AGENDA

BERKELEY CITY COUNCIL MEETING

Tuesday, February 25, 2025
6:00 PM

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

ADENA ISHII, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI
DISTRICT 2 – TERRY TAPLIN
DISTRICT 3 – BEN BARTLETT
DISTRICT 4 – IGOR TREGUB
DISTRICT 5 – SHOSHANA O'KEEFE
DISTRICT 6 – BRENT BLACKABY
DISTRICT 7 – CECILIA LUNAPARRA
DISTRICT 8 – MARK HUMBERT

This meeting will be conducted in a hybrid model with both in-person attendance and virtual participation. Live captioned broadcasts of Council meetings are available on B-TV (Channel 33) and via internet video stream at http://berkeley.granicus.com/MediaPlayer.php?publish_id=1244. All Council meetings are recorded.

*To access the meeting remotely use this URL: https://cityofberkeley-info.zoomgov.com/j/1608430091. To request to speak, use the "raise hand" function in Zoom. To join by phone: Dial **1-669-254-5252 or 1-833-568-8864 (Toll Free)** and enter **Meeting ID: 160 843 0091**. To provide public comment, Press *9 and wait to be recognized by the Chair. To submit a written communication for the public record, email council@berkeleyca.gov.*

This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting, however, if you are feeling sick, please do not attend the meeting in person. The City Council may take action related to any subject listed on the Agenda.

Pursuant to the City Council Rules of Procedure and State Law, the presiding officer may remove, or cause the removal of, an individual for disrupting the meeting. Prior to removing an individual, the presiding officer shall warn the individual that their behavior is disrupting the meeting and that their failure to cease their behavior may result in their removal. The presiding officer may then remove the individual if they do not promptly cease their disruptive behavior. "Disrupting" means engaging in behavior during a meeting of a legislative body that actually disrupts, disturbs, impedes, or renders infeasible the orderly conduct of the meeting and includes, but is not limited to, a failure to comply with reasonable and lawful regulations adopted by a legislative body, or engaging in behavior that constitutes use of force or a true threat of force.

***Government Code Section 84308 (Levine Act)** - Parties to a proceeding involving a license, permit, or other entitlement for use are required to disclose if they made contributions over $500 within the prior 12 months to any City employee or officer. Parties and participants with a financial interest are prohibited from making more than $500 in contributions to a decisionmaker for the 12 months after the final decision is rendered on the proceeding. The above contribution disclosures and restrictions do not apply when the proceeding is competitively bid, or involves a personnel or labor contract. For more information, see Government Code Section 84308.*

Preliminary Matters

Roll Call:

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.*

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: *Up to ten persons will be selected to address matters not on the Council agenda. If five or fewer persons are identified to provide non-agenda comment, each person selected will be allotted two minutes each. If more than five persons are selected to address matters not on the Council agenda, each person selected will be allotted one minute each.*

In-person attendees wishing to address the Council on matters not on the Council agenda during the initial ten-minute period for such comment, must submit a speaker card to the City Clerk in person at the meeting location and prior to the moment that the Presiding Officer calls for public comment on non-agenda items. Remote attendees must raise their hand in the videoconference application when the Presiding Officer calls for non-agenda speakers. The first five raised hands on the videoconference application will be selected to speak and the first five cards drawn at the meeting will be selected to speak. The number of in-person and remote speakers selected may be adjusted by the Presiding Officer if fewer than five speakers from either format are identified.

The remainder of the speakers wishing to address the Council on non-agenda items will be heard at the end of the agenda.

Public Comment by Employee Unions (first regular meeting of the month): *This period of public comment is reserved for officially designated representatives of City of Berkeley employee unions, with five minutes allocated per union if representatives of three or fewer unions wish to speak and up to three minutes per union if representatives of four or more unions wish to speak.*

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 or Information 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. If ten or fewer persons are interested in speaking on an individual agenda item, each speaker 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. 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. Minutes for Approval
From: City Manager
Recommendation: Approve the minutes for the Council meeting of January 21, 2025 (regular).
Financial Implications: None
Contact: Mark Numainville, City Clerk, (510) 981-6900

2. Grant Application: National Endowment for the Arts Grant ($150,000)
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager or their designee to submit a grant application to the National Endowment for the Arts (NEA) to receive up to $150,000 for a Civic Arts grant program, to accept the grant if awarded; and to execute any resulting grant agreements and any amendments. If received, the funds would support the Arts Programs Grant category and would be regranted to nonprofit organizations for arts and cultural programming within the City of Berkeley in Fiscal Year 2027.
Financial Implications: See report
Contact: Eleanor Hollander, Economic Development, (510) 981-7530

Consent Calendar

3. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on February 25, 2025
From: City Manager
Recommendation: Approve the request for proposals or invitation for bids 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.
Financial Implications: See report
Contact: Henry Oyekanmi, Finance, (510) 981-7300

4. Contract: Forster & Kroeger Landscape Maintenance for Chipping Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager or his designee to execute a contract and any amendments, with Forster & Kroeger Landscape Maintenance to provide Chipping Services for three years from March 1, 2025 until February 29, 2028 with the option to extend for two additional one-year terms in the amount not to exceed $1,400,000.
Financial Implications: See report
Contact: David Sprague, Fire, (510) 981-3473

5. Contract No. 32300185 Amendment: JSI Research & Training Institute, Inc. for Community Health Assessment, Innovation, and Improvement Plan Consultant
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager or his designee to execute an amendment to Contract No. 32300185 with JSI Research & Training Institute, Inc increasing the contract by $25,000 to serve as a Community Health Assessment, Innovation, and Improvement Plan consultant for the City of Berkeley's Health, Housing, and Community Services Department (HHCS) in a total amount not to exceed $274,413 with a contract end date of November 1, 2025.
Financial Implications: See report
Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400

6. Berkeley Police Association – Amendments to Retiree Medical Benefits
From: City Manager
Recommendation: Adopt a Resolution approving a side letter between the City of Berkeley and the Berkeley Police Association amending Sections 32.3, 32.5, and 32.6 of the City's Memorandum of Understanding (MOU) with the union to expand and clarify existing provisions that pertain to retiree health benefits.
Financial Implications: None
Contact: Monica Walker, Human Resources, (510) 981-6800

Consent Calendar

7. ***Item Removed by the City Manager* Contract No. 32000118 Amendment: Nexgen Asset and Work Order Management Software Maintenance**
From: City Manager
Contact: Kevin Fong, Information Technology, (510) 981-6500

8. Contract No. 105921-1 Amendment: TruePoint Solutions, LLC for Professional Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager or his designee to amend Contract No. 105921-1 with TruePoint Solutions, LLC for professional services, increasing the amount by $180,000, for a total not-to-exceed amount of $1,477,200 and extending the term by two years for the term beginning June 1, 2015 to June 30, 2027.
Financial Implications: See report
Contact: Kevin Fong, Information Technology, (510) 981-6500

9. Contract: Ashlar Structural LLC for Strawberry Creek Culvert Maintenance Project – Phase 1 (Specification No. 25-11689-C)
From: City Manager
Recommendation: Adopt a Resolution: 1. Approving plans and specifications for the Strawberry Creek Culvert Maintenance Project – Phase 1; and 2. Accepting the bid of Ashlar Structural LLC (Ashlar Structural) as the lowest, responsive and responsible bidder; and 3. Authorizing the City Manager or his designee to execute a contract and any amendments, extensions, or other change orders until completion of the project, in accordance with the approved plans and specifications in an amount not to exceed $4,544,232.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300

10. Contract: Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. for Fire Station #2 Improvements Project
From: City Manager
Recommendation: Adopt a Resolution: 1. Approving plans and specifications for Fire Station #2 Improvements (Project), Specification No. 23-11575-C; and 2. Accepting the bid of Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. as the lowest, responsive and responsible bidder; and 3. Authorizing the City Manager to execute a contract and any amendments, extensions, or change orders until the Project is completed in accordance with the approved plans and specifications for an amount not to exceed $1,104,000, which includes a contingency of $184,000.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300

Consent Calendar

11. Contract No. 32500082 Amendment: Telegraph Property and Business Management Corporation
From: City Manager
Recommendation: Adopt a Resolution amending Contract No. 32500082 with the Telegraph Property and Business Management Corporation, commonly known as the Telegraph Business Improvement District, for the janitorial maintenance of the new 24 hour, 7 days a week (24/7), public restroom with a new not to exceed amount of $150,000 and extend the contract through June 30, 2026.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300

12. Contract No. 32500098 Amendment: Pacific Site Management: Landscaping Services for Public Works Department
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 32500098 with Pacific Site Management to increase the spending authority by $150,000 for a new total not to exceed of $300,000 and extend the contract through June 30, 2027.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300

Council Consent Items

13. Supporting the Free and Safe Passage of Whales, Sea Turtles, and other Marine Animals in the San Francisco Bay Area's Coastal Waters and the State Of California's Vision Zero Target of Zero Mortality for Whales and Sea Turtles
From: Councilmember Lunaparra (Author), Councilmember O'Keefe (Co-Sponsor)
Recommendation: Adopt a resolution Supporting the Free and Safe Passage of Whales, Sea Turtles, and other Marine Animals in the San Francisco Bay Area's Coastal Waters and the State Of California's Vision Zero Target of Zero Mortality for Whales and Sea Turtles.
Financial Implications: None
Contact: Cecilia Lunaparra, Councilmember, District 7, (510) 981-7170

Action Calendar

The public may comment on each item listed on the agenda for action. 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 during the Action Calendar public comment period on the item

The Presiding Officer will request that persons wishing to speak line up at the podium, or use the "raise hand" function in Zoom, to determine the number of persons interested in speaking at that time. If ten or fewer persons are interested in speaking on an individual agenda item, each speaker 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.

The Presiding Officer may open and close an additional comment period for Action items on this agenda (excluding any public hearings, appeals, and/or quasi-judicial matters), at the start of the Action Calendar. Those who speak on an item during this comment period may not speak a second time when the item is taken up by Council.

Action Calendar – Public Hearings

Staff shall introduce the public hearing item and present their comments. For certain hearings, this is followed by five-minute presentations each by first the appellant and then the applicant. The Presiding Officer will request that persons wishing to speak line up at the podium, or use the "raise hand" function in Zoom, to be recognized and to determine the number of persons interested in speaking at that time.

If ten or fewer persons are interested in speaking during a public hearing, each speaker 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.

When applicable, 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.

14. Inclusionary Housing Ordinance In-Lieu Fee; Amending Berkeley Municipal Code Chapter 23.328

From: City Manager

Recommendation: Conduct a public hearing and upon conclusion:

1. Adopt a Resolution setting the Inclusionary Housing in-lieu fee at $56.25 per square foot of the Residential Unit Floor Area (RUFA) of a Housing Development Project; and

-Include a provision in the resolution to allow a project paying the full in-lieu fee instead of providing Affordable Units to deduct 5,000 square feet from the RUFA calculation in order to continue to exempt projects under 5,000 square feet in full and proportionally reduce the fee for projects above 5,000 square feet; and

-Include a provision in the resolution dedicating 80% of very low-income Units for Section 8 and Shelter Plus Care voucher holders; and

-Include a provision in the resolution to adjust the fee biennially by the Construction Cost Index (CCI) starting on July 1, 2025; and

2. Adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Chapter 23.328 (F) to remove the exemption for projects with 5,000 square feet or less of RUFA.

Financial Implications: See report

Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400

Action Calendar – Public Hearings

15. Zoning Ordinance Amendments to Title 23 of the Berkeley Municipal Code for Consistency with State Law Related to Electric Vehicle Charging and Technical Edits

From: City Manager

Recommendation: Conduct a public hearing and upon conclusion, adopt the first reading of an Ordinance amending the following sections of the Zoning Ordinance to align the Berkeley Municipal Code (BMC) with state law related to electric vehicle charging, as well as additional non-substantive edits and corrections:

-23.106.020 Lot Coverage
-23.106.080 Building Separation
-23.202.020 Allowed Land Uses (Residential Districts)
-23.204.020 Allowed Land Uses (Commercial Districts)
-23.204.090 C-NS North Shattuck Commercial District
-23.204.100 C-SA South Area Commercial District
-23.204.130 C-DMU Downtown Mixed-Use District
-23.204.140 C-W West Berkeley Commercial District
-23.204.150 C-AC Adeline Corridor Commercial District
-23.206.020 Allowed Land Uses and Permit Requirements (Manufacturing Districts)
-23.206.040 Use-Specific Regulations (Manufacturing Districts)
-23.206.050 Protected Uses (Manufacturing)
-23.302.070 Use-Specific Regulations (Supplemental Use Regulations)
-23.306.010 Purpose (Accessory Dwelling Units)
-23.306.030 Development Standards (Accessory Dwelling Units)
-23.306.040 Permit Procedures (Accessory Dwelling Units)
-23.310.020 General Requirements Excluding Incidental Beer and Wine
-23.310.030 Alcohol Beverage Standards When Incidental to Food Service
-23.322.030 Required Parking Spaces
-23.322.080 Parking Layout and Design
-23.334.030 Transportation Demand Management Program Requirements
-23.502.020 Defined Terms (Glossary)

Financial Implications: None

Contact: Jordan Klein, Planning and Development, (510) 981-7400

Information Reports

16. Community Health Assessment Report
From: City Manager
Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400

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.*

Archived indexed video streams are available at:
https://berkeleyca.gov/your-government/city-council/city-council-agendas.
Channel 33 rebroadcasts the following Wednesday at 9:00 a.m. and Sunday at 9:00 a.m.

Communications to the 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 to the City Clerk Department at 2180 Milvia Street. 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 Department for further information.

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, and through the City's online records portal: https://records.cityofberkeley.info/.

Agendas, agenda reports, and revised/supplemental material may be accessed via the online agenda for this meeting at:
https://berkeleyca.gov/your-government/city-council/city-council-agendas
and may be accessed 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@berkeleyca.gov

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

COMMUNICATION ACCESS INFORMATION:
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 ada@berkeleyca.gov, (510) 981-6418 (V), or (510) 981-6347 (TDD) at least three business days before the meeting date.

Attendees at public meetings are reminded that other attendees may be sensitive to various scents, whether natural or manufactured, in products and materials. Please help the City respect these needs.



Captioning services are provided at the meeting, on B-TV, and on the Internet. In addition, assisted listening devices for the hearing impaired are available from the City Clerk prior to the meeting, and are to be returned before the end of the meeting.

Questions regarding public participation may be addressed to the City Clerk Department (510) 981-6900 or by email at clerk@berkeleyca.gov.

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I hereby certify that the agenda for this 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 February 13, 2025.

Mark Numainville, City Clerk

Communications

Council rules limit action on Communications to referral to the City Manager and/or Boards and Commissions for investigation and/or recommendations. All communications submitted to Council are public record. Copies of individual communications are available for viewing at the City Clerk Department and through Records Online.

Civic Center

1. Bhima Sheridan
2. Rebecca Levenson
3. John Craner, Albert Chan, Martin Bourque, Ann Harlow, David Flores, and J.K. Fowler
4. Samantha Johnston (2)
5. Rosemary Hardy
6. Megan Bates
7. Stacey Zolt Hara
8. Julie Elis (3)
9. Nicole Herron
10. Daniel Korson
11. Jeff Vincent
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12. Michelle Mascarenhas
13. Jennifer Ito
14. Ken Lim
15. Nirav Bisarya
16. Abby Cook
17. Elise Proulx

Cesar Chavez Park

18. Jennifer Chinlund
19. Alexis
20. Sherry Shannon
21. Catherine Mattison
22. Alexis Frasz
23. Camille Watts-Zagha
24. David Rice
25. Joyce Freedman
26. Lynda Vigil
27. Noah Guyunn
28. Molly Van Der Molen
29. Isabel Choi and Igor Ranitovic
30. Lesley Fernow
31. Whitney K. Taylor
32. Michael Ciarleglio
33. Micky Duxbury
34. Andrea Fernandes
35. Mason Scharf
36. Gillian Scharff
37. Kellie Gan
38. Lauren Kaneko-Jones
39. Steve Kemnitz
40. David Tepper
41. Hannah Meara
42. Maureen Fitzgerald
43. Jennifer Chou
44. Scott Willson
45. Tanya Johnson
46. Kathy Gee

Fire Concerns

47. Brent Blackaby
48. Rachel Bradley
49. George Tharisayi
50. Jacques Watteyne and Ellen Archilla
51. Ruth Langridge

8th and Harrison Encampment

52. Moni T. Law
53. Summer Brenner
54. Elana Auerbach
55. Yesica Prado on behalf of the Berkeley Homeless Union

Treasury Department
56. Kellie Stoddart (2)

Draft Bicycle Plan
57. Jim McGrath (2)
58. Charles Siegel
59. Wahid Amiri

Safety Concern
60. Carl Martineau

Berkeley Restaurant Week
61. Jeffrey Church

Flood Zone
62. Inetjalopy

Berkeley Properties
63. Eids TV

Community Mural
64. Angelina Record

Auditor Report
65. Steve Lipson

Middle Class
66. Tillymaui

Request for Targeted Strategic Action
67. Henry DeNero

MLK Safety Concern
68. Matthew Lewis

Chess Club
69. Jesse Sheehan

Round Park Letter
70. Andy Robson and the residents of Parkside Drive (2)

Planning Commission Meetings
71. Carol Denney

California Civilians
72. Director of Security

Letter
73. Eids TV

Cannabis Policies
74. Alisa A. Padon, Aurush J. Soroosh, Lynn Silver, Kiara Gonzalez Garcia, and Ryan Whitacre on behalf of the Getting it Right from the Start

Pedestrian Safety
75. Nadine Simons

Measure FF
76. Lisa Chow on behalf of Berkeleyans for Accessible Rights-of-Way

Zone Zero Fines
77. Isabelle Gaston (2)

UC Berkeley Class
78. Eli and Nava Marmur

Middle East Conflict
79. Nanette Lashuay
80. Suzanna Loper

Escrow Deposit
81. Oren (2)

Council Meeting Concern
82. Ben Buettner

SSBPPE Commission
83. Roberto Terrones on behalf of the Sugar-Sweetened Beverage Product Panel of Experts Commission

Electric Scooters
84. Robert Byler
85. Steven Schuyler
86. Gregory Kalkanis

City Tree Planting
87. Stephen Rosenbaum

Golden Gate Fields Inquiry
88. Roger Hooks

Private Citizen
89. Jeff W. (2)

Ohlone Greenway
90. Clifford Fred

Housing Concern
91. Bingo Fantasy Football (8)

Legal Education
92. Fatima Martos

Survey
93. John Craner

High Fire Area Workshops
94. Molly Brown

Forwards
95. Barbara Gilbert (2)
96. Russbumper (2)

Screenshots
97. Josh Atwood (2)

URL's
98. Russbumper (3)

Public Toilets
99. Heike Helmer

2138 Kittredge St.
100. Fatema Crane
101. Carol A. Bagshawe

Supplemental Communications and Reports

Items received by the deadlines for submission will be compiled and distributed as follows. If no items are received by the deadline, no supplemental packet will be compiled for said deadline.

- **Supplemental Communications and Reports 1**
  Available by 5:00 p.m. five days prior to the meeting.

- **Supplemental Communications and Reports 2**
  Available by 5:00 p.m. the day before the meeting.

- **Supplemental Communications and Reports 3**
  Available by 5:00 p.m. two days following the meeting.

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Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Mark Numainville, City Clerk

Subject: Minutes for Approval

RECOMMENDATION
Approve the minutes for the Council meeting of January 21, 2025 (regular).

CONTACT PERSON
Mark Numainville, City Clerk, (510) 981-6900

Attachments:
1. January 21, 2025 – Regular City Council Meeting

MINUTES

BERKELEY CITY COUNCIL MEETING

Tuesday, January 21, 2025
6:00 PM

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

ADENA ISHII, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI
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*To access the meeting remotely use this URL: https://cityofberkeley-info.zoomgov.com/j/1608180534. To request to speak, use the "raise hand" function in Zoom. To join by phone: Dial **1-669-254-5252 or 1-833-568-8864 (Toll Free)** and enter **Meeting ID: 160 818 0534.** To provide public comment, Press *9 and wait to be recognized by the Chair. To submit a written communication for the public record, email council@berkeleyca.gov.*

This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting, however, if you are feeling sick, please do not attend the meeting in person. The City Council may take action related to any subject listed on the Agenda.

Pursuant to the City Council Rules of Procedure and State Law, the presiding officer may remove, or cause the removal of, an individual for disrupting the meeting. Prior to removing an individual, the presiding officer shall warn the individual that their behavior is disrupting the meeting and that their failure to cease their behavior may result in their removal. The presiding officer may then remove the individual if they do not promptly cease their disruptive behavior. "Disrupting" means engaging in behavior during a meeting of a legislative body that actually disrupts, disturbs, impedes, or renders infeasible the orderly conduct of the meeting and includes, but is not limited to, a failure to comply with reasonable and lawful regulations adopted by a legislative body, or engaging in behavior that constitutes use of force or a true threat of force.

***Government Code Section 84308 (Levine Act)** - Parties to a proceeding involving a license, permit, or other entitlement for use are required to disclose if they made contributions over $500 within the prior 12 months to any City employee or officer. Parties and participants with a financial interest are prohibited from making more than $500 in contributions to a decisionmaker for the 12 months after the final decision is rendered on the proceeding. The above contribution disclosures and restrictions do not apply when the proceeding is competitively bid, or involves a personnel or labor contract. For more information, see Government Code Section 84308.*

Preliminary Matters

Roll Call: 6:16 p.m.

Present: Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii

Absent: Bartlett

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.*

Ceremonial Matters: None

City Manager Comments: None

City Auditor Comments: City Auditor Jenny Wong gave a presentation to Council on Item 29, Audit Follow-up Status Update.

Public Comment on Non-Agenda Matters: 10 speakers

Public Comment by Employee Unions: 1 speaker

Consent Calendar

Public Comment on Consent Calendar and Information Items Only: 34 speakers.

Action: M/S/C (Tregub/Blackaby) to adopt the Consent Calendar in one motion except as indicated.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

Recess Items

1. **Contract No. 105938-1 Amendment: Koefran Industries for Animal Disposal Services**
   From: City Manager
   Recommendation: Ratify the action taken by the City Manager during recess to extend and increase the current contract with Koefran Industries to provide weekly removal and disposal of deceased animals from the Berkeley Animal Care Services (BACS) through 2027, increasing the contract amount by $42,840 for a new total contract amount not to exceed $274,440.
   Financial Implications: See report
   Contact: Peter Radu, City Manager's Office, (510) 981-7000
   Action: Adopted Resolution No. 71,630–N.S.

2. **Contract Amendments: Contract No. 32000146 Vestis Services, LLC (formerly Aramark Uniform Services) for Uniforms and Laundering & Contract No. 32300013 Herc Rental Inc. for Rental Equipment and Products**
   From: City Manager
   Recommendation: Ratify the action taken by the City Manager during the City Council recess to increase Contract Nos. 32000146 and 32300013 by $500,000 each, for a not to exceed amount of $1,517,000 for contract #32000146 and $1,235,000 for contract #32300013.
   Financial Implications: See report
   Contact: Henry Oyekanmi, Finance, (510) 981-7300
   Action: Adopted Resolution No. 71,631–N.S.

3. **Contract No. 32400177 Amendment - Health Officer Coverage Contract – Dr. Lisa B. Hernandez**
   From: City Manager
   Recommendation: Adopt a Resolution authorizing the City Manager or his designee to amend Contract No. 32400177 with Dr. Lisa B. Hernandez to increase by $20,000 for a total not to exceed amount (NTE) of $120,000.
   Financial Implications: See report
   Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400
   Action: Adopted Resolution No. 71,632–N.S.

Recess Items

4. Contract: Rosas Brothers Construction for FY 2025 Curb Ramp Improvement Project (Specification No. 25-11679-C)
From: City Manager
Recommendation: Adopt a Resolution ratifying the action taken by the City Manager during recess: approving plans and specifications for the FY 2025 Curb Ramp Improvement Project; accepting the bid of Rosas Brothers Construction as the lowest, responsive and responsible bidder; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until project completion, in accordance with the approved plans and specifications in an amount not to exceed $2,683,395, which includes a 10% contingency.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300
Action: Adopted Resolution No. 71,633–N.S.

Consent Calendar

5. Contract No. 32400129 Amendment: IGM Technology Corporation for Digital Budget Book Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager, or their designee, to amend Contract No. 32400129 with IGM Technology Corporation to add $45,203 for the annual service fees and extend the contract term to January 31, 2027 with a not to exceed amount of $85,203.
Financial Implications: See report
Contact: Sharon Friedrichsen, Budget Manager, (510) 981-7000
Action: Adopted Resolution No. 71,634–N.S.

6. Contract with Records Xpress of California, LLC dba Access Information Management for Offsite Records Management Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to execute a new contract with Records Xpress of California, LLC. dba Access Information Management for off-site record management services. The new contract is for a five-year period beginning December 1, 2024 through November 30, 2029, for a total contract amount not to exceed $330,000.
Financial Implications: See Report
Contact: Mark Numainville, City Clerk, (510) 981-6900
Action: Adopted Resolution No. 71,635–N.S.

Consent Calendar

7. Contract: Julie W. Chang Public Artwork Commission for Willard Clubhouse
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to execute a contract and any necessary amendments with artist Julie W. Chang for an amount not to exceed $150,000 for a public art commission of a mosaic mural on the 18'-5" wide by 10' tall interior lobby wall located in the Willard Clubhouse at the southeast corner of Willard Park at 2720 Hillegass Avenue, between Derby Street and Stuart Street.
Financial Implications: See report
Contact: Eleanor Hollander, Economic Development, (510) 981-7530
Action: Adopted Resolution No. 71,636–N.S.

8. Acceptance of a $40,000 Grant from the National Endowment for the Arts to enhance Civic Arts Grant Programing
From: City Manager
Recommendation: Adopt a Resolution accepting a $40,000 grant from the National Endowment for the Arts (NEA). The grant will be used to support a Civic Arts grant program totaling $80,000 to be expended in Fiscal Year 2026 (FY26). This will be the second annual implementation of the new program designed to support the following types of arts and cultural programming in the City of Berkeley: Nonprofit (not-art specific) organizations located in the City of Berkeley to produce arts/cultural programming in the City of Berkeley led by a partnering arts organization or teaching artist; or Arts nonprofit organizations located in the Greater Bay Area (outside of Berkeley) to produce arts/cultural programming taking place in the City of Berkeley.
Financial Implications: See report
Contact: Eleanor Hollander, Economic Development, (510) 981-7530
Action: Adopted Resolution No. 71,637–N.S.

9. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on January 21, 2025
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.
Financial Implications: See report
Contact: Henry Oyekanmi, Finance, (510) 981-7300
Action: Approved recommendation.

Consent Calendar

10. Authorized Agent Update for FEMA Public Assistance
From: City Manager
Recommendation: Adopt a Resolution updating Resolution 69,682-N.S. authorizing the City Manager, Deputy City Managers, and AG Witt, LLC to engage for another three years with the Federal Emergency Management Agency and the Governor's Office of Emergency Services regarding grants applied for by the City of Berkeley for the FEMA-4482-DR-CA California COVID-19 Pandemic, as well as future disasters.
Financial Implications: See report
Contact: David Sprague, Fire, (510) 981-3473
Action: Adopted Resolution No. 71,638–N.S.

11. Contract No. 32100126 Amendment: Anjanette Scott LLC for Housing Consultant Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager or designee to execute an amendment to Contract No. 32100126 with Anjanette Scott LLC increasing the contract by $30,000 for consulting services in a total amount not to exceed $205,000, and extending the contract end date of June 30, 2026.
Financial Implications: See report
Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400
Action: Adopted Resolution No. 71,639–N.S.

12. Housing Trust Fund Recommendations for the Martin Luther King Jr. House Predevelopment Funds and Haste Street Rehabilitation Funds
From: City Manager
Recommendation: Adopt a Resolution:
1. Authorizing the City Manager or designee to disburse up to $320,000 of Insight Housing's loan for Martin Luther King, Jr. (MLK) House for predevelopment;
2. Reserving $500,000 for the Northern Community Land Trust's (NCLT) rehabilitation of 2207 Haste Street; and
3. Authorizing the City Manager or designee to execute all original or amended documents or agreements to effectuate these actions.
Financial Implications: See report
Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400
Action: Adopted Resolution No. 71,640–N.S.

Consent Calendar

13. Contract No(s) 32400134, 32400135 and 32400145 Amendment: As- Needed Derelict Vessel/Debris Removal and Disposal Services at the Berkeley Marina
From: City Manager
Recommendation: Adopt a Resolutions authorizing the City Manager to amend contract no. 32400134 with Lind Marine, contract no. 32400135 with Silverado Contractors, and contract no. 32400145 with Power Engineering to remove and dispose derelict and abandoned vessels at the Berkeley Marina by increasing the contract amount by $55,000 for a total not-to-exceed amount of $217,000, as well as extending the contract to September 30, 2026.
Financial Implications: See report
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
Action: Adopted Resolution No. 71,641–N.S. (Lind Marine), Resolution No. 71,642–N.S. (Power Engineering), and Resolution No. 71,643–N.S. (Silverado).

14. Contract No. 32100143 Amendment: ACTC/Caltrans for Construction of Gilman Street Sanitary Sewer Line Extension
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to amend Contract No. 32100143 with the Alameda County Transportation Commission (Alameda CTC/Caltrans) for the construction of a sanitary sewer line on Gilman Street (Project) to increase the contract amount by $86,000, for a total not-to-exceed contract amount of $806,000.
Financial Implications: See report
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
Action: Adopted Resolution No. 71,644–N.S.

15. Donation from the Friends of the Berkeley Animal Care Shelter
From: City Manager
Recommendation: Adopt a Resolution accepting a cash donation of up to $16,000 from the Friends of the Berkeley Animal Care Shelter to install new fencing for the animal training area at Aquatic Park.
Financial Implications: See report
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
Action: Adopted Resolution No. 71,645–N.S.

16. Contract - Benchmark Analytics for Early Intervention System Platform
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to execute a contract and any amendments with Benchmark Analytics (Contractor) to provide a cloud-based Early Intervention System (EIS) platform from February 3, 2025 to February 3, 2027, in an amount not to exceed $200,000 with an option to extend for two additional years, for a total contract amount not to exceed $400,000.
Financial Implications: See report
Contact: Jennifer Louis, Police, (510) 981-5900
Action: Adopted Resolution No. 71,646–N.S.

Consent Calendar

17. Contract No. 100692-5 Amendment: Serological Research Institute for DNA Testing Services
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to amend Contract No. 100692-5 and any necessary future amendments with Serological Research Institute (SERI) for the Police Department, increasing the contract amount by $2,000,000 for a total not to exceed $5,000,000 and expand the contract expiration two years from June 30, 2025 to June 30, 2027.
Financial Implications: See report
Contact: Jennifer Louis, Police, (510) 981-5900
Action: Adopted Resolution No. 71,647–N.S.

18. Contract No. 31900143 Amendment: Passport Labs Incorporated for a Parking Management System
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to amend Contract No. 31900143 and any necessary future amendments with Passport Labs Inc. to provide a Parking Management System for the Police Department, extending the term by another 18 months to August 4, 2027 and increasing this contract by $2,000,000 for a total not to exceed $7,365,545.
Financial Implications: See report
Contact: Jennifer Louis, Police, (510) 981-5900
Action: Adopted Resolution No. 71,648–N.S.

19. Agreements with Union Pacific Railroad for Reimbursement for Construction of Safety Improvements for Pedestrians, Cyclists and Vehicular Traffic at Addison and Bancroft railroad crossings
From: City Manager
Recommendation: Adopt a Resolution authorizing the City Manager to execute two reimbursement agreements and any amendments with Union Pacific Railroad Company (UPRR) to construct all necessary safety improvement elements at Addison Street and Bancroft Way railroad crossings subject to reimbursement by the City for actual costs incurred.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300
Action: Adopted Resolution No. 71,649–N.S.

Consent Calendar

20. Purchase Order: California Automotive Retailing Group dba Dublin Chevrolet for Two 2025 Chevrolet Blazer EV Police Pursuit Vehicles
From: City Manager
Recommendation: Adopt a Resolution satisfying the requirements of City Charter allowing the City to participate in Alameda County Purchase Order Contract, Master Contract No.901979 and authorizing the City Manager to execute a purchase order for two (2) 2025 Chevrolet Blazer EV Police Pursuit vehicles with California Automotive Retailing Group dba Dublin Chevrolet in an amount not to exceed $220,000.
Financial Implications: See report
Contact: Terrance Davis, Public Works, (510) 981-6300
Action: Adopted Resolution No. 71,650–N.S.

21. Appointment of Lisa Teague to the Mental Health Commission
From: Mental Health Commission
Recommendation: Adopt a Resolution approving the recommendation for appointment of Lisa Teague to the Mental Health Commission as a representative of the Special Interest Category, Consumer. Lisa Teague 3-year term will begin on January 22, 2025 and end on January 21, 2028.
Financial Implications: See report
Contact: Jamie Works-Wright, Commission Secretary, (510) 981-5400
Action: Adopted Resolution No. 71,651–N.S.

Council Consent Items

22. Seating Arrangement for the Council, Vice Mayor Term Revision, Mayoral Appointment to City/UC/Student Relations Committee, and 2025 Council Appointments
From: Mayor Ishii (Author)
Recommendation:
Rescind Resolution No. 71,393-N.S. and adopt a resolution that establishes the seating arrangement for the City Council.
Rescind Resolution 70,631-N.S. and adopt a Resolution establishing a schedule of appointments for the office of Vice-President of the Council at the discretion of the Mayor and for these appointments to be established at the first Council meeting in December every year or the proceeding month's council meeting after a new Mayor is sworn in.
Adopt a Resolution appointing Mayor Ishii as the alternate on the 4x6 City/UC/Student Relations Committee.
Adopt a Resolution approving the appointment of Council representatives to City Council Standing Policy Committees, Partnership Committees, Regional Bodies, and Liaisons to the City Boards and Commissions for a term ending on January 31, 2026 or until new appointments are made.
Financial Implications: See report
Contact: Adena Ishii, Mayor, (510) 981-7100

Action: M/S/Failed (Ishii/Lunaparra) to adopt Resolutions for Seating Assignments, Vice-President Rotation, 4x6 Committee Alternate, and Representative Appointments as revised in Supplemental Communications Packet #2 by Mayor Ishii to add the AC Transit-City of Berkeley Inter-Agency Liaison Committee appointments and further amended on the dais to switch the appointments of Councilmembers Bartlett and Blackaby on the Public Safety Committee and the Land Use Housing and Economic Development Committee.
Vote: Ayes – O'Keefe, Lunaparra, Ishii; Noes – Kesarwani, Taplin, Blackaby, Humbert; Abstain – Tregub; Absent – Bartlett

Action: Moved to Action Calendar. 0 speakers. M/S/Carried (Taplin/Kesarwani) to:
1. Adopt Resolution No. 71,652–N.S. (Seating Assignments)
2. Adopt Resolution No. 71,653–N.S. (Vice-President Rotation) amended to change the rotation order to be determined by length of tenure starting from longest to shortest and to break ties in tenure with the higher number of votes received in the previous election.
3. Adopt Resolution No. 71,654–N.S. (4x6 Committee Alternate)
4. Adopt Resolution No. 71,655–N.S. (Representative Appointments) as revised in Supplemental Communications Packet #2 by Mayor Ishii to add the AC Transit-City of Berkeley Inter-Agency Liaison Committee appointment; further amended on the dais to switch the appointments of Councilmembers Bartlett and Blackaby on the Public Safety Committee and the Land Use Housing and Economic Development Committee; and further amended on the dais to switch the appointments of

Councilmembers Humbert and Lunaparra on the Agenda & Rules Committee and the Land Use Housing and Economic Development Committee
Vote: Ayes – Kesarwani, Taplin, Tregub, Blackaby, Humbert; Noes – O'Keefe, Lunaparra, Ishii, Abstain – None; Absent – Bartlett.

Action Calendar – Public Hearings

23. California Municipal Finance Authority Bond Financing for 2001 Ashby Avenue
From: City Manager
Recommendation: Conduct a public hearing under the requirements of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and the Internal Revenue Code of 1986, as amended, and upon conclusion, adopt a Resolution approving the issuance of additional bonds, increasing the total amount of bonds to be issued for this project, by the California Municipal Finance Authority (CMFA) for the benefit of the 2001 Ashby Avenue rental housing development.
Financial Implications: See report
Contact: Scott Gilman, Health, Housing, and Community Services, (510) 981-5400

Public Testimony: The Mayor opened the public hearing. 0 speakers.
M/S/C (Ishii/Tregub) to close the public hearing.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

Action: M/S/C (Tregub/Taplin) to adopt Resolution No. 71,656–N.S.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

24. Changes to Select Recreation Facilities and Camps Program Fees
From: City Manager
Recommendation: Conduct a public hearing and upon conclusion, adopt a Resolution approving new fees and increasing current fees for select recreation programs and facility rentals; and rescinding Resolution No. 71,356 N.S. and all amendatory resolutions
Financial Implications: See report
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700

Public Testimony: The Mayor opened the public hearing. 2 speakers.
M/S/C (Ishii/Lunaparra) to close the public hearing.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

Action: M/S/C (Ishii/Lunaparra) to adopt Resolution No. 71,657–N.S.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

Action Calendar – Public Hearings

25. ZAB Appeal: 2708 Prince Street, Use Permit ZP2024-0024
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 ZP2024-0024 to demolish a single-family home and accessory building (garage), and construct a 2-story (24 feet in height) 3,118 square-foot duplex, and dismiss the appeal.
Financial Implications: See report
Contact: Jordan Klein, Planning and Development, (510) 981-7400

Action: Appeal withdrawn by the appellants. No action taken by the City Council. The decision of the Zoning Adjustments Board stands.

Council Action Items

26. Expanding Homeownership Opportunities for Middle-Income Earners
From: Councilmember Kesarwani (Author)
Recommendation: Refer to the City Manager to develop modifications to Berkeley Municipal Code Title 21 (Subdivisions) and refer to the City Manager and Planning Commission to develop modifications to Title 23 (Zoning) to enhance ownership opportunities for middle housing–in alignment with unanimous Council direction for a Middle Housing Ordinance and allowances under Chapter 783, Statutes of 2023 (S.B. 684, Caballero).
Financial Implications: See report
Contact: Rashi Kesarwani, Councilmember, District 1, (510) 981-7110
Action: Moved to Consent Calendar. Councilmembers Humbert, Bartlett, and Lunaparra added as co-sponsors. Approved recommendation as submitted in Supplemental Communications Packet #2 by Councilmember Kesarwani.

Council Action Items

27. Reaffirming Berkeley as a Sanctuary City
From: Councilmember Blackaby (Author), Mayor Ishii (Co-Sponsor), Councilmember Lunaparra (Co-Sponsor), Councilmember Taplin (Co-Sponsor)
Recommendation: Adopt a Resolution reaffirming Berkeley as a Sanctuary City and asking the City Clerk to send a copy to each City Department Director, requesting they inform their staff of the City's Sanctuary City standing and the City's policies and procedures regarding staff interaction with U.S. Immigration & Customs Enforcement (ICE) related to enforcement of federal immigration law.
Additionally, refer to the City Attorney to explore the possibility of pledging the City's legal support to help "sensitive sites" defend themselves against civil litigation.
Additionally, the Mayor will create a taskforce of Councilmembers, Community Based Organizations (CBOs), immigration and civil rights organizations, faith leaders, legal experts, school and university officials, and community activists to continually assess threats to Berkeley's immigrant communities and participate in the process of codifying Berkeley's Sanctuary protections through a city ordinance.
Financial Implications: See report
Contact: Brent Blackaby, Councilmember, District 6, (510) 981-7160
Action: Moved to Consent Calendar. Adopted Resolution No. 71,658–N.S. as revised in Supplemental Communications Packet #1 by Councilmember Blackaby.

28. Budget Referral: Curb Marking and Preventative Infrastructure Upgrades at High-Risk Intersections in Accordance with the New California Daylighting Law, AB 413
From: Councilmember Lunaparra (Author), Councilmember Humbert (Co-sponsor)
Recommendation: Refer $1,250,000 to the June budget process (FY26 Mid-Biennial Update) to provide the City of Berkeley Public Works Department with necessary funds for curb marking and preventative infrastructure upgrades in accordance with the new California Daylighting Law, AB 413.
Financial Implications: See report
Contact: Cecilia Lunaparra, Councilmember, District 7, (510) 981-7170
Action: Moved to Consent Calendar. Approved recommendation as revised in Supplemental Communications Packet #1 by Councilmember Lunaparra.

Information Reports

29. Audit Follow-up Status Update
From: Auditor
Contact: Jenny Wong, Auditor, (510) 981-6750
Action: Received and filed with the presentation submitted in Supplemental Communications Packet #1 by the City Auditor.

Public Comment – Items Not Listed on the Agenda - 2 speakers.

Adjournment

Action: M/S/C (Ishii/Blackaby) to adjourn the meeting in memory of those that have lost their lives in the fires in Southern California.
Vote: Ayes – Kesarwani, Taplin, Tregub, O'Keefe, Blackaby, Lunaparra, Humbert, Ishii; Noes – None; Abstain – None; Absent – Bartlett.

Adjourned at 8:46 p.m.

I hereby certify that the foregoing is a true and correct record of the City Council regular meeting held on January 21, 2025.

_____
Mark Numainville, City Clerk

Communications

Welcome
1. Roger Pritchard

Encampment Sweeps and Concerns
2. Elizabeth Mackenzie
3. Isabella J. Lake
4. Moni T. Law
5. Alex Stephens
6. Daisy Ryan
7. Lillian Robles
8. Russbumper (2)
9. Gale Smith
10. Peter Radu
11. Robb M Walker
12. Claudia Qi
13. Betty Chu
14. Jeff Morgan
15. Sam Gooch
16. Craig Nagasawa
17. Luther Miller

Porta Potties
18. Negeene Mosaed
19. Megan
20. Elania Nanopoulos
21. Ward Kanowsky
22. Sarah Donoghue
23. Summer Brenner (2)
24. Andrea Henson

25. Russbumper
26. Elana Auerbach
27. T. Freeman

Social Housing in SF
28. Summer Brenner

Measure BB Impact
29. Matt Wickland
30. James Williams

Restaurant/Food Facility Inspection
31. David Lerman

Local Violence Concerns
32. David Soffa

Harrison House
33. Avalonia Williams

Middle Class
34. A Successful Asian Woman

Agenda and Rules Committee Concern
35. Dorothea Dorenz

Gilman District
36. Jeff Morgan

Rose and Josephine
37. Wolfram Arnold
38. Christopher Riederer on behalf of The Neighbors of North Berkeley

Mural Concerns
39. Kathy Baylor
40. Judith Smith

UA Theater
41. Jon Winet
42. Lois Yuen
43. Summer Brenner
44. Jill Korte (2)
45. Barbara Hadenfeldt
46. Charlene M. Woodcock
47. Melanie Bowden
48. Jane Stillwater

Telegraph Holiday Fair
49. Laly Pena (2)

UC Berkeley Class
50. 6 Similarly worded form letters

Safety Concern
51. Carl Martineau

Berkeley Asphalt Operations
52. Pear Michaels (2)

Restroom Installation Concern
53. Nicola Spence

Potential Landmark Designation
54. Todd Williams (3)
55. Fatema Crane

Berkeley Community Meal
56. Rashi Kesarwani
57. Andrea Henson

Street Paving
58. Siddharth Kiyawat

Affordable Housing
59. Barbara Hadenfeldt

City Concern
60. Kaethe Weingarten
61. Molly Freeman

Haste & Dwight Repaving
62. The members of Telegraph For People

Safety Upgrades
63. Jordan Burns
64. Dave

Parking at Marina
65. Paul Kamen

3rd and Harrison
66. Maria Yates

Safety Concerns on Adeline St.

67. Nhan Nguyen Le, Teresa Clarke, and Bruce Curtis

Police Report
68. Adam Warlow

Women's March
69. Hali Hammer (2)

Cesar Chavez Park and Dogs
70. Mary Sears

Wood Burning
71. Clifford Fred

Tobacco Prevention Coalition
72. Carol Denney

Parking in the Red Zone
73. Jessica Phrogus

Local Culture
74. Summer Brenner

Civil Defense Structure
75. Adam Messinger

Tourist Attractions
76. John L. Haracz (2)

Transportation Manager Position Description
77. Ben Gerhardstein
78. Wahid Amiri

Waterfront Planning
79. Jim McGrath

Ohlone Greenway Project
80. Janice Schroeder

Hopkins St.
81. Bruce Buckelew

Winter News
82. Walter Wood

Black Repertory Group
83. Mona VScott (2)

3008 Russell at Domingo
84. Inetjalopy (5)

Electric Bikes and Scooters
85. Linda Franklin
86. Laarni Mathias (2)
87. Stephanie Lauren
88. Robert Byler
89. Jeff L (Veo)

Middle East Conflict
90. Russbumper (3)
91. Hollie Roizman

URL's
92. Russbumper (24)
93. Josh Atwood (3)
94. Glen

Forwards
95. Eid (13)
96. Josh Atwood (2)
97. Vivian Warkentin
98. Russbumper

Supplemental Communications and Reports 1

Item #26: Expanding Homeownership Opportunities for Middle-Income Earners
99. Zelda Bronstein
100. Toni Mester

Item #27: Reaffirming Berkeley as a Sanctuary City
101. Revised agenda material submitted by Councilmember Brent Blackaby

Item #28: Budget Referral: Curb Marking and Preventative Infrastructure Upgrades at High-Risk Intersections in Accordance with the New California Daylighting Law, AB 413
102. Supplemental agenda material submitted by Councilmember Cecilia Lunaparra

Item #29: Audit Follow-up Status Update
103. Supplemental agenda material submitted by Jenny Wong, City Auditor

Supplemental Communications and Reports 2

Item #22: Seating Arrangement for the Council, Vice Mayor Term Revision, Mayoral Appointment to City/UC/Student Relations Committee, and 2025 Council Appointments

104. Revised material, submitted by Mayor Ishii

Item #25: ZAB Appeal: 2708 Prince Street, Use Permit ZP2024-0024
105. Robert Riemer and Sheila Moran

Item #26: Expanding Homeownership Opportunities for Middle-Income Earners
106. Revised material, submitted by Councilmember Kesarwani
107. Alfred Twu
108. John S. Robey
109. David Cohn
110. Isabelle Gaston (2)
111. Tamara Abrams
112. Jim Haydel
113. Helaine Kaplan Prentice
114. Cindy Larson
115. Karen and Robert Holtermann
116. Yen Trac
117. Jennifer Lombardi (2)
118. Wendy Pulling
119. Bruce A. Smith
120. Dante Lombardi
121. Jack Kurzweil
122. Rochelle Blumenfeld
123. Milton McClaskey and Audrey Spector
124. Bob and Irene Byrne
125. Lee Bishop
126. 9 Substantially Similar Form Letters

Item #27: Reaffirming Berkeley as a Sanctuary City
127. Peace and Justice Commission
128. Grace Morizawa
129. Grant Thompson
130. Carol Rothman
131. Adrianne Bank

Item #28: Budget Referral: Curb Marking and Preventative Infrastructure Upgrades at High-Risk Intersections in Accordance with the New California Daylighting Law, AB 413
132. Liza Lutzker, on behalf of Walk Bike Berkeley

Supplemental Communications and Reports 3

Item #26: Expanding Homeownership Opportunities for Middle-Income Earners
99. Elizabeth Dodge
100. Kathleen M. Crandall
101. Micky Duxbury
102. Joey Consos
103. Phyllis Mace
104. 34 Substantially similar form letters

Item #27: Reaffirming Berkeley as a Sanctuary City

105. Jessica Montes
106. Julie Twichell
107. Russbumper

Item #29: Audit Follow-up Status Update

108. Caitlin Palmer on behalf of the City Auditor's office

Miscellaneous Communications

109. Eid

02

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Eleanor Hollander, Economic Development Manager

Subject: Grant Application: National Endowment for the Arts Grant ($150,000)

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or their designee to submit a grant application to the National Endowment for the Arts (NEA) to receive up to $150,000 for a Civic Arts grant program, to accept the grant if awarded; and to execute any resulting grant agreements and any amendments. If received, the funds would support the *Arts Programs Grant* category and would be regranted to nonprofit organizations for arts and cultural programming within the City of Berkeley in Fiscal Year 2027.

