies and boards to conduct their business through virtual public meetings during the COVID-19 pandemic.

Please be assured that this Executive Order Provision will not terminate on June 15 when the Blueprint is scheduled to terminate. While the Governor intends to terminate COVID-19 executive orders at the earliest possible date at which conditions warrant, consistent with the Emergency Services Act, the Governor recognizes the importance of an orderly return to the ordinary conduct of public meetings of state and local agencies and boards. To this end, the Governor's office will work to provide notice to affected stakeholders in advance of rescission of this provision to provide state and local agencies and boards time necessary to meet statutory and logistical requirements. Until a further order issues, all entities may continue to rely on N-29-20.

We appreciate your partnership throughout the pandemic.

Regards,

A handwritten signature in blue ink, appearing to read 'Ana Matosantos', written in a cursive style.

Ana Matosantos  
Cabinet Secretary





## NEWS RELEASE

Release  
Number: 2021-58

June 4, 2021

### Standards Board Readopts Revised Cal/OSHA COVID-19 Prevention Emergency Temporary Standards

**The revised Cal/OSHA standards are expected to go into effect no later than June 15**

**Sacramento** — The Occupational Safety and Health Standards Board on June 3 readopted Cal/OSHA's revised COVID-19 prevention emergency temporary standards.

Last year, the Board adopted health and safety standards to protect workers from COVID-19. The standards did not consider vaccinations and required testing, quarantining, masking and more to protect workers from COVID-19.

The changes adopted by the Board phase out physical distancing and make other adjustments to better align with the state's June 15 goal to retire the Blueprint. Without these changes, the original standards, would be in place until at least October 2. These restrictions are no longer required given today's record low case rates and the fact that we've administered 37 million vaccines.

The revised emergency standards are expected to go into effect no later than June 15 if approved by the Office of Administrative Law in the next 10 calendar days. Some provisions go into effect starting on July 31, 2021.

The [revised standards](#) are the first update to Cal/OSHA's temporary COVID-19 prevention requirements adopted in November 2020.

**The Board may further refine the regulations in the coming weeks** to take into account changes in circumstances, especially as related to the availability of vaccines and low case rates across the state.

The standards apply to most workers in California not covered by Cal/OSHA's Aerosol Transmissible Diseases [standard](#). Notable revisions include:

- **Face Coverings:**
  - Indoors, fully vaccinated workers without COVID-19 symptoms do not need to wear face coverings in a room where everyone else is fully vaccinated and not showing symptoms. However, where there is a mixture of vaccinated and unvaccinated persons in a room, all workers will continue to be required to wear a face covering.
  - Outdoors, fully vaccinated workers without symptoms do not need to wear face coverings. However, outdoor workers who are not fully vaccinated must continue to wear a face covering when they are less than six feet away from another person.
- **Physical Distancing:** When the revised standards take effect, employers can eliminate physical distancing and partitions/barriers for employees working indoors and at outdoor mega events if they provide respirators, such as N95s, to unvaccinated employees for voluntary use. After July 31, physical distancing

and barriers are no longer required (except during outbreaks), but employers must provide all unvaccinated employees with N95s for voluntary use.

- **Prevention Program:** Employers are still required to maintain a written COVID-19 Prevention Program but there are some key changes to requirements:
  - Employers must review the California Department of Public Health's [Interim guidance for Ventilation, Filtration, and Air Quality in Indoor Environments](#).
  - COVID-19 prevention training must now include information on how the vaccine is effective at preventing COVID-19 and protecting against both transmission and serious illness or death.
- **Exclusion from the Workplace:** Fully vaccinated workers who do not have COVID-19 symptoms no longer need to be excluded from the workplace after a close contact.
- **Special Protections for Housing and Transportation:** Special COVID-19 prevention measures that apply to employer-provided housing and transportation no longer apply if all occupants are fully vaccinated.

The Standards Board will file the readoption rulemaking package with the Office of Administrative Law, which has 10 calendar days to review and approve the temporary workplace safety standards enforced by Cal/OSHA. Once approved and published, the full text of the revised emergency standards will appear in the Title 8 sections [3205](#) (COVID-19 Prevention), [3205.1](#) (Multiple COVID-19 Infections and COVID-19 Outbreaks), [3205.2](#) (Major COVID-19 Outbreaks), [3205.3](#) (COVID-19 Prevention in Employer-Provided Housing) and [3205.4](#) (COVID-19 Prevention in Employer-Provided Transportation) of the [California Code of Regulations](#). Pursuant to the state's [emergency rulemaking process](#), this is the first of two opportunities to readopt the temporary standards after the initial effective period.