FISCAL IMPACTS OF RECOMMENDATION

The NEA requires a one-to-one match of City funds for this grant request of up to $150,000 if awarded in Fiscal Year 2027. If awarded the full amount requested from the NEA, the City would receive $150,000 in federal funds to combine with the required City match of $150,000 to support the *Arts Programs Grant* category (totaling $300,000) to be expended in FY27. These federal grant funds would enable the City of Berkeley to leverage local funds to provide increased support for arts and cultural activities within the City of Berkeley.

CURRENT SITUATION AND ITS EFFECTS

The City of Berkeley has been awarded funding from the NEA in two consecutive cycles, a $30,000 award for FY25 and $40,000 award for FY26, to launch and then support the continuation of the new Civic Arts grant program, known as the *Arts Programs Grant* category. With the success of the second year's application to the NEA, represented by the $10,000 award increase over the previous year, the maximum amount of $150,000 is again requested from the NEA to support the continuation of the new Civic Arts Grants funding category – *the Arts Program Grants* – for a third year.

The *Arts Program Grants* aim to (1) foster cross-sector collaborations and opportunities for non-arts organizations to hire arts and cultural workers or partner with Berkeley-based arts organizations for programming, and (2) offer the Berkeley community the opportunity to engage in Greater Bay Area programming offered by non-Berkeley arts organizations taking place in Berkeley. In FY27, *Arts Program Grant* Awards will be up

to $5,000 each for successful applicants to cover eligible program-related expenses. If funded by the NEA, this third year of the *Arts Program Grants* would be administered in conjunction with the standard FY27 Civic Arts Grants process.

BACKGROUND
Funding was requested from the NEA in 2023 in order to establish a new "Arts Programs Grant" category to address an identified gap in the Civic Arts Grants offerings and better support a wide range of arts and cultural activities taking place in Berkeley.

The Civic Arts Grants, have an annual budget of approximately $700,000 from the City's General Fund (011), and annually the Civic Arts Grants Program awards funding in three distinct categories: 1) Individual Artist Projects; 2) Community Festivals, and 3) General Operating Support. With funding from the NEA along with the local match, the City of Berkeley has established a fourth Civic Arts Grants funding category – the *Arts Programs Grant* – administered in conjunction with the annual Civic Arts Grants process. A decision of this current application for $150,000 (to be submitted in late February 2025) is anticipated by November of 2025.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS
There are no environmental sustainability or climate impacts associated with this recommendation.

RATIONALE FOR RECOMMENDATION
Accepting federal funding from the National Endowment for the Arts would help the City accomplish one of the five high-level goals articulated in The City of Berkeley's Arts and Culture Plan (2018-2027): "***Increase Investment in a Vibrant Arts Community****, Strengthen and support Berkeley's inclusive and culturally rich arts sector by expanding funding and marketing opportunities for a broader array of arts organizations*." Additionally, applying for these funds aligns with the City of Berkeley's fiscal policy to leverage City funds to secure matching State and Federal resources for the City of Berkeley.

ALTERNATIVE ACTIONS CONSIDERED
No alternatives were considered.

CONTACT PERSON
Hilary Amnah, Office of Economic Development, 510-981-7539

Attachment:
1: Resolution

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

GRANT APPLICATION: REQUESTING $150,000 FROM THE NATIONAL ENDOWMENT FOR THE ARTS (NEA) TO SUPPORT ACCESS TO ARTS AND CULTURAL PROGRAMMING IN THE CITY OF BERKELEY BY CONTINUING THE CIVIC ARTS GRANTS PROGRAM FUNDING CATEGORY KNOWN AS THE *ARTS PROGRAM GRANTS*.

WHEREAS, the *Arts and Culture Plan for the City of Berkeley (2017-18)* includes the goal of increasing investment in a vibrant arts community by expanding funding and marketing opportunities for a broader array of arts organizations; and

WHEREAS, in 2023, the Civic Arts Program identified a gap in its grant program offerings through data analysis and community feedback on program-based funding; and

WHEREAS, an *Arts Program Grant* category supports the City's ability to create increased access to arts and cultural programming taking place in Berkeley; and

WHEREAS, federal funding from the National Endowment for the Arts is available to local arts agencies for sub-granting purposes; and

WHEREAS, the City is implementing the second year of the *Arts Program Grants* in Fiscal Year 2026 with $40,000 in matching funds from the NEA for a total grant program amount of $80,000; and

WHEREAS, to continue a third year of the *Arts Program Grant* category in Fiscal Year 2027 the grant application will ask for an increased total grant program amount of $300,000 to be supported with $150,000 in matching funds from the NEA; and

WHEREAS, the City has identified the required 1:1 match of up to $150,000 in the General Fund and/or the Art(s) Funds for Fiscal Year 2027 to be appropriated in FY27 if the grant is received; and

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or their designee is authorized to submit a grant application to the National Endowment for the Arts to receive up to $150,000 for the above purpose; accept the grant if awarded; and execute any resultant agreements and amendments.

03

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Henry Oyekanmi, Director, Finance

Subject: Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on February 25, 2025

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.

FISCAL IMPACTS OF RECOMMENDATION

Total estimated cost of items included in this report is **$200,000**

PROJECT	Fund	Source	Amount
Underground and Aboveground Tank Monitoring, Inspection and Maintenance	672 101 011	EQ MAINT LIB-TAX GEN FUND	$200,000
Total:			**$200,000**

CURRENT SITUATION AND ITS EFFECTS

On May, 6, 2008, Council adopted Ordinance No. 7,035-N.S. effective June 6, 2008, which increased the City Manager's purchasing authority for services to $50,000. As a result, this required report submitted by the City Manager to Council is now for those purchases in excess of $100,000 for goods; and $200,000 for playgrounds and construction; and $50,000 for services. If Council does not object to these items being sent out for bid or proposal within one week of them appearing on the agenda, and upon final notice to proceed from the requesting department, the IFB (Invitation for Bid) or RFP (Request for Proposal) may be released to the public and notices sent to the potential bidder/respondent list.

BACKGROUND

On May 6, 2008, Council adopted Ordinance No. 7,035-N.S., amending the City Manager's purchasing authority for services

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS
The Finance Department reviews all formal bid and proposal solicitations to ensure that they include provisions for compliance with the City's environmental policies. For each contract that is subject to City Council authorization, staff will address environmental sustainability considerations in the associated staff report to City Council.

RATIONALE FOR RECOMMENDATION
Need for the goods and/or services.

ALTERNATIVE ACTIONS CONSIDERED
None.

CONTACT PERSON
Roopreet Walia-Soorma, Senior Buyer, Finance, 510-981-7311

Attachments:
1. Underground and Aboveground Tank Monitoring, Inspection and Maintenance

Note: Original of this attachment with live signature of authorizing personnel is on file in General Services.

SPECIFICATION NO.	DESCRIPTION OF GOODS / SERVICES BEING PURCHASED	APPROX. RELEASE DATE	APPROX. BID OPENING DATE	INTENDED USE	ESTIMATED COST	BUDGET CODE TO BE CHARGED	DEPT. / DIVISION	CONTACT NAME & PHONE
25-11712-C	Underground and Aboveground Tank Monitoring, Inspection and Maintenance	12/1/2024	1/1/2025	Underground storage tank(s) monitoring, inspection and maintenance. Including but not limited to, monitoring certification, line leak detection, secondary containment testing and installment of new monitoring system.	$200,000.00 over three years, with option to extend by two years	672-54-626-722-0000-000-474-624110-$60000 101-22-242-272-0000-000-463-612990-$5000 011-72-742-835-0000-000-422-613120-$5000	Public Works / Equipment Maintenance Library Fire Department	Tucker Brofft 510-981-5375 Erika Barros 510-981-6462 Robert Hernandez 510-981-6644
Dept Total					**$200,000**			
TOTAL					**$200,000**			

04

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: David Sprague, Fire Chief

Subject: Contract - Forster & Kroeger Landscape Maintenance for Chipping Services

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or his designee to execute a contract and any amendments, with Forster & Kroeger Landscape Maintenance to provide Chipping Services for three years from March 1, 2025 until February 29, 2028 with the option to extend for two additional one-year terms in the amount not to exceed $1,400,000.

FISCAL IMPACTS OF RECOMMENDATION

The FY25-26 Adopted Budget includes funding for vegetation management and fuel reduction efforts from a variety of sources that is available for use toward the cost of chipping services within the Fire Department (General Fund, Measure FF and/or UC Settlement Fund). The Fire Department may pursue grants to offset the cost of this service and upon grant approval, these funds would be added to the Department budget through the Annual Appropriation Ordinance (AAO) process.

CURRENT SITUATION AND ITS EFFECTS

The City conducted RFP Specification No. 25-11697-C with proposals due no later than January 7, 2025. The City received four proposals in response to this RFP. The selection committee, composed of subject matter experts from the Fire Department and the Department of Parks, Recreation, and Waterfront, met to evaluate the proposals on January 22, 2025. The criteria used to rate the proposals were Project Approach (20%), Expertise and References (40%), Cost (20%), and Relevant Experience (20%). Forster and Kroeger (F&K) was selected as the highest scoring vendor. The Contractor has signed the City's Nuclear Free Zone Disclosure Form, Oppressive States Compliance Statement, Living Wage Certification Form, and the Sanctuary City Compliance Statement.

The citywide chipping program is one way the City supports residents across Fire Zones 1, 2 and 3 to remove vegetation from their properties and create defensible space. The chipping program removed over 3,000 cubic yards of vegetative fuel load from Berkeley homes in 2024 alone.

F&K was selected as the leading vendor that has adequate staff and equipment to service Berkeley and years of experience working directly with the event-based, curbside chipping software used by the City. Additionally, F&K has the following certifications and licenses: State Contractor's License with a C-27 certification (#748791); Small Business (Micro) certification, with a 721029 classification, by the California Department of General Services (#18296); certification as a State Minority Business Enterprise with the California Department of Transportation (#31098); registration with the California Department of Industrial Relations (#1000027030).

BACKGROUND

F & K responded to a Request for Proposal and was selected after submitting the most competitive bid. All chipping contractors in the area were eligible to bid on the project, with submittals due by January 7, 2025. Requirements for a complete bid offer included the ability to provide at least two, 3-person crews for work between Monday and Thursday over a 28-week period between March and December. Contractors were also required to submit detailed equipment lists that included multiple sized box trucks ranging from 14 to 24 cubic yard capacity as well as being able to supply their own chippers. This was necessary to ensure that there was enough equipment available to provide daily service and access to small roads in the hills.

All contractors were required to supply proof of insurance and liability coverage and agree to an onsite inspection of their service yard and equipment.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

This program will support the removal and thinning of hazardous vegetation which will create more defensible space and help prevent a wildfire from becoming an urban structural conflagration. A smaller wildfire will generate a smaller volume of smoke if one does ignite in or adjacent to the City. The chipped vegetation is processed as green waste by the City of Berkeley transfer station.

RATIONALE FOR RECOMMENDATION

It is critically important that this program and contractor are in place by late Winter 2025 for a successful delivery in Spring 2025. This contract will provide up to four-seasons of service from F & K who has executed, and never had cancelled, similar contracts with neighboring agencies.

ALTERNATIVE ACTIONS CONSIDERED

Purchasing the necessary apparatus, equipment and hiring numerous part-time employees required to run the program. This would be significantly more expensive and require a degree of management and supervision that the City does not have staff to fulfill.

CONTACT PERSON

David Sprague, Fire Chief, (510) 981-3473

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

CONTRACT - FORSTER & KROEGER LANDSCAPE MAINTENANCE FOR CHIPPING SERVICES

WHEREAS, the City conducted RFP Specification No. 25-11697-C with proposals due no later than January 7, 2025, and

WHEREAS, the City received four proposals and a selection committee composed of subject matter experts from the Fire Department and the Department of Parks, Recreation, and Waterfront met to evaluate the proposals, and

WHEREAS, Forster and Kroeger (F&K) was selected as the highest scoring vendor.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute a contract and any amendments with Forster & Kroeger Landscape Maintenance to provide Chipping Services for two years from May 1, 2025 until April 30, 2027 with the option to extend for two additional one-year terms in an amount not to exceed $1,400,000.

Office of the City Manager

05

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Scott Gilman, Director, Health, Housing, and Community Services

Subject: Contract No. 32300185 Amendment: JSI Research & Training Institute, Inc. for Community Health Assessment, Innovation, and Improvement Plan Consultant

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or his designee to execute an amendment to Contract No. 32300185 with JSI Research & Training Institute, Inc increasing the contract by $25,000 to serve as a Community Health Assessment, Innovation, and Improvement Plan consultant for the City of Berkeley's Health, Housing, and Community Services Department (HHCS) in a total amount not to exceed $274,413 with a contract end date of November 1, 2025.

FISCAL IMPACTS OF RECOMMENDATION

The total not-to-exceed amount of this contract will be $274,413. Resources for the amended contract will be provided by the Future of Public Health grant (Fund 302) received by the City of Berkeley's HHCS department from the California Department of Public Health.

CURRENT SITUATION AND ITS EFFECTS

The City currently has a contract with JSI Research & Training Institute, Inc. to serve as a consultant on the Community Health Assessment, Innovation, and Improvement Plan for the City of Berkeley's HHCS Department. These consultant services include conducting a landscape scan for partnership opportunities to reduce chronic racial disparities and improve Berkeley's public health strategy, conduct a Community Health Assessment (CHA), and develop a Community Health Improvement Plan (CHIP).

The current contract with JSI Research & Training Institute, Inc. expires on May 1, 2025 and this item requests that it be extended to November 1, 2025 to allow for completion of contract deliverables. The contract was approved by Council on April 11, 2023 with Resolution No. 70,754-N.S.

The HHCS Department's health equity work, which includes completion of the Community Health Assessment and Improvement Plan, is a priority project under the

Department's Strategic Plan for Health Equity, advancing our goal to champion and demonstrate social and racial equity and achieving health equity.

BACKGROUND

The State of California encourages all public health jurisdictions to complete a CHA and a CHIP on a regular basis. These are prerequisites for public health department accreditation, which has been discussed as a state priority.

JSI Research & Training Institute, Inc. entered into the current contract with the City on May 1, 2023 to complete the City's CHA and develop the City's CHIP. They have recently completed the CHA phase of the project, which involved the creation of a community steering committee, development and implementation of a community survey, and community focus groups. The CHA has been completed and JSI has initiated the CHIP phase.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

There are no identifiable environmental effects or opportunities associated with the action requested in this report.

RATIONALE FOR RECOMMENDATION

The process of completing the CHA took more time in identifying and working with the Community Steering Committee and completing the report. It is anticipated that more hours will be needed to complete the Community Health Improvement Plan phase.

In addition, HHCS staff has asked JSI Research & Training Institute, Inc. to provide support to the department conducting outreach with HHCS leadership and other city leaders to present and discuss the CHIP plans. They have also been asked to assist the department in engaging the Alameda County's Managed Care Plans (MCP) to identify ideas for using the resources that the MCPs have dedicated to this process.

ALTERNATIVE ACTIONS CONSIDERED

If the Department is unable to amend and extend the contract with JSI Research & Training Institute, Inc. completion of the CHIP is unlikely, or will be delayed.

CONTACT PERSON

Kellie Knox, Future of Public Health Coordinator, HHCS (510) 981-5301

Attachments:

1: Resolution

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

CONTRACT NO. 32300185 AMENDMENT – JSI RESEARCH & TRAINING INSTITUTE, INC. FOR COMMUNITY HEALTH ASSESSMENT, INNOVATION, AND IMPROVEMENT PLAN CONSULTANT

WHEREAS, on May 1, 2023, the Health, Housing and Community Services Department entered into a contract with JSI Research & Training Institute, Inc. (Contract No. 323000185) serve as a consultant on the Community Health Assessment, Innovation, and Improvement Plan for the City of Berkeley's Health, Housing, and Community Services (HHCS); and

WHEREAS, Contract No. 323000185 with JSI Research & Training Institute, Inc. was approved by Council on April 11, 2023 with Resolution No. 70,754-N.S; and

WHEREAS, JSI Research & Training Institute, Inc. has partially completed this contract and is requesting more staff hours and more time to complete it; and

WHEREAS, JSI Research & Training Institute, Inc. has provided necessary services through the completion of the Community Health Assessment and continues their work with the Community Health Implementation Plan.

NOW THEREFORE, BE IT RESOLVED that the Council of the City of Berkeley approves a resolution authorizing the City Manager or designee to amend Contract No. 32300185 with JSI Research & Training Institute, Inc. for consultation to add $25,000 in Future of Public Health grant funding (Fund 302), for a total not to exceed amount of $274,413, and extend the contract to November 1, 2025.

BE IT FURTHER RESOLVED that the City Manager or his designee, is hereby authorized to execute all original or amended documents or agreements to effectuate this action; a signed copy of said documents, agreements and any amendments will be kept on file in the Office of City Clerk.

Office of the City Manager

06

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Monica Walker, Interim Director of Human Resources

Subject: Berkeley Police Association – Amendments to Retiree Medical Benefits

RECOMMENDATION

Adopt a Resolution approving a side letter between the City of Berkeley and the Berkeley Police Association amending Sections 32.3, 32.5, and 32.6 of the City's Memorandum of Understanding (MOU) with the union to expand and clarify existing provisions that pertain to retiree health benefits.

FISCAL IMPACTS OF RECOMMENDATION

There are no new fiscal impacts associated with the recommendation, which expands and clarifies existing MOU language.

CURRENT SITUATION AND ITS EFFECTS

The proposed amendments are a rewrite of the retiree health sections of the MOU within the Retiree Medical Trust structure that already exists. They merely add clarifying language and specify the manner in which payments will be processed. (The agreement defers to negotiations of a successor agreement [in 2026] a dispute as to whether the cap extends to Medicare-eligible retirees.)

The only new provision in the side letter is a specification that BPA members with original hire dates prior to June 30, 2024 will retain their original hire date for purposes of retiree health benefits if they separate from service but are subsequently reinstated. This provision was added as a (re)hiring incentive in response to an actual situation that recently materialized.

BACKGROUND

In labor negotiations with BPA in 2023, the City negotiated a cap on future retiree medical benefits in order to mitigate its long-term unfunded liabilities. Long-term savings from reductions in the City's unfunded liabilities for retiree health were estimated to be as high as $13.66 million by an actuarial study.

Key principles of the agreement were incorporated into the City's contract with BPA and approved in September of that year. The parties expressly specified in the MOU, however, that they would meet and confer to amend the retiree medical benefits section "to reflect the terms of the agreement in principle" in greater detail.

The current recommendations, which emanate from the aforementioned "meet and confer" process, were considered by Council in closed session on February 3, 2025.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS
There are no identifiable environmental effects or opportunities associated with the subject of this report.

RATIONALE FOR RECOMMENDATION
The amendments provide needed clarity to the structure and implementation of retiree health benefits negotiated by the City and BPA in 2023; in this regard, they comply with MOU language which required the parties to meet and confer to amend the retiree medical benefits section of the contract "to reflect the terms of the agreement in principle" in greater detail.

ALTERNATIVE ACTIONS CONSIDERED
None.

CONTACT PERSON
Monica Walker, Interim Director of Human Resources, (510) 981-6807.

Attachments:
1: Resolution and Exhibit A – Side Letter with Berkeley Police Association – Amendments to Retiree Medical Benefits

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

BERKELEY POLICE ASSOCIATION – AMENDMENTS TO RETIREE MEDICAL BENEFITS

WHEREAS, in labor negotiations with Berkeley Police Association (BPA) in 2023, the City negotiated a cap on future retiree medical benefits in order to mitigate its long-term unfunded liabilities; and

WHEREAS, key principles of the agreement were incorporated into the City's contract with BPA and approved in September of that year; and

WHEREAS, the parties expressly specified in the Memorandum of Understanding (MOU) that they would meet and confer to amend the retiree medical benefits section "to reflect the terms of the agreement in principle" in greater detail; and

WHEREAS, the parties have met and conferred, and have drafted amendments that constitute a rewrite of the retiree health sections of the MOU within the Retiree Medical Trust structure that already exists; and

WHEREAS, the amendments add clarifying language and specify the manner in which payments will be processed; and

WHEREAS, the agreement defers to negotiations of a successor agreement (in 2026) a dispute as to whether the cap extends to Medicare-eligible retirees; and

WHEREAS, the only new provision in the side letter is a specification that BPA members with original hire dates prior to June 30, 2024 will retain their original hire date for purposes of retiree health benefits if they separate from service but are subsequently reinstated (which provision was added as a (re)hiring incentive);

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is hereby authorized to execute a side letter with Berkeley Police Association, which is attached hereto, made a part hereof and marked Exhibit A, to amend Sections 32.3, 32.5, and 32.6 of the City's contract with the union and to detail and clarify the structure and implementation of retiree health benefits;

BE IT FURTHER RESOLVED that a fully executed original of said side letter is filed in the Office of the City Clerk.

Exhibit

A: Side Letter with Berkeley Police Association – Amendments to Retiree Health Benefits

Exhibit A

This Amendment No. [__] is entered into between City of Berkeley (the "City") and the Berkeley Police Association ("BPA") (collectively, the "Parties"), and is effective as of the date approved by the Berkeley City Council.

Whereas, the current Memorandum of Understanding ("MOU") between the Parties effective July 1, 2023 to June 30, 2026 provides in Section 32.6 that: "The parties shall meet and confer promptly following adoption of this Agreement by the City Council to amend Section 32 to reflect the terms of the agreement in principle stated in this Section 32.6.", and

Whereas, the Parties entered into a "Side Letter Agreement" ("Side Letter") attached hereto as Exhibit [__] for purposes of clarifying the rights of certain members to the retiree medical benefits enumerated therein, and

Whereas, the Parties have met and conferred and reached an agreement on the matters set forth in MOU Sections 32.3,32.5 and 32.6 and the Side Letter.

THEREFORE, the Parties agree that the MOU is amended to replace the current Sections 32.3, 32.5 and 32.6 in ~~its~~ their entirety with the following provisions as a new Exhibit [___], which is incorporated by reference and given full effect as if originally included in the MOU:

32.3 Retiree Health Premium Assistance Coverage

The City will cease making contributions to an Internal Revenue Code Section 401(a) plan for the purpose of paying the retiree health care benefit provided under this Section for any employees hired on or after that date who would otherwise have qualified for benefits under the terms described in this Section 32. Any employees hired on or after September 19, 2012, as well as any current employees who retire on or after such date, shall receive the benefits described in this Section 32.3 as a benefit provided by the City under a newly established retiree health premium assistance plan and related trust agreement. Any benefits payable to employees who have retired prior to such date or to their surviving spouses may continue to be made under the Internal Revenue Code Section 401(a) plan that was established for such purpose to the extent benefits are not provided for such retirees under the new retiree health premium assistance plan. Under the newly established retiree health premium assistance plan, benefits will be the same as previously provided under the 401(a) plan, except for different eligibility criteria and that payment under the 401(a) plan was made directly to the retiree or their surviving spouse, and under the new plan the City will pay the retiree health premium assistance amount to the ~~provider~~ retiree's individual PORAC Retiree Medical Trust account who is providing retiree health coverage to the retiree or their surviving spouse (if spouse is eligible per Section 32.5.2.

Upon the death of the retiree, the amount provided to an eligible surviving spouse will be an amount equivalent to the appropriate percentage of the single party active Kaiser monthly medical insurance premium amount, which will continue until the death of the eligible surviving spouse. The maximum amount the City shall pay towards coverage for the retiree or their surviving spouse, either directly or to ~~a health care provider~~ the retiree's individual PORAC Retiree Medical Trust account on their behalf, is based on the following schedule set forth in Section 32.5 et seq.

32.5 Retiree Medical Coverage

For those employees who retire on or after September 19, 2012 and effective immediately upon the date of retirement, the City will assist in the payment of medical insurance premium payments for the retiree and/or surviving spouse/domestic partner by making payments directly to the ~~medical insurance provider~~ retiree's individual PORAC Retiree Medical Trust account. Retirees shall be permitted at their discretion to enroll in non-City sponsored health plans. ~~In that event, the City shall make medical insurance premium payments directly to the health insurance provider equal in value to the City sponsored health plan. The City shall not be responsible for any excess cost differentials associated with the direct payment of premiums to non-City sponsored plans. The City will only make payments through its third-party administrator to provide medical insurance premium payments for an individual plan and will not make payments for a group plan.~~ The retiree and/or surviving spouse or domestic partner will pay the administrative set up fee and the monthly administrative fee established by the PORAC Retiree Medical Trust. ~~the third-party administrator.~~ No cash payments will be paid directly to the retiree and/or the retiree's spouse/domestic partner. There shall be no cash in lieu payments made under this benefit.

32.5.1 For employees that retire on or after September 19, 2012 the City will discontinue the current practice of paying directly to the retiree the cash equivalent of the active two-party Kaiser rate. However, for those employees who retired before September 19, 2012, the City shall continue to make cash payments to these retirees under the Agreement provisions in effect at the time of their retirement.

32.5.2 Qualifying Spouse or Domestic Partner. A retiree will receive the appropriate percentage of two-party coverage for a spouse or domestic partner that meets any of the following criteria ("Qualifying Spouse"): (1) the spouse or domestic partner of the retiree at the time of retirement; (2) for a retiree that did not have a spouse or domestic partner at the time of retirement, the initial spouse or domestic partner a retiree adds to their health plan after retirement; or, (3) for any retiree, a subsequent spouse or domestic partner if the previous spouse or domestic partner died. For all times that a retiree does not have a Qualifying Spouse, the City will only pay the appropriate percentage of single party premium for that retiree. If a retiree predeceases a Qualifying Spouse, the City will continue to pay the appropriate percentage of single party premium for that individual.

32.5.3 In the event that an employee retires and initially elects not to utilize the Berkeley retiree medical plan as described above, the employee may opt back into the Berkeley retiree medical plan during any open enrollment period with either single only coverage or two-party coverage, if applicable. Once the employee opts into the Retiree Health Premium Assistance Coverage medical plan, the payments will be paid directly to the retiree's individual RMT account.

32.5.4 The City will comply with any lawfully executed Qualified Domestic Relations Order (QDRO) but under no circumstances will it provide retiree medical benefits to more than two persons.

32.5.5 In order to be eligible for the Retiree Health Premium Assistance Coverage a "Retiree" must meet all of the following criteria (note, this is different criteria than used for previous plans):

32.5.5.1 A person who is vested in CalPERS, and

32.5.5.2 Has reached the age of 50, and,

32.5.5.3 Has retired from the City at age 50 or thereafter, and

32.5.5.4 Has applied for and is receiving a pension from CalPERS at the time of retirement.

However, a "retiree" is also anyone, regardless of age, who receives a disability retirement benefit, either industrial disability or non-industrial disability, from CalPERS.

32.5.6 The maximum amount the City will contribute toward the payment of medical insurance premiums is based on the employee's years of service as a sworn member of the Berkeley Police Department at time of retirement. The retiree must have at least 10 years of service as a sworn member of the Berkeley Police Department to qualify for this benefit.

32.5.7 The maximum amount the City will contribute toward payment of the medical premium is based on the following schedule:

Years of Service	Percentage to be Paid by the City
10 Years of Service	City to provide medical premium assistance equal to 25% of either the single party or two-party amount as determined below

15 Years of Service	City to provide medical premium assistance equal to 50% of either the single party or two-party amount as determined below
20 Years of Service	City to provide medical premium assistance equal to 100% of either the single party or two-party amount as determined below

There will be no pro-rating of years of service.

32.5.8 The City will assist the retiree and/or surviving spouse/domestic partner in the payment of the medical insurance premium as follows:

32.5.9 Early Retirees who are not Medicare Eligible: Beginning September 19, 2012, each month after the employee retires, the City will pay ~~the health care service provider~~ directly into the retiree's individual PORAC Retiree Medical Trust account an appropriate percentage based on the chart in Section 32.5.7 of an amount equal to $1,200.00 per month for two party coverage for the retiree and a qualifying spouse/domestic partner or $600.00 per month for single party coverage. Upon the death of either the retiree or the retiree's spouse, the City will only pay the appropriate percentage based on the chart in Section 32.5.7 of the single party rate to the ~~provider~~ retiree's individual PORAC Retiree Medical Trust account on behalf of the surviving retiree or spouse/domestic partner. If there is no spouse/domestic partner at the time of retirement, the City shall only pay the single party rate. The retiree and/or surviving spouse/domestic partner will be responsible for payment of the difference between the amount the City contributes toward payment of the premium and the actual premium cost. ~~The funds for this difference will come from the retirees CalPERS retirement account and the retiree must authorize such withdrawal of funds.~~

Beginning July 1, 2013 and effective each July 1 thereafter, the base rates the City contributes toward payment of the premium amount described in the preceding paragraph shall be increased by either the amount Kaiser increases the early retiree plan medical premium for that year, or 6%, whichever is less. The retiree and/or surviving spouse/domestic partner shall pay the difference between the amount the City contributes toward payment of the premium and the actual premium cost.

32.5.10 Retirees who reach Medicare eligibility age: Beginning September 19, 2012, for retirees who reach Medicare eligibility age, the City will pay the health care service provider the appropriate percentage based on the chart in Section 32.5.7 of an amount equal to $765.80 per month for two-party coverage for the retiree and spouse/domestic partner or $382.90 month for single party coverage. Upon the death of either the retiree or spouse/domestic partner, the City will only pay the appropriate percentage based on the chart in Section 32.5.7 of the single party rate to the health care service provider on behalf of the surviving retiree or spouse/domestic partner. If there is no spouse at the time of retirement, the City shall only pay the single party

rate. The retiree and/or surviving spouse/domestic partner will be responsible for payment of the difference between the amount the City contributes toward payment of the premium and the actual premium cost. The funds for this difference will come from the retirees CalPERS retirement account and the retiree must authorize such withdrawal of funds.

Beginning July 1, 2013 and each July 1 thereafter, the base rates the City contributes toward payment of the premium amount described in the preceding paragraph shall be increased by either the amount Kaiser increases the retiree medical premium for that year, or 6% whichever is less. The retiree and/or surviving spouse/domestic partner shall pay the difference between the amount the City contributes toward payment of the premium and the actual premium cost.

Former employees who leave employment prior to age 50 and do not qualify as a "Retiree" under the definition above ("non-qualifying retiree") will not receive any funds from the City, either directly or indirectly, for payment of medical insurance premiums. However, a non-qualifying retiree shall be permitted to purchase health insurance from the retiree medical pool if **all** of the following criteria are met:

32.5.10.1 The former employees is vested in CalPERS, and

32.5.10.2 Has reached the age of 50, and,

32.5.10.3 Has applied for and is receiving a pension from CalPERS, and

32.5.10.4 The City sponsored group health plan permits the retiree to enroll in the retiree medical pool, and

32.5.10.5 The retiree pays all cost associated with enrolling and maintaining eligibility in the group health plan, including, but not limited to, the administrative set up fee and the monthly administrative fee established by the third-party administrator.

~~**32.6 Retiree Medical Benefits.**~~
32.6 Effective the first full pay period after July 1, 2024, the retiree medical benefit identified in the current Agreement (except Paragraph 2 of Section 32.5.10) will be frozen at rates in place as of July 1, 2024, and the benefit paid and administered as set forth in this Section 32.6 and Section 32.5. ~~will be fully vested for all current members and members hired on or before June 30, 2024.~~ The parties acknowledge that a current dispute exists whether the agreement reached in 2023 was intended to cap rates for Medicare-eligible retirees. The parties have agreed to defer resolution of this matter to the negotiations of a successor agreement in 2026.

~~Effective the first full pay period after July 1, 2024, the City shall contribute $50.00 per pay period, into an individual PORAC Retiree Medical Trust account for all members hired on or before June 30, 2024.~~

~~Immediately upon retirement, the monthly retiree health benefit will be paid directly to the PORAC RMT as the third-party administrator for the retiree.~~

~~New hires, hired on or after July 1, 2024, shall be entitled to receive the minimum contribution for retirees specified by Government Code section 22892 (currently $151.00/month). New hires will make an employee contribution of $50.00 per pay period into their individual PORAC RMT account.~~

~~The parties shall meet and confer promptly following adoption of this Agreement by the City Council to amend Section 32 to reflect the terms of the agreement in principle stated in this Section 32.6.~~

32.6.1. Vesting of Benefit. Effective the first full pay period after July 1, 2024, in consideration of the freezing of the retiree medical benefit identified in Section 32.5 and this Section 32.6, active and retired Association members shall be entitled to retiree health benefits as follows:

32.6.1.1 Any retirees who are receiving retiree medical benefits set forth in Sections 32.3 and 32.5 of the Agreement (Retirement Health Premium Assistance Coverage) as of the date of City Council approval of this Addendum shall become fully and permanently vested in such benefits, and will continue to receive retiree medical benefits as adjusted in accordance with Sections 32.5.9 and 32.5.10.

32.6.1.2 All active members who are hired on or before June 30, 2024, shall continue to be eligible to receive the retiree medical benefits set forth in Sections 32.3 and 32.5 of the Agreement, but such benefit will be frozen at the dollar amount contributions rates in place on July 1, 2024, notwithstanding Paragraph 2 of Section 32.5.9. Such benefit shall be fully and permanently vested. This subsection and Sections 32.5 and 32.6 encompass members with original hire dates prior to June 30, 2024 and who have separated and subsequently been reinstated.

32.6.2. Participation in the PORAC Retiree Medical Trust.

32.6.2.1 Employer contribution. Effective the first full pay period after July 1, 2024, concurrent with the benefits set forth in Sections 32.3 and 32.5, the City shall contribute $50.00 per pay period to the PORAC Retiree Medical Trust for each member hired on or before June 30, 2024. This subsection and Sections 32.5 and 32.6 encompass members with original hire dates prior to June 30, 2024 and who have separated and subsequently been reinstated.

32.6.2.2. Employee contribution. Effective the first full pay period after July 1, 2024, all members hired on or after July 1, 2024 (“new hires”) shall make a mandatory employee contribution of $50.00 per pay period for deposit into the PORAC Retiree Medical Trust. The City shall not allow any election to opt out of this mandatory employee contribution.

32.6.2.3 Transfer of contributions. The City shall transfer the contribution of $50.00 per pay period identified in this Section 32.6.2 into the PORAC Retiree Medical Trust on a monthly basis.

32.6.2.4. Execution of agreements. The Parties shall execute acknowledgements, applications and agreements required by the PORAC Retiree Medical Trust to effectuate participation in the Trust, including, but not limited to the PORAC RMT "Joinder and Application Agreement".

32.6.3 New Hires - CalPERS Retiree Medical Benefit. All members hired after July 1, 2024, shall be entitled to receive the minimum contribution for retirees specified by the Public Employees' Medical & Hospital Care Act (PEMHCA) (Government Code section 22892) in lieu of the retiree medical benefits set forth in Section 32.3. The benefit is currently set at $151.00/month.

32.6.4 ~~Administration of Retiree Benefit under Section 32.5.~~ Payment of Retiree Health Premium Assistance Coverage. The City shall disburse the Retiree Health Premium Assistance Coverage medical plan payments pursuant to the provisions of ~~The Parties will meet to discuss the administration and payment procedures associated with the retiree benefit set out in~~ Section 32.5 for purposes of achieving greater efficiencies for the City and retirees.

EXECUTION

By signing below, I affirm and certify that I am authorized to execute this Amendment No. [__] on behalf of the represented organization as noted.

For the Berkeley Police Association:

_____
Name (Printed)

_____
Signature

_____
Date

_____

Title

For the City of Berkeley:

Name (Printed)

Signature

Date

Title

07

Item Removed From Agenda

This item has been removed from the agenda by the City Manager.

If you have questions regarding this report, please contact the person noted on the agenda.

City Clerk Department
2180 Milvia Street
Berkeley, CA 94704
(510) 981-6900

The City of Berkeley, City Council's Website
https://berkeleyca.gov/your-government/city-council

08

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Kevin Fong, Director, Information Technology

Subject: Contract No. 105921-1 Amendment: TruePoint Solutions, LLC for Professional Services

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or his designee to amend Contract No. 105921-1 with TruePoint Solutions, LLC for professional services, increasing the amount by $180,000, for a total not-to-exceed amount of $1,477,200 and extending the term by two years for the term beginning June 1, 2015 to June 30, 2027.

FISCAL IMPACTS OF RECOMMENDATION

Funding for the additional professional services are available in the Fiscal Year (FY) 2026 Permit Service Center Fund, Sewer Fund, and General Fund and in the Fiscal Year (FY) 2027 Permit Service Center Fund, Sewer Fund, and General Fund, as itemized below, and any future expenditures are subject to Council approval of the proposed citywide budget and Annual Appropriations Ordinances.

	FY 2026: Professional Services – Planning
$30,000	Fund 621 - Permit Service Center Fund
	FY 2026: Professional Services – Public Works
$50,000	Fund 611 - Sewer Fund, Public Works
$25,000	Fund 011 - General Fund, Public Works
	FY 2027: Professional Services – Public Works
$50,000	Fund 611 - Sewer Fund, Public Works
$25,000	Fund 011 - General Fund, Public Works
$180,000	**Total Professional Services**

CURRENT SITUATION AND ITS EFFECTS

The departments of Planning & Development and Public Works currently use the Accela Civic Platform as their permitting system to process permit applications, schedule inspections, receive permit application payments online, and maintain permits. TruePoint

Solutions provides the professional services necessary to effectively implement and maintain these critical features and functionalities, as well as to provide consultation and technical support. The contract amendment is essential to continue the successful operation of this enterprise permitting software that is used on a daily basis by the Planning & Development and Public Works departments, and the members of the public.

This contract extension aligns with the City's strategic goal to be a customer-focused organization that provides excellent, timely and easily accessible service to the community.

BACKGROUND

Established in 2004, TruePoint Solutions, LLC provides design, implementation, and support services to public sector technology solutions. In 2005, TruePoint Solutions became an Accela-Certified implementation partner.

In 2015, the City contracted with TruePoint Solutions for report writing and additional scripting and configuration of Accela's Building Permit system. In 2016, the City Council approved an amendment with TruePoint Solutions for the management of the Private Sewer Laterals module for the Department of Public Works. In 2018, the City Council approved an amendment with TruePoint Solutions to provide professional assistance for the work on system issues as requested and prioritized by the City and suggest additional enhancements/improvements.

The City has enhanced Accela with the help of TruePoint Solutions to streamline internal processes, enhance online functionality, and make services more accessible to the community. Recent examples of the additional functionality improvements include the adding of the following services online:

- Pay for Public Works permits;
- Applications for street events;
- Application for oversized load permit;
- Application for private sewer lateral (PSL) certification;
- PSL enforcement documentation; and
- The ability to look up and save PSL certificates.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

The City will help reduce carbon emissions by allowing most, if not all, permitting processes to be performed online thereby reducing traffic into the City. Further, the online application capability of the system eliminates the use of paper thus working towards the City's goal of achieving zero waste to landfills.

RATIONALE FOR RECOMMENDATION

TruePoint Solutions is an Accela-Certified implementation partner. TruePoint Solutions performs specialized process analysis, configuration, and scripting to support the City's

permitting system. TruePoint Solutions has in-depth knowledge of City business processes and data architecture that would take another vendor years to acquire.

ALTERNATIVE ACTIONS CONSIDERED
Staff considered completing these projects and enhancements without professional services; however, doing so would lead to an inefficient allocation of staff resources and significantly extend implementation timelines.

CONTACT PERSON
Kevin Fong, Director, Information Technology, 510-981-6541

Attachments:
1: Resolution

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

CONTRACT NO. 105921-1 AMENDMENT: TRUEPOINT SOLUTIONS, LLC FOR ACCELA PROFESSIONAL SERVICES

WHEREAS, TruePoint Solutions provides design, implementation, and support services to public sector technology solutions, and is an Accela-Certified implementation partner; and

WHEREAS, TruePoint Solutions is essential to continue the successful operation of the Planning and Public Works departments' permitting software and meet ongoing technical support requirements; and

WHEREAS, TruePoint Solutions has previously provided excellent report writing, scripting, and consulting services and therefore has an in-depth knowledge of City business processes and data architecture that would take another vendor years to acquire; and

WHEREAS, funding for the additional professional services are available in the Fiscal Year (FY) 2025 Permit Service Center fund, Sewer Fund, and General Fund and in the Fiscal Year (FY) 2026 Permit Service Center fund, Sewer Fund, and General Fund, and any future expenditures are subject to Council approval of the proposed citywide budget and Annual Appropriations Ordinances.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to amend contract No. 105921-1 with TruePoint Solutions, LLC, increasing the amount by $180,000, for a total not-to-exceed amount of $1,477,200 and for the term beginning June 1, 2015 to June 30, 2027.

09

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Terrance Davis, Director, Department of Public Works

Subject: Contract: Ashlar Structural LLC for Strawberry Creek Culvert Maintenance Project – Phase 1 (Specification No. 25-11689-C)

RECOMMENDATION

Adopt a Resolution:

1. Approving plans and specifications for the Strawberry Creek Culvert Maintenance Project – Phase 1; and
2. Accepting the bid of Ashlar Structural LLC (Ashlar Structural) as the lowest, responsive and responsible bidder; and
3. Authorizing the City Manager or his designee to execute a contract and any amendments, extensions, or other change orders until completion of the project, in accordance with the approved plans and specifications in an amount not to exceed $4,544,232.

FISCAL IMPACTS OF RECOMMENDATION

Funding from the State Transportation Tax (Fund 127), Measure B Local Street & Roads (Fund 130), Measure BB Sales Tax (Fund 134) and the City's Capital Improvement Fund (Fund 501) is available in FY 2025 and additional Measure BB Sales Tax (Fund 134) funding will be subject to appropriation as part of the FY2026 Adopted Mid-Biennial update.

Low bid by Contractor	$4,131,120
Contingency of 10%	$413,112
Total construction cost	$4,544,232

FY 2025 Funding:

State Transportation Tax (Fund 127)	$2,050,000
Measure B Local Streets & Roads (Fund 130)	$99,000
Measure BB Sales Tax (Fund 134)	$162,173
Capital Improvement Fund (Fund 501)	$1,053,769
Total FY 2025 funding	$3,364,946

FY 2026 Funding:

Measure BB Sales Tax (Fund 134) $1,179,286

CURRENT SITUATION AND ITS EFFECTS

The project rehabilitates approximately 1,600 linear feet of City-owned Strawberry Creek culverts ranging in size from eight-foot by five-foot arched cross section to 90-inch diameter circular culverts. This project was developed following a comprehensive structural assessment of Strawberry Creek culverts. The scope is focused on extending the service life of culvert sections exhibiting the highest degree of deterioration. Protecting these culverts is critical to safeguarding the Strawberry Creek watershed and protecting overlying infrastructure from potential damage or failure.

The project was released for bids on November 4, 2024, and bids were opened on December 19, 2024 (see Attachment 3, Abstract of Bids). Six non-local bids were received, from a low of $4,131,120 to a high of $7,390,200. The engineer's estimate for the project was $3,620,000.

Ashlar Structural of Nanuet, New York, was the lowest, responsive and responsible bidder with a bid of $4,131,120, and their references were satisfactory. This project includes a 10% contingency, which brings the total contract amount up to the requested $4,544,232. Staff recommends that a contract for this project be awarded to Ashlar Structural.

The Strawberry Creek Culvert Maintenance Project – Phase 1 is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

In September 2022, the City began efforts to perform detailed mapping and structural assessment of City-owned and maintained sections of Strawberry Creek Culvert. Initial work included topographic survey and visual assessment of the entire stretch of culvert between the UC Berkeley campus and the westernmost limit of the creek culvert near the intersection of Curtis Street and Addison Street. Detailed structural assessment including testing of existing concrete and rebar scanning was performed during the summer of 2023. The testing and assessment efforts culminated in the development of a detailed structural assessment report titled "Structural Assessment and Protect Scoping Report." The report, dated December 2023, is available for review on the City's website.

Rehabilitation of the entire length of City-owned Strawberry Creek culverts will need to be completed in phases due to funding limitations. This contract awards the first phase. Additional phases would be completed in future fiscal years as funding becomes available. Phase 1 of construction focuses on rehabilitating sections of City-owned Strawberry Creek culverts which the structural analysis identified as having the highest degree of deterioration. This includes culvert sections below Martin Luther King Jr. Way,

Old Berkeley City Hall (Maudelle Shirek Building), McKinley Ave, Grant Street, Roosevelt Avenue, McGee Avenue, and the culvert section running below Allston Way between California Street and the daylighted portion of Strawberry Creek at 1431 Allston Way just west of Sacramento Street. The proposed rehabilitation method consists of targeted structural repairs and lining the culvert with high performance geopolymer mortar.

The contract's one-hundred and twenty working day term includes a one-hundred working day construction period and an additional twenty working days for project closeout.

The City filed a Notice of Exemption declaring this work is exempt from the California Environmental Quality Act (CEQA). This notification was filed with Alameda County to fulfill the requirement for public notification. No comments, questions, or protests were received. All environmental regulatory permits required for completing the project work in Strawberry Creek have been secured.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

The project aims to rehabilitate existing creek culverts, enhancing their long-term resilience to the erosive impacts of more intense storms anticipated due to climate change.

RATIONALE FOR RECOMMENDATION

The City conducted a public bid process and Ashlar Structural submitted the lowest, responsive, and responsible bid. The work requires contracted services, as the City does not possess the in-house labor or equipment resources necessary to complete this specialized construction work.

ALTERNATIVE ACTIONS CONSIDERED

No alternative actions were considered for this project. Failure to rehabilitate the aging infrastructure would lead to further degradation and eventual failure, placing public infrastructure and adjacent private property at risk.

CONTACT PERSON

Wahid Amiri, Deputy Director, Public Works (510) 981-6396
Ronald A. Nevels, Manager of Engineering, Public Works (510) 981-6439

Attachments:
1: Resolution
2: Location Map
3: Abstract of Bids

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

CONTRACT: ASHLAR CONSTRUCTION LLC FOR STRAWBERRY CREEK CULVERT MAINTENANCE PROJECT – PHASE 1

WHEREAS, in September 2022, the City began efforts to perform detailed mapping and structural assessment of City-owned and maintained sections of Strawberry Creek Culvert; and

WHEREAS, the assessment efforts are summarized in a report dated December 2023 and titled “Structural Assessment and Protect Scoping Report” (Report) which is available for public review on the City’s website; and

WHEREAS, City staff recommends undertaking rehabilitation efforts to extend the service life of deteriorated culvert sections; and

WHEREAS, due to funding limitations, rehabilitation of all deteriorated sections of City-owned Strawberry Creek culvert would need to be completed in phases, with the first phase of construction focusing on culvert sections found to have the highest degree of deterioration based on the Report; and

WHEREAS, Phase 1 of the project would include rehabilitating approximately 1,600 linear feet of culvert sections below Martin Luther King Jr. Way, Old Berkeley City Hall, McKinley Avenue, Grant Street, Roosevelt Avenue, McGee Avenue, and a culvert section running below Allston Way between California Street and the daylighted portion of Strawberry Creek just west of Sacramento Street; and

WHEREAS, the City has neither the labor nor the equipment necessary to undertake work; and

WHEREAS, an invitation for bids for Strawberry Creek Culvert Maintenance Project – Phase 1 was duly advertised, and Ashlar Structural LLC was the lowest responsive and responsible bidder; and

WHEREAS, funding is available in the FY 2025 and FY 2026 budgets in State Transportation Tax (Fund 127), Measure B Local Streets & Roads (Fund 130), Measure BB Sales Tax (Fund 134), and Capital Improvement Fund (Fund 501).

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications for Specification No. 25-11689-C Strawberry Creek Culvert Maintenance Project – Phase 1 are approved.

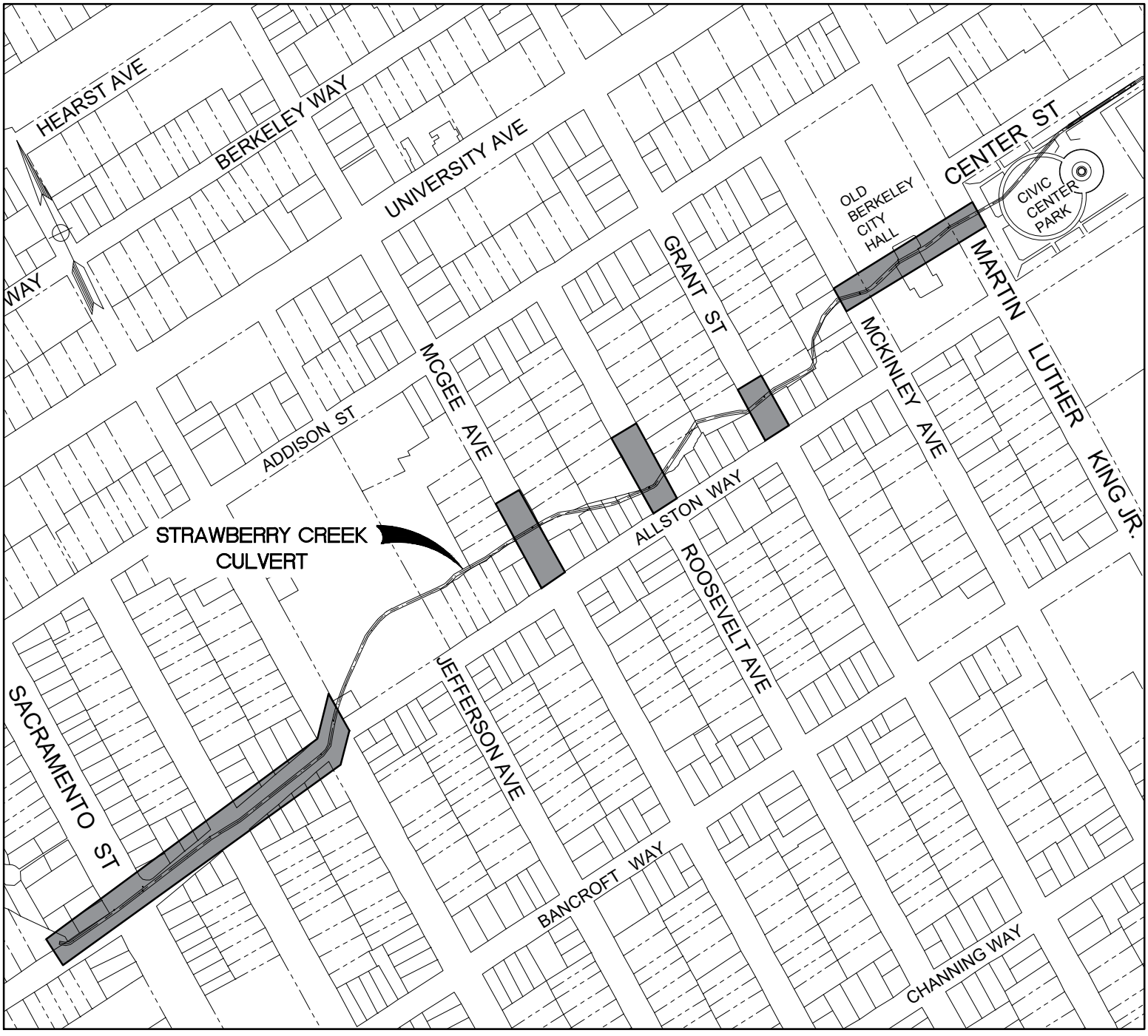
BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments, extensions or change orders, until

completion of the project in accordance with the approved plans and specifications with Ashlar Structural LLC for the Strawberry Creek Culvert Maintenance Project – Phase1, in an amount not to exceed $4,544,232, which includes a 10% contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments are to be on file in the Office of the City Clerk.

CITY OF BERKELEY, CALIFORNIA

STRAWBERRY CREEK CULVERT MAINTENANCE PROJECT PHASE 1

SPECIFICATION NO. 25-11689-C



PROJECT LOCATION MAP

Finance Department

General Services Division

City of Berkeley
Abstract of Bid Worksheet

FOR: Strawberry Creek Culvert Maintenance Project - Phase 1

Spec. # 25-11689 **Bid Date: 12/19/24**

	Bidders	Bid Package A Base Bid	Bid Package B Bid Alternate	Addenda (1-5)	Bid Bond	Experience-Fin. Qual.	Taxpayer ID	Nuclear Free	Oppresive States	Sanctuary City	EBO
				required w/ bid							
1	DISNEY CONSTRUCTION	$ 6,580,500.00	$ 809,700.00	X	X	X	X	X	X	X	X
2	A/B CONSTRUCTION	$ 6,481,610.00	$ 966,160.00	X	X	X	X	X	X	X	X
3	PIPE AND PLANT SOLUTIONS	$ 6,037,839.00	$ $756,900.00 ~~758,903.62~~	X	X	X	X	X	X	X	X
4	VALENTINE CORPERATION	$ 5,449,367.00	$ 653,000.00	X	X	X	X	X	X	X	X
5	ASHLAR	$ 3,778,152.00	$ 352,968.00	X	X	X	X	X	X	X	X
6	TRINET CONTRUCTION INC	$ 5,367,750.00	$ 764,500.00	X	X	X	X	X	X	X	X
7											
8											
9											
10											

Bid Recorder: TALIA STEWART Talia Stewart (Dec 20, 2024 12:58 PST) Date 12/20/2024

Bid Opener: ROOP SOORMA RSoorma Date 12/20/2024

Project Manager: RICARDO SALCEDO Date 12/20/2024

****After reviewing bid proposals, a mathematical error was discovered for Pipe and Plant Solutions for Bid Package B. The Bid Package B amount has been revised above.**

2180 Milvia Street, Berkeley, CA 94704 Tel: 510.981.7320 TDD: 510.981.6903 Fax: 510.981.7390
E-mail: finance@ci.berkeley.ca.us

25-11689-C - ABSTRACT (1)

Final Audit Report 2024-12-20

Created:	2024-12-20
By:	Talia Stewart (TStewart@berkeleyca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAY903BJR0Yz92uuB7DXPeM8cHlfgpTwZk

"25-11689-C - ABSTRACT (1)" History

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Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Terrance Davis, Director, Public Works Department

Subject: Contract: Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. for Fire Station #2 Improvements Project

RECOMMENDATION

Adopt a Resolution:

1. Approving plans and specifications for Fire Station #2 Improvements (Project), Specification No. 23-11575-C; and

2. Accepting the bid of Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. as the lowest, responsive and responsible bidder; and

3. Authorizing the City Manager to execute a contract and any amendments, extensions, or change orders until the Project is completed in accordance with the approved plans and specifications for an amount not to exceed $1,104,000, which includes a contingency of $184,000.

FISCAL IMPACTS OF RECOMMENDATION

Funding for this project is available in the Fiscal Year 2025 budget in the Capital Improvement, and Measure T1 Funds.

Low bid by Bay Construction Co.	$920,000
20% Contingency	$184,000
Total Construction Cost NTE	**$1,104,000**

Fiscal Year 2025 Funding:

- Measure T1 Phase 2 Fund: …… $920,000
- Capital Improvement Fund:…… $184,000

CURRENT SITUATION AND ITS EFFECTS

The Project was advertised for bids on October 29, 2024, and opened on December 17, 2024. The City received seven (7) bids ranging from $920,000 to $1,468,600. The lowest responsive and responsible bidder was determined to be Mark Lee and Yong

Kay, Inc., DBA Bay Construction Co. Staff recommends that a construction contract for the Project be awarded to Mark Lee and Yong Kay, Inc., DBA Bay Construction Co.

Fire Station #2 is located in District 4 at 2029 Berkeley Way; it consists of a two-story main building and an annex building. The first floor of the main building has a kitchen, common area, fire apparatus parking, and sleeping quarters for fire chiefs. The second floor has additional sleeping quarters, food storage, roof access, and critical electrical equipment. The annex is primarily a storage area with two additional sleeping quarters. The station was built in 1965 and has undergone various maintenance and upgrades throughout its history.

Currently, the building is not equipped with a cooling system. As an interim solution, a combination of window air conditioning units and portable units are used to cool the space, but this solution is not permanent and created various inconveniences for staff. Window cooling units can damage building facades over time due to uncollected condensate, while portable units are less energy-efficient, noisy, and occupy considerable space in sleeping quarters.

All the electrical equipment in the building is from 1996 and past its estimated useful life. All panels are already fully loaded to meet the current demands of the station and do not have the capacity for any new required equipment.

This project will replace existing gas furnaces with energy-efficient electric heat pumps and fan coil units to provide heating and cooling to the main building and annex. An energy recovery ventilator will be provided to exchange, filter, and precondition outside air and further reduce energy use and improve indoor air quality. Additional work includes new kitchen and laundry exhaust fans, new electrical subpanels, provisions for electric vehicle charging, and ancillary work.

Fire Station #2 Improvements is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

Fire Station #2 was constructed in 1965 and seismically renovated in 1998. It is comprised of apparatus storage and living quarters for Fire Department staff. The renovation project is a Measure T1 Phase 2 project.

Public Works engaged the services of an architectural consultant to assess the condition of various city buildings in 2021. After building deficiencies were cataloged, Public Works engaged an architectural consultant in March 2022, to help identify the scope for improvements and begin design of the project. In June 2024, permit documents were approved and the project was advertised for public bid in October, 2024.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

This project will address the City's sustainability and climate goals by increasing energy efficiency, reducing greenhouse gas emissions, and strengthening community resilience to adapt to the effects of climate change. The addition of EV charging supports the city's fleet electrification initiative. There are no anticipated negative environmental effects of this action.

RATIONALE FOR RECOMMENDATION

Contracted services are required for this project as the City does not have the in-house expertise to complete this specialized work.

ALTERNATIVE ACTIONS CONSIDERED

None. The City can elect not to construct the project; however, deferring the work will lead to deterioration of the existing electrical system and continued discomfort for the fire department. Furthermore, the City may not meet its fleet electrification goals if the charging station is not constructed.

CONTACT PERSON

Wahid Amiri, Deputy Director, Department of Public Works (510) 981-6396
Ronald Nevels, Manager of Engineering, Department of Public Works (510) 981-6439
Elmar Kapfer, Supervising Civil Engineer, Department of Public Works (510) 981-6435

Attachment:
1: Resolution
2: Abstract of Bids

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

CONTRACT: MARK LEE AND YONG KAY, INC, DBA BAY CONSTRUCTION CO. FOR FIRE STATION #2 IMPROVEMENTS; SPECIFICATION NO. 23-11575-C, AT 2029 BERKELEY WAY

WHEREAS, the project consists of HVAC and electrical upgrades of Fire Station #2 per Plans and Specifications No. 23-11575-C; and

WHEREAS, The City has neither the labor nor the equipment necessary to undertake this project; and

WHEREAS, an invitation for bids (Plans and Specifications No.23-11575-C) was duly advertised in October of 2024, and Mark Lee and Yong Kay, INC, DBA Bay Construction Co. was determined to be the lowest responsive and responsible bidder.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 23-11575-C for Fire Station #2 Improvements are approved.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley accepts the bid of Mark Lee and Yong Kay, INC, DBA Bay Construction Co. as the lowest responsive and responsible bidder.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments, extensions or change orders, until completion of the project in accordance with the approved plans and specifications with Mark Lee and Yong Kay, INC, DBA Bay Construction Co. for the Fire Station #2 Improvements in an amount not to exceed $1,104,000, which includes a contingency in the amount of $184,000. A record signature copy of the agreement and any amendments will be on file in the Office of the City Clerk.

Finance Department
General Services Division

City of Berkeley
Abstract of Bid Worksheet

Bid Date: 12/17/2024
Spec. # 23-11575-C

FOR: Fire Station #2 Improvements

required w/ bid

	Bidders	Base Bid	Addenda (2)	Bid Bond	Reg / Exp	Subcontractors	Non-Collusion	CERTS	
1	MARK LEE & YONG KAY, INC BBA BAY CONSTRUCTION	$ 920,000.00	X	X	X	X	X	X	
2	S&H CONSTRUCTION	$ 1,468,600.00	X	X	X	X	X	X	
3	VANTIS	$ 1,270,000.00	X	X	X	X	X	X	
4	MAR CON BUILDERS	$ 1,458,371.00	X	X	X	X	X	X	
5	GECO, INC	$ 1,230,000.00	X	X	X	X	X	X	
6	EVRA CONSTRUCTION	$ 1,210,000.00	X	X	X	X	X	X	
7	ANGOTTI & REILLY INC	$ 1,231,291.00	X	X	X	X	X	X	
8									
9									
10									

Bid Recorder: Talia Stewart — Talia Stewart (Dec 30, 2024 15:25 PST) — Date 12/30/202

Bid Opener: Roop Soorma — Roopreet Soorma (Dec 31, 2024 10:55 PST) — Date 12/31/202

Project Manager: Priya Chopra — Priya Chopra — Date 12/30/202

2180 Milvia Street, Berkeley, CA 94704 Tel: 510.981.7320 TDD: 510.981.6903
finance@cityofberkeley.info

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

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CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS
1947 CENTER ST. 4TH FLOOR

PROJECT NUMBER: 201320.31
CITY SPECIFICATION NUMBER: 23-11575-C

ISSUE FOR PERMIT

OCTOBER 30, 2023

els architecture+ urban design
2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE FOR PERMIT

ABBREVIATIONS

d	PENNY (NAIL)
PL	PROPERTY LINE
&	AND
∠	ANGLE
@	AT
CL	CENTERLINE
ϕ	DIAMETER, ROUND
⊥	PERPENDICULAR
#	POUND, NUMBER
(E)	EXISTING
(N)	NEW
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE, ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ALT.	ALTERNATE
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECT
ASPH.	ASPHALT
A.T.	ASHTRAY
BC	BOTTOM OF CURB
BSMT.	BASEMENT
BTW.	BETWEEN
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BLW.	BELOW
BM.	BEAM
B.O.	BOTTOM OF
B.S.	BOTTOM OF SILL
B.R.	BOTTOM OR RISER
B.O.C.	BOTTOM OF CURB
BOT.	BOTTOM
B.U.R.	BUILT-UP ROOFING
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CEM. PLAS.	CEMENT PLASTER
CER.	CERAMIC
C.I.	CAST IRON
C.J.	CONTROL JOINT
CLG.	CEILING
CLKG.	CAULKING
CH.	COAT HOOK
C.J.	CONSTRUCTION JOINT
CLO.	CLOSET
C.O.	CLEAN_OUT
CLR.	CLEAR
COL.	COLUMN
COMP.	COMPOSITION
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
C.T.	CERAMIC TILE
CTSK.	COUNTERSINK
CNTR.	COUNTER
CPT.	CARPET
CTR.	CENTER
CUSP.	CUSPIDOR
CW.	CURTAIN WALL
D.	DEEP
DBL.	DOUBLE
D.C. TYPE 1 (ETC.)	DECK COATING TYPE 1 (ETC.)
D.D	DECK DRAIN
DEMO.	DEMOLISH
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DOUGLAS FIR, DRINKING FOUNTAIN
DIAM.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DWG.	DRAWING
D.W.P.	DESIGN WORKING POINT
DWR.	DRAWER
D.S.	DAVIT SOCKET
D.S.P.	DRY STANDPIPE
E.	EAST
EA.	EACH
E.B.	EXPANSION BOLT
E.F.	EXHAUST FAN
E.F.S.	EXTER. FINISH SYSTEM
E.I.F.S.	EXTER. INSUL. & FIN. SYST.
E.J.	EXPANSION JOINT
ELECT.	ELECTRICAL
EL.	ELEVATION
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENAM.	ENAMELED
ENCL.	ENCLOSURE
E.P.	ELECTRICAL PANEL
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
(E)	EXISTING
EXPO.	EXPOSED
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FOOTBOARD
F.D.	FLOOR DRAIN
FC	FANCOIL
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.	FIRE HYDRANT
F.F.	FINISH FLOOR
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLR.	FLOOR
FLASH.	FLASHING
FLUOR.	FLUORESCENT
F.O.	FACE OF
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUDS
FPRF.	FIREPROOF
FRMG.	FRAMING
F.S.R.	FIRE SPRINKLER RISER
F.S.	FLOOR SINK
FT.	FOOT, FEET
FTG.	FOOTING
FND.	FOUNDATION
FURR.	FURRING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
GWB.	GYPSUM WALL BOARD
G.I.	GALVANIZED IRON
G.F.I.	GROUND FAULT INTERRUPTER
G.F.R.C.	GLASS FIBER REINF. CONC.
GL.	GLASS
GND.	GROUND
GR.	GRADE
G.R.G.	GLASS REINFORCED GYPSUM
GYP.	GYPSUM
H.R.	HAND RAIL
H.	HIGH
H.B.	HOSE BIBB
HC.	HANDICAPPED
H.C.	HOLLOW CORE
HDR.	HEADER
HDWD.	HARDWOOD
HDWE.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
I.D.	INSIDE DIAMETER (DIMENSION)
INSUL.	INSULATION
INT.	INTERIOR
INTERM.	INTERMEDIATE
JAN.	JANITOR
JST.	JOIST
J.H.	JOIST HANGER
JT.	JOINT
KIT.	KITCHEN
L.B.	LAG BOLT
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LOC.	LOCATION
L.	LONG
LT.	LIGHT
MACH.	MACHINE
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
MTP.	METAL TOILET PARTITION
MTL.	METAL SIDING
MUL.	MULLION
(N)	NEW
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
OBSC.	OBSCURE
O.C.	ON CENTER
OD	OVERFLOW DRAIN
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
OFF.	OFFICE
O.H.	OVERHEAD
OPNG.	OPENING
OPP.	OPPOSITE
PART'N.	PARTITION
P. & SH.	POLE AND SHELF
P. B.	PARTICLE BOARD
P.D.	PLANTER DRAIN
PLUMB.	PLUMBING
PRCST.	PRECAST
PREFAB.	PRE-FABRICATED
PTDF	PRESSURE TREATED DOUGLAS FIR
PL.	PLATE
P. LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PTP	PLASTIC TOILET PARTITION
PR.	PAIR
P.T.	PRESSURE-TREATED
PT OR PTD.	PAINTED
PTN, PART.	PARTITION
P.T.R.	PAPER TOWEL RECPTACLE
Q.T.	QUARRY TILE
r.	RADIUS
R.	RISER
(R)	REMOVE
R.D.	ROOF DRAIN
REF.	REFERENCE
REFER.	REFRIGERATOR
RGTR.	REGISTER
REINF.	REINFORCED
REQ'D	REQUIRED
RESIL.	RESILIENT
RET.	RETAINING
REV.	REVISION, REVISED
RM.	ROOM
R.O.	ROUGH OPENING
RDWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
R.B.	RUBBER BASE
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCH.	SCHEDULE
S.D.	SOAP DISPENSER
SECT.	SECTION
SED	SEE ELECTRICAL DRAWINGS
SH.	SHELF
S.H.V.C.	SURFACE MOUNTED HOSE VALVE CABINET
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
S.L.D.	SEE LANDSCAPE DRAWINGS
S.M.	SHEET METAL
SMD	SEE MECH. DRAWINGS
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPEC.	SPECIFICATION
S.P.R.	SINGLE-PLY ROOFING
SQ.	SQUARE
	SQUARE FOOT, SQUARE FEET
S.S.	STAINLESS STEEL
SSD	SEE STRUCTURAL DRAWINGS
S. SK.	SERVICE SINK
STA.	STATION
STD,	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
S.V.	SHEET VINYL
SYM.	SYMMETRICAL
T.B.	TOWEL BAR
T.C.	TOP OF CURB
T.O.C.	TOP OF CONCRETE
T.D.	TIE DOWN
TEL.	TELEPHONE
TEMP.	TEMPERED
TER.	TERRAZZO
T. & G.	TONGUE AND GROOVE
THK.	THICK
THR.	THRESHOLD
T.O.	TOP OF
T.O.B.	TOP OF BENCH
T.O.C	TOP OF CONCRETE
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STRUCTURE
T.P.D.	TOILET PAPER DISPENSER
TRANSF.	TRANSFORMER
T.O.W.	TOP OF WALL
TYP.	TYPICAL
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
V.T.	VINYL TILE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W	WIDE
W.	WEST
W/	WITH
W.C.	WATER CLOSET
W.I.	WROUGHT IRON
WD.	WOOD
W.F.	WIDE FLANGE
W.O.	WHERE OCCURS
W/O	WITHOUT
WP.	WATERPROOF
WP. TYPE 1 (ETC.)	WATERPROOFING TYPE 1 (ETC.)
WR	WATER RESISTANT
W.S.	WOOD SCREW
WSCT.	WAINSCOT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

GENERAL NOTES

1. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS WITH EACH OTHER AND SHALL AT ONCE REPORT TO THE ARCHITECT ERRORS, INCONSISTENCIES OR OMISSIONS DISCOVERED. IF THE CONTRACTOR PERFORMS ANY CONSTRUCTION ACTIVITY KNOWING IT INVOLVES A RECOGNIZED ERROR, INCONSISTENCY OR OMISSION IN THE CONTRACT DOCUMENTS WITHOUT SUCH NOTICE TO THE ARCHITECT, THE CONTRACTOR SHALL ASSUME APPROPRIATE RESPONSIBILITY FOR SUCH PERFORMANCE AND SHALL BEAR AN APPROPRIATE AMOUNT OF THE ATTRIBUTABLE COSTS FOR CORRECTION.
2. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION TO REMAIN, ALL CONDITIONS AFFECTING WORK PROGRESS AND CONFORMANCE TO PLANS AND SPECIFICATIONS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO START OF WORK.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED MEASUREMENTS. WHERE DISCREPANCIES IN DIMENSIONS OCCUR THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
4. ALL WORK AND MATERIALS SHALL BE IN ACCORD WITH THE LATEST RULES AND REGULATIONS OF ALL APPLICABLE STATE AND/OR LOCAL CODES, LAWS, ORDINANCES, STATUTES AND REGULATIONS. NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED AS REQUIRING OR PERMITTING WORK CONTRARY TO THESE RULES, REGULATIONS, AND CODES.
5. THE DRAWINGS INDICATE LOCATIONS, DIMENSIONS, AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION; WORK NOT EXPRESSLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS THAT ARE DETAILED. WHERE DISCREPANCIES OCCUR, THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
6. SITE BOUNDARY LINES, BOUNDARY DIMENSIONS, BOUNDARY DECLINATIONS, AND EXISTING GRADES ARE BASED UPON THE SURVEY DRAWING. THE CONTRACTOR SHALL BE DEEMED TO HAVE INSPECTED THE SITE AND SATISFIED HIMSELF AS TO ACTUAL GRADES, LEVELS, DIMENSIONS, AND DECLINATIONS AND THE TRUE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
7. MASONRY DIMENSIONS ARE GIVEN TO THE NOMINAL FACE OF MASONRY.
8. DIMENSIONS ARE TO BE FACE OF FINISH UNLESS OTHERWISE NOTED. DO NOT SCALE THE DRAWINGS. LAY OUT WORK FOLLOWING WRITTEN DIMENSIONS. IF WRITTEN DIMENSIONS ARE LACKING, NOTIFY THE ARCHITECT AT ONCE. IF NO LOCATING DIMENSIONS ARE SHOWN, DOOR OPENINGS ARE LOCATED BY THE DOOR DETAILS.
9. DIMENSIONS AND ELEVATIONS ON THESE DRAWINGS REFER TO BUILDING DATUM, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING. FOR PURPOSES OR PREPARING A BID, IN CASE OF CONFLICTING INSTRUCTIONS, THE CONTRACTOR SHALL ALLOW FOR THE ONE INVOLVING THE HIGHER COST AND/OR LONGER CONSTRUCTION TIME.
11. LIMIT OF WORK LINES ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. WORK SHOWN OR SPECIFIED OUTSIDE OF WORK LINES IS EQUALLY A PART OF THIS PROJECT.
12. ASSUME ALL MATERIALS AND PRODUCTS CALLED OUT IN THE DRAWINGS ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING.
13. EXISTING CONDITION DIMENSIONS ARE FOR REFERENCE ONLY AND MUST BE VERIFIED IN FIELD.
14. UPON COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS, CLEAN ALL SURFACES OF CONSTRUCTION MATERIALS, AND REPAIR ANY SURFACES MARRED BY THE TRADES PEOPLE OR MATERIALS UNDER CONTRACTOR'S SUPERVISION, AND SURFACES LEFT BROOM CLEAN.
15. PRODUCT DATA AND SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL NEW MATERIALS USED ON THE PROJECT AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO ALLOW FOR TIME IN THE SCHEDULE FOR SUBMITTAL REVIEW AND REQUIRED RESUBMITTALS. SUBMIT FOR REVIEW BY THE OWNER/DESIGN TEAM. SEE SPECIFIC REQUIREMENTS FOR ON-SITE MOCKUPS AND PHYSICAL SAMPLES.
16. ACTUAL DIMENSIONS ARE INDICATED ON THE PLANS AND DETAILS.
17. CONTRACTOR SHALL RESTORE ALL EXISTING OR NEWLY INSTALLED BUILDING AND/OR SITE COMPONENTS, EQUIPMENT, AND MATERIAL THAT IS DAMAGED BY THE CONTRACTOR OR SUBCONTRACTORS. COMPLETE RESTORATION TO ORIGINAL CONDITION SHALL BE PROVIDED TO THE SATISFACTION OF THE CITY WITHOUT ADDITIONAL COMPENSATION.
18. PROVIDE READILY ACCESSIBLE AREAS THAT SERVE THE ENTIRE BUILDING AND ARE IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS , ORGANIC WASTE, AND METALS. [CGBSC 5.410.1]
19. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL COMPLY WITH CALGREEN TABLE 5.504.4.1 AND 5.504.4.2 FOR VOC LIMITS. PRODUCT UNITS WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND CALIFORNIA CODE OF REGULATIONS, TITLE 17. [CGBSC 5.504.4.1]

SYMBOLS LEGEND

GRID / GRID — GRID LINE REFERENCE

3 TITLE SCALE — DRAWING TITLE

1 VIEW; 4 SHEET 2; 3 — INTERIOR ELEVATION

1 VIEW; SHEET — EXTERIOR ELEVATION

NO. SHEET — SECTION KEY

NO. SHEET — DETAIL SECTION KEY

NO. SHEET — DETAIL PLAN KEY

LEVEL 0'-0" — ELEVATION TARGET

+21'-0" — SPOT ELEVATION

WORK POINT

W - # — WINDOW TYPE

L - # — LOUVER TYPE

101 — DOOR NUMBER

(E) 1-HR FIRE RATED WALL

DRAWING REVISION

XX/A.XX — MATCHLINE

TYPE; FIRE RATING (HRS); P1 1 -; ACOUSTICAL — PARTITION TYPE

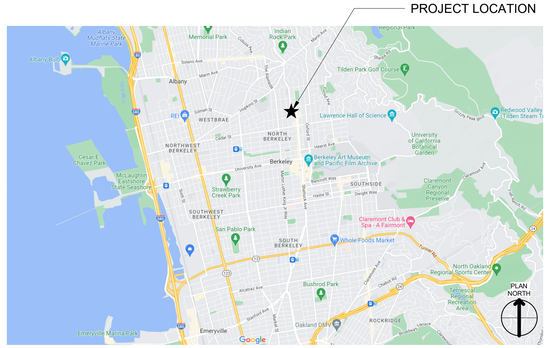
— SHEET NOTE

ROOM — ROOM NAME; 123 — ROOM # — ROOM KEY

0 2' 4' 8'; SCALE: 1" = 4'-0" — GRAPHIC SCALE

PLAN NORTH

PROJECT LOCATION



CODE INFORMATION

APPLICABLE CODES
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA EXISTING BUILDING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIAI PLUMBING CODE
2022 CALIFORNIA GREEN BUILDING CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIAL ELECTRICAL CODE

OCUPANCY
EXISTING: B
PROPOSED: NO CHANGE

CONSTRUCTION TYPE: 3-B

BUILDING GROSS AREA

GROUND FLOOR:	8,926 SF
SECOND FLOOR:	4,672 SF
ANNEX BUILDING:	871 SF
TOTAL BUILDING AREA:	14,469 SF

FIRE PROTECTION
ENTIRE BUILDING PROTECTED BY AN EXISTING FIRE SPRINKLER SYSTEM

THE PRIMARY IMPROVEMENTS TO THIS PROJECT ARE MECHANICAL AND ELECTRICAL IN NATURE. THERE ARE SMALL VOLUNTARY ACCESSIBILITY IMPROVEMENTS ALSO. THIS PROJECT IS SEEKING AN EXCEPTION FOR MAKING PATH OF TRAVEL IMPROVEMENTS UNDER:

2022 CBC11B-202.4, EXCEPTION 7. *PROJECTS CONSISTING ONLY OF HEATING, VENTILATION, AIR CONDITIONING, REROOFING, ELECTRICAL WORK NOT INVOLVING PLACEMENT OF SWITCHES AND RECEPTACLES, COSMETIC WORK THAT DOES NOT AFFECT ITEMS REGULATED BY THIS CODE, SUCH AS PAINTING, EQUIPMENT NOT CONSIDERED TO BE A PART OF THE ARCHITECTURE OF THE BUILDING OR AREA, SUCH AS COMPUTER TERMINALS AND OFFICE EQUIPMENT SHALL NOT BE REQUIRED TO COMPLY WITH SECTION I IB-202.4 UNLESS THEY AFFECT THE USABILITY OF THE BUILDING OR FACILITY.*

PROJECT DESCRIPTION

FIRE STATION 2 REMODEL INCLUDES THE FOLLOWING:

- NEW HVAC SYSTEM FOR MAIN AND ANNEX BUILDING.
- REPLACEMENT OF ELECTRICAL PANELS.

els architecture+ urban design
2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
3260 Blume Drive, Suite 240
Richmond, CA 94806
P: 510.243.5987

ELECTRICAL ENGINEER:
RIJA INC.
5515 Doyle Street, #7
Emeryville, CA 94608
P: 415.730.7994

STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
GENERAL NOTES, LEGENDS, AND INDEX

SHEET NUMBER:
A001

Form #165

Code Compliance Checklist
CALGREEN NON-RESIDENTIAL

Building and Safety
Permit Service Center

Projects for new buildings, additions of 1,000 square feet or greater and/or building alterations with a permit valuation of $200,000 or above are subject to the provisions of the California Green Building Standards Code. This checklist is provided by the City of Berkeley in order to demonstrate compliance with the code and facilitate permit approval.

Instructions:

1. Read and understand the requirements of all mandatory measures listed in this checklist.
2. Mark all mandatory measures that are applicable to the proposed project.
3. Coordinate the construction drawings with the mandatory measures.
4. Incorporate this checklist into the submitted set of construction drawings on full sized sheets.

Building and Safety
1947 Center St. 3rd floor
Berkeley, CA 94704
510-981-7440 TTY 6903
buildingandsafety@cityofberkeley.info

Project Information

Project Address: 2029 Berkeley Way

Permit Number: B2023-05800

☐ New Building [N] ☐ Addition [A] ☑ Alteration

Planning and Design

Storm Water

☐ **Storm water pollution prevention.** Projects which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through one or more of the following measures: [CGBSC 5.106.1]
- **Stormwater management.** Comply with the Stormwater management and erosion control requirements per Title 17 of the City of Berkeley Municipal Code. [CGBSC 5.106.1.1]
- **Best management practices (BMP).** Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP. [CGBSC 5.106.1.2]
- **Grading and paving.** Indicate how site grading or drainage system will manage all surface water flows to keep water from entering buildings. [CGBSC 5.106.1.10]

Bicycle Parking

☐ **Bicycle Parking.** Projects adding 10 or more vehicular parking spaces shall comply with the the following or meet the applicable City of Berkeley ordinance, whichever is stricter. [CGBSC 5.106.4.1]
- **Short-term bicycle parking.** Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5-percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. [CGBSC 5.106.4.1.1]
- **Long-term bicycle parking.** Provide secure bicycle parking for 5-percent of the tenant vehicular parking spaces being added, with a minimum of one space. [CGBSC 5.106.4.1.2]

Vehicle Parking

☐ **Designated parking.** In projects that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles per CALGreen Table 5.106.5.2. Provide parking stall markings as required per CALGreen Section 5.106.5.2.1. [CGBSC 5.106.5.2]

Electric Vehicle Charging

Definitions

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge an electric vehicle.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). A space intended for future installation of EV charging equipment and charging of electric vehicles.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) RACEWAY EQUIPPED. An EV Space that includes a raceway between any enclosed, inaccessible or concealed areas and the electrical service panel or subpanel. No additional electrical panel capacity is required at the time of construction.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces served by electric vehicle charger(s) or other

Last Revised 05/06/20

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

equipment allowing charging of electric vehicles. Electric vehicle charging stations are not considered parking spaces.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

☐ **Identification.** The service panel or subpanel circuit directory shall identify the overcurrent protective device for future EV charging as "EV CAPABLE" and identify the overcurrent protective devices serving EVCS as "EV CHARGER". Raceway termination locations shall be permanently and visibly marked as "EV CAPABLE". [CGBSC 5.106.6.3.4]

☐ **Raceways.** Listed raceways and associated conductors shall be sized to accommodate a dedicated 208/240-volt branch circuit for a future EV charger. The raceway shall not be less than nominal 1-inch inside diameter. Raceways shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Construction documents shall identify the raceway termination point. [CGBSC 5.106.5.3.1 and 5.106.5.3.2]

Electric Vehicle Charging Stations

☐ **Single EVCS.** The service panel and/or subpanel shall be provided with a 40 ampere minimum dedicated branch circuit and overcurrent protective device to serve EVSE. [CGBSC 5.106.5.3.1

☐ **Multiple EVCS.** Construction documents shall provide information on amperage of dedicated branch circuits, EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. [CGBSC 5.106.5.3.2]

Accessibility

☐ **Minimum number.** Where EVCS are required, EVCS complying with CBC Section 11B-228.3.1 and 11B-812 shall be provided in accordance with CBC Table 11B-228.3.2.1. Where an EV charger can simultaneously charge more than one vehicle, the number of EV chargers provided shall be considered equivalent to the number of electric vehicles that can be simultaneously charged. [CBC 11B-228.3.2]

EV Spaces

☐ **EV charging space calculation.** When 10 or more parking spaces are constructed: [CGBSC 5.106.5.3.3]
- 10 percent of the total number of parking spaces shall be EVCS and equipped with EV chargers. Installation of a Direct Current Fast Charger with the capacity to provide at least 80 kW of output may substitute for up to 10 EV Spaces.
- 40 percent of the total number of parking spaces shall be EV Spaces Raceway Equipped capable of supporting future EVSE.

Light Pollution

☐ **Light pollution reduction. [N]** Outdoor lighting systems shall be designed and installed to comply with Backlight, Uplight and Glare rating requirements in CALGreen Table 5.106.8 or comply with the City of Berkeley's ordinances, whichever is more stringent [CGBSC 5.106.8].

Water Efficiency and Conservation

Indoor Water Use: Metering Devices

☐ **New buildings or additions in excess of 50,000 square feet.** Separate sub-meters shall be installed as follows: [CGBSC 5.303.1.1]
- For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day, including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
- Where separate sub-meters for individual building tenants are unfeasible, for water supplied to the following subsystems:
  a. Makeup water for cooling towers where flow through is greater than 500 gpm.
  b. Makeup water for evaporative coolers greater than 6 gpm.
  c. Steam and hot-water boilers with energy input more than 500,000 Btu/h.

☐ **Excess consumption. [N]** A separate sub-meter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day. [CGBSC 5.303.1.2]

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

Indoor Water Use: Water Conservation

☐ **Water closets.** The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification for Tank-type Toilets. [CGBSC 5.303.3.1]

Urinals

☐ **Wall-mounted urinals.** The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. [CGBSC 5.303.3.2.1]

☐ **Floor-mounted urinals.** The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush. [CGBSC 5.303.3.2.2]

Showerheads

☐ **Single showerhead.** Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the US EPA WaterSense Specification for Showerheads. [CGBSC 5.303.3.3.1]

☐ **Multiple showerheads serving one shower.** When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead. [CGBSC 5.303.3.3.2]

Faucets and Fountains

☐ **Nonresidential lavatory faucets.** Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. [CGBSC 5.303.3.4.1]

☐ **Kitchen faucets.** Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. [CGBSC 5.303.3.4.2]

☐ **Wash fountains.** Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi]. [CGBSC 5.303.3.4.3]

☐ **Metering faucets.** Metering faucets shall not deliver more than 0.20 gallons per cycle. [CGBSC 5.303.3.4.4]

☐ **Metering faucets for wash fountains.** Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle/20 [rim space (inches) at 60 psi]. [CGBSC 5.303.3.4.5]

Commercial Kitchen Equipment

☐ **Food waste disposers.** Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/noload) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. [CGBSC 5.303.4.1]

Outdoor Water Use

☐ **Outdoor potable water use in landscape areas.** Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. [CGBSC 5.304.1]

Note: The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.

Material Conservation and Resource Efficiency

Low-carbon Concrete

☐ **Reduction in cement use.** As allowed by the enforcing agency, cement used in concrete mix design shall be reduced not less than 25 percent. Products commonly used to replace cement in concrete mix designs include, but are not limited to fly ash, slag, silica fume, and rice hull ash. [CGBSC 5.405.1]

Water Resistance and Moisture Management

☐ **Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures. [CGBSC 5.407.2.1]

☐ **Entries and openings.** Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows: [CGBSC 5.407.2.2]
- **Exterior door protection.** Primary exterior entries shall be covered to prevent water intrusion by using non-absorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: [CGBSC 5.407.2.2.1]
  a. An installed awning at least 4 feet in depth.
  b. The door is protected by a roof overhang at least 4 feet in depth.
  c. The door is recessed at least 4 feet.
  d. Other methods which provide equivalent protection.
- **Flashing.** Install flashings integrated with a drainage plane. [CGBSC 5.407.2.2.2]

Construction Waste Reduction, Disposal and Recycling

☑ **Construction waste management plan & excavated soil and land clearing debris.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. [CGBSC 5.408.1 and 5.408.3]

☑ **Universal waste. [A]** Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as flourescent lamps and ballast and mecury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. [CGBSC 5.408.2]

Building Maintenance and Operation

☑ **Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals. [CGBSC 5.410.1]

☐ **Additions. [A]** All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site. [CGBSC 5.410.1.1]

☐ **Commissioning. [N]** For newly constructed buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed by trained personnel with experience on projects of comparable size and complexity. All building operating systems covered by Title 24, Part 6, California Energy Code as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements. [CGBSC 5.410.2]

☐ **Owner's or Owner representative's Project Requirements (OPR). [N]** The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following: [CGBSC 5.410.2.1]
- Environmental and sustainability goals.
- Energy efficiency goals.
- Indoor environmental quality requirements.
- Project program, including facility functions and hours of operation, and need for after hours operation.
- Equipment and systems expectations.
- Building occupant and operation and maintenance (O&M) personnel expectations.

☐ **Basis of Design (BOD). [N]** A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover: [CGBSC 5.410.2.2]
- Heating, ventilation, air conditioning systems and controls.
- Indoor lighting system and controls.
- Water heating system.
- Renewable energy systems.
- Landscape irrigation systems.
- Water reuse systems.

☐ **Commissioning plan. [N]** Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following: [CGBSC 5.410.2.3]
- General project information.
- Commissioning goals.
- Systems to be commissioned. Plans to test systems and components shall include:
  a. An explanation of the original design intent.
  b. Equipment and systems to be tested, including the extent of tests.
  c. Functions to be tested.
  d. Conditions under which the test shall be performed.
  e. Measurable criteria for acceptable performance.

SHEET A001 DEF. ITEM

SHEET A001 GEN. NOTES

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b. The door is protected by a roof overhang at least 4 feet in depth.
c. The door is recessed at least 4 feet.
d. Other methods which provide equivalent protection.

- **Flashing.** Install flashings integrated with a drainage plane. [CGBSC 5.407.2.2.2]

Construction Waste Reduction, Disposal and Recycling

☑ **Construction waste management plan & excavated soil and land clearing debris.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. [CGBSC 5.408.1 and 5.408.3]

☑ **Universal waste. [A]** Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as flourescent lamps and ballast and mecury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. [CGBSC 5.408.2]

Building Maintenance and Operation

☑ **Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals. [CGBSC 5.410.1]

☐ **Additions. [A]** All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site. [CGBSC 5.410.1.1]

☐ **Commissioning. [N]** For newly constructed buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed by trained personnel with experience on projects of comparable size and complexity. All building operating systems covered by Title 24, Part 6, California Energy Code as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements. [CGBSC 5.410.2]

☐ **Owner's or Owner representative's Project Requirements (OPR). [N]** The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following: [CGBSC 5.410.2.1]
- Environmental and sustainability goals.
- Energy efficiency goals.
- Indoor environmental quality requirements.
- Project program, including facility functions and hours of operation, and need for after hours operation.
- Equipment and systems expectations.
- Building occupant and operation and maintenance (O&M) personnel expectations.

☐ **Basis of Design (BOD). [N]** A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover: [CGBSC 5.410.2.2]
- Heating, ventilation, air conditioning systems and controls.
- Indoor lighting system and controls.
- Water heating system.
- Renewable energy systems.
- Landscape irrigation systems.
- Water reuse systems.

☐ **Commissioning plan. [N]** Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following: [CGBSC 5.410.2.3]
- General project information.
- Commissioning goals.
- Systems to be commissioned. Plans to test systems and components shall include:
  a. An explanation of the original design intent.
  b. Equipment and systems to be tested, including the extent of tests.
  c. Functions to be tested.
  d. Conditions under which the test shall be performed.
  e. Measurable criteria for acceptable performance.

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- Commissioning team information.
- Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

☐ **Functional performance testing. [N]** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, testing methods utilized, and any readings and adjustments made. [CGBSC 5.410.2.4]

☐ **Documentation and training. [N]** A systems manual and systems operations training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations. [CGBSC 5.410.2.5]

☐ **Commissioning report. [N]** A report of commissioning process activities undertaken through design and construction phases of the building project shall be completed and provided to the owner or representative. [CGBSC 5.410.2.6]

☐ **Testing and adjusting.** Testing and adjusting of systems shall be required for newly constructed buildings less than 10,000 square feet, or new systems to serve an addition or alteration, as applicable. [CGBSC 5.410.4]
- HVAC systems and controls.
- Indoor and outdoor lighting and controls.
- Water heating systems.
- Renewable energy systems.
- Landscape irrigation systems.
- Water reuse systems.

☐ **Procedures.** Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system. [CGBSC 5.410.4.3]

☑ **HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the City of Berkeley. [CGBSC 5.410.3.1]

☑ **Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services. [CGBSC 5.410.4.4]

☐ **Operation and maintenance (O&M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations. [CGBSC 5.410.4.5]

Environmental Quality

Fireplaces

☐ **Fireplaces.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code Section 150. [CGBSC 5.503.1]

☐ **Woodstoves.** Woodstove and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. [CGBSC 5.503.1.1]

Pollutant Control: Mechanical Systems

☐ **Temporary ventilation.** The permanent HVAC system shall only be used during construction if necessary to condition the building within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30-percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction. [CGBSC 5.504.1]

☐ **Covering of duct openings & protection of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the City of Berkeley to reduce the amount of dust, water and debris

SEE MECH. DWGS AND SPECS

SEE MECH. DWGS AND SPECS

SEE SHEET A001 GEN. NOTES

SEE SHEET A302 SHEET NOTES

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which may enter the system. [CGBSC 5.504.3]

☑ **Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. Existing mechanical equipment excepted. [CGBSC 5.504.5.3]
- **Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. [CGBSC 5.504.5.3.1]

☐ **Environmental tobacco smoke (ETS) control.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of the City of Berkeley, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions. [CGBSC 5.504.7]

Pollutant Control: Finish Material

☑ **Adhesives, sealants and caulks.** Adhesives, sealants and caulks used on the project shall comply with CALGreen Table 5.504.4.1 and 5.504.4.2 for VOC limits. Product units which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces shall comply with statewide VOC standards and California Code of Regulations, Title 17. [CGBSC 5.504.4.1]

☑ **Paints and Coatings.** Architectural paints and coatings shall comply with VOC limits in CALGreen Table 5.504.4.3. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat -High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in CALGreen Table 5.504.4.3 shall apply. [CGBSC 5.504.4.3]

☐ **Aerosol paints and coatings.** Aerosol paints and coatings shall meet the PWMIR Limits for ROC in California Code of Regulations, Title 17 and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49. [CGBSC 5.504.4.3.1]

Carpets

☐ **Carpet systems.** All carpet installed in the building interior shall meet at least one of the following testing and product requirements: [CGBSC 5.504.4.4]
- Carpet and Rug Institute's Green Label Plus Program;
- Compliant with the VOC-emission limits and requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350);
- NSF/ANSI 140 at the Gold level or higher;
- Scientific Certifications Systems Sustainable Choice; or
- Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 dated July 2012 and listed in the CHPS High Performance Product Database.

☐ **Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. [CGBSC 5.504.4.4.1]

☐ **Carpet adhesive.** All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBSC 5.504.4.4.2]

Composite Wood Products

☐ **Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as shown in CALGreen Table 5.504.4.5. [CGBSC 5.504.4.5]

Environmental Comfort

☐ **Acoustical control.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in CGBSC Section 5.507.4.1 or 5.507.4.2. [CGBSC 5.507.4]

SEE MECH. DWGS AND SPECS

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

Outdoor Air Quality

☑ **Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with the following: [CGBSC 5.508.1]
- **Chlorofluorocarbons (CFCs).** Install HVAC, re-frigeration & fire suppression equipment that do not contain CFCs. [CGBSC 5.508.1.1]
- **Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. [CGBSC 5.508.1.2]
- **Supermarket refrigerant leak reduction.** New commercial refrigeration systems containing high-global-warming potential refrigerants (GWP of 150 or greater) installed in retail food stores with 8,000 square feet or more of conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units shall comply with refrigerant leak reduction measures. [CGBSC 5.508.2]

Additional:

I certify that I have read and acknowledged all of the Code Requirements noted above. I accept full responsibility for complying with all of the above requirements, as applicable to my project. I further agree that if I fail to comply with the code requirements, due to error or omission, I will correct all deficiencies prior to final inspection.

Name | Signature | Date

Check One: ☐ Contractor ☐ Owner ☐ Owner's Agent

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.

SHEET NOTES

1. THE CODE SECTIONS RELEVANT TO THE ADDITIONS AND ALTERATIONS SHALL ONLY APPLY TO THE PORTIONS OF THE BUILDING BEING ADDED OR ALTERED WITH THE SCOPE OF THE PERMIT WORK.