The Standards Board also convened a representative subcommittee to work with Cal/OSHA on a proposal for further updates to the standard, as part of the emergency rulemaking process. It is anticipated this newest proposal, once developed, will be heard at an upcoming Board meeting. The subcommittee will provide regular updates at the Standards Board monthly meetings.

The [Occupational Safety and Health Standards Board](#), a seven-member body appointed by the Governor, is the standards-setting agency within the Cal/OSHA program. The Standards Board's objective is to adopt reasonable and enforceable standards at least as effective as federal standards. The Standards Board also has the responsibility to grant or deny applications for permanent variances from adopted standards and respond to petitions for new or revised standards.

The California Division of Occupational Safety and Health, or [Cal/OSHA](#), is the division within the Department of Industrial Relations that helps protect California's workers from health and safety hazards on the job in almost every workplace. [Cal/OSHA's Consultation Services Branch](#) provides free and voluntary assistance to employers to improve their health and safety programs. Employers should call (800) 963-9424 for assistance from Cal/OSHA Consultation Services.

**Contact:** Erika Monterroza / Frank Polizzi, [Communications@dir.ca.gov](mailto:Communications@dir.ca.gov), (510) 286-1161.

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The [California Department of Industrial Relations](#), established in 1927, protects and improves the health, safety, and economic well-being of over 18 million wage earners, and helps their employers comply with state labor laws. DIR is housed within the [Labor & Workforce Development Agency](#)



Office of the City Manager

June 1, 2021

To: Agenda & Rules Committee

From: Dee Williams-Ridley, City Manager

Subject: Preliminary Analysis of Return to In-Person Meetings of City Legislative Bodies

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### Introduction

This memo responds to the request from the Agenda & Rules Committee on May 17, 2021 for information from the City Manager on the options and timing for a return to in-person meetings for City legislative bodies. The analysis below is a preliminary summary of the considerations and options for returning to in-person meetings.

With the onset of the COVID-19 pandemic, the shelter-in-place order, and the issuance of Executive Order N-29-20 (“Executive Order”) in the spring of 2020, the City quickly adjusted to a virtual meeting model. Now, almost 15 months later, with the Blueprint for a Safer Economy scheduled to sunset on June 15, 2021, the City is faced with a new set of conditions that will impact how public meetings may be held in Berkeley. While the June 15, 2021 date appears to be certain, there is still a great deal of uncertainty about the fate of the Executive Order. In addition, the City is still awaiting concrete, specific guidance from the State with regards to regulations that govern public meetings and public health recommendations that will be in place after June 15, 2021.

For background, Executive Order N-29-20 allows legislative bodies to meet in a virtual setting and suspends the following Brown Act requirements:

- Printing the location of members of the legislative body on the agenda;
- Posting the agenda at the location of members of the legislative body that are remote; and
- Making publicly available remote locations from which members of the legislative body participate.

Meeting Options

There are three groups of City Legislative bodies that are considered in this memo

- City Council;
- City Council Policy Committees; and
- Boards and Commissions.

The three meeting models available are:

- In-person only;
- Virtual only; or
- Hybrid (in-person and virtual).

The scenarios below show the options available for each given set of facts.

Summary Recommendations of Meeting Options	Physical Distancing			No Physical Distancing		
	In-Person	Hybrid	Virtual*	In-Person	Hybrid	Virtual*
	City Council	X	X	X	X	X
Policy Committees			X	X		X
Board and Commissions			X	X		X

\* The ability to hold virtual-only meetings is dependent on the status of Executive Order N-29-20

Currently, the Centers for Disease Control recommends physical distancing for unvaccinated persons. While the City and the community have made tremendous progress with regards to vaccination, the City would use the guidelines for unvaccinated persons when making determinations regarding public meetings.

Meeting Type Considerations

Our previous experience pre-pandemic and our experience over the past 15 months demonstrates that the City can conduct all in-person and all virtual meetings. However, the possibility of hybrid meetings presents new questions to consider. The primary concern for a return to in-person meetings using a hybrid model is the impact on the public experience and the legislative process.