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
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ELECTRICAL ENGINEER:
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Emeryville, CA 94608
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STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

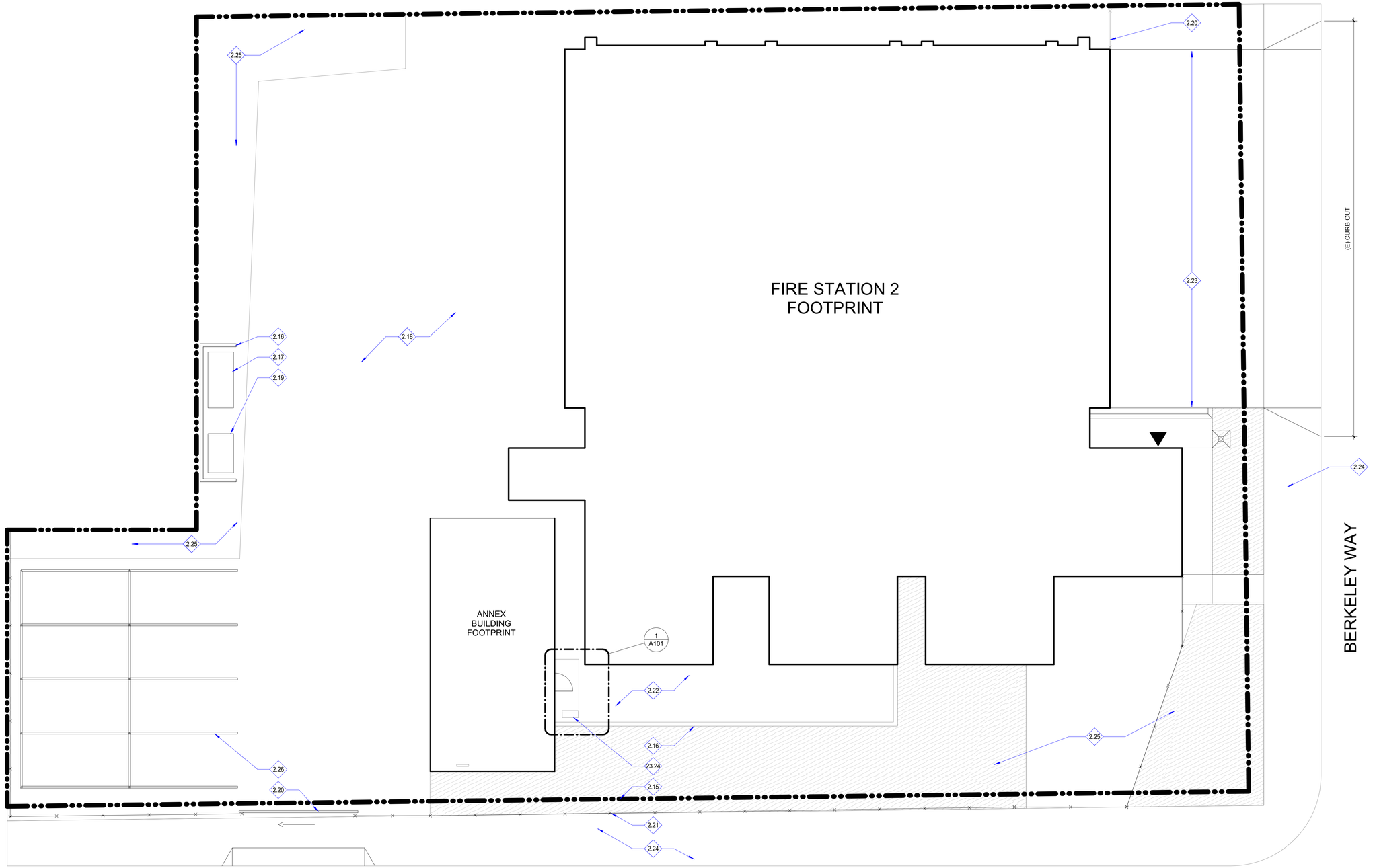
ISSUE:
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DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
CALGREEN NON-RESIDENTIAL CODE COMPLIANCE

SHEET NUMBER:
A002



1 EXISTING SITE PLAN
1/8" = 1'-0"

KEYNOTE	
2.15	(E) PROPERTY LINE
2.16	(E) CMU RETAINING WALL
2.17	(E) GENERATOR
2.18	(E) CONC. & ASPHALT VEHICLE ACCESS
2.19	(E) FUEL TANK
2.20	(E) GATE
2.21	(E) FENCE
2.22	(E) CONC. PAVING
2.23	(E) FIRE DEPARTMENT DRIVE WAY, TYP.
2.24	(E) SIDEWALK, TYP.
2.25	(E) LANDSCAPE

KEYNOTE	
2.26	(E) PARKING
23.24	OUTDOOR HEAT PUMP, SED, SMD

SHEET NOTES

1. PROVIDE GAS SHUT-OFF VALVE.

2. PROVIDE SEWER LATERAL REQUIREMENTS FOR OBTAINING SEWER LATERAL CERTIFICATE.

SHEET LEGEND

PROPERTY LINE

MAIN ENTRY DOOR LOCATION

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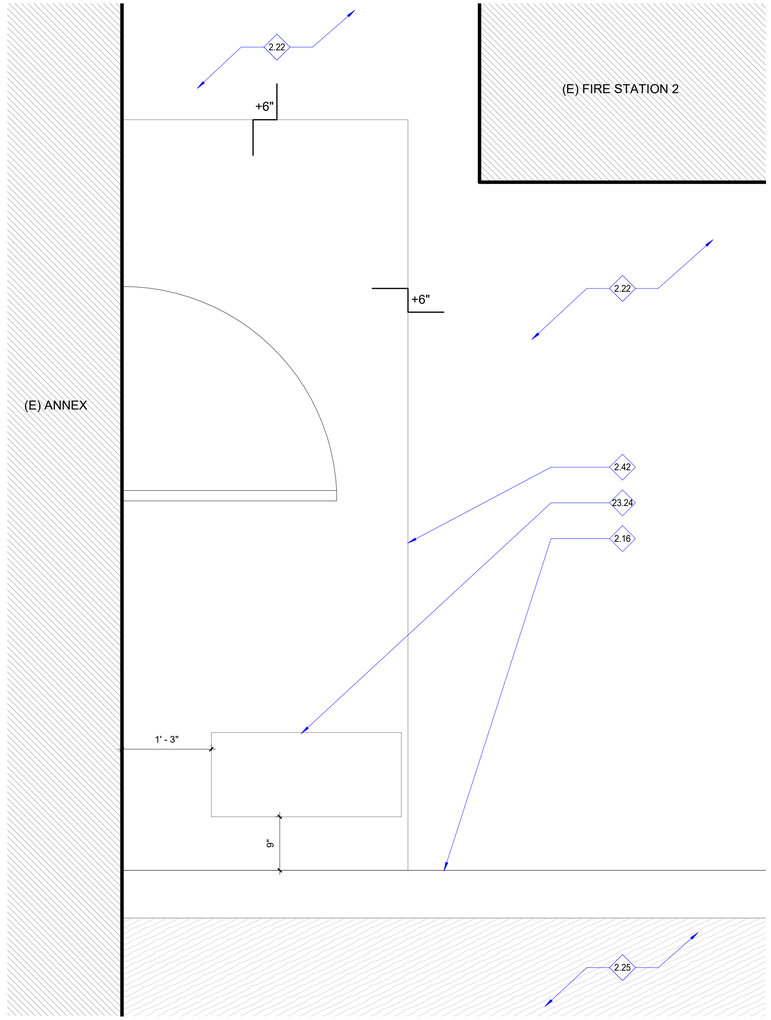
ISSUE:
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DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
A100



1 ENLARGED SITE PLAN
1" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.

4. ALL EXPOSED CONDUIT FOR NEW AND FUTURE USE SHALL BE TIGHT TO STRUCTURE AND FASTENED APPROPRIATELY. NEW CONDUIT AT INTERIOR AND EXTERIOR SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

5. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

KEYNOTE

2.16	(E) CMU RETAINING WALL
2.22	(E) CONC. PAVING
2.25	(E) LANDSCAPE
2.42	(E) CONCRETE LANDING
23.24	OUTDOOR HEAT PUMP, SED, SMD

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

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23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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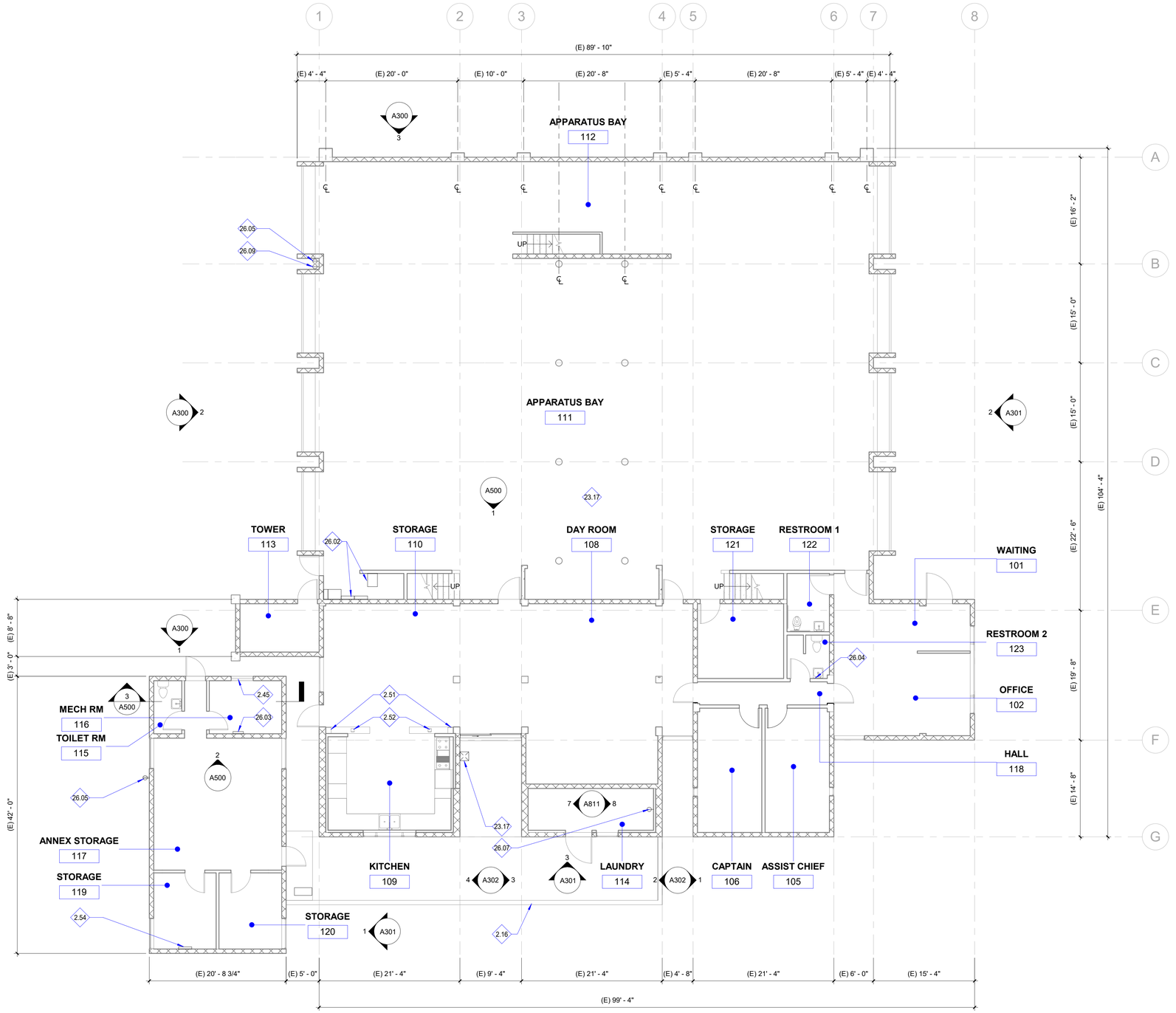
ISSUE:
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DATE:
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SHEET TITLE:
PARTIAL SITE PLAN AND DETAILS

SHEET NUMBER:
A101



1 GROUND FLOOR PLAN
1/8" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.

4. ALL EXPOSED CONDUIT FOR NEW AND FUTURE USE SHALL BE TIGHT TO STRUCTURE AND FASTENED APPROPRIATELY. NEW CONDUIT AT INTERIOR AND EXTERIOR SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

5. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

KEYNOTE

2.16	(E) CMU RETAINING WALL
2.45	(E) METAL LOUVER
2.51	(E) STRUCTURAL POST
2.52	(E) STRUCTURAL BRACED FRAME
2.54	(E) DATA PANEL
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
26.02	REPLACE (E) PANEL, SED
26.03	NEW PANEL SED
26.04	EXHAUST FAN SWITCH, SED
26.05	WEATHER RESISTANT J-BOX WITH WIRE, SED
26.07	J-BOX WITH CONDUIT FOR FUTURE WIRE, SED
26.09	WEATHER RESISTANT J-BOX WITH CONDUIT FOR FUTURE WIRE, SED

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
- (E) CMU WALL
- (E) 1-HR FIRE-RATED WALL
- MECH. DUCT, SMD
- GFCI SINGLE RECEPTACLE, SED
- GFCI DUPLEX RECEPTACLE, SED

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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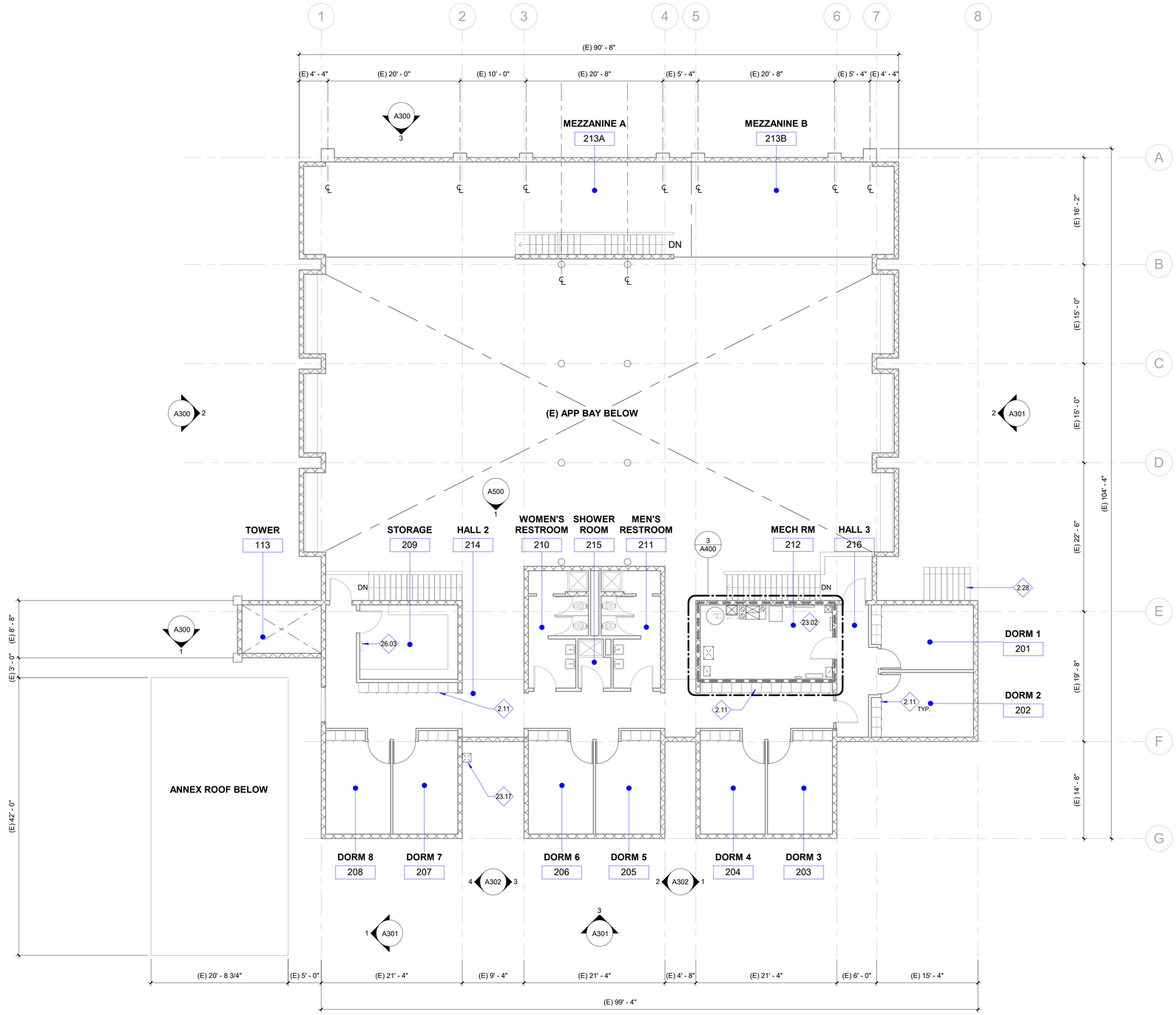
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SHEET TITLE:
GROUND FLOOR PLAN

SHEET NUMBER:
A201



1 SECOND FLOOR PLAN
1/8" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.

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5. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

KEYNOTE

2.11	(E) METAL LOCKERS
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
23.02	REPLACE (E) MECH. EQUIP. AND DUCTS IN MECH. ROOM, SMD
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
26.03	NEW PANEL. SED

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
- (E) CMU WALL
- (E) 1-HR FIRE-RATED WALL
- MECH. DUCT, SMD
- GFCI SINGLE RECEPTACLE, SED
- GFCI DUPLEX RECEPTACLE, SED

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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1	03/08/2024	PLAN CHECK 1

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SHEET TITLE:
SECOND FLOOR PLAN

SHEET NUMBER:
A202



1 ROOF PLAN
1/8" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

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6. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
2

KEYNOTE

2.02	(E) ROOF DRAIN, TYP
2.03	(E) SKYLIGHT, TYP.
2.05	(E) OVERFLOW DRAIN, TYP
2.08	(E) ROOF HATCH
2.09	(E) SINGLE-PLY ROOFING, TYP.
2.10	(E) ROOF SLEEPERS COVERED BY (N) SINGLE-PLY ROOFING, TYP OF FIVE (5)
2.12	(E) ROOF EXHAUST VENT, TYP
2.13	(E) ROOF VENTILATION LOUVERS
2.14	(E) ROOF WALKWAY PADS, TYP
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.55	(E) STRUCTURAL BRACE
23.14	VRF ROOFTOP UNIT, SMD
23.16	EXHAUST FAN W/CURB, SMD
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
- (E) SKYLIGHT
- (E) ROOF HATCH

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BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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REVISION

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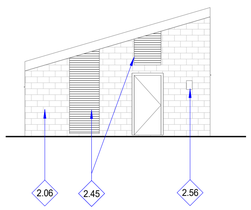
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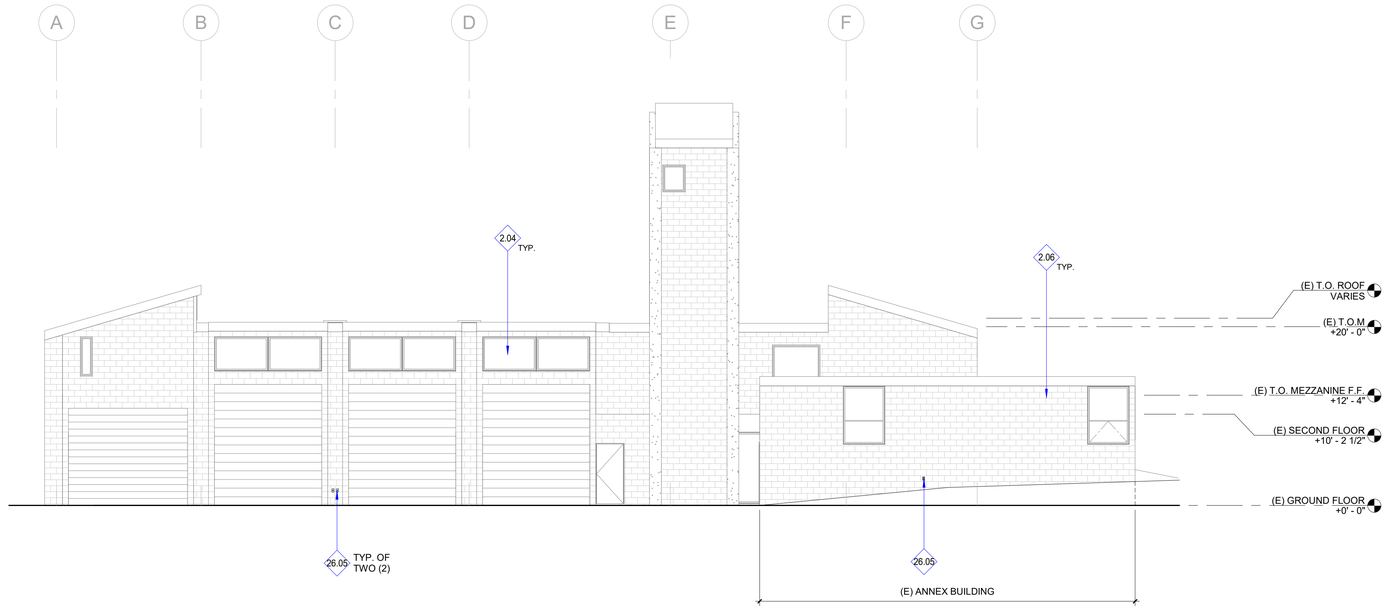
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SHEET TITLE:
ROOF PLAN

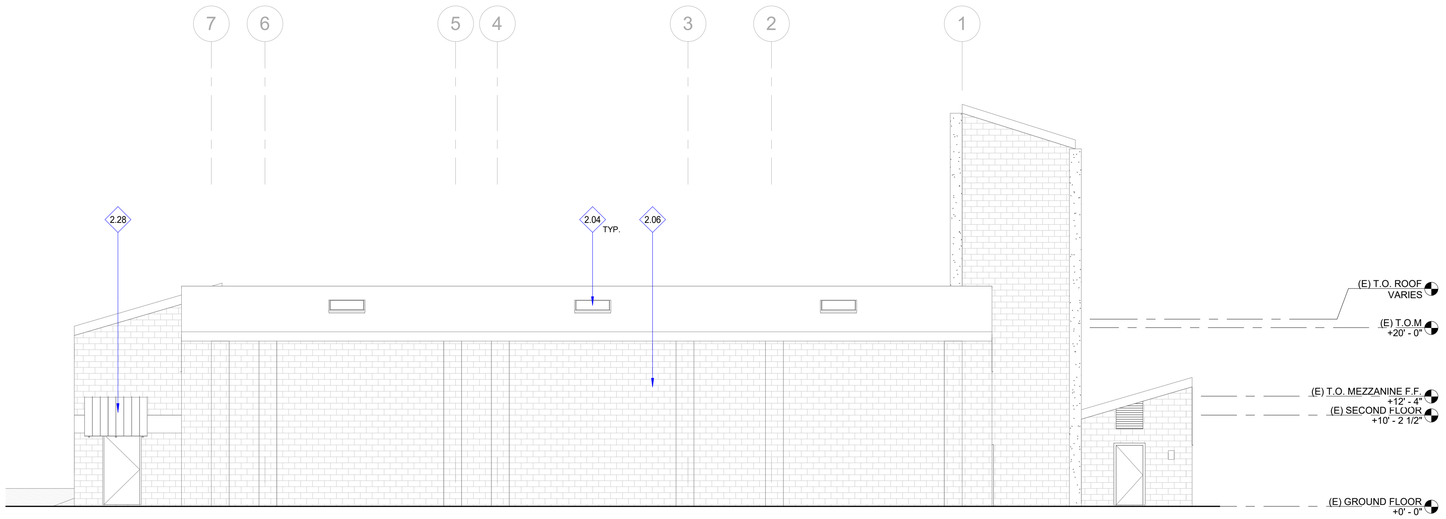
SHEET NUMBER:
A203



1 ANNEX BUILDING EAST ELEVATION
1/8" = 1'-0"



2 EXTERIOR NORTH ELEVATION
1/8" = 1'-0"



3 EXTERIOR EAST ELEVATION
1/8" = 1'-0"

SHEET NOTES

1. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

2. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

3. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.45	(E) METAL LOUVER
2.56	(E) EXHAUST WALL CAP
26.05	WEATHER RESISTANT J-BOX WITH WIRE, SED

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PROJECT:

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BERKELEY, CA 94704

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201320.31

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PROJECT TEAM:

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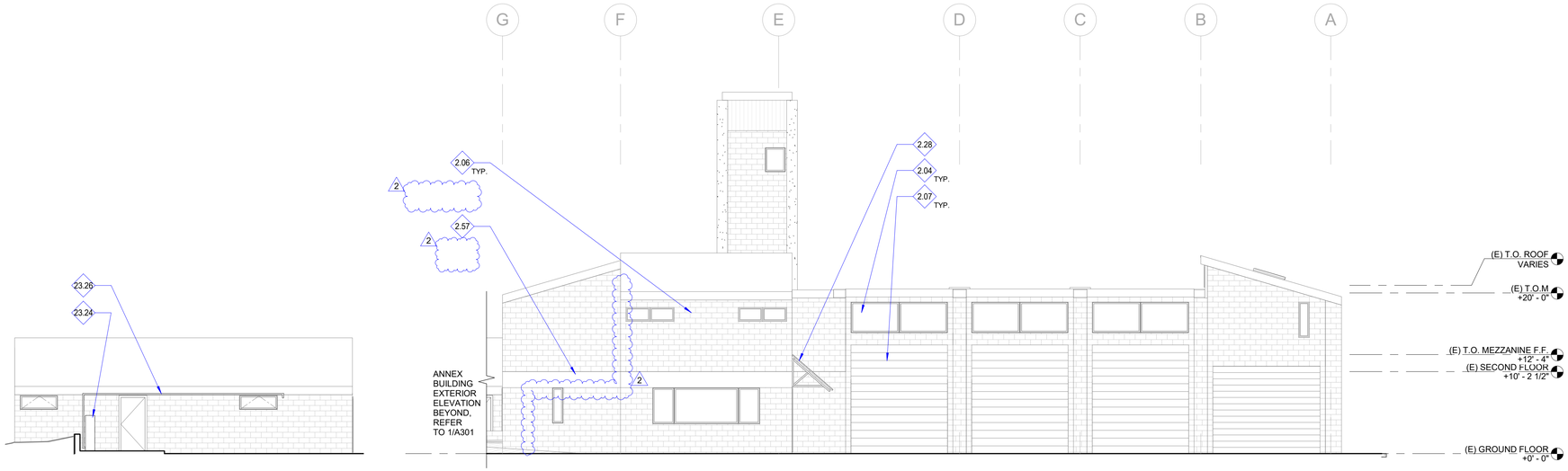
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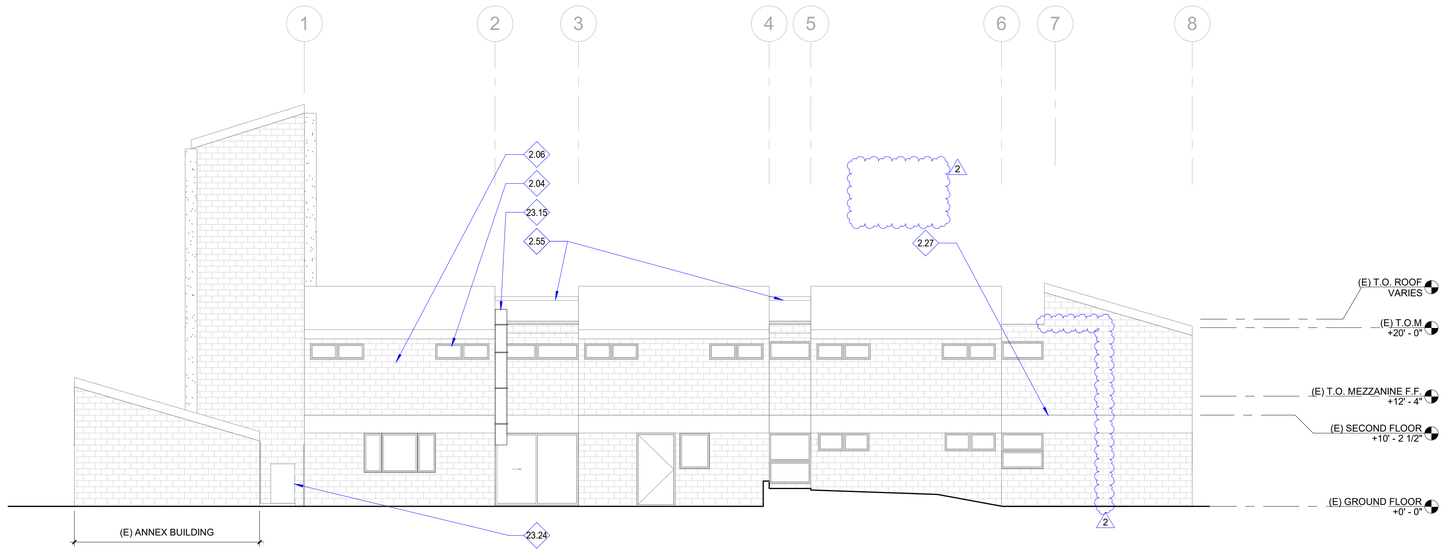
SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A300



1 ANNEX BUILDING SOUTH ELEVATION
1/8" = 1'-0"

2 EXTERIOR SOUTH ELEVATION
1/8" = 1'-0"



3 EXTERIOR WEST ELEVATION
1/8" = 1'-0"

SHEET NOTES

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2. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

3. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.07	(E) STL ROLL UP DOOR & JAMBS, TYP.
2.27	(E) CONC. BEAM
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.55	(E) STRUCTURAL BRACE
2.57	(E) CONC. BEAM
23.15	EXHAUST DUCT, SECURE TO (E) CMU WALL MAX. 4'-0" O.C. VERT, SMD
23.24	OUTDOOR HEAT PUMP, SED, SMD
23.26	REFRIGERANT LINE, SMD

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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REVISION

NUMBER	DATE	DESCRIPTION
2	08/27/2024	REVISION 1

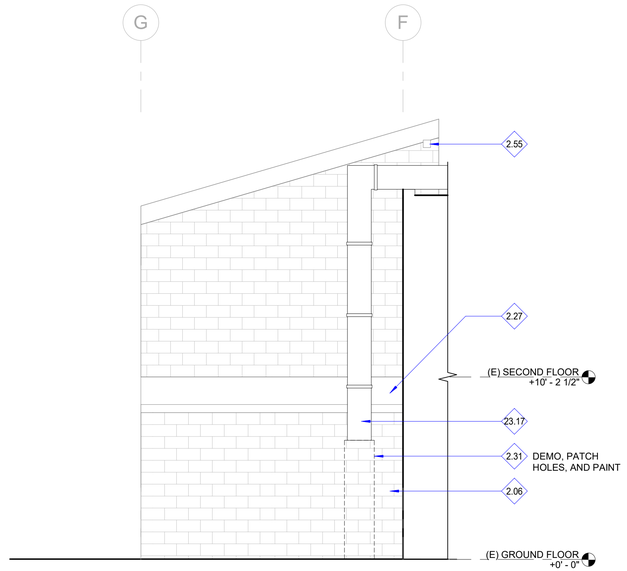
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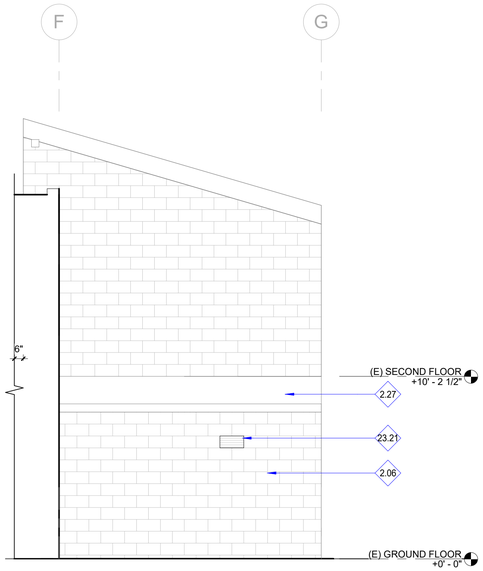
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SHEET TITLE:
EXTERIOR ELEVATIONS

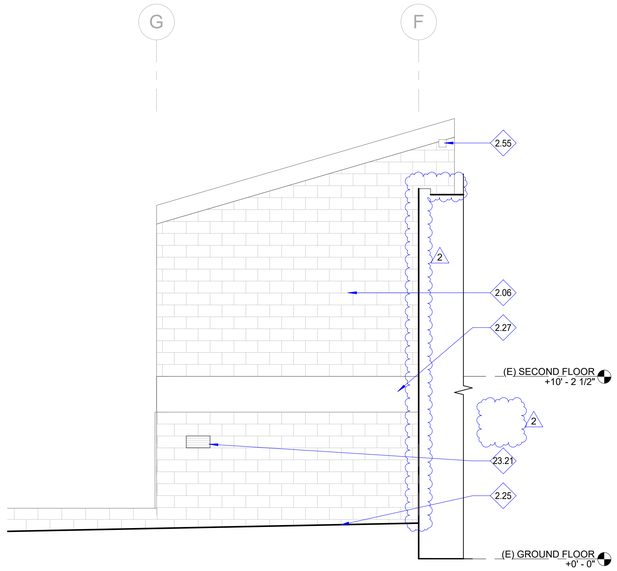
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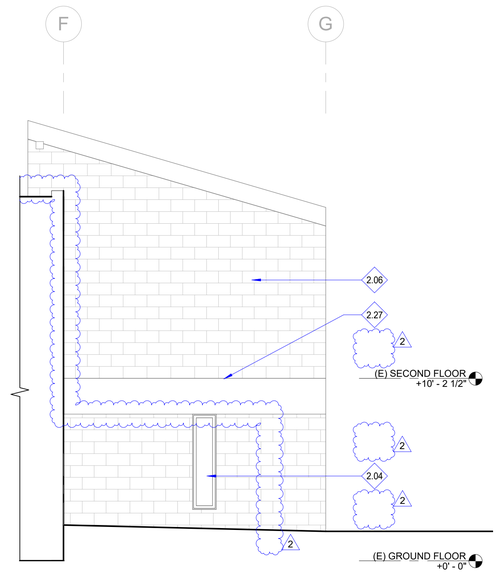
4 EXTERIOR PARTIAL SOUTH ELEVATION 2
1/4" = 1'-0"



3 EXTERIOR PARTIAL NORTH ELEVATION 2
1/4" = 1'-0"



2 EXTERIOR PARTIAL SOUTH ELEVATION 1
1/4" = 1'-0"



1 EXTERIOR PARTIAL NORTH ELEVATION 1
1/4" = 1'-0"

SHEET NOTES

1. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

2. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

3. ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN CALGREEN TABLE 5.504.4.3 THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 5.504.4.3 SHALL BE BETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGHGLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36 AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES OARD, SUGGESTD CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN CALGREEN TABLE 5.504.4.3 SHALL APPLY. [CGBSC 5.504.4.3]

4. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.25	(E) LANDSCAPE
2.27	(E) CONC. BEAM
2.31	(E) S.S. WALL PANEL
2.55	(E) STRUCTURAL BRACE
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
23.21	WALL LOUVER WITH BIRDSCREEN, POSITION TWO CMU ROWS BELOW CONCRETE BEAM, REFER TO INTERIOR ELEVATION FOR LOCATION. SMD.

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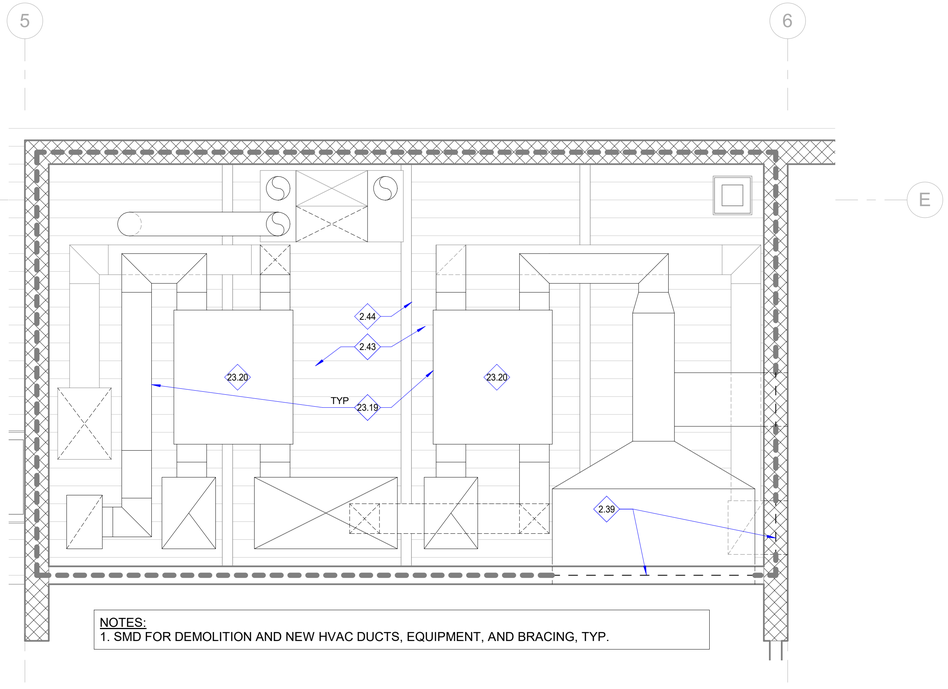
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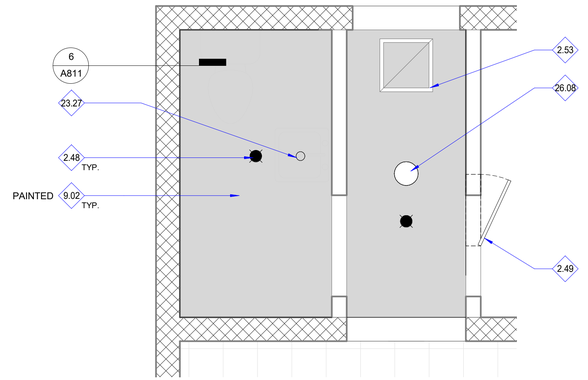
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EXTERIOR ELEVATIONS

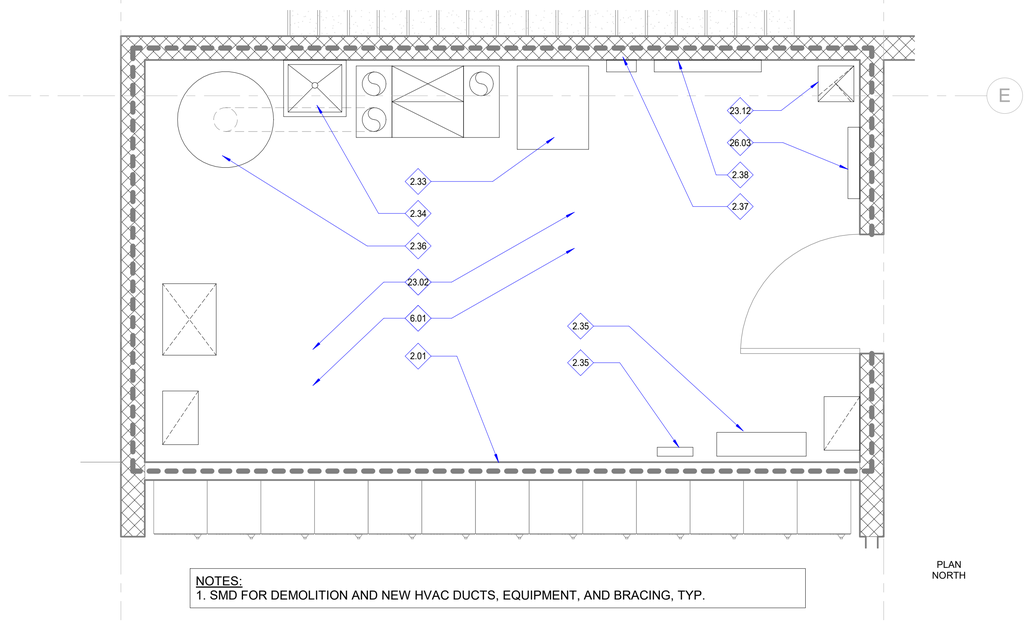
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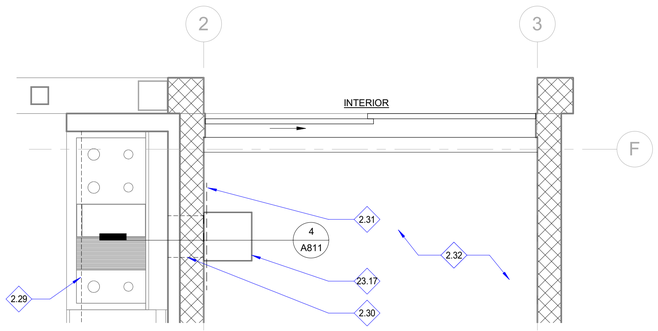
4 MECHANICAL ROOM 212 REFLECTED CEILING PLAN
1/2" = 1'-0"



2 ENLARGED ANNEX RESTROOM RCP
1/2" = 1'-0"



3 MECHANICAL ROOM 212
1/2" = 1'-0"



1 KITCHEN EXHAUST FAN
1/2" = 1'-0"

SHEET NOTES

1. LOCATE AND RETAIN EXISTING FIRE DAMPERS IN MECHANICAL ROOM.

KEY NOTES

2.01	(E) 1-HR. FIRE-RATED WALL AT MECH RM, TYP
2.29	(E) GREASE HOOD AT KITCHEN TO REMAIN
2.30	(E) THRU-WALL DUCT AND ELECTRICAL CONDUIT TO REMAIN
2.31	(E) S.S. WALL PANEL
2.32	(E) EXTERIOR CONCRETE PAVING BELOW
2.33	(E) TELECOM EQUIP
2.34	(E) SERVICE SINK, S.P.D.
2.35	(E) EQUIPMENT
2.36	(E) WATER HEATER
2.37	(E) ALARM PANEL
2.38	(E) WIRING AND PANELS
2.39	(E) FIRE DAMPER
2.43	(E) EXPOSED WOOD DECKING
2.44	(E) 4X10 ROOF JOISTS
2.48	(E) FIRE SPRINKLER TO REMAIN
2.49	(E) ATTIC ACCESS
2.53	(E) CEILING RETURN GRILLE
6.01	REPAIR DAMAGED FLOOR AFTER HVAC DEMO, PROVIDE BLOCKING, MATCH (E) PLYWOOD, AND PAINT
9.02	GYP. BD. CLG. FASTENED TO JOISTS
23.02	REPLACE (E) MECH. EQUIP. AND DUCTS IN MECH. ROOM, SMD
23.12	(E) ROOF EXHAUST VENT
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
23.19	GALV. MTL. SEISMIC BRACING AT DUCTS AND EQUIP., SMD
23.20	ENERGY RECOVERY VENTILATOR, SMD
23.27	FAN COIL SECONDARY DRAIN WITH ESCUTCHEON. SMD
26.03	NEW PANEL. SED
26.08	REPLACE EXISTING DOWNLIGHT

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
- (E) ITEM ABOVE OR BEHIND
- (E) CMU WALL
- (E) OR (N) WALL PENETRATION FOR MECH.
- (E) 1-HR FIRE-RATED WALL
- SUPPLY DUCT RISER, SMD
- SUPPLY DUCT DROP, SMD
- RETURN DUCT RISER, SMD
- RETURN DUCT DROP, SMD
- EXHAUST RISER, SMD
- EXHAUST DROP, SMD
- FLUE, SMD

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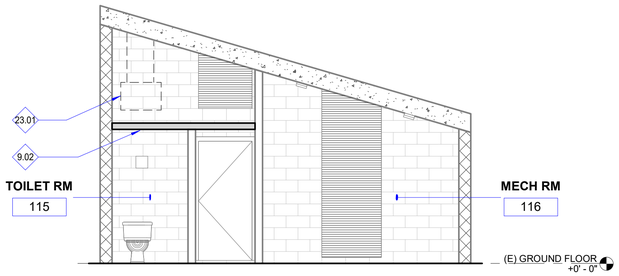
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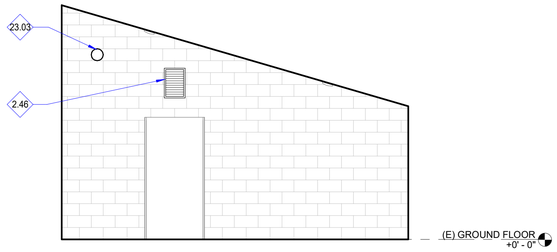
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ENLARGED PLANS

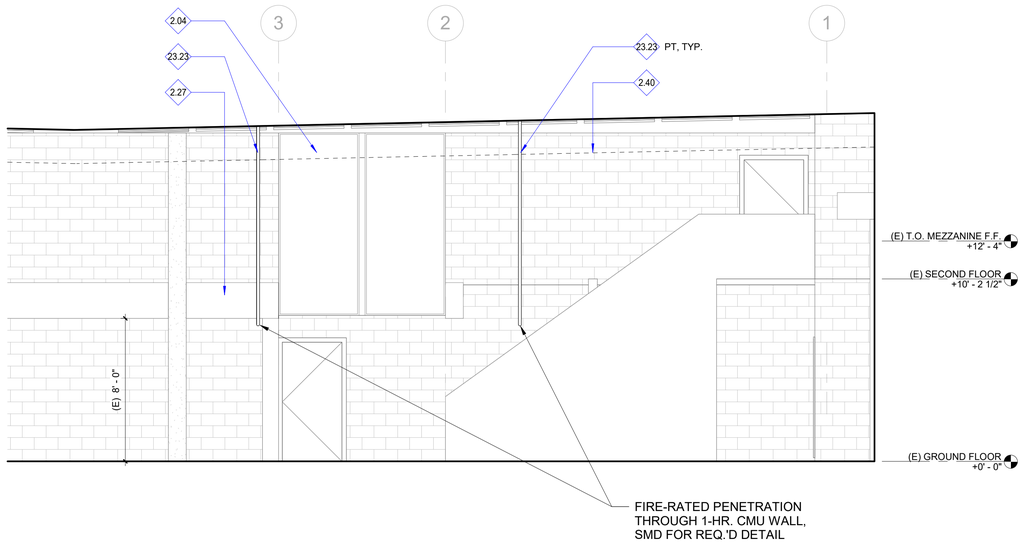
SHEET NUMBER:
A400



3 ANNEX SECTION
1/4" = 1'-0"



2 ANNEX STORAGE EAST INTERIOR ELEVATION
1/4" = 1'-0"



1 APP. BAY INTERIOR ELEVATION
1/4" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.

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6. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.27	(E) CONC. BEAM
2.40	(E) GLU-LAM BEAM IN FOREGROUND
2.46	(E) INDOOR GRILLE, S.M.D. FOR REUSE OF GRILLE
9.02	GYP. BD. CLG. FASTENED TO JOISTS
23.01	FAN COIL UNIT HUNG FROM CLG., SMD
23.03	EXPOSED DUCT, S.M.D.
23.23	PIPE FROM ROOF TO PENETRATE CMU WALL, SMD

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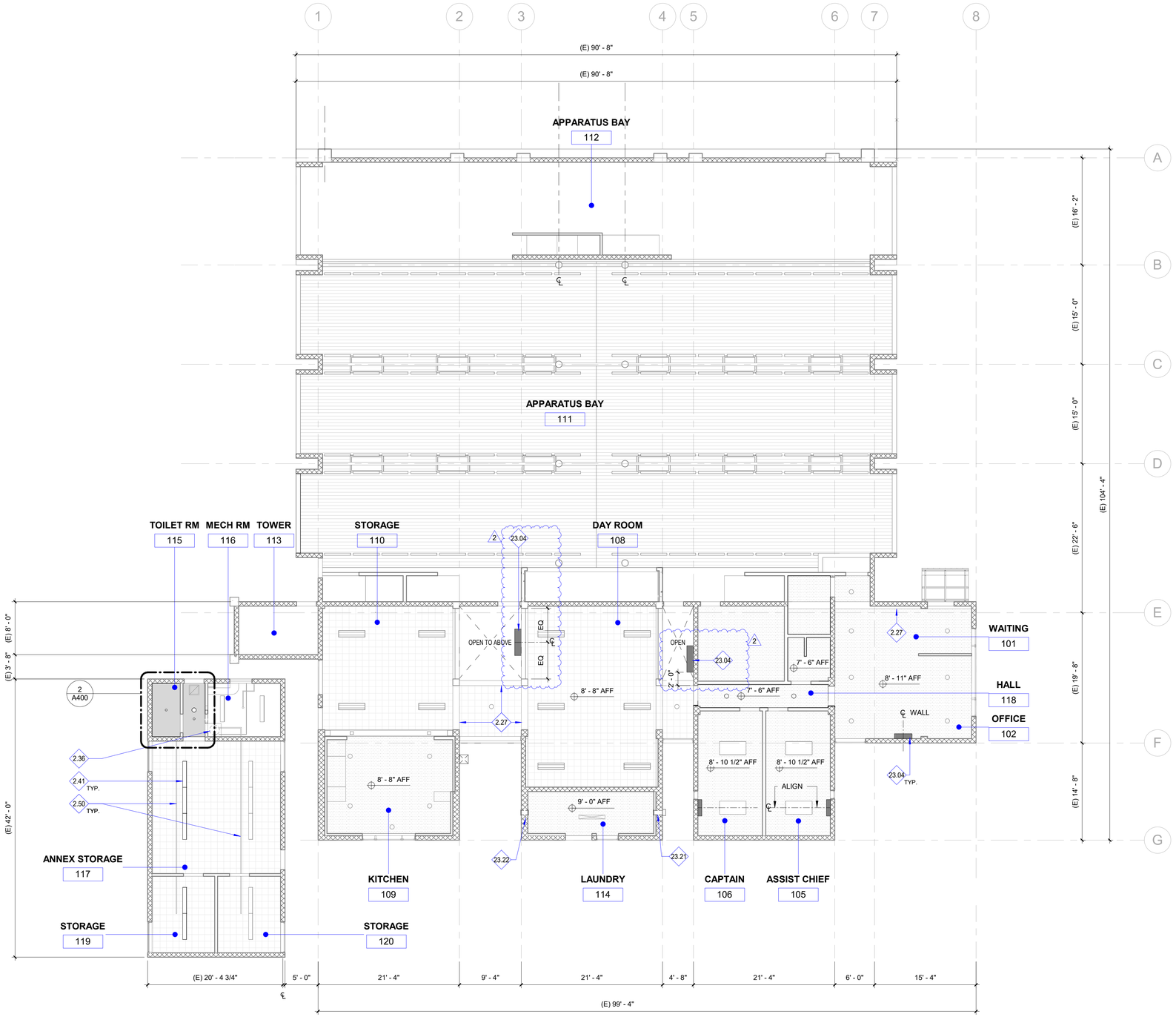
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SHEET TITLE:
INTERIOR ELEVATIONS & BUILDING SECTIONS

SHEET NUMBER:
A500



1 REFLECTED GROUND FLOOR CEILING PLAN
1/8" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.

2. ALL DIMENSIONS SHOWN NOTED AS VIF ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.

4. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

5. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.
2

KEYNOTE

2.27	(E) CONC. BEAM
2.36	(E) WATER HEATER
2.41	(E) LIGHT FIXTURE
2.50	(E) FIRE SPRINKLER LINE
23.04	DUCTLESS WALL-MOUNTED FC UNIT, SMD
23.21	WALL LOUVER WITH BIRDSCREEN, POSITION TWO CMU ROWS BELOW CONCRETE BEAM, REFER TO INTERIOR ELEVATION FOR LOCATION. SMD.
23.22	EXHAUST FAN, LOCATED TWO CMU COURSE BELOW CONC. BEAM, SEE INT ELEVS FOR LOCATION, SMD

LEGEND

X' - X" AFF	HEIGHT OF (E) CLG. ABOVE FINISHED FLOOR
	NEW ITEM
	(E) ITEM TO REMAIN
	(E) CMU WALL
	(E) 1 X 1 ACOUSTIC CEILING PANEL ON CLIP SYSTEM
	(E) GYPSUM BOARD CEILING
	(E) EXPOSED WOOD DECKING
	GYP. BOARD CEILING
	(E) OR (N) HVAC DUCT, SMD
	(E) ROOF HATCH ACCESS PANEL
	WALL MTD. FAN COIL UNIT, SMD

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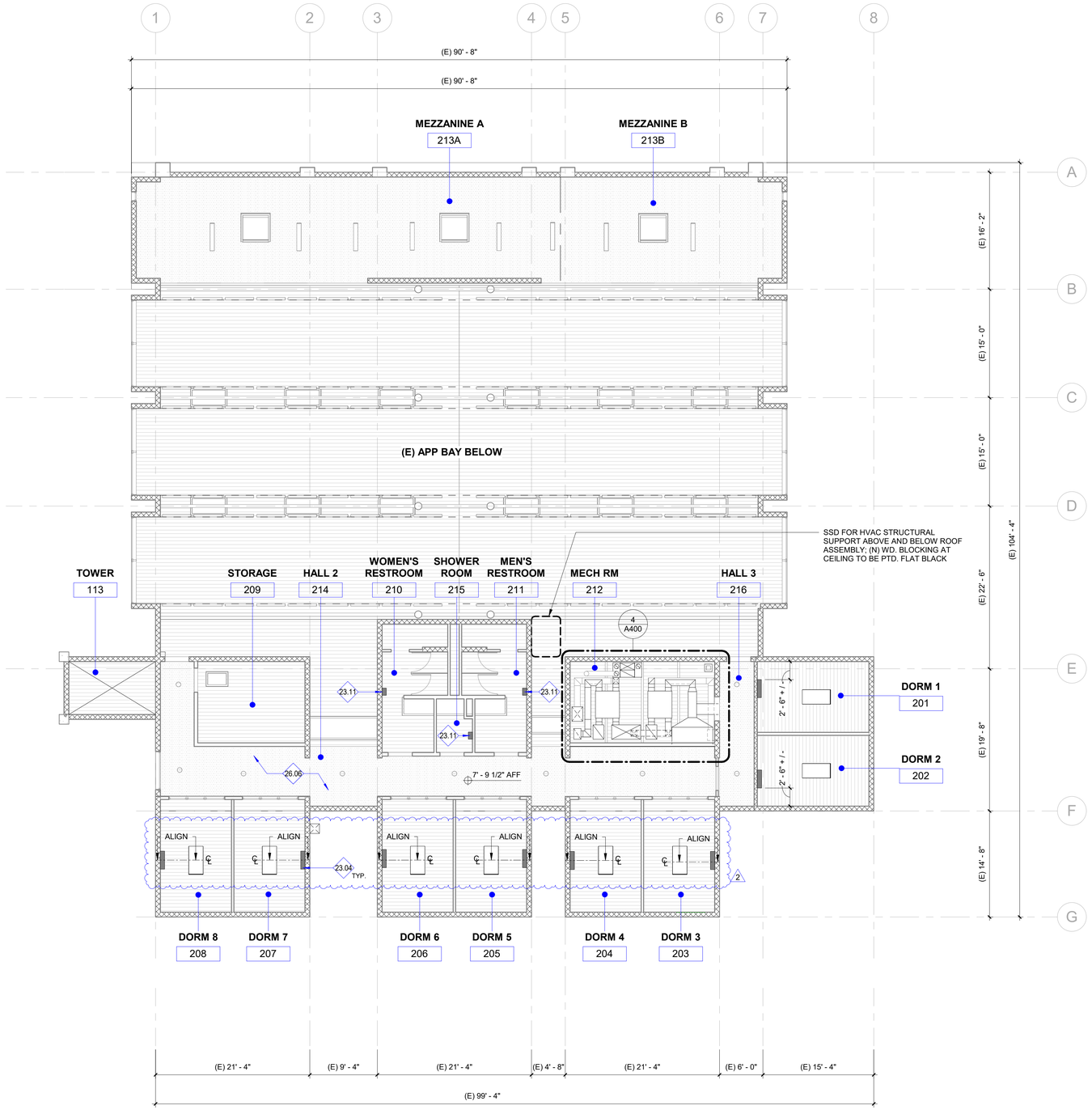
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DATE:
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SHEET TITLE:
REFLECTED GROUND FLOOR CEILING PLAN

SHEET NUMBER:
A601



1 REFLECTED SECOND FLOOR CEILING PLAN
1/8" = 1'-0"

SHEET NOTES

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2

KEYNOTE

23.04	DUCTLESS WALL-MOUNTED FC UNIT, SMD
23.11	PANEL HEATER, SMD
26.06	SURFACE MTD. CONDUIT AT CLG FOR WIRING TYP, SED

LEGEND

X' - X" AFF	HEIGHT OF (E) CLG. ABOVE FINISHED FLOOR
	NEW ITEM
	(E) ITEM TO REMAIN
	(E) CMU WALL
	(E) 1 X 1 ACOUSTIC CEILING PANEL ON CLIP SYSTEM
	(E) GYPSUM BOARD CEILING
	(E) EXPOSED WOOD DECKING
	GYP. BOARD CEILING
	(E) OR (N) HVAC DUCT, SMD
	(E) ROOF HATCH ACCESS PANEL
	WALL MTD. FAN COIL UNIT, SMD

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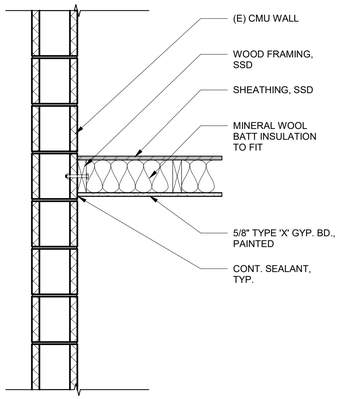
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SHEET TITLE:
REFLECTED SECOND FLOOR CEILING PLAN

SHEET NUMBER:
A602

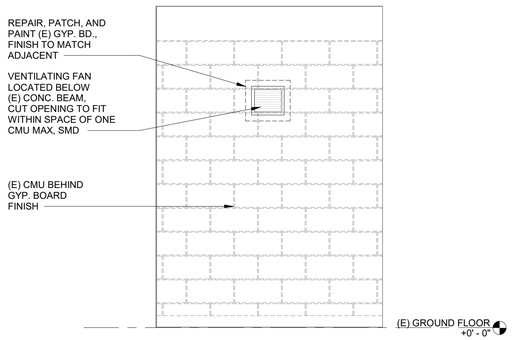


6 CEILING AT ANNEX BLDG
1" = 1'-0"

NOTES:
1. CONTRACTOR TO AVOID CORE DRILLING THROUGH WOOD STRUCTURE.
2. PENETRATION TO BE COORD. W/INTERIOR PATHWAY FOR EFFICIENT ROUTING.

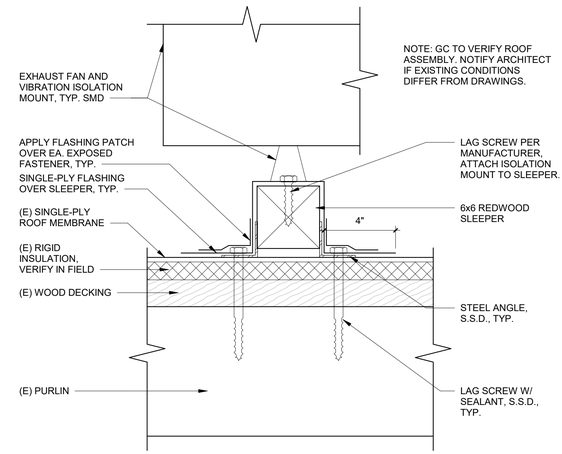


3 DTL. VIEW PIPE PENETRATION AT DORM WALL
1/8" = 1'-0"

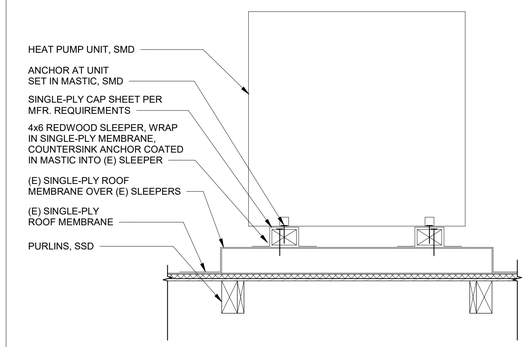


NOTE:
1. DO NOT CUT OR DRILL THROUGH (E) REINFORCEMENT.
2. CONTACT ARCHITECT IF (E) CONDITIONS AFFECT LOCATION OF VENT.

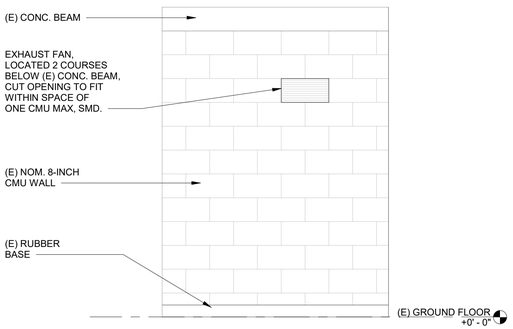
8 LAUNDRY ROOM SOUTH INTERIOR ELEVATION
1/2" = 1'-0"



5 EXHAUST FAN CURB DETAIL
3" = 1'-0"

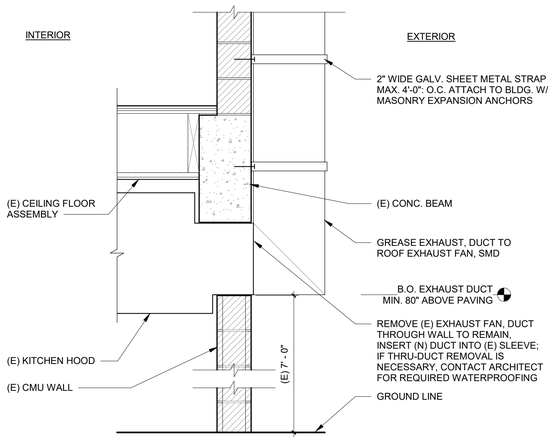


2 SECTION AT ROOFTOP HEAT PUMP
3/4" = 1'-0"

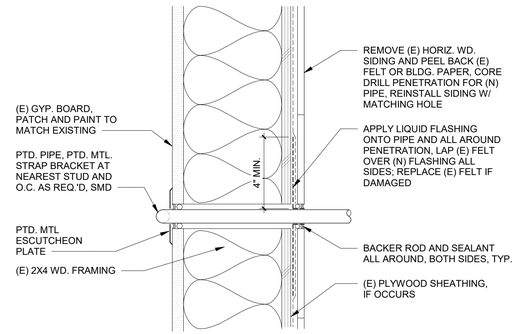


NOTE:
1. DO NOT CUT OR DRILL THROUGH (E) REINFORCEMENT.
2. CONTACT ARCHITECT IF (E) CONDITIONS AFFECT LOCATION OF VENT.

7 LAUNDRY ROOM NORTH INTERIOR ELEVATION
1/2" = 1'-0"



4 GREASE EXHAUST DUCT PENETRATION DETAIL SECTION
3/4" = 1'-0"



NOTES:
1. TYPICAL DETAIL FOR ONE (1) PIPE PENETRATION.
2. DO NOT DRILL THROUGH 2x WD. STUDS OR LARGER WD. STRUCTURAL MEMBERS.
3. REPLACE (E) FELT OR BLDG. PAPER IF DAMAGED.
4. AFTER (E) ASSEMBLY IS INVESTIGATED, CONTACT ARCHITECT IF CONDITIONS ARE DIFFERENT OR OTHERWISE REQUIRE DIRECTION.
5. REFRIGERANT LINES TO BE SURFACE MOUNTED TIGHT TO STRUCTURE, AND IN STRAIGHT LINES WHEREVER POSSIBLE. ATTACH TO STRUCTURE AS REQUIRED BY MECH.

1 REFRIGERANT LINE PENETRATION DETAIL
3" = 1'-0"

els architecture+ urban design
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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
EXTERIOR AND INTERIOR DETAILS

SHEET NUMBER:
A811

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE.
2. THESE NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN.
3. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS. ALL DETAILS REFERENCED, AND DETAILS NOT REFERENCED ON PLANS, SHALL BE CONSIDERED TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS OF THE CONSTRUCTION.
4. UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON "TYPICAL DETAIL" SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER "TYPICAL DETAILS". SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN "GENERAL NOTES".
5. THE STRUCTURAL DRAWINGS SHOW STRUCTURAL FEATURES. EXACT CONFIGURATION OF INTERIOR PARTITION WALLS IS SHOWN ON ARCHITECTURAL DRAWINGS AND IS NOT NECESSARILY ALL SHOWN ON THE STRUCTURAL DRAWINGS.
6. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: OPENINGS REQUIRED FOR DUCTS, VENTS, PLUMBING, ETC.; FLASHING, INSERTS, ANCHORAGES, HANGERS ETC. EMBEDDED IN OR ATTACHED TO THE STRUCTURE; AND ELEVATIONS.
7. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.
8. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
9. BEAMS, JOISTS AND ANY OTHER STRUCTURAL ELEMENTS SHALL NOT BE CUT OR PENETRATED, EXCEPT AS SHOWN IN STRUCTURAL DETAILS OR AS APPROVED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
10. FEATURES OF EXISTING CONSTRUCTION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS AND PROCEDURES DURING CONSTRUCTION.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY SHORE AND BRACE EXISTING BUILDING AS REQUIRED DURING CONSTRUCTION. ALL SHORING SHALL CONFORM TO FEDERAL AND LOCAL JURISDICTION OSHA REQUIREMENTS. SHORING DESIGN SHALL BE DESIGNED AND STAMPED BY AN ENGINEER RETAINED BY CONTRACTOR AND REGISTERED IN THE LOCAL JURISDICTION.
13. THE CONTRACTOR SHALL FOLLOW ALL INSTRUCTIONS, RECOMMENDATIONS AND SAFETY PRECAUTIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER OF ANY MATERIAL OR PRODUCT NOTED IN GENERAL NOTES OR DRAWINGS.
14. CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY VARIATION FROM CONDITIONS ASSUMED ON DRAWINGS. CONTRACTOR SHALL VERIFY THAT EXISTING FRAMING IS RE-SUPPORTED AND ALL LOADS ARE TRANSFERRED TO NEW OR EXISTING FOOTINGS. CONTRACTOR SHALL CONSULT WITH THE STRUCTURAL ENGINEER AS REQUIRED.
15. DO NOT SCALE DRAWINGS.

DESIGN CRITERIA

1. VERTICAL LOADS:
   - A. DEAD LOADS:
     - ROOF DEAD LOAD: 12 PSF
   - B. LIVE LOADS:
     - ROOF LIVE LOAD: 20 PSF
2. LATERAL LOADS:
   - A. SEISMIC DESIGN – PER CBC SECTION 1613

RISK CATEGORY	IV
SEISMIC DESIGN CATEGORY	D
SITE CLASS	D - DEFAULT
MAPPED SHORT PERIOD ACCELERATION	S_s = 2.189 g
SITE COEFFICIENT	F_a = 1.2
DESIGN SHORT PERIOD ACCELERATION	S_{DS} = 1.751 g
MAPPED ONE SECOND PERIOD ACCELERATION	S_1 = 0.845 g
COMPONENT AMPLIFICATION FACTOR	a_p = 2.5
COMPONENT RESPONSE MODIFICATION FACTOR	R_p = 2.5
COMPONENT IMPORTANCE FACTOR	I_p = 1.0

EXISTING BUILDING NOTES:

1. CONDITION OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED. THE CONSTRACTOR SHALL VERIFY FRAMING CONDITIONS PRIOR TO START OF WORK. IF CONDITIONS DIFFER IN ANY SIGNIFICANT WAY FROM THAT SHOWN, NOTIFY ARCHITECT/STRUCTURAL ENGINEER.
2. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING AND/OR SCAFFOLDING.
3. THE CONTRACTOR SHALL CAREFULLY CHECK THE STABILITY OF ALL ELEMENTS OF THE EXISTING BUILDING BEFORE COMMENCING WITH ANY WORK.
4. SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS, REFER TO CIVIL, PLUMBING AND ELECTRICAL DRAWINGS FOR THEIR LOCATION, PROFILE AND DETAILS. ANY INTERFERENCE BETWEEN SEWER AND UTILITY LINES SHALL BE NOTIFIED TO THE ARCHITECT/STRUCTURAL ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
5. PRIOR TO DRILL HOLES FOR POST-INSTALLED ANCHORS/DOWELS, CONTRACTOR SHALL USE NON-DESTRUCTIVE METHOD TO DETECT LOCATIONS OF REBAR IN EXISTING ELEMENTS TO AVOID DAMAGING AND/OR CUTTING. NOTIFY, ARCHITECT AND STRUCTURAL ENGINEER WHERE CONFLICT ARE FOUND IN FIELD.
6. OTHER THAN THE DRILLED HOLES FOR POST-INSTALLED ANCHORS, DO NOT DAMAGE SURROUNDING EXISTING CONCRETE DURING INSTALLATION AND FOR TESTING OF POST-INSTALLED ANCHORS.

CARPENTRY NOTES

1. ALL LUMBER SHALL BE DOUGLAS FIR-LARCH NO. 1, MANUFACTURED AND GRADED IN ACCORDANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU "STANDARD GRADING RULES NO. 17", LATEST EDITION INCLUDING ALL SUPPLEMENTS. ALL LUMBER IN EXTERIOR APPLICATIONS SHALL BE PRESSURE TREATED.
2. ALL FRAMING LUMBER SHALL BE HAVE A MAXIMUM MOISTURE CONTENT OF 19 PERCENT AT TIME OF INSTALLATION.
3. LAG SCREWS SHALL BE SCREWED (NOT DRIVEN) INTO PLACE. DRILL HOLES SAME DIAMETER AND DEPTH AS SHANK. THEN DRILL HOLE 60-70% OF DIAMETER AT BASE OF THREAD FOR THE THREADED PORTION. USE STEEL PLATE WASHERS AS REQUIRED FOR THE SAME BOLT SIZE.
4. BOLTS IN WOOD SHALL BE MACHINE BOLTS UNLESS OTHERWISE NOTED. ALL MACHINE BOLTS SHALL HAVE CUT THREADS.
5. BOLT HOLES IN WOOD AND STEEL SHALL BE THE DIAMETER OF THE BOLT PLUS 1/16".
6. PROVIDE PLATE WASHER UNDER HEAD AND NUT OF BOLT WHERE BEARING IS AGAINST WOOD. LENGTH OF THREAD SHALL BE SUCH THAT THREADS DO NOT BEAR AGAINST WOOD. ALL NUTS SHALL BE TIGHTENED WHEN PLACED AND RE-TIGHTENED AT COMPLETION OF THE JOB IMMEDIATELY BEFORE CLOSING WITH FINISH CONSTRUCTION.
7. SHEATHING MAY BE ORIENTED STRAND BOARD OR PLYWOOD UNLESS SPECIFICALLY NOTED AS PLYWOOD.

FASTENER NOTES

1. CONNECTORS FOR WOOD CONSTRUCTION NOTED ON PLANS AND DETAILS SHALL BE SIMPSON COMPANY STRONG-TIE CONNECTORS OR APPROVED EQUAL.
2. ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE NAILS TEND TO SPLIT THE WOOD, NAIL HOLES SHALL BE PRE-DRILLED.
3. SHEATHING SHALL BE NAILED WITH 10d @ 4" ON CENTER ALONG SUPPORTED PANEL EDGES AND WHERE NOTED ON PLANS AND DETAILS AS EDGE NAILING (EN) AND 10d @ 12" ON CENTER ALONG INTERMEDIATE FRAMING MEMBERS.
4. FASTENERS PENETRATING PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D.
5. ALL CONNECTORS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE STAINLESS STEEL. ALL NAILS, SCREWS, BOLTS, ETC. FOR SUCH CONNECTORS SHALL BE STAINLESS STEEL.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL W AND WT SHAPES SHALL BE ASTM A992.
2. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION.
3. BOLT HOLES IN STEEL SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED.
4. STRUCTURAL STEEL WHERE EXPOSED TO WEATHER SHALL BE GALVANIZED AND PAINTED

TESTS, INSPECTIONS AND OBSERVATIONS NOTES

1. TESTS AND INSPECTIONS SHALL BE PROVIDED FOR ALL ITEMS AS REQUIRED BY THE CALIFORNIA BUILDING CODE.
2. SEE STATEMENT OF SPECIAL INSPECTIONS, WHEN INCLUDED, FOR SPECIAL INSPECTION REQUIRMENTS.
3. THE FOLLOWING ITEMS SHALL HAVE SPECIAL INSPECTION.
   - A. POST INSTALLED ANCHORS IN CONCRETE -EXPANSION ANCHORS, EPOXY ANCHORS, ETC.
4. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING AN INDEPENDENT TESTING AND INSPECTION LABORATORY TO PERFORM ALL REQUIRED TESTING AND INSPECTIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TESTING AND INSPECTION LABORATORY WITH CONSTRUCTION SCHEDULES TO ENSURE PROPER COORDINATION OF WORK.

THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR INSPECTOR A MINIMUM OF 48 HOURS (EXCLUDING WEEKEND DAYS) PRIOR TO THE TIME OF A REQUIRED INSPECTION.

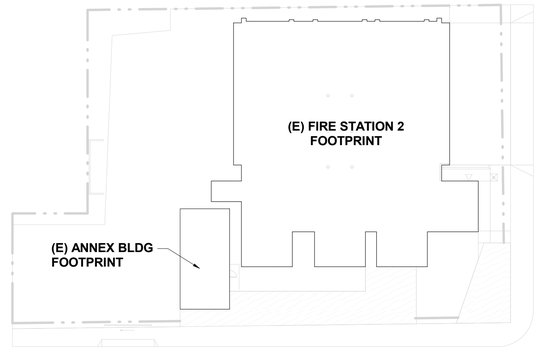
SYMBOLS AND ABBREVIATIONS

A/S2.1	SECTION A ON DRAWING S2.1	ID	INSIDE DIAMETER
@	AT	IF	INSIDE FACE
&	AND	INT	INTERIOR
°	DEGREE		
Ø OR DIA	DIAMETER	JST	JOIST
#	NUMBER OR POUND	JT(S)	JOINT(S)
(E)	EXISTING		
(N)	NEW	K	KIPS (1000 LBS)
AB	ANCHOR BOLT	LBS	POUNDS
ADDL	ADDITIONAL	LG	LONG
ADJ	ADJACENT	LL	LIVE LOAD
AFF	ABOVE FINISH FLOOR	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE	LLV	LONG LEG VERTICAL
APPROX	APPROXIMATE	LT	LIGHT
ARCH	ARCHITECT OR ARCHITECTURAL	LTWT	LIGHTWEIGHT
ATTN	ATTENTION		
		MATL	MATERIAL
BD	BOARD	MAX	MAXIMUM
BLDG	BUILDING	MB	MACHINE BOLT
BLK	BLOCK	MECH	MECHANICAL
BLKG	BLOCKING	MFR	MANUFACTURER
BM	BEAM	MIN	MINIMUM
BO	BOTTOM OF	MISC	MISCELLANEOUS
BOT	BOTTOM	MTL	METAL
BS	BOTH SIDES		
BTWN	BETWEEN	NIC	NOT IN CONTRACT
		NOM	NOMINAL
CBC	CALIFORNIA BUILDING CODE	NTS	NOT TO SCALE
CL	CENTERLINE		
CLG	CEILING	OSB	ORIENTED STRAND BOARD
CLR	CLEAR	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	OD	OUTSIDE DIAMETER
COL	COLUMN	OH	OPPOSITE HAND
CONC	CONCRETE OR CONCENTRATED	OPNG	OPENING
COND	CONDITION	OPP	OPPOSITE
CONN	CONNECTION		
CONT	CONTINUOUS	PL	PLATE
CP	COMPLETE PENETRATION WELD	PSF	POUNDS PER SQUARE FEET
CTSK	COUNTERSINK	PSI	POUNDS PER SQUARE INCH
		PT	POINT
d	PENNY	PTDF	PRESSURE TREATED DOUGLAS FIR LUMBER
D	DEPTH	PW	STRUCTURAL PLYWOOD
DBL	DOUBLE	PW EN	PLYWOOD EDGE NAILING
DEMO	DEMOLISH		
DET	DETAIL	RAD	RADIUS
DF	DOUGLAS FIR	RDP	REGISTERED DESIGN PROFESSIONAL
DIAG	DIAGONAL	REF	REFERENCE
DIM(S)	DIMENSION(S)	RECT	RECTANGULAR
DJ	DOUBLE JOIST	REINF	REINFORCING
DL	DEAD LOAD	REQD	REQUIRED
DN	DOWN	RET WALL	RETAINING WALL
DO	DITTO		
DP	DEEP	SAD	SEE ARCHITECTURAL DRAWING
DTLS	DETAILS	SCD	SEE CIVIL/SITE DRAWINGS
DWG(S)	DRAWING(S)	SCHED	SCHEDULE
		SEC	SECTION
EA	EACH	SED	SEE ELECTRICAL DRAWINGS
EB	EXPANSION BOLT	SHT	SHEET
EE	EACH END	SHTG	SHEATHING
EF	EACH FACE	SIM	SIMILAR
EL	ELEVATION	SLD	SEE LANDSCAPE DRAWINGS
ELEC	ELECTRICAL	SLRS	SEISMIC LOAD RESISTING SYSTEM
EMBED	EMBEDMENT	SMD	SEE MECHANICAL DRAWINGS
EN	EDGE NAILING	SMS	SHEET METAL SCREW
ENGR	ENGINEER	SOG	SLAB ON GRADE
EQ	EQUAL	SPD	SEE PLUMBING DRAWINGS
EQUIP	EQUIPMENT	SPEC(S)	SPECIFICATION(S)
ES	EACH SIDE	SQ	SQUARE
ETC	ETCETERA	SS	SOLID SAWN
EW	EACH WAY	STAG	STAGGERED
EXC	EXCAVATE	STD	STANDARD
EXT	EXTERIOR	STL	STEEL
		STRUCT	STRUCTURAL
FDN	FOUNDATION	SYM	SYMMETRICAL
FF	FINISH FLOOR		
FIN	FINISH	T&B	TOP & BOTTOM
FLR	FLOOR	T&G	TONGUE & GROOVE
FOC	FACE OF CONCRETE	THK	THICK
FOM	FACE OF MASONRY	THRU	THROUGH
FS	FAR SIDE	TN	TOENAIL
FT	FEET	T.O.	TOP OF
FTG	FOOTING	TOC	TOP OF CONCRETE
		TOF	TOP OF FOOTING
GA	GAGE, GAUGE	TO PW	TOP OF PLYWOOD
GALV	GALVANIZED	TYP	TYPICAL
GLM	GLUED LAMINATED		
		UON	UNLESS OTHERWISE NOTED
HD	HOLDOWN		
HDG	HOT-DIPPED GALVANIZED	VENT	VENTILATION
HDR	HEADER	VERT	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HOR	HORIZONTAL		
HSB	HIGH STRENGTH BOLT	W/	WITH
HSS	HOLLOW STEEL SECTION	WD	WOOD
HT	HEIGHT	WF	WIDE FLANGE
		W/O	WITHOUT
		WT	WEIGHT

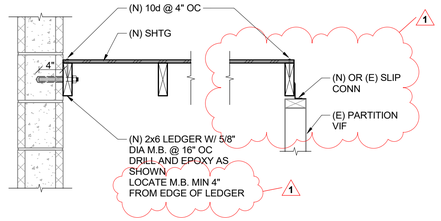
STRUCTURAL SHEET LIST	
SHEET NO.	**SHEET NAME**
S001	GENERAL NOTES AND TYPICAL DETAILS
S203	ROOF FRAMING PLAN

SYMBOLS LIST

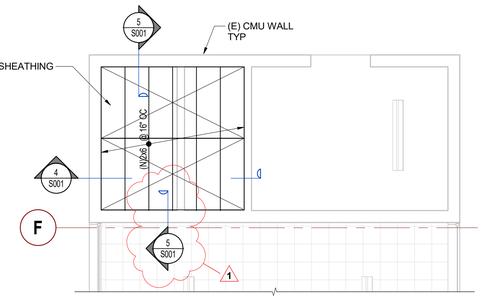
- CONTINUOUS WOOD MEMBER IN SECTION
- NON-CONTINUOUS WOOD MEMBER IN SECTION
- (E) CONTINUOUS WOOD MEMBER IN SECTION
- (E) NON-CONTINUOUS WOOD MEMBER IN SECTION
- (E) CMU WALL IN PLAN



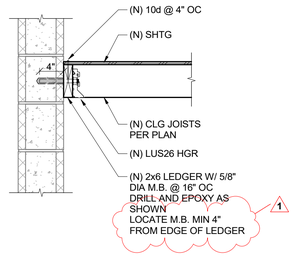
1 S001 **SITE**
1" = 30'-0"



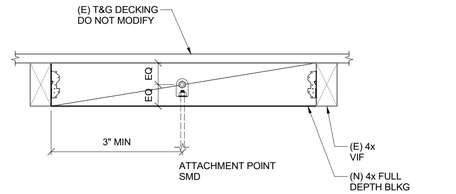
4 S001 **(N) CEILING AT ANNEX BLDG**
1" = 1'-0"



2 S001 **ANNEX BUILDING CEILING FRAMING PLAN**
1/4" = 1'-0"



5 S001 **(N) CEILING AT ANNEX BLDG**
1" = 1'-0"



3 S001 **(N) BLKG FOR LIGHTWEIGHT UNIT OR DUCT SUPPORT**
1" = 1'-0"

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PROJECT:

BERKELEY FIRE STATION NO. 2 REMODEL

PROJECT NUMBER:
23048

CLIENT:

PROJECT TEAM:

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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

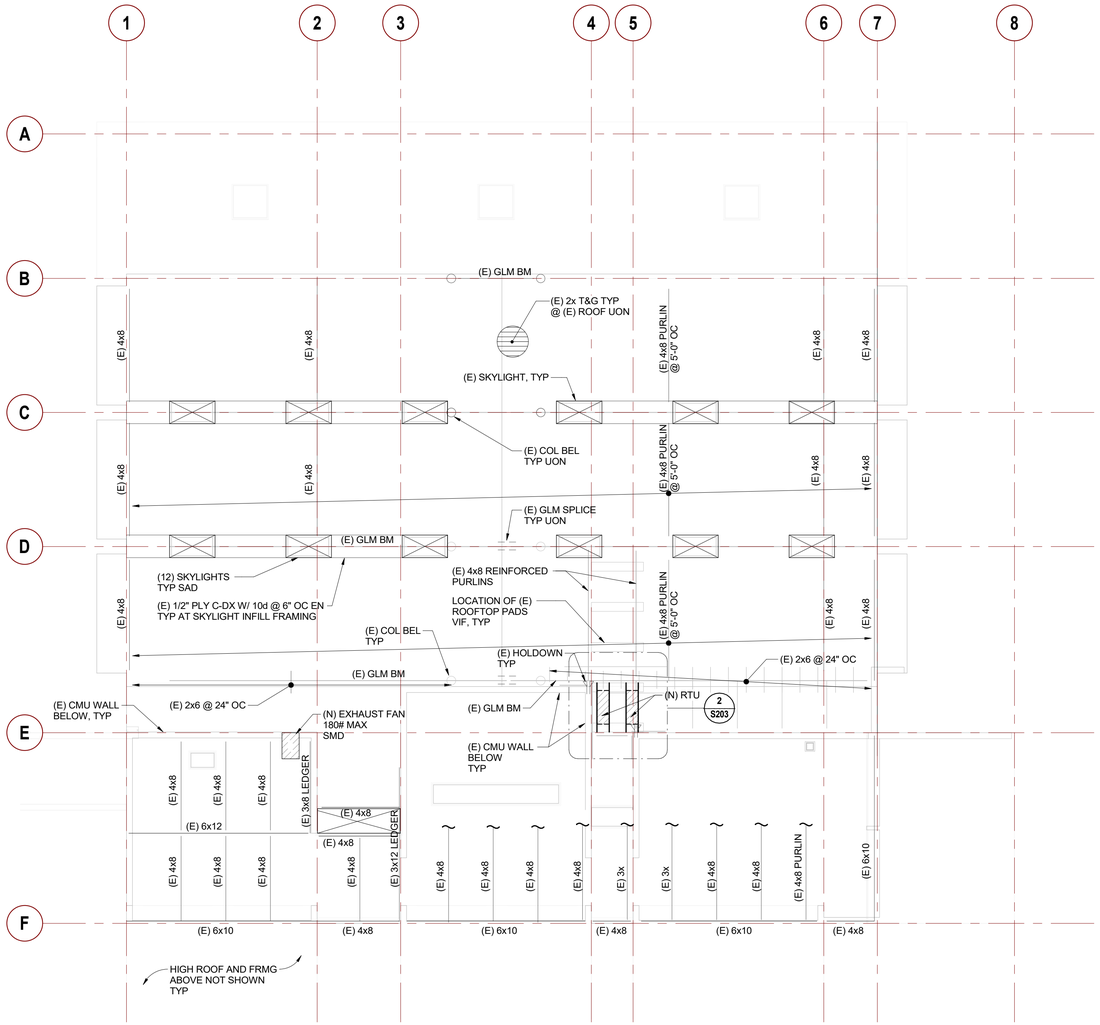
DATE:
OCTOBER 30, 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER
STEPHEN R. DeTESSE
No. S03527
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE:
GENERAL NOTES AND TYPICAL DETAILS

SHEET NUMBER:
S001



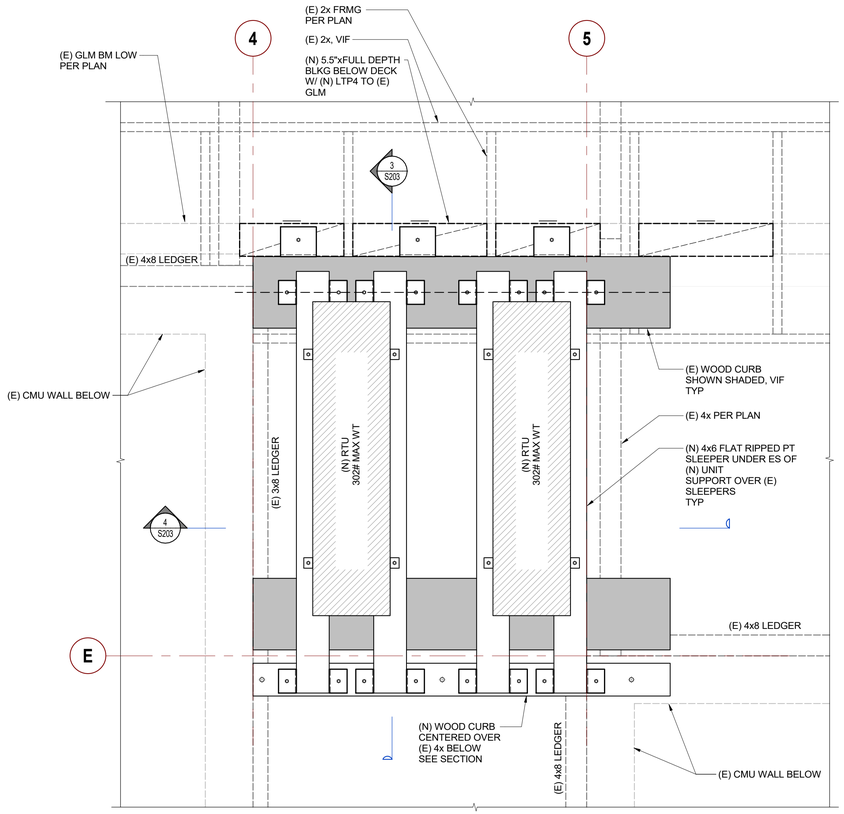
1 S203 ROOF FRAMING PLAN

1/8" = 1'-0"

N

SHEET NOTES:

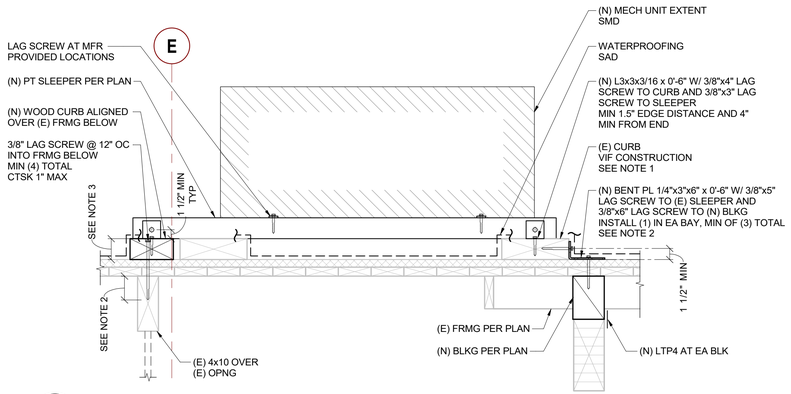
1. SEE GENERAL NOTES ON S001 FOR ADDITIONAL INFORMATION NOT SHOWN HEREIN
2. DO NOT CUT ANY (E) FRAMING MEMBERS FOR ROOF PENETRATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONTIONS AND DIMENSIONS IN AREAS OF PLANNED WORK AND SHALL NOTIFY ARCHITECT AND ENGINEER OF ALL EXCEPTIONS AND / OR DISCREPANCIES BEFORE PROCEEDING WITH WORK.



2 S203 ENLARGED ROOF FRAMING PLAN AT (N) MECH UNITS

1" = 1'-0"

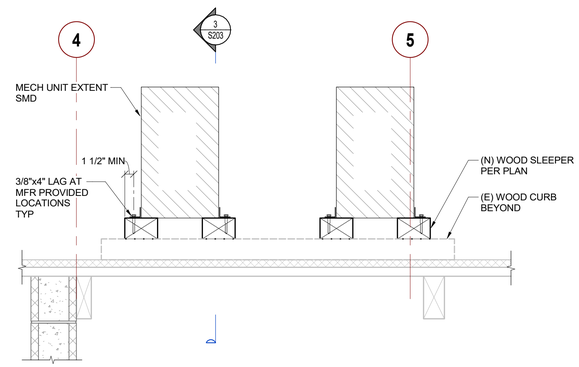
N



NOTES:
1. VERIFY CONDITIONS OF (E) CONSTRUCTION AND NOTIFY SEOR IF CONDITIONS VARY FROM AS SHOWN.
2. LAG SCREWS INTO (N) BLKG AND INTO (E) FRAMING SHALL BE OF SUFFICIENT LENGTH TO PROVIDE MIN 4" EMBEDMENT INTO MEMBER BELOW.
3. PROVIDE (N) WOOD CURB AS SHOWN TO ALIGN OVER (E) FRMG BELOW. MATCH HEIGHT OF (E) CURB AND PROVIDE MIN 4" BEARING OF (N) WOOD SLEEPER OVER CURB.

3 S203 SECTION

1" = 1'-0"



4 S203 SECTION

1" = 1'-0"

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PROJECT:

BERKELEY FIRE STATION NO. 2 REMODEL

PROJECT NUMBER:
23048

CLIENT:

PROJECT TEAM:

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REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER
STEPHEN N. DeTESSE
No. S03527
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE:
ROOF FRAMING PLAN

SHEET NUMBER:
S203

VRF SYSTEM SCHEDULE

INDOOR FAN COIL UNIT

SYSTEM TAG	EQUIPMENT TAG	MANUFACTURER	MODEL	SERVICE	CFM	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	WEIGHT (LBS.)	ELECTRICAL					REMARKS
									VOLT	HZ	PH	MCA	MOCP	
H-1	FC-1-1	MITSUBISHI	PKFY-P18NLMU-E	DINING ROOM	430	18	20	28	208/230	60	1	0.2	15	SEE NOTES 1-5
	FC-1-2	MITSUBISHI	PKFY-P18NLMU-E	DAY ROOM	430	18	20	28	208/230	60	1	0.2	15	SEE NOTES 1-5
	FC-1-3	MITSUBISHI	PKFY-P06NLMU-E	CAPTAIN'S ROOM	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-1-4	MITSUBISHI	PKFY-P06NLMU-E	ASSISTANT CHIEF'S ROOM	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-1-5	MITSUBISHI	PKFY-P12NLMU-E	OFFICE	290	12	13.5	25	208/230	60	1	0.24	15	SEE NOTES 1-5
H-2	FC-2-1	MITSUBISHI	PKFY-P06NLMU-E	DORM 1	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-2	MITSUBISHI	PKFY-P06NLMU-E	DORM 2	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-3	MITSUBISHI	PKFY-P06NLMU-E	DORM 3	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-4	MITSUBISHI	PKFY-P06NLMU-E	DORM 4	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-5	MITSUBISHI	PKFY-P06NLMU-E	DORM 5	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-6	MITSUBISHI	PKFY-P06NLMU-E	DORM 6	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-7	MITSUBISHI	PKFY-P06NLMU-E	DORM 7	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-8	MITSUBISHI	PKFY-P06NLMU-E	DORM 8	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
H-3	FC-3	MITSUBISHI	PVA-A18AA7	ANNEX STORAGE	700	18	19	113	208/230	60	1	3.0	–	SEE NOTES 1-7

NOTES:

1. COOLING CAPACITY IS BASED ON 95°F DB EAT AND 80°F DB/67°F WB LAT. HEATING CAPACITY IS BASED ON 47°F DB/43°F WB EAT AND 70°F DB LAT.
2. DISCONNECT/STARTER BY DIV. 16.
3. R-410A REFRIGERANT.
4. WALL-MOUNTED THERMOSTAT.
5. INSTALL PER MANUFACTURER'S RECOMMENDATION AND SUPPLIED MOUNTING KIT.
6. PROVIDE WITH MERV-13 FILTER.
7. POWER TO THE INDOOR UNIT WILL COME FROM THE OUTDOOR CONDENSING UNIT.

2

OUTDOOR CONDENSING UNIT

SYSTEM TAG	EQUIPMENT TAG	MANUFACTURER & MODEL	LOCATION	COP	EER	SEER	CAPACITY (TONS)	COMBINED COOLING CAPACITY (MBH)	COMBINED HEATING CAPACITY (MBH)	WEIGHT (LBS.)	ELECTRICAL			REMARKS
											VOLT/ø/HZ	MCA	MOCP	
H-1	CU-1	MITSUBISHI PUMY-P60NKMU3	ROOF	4.1	13.3	20.0	5	60	66	302	208/230V/1/60	36	45	SEE NOTES 1-7
H-2	CU-2	MITSUBISHI PUMY-P60NKMU3	ROOF	4.1	13.3	20.0	5	60	66	302	208/230V/1/60	36	45	SEE NOTES 1-7
H-3	CU-3	MITSUBISHI PUZ-A18NKA7	OUTDOOR	3.78	11.4	20.2	1.5	18	19	100	208/230V/1/60	11	28	SEE NOTES 1-7

NOTES:

1. R-410A REFRIGERANT.
2. COOLING CAPACITY AT 95°F AMBIENT.
3. TEMPERATURE OPERATING RANGE: COOLING: 5°F TO 115°F DB HEATING: -13°F TO 59°F DB
4. PROTECTION DEVICES: HIGH-PRESSURE SENSOR, HIGH PRESSURE SWITCH; OVERHEAT PROTECTION, THERMAL SWITCH; OVERHEAT AND OVERCURRENT PROTECTION.
5. DRAIN SOCKET ASSEMBLY.
6. SIZE REFRIGERANT PER MANUFACTURER'S RECOMMENDATIONS.
7. SINGLE POINT OF CONNECTION AT OUTDOOR HEAT PUMP UNIT. COORDINATE POWER SUPPLY WITH ELECTRICAL.