*Will the legislative body be able to provide a transparent, coherent, stable, informative, and meaningful experience for the both the public in attendance and virtually?*



*Will the legislative body be able to conduct the legislative process in an efficient, coherent, and meaningful manner with the members split between in-person and virtual, and considering the additional delays and logistical challenges of allowing for public participation in a hybrid model?*

For the City Council, testing has shown that the larger space and technology infrastructure at the Boardroom will allow the Council to conduct all three types of meetings (in-person, hybrid, virtual).

For Policy Committees and Commissions, only the “all virtual” or “all in-person” meetings are recommended. Preliminary testing has shown that the audio/visual limitations of the meeting rooms available for these bodies would result in inefficient and cumbersome management of the proceedings in a hybrid model. In addition, there are considerations to analyze regarding the available bandwidth in city facilities and all members having access to adequate devices. Continuing the all virtual model for as long as possible, then switching to an all in-person model when conditions permit provides the best access, participation, and legislative experience for the public and the legislative body.

#### Other Considerations

Some additional factors to consider in the evaluation of returning to in-person or hybrid meetings are:

- How to address vaccination status for in-person attendees.
- Will symptom checks and/or temperature checks at entry points be required?
- Who is responsible for providing PPE for attendees?
- How are protocols for in-person attendees to be enforced?
- Physical distancing measures for the Mayor and City Councilmembers on the dais.
- Installation of physical barriers and other temporary measures.
- Will the podium and microphone need to be sanitized after every speaker?
- High number of touch points in meeting rooms.
- Will chairs for the public and staff need to be sanitized if there is turnover during the meeting?
- Determining the appropriate capacity for meeting locations.
- The condition and capacity of meeting room ventilation system and air cycling abilities.
- How to receive and share Supplemental Items, Revisions, Urgent Items, and submissions by the public both in-person and virtually.
- Budget including costs for equipment, physical improvements, A/V, PPE, and sanitization.

Conclusion

As stated above, conditions are changing daily, and there is a high degree of uncertainty surrounding the future guidance, regulations, and actions at the state level. Planning, testing and analysis are already underway to prepare for an eventual return to in-person meetings. Staff will continue to monitor the evolving legislative and public health circumstances and advise the committee at future meetings.

Attachment:

1. Executive Order N-29-20

EXECUTIVE DEPARTMENT  
STATE OF CALIFORNIA

EXECUTIVE ORDER N-29-20

**WHEREAS** on March 4, 2020, I proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19; and

**WHEREAS** despite sustained efforts, the virus continues to spread and is impacting nearly all sectors of California; and

**WHEREAS** the threat of COVID-19 has resulted in serious and ongoing economic harms, in particular to some of the most vulnerable Californians; and

**WHEREAS** time bound eligibility redeterminations are required for Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries to continue their benefits, in accordance with processes established by the Department of Social Services, the Department of Health Care Services, and the Federal Government; and

**WHEREAS** social distancing recommendations or Orders as well as a statewide imperative for critical employees to focus on health needs may prevent Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries from obtaining in-person eligibility redeterminations; and

**WHEREAS** under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay appropriate actions to prevent and mitigate the effects of the COVID-19 pandemic.

**NOW, THEREFORE, I, GAVIN NEWSOM**, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567 and 8571, do hereby issue the following order to become effective immediately:

**IT IS HEREBY ORDERED THAT:**

1. As to individuals currently eligible for benefits under Medi-Cal, CalFresh, CalWORKs, the Cash Assistance Program for Immigrants, the California Food Assistance Program, or In Home Supportive Services benefits, and to the extent necessary to allow such individuals to maintain eligibility for such benefits, any state law, including but not limited to California Code of Regulations, Title 22, section 50189(a) and Welfare and Institutions Code sections 18940 and 11265, that would require redetermination of such benefits is suspended for a period of 90 days from the date of this Order. This Order shall be construed to be consistent with applicable federal laws, including but not limited to Code of Federal Regulations, Title 42, section 435.912, subdivision (e), as interpreted by the Centers for Medicare and Medicaid Services (in guidance issued on January 30, 2018) to permit the extension of



otherwise-applicable Medicaid time limits in emergency situations.

2. Through June 17, 2020, any month or partial month in which California Work Opportunity and Responsibility to Kids (CalWORKs) aid or services are received pursuant to Welfare and Institutions Code Section 11200 et seq. shall not be counted for purposes of the 48-month time limit set forth in Welfare and Institutions Code Section 11454. Any waiver of this time limit shall not be applied if it will exceed the federal time limits set forth in Code of Federal Regulations, Title 45, section 264.1.
3. Paragraph 11 of Executive Order N-25-20 (March 12, 2020) is withdrawn and superseded by the following text:

Notwithstanding any other provision of state or local law (including, but not limited to, the Bagley-Keene Act or the Brown Act), and subject to the notice and accessibility requirements set forth below, a local legislative body or state body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body or state body. All requirements in both the Bagley-Keene Act and the Brown Act expressly or impliedly requiring the physical presence of members, the clerk or other personnel of the body, or of the public as a condition of participation in or quorum for a public meeting are hereby waived.