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	MANUFACTURER & MODEL	SYSTEM SERVICE	AIRFLOW, CFM	E.S.P. IN. WG.	TEMP. RECOVERY, %	ENTH. RECOVERY, %		ELECTRICAL DATA			WEIGHT LBS.	REMARKS
						HEATING	COOLING	V/ø/HZ	MCA	MOCP		
ERV-1	MITSUBISHI LOSSNAY LGH-F470RVX2-E	H-1	470	1.0	84.5	83	72	208/230/1/60	5.1	15	110	SEE NOTES 1-2
ERV-2	MITSUBISHI LOSSNAY LGH-F470RVX2-E	H-2	470	1.0	84.5	83	72	208/230/1/60	5.1	15	110	SEE NOTES 1-2

NOTES:

1. ENTERING AIR TEMPERATURE OPERATING RANGE: 14°F TO 104°F AT 80% RH OR LESS.
2. PROVIDE WITH STAND ALONE REMOTE CONTROLLER (PZ-62DR-E), MERV-14 FILTER (PZ-80RFP-E) AND MOTOR STARTERS.

GREASE EXHAUST FAN SCHEDULE

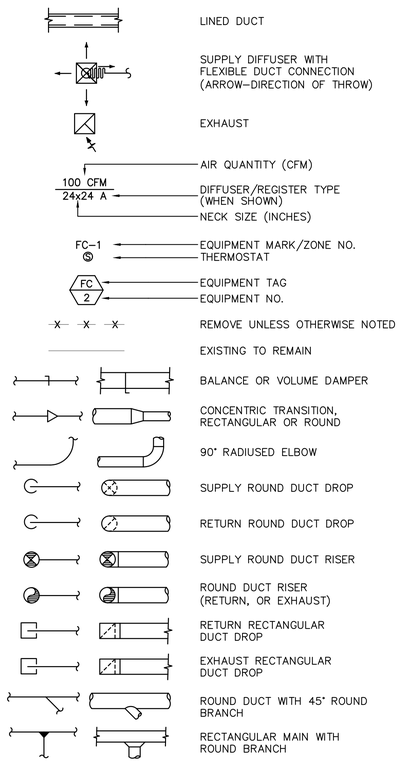
MARK	MANUFACTURER & MODEL	SERVICE	CFM	E.S.P.	RPM	BHP	TYPE	ELECTRICAL				OPERATING WEIGHT, LBS	REMARKS
								POWER	VOLTS	ø	FLA		
GEF-1	COOK 150 CPA	GREASE EXHAUST	1800	2	1632	0.867	SINGLE WIDTH UTILITY UPBLAST	1 HP	230	1	8	185	SEE NOTES 1-5

NOTES:

1. COMPLIES WITH UL762 LISTING.
2. BELT DRIVE MOTOR, ARRANGEMENT 10, CLASS I, CLOCKWISE UPBLAST DISCHARGE.
3. PROVIDE UNIT STARTER AND DISCONNECT SWITCH. COORDINATE W/ ELECTRICAL CONTRACTOR.
4. PROVIDE WITH ALUMINUM DRAIN, HINGED ACCESS DOOR, AND CURB MOUNTED GREASE TROUGH.
5. PROVIDE WITH BASE RAIL AND 1" SPRING ISOLATOR.

1

LEGEND AND ABBREVIATIONS



(E)	EXISTING
(N)	NEW
°F	DEGREE FAHRENHEIT
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
IN. OR "	INCH
LBS	POUNDS
MBH	THOUSAND BTUH
O.A.	OUTSIDE AIR
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
SS	STAINLESS STEEL
TYP.	TYPICAL
V/ø/HZ	VOLTAGE/PHASE/HERTZ

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED FEES, PERMITS AND INSPECTIONS.
3. BEFORE SUBMISSION OF A BID, THE CONTRACTOR SHALL PERFORM A FIELD SURVEY OF THE SITE CONDITIONS AND FEATURES. ANY SITE CONDITIONS, WHICH MAY CAUSE SIGNIFICANT DEVIATION FROM THE DESIGN DRAWINGS, SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT/ENGINEER OF RECORD FOR CLARIFICATION PRIOR TO SUBMISSION OF THE CONTRACTORS BID. IF APPLICABLE, VERIFY DIMENSIONS OF ALL OWNER-FURNISHED EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL SUBMIT BID THAT INCLUDES ALL LABOR AND MATERIALS REQUIRED TO PROVIDE FOR COMPLETE AND SATISFACTORILY OPERATING SYSTEMS IN THE BID.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. EXISTING INFORMATION SHOWN ON PLANS IS FROM ORIGINAL RECORD DRAWINGS AND CURSORY NONDESTRUCTIVE FIELD SURVEY. THE CONTRACTOR SHALL VERIFY AND ACCOUNT FOR ALL EXISTING CONDITIONS IN THE FIELD AFFECTING THE WORK.
5. MECHANICAL CONTRACTOR SHALL BE COGNIZANT WITH BUILDING STRUCTURE AND CEILING SPACE. ALLOW FOR INSTALLATION OF EQUIPMENT PRIOR TO BID AND FROM PRICING AND ADDITIONAL OFFSETS OF DUCTS AND PIPING THAT ARE NOT SHOWN ON DRAWING. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL CEILING ACCESS, PATCHING AND REPAIR REQUIRED IN THE IMMEDIATE AREA OF THE WORK AND ANY ACCESS OUTSIDE THE IMMEDIATE AREA OF THE WORK REQUIRED TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING SYSTEMS.
6. ABSOLUTE ACCURACY OF DRAWINGS IS NOT GUARANTEED. REPORT DISCREPANCIES OR INCONSISTENCIES BETWEEN THE SPECIFIED DESIGN AND EXISTING CONDITIONS IN THE FIELD TO THE ARCHITECT/ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO BID AND COMMENCEMENT OF THE WORK.
7. ALL DUCT DIMENSIONS ARE SHOWN IN INCHES. ALL DIMENSIONS ARE CLEAR INSIDE SIZES. FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
8. ALL DUCTWORK AND PIPING SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION.
9. ADVISE OWNER'S REPRESENTATIVE IN WRITING IN EVENT OF DISCREPANCIES BETWEEN CONTRACT DOCUMENTS PRIOR TO BID.
10. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. GUARD ALL HAZARDS IN ACCORDANCE WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTIONS OF AMERICA AND OSHA.
11. DUCTWORK SHALL BE SHEET METAL GALVANIZED STEEL. FABRICATE, INSTALL AND SUPPORT DUCTWORK AS PER LATEST SMACNA STANDARD.
12. MECHANICAL DRAWING IS DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE FINAL PIPING AND DUCT ROUTING PER ACTUAL OR EXISTING FIELD/CEILING CONDITION.
13. SHEET METAL DUCT JOINTS SHALL BE AIRTIGHT AND SEALED IN ACCORDANCE WITH CEC BUILDING STANDARD REGULATION, TITLE 24, AND CMC SECTION 1102(C). DUCTWORK SHALL BE INSULATED PER LATEST EDITION OF CEC TITLE 24 (R-8).
14. INSTALL WALL-MOUNTED ROOM THERMOSTATS 4-FEET ABOVE FINISHED FLOOR UNLESS DIRECTED OTHERWISE COORDINATE INSTALLATION LOCATION AND HEIGHT PRIOR TO THERMOSTAT ROUGH-IN.
15. COORDINATE WORK WITH ALL OTHER TRADES.
16. PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
17. FURNISH AND INSTALL ALL MATERIALS EQUIPMENT AND LABOR AS SHOWN AND AS NECESSARY FOR COMPLETE WORKABLE SYSTEMS.
18. PERFORM TEST AND AIR BALANCING OF HVAC SYSTEM. SUBMIT A CERTIFIED TEST AND AIR BALANCE REPORT TO ENGINEER FOR REVIEW AND APPROVAL.
19. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT THE REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.
20. WHERE EXISTING PIPES, CONDUITS AND/OR DUCTS WHICH ARE TO REMAIN PREVENT INSTALLATION OF NEW WORK, RELOCATE, OR ARRANGE FOR RELOCATION OF THESE ITEMS TO FACILITATE NEW WORK.
21. ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT/ENGINEER. ANY PORTION OF THE WORK FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE CONTRACTOR AS PART OF THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
22. ANY PIPING OFFSETS REQUIRED AS RESULT OF EXISTNG JOB CONDITIONS, OR COORDINATION WITH OTHER TRADES, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER AND IS SUBJECT TO REVIEW BY THE ARCHITECT/ENGINEER.
23. FOR PIPES PENETRATING WALLS, PROVIDE ESCUTCHEONS FOR FINISH COVER OF EXPOSED PENETRATIONS.

LAUNDRY EXHAUST FAN SCHEDULE

MARK	SERVICE	LOCATION	MANUFACTURER & MODEL	TYPE	CFM	S.P.	RPM	AMPS	ELECTRICAL			OPER. WT. LBS.	REMARKS
									POWER	VOLTS	ø		
LEF-1	LAUNDRY EXHAUST FAN	LAUNDRY ROOM 114	PANASONIC FV-08WQ1	WALL	70	0.03	660	0.20	18 WATTS	120	1	12	SEE NOTES 1-3

NOTES:

1. FAN SHALL HAVE A WALL SWITCH (MANUAL SWITCH) WITH HUMIDITY SENSOR, SMART ACTION MOTION SENSOR WITH UP TO 60 MINUTES TIME DELAY.
2. INCLUDED WITH GRILLE AND EXTERIOR WALL CAP (WITH BUILT-IN BACKDRAFT DAMPER AND BIRD SCREEN).
3. INSTALL AND WIRE PER MANUFACTURER'S INSTRUCTION.

MISCELLANEOUS EQUIPMENT SCHEDULE

MARK	MANUFACTURER & MODEL	DESCRIPTION	WATTS	AMPS	V/ø/HZ	WEIGHT LBS
PH 1	ECONOHOME 500SS	ELECTRIC PANEL HEATER WALL-MOUNTED, WITH ADJUSTABLE PLUG-IN THERMOSTAT WITH PLUG-IN TIMER. PROVIDE WITH HEAT GUARD ACCESSORY.	400	3.33	120/1/60	15

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

23-11575-C

CLIENT:

CITY OF BERKELEY

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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:

ISSUE FOR PERMIT

DATE:

AUGUST 27, 2024

STAMP:



SHEET TITLE:

MECHANICAL GEN. NOTES, LEGEND & ABBREV., AND SCHEDULES

SHEET NUMBER:

M001

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 3 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
H-1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	66	66	0	60	60	66	60
H-2	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	66	66	0	60	60	66	60
H-3	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	19	19	0	18	18	19	18

[1]*FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.*
[2]*It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
H-1	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	12	SEER	13	20
H-2	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	12	SEER	13	20

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.		
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 1 of 8)**
Project Address: 2029 BERKELEY WAY, BERKELEY, CA 94704	**Date Prepared:**	2023-10-09T17:30:39-04:00

A. GENERAL INFORMATION

01	Project Location (city)	BERKELEY	04	Total Conditioned Floor Area	4122
02	Climate Zone	3	05	Total Unconditioned Floor Area	1980
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	2
● All Other Occupancies					

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01		02		03	
Air System(s)		Wet System Components		Dry System Components	
☒	Heating Air System	☐	Water Economizer	☐	Air Economizer
☒	Cooling Air System	☐	Pumps	☐	Electric Resistance Heat
Mechanical Controls		☐	System Piping	☐	Fan Systems
☐	Mechanical Controls (existing to remain, altered or new)	☐	Cooling Towers	☒	Ductwork (existing to remain, altered or new)
		☐	Chillers	☐	Ventilation
		☐	Boilers	☐	Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 4 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
H-3	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	10.4	SEER	13	20.2

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This section does not apply to this project.

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
H-1/H-2/H-3	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	NA: Serves < 25k ft^2	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: Alteration Project

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 2 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND		AND	Yes	AND		AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
H-1	1	Single zone	New/ Addition	All Other Occupancies	☐
H-2	1	Single zone	New/ Addition	All Other Occupancies	☐
H-3	1	Single zone	New/ Addition	All Other Occupancies	☐

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PROJECT:
FIRE STATION NO.2 REMODEL
2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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STRUCTURAL ENGINEER
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Oakland, CA 94612
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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:
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DATE:
AUGUST 27, 2024

STAMP:
REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER L. ARGENTO No. M29691 Exp. 06-30-26 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE:
MECHANICAL TITLE 24 FORMS

SHEET NUMBER:
M002

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 7 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location
		M001, M201, M202, M203, M301, M401, M402, M403

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 5 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

I. SYSTEM CONTROLS

[1]FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY

This section does not apply to this project.

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing			
The answers to the questions below apply to the following duct systems:	ERV-1/ERV-2/FC-3	**NR/ Common Use:** Duct leakage testing shall not exceed 15% per NA7.5.3 required for these systems?	No

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 8 of 8)**
Project Address: 2029 BERKELEY WAY, BERKELEY, CA 94704	**Date Prepared:**	2023-10-09T17:30:39-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: George Arellano	Documentation Author Signature: GEORGE L. ARELLANO, PE, CPD Digitally signed by GEORGE L. ARELLANO, PE, CPD Date: 2023.10.24 12:21:34-07'00'
Company: Canyon Consulting Engineers	Signature Date: 2023-10-24
Address: 3260 Blume Dr., Ste. 240	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Richmond, CA 94806	Phone: 510-243-5987

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: George Arellano	Responsible Designer Signature: GEORGE L. ARELLANO, PE, CPD Digitally signed by GEORGE L. ARELLANO, PE, CPD Date: 2023.10.24 12:21:43-07'00'
Company: Canyon Consulting Engineers	Date Signed: 2023-10-24
Address: 3260 Blume Dr., Ste. 240	License: M29691
City/State/Zip: Richmond, CA 94806	Phone: 510-243-5987

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: FIRE STATION NO. 2 REMODEL	**Report Page:**	**(Page 6 of 8)**
	Date Prepared:	2023-10-09T17:30:39-04:00

L. DISTRIBUTION (DUCTWORK and PIPING)

		Dwelling Units: Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 10% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft^2 of conditioned floor area.	
14	Yes	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18	Yes	All ductwork is an extension of an existing duct system	
19	No	Ductwork serving individual dwelling unit	
20	No	< 25 ft of new or replacement space conditioning ducts installed	
21	R-0.0	Duct Insulation R-value	
22	Yes	Ductwork Existing To Remain	
23	Yes	Duct System Connected To Altered Space Conditioning System	

M. COOLING TOWERS

This section does not apply to this project.

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PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
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CLIENT:
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PROJECT TEAM:

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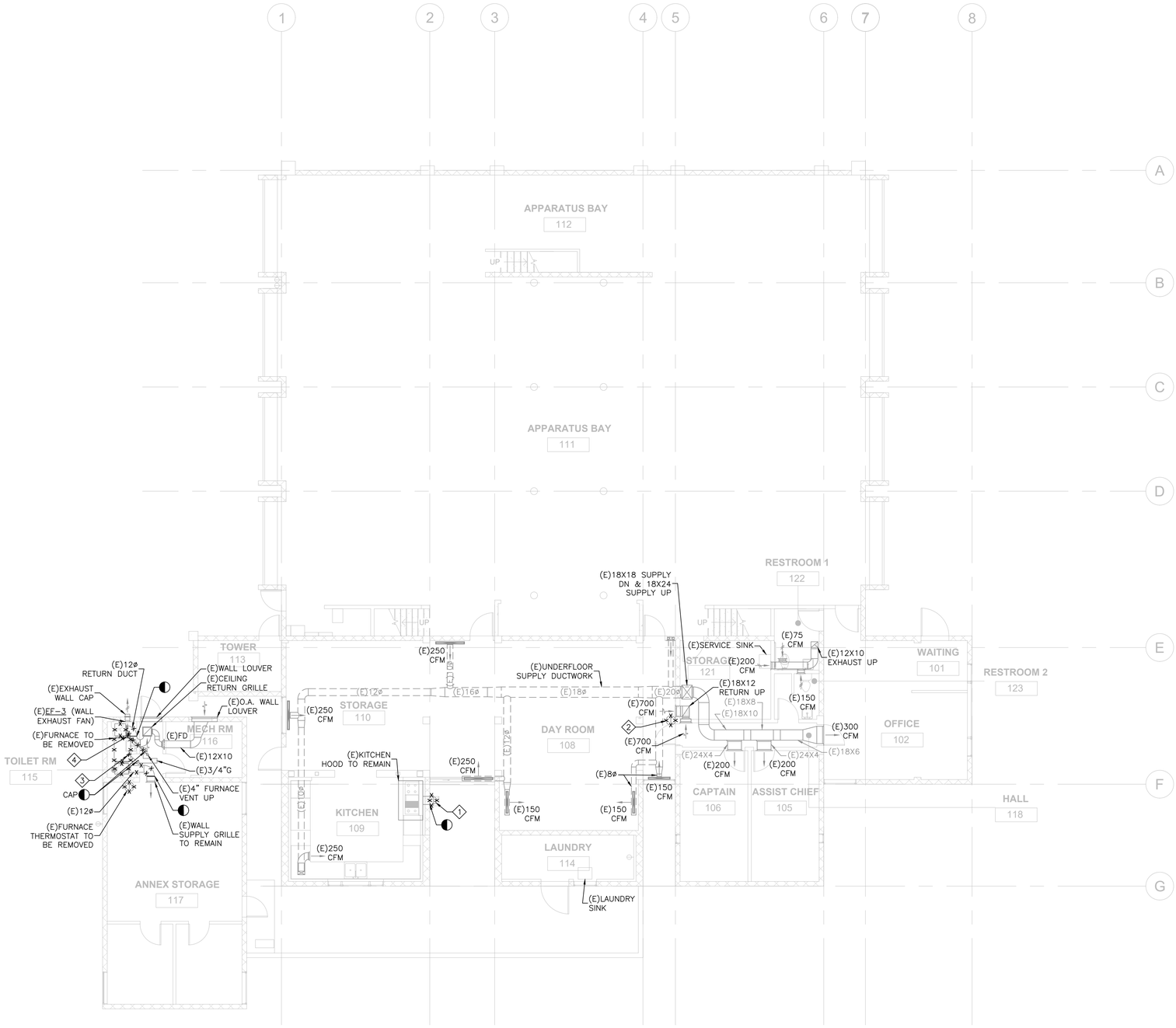
DATE:
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REGISTERED PROFESSIONAL ENGINEER
GEORGE L. ARELLANO
No. M29691
12-31-26
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE:
MECHANICAL TITLE 24 FORMS

SHEET NUMBER:
M003



1 GROUND FLOOR MECHANICAL DEMOLITION PLAN

SCALE: 1/8"=1'-0"

DEMOLITION SHEET NOTES:

1. (E)WALL-MOUNTED GREASE EXHAUST FAN TO BE REMOVED & REPLACED.
2. (E)THERMOSTAT (F-1) TO BE REMOVED.
3. (E)3/4"G CONNECTION TO (E)FURNACE TO BE REMOVED. CAP (E)3/4"G DOWNSTREAM OF (E)SHUTOFF VALVE.
4. (E)FURNACE FLUE VENT TO BE REMOVED. CAP TO WHERE SHOWN.

PLAN NORTH

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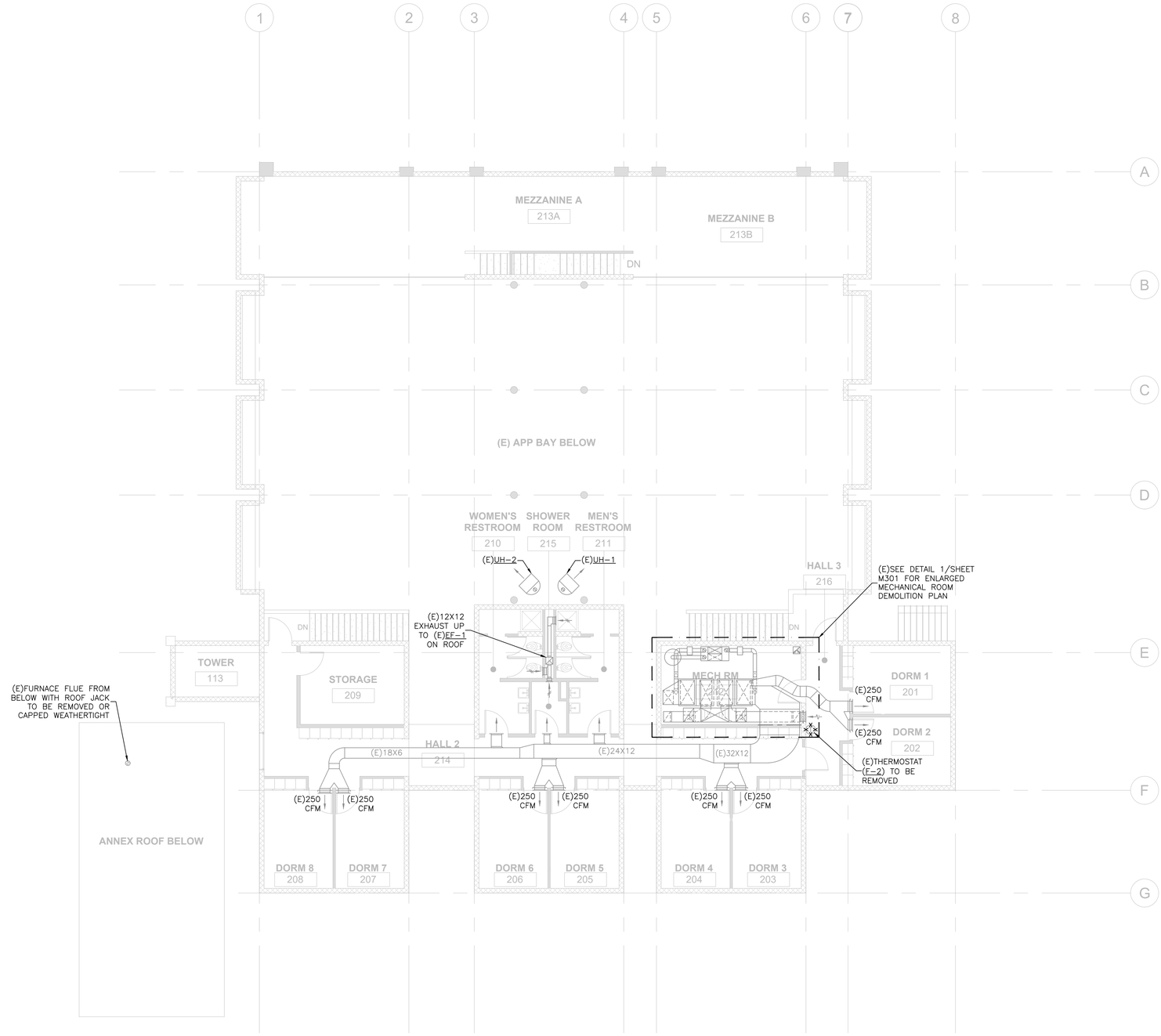
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REGISTERED PROFESSIONAL ENGINEER GEORGE L. ARCHILLA No. M29691 EXP. 06-30-26 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE:
GROUND FLOOR MECHANICAL DEMOLITION PLAN

SHEET NUMBER:
M101



1 SECOND FLOOR MECHANICAL DEMOLITION PLAN

SCALE: 1/8"=1'–0"

PLAN NORTH

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
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PROJECT TEAM:

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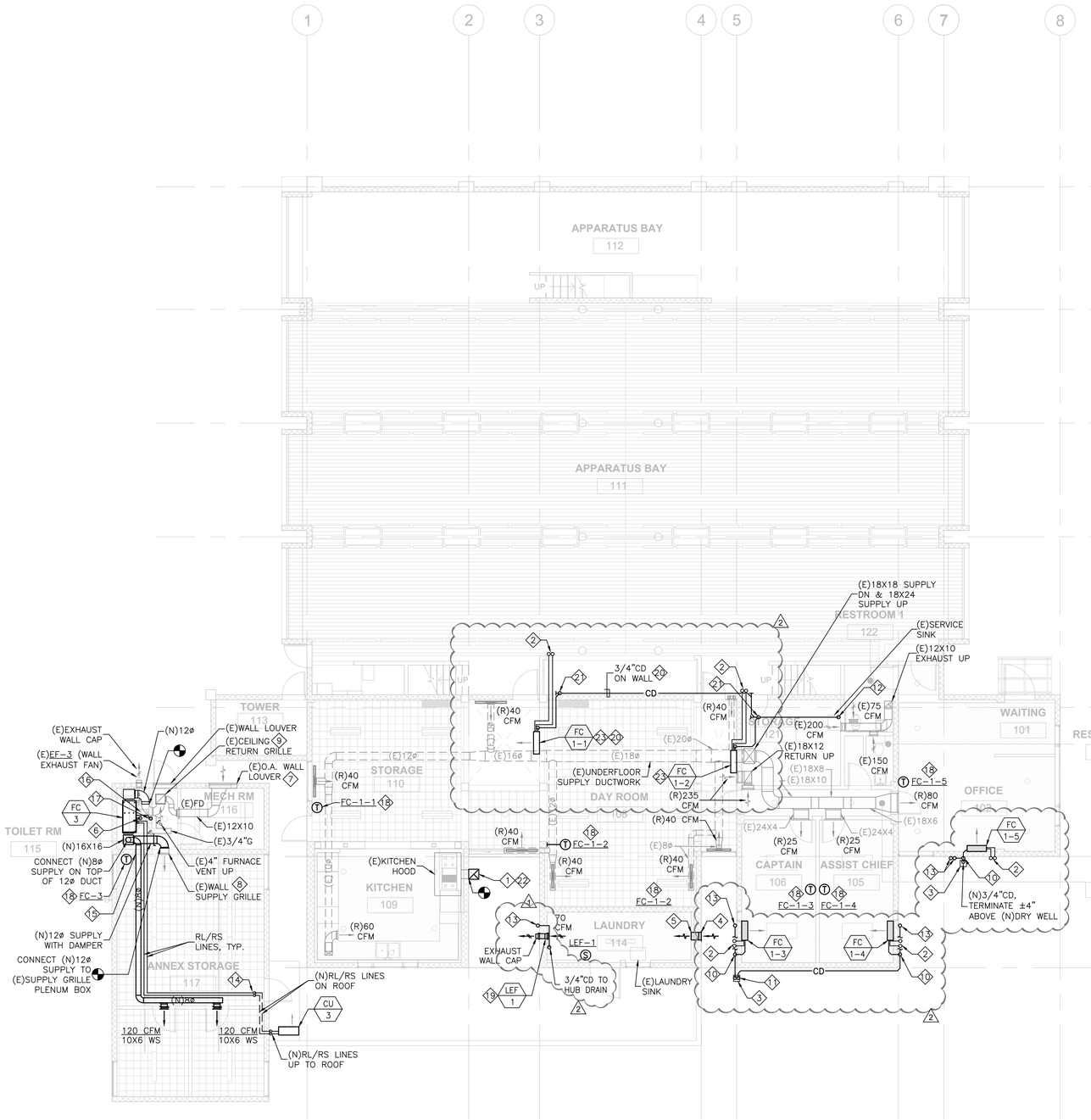
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REGISTERED PROFESSIONAL ENGINEER GEORGE L. ARCHULETA No. M29691 EXP. 06-30-26 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE:
SECOND FLOOR MECHANICAL DEMOLITION PLAN

SHEET NUMBER:
M102



1 GROUND FLOOR MECHANICAL NEW PLAN

SCALE: 1/8"=1'-0"

PLAN NORTH

GENERAL NOTES:

1. PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, FC-3, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
2. SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.
3. GREASE DUCTS SHALL COMPLY WITH CMC 510.5. 1
4. SLOPE ALL CONDENSATE AT 1% MINIMUM. 2

MECHANICAL SHEET NOTES:

1. (N)16X16 GREASE EXHAUST ON WALL & UP.
2. (N)RL/RS LINES ON WALL FROM ABOVE & ROUTE TO FC UNIT.
3. (N)10X10X10 DRY WELL WITH DRAIN ROCK.
4. (N)12X12 WALL LOUVER WITH BIRDSCREEN. LOUVER SHALL BE GREENHECK ESJ-401 OR EQUAL.
5. (N)12X12 MAKE-UP AIR OPEN DUCT PLENUM.
6. 3/4"CD (SECONDARY DRAIN). TERMINATE ABOVE (E)LAVATORY OR WHERE DRIPS WOULD NOT CAUSE DAMAGE. ADJUST LOCATION WHERE NEEDED. PROVIDE WITH CHROME-PLATED ESCUTCHEON ON FINISHED CEILING. SEE DETAIL 9/SHEET M401.
7. REBALANCE OUTSIDE AIR TO 120 CFM.
8. REBALANCE (E)WALL SUPPLY GRILLE TO 460 CFM.
9. REBALANCE (E)CEILING RETURN GRILLE TO 580 CFM.
10. (N)3/4"CD TO EXTERIOR WALL.
11. TERMINATE (N)3/4"CD TO DRY WELL.
12. (N)3/4"CD TERMINATE TO (E)SERVICE SINK.
13. (N)3/4"CD FROM SECOND FLOOR. 2
14. PENETRATE (N)RL/RS LINES THRU SLOPED ROOF TO ANNEX STORAGE CEILING LEVEL.
15. COORDINATE LOCATION AND ELEVATION OF (N)8ø DUCT PENETRATION TO (E)CMU WALL WITH STRUCTURAL.
16. REPLACE (E)LAVATORY DRAIN TAILPIECE WITH (N)TAILPIECE WITH 3/4" CD CONNECTION.
17. (N)3/4"CD DN & CONNECT TO (N)LAVATORY DRAIN TAILPIECE CD CONNECTION.
18. COORDINATE LOCATION OF (N)THERMOSTAT WITH ARCHITECTURAL DRAWINGS.
19. COORDINATE EXHAUST FAN LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
20. FIELD VERIFY ROUTING OF (N)3/4"CD. REVISE ROUTING AS NEEDED. 2
21. INSTALL (N)3/4"CD FROM FC UNIT ABOVE (N)3/4"CD PIPING.
22. PROVIDE EXH. DUCT ACCESS CLEANOUT. 1
23. INSTALL UNIT BELOW CONCRETE BEAM OR CEILING. DIRECT AIRFLOW FROM (N)FC-1-2 AWAY FROM WALL AND BELOW CEILING.
24. TERMINATE 3/4"CD TO (E) WASHING MACHINE HUB DRAIN INSIDE LAUNDRY ROOM. 2

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PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
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PROJECT TEAM:

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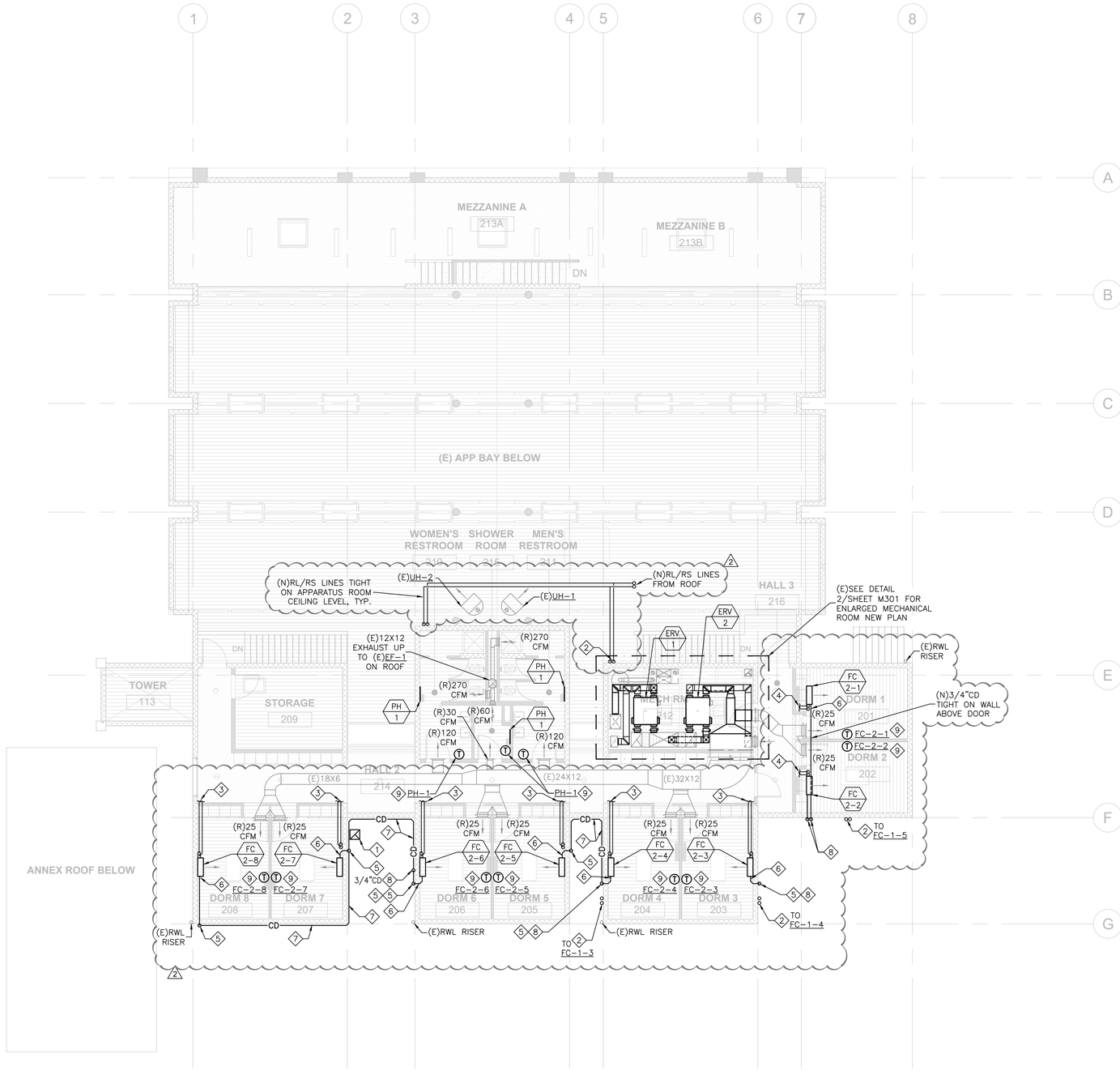
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REGISTERED PROFESSIONAL ENGINEER GEORGE L. ARCHULETA No. M29691 EXP. 06-30-26 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE:
GROUND FLOOR MECHANICAL NEW PLAN

SHEET NUMBER:
M201



1 SECOND FLOOR MECHANICAL NEW PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, FC-3, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
2. SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.
3. GREASE DUCTS SHALL COMPLY WITH CMC 510.5. (1)
4. SLOPE ALL CONDENSATE AT 1% MINIMUM. (2)

MECHANICAL SHEET NOTES:

1. (N)16X16 GREASE EXHAUST ON WALL FROM BELOW & UP TO ROOF.
2. (N)RL/RS LINES FROM ROOF ON WALL & DN TO FIRST FLOOR.
3. (N)RL/RS LINES FROM ROOF & ON WALL TO FC UNIT. SEE SHEET M203 FOR CONTINUATION.
4. (N)RL/RS FROM ROOF & TO FC UNIT. SEE SHEET M203 FOR CONTINUATION.
5. (N)3/4"CD TO EXTERIOR WALL.
6. (N)3/4"CD FROM INDOOR FC UNIT.
7. (N)3/4"CD TIGHT ON EXTERIOR WALL.
8. (N)3/4"CD ON EXTERIOR WALL AND DOWN.
9. COORDINATE LOCATION OF (N)THERMOSTAT WITH ARCHITECTURAL DRAWINGS. (2)

PLAN NORTH

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PROJECT:

FIRE STATION NO.2 REMODEL

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BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

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PROJECT TEAM:

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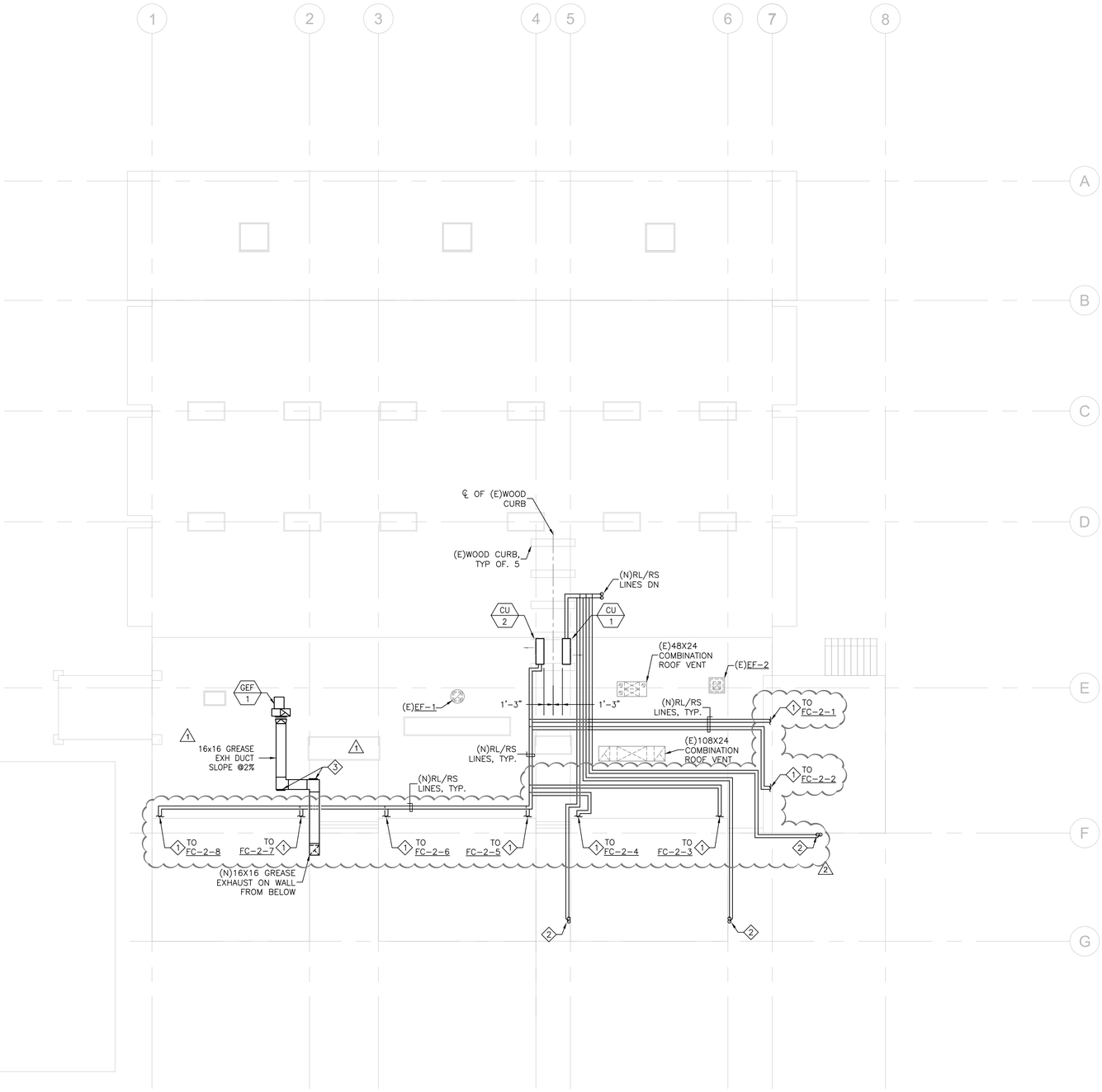
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REGISTERED PROFESSIONAL ENGINEER GEORGE L. ARGYRIS No. M 029691 Exp. 06-30-26 MECHANICAL STATE OF CALIFORNIA

SHEET TITLE:
SECOND FLOOR MECHANICAL NEW PLAN

SHEET NUMBER:
M202



1 ROOF MECHANICAL NEW PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
2. SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.
3. SLOPE CONDENSATE DRAIN AT 2% MIN.
4. GREASE DUCTS SHALL COMPLY WITH CMC 510.5.

MECHANICAL SHEET NOTES: 1

1. (N)RL/RS LINES TO FC UNIT IN SECOND FLOOR DORMITORIES. SEE SHEET M202 FOR CONTINUATION.
2. (N)RL/RS LINES DN & ON EXTERIOR WALL.
3. EXHAUST DUCT ACCESS CLEANOUT. 1

PLAN NORTH

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GEORGE L. ARGYLE
NO. M 029691
EXP. 06-30-26
MECHANICAL
STATE OF CALIFORNIA

SHEET TITLE:
ROOF MECHANICAL NEW PLAN

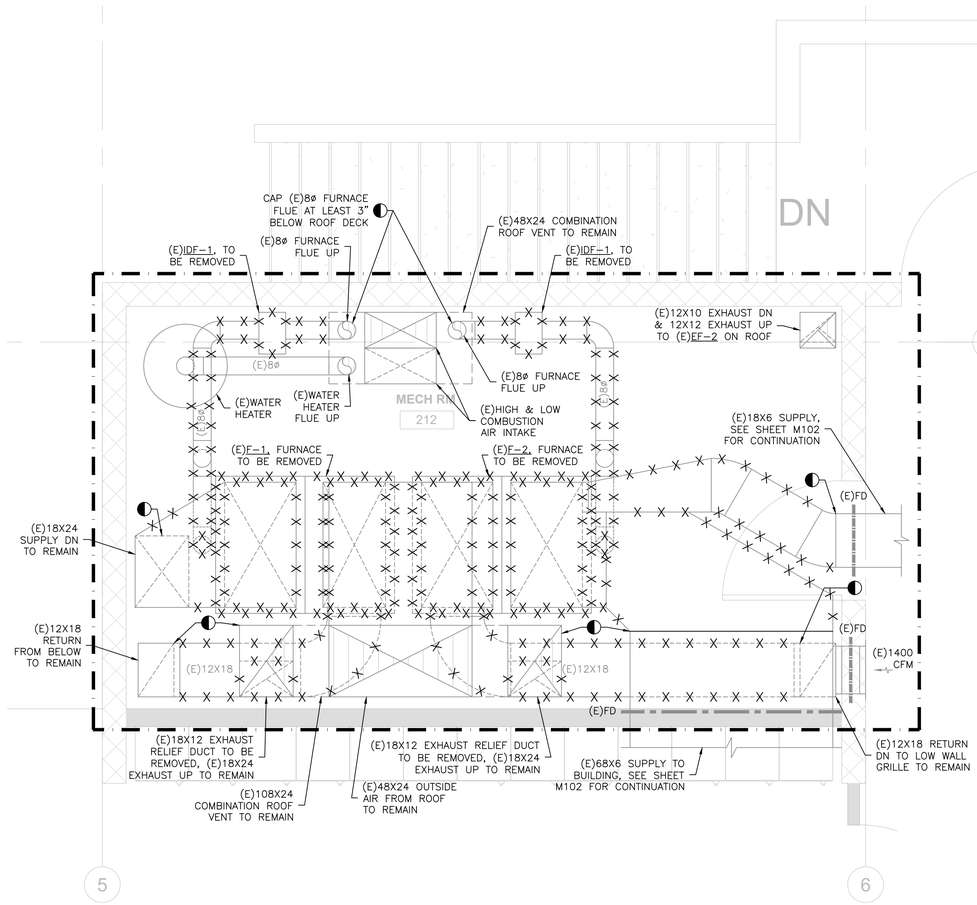
SHEET NUMBER:
M203

GENERAL NOTES:

1. PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
2. SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.

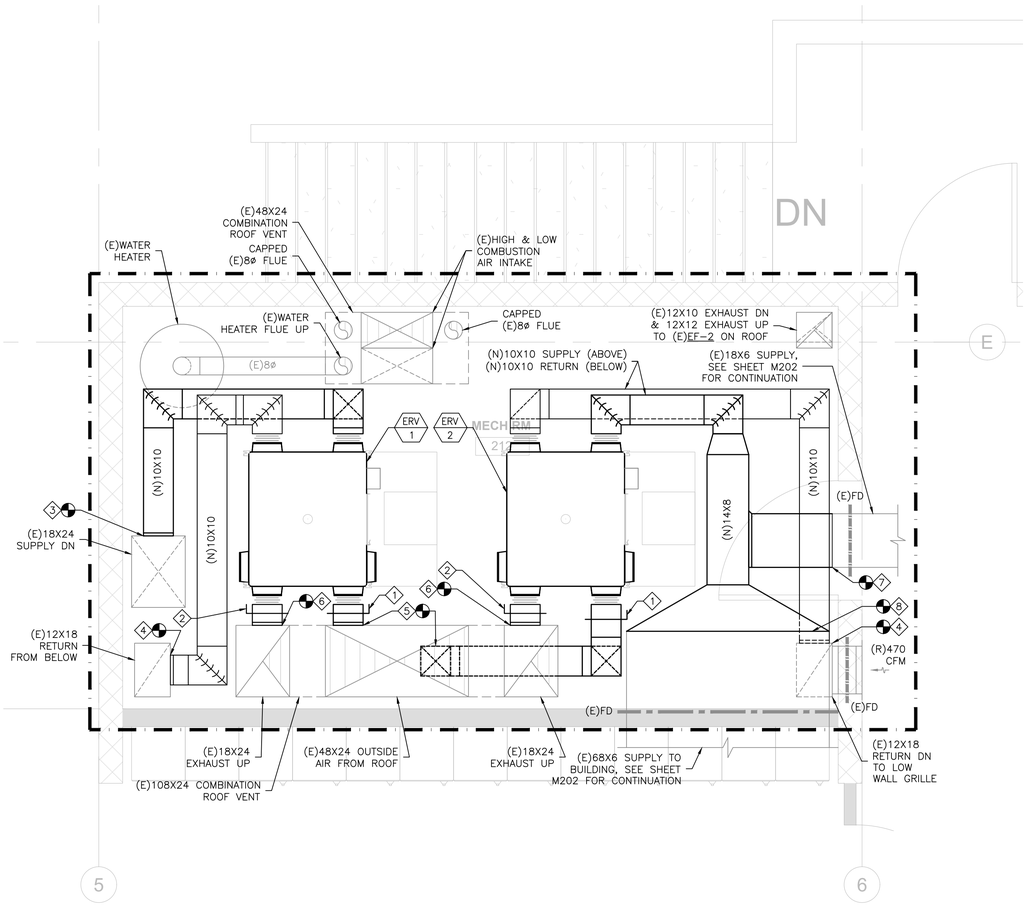
MECHANICAL SHEET NOTES:

1. BALANCE OUTSIDE AIR TO 470 CFM.
2. BALANCE EXHAUST AIR TO 470 CFM.
3. CONNECT (N)10X10 SUPPLY DUCT TO (E)18X24 SUPPLY DUCT.
4. CONNECT (N)10X10 RETURN DUCT TO (E)12X18 RETURN DUCT.
5. CONNECT (N)10X10 OUTSIDE AIR TO (E)48X24 OUTSIDE AIR DUCT.
6. CONNECT (N)10X10 EXHAUST TO (E)12X24 EXHAUST DUCT.
7. EXTEND (E)18X6 SUPPLY DUCT & CONNECT TO (N)14X8.
8. CONNECT (N)14X8 TO (E)68X6. PROVIDE WITH TRANSITION FITTING.



1 MECHANICAL ROOM ENLARGED DEMOLITION PLAN

SCALE: 1/2"=1'-0"



2 MECHANICAL ROOM ENLARGED NEW PLAN

SCALE: 1/2"=1'-0"

PLAN NORTH

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

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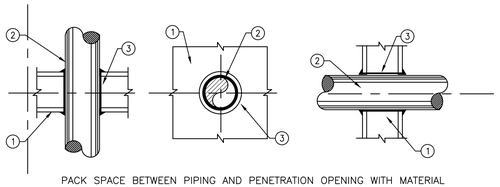
DATE:
AUGUST 27, 2024

STAMP:

REGISTERED PROFESSIONAL ENGINEER — GEORGE L. AREVALO — No. M29691 — 06-30-26 — MECHANICAL — STATE OF CALIFORNIA

SHEET TITLE:
MECHANICAL ROOM ENLARGED DEMOLITION & NEW PLANS

SHEET NUMBER:
M301



PACK SPACE BETWEEN PIPING AND PENETRATION OPENING WITH MATERIAL APPROVED BY UNDERWRITERS LABORATORIES FOR THROUGH PENETRATION FIRE STOP SYSTEMS. MATERIALS, METHODS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH UL APPROVED LISTING AND SHALL BE DESIGNED TO ACT AS A FIRESTOP AS WELL AS A COLD SMOKE, NOXIOUS GAS AND WATER SEALANT. SUBMIT LISTING NUMBERS AND DETAILS FROM UL FIRE RESISTANT DIRECTORY FOR ALL SUCH SYSTEMS TO BE USED. INSULATE PIPES 3 FEET TO EITHER SIDE OF PENETRATION WITH MATERIAL SPECIFIED IN THE UL FIRE RESISTANCE DIRECTORY IF REQUIRED TO OBTAIN THE T– AND F– RATINGS.

1. WALL AND FLOOR
2. PIPE OR INSULATED PIPE
3. FIRE BARRIER – "3M PRODUCTS INC." FIRE BARRIER CAULK CP25 WB+, CP 25WB, CP 25 N/S AND S/L, FIRE BARRIER 2000+, 2000 AND 2003 SILICONE SEALANTS, MOLDABLE PUTTY.

USE FOLLOWING APPLICABLE UL SYSTEMS FOR THE CONSTRUCTION TYPES LISTED.

CONSTRUCTION TYPE	THROUGH PENETRATION FIRESTOP SYSTEM NUMBERS
CONCRETE FLOORS	CAJ1044 (F–2, 3, 4 HR; T–0 HR), CAJ1058 (F–3 HR; T–0 HR), CAJ1175 (F–2 HR; T–0 HR), CAJ5001 (F–1.5, 2, 3 HR; T–0 TO 1 HR)
CONCRETE OR MASONRY WALLS	CAJ1001 (F–3 HR; T–0 HR), CAJ1027 (F–3 HR; T–0 HR), CAJ1044 (F–2, 3, 4 HR; T–0 HR), CAJ1058 (F–3 HR; T–0 HR),
GYPSUM WALLBOARD/ STUD WALLS	WL1001 (F–1, 2, 3, 4 HR; T–0 TO 4 HR), WL1003 (F–1, 2 HR; T–0 HR), WL2002 (F–1, 2 HR, T–0 TO 2 HR), WL2003 (F–1, 2 HR; T–0 TO 2 HR), WL2004 (F–2 HR; T–0 TO 2 HR), WL2005 (F–1, 2 HR; T–0 TO 2 HR), WL5001 (F–1, 2 HR; T–0 TO 1.5 HR), WL5002 (F–1, 2 HR; T–0 TO 2 HR)

7 PIPE THRU RATED BARRIER DETAIL

NOT TO SCALE

DIMENSIONS

UNIT TYPE	"A"	"B"
DRAW THRU	1.0 x S.P.	1.5 x S.P.
BLOW THRU	1" MIN.	2.0 x S.P.

S.P. = STATIC PRESSURE IN PAN

AIR HANDLING UNIT CONDENSATE DRAIN CONNECTION

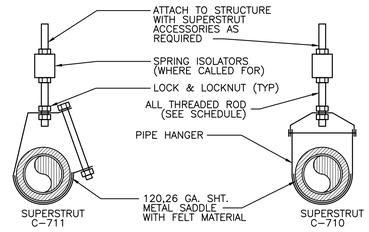
NOTE:
ALL INTERIOR CONDENSATE DRAINS SHALL BE INSULATED.

8 CONDENSATE DRAIN TRAP DETAIL

NOT TO SCALE

9 SECONDARY DRAIN PAN DETAIL

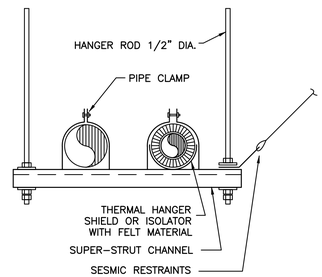
NOT TO SCALE



PIPE SIZE (IN)	MAX SUPPORT SPAN (FT)	MIN. ROD SIZE (IN)
UP TO 1"	6	3/8"
1–1/2"	6	3/8"
2 TO 2–1/2"	10	3/8"
3"	10	1/2"
3–1/2"	10	1/2"
4	10	5/8"

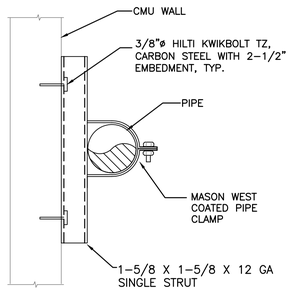
4 PIPE HANGER DETAIL

NOT TO SCALE



5 TRAPEZE HANGER DETAIL

NOT TO SCALE

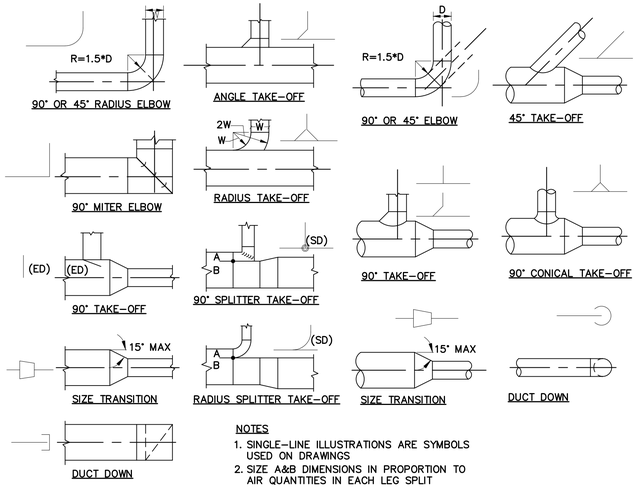


NOTES:

1. PAINT TO MATCH (E)ADJACENT SURFACE. SEE ARCHITECTURAL DRAWINGS.

6 PIPE SUPPORT ON WALL

NOT TO SCALE

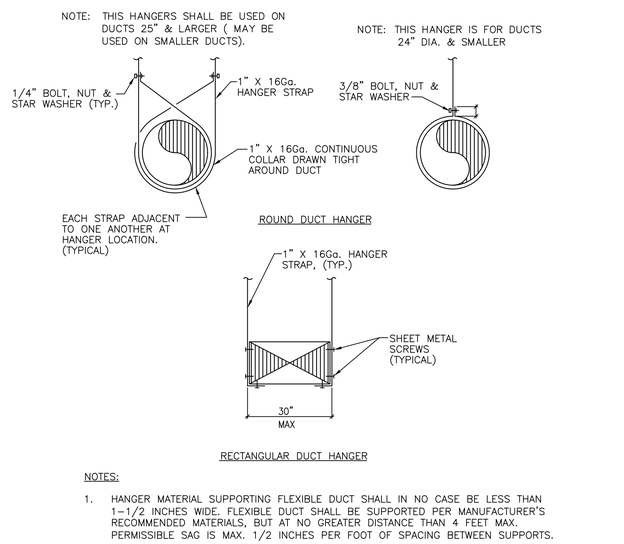


NOTES

1. SINGLE–LINE ILLUSTRATIONS ARE SYMBOLS USED ON DRAWINGS
2. SIZE A&B DIMENSIONS IN PROPORTION TO AIR QUANTITIES IN EACH LEG SPLIT

1 DUCT CONSTRUCTION DETAIL

NOT TO SCALE

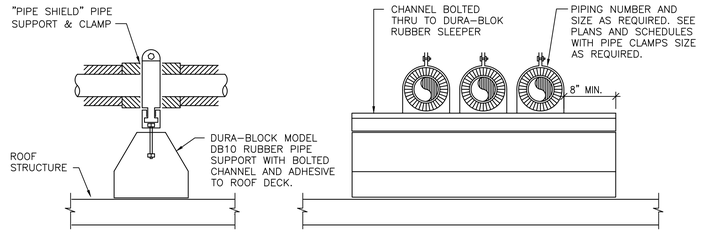


NOTES:

1. HANGER MATERIAL SUPPORTING FLEXIBLE DUCT SHALL IN NO CASE BE LESS THAN 1–1/2 INCHES WIDE. FLEXIBLE DUCT SHALL BE SUPPORTED PER MANUFACTURER'S RECOMMENDED MATERIALS, BUT AT NO GREATER DISTANCE THAN 4 FEET MAX. PERMISSIBLE SAG IS MAX. 1/2 INCHES PER FOOT OF SPACING BETWEEN SUPPORTS.

2 DUCT SUPPORT DETAIL

NOT TO SCALE



3 REFRIGERANT PIPE ROOF MOUNTING DETAIL

NOT TO SCALE

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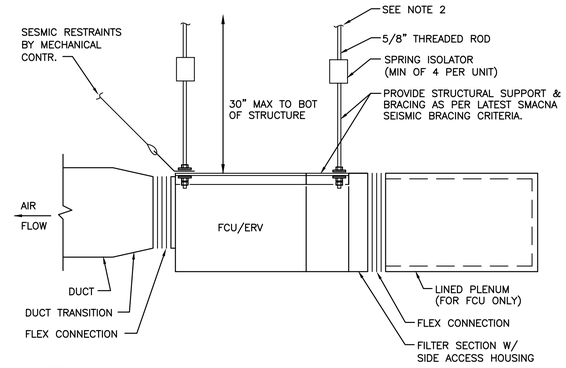
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STAMP:

REGISTERED PROFESSIONAL ENGINEER GEORGE L. ARGYRIOU No. M29691 EXP. 06-30-26 MECHANICAL STATE OF CALIFORNIA

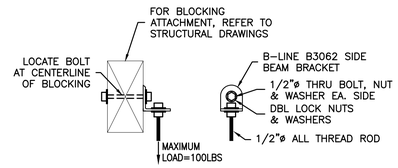
SHEET TITLE:
MECHANICAL DETAILS

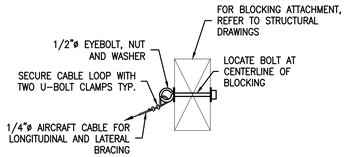
SHEET NUMBER:
M401



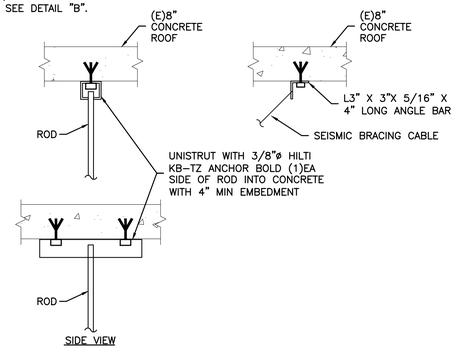
NOTES:

1. PROVIDE SEISMIC BRACING AT ALL FCU/ERV.
2. FOR UNIT ATTACHMENT TO WOOD STRUCTURE, SEE DETAIL "A".
   FOR UNIT ATTACHMENT TO CONCRETE ROOF, SEE DETAIL "B".





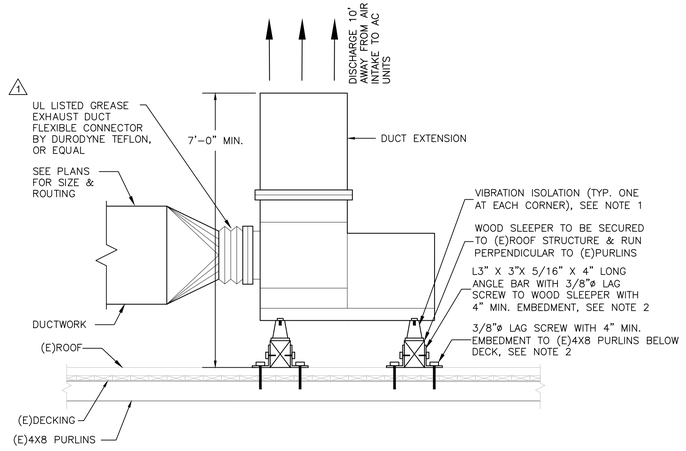
DETAIL "A": ATTACHMENT TO WOOD STRUCTURE



DETAIL "B": ATTACHMENT TO CONCRETE ROOF

4 DUCTED FCU/ERV MOUNTING DETAIL

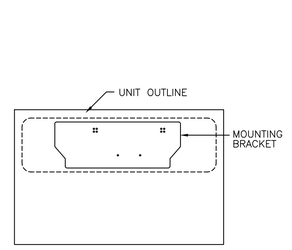
NOT TO SCALE



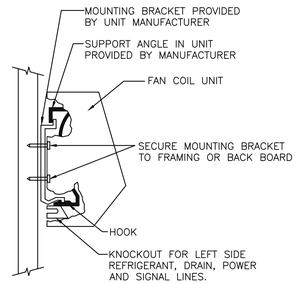
NOTE:
1. VIBRATION ISOLATOR BY MASON INDUSTRIES INC. TYPE SLR-2A-800, TYP.
2. PROVIDE LAG SCREW TO 2 EACH SIDE (4 TOTAL) TO EMBED 1-1/2" MIN. FROM EDGE AND 4" MIN. FROM END. LAG SCREW TO BE HDG OR SS, WITH STD. WASHER, TYP.
3. FAN DISCHARGE SHALL BE 45° AWAY FROM PROPERTY LINE.

1 EXHAUST FAN MOUNTING DETAIL

NOT TO SCALE



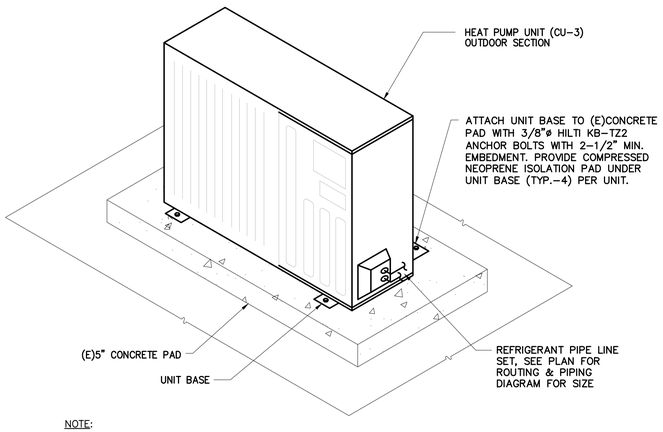
REAR VIEW



SIDE VIEW

2 WALL-MOUNTED DUCTLESS INDOOR UNIT MOUNTING DETAIL

NOT TO SCALE

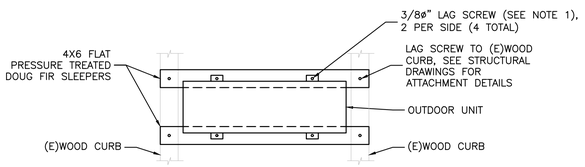


NOTE:

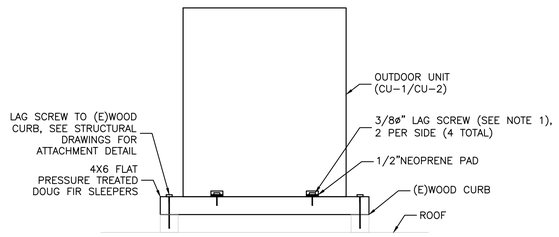
1. MAINTAIN 6" MINIMUM DISTANCE FROM EDGE OF THE (E)CONCRETE PAD TO OUTDOOR UNIT MOUNTING HOLES, TYP. ALL SIDES.

6 OUTDOOR HEAT PUMP (CU-3) UNIT MOUNTING DETAIL

NOT TO SCALE



PLAN VIEW



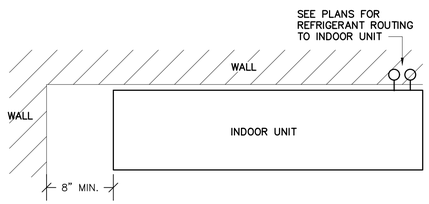
FRONT VIEW

NOTE:

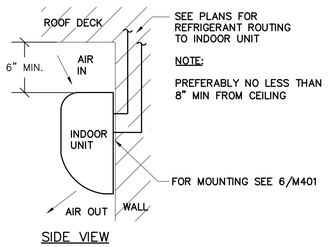
1. 3/8"ø LAG SCREW TO BE HDG OR SS, WITH STD. WASHER, TYP. (SEE STRUCTURAL DETAILS FOR MIN. EMBEDMENT).

5 OUTDOOR HEAT PUMP (CU-1/CU-2) UNIT MOUNTING DETAIL

NOT TO SCALE



TOP VIEW



SIDE VIEW

3 WALL-MOUNTED DUCTLESS INDOOR UNIT INSTALLATION CLEARANCE REQUIREMENTS

NOT TO SCALE

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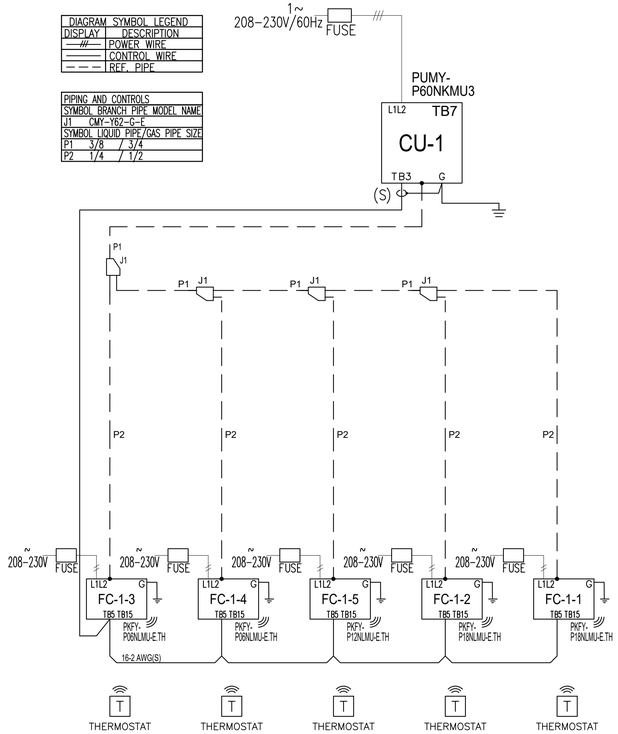
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SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:
M402

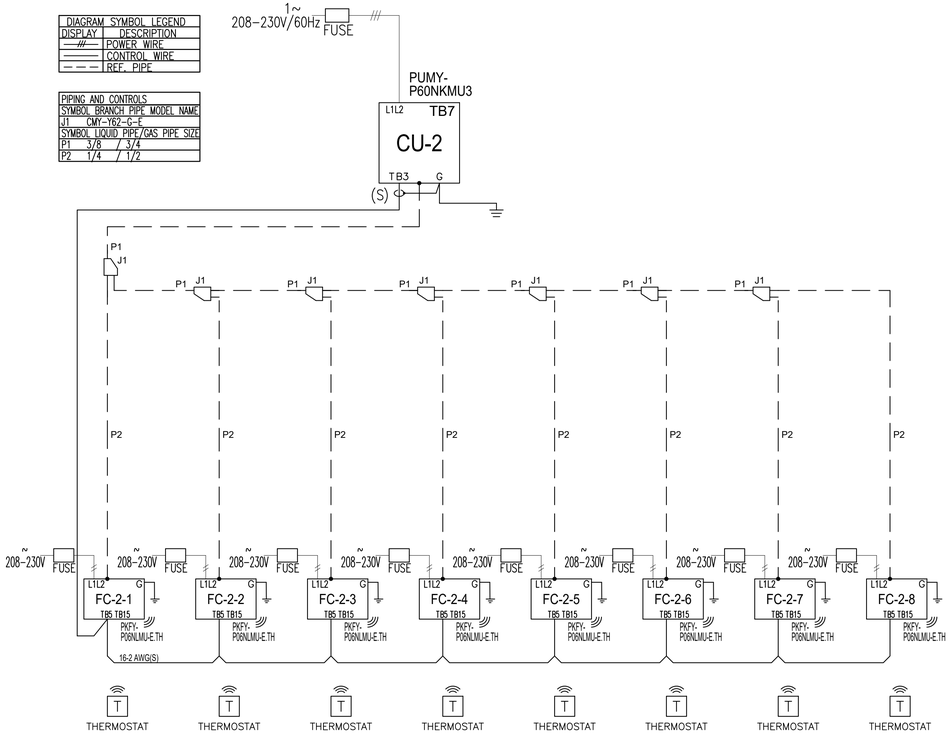


NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

1 SYSTEM H-1 CONTROL DIAGRAM

NOT TO SCALE

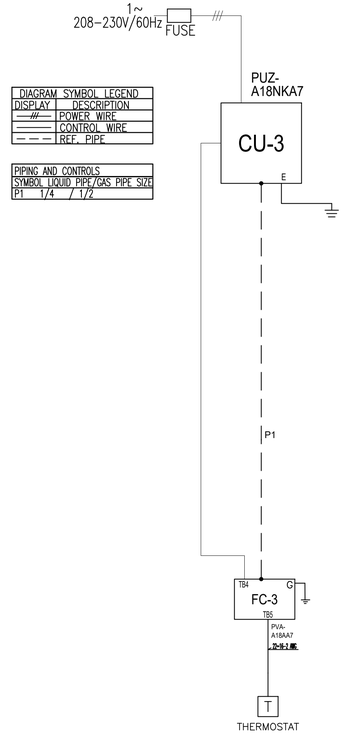


NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

2 SYSTEM H-2 CONTROL DIAGRAM

NOT TO SCALE



NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

3 SYSTEM H-3 CONTROL DIAGRAM

NOT TO SCALE

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SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:
M403

SYMBOL LIST (NOT ALL SYMBOLS USED)

LINE TYPES

- EXISTING EQUIPMENT/ RACEWAYS TO REMAIN, (E)
- EXISTING EQUIPMENT/ RACEWAYS TO BE REMOVED, (D)
- NEW EQUIPMENT / RACEWAYS
- CONDUIT CONCEALED
- EXPOSED CONDUIT
- UNDERGROUND OR BELOW GRADE CONDUIT

SINGLE LINE DIAGRAM

- TRANSFORMER
- CIRCUIT BREAKER
- DRAW OUT CIRCUIT BREAKER
- MEDIUM VOLTAGE VACUUM CIRCUIT BREAKER
- MOTOR STARTER WITH OVERCURRENT PROTECTION 3 POLE UNLESS OTHERWISE NOTED
- NON-FUSED DISCONNECT SWITCH, 30 AMP, 3P UNLESS NOTED OTHERWISE.
- FUSED DISCONNECT SWITCH, 3 POLE UNLESS NOTED OTHERWISE.
- CIRCUIT BREAKER ACCESORY, 'S' INDICATES SHUNT TRIP, 'G' INDICATES GROUND FAULT RELAY
- UTILITY METER WITH CT/PT
- KWH SUB METER WITH CT/PT
- MULTIPOINT KWH SUB METER IN SEPARATE ENCLOSURE, CT/PTS AS SHOWN

DEVICES

FLOOR* WALL CEILING

- SIMPLEX OR SPECIAL RECEPTACLE TYPE, SEE PLANS FOR NEMA TYPE
- DUPLEX RECEPTACLE, 5-20R U.O.N.
- DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
- CONTROLLED DUPLEX RECEPTACLE, 5-20R U.O.N.
- CONTROLLED DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
- *PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL

LTR

- A — ABOVE COUNTER OR AT DEFINED HEIGHT. REFER TO ARCHITECT
- G — GROUND FAULT CIRCUIT INTERRUPTER
- WP — WEATHERPROOF IN-USE COVER WITH GFI RECEPTACLE
- U — RECEPTACLE DEVICE WITH (2) USB PORTS
- S — SPLIT WIRED RECEPTACLE
- Z — DEDICATED CIRCUIT

A-1.

- DEVICE CIRCUITING NOMENCLATURE
  A = PANEL NAME, IF SHOWN
  1. = CIRCUIT NUMBER

FLOOR* WALL CEILING

- 4-IN SQUARE JUNCTION BOX
- PULL BOX, SIZED PER CODE
- POWER AND DATA JUNCTION BOXES WITH WHIPS FOR FURNITURE CONNECTION. *PROVIDE POWER POLE WITH CEILING JUNCTION BOX

EQUIPMENT

RECESSED SURFACE

- DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
- FUSED DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
- COMBINATION DISCONNECT SWITCH MOTOR STARTER
- MOTOR, 5 HP INDICATED.
- TRANSFORMER, ###W INDICATES WATTAGE
- RELAY OR EQUIPMENT CABINET AS INDICATED ON PLANS.
- LIGHTING OR POWER PANEL BOARD.
- FREE STANDING SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD.
- FIRE TREATED PLYWOOD BACKBOARD 3/4"X96" HIGH X LENGTH AS INDICATED.
- GROUND BUS BAR
- BATTERY PACK OR MINI INVERTER, ###W INDICATES WATTAGE

TAGS

- ELECTRICAL EQUIPMENT DESIGNATION DESIGNED "EQ01"
- SHEET NOTE ON SAME SHEET.
- MECHANICAL EQUIPMENT DESIGNATION "AC-1" INDICATED. A-1,3,5. INDICATES CIRCUIT NUMBER, F40-3 INDICATES FEEDER CODE IF NONE SHOWN REFER TO SINGLE LINE DIAGRAM FOR ELECTRICAL REQUIREMENTS
- DETAIL REFERENCE

ABBREVIATIONS

(E)	EXISTING
(D)	DEMOLISH
(R)	RELOCATE
(RL)	NEW LOCATION OF RELOCATED DEVICE
A	AMPERES, AMBER
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AVAILABLE INTERRUPTING CAPACITY
C	CONDUIT, CLOSE, CONTROL
CA	CABLE
CAT	CATEGORY
CU	COPPER
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DWG	DRAWING
EA	EACH
FF	FINISH FLOOR
FT	FOOT, FEET G,
GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPS
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEC	NATIONAL ELECTRIC CODE
NTS	NOT TO SCALE
PH	PHASE
QTY	QUANTITY
RM	ROOM
STD	STANDARD
TBD	TO BE DETERMINED
TGB	TELECOMMUNICATIONS GROUNDING BUS BAR
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLTS, VOLTAGE
WP	WEATHERPROOF

CODES & STANDARDS

1. 2022 CALIFORNIA BUILDING CODE
2. 2022 CALIFORNIA ELECTRICAL CODE
3. 2022 CALIFORNIA MECHANICAL CODE
4. 2022 CALIFORNIA PLUMBING CODE
5. 2022 CALIFORNIA ENERGY CODE (TITLE 24)
6. 2022 CALIFORNIA FIRE CODE
7. 2022 CALIFORNIA GREEN CODE

DRAWING INDEX

E001	COVER SHEET – ELECTRICAL
E101	DEMOLITION PLANS – ELECTRICAL
E201	GROUND FLOOR PLAN – POWER
E202	SECOND FLOOR PLAN – POWER
E203	ROOF PLAN – POWER
E301	SINGLE LINE DIAGRAM
E401	SCHEDULES

GENERAL ELECTRICAL NOTES

A. SCHEDULE WORK IN EXISTING BUILDINGS WITH THE OWNER. MINIMIZE DISRUPTION OF NORMAL OPERATIONS.

B. VISIT THE SITE BEFORE SUBMITTING A BID TO OBSERVE EXISTING CONDITIONS.

C. DO NOT INSTALL ELECTRICAL BOXES IN RATED WALLS CLOSER THAN 2'-0" TO EACH OTHER. PROVIDE "PADDY" PADS OR EQUIVALENT ON EACH BOX INSTALLED.

D. PLANS DO NOT GENERALLY INDICATE WIRE COUNTS. FOR EACH 20 AMP, 120 VOLT OR 277 VOLT CIRCUIT, PROVIDE (1) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR AND (1) #12 GROUNDING CONDUCTOR. WHERE MULTIPLE CIRCUITS ARE SHOWN, UP TO THREE SEPARATE AND DIFFERENTLY PHASED CIRCUITS (A, B AND C) PROVIDE DEDICATED NEUTRALS UNLESS OTHERWISE NOTED AND A SINGLE GROUNDING CONDUCTOR. WHERE DRAWINGS INDICATE WIRE SIZES/COUNTS, PROVIDE SUCH CIRCUIT, NEUTRAL AND GROUNDING CONDUCTORS FOR THE PORTION OF THE CIRCUIT WHERE SUCH CONDUCTORS SHARE A COMMON CONDUIT. GROUND WIRE INSULATION: GREEN. ALL WORK COMPLY WITH CEC 300.17.

E. IN ALL CASES AND FOR ALL SYSTEMS AND COMPONENTS, USE ONLY EQUIPMENT IN ACCORDANCE WITH ITS LISTING OR LABELING. [CEC 110.3(B)]

F. USE ONLY EQUIPMENT MARKED (LISTED/LABELED) AS SUITABLE FOR INSTALLATION AND WITH HIGHER TEMPERATURE RATED CONDUCTORS AT THE AMPACITY OF THE HIGHER RATED CONDUCTORS. REFER TO THE UL ELECTRICAL CONSTRUCTION MATERIAL DIRECTORY FOR CIRCUIT BREAKERS, SWITCHES, PANELBOARDS, SWITCHBOARDS, ETC. [CEC 110.14(C)]

G. PROVIDE SUFFICIENT ACCESS AND WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(A).

H. PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(C).

I. PROVIDE OUTLET DEVICE(S) INSTALLED ON A BRANCH CIRCUIT WITH A RATING IN ACCORDANCE WITH CEC 210.21(B) (SEE EXCEPTIONS, AND REFER TO 210.21(B) TABLE(S)).

J. PROVIDE GROUND FAULT PROTECTION OF EQUIPMENT IN ACCORDANCE WITH CEC 230.95 AND 240.13 (SEE EXCEPTIONS).

K. FOR PERMANENTLY CONNECTED APPLIANCES RATED NOT OVER 300 VOLTAMPERES OR 1/8 HORSEPOWER, THE BRANCH-CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS. [CEC 422.31]

STRUCTURAL PENETRATIONS

USE CARE AND CAUTION AT ALL TIMES TO AVOID CUTTING OR DAMAGING REINFORCEMENT STEEL. ALL OPENINGS IN EXISTING CONCRETE WALLS SHALL BE CAREFULLY PRESCANNED USING EFFECTIVE MEANS PRIOR TO INSTALLING THE OPENING. DRILL PILOT HOLES WITH SMALLER DIAMETERS THEN FINAL HOLES (3/8" MAXIMUM PILOT HOLE DIMAETER) TO DETECT REINFORCEMENT WHERE OTHER MEANS ARE NOT EFFECTIVE.

WHERE REINFORCEMENT IS ENCOUNTERED, GC TO COORDINATE LOCATION TO AVOID CUTTING REBAR OR MINIMIZE IMPACT TO EXISTING REBAR. FOR ALL CONDITIONS WHERE REINFORCEMENT IS ENCOUNTERED, CONTACT THE ARCHITECT PRIOR TO INSTALLING THE OPENING.

CONTRACTOR METHODS OF OPERATION

ONGOING OPERATION OF THE FACILITY IS A PROJECT REQUIREMENT. TEMPORARY SHUTDOWNS OF THE ELECTRICAL SYSTEM ARE ACCEPTABLE DURING DAYTIME HOURS. FACILITY IS REQUIRED TO BE OPERATIONAL IN THE EVENING. PROVIDE TEMPORARY POWER AS REQUIRED TO COMPLETE THE SCOPE OF WORK.

BEFORE BEGINNING CONSTRUCTION, PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES. SCHEDULE SHALL IDENTIFY SHUTDOWN TIMES AND ANTICIPATED DURATION.

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER: **201320.31**

CITY SPEC. NUMBER: **23-11575-C**

CLIENT:

CITY OF BERKELEY

1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE: **ISSUE FOR PERMIT**

DATE: **OCTOBER 30, 2023**

STAMP:

REGISTERED PROFESSIONAL ENGINEER — RAJA V. JURAYJ — No. E19586 Exp. 06-30-25 — ELECTRICAL — STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE: **COVER SHEET - ELECTRICAL**

SHEET NUMBER: **E001**

GENERAL SHEET NOTES

A. COORDINATE DEMOLITION WORK WITH ARCHITECT AND BUILDING OWNER PRIOR TO COMMENCEMENT OF WORK.

B. DEMOLISH EXISTING RECEPTACLES, VOICE/DATA OUTLETS, FEEDERS, ETC., AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION AND INDICATED WITH CROSSMARKS ON DRAWINGS. COORDINATE AND SEQUENCE DEMOLITION WORK WITH PROVISIONS OF CONSTRUCTION DOCUMENT DIVISIONS.

C. REMOVE EXISTING MATERIALS CONFLICTING WITH REMODEL WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SUBJECT TO CONDITIONS INDICATED IN SUCH.

D. MAINTAIN IN OPERATION EXISTING SYSTEMS NOT INDICATED FOR REMOVAL IN CONSTRUCTION DOCUMENTS.

E. PROVIDE UPDATED PANEL SCHEDULES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.

F. VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK. PROVIDE ADDITIONAL SPLICE BOXES, ETC., AS REQUIRED FOR COMPLETE AND PROPERLY OPERATING SYSTEM. REUSE IN PLACE EXISTING CONDUIT NOT REMOVED DURING DEMOLITION IF SIZED IN ACCORDANCE WITH LATEST EDITION OF THE C.E.C. (CALIFORNIA ELECTRICAL CODE) AND THOROUGHLY CLEANED AND SWABBED PRIOR TO PULLING NEW WIRES.

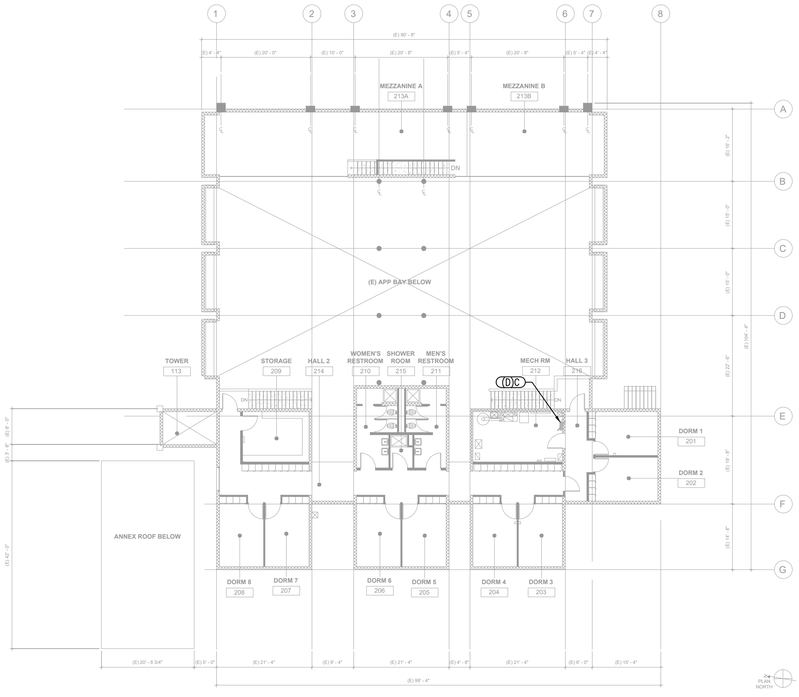
G. OBTAIN COPY OF EXISTING AS-BUILT DRAWINGS PRIOR TO BID.

H. WHERE REMOVAL OF OUTLET(S) INTERRUPT EXISTING CONDUIT AND/OR CIRCUIT, WALL OR PORTION OF THE CIRCUIT AND RESULTS IN LOSS OF CIRCUIT CONTINUITY, REROUTE, EXTEND AND RECONNECT REMAINING CONDUIT AND/OR CIRCUIT AS REQUIRED TO PROVIDE CONTINUITY OF THE CIRCUIT THAT REMAINS IN SERVICE TO OUTLETS AND EQUIPMENT.

I. WHERE DRAWINGS INDICATE EXISTING ELECTRICAL EQUIPMENT OR DEVICES TO BE RELOCATED AND/OR REUSED, REFURBISH THEM. THOROUGHLY CLEAN SUCH ITEMS. NOTIFY ARCHITECT OF ANY DEFECTS IN SUCH INSTALLATIONS. REPAIR ANY DAMAGE CAUSED BY DEMOLITION OR CONSTRUCTION PERFORMED UNDER THIS CONTRACT.

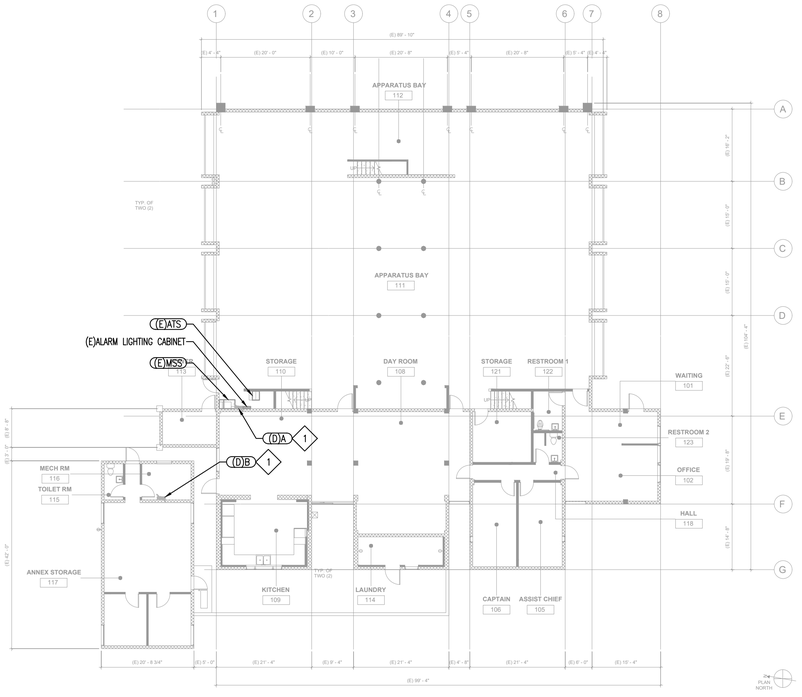
SHEET NOTES

1. DISCONNECT AND REMOVE PANEL. COIL EXISTING BRANCH CIRCUIT CONDUCTORS IN GUTTER ABOVE. PANEL TO BE REPLACED, REFER TO NEW WORK AND SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.



02 SECOND FLOOR PLAN – DEMOLITION

SCALE: 1/16" = 1'-0"



01 GROUND FLOOR PLAN – DEMOLITION

SCALE: 1/16" = 1'-0"

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PROJECT:

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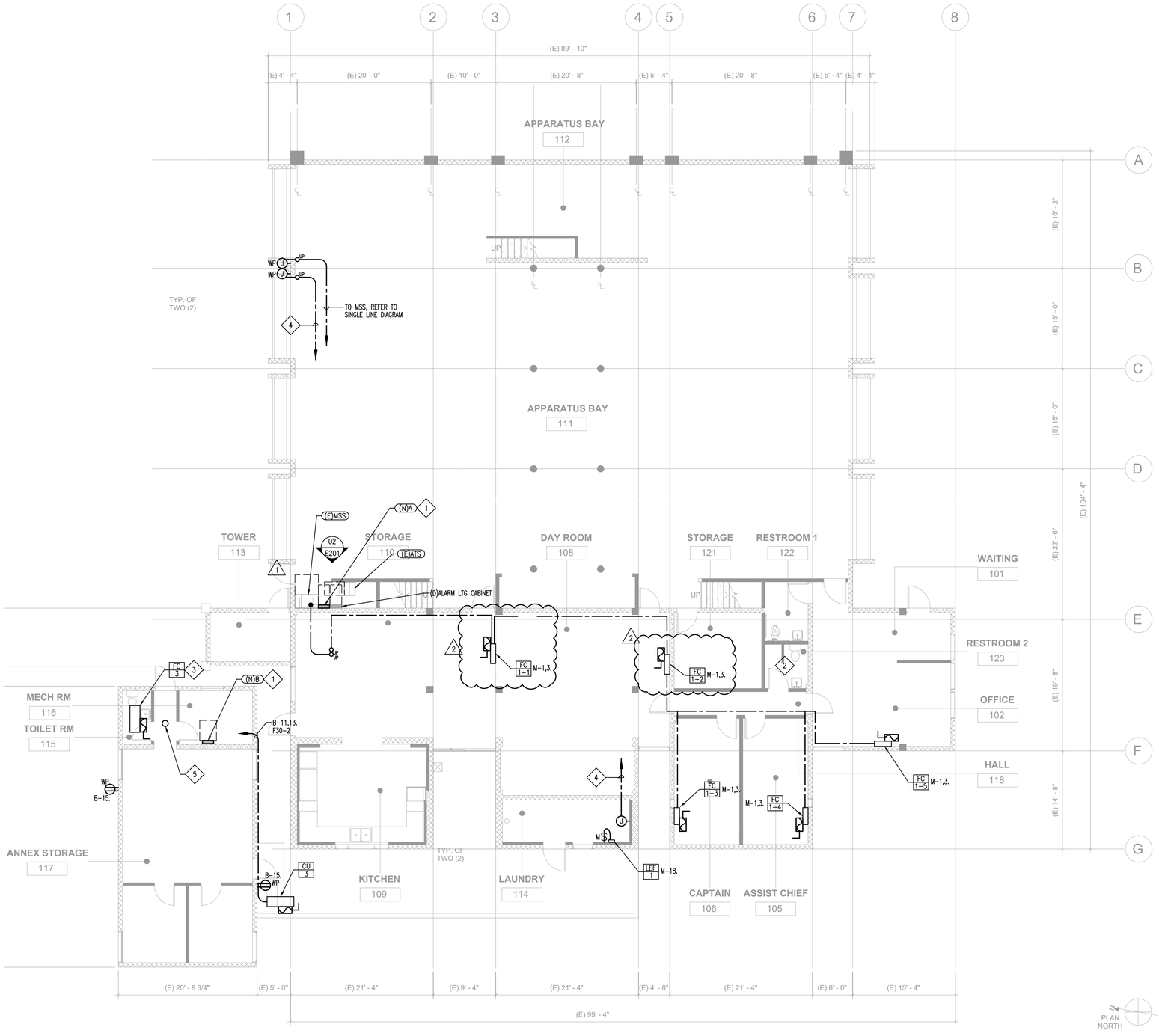
STAMP:

REGISTERED PROFESSIONAL ENGINEER
RAJA A. JUNNARKAR
No. E19585
Exp. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE:
DEMOLITION PLANS - ELECTRICAL

SHEET NUMBER:
E101



01 GROUND FLOOR PLAN – ELECTRICAL

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

A. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.

B. IN FINISHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REFER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.

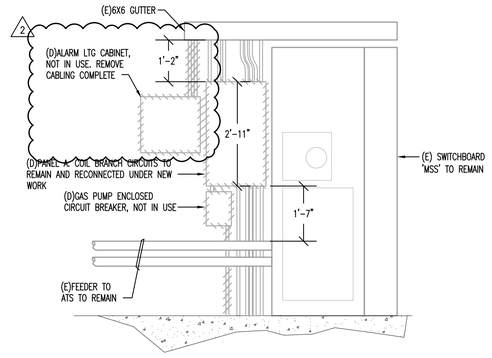
C. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.

D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.

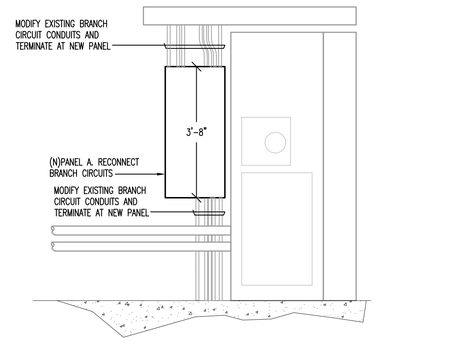
E. CONDUIT AND WIRING ARE SHOWN ON THESE PLANS DIAGRAMATICALLY. EXACT ROUGH-IN LOCATIONS AND ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT SITE CONDITIONS AND IN COORDINATION WITH ARCHITECT.

SHEET NOTES

1. RECONNECT EXISTING BRANCH CIRCUITS COMPLETE TO PLACE BACK INTO SERVICE.
2. PROVIDE MOTOR RATED TOGGLE SWITCH FOR ON/OFF CONTROL OF EXISTING TOILET EXHAUST FAN. DISCONNECT AND REMOVE EXISTING SWITCH AT 2ND FLOOR.
3. POWERED VIA CU-3, PROVIDE 3/4"C.
4. ROUTE 1"C AND PULL STRING TO EXISTING SWITCHBOARD. CAP FOR FUTURE USE.
5. REPLACE LIGHTING FIXTURE WITH NEW, RECONNECT TO EXISTING CIRCUIT AND CONTROL; MAXLITE FLEMING ML2-LA-12-S-WH-18-9CS2-MS OR APPROVED



DEMOLITION



NEW

02 EQUIPMENT ELEVATION

SCALE: 1/2" = 1'-0"

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201320.31

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23-11575-C

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PROJECT TEAM:

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2	08/27/2024	REVISION 1

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OCTOBER 30, 2023

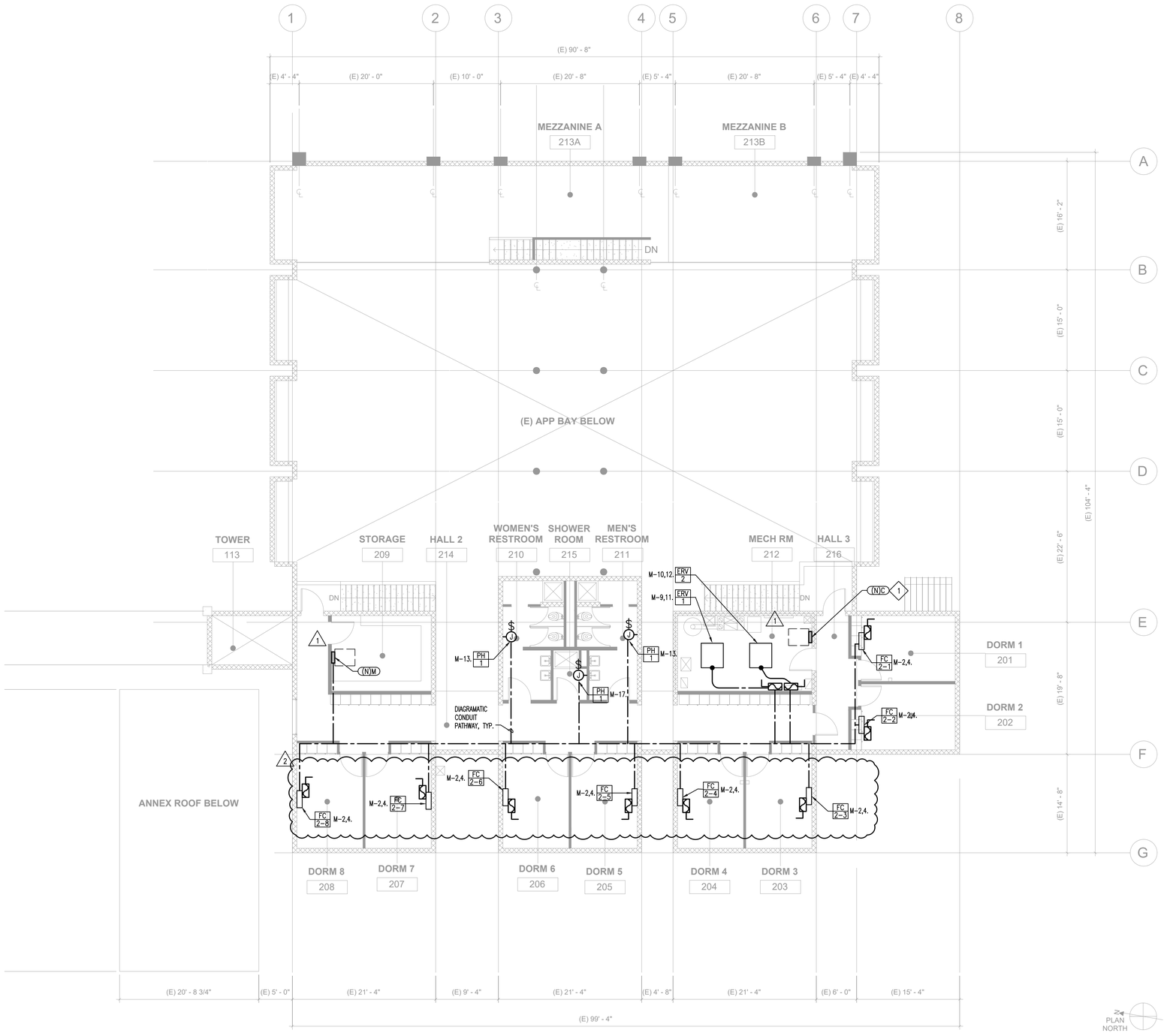
STAMP:



Date Signed: 9/6/24

SHEET TITLE:
GROUND FLOOR PLAN - ELECTRICAL

SHEET NUMBER:
E201



01 SECOND FLOOR PLAN – ELECTRICAL

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

A. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.