In particular, any otherwise-applicable requirements that

- (i) state and local bodies notice each teleconference location from which a member will be participating in a public meeting;
- (ii) each teleconference location be accessible to the public;
- (iii) members of the public may address the body at each teleconference conference location;
- (iv) state and local bodies post agendas at all teleconference locations;
- (v) at least one member of the state body be physically present at the location specified in the notice of the meeting; and
- (vi) during teleconference meetings, a least a quorum of the members of the local body participate from locations within the boundaries of the territory over which the local body exercises jurisdiction

are hereby suspended.

A local legislative body or state body that holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, consistent with the notice and accessibility requirements set forth below, shall have satisfied any requirement that the body allow



members of the public to attend the meeting and offer public comment. Such a body need not make available any physical location from which members of the public may observe the meeting and offer public comment.

Accessibility Requirements: If a local legislative body or state body holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, the body shall also:

- (i) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the Americans with Disabilities Act and resolving any doubt whatsoever in favor of accessibility; and
- (ii) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment, pursuant to subparagraph (ii) of the Notice Requirements below.

Notice Requirements: Except to the extent this Order expressly provides otherwise, each local legislative body and state body shall:

- (i) Give advance notice of the time of, and post the agenda for, each public meeting according to the timeframes otherwise prescribed by the Bagley-Keene Act or the Brown Act, and using the means otherwise prescribed by the Bagley-Keene Act or the Brown Act, as applicable; and
- (ii) In each instance in which notice of the time of the meeting is otherwise given or the agenda for the meeting is otherwise posted, also give notice of the means by which members of the public may observe the meeting and offer public comment. As to any instance in which there is a change in such means of public observation and comment, or any instance prior to the issuance of this Order in which the time of the meeting has been noticed or the agenda for the meeting has been posted without also including notice of such means, a body may satisfy this requirement by advertising such means using "the most rapid means of communication available at the time" within the meaning of Government Code, section 54954, subdivision (e); this shall include, but need not be limited to, posting such means on the body's Internet website.

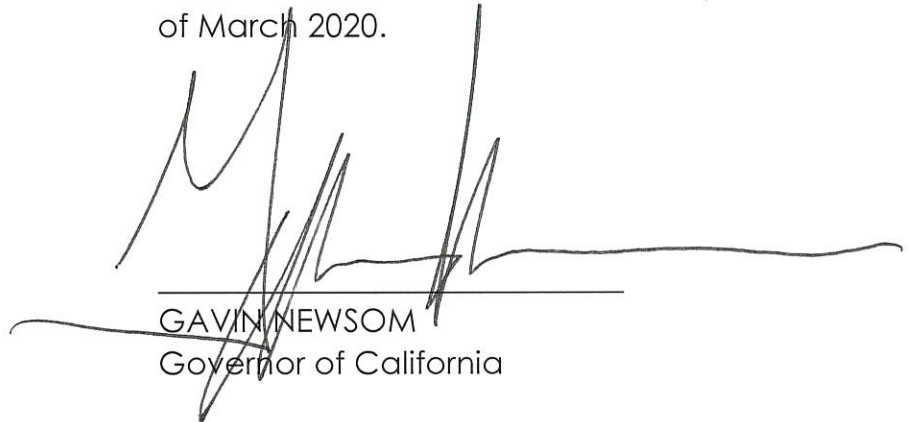
All of the foregoing provisions concerning the conduct of public meetings shall apply only during the period in which state or local public health officials have imposed or recommended social distancing measures.

All state and local bodies are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Bagley-Keene Act and the Brown Act, and other applicable local laws regulating the conduct of public meetings, in order to maximize transparency and provide the public access to their meetings.

**IT IS FURTHER ORDERED** that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

**IN WITNESS WHEREOF** I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 17th day of March 2020.



\_\_\_\_\_  
GAVIN NEWSOM  
Governor of California

**ATTEST:**

\_\_\_\_\_  
ALEX PADILLA  
Secretary of State