B. IN FINISHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REFER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.

C. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.

D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.

E. CONDUIT AND WIRING ARE SHOWN ON THESE PLANS DIAGRAMATICALLY. EXACT ROUGH-IN LOCATIONS AND ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT SITE CONDITIONS AND IN COORDINATION WITH ARCHITECT.

SHEET NOTES

1. RECONNECT EXISTING BRANCH CIRCUITS COMPLETE TO PLACE BACK INTO SERVICE.

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PROJECT:

FIRE STATION NO.2 REMODEL

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BERKELEY, CA 94704

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1947 CENTER ST. 4TH FLOOR
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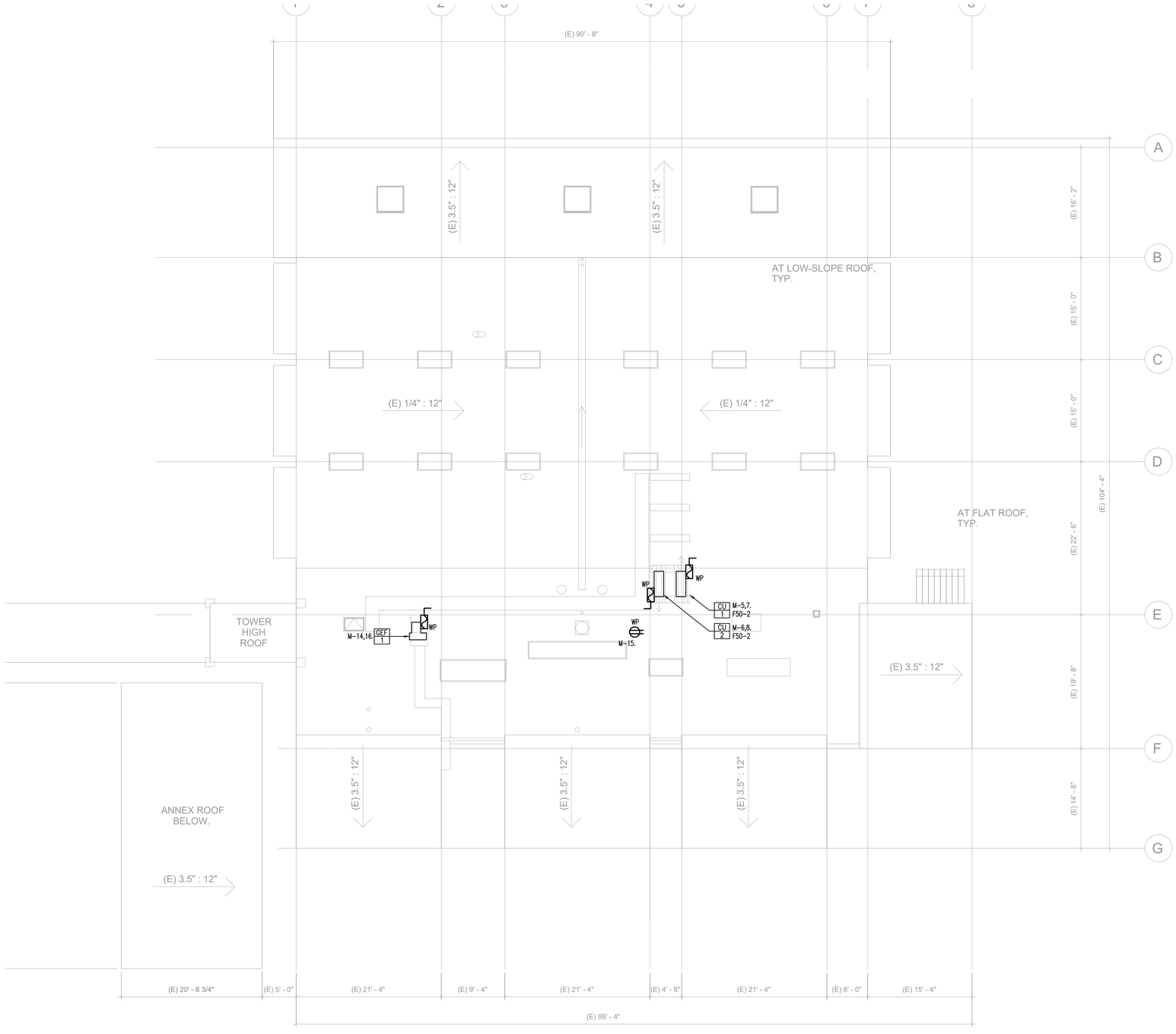
STAMP:

REGISTERED PROFESSIONAL ENGINEER
RAJA A. JUNNARKAR
No. E-19586
Exp. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE:
SECOND FLOOR PLAN - ELECTRICAL

SHEET NUMBER:
E202



01 ROOF PLAN – ELECTRICAL

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

A. WHERE PANELBOARDS ARE LOCATED ON FLOOR BELOW TO FEED ITEMS ON ROOF, PENETRATE ROOF FROM SPACE BELOW TO LOCATION OF DEVICE OR MOTOR. SMALL SECTIONS OF HORIZONTAL CONDUIT NOT EXCEEDING 10'-0" ARE PERMITTED WHERE:
- A.A. INSTALLED LOCAL TO EQUIPMENT SERVED
- A.B. WITHIN PROXIMITY OF EQUIPMENT SERVED.

B. USE LIQUID FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION TO EQUIPMENT. MAXIMUM LENGTH OF LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE 6'-0". SUPPORT PER NEC ARTICLE 350.

C. MOUNT DISCONNECT SWITCHES, COMBINATION STARTERS, RECEPTACLES, AND OTHER DEVICES FREE AND INDEPENDENT AND FREE OF MECHANICAL EQUIPMENT HOUSINGS. THE DISCONNECT MAY BE MOUNTED TO THE MECHANICAL EQUIPMENT SERVED FROM THE DISCONNECT WHERE ALL THE FOLLOWING CONDITIONS APPLY:
- C.A. WHERE ACCEPTABLE TO THE MECHANICAL CONTRACTOR
- C.B. WHERE APPROVED BY AHJ
- C.C. WHERE THE LOCATION PROVIDES FREE AND CLEAR FRONT ACCESS TO DEVICES AND SWITCHES FOR SERVICE AND USE.
- C.D. WHERE THE LOCATION DOES NOT INHIBIT ACCESS TO MECHANICAL EQUIPMENT FOR SERVICE, INSPECTION, AND OPERATION.
- C.E. WHERE AIR FLOW PATHS ARE NOT OBSTRUCTED.

D. COORDINATE ROOF PENETRATION AND FLASHING WITH ARCHITECT.

E. CONSTRUCTION OF ROOF SUPPORTS (SLEEPERS) FOR RUNS OF HORIZONTAL CONDUIT TO BE INSTALLED AND ATTACHED TO ROOF STRUCTURE BY LICENSED ROOFING CONTRACTOR.

F. SECURE CONDUITS TO SUPPORTS AT CODE REQUIRED INTERVALS.

G. SEE ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR ROOF PENETRATION MATERIALS AND ADDITIONAL ROOF PENETRATION INFORMATION.

H. VERIFY EXACT LOCATION, LAYOUT AND ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.

I. COORDINATE WITH APPROVED EQUIPMENT SUBMITTALS AND MECHANICAL CONTRACTOR FOR EXACT POWER POINT OF CONNECTION(S) TO ALL UNITS AND LOCATE DISCONNECT WHERE CODE REQUIRED CLEARANCES WILL BE MAINTAINED. LOCATION OF DISCONNECT ARE DIAGRAMMATIC, CONTRACTOR SHALL PROVIDE FLOOR PEDESTALS OR STRUT AT THE ENCLOSURE FOR MOUNTING OF THE DISCONNECT.

J. FIRE ALARM DEVICES, DAMPERS, SMOKE DETECTORS AND CONTROLS POWER SHALL BE COORDINATED WITH HVAC AND FIRE ALARM SYSTEM INSTALLER.

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REGISTERED PROFESSIONAL ENGINEER
RAJA V. JURDAON
No. E19586
Exp. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE:
ROOF PLAN - ELECTRICAL

SHEET NUMBER:
E203

FEEDER SCHEDULE (COPPER)			
2 WIRE + GND			
FEEDER TAG	**WIRE AND CONDUIT**	**MAXIMUM CIRCUIT BREAKER**	**ACTUAL FEEDER CAPACITY**
F20-2	2 #12, 1#12 GND IN 3/4"C	20	20
F30-2	2 #10, 1#10 GND IN 3/4"C	30	30
F40-2	2 #8, 1#10 GND IN 3/4"C	40	40
F50-2	2 #6, 1#8 GND IN 3/4"C	60	55
F70-2	2 #4, 1#8 GND IN 1"C	70	70
F90-2	2 #2, 1#8 GND IN 1"C	90	95
F125-2	2 #1, 1#6 GND IN 1-1/4"C	125	130
3 WIRE + GND			
FEEDER TAG	**WIRE AND CONDUIT**		
F20-3	3 #12, 1#12 GND IN 3/4"C	20	20
F30-3	3 #10, 1#10 GND IN 3/4"C	30	30
F40-3	3 #8, 1#10 GND IN 1"C	40	40
F50-3	3 #6, 1#8 GND IN 1"C	60	55
F70-3	3 #4, 1#8 GND IN 1-1/4"C	70	70
F90-3	3 #2, 1#8 GND IN 1-1/4"C	90	95
F125-3	3 #1, 1#6 GND IN 1-1/2"C	125	130
F150-3	3 #1/0, 1#6 GND IN 1-1/2"C	150	150
F175-3	3 #2/0, 1#6 GND IN 2"C	175	175
F200-3	3 #3/0, 1#6 GND IN 2"C	200	200
F225-3	3 #4/0, 1#4 GND IN 2"C	225/250	230
F250-3	3 #250, 1#4 GND IN 2-1/2"C	250/300	255
F300-3	3 #350, 1#4 GND IN 3"C	300/350	310
F350-3	3 #500, 1#2 GND IN 4"C	350/400	380
F400-3	2 SETS (3 #3/0, 1#2 GND IN 2"C)	400	400

FEEDER SCHEDULE NOTES:

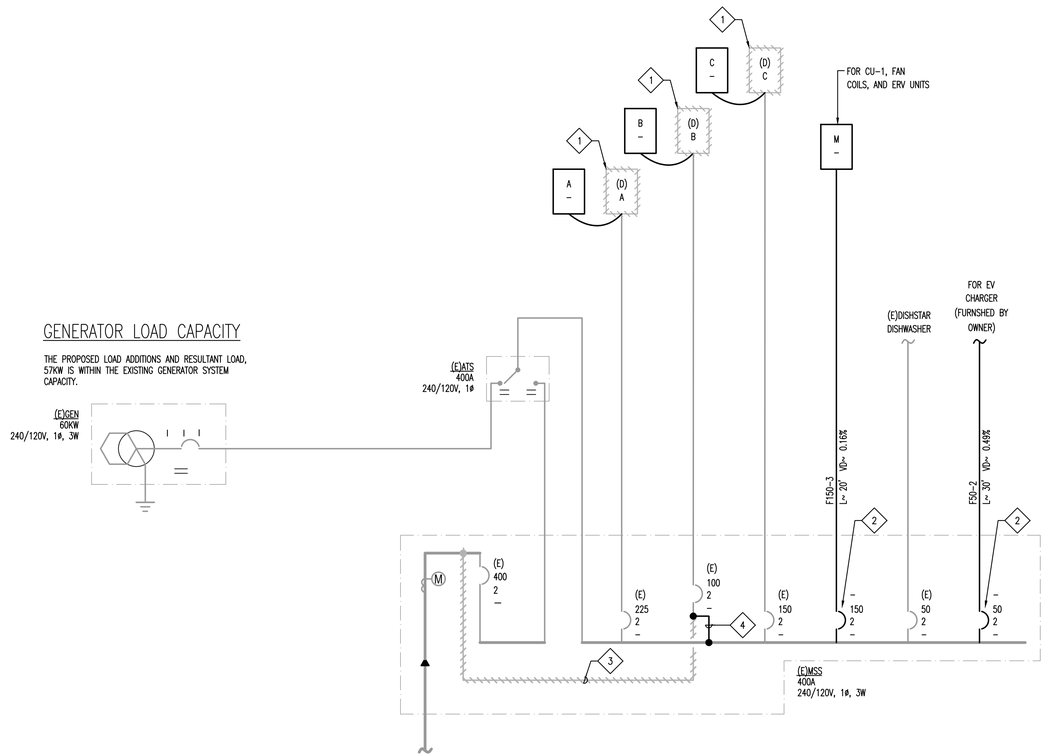
A. CONDUIT SIZES ARE MINIMUM.
B. USE MINIMUM 1"C FOR UNDERGROUND WORK
C. ABOVE 86 DEG. F AMBIENT, INCREASE WIRE SIZE PER NATIONAL ELECTRICAL CODE
D. DERATE WIRE SIZE PER NEC FOR MORE THAN THREE CURRENT CARRYING WIRES IN CONDUIT

SUMMARY OF VOLT DROP LIMITS			
CIRCUIT VOLTS (V)	**2% VOLTAGE DROP (V)**	**3% VOLTAGE DROP (V)**	**TOTAL LOSS (V)**
120	2.4	3.6	6.0
208	4.2	6.2	10.4

SUMMARY OF MAXIMUM FEEDER AND BRANCH CIRCUIT LENGTHS					
WIRE (AWG)	**CIRCUIT AMPS (A)**	**MAXIMUM FEEDER LENGTH (ft)**		**MAXIMUM BRANCH CIRCUIT LENGTH (ft)**	
		120V	**208V**	**120V**	**208V**
14	12	39	67	58	101
12	16	46	80	69	120
10	24	48	83	72	125
8	32	57	99	86	149
6	40	73	127	110	190
4	52	89	154	134	232
2	72	103	178	154	267
1/0	96	123	212	184	319
2/0	108	137	238	206	357
4/0	144	163	283	245	425
250	164	170	294	255	441
300	184	181	314	272	471
350	200	195	338	292	506
500	248	224	388	336	582

GENERATOR LOAD CAPACITY

THE PROPOSED LOAD ADDITIONS AND RESULTANT LOAD, 57KW IS WITHIN THE EXISTING GENERATOR SYSTEM CAPACITY.



01 SINGLE LINE DIAGRAM

SCALE: NTS

GENERAL SHEET NOTES

A. DERATE WIRE SIZE PER NEC FOR NUMBER OF CURRENT CARRYING WIRES AND FOR AMBIENT TEMPERATURE OF 86F

B. FEEDERS SHOWN ARE COPPER CONDUCTORS WITH THHN/THWN INSULATION TYPE UNLESS NOTED OTHERWISE.

C. FEEDER LENGTH AND VOLTAGE DROP CALCULATIONS ARE FOR ESTIMATING VOLTAGE DROP AND SHORT CIRCUIT COORDINATION PURPOSES ONLY. CONTRACTOR SHALL USE ACTUAL FEEDER LENGTHS TO CALCULATE ACTUAL VOLTAGE DROP AND SHORT CIRCUIT VALUES.

D. THE CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT ARC FLASH WARNING LABELS FOR ALL NEW POWER DISTRIBUTION EQUIPMENT (CEC 110.16). LABEL SHALL BE FACTORY APPLIED AND MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS.

SHEET NOTES

1. DISCONNECT AND REMOVE EXISTING PANELBOARD. REPLACE WITH NEW, COMPLETE WITH NEW CIRCUIT BREAKERS, REFER TO SCHEDULES. PROVIDE NEW TYPE WRITTEN PANEL DIRECTORY.
2. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING SWITCHBOARD MANUFACTURER AND AIC RATING.
3. DISCONNECT AND REMOVE EXISTING TAP CONDUCTORS THAT POWERS PANEL B UPSTREAM OF THE MAIN CIRCUIT BREAKER.
4. RE-CONNECT EXISTING PANEL B TO THE LOAD SIDE OF THE MAIN CIRCUIT BREAKER.

LOAD VERIFICATION		
EXISTING PEAK LOAD:		21 KW
DATE RECORDED:		BILLING CYCLE 11/19/21 TO 1/19/22
SOURCE:		PG&E UTILITY DATA
EXISTING SERVICE SIZE:		400 A 120/240V 1 PHASE
SERVICE CAPACITY:		96 KW
EXISTING PEAK LOAD X 125%:		26.25 KW
ADDED LOAD:		
	HVAC	20 KW
	HVAC @ ANNEX	2 KW
	EV CHARGER	9.6 KW
TOTAL		58 KW 240 Amps

els architecture+ urban design
2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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Oakland, CA 94612
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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:



Date Signed: 9/6/24

SHEET TITLE:
SINGLE LINE DIAGRAM

SHEET NUMBER:
E301

PANEL A

VOLTAGE: 240/120 V
PHASE/WIRE: 1 PH 3W
MAIN AMPS: MLO
BUS AMPS: 225 A
AIC RATING MATCH (E)
MOUNTING: SURFACE

PHASE A: 0 VA 0 A
PHASE B: 0 VA 0 A
CONNECTED: 0 VA 0 A
DEMAND: 0 VA 0 A

NOTES	LOAD DESCRIPTION	φ	VA	BKR	CKT	CKT	BKR	VA	φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A		20/1	1	2	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	3	4	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	5	6	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	7	8	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	9	10	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	11	12	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	13	14	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	15	16	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/2	17	18	20/1		A	(EXISTING LOAD)	1
-		B		-	19	20	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	21	22	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	23	24	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	25	26	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	27	28	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	29	30	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	31	32	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	33	34	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	35	36	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	37	38	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	39	40	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	41	42	30/2		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	43	44	-		B	-	-
	SPARE	A		20/1	45	46	20/1		A	SPARE	
	SPARE	B		20/1	47	48	20/1		B	SPARE	
	SPARE	A		20/1	49	50	20/1		A	SPARE	
	SPARE	B		20/1	51	52	20/1		B	SPARE	
	SPARE	A		20/1	53	54	20/1		A	SPARE	
	SPARE	B		20/1	55	56	20/1		B	SPARE	
	SPARE	A		20/1	57	58	20/1		A	SPARE	
	SPARE	B		20/1	59	60	20/1		B	SPARE	
	SPACE	A			61	62			A	SPACE	
	SPACE	B			63	64			B	SPACE	
	SPACE	A			65	66			A	SPACE	
	SPACE	B			67	68			B	SPACE	
	SPACE	A			69	70			A	SPACE	
	SPACE	B			71	72			B	SPACE	

GENERAL NOTES

a. NO LOAD IS ADDED TO THIS PANEL UNDER THIS SCOPE OF WORK
b. BASIS OF DESIGN: SQUARE D NQ, 72 SPACE PANELBOARD
c.

SCHEDULE NOTES

1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE NEW TYPE-WRITTEN PANEL DIRECTORY.
2.

LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)
G	GENERAL	0.00	0.00	0.00	100%	0.00
L	LIGHTING	0.00	0.00	0.00	125%	0.00
R	RECEPTACLES	0.00	0.00	0.00	100%/50%	0.00
K	KITCHEN	0.00	0.00	0.00	100%	0.00
H	HEATING	0.00	0.00	0.00	100%	0.00
M	MOTORS	0.00	0.00	0.00	100%	0.00
LM	LARGEST MOTOR	0.00	0.00	0.00	125%	0.00
WH	WATER HEATER	0.00	0.00	0.00	125%	0.00
C	CONTINUOUS	0.00	0.00	0.00	125%	0.00

PANEL C

VOLTAGE: 240/120 V
PHASE/WIRE: 1 PH 3W
MAIN AMPS: MLO
BUS AMPS: 225 A
AIC RATING MATCH (E)
MOUNTING: SURFACE

PHASE A: 0 VA 0 A
PHASE B: 0 VA 0 A
CONNECTED: 0 VA 0 A
DEMAND: 0 VA 0 A

NOTES	LOAD DESCRIPTION	φ	VA	BKR	CKT	CKT	BKR	VA	φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A		20/1	1	2	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	3	4	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	5	6	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	7	8	30/2		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	9	10	-		A	-	-
1	(EXISTING LOAD)	B		20/1	11	12	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	13	14	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	15	16	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		XX/2	17	18	30/1		A	(EXISTING LOAD)	1
-	-	B		-	19	20	30/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		XX/2	21	22	30/1		A	(EXISTING LOAD)	1
-	-	B		-	23	24	30/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	25	26	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	27	28	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	29	30	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	31	32	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	33	34	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		30/2	35	36	20/1		B	(EXISTING LOAD)	1
-	-	A		-	37	38			A	SPACE	
1	(EXISTING LOAD)	B		30/2	39	40	50/2		B	(EXISTING LOAD)	1
-	-	A		-	41	42	-		A	-	-
	SPARE	B		20/1	43	44	20/1		B	SPARE	
	SPARE	A		20/1	45	46	20/1		A	SPARE	
	SPARE	B		20/1	47	48	20/1		B	SPARE	
	SPARE	A		20/1	49	50	20/1		A	SPARE	
	SPARE	B		20/1	51	52	20/1		B	SPARE	
	SPARE	A		20/1	53	54	20/1		A	SPARE	
	SPARE	B		20/1	55	56	20/1		B	SPARE	
	SPACE	A			57	58			A	SPACE	
	SPACE	B			59	60			B	SPACE	
	SPACE	A			61	62			A	SPACE	
	SPACE	B			63	64			B	SPACE	
	SPACE	A			65	66			A	SPACE	
	SPACE	B			67	68			B	SPACE	
	SPACE	A			69	70			A	SPACE	
	SPACE	B			71	72			B	SPACE	

GENERAL NOTES

a. NO LOAD IS ADDED TO THIS PANEL UNDER THIS SCOPE OF WORK
b. BASIS OF DESIGN: SQUARE D NQ, 72 SPACE PANELBOARD
c.

SCHEDULE NOTES

1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE NEW TYPE-WRITTEN PANEL DIRECTORY.
2.

LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)
G	GENERAL	0.00	0.00	0.00	100%	0.00
L	LIGHTING	0.00	0.00	0.00	125%	0.00
R	RECEPTACLES	0.00	0.00	0.00	100%/50%	0.00
K	KITCHEN	0.00	0.00	0.00	100%	0.00
H	HEATING	0.00	0.00	0.00	100%	0.00
M	MOTORS	0.00	0.00	0.00	100%	0.00
LM	LARGEST MOTOR	0.00	0.00	0.00	125%	0.00
WH	WATER HEATER	0.00	0.00	0.00	125%	0.00
C	CONTINUOUS	0.00	0.00	0.00	125%	0.00

PANEL B

VOLTAGE: 240/120 V
PHASE/WIRE: 1 PH 3W
MAIN AMPS: MLO
BUS AMPS: 100 A
AIC RATING MATCH (E)
MOUNTING: SURFACE

PHASE A: 915 VA 7.6 A
PHASE B: 1275 VA 10.6 A
CONNECTED: 2190 VA 9.1 A
DEMAND: 2190 VA 9.1 A

NOTES	LOAD DESCRIPTION	φ	VA	BKR	CKT	CKT	BKR	VA	φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A		20/1	1	2	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	3	4	20/1		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	5	6	20/1		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B		20/1	7	8	30/2		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A		20/1	9	10	-		A	-	-
	CU-3	B	915 M	30/2	11	12			B	SPACE	
	-	A	915 M	-	13	14			A	SPACE	
	RECEPTACLE - EXTERIOR	B	360 R		15	16			B	SPACE	
	SPACE	A			17	18			A	SPACE	
	SPACE	B			19	20			B	SPACE	
	SPACE	A			21	22			A	SPACE	
	SPACE	B			23	24			B	SPACE	
	SPACE	A			25	26	20/2		A	(EXISTING LOAD)	1
	SPACE	B			27	28	-		B		-
	SPACE	A			29	30			A	SPACE	

GENERAL NOTES

a.
b.
c.

SCHEDULE NOTES

1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE NEW TYPE-WRITTEN PANEL DIRECTORY.
2.

LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)
G	GENERAL	0.00	0.00	0.00	100%	0.00
L	LIGHTING	0.00	0.00	0.00	125%	0.00
R	RECEPTACLES	0.36	0.00	0.36	100%/50%	0.36
K	KITCHEN	0.00	0.00	0.00	100%	0.00
H	HEATING	0.00	0.00	0.00	100%	0.00
M	MOTORS	1.83	0.00	1.83	100%	1.83
LM	LARGEST MOTOR	0.00	0.00	0.00	125%	0.00
WH	WATER HEATER	0.00	0.00	0.00	125%	0.00
C	CONTINUOUS	0.00	0.00	0.00	125%	0.00

PANEL M

VOLTAGE: 240/120 V
PHASE/WIRE: 1 PH 3W
MAIN AMPS: MLO
BUS AMPS: 225 A
AIC RATING 22000 A
MOUNTING: SURFACE

PHASE A: 10384 VA 86.5 A
PHASE B: 9344 VA 77.9 A
CONNECTED: 19728 VA 82.2 A
DEMAND: 19728 VA 82.2 A

NOTES	LOAD DESCRIPTION	φ	VA	BKR	CKT	CKT	BKR	VA	φ	LOAD DESCRIPTION	NOTES
	FAN COILS 1ST FLOOR	A	105 M	20/2	1	2	20/2	207 M	A	FAN COILS 2ND FLOOR	
	-	B	105 M	-	3	4	-	207 M	B	-	
	CU-1	A	3456 M	45/2	5	6	45/2	3456 M	A	CU-2	
	-	B	3456 M	-	7	8	-	3456 M	B	-	
	ERV-1	A	490 M	15/2	9	10	15/2	490 M	A	ERV-2	
	-	B	490 M	-	11	12	-	490 M	B	-	
	PH-1	A	800 H	20/1	13	14	20/2	960 M	A	GEF-1	
	ROOF RECEPT	B	180 R	20/1	15	16	-	960 M	B	-	
	PH-1	A	400 H	20/1	17	18	20/1	20 M	A	LEF-1	
	SPARE	B		20/1	19	20	20/1		B	SPARE	
	SPACE	A			21	22			A	SPACE	
	SPACE	B			23	24			B	SPACE	
	SPACE	A			25	26			A	SPACE	
	SPACE	B			27	28			B	SPACE	
	SPACE	A			29	30			A	SPACE	
	SPACE	B			31	32			B	SPACE	
	SPACE	A			33	34			A	SPACE	
	SPACE	B			35	36			B	SPACE	
	SPACE	A			37	38			A	SPACE	
	SPACE	B			39	40			B	SPACE	
	SPACE	A			41	42			A	SPACE	

GENERAL NOTES

a.
b.
c.

SCHEDULE NOTES

1.
2.
3.

LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)
G	GENERAL	0.00	0.00	0.00	100%	0.00
L	LIGHTING	0.00	0.00	0.00	125%	0.00
R	RECEPTACLES	0.18	0.00	0.18	100%/50%	0.18
K	KITCHEN	0.00	0.00	0.00	100%	0.00
H	HEATING	1.20	0.00	1.20	100%	1.20
M	MOTORS	18.35	0.00	18.35	100%	18.35
LM	LARGEST MOTOR	0.00	0.00	0.00	125%	0.00
WH	WATER HEATER	0.00	0.00	0.00	125%	0.00
C	CONTINUOUS	0.00	0.00	0.00	125%	0.00

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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER
RAJA A. JUNNARKAR
No. E19589
Exp. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE:
SCHEDULES

SHEET NUMBER:
E401

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii	
Project Name: FIRE STATION NO.2 REMODEL	**Report Page:** (Page 1 of 4)
Project Address: 2029 Berkeley Way	**Date Prepared:** 2023-10-20T14:16:17-04:00

A. GENERAL INFORMATION

01	Project Location (city)	BERKELEY	02	Climate Zone	3
			03	Occupancy Types Within Project:	Commercial Industrial

B. PROJECT SCOPE

This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/ Description	Scope of Work[1]	Rating[2] (kVA)	Utility Provided Metering System Exception to 130.5(a)/ 160.6(a)[3]	System subject to CA Elec Code Article 517 Exception to 130.5(a)and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
Existing 400A 240/120 1ph service at app bay	Add/Alt to feeders and branch circuits only	---	☐	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/ 160.3, 130.1/ 160.5, and 130.3/ 160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	☐

[1] FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
[2] If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
[3] Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: FIRE STATION NO.2 REMODEL	**Report Page:** (Page 2 of 4)
	Date Prepared: 2023-10-20T14:16:17-04:00

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01		02		03		04	05	06
Service Electrical Metering 130.5(a)/ 160.6(a) (See Table F)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
	AND		AND	Yes	AND			COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

H. VOLTAGE DROP

This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/ 160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)2Piii/ 180.2(b)4Bviic.

01	02				03	04	05	
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method				Location of Voltage Drop Calculations[1]	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector	
							Pass	Fail
Existing 400A 240/120 1ph service at app bay	☒	Voltage drop less than 5%	☐	Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E301	☐	☐

** NOTES: If "Permitted by CA Elec Code '*'" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 | Documentation Software: Energy Code Ace Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: FIRE STATION NO.2 REMODEL	**Report Page:** (Page 3 of 4)
	Date Prepared: 2023-10-20T14:16:17-04:00

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ELC-E - Must be submitted for all buildings

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 | Documentation Software: Energy Code Ace Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: FIRE STATION NO.2 REMODEL	**Report Page:** (Page 4 of 4)
Project Address:	**Date Prepared:** 2023-10-20T14:16:17-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Ray Juachon	Documentation Author Signature:
Company: RIJA	Signature Date: 10/20/23
Address: 5515 Doyle Street, #7	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Emeryville, CA 94608	Phone: 415-730-7994

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provided to the building owner at occupancy.

Responsible Designer Name: Ray Juachon	Responsible Designer Signature:
Company: RIJA	Date Signed: 10/20/23
Address: 5515 Doyle Street, #7	License: E19586
City/State/Zip: Emeryville, CA 94608	Phone: 415-730-7994

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 | Documentation Software: Energy Code Ace Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20

els architecture+ urban design
2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
3260 Blume Drive, Suite 240
Richmond, CA 94806
P: 510.243.5987

ELECTRICAL ENGINEER:
RIJA INC.
5515 Doyle Street, #7
Emeryville, CA 94608
P: 415.730.7994

STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER
RAY A. JUACHON
No. E19586
Exp. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

Date Signed: 9/6/24

SHEET TITLE:
TITLE 24

SHEET NUMBER:
E501

11

Office of the City Manager

CONSENT CALENDAR
February, 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Terrance Davis, Director, Public Works

Subject: Contract No. 32500082 Amendment: Telegraph Property and Business Management Corporation

RECOMMENDATION

Adopt a Resolution amending the Contract No. 32500082 contract with the Telegraph Property and Business Management Corporation, commonly known as the Telegraph Business Improvement District, for the janitorial maintenance of the new 24 hour, 7 days a week (24/7), public restroom with a new not to exceed amount of $150,000 and extend the contract through June 30, 2026.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the General Fund in the amount of $105,000 in FY2025 and future funding in FY2026 as part of the adopted budget. It is anticipated that the amount of $45,000 will be included as part of Annual Appropriations Ordinance #2.

CURRENT SITUATION AND ITS EFFECTS

Public Works has contracted with the Telegraph Property and Business Management Corporation (commonly known as the Telegraph Business Improvement District (TBID)) for the janitorial services for the public restroom on Channing Way near the intersection with Telegraph Avenue.

In 2018, the City initiated a Citywide Restroom Study[1], which was completed in 2020. The study's recommendations included the design and construction of three new public restrooms. The Telegraph-Channing location is the first of these restrooms to be constructed, with the other two, Alcatraz-Adeline & San Pablo-University, starting construction in Spring 2025.

As part of the FY 2024 Two-Year Budget process, $210,000 ($105,000 for FY25 and $105,000 for FY26) of funds from the General Fund was approved for the maintenance of the public restroom.

[1] https://berkeleyca.gov/your-government/our-work/capital-projects/citywide-restroom-assessment-project

Amending the contract with the servicing of the public restroom is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

TBID was selected through a sole source agreement in January of 2023 in advance of the completion of the restroom which was anticipated in April 2023. The original contract has an initial start date of July 1, 2024, but construction delays prevented the implementation of this contract until January 2025 as the contractor prepared for the opening of the restroom to the public.

TBID is currently best suited to oversee this work as they have Ambassadors that will assist in monitoring the status of the restrooms. The cleaning will be handled by their subcontractor which is currently maintaining the restroom inside the Telegraph Channing Garage. The cleaning subcontractor will be responsible for cleaning and inspecting the restroom 3 times a day 24/7 and will have easy access to their supplies within the Telegraph Channing Garage. There are no City staff able to complete this work. Additionally, coordinating with TBID was a recommendation of the Citywide Restroom Study as TBID has Ambassadors that are readily able to report issues to the City.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Providing ongoing janitorial service for a 24/7 public restroom will keep the restroom open and usable by the community. Public restrooms may help reduce open defecation which impacts stormwater and public health. There are no identifiable climate impacts.

RATIONALE FOR RECOMMENDATION

Amending the existing contract is the most efficient and effective use of City resources.

ALTERNATIVE ACTIONS CONSIDERED

There are two additional 24/7 restrooms that are currently in the design phase, with construction anticipated in late 2025. When construction begins, PW will review the janitorial services required and evaluate whether or not continuation of this contract makes operational and financial sense, or if there is an alternate vendor available through a competitive process.

CONTACT PERSON

Joy Brown, Operations Manager, Public Works, 510-981-6629
Aaron Baker, Superintendent, Public Works, 510-981-6452
Peni Basalusalu, Deputy Director, Public Works, 510-981-6485

Attachment:
1: Resolution

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

CONTRACT NO. 32500082 AMENDMENT: TELEGRAPH PROPERTY AND BUSINESS MANAGEMENT CORPORATION

WHEREAS, Public Works has contracted with the Telegraph Property and Business Management Corporation (commonly known as the Telegraph Business Improvement District (TBID)) for the janitorial services for the public restroom on Channing Way near the intersection with Telegraph Avenue; and

WHEREAS, funding is available in the General Fund for maintenance and janitorial services in the baseline FY2025 budget and additional funding will be appropriated from General Fund in FY2026; and

WHEREAS, the TBID is well positioned to manage the janitorial services and provide additional support of notification of issues through their Ambassador Program; and

WHEREAS, the City requires the services of TBID to provide janitorial maintenance of the public restroom on Channing Way at Telegraph Avenue.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that Amending the contract with the Telegraph Property and Business Management Corporation, commonly known as the Telegraph Business Improvement District, for the janitorial maintenance of the new 24/7 public restroom with a new not to exceed amount of $150,000 and extend the contract through June 30, 2026.

12

Office of the City Manager

CONSENT CALENDAR
February 25, 2024

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Terrance Davis, Director, Public Works

Subject: Contract No. 32500098 Amendment: Pacific Site Management: Landscaping Services for Public Works Department

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or his designee to execute an amendment to Contract No. 32500098 with Pacific Site Management to increase the spending authority by $150,000 for a new total not to exceed $300,000 and extend the contract through June 30, 2027.

FISCAL IMPACTS OF RECOMMENDATION

Funding for the contract amendment is primarily available in the FY 2025 budget in the Clean Storm and Zero Waste funds. Additional funding will be available for projects as they arise in other funds, including the Building Maintenance Fund, General Fund, Streetlight Assessment District Fund, Off Street Parking Fund, Measure BB Local Streets & Roads Fund, and Sanitary Sewer Fund.

CURRENT SITUATION AND ITS EFFECTS

The current contract, Contract No. 32500098, approved by Council through Resolution No. 70,804-N.S. on September 30, 2024, is managed by the Public Works Department (PW) to address onsite needs at City facilities. PW is amending the existing contract to add funds to cover ongoing services and future projects, such as the additional need to retrofit and provide maintenance to several green infrastructure locations.

The City relies in part on green infrastructure (GI) systems—comprised of stormwater management practices (SMPs) such as bioretention, bioswales, and permeable pavement—to reduce stormwater volume and pollutants delivered to local waterways. Because GI systems incorporate vegetation, they can change as plant communities grow and establish. An effective and rigorous maintenance program is crucial for the long-term sustainability and function of GI systems.

Typical maintenance tasks include removing competitive species, removing sediment, trash, and debris, and maintaining irrigation, and other GI components. Maintenance

tasks may also include a range of other activities including repairing small erosion problems, pruning trees, removing graffiti, and replanting or reseeding areas.

Currently, the City has a total of 43 GI installations. The attached list of sites shows the anticipated locations and maintenance frequency that Pacific Site Management will be contracted with to perform services if contract is approved. This includes sites that Public Works has maintenance oversight and management responsibility.

Traffic calming devices, such as traffic circles, often contain vegetation which, when overgrown, can obstruct sight lines and right-of-way access for motorized vehicles, cyclists, and pedestrians using crosswalks. Consistent maintenance, trimming, and removal of vegetation is required to keep sightlines visible for crossing traffic. Many of the City's traffic circle sites managed by PW are maintained by volunteers as a part of the Adopt-a-Spot program. The Adopt-a-Spot volunteers consistently do an outstanding job of maintaining vegetation on the traffic circles that are adopted. However, not all traffic circles are adopted, and all traffic circles are subject to maintenance by the City if not properly cared for and maintained.

Landscaping services in traffic circles and green infrastructure sites, provided by Pacific Site Management, address the Strategic Plan Priority of advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

PW does not have staff assigned to perform landscape maintenance. PW's request is to amend their existing contract with Pacific Site Management to cover additional work at traffic circles, green infrastructure, and additional department facilities.

In April 2023, under Specification No. 23-11564, the City released a Request for Proposals (RFP) and convened a panel of stakeholders that selected Pacific Site Management as the most responsive and responsible bidder for providing landscaping services at City facilities managed by HHCS. These same standards and landscaping services are immediately applicable to the services required to meet the City's traffic circle and green infrastructure maintenance needs. PW piggybacked off of this solicitation to execute the contract.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

There are no anticipated negative environmental effects or climate impacts of this action. This contract amendment will help ensure proper maintenance of traffic circles and green infrastructure installations, which slow runoff by dispersing it to vegetated areas, which promote infiltration and evapotranspiration, and/or use bioretention to improve the water quality of stormwater runoff. In addition, any replacement plantings or new landscaping will be Bay-Friendly, drought-tolerant, and pollinator-supportive. Any vegetative debris generated from their services will be converted into usable compost.

RATIONALE FOR RECOMMENDATION

Pacific Site Management is a landscaping company with demonstrated experience in providing landscaping services for many clients with multiple large facilities. Their RFP proposal included services that align with the needed maintenance services identified at various PW locations. Approving this amendment saves staff time and City funds by avoiding another RFP process for services identical to those outlined in Specification No. 23-11564

ALTERNATIVE ACTIONS CONSIDERED

There is no alternative action at this time. If the contract amendment is not authorized, there are no internal staff available to complete this type of work.

CONTACT PERSON

Joseph Griffin, Community Services Specialist, Public Works, 510-981-6358
Mary Skramstad, Environmental Compliance Specialist, Public Works, 510-981-6337
Joy Brown, Operations Manager, Public Works, 510-981-6629

Attachments:
1: Resolution
    Exhibit A: List of Green Infrastructure Installations

RESOLUTION NO. 70,804-N.S.

CONTRACT AMENDMENT: PACIFIC SITE MANAGEMENT: LANDSCAPING SERVICES FOR PUBLIC WORKS

WHEREAS, the City of Berkeley Department of Public Works, is committed to providing state-of-the-art, well-maintained infrastructure, amenities, and facilities; and

WHEREAS, the City Council approved Resolution No.64,507-N.S. on June 3, 2009, establishing a Bay-Friendly landscaping policy for City projects; and

WHEREAS, the City Council approved Resolution No.69,090-N.S. on September 10, 2019 adopting a Green Infrastructure Plan; and

WHEREAS, Pacific Site Management was selected as the most qualified vendor by the City's Request For a Proposal process to meet a Bay-Friendly, Green Infrastructure Plan in April 2023, under Specification No. 23-11564, which included bidding from multiple vendors, draft proposals, and pricing; and

WHEREAS, Pacific Site Management and the City executed Contract No. 32500098, which was approved by Council on September 30, 2024, through Resolution No. 70,804-N.S. for an amount not to exceed $150,000; and

WHEREAS, with additional landscaping service needs throughout the City now evident for services outlined under Specification No. 23-11564, funds are available to meet these needs in Public Works budgets for FY25 through FY26, including the Zero Waste Fund 601 and Clean Storm Fund 616.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or his designee is authorized to execute a contract amendment, with Pacific Site Management to provide landscaping services for Public Works locations in an amount not to exceed $300,000 through June 30, 2027. A record signature copy of said contract and any amendments will be on file in the City Clerk Department.

Exhibit:
A: Public Works Green Infrastructure Locations

Public Works Green Infrastructure Locations

As of January 2025

Public Works Sites (non-facilities)			
#	Site Location	Type	Maintenance Frequency
1	Spruce and Vine	Bioswale	Quarterly Special Events: **April -** Compost **July** - Mulch **October** – Replanting
2	Rose and Hopkins		
3	Channing R.R.		
4	Woolsey		
5	Derby and Grant	Bioretention and tree wells	
6	Sixth and Codornices		
7	Milvia Street		
8	Grayson St (Bayer)		
9	Dwight R.R.		
10	Page St. R.R.		
11	San Pablo: McDonald's		
12	Downtown Berkeley Bart		
13	Hearst and Oxford	Bioretention	Replanting Maintenance If needed during 1st year

13

Cecilia Lunaparra
Councilmember Berkeley District 7

CONSENT CALENDAR
February 25, 2025

To: Honorable Members of the City Council

From: Councilmember Lunaparra (author), Councilmember O'Keefe (co-sponsor)

Subject: Supporting the Free and Safe Passage of Whales, Sea Turtles, and other Marine Animals in the San Francisco Bay Area's Coastal Waters and the State Of California's Vision Zero Target of Zero Mortality for Whales and Sea Turtles

RECOMMENDATION

Adopt a resolution Supporting the Free and Safe Passage of Whales, Sea Turtles, and other Marine Animals in the San Francisco Bay Area's Coastal Waters and the State Of California's Vision Zero Target of Zero Mortality for Whales and Sea Turtles

CURRENT SITUATION AND ITS EFFECTS

The California Department of Fish and Wildlife has confirmed 37 instances of whales or sea turtles being entangled in fishing gear off the coast of California since 2021.[1] Moreover, the National Marine Fisheries Service recorded 49 documented instances of ships killing large whales off the California coast between 2007 and 2020 with scientists believing the actual number could be 20 times higher.[2] Developing and managing whale and sea turtle safe fisheries is important to operating sustainable fisheries, protecting marine life, and preventing extinction. To address this issue, the California Ocean Protection Council approved the Strategic Plan to Protect California's Coast and Ocean which includes a target of zero mortality (Vision Zero) for whales and sea turtles.[3]

BACKGROUND

The State of California designated the endangered Pacific leatherback turtle as the state marine reptile in 2012 and designated the Gray Whale as the state marine

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[1] California Department of Fish and Wildlife (CDFW). 2024., RAMP Entanglement History. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=218549&inline.

[2] Greater Farallones Association. Reducing the Risk of Ship Strikes on Endangered Whales. https://farallones.org/reduce-whale-strikes/#:~:text=There%20were%2070%20recorded%20incidents,of%20ship%20strikes%20occurring%20since.

[3] California Ocean Protection Council (OPC). 2020. Strategic Plan to Protect California's Coast and Ocean 2020-2025. California Ocean Protection Council. 64 p. at target 3.3.5; see also Marine Life Management Act (AB1241, Keely, 1998). https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200226/OPC-2020-2025-Strategic-Plan-FINAL-20200228.pdf.

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mammal in 1975.[4] Entanglement in fishing gear and vessel strikes are two of the main causes of human-caused serious injury and death for whales and sea turtles.[5] The City of Berkeley values our state's ocean and coastal waters, which provide habitat to a vast array of wildlife, including fish, whales, sea turtles, and birds that depend on a healthy and clean environment. Berkeley's residents and its visitors enjoy our beaches, local marine life, the San Francisco Bay, and the Pacific Ocean for recreational, commercial, and educational activities, all of which support our local economy.

FINANCIAL IMPLICATIONS
None.

ENVIRONMENTAL SUSTAINABILITY
This resolution supports the City of Berkeley's and the State of California's efforts to protect our natural environment, namely marine wildlife.

ATTACHMENTS
1. Resolution

CONTACT PERSON
Councilmember Cecilia Lunaparra, 510-981-7170
Jonah Gottlieb, Chief of Staff

[4] California State Library. State Symbols. https://www.library.ca.gov/california-history/state-symbols/#tab-am.

[5] California Ocean Protection Council (OPC). 2019. Strategy for Protecting Whales and Sea Turtles & Ensuring Thriving Fisheries: Reducing the Risk of Entanglement in California Fishing Gear. California Ocean Protection Council. 3 p. at Threats to Whales and Sea Turtles. https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20191113/Item6_Appendix-A-Whale-and-Sea-Turtle-Strategy-Final.pdf.

2180 Milvia Street, Berkeley, CA 94704 ● (510) 981-7170 ● clunaparra@berkeleyca.gov

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

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BERKELEY SUPPORTING THE FREE AND SAFE PASSAGE OF WHALES, SEA TURTLES, AND OTHER MARINE ANIMALS IN THE SAN FRANCISCO BAY AREA'S COASTAL WATERS AND THE STATE OF CALIFORNIA'S VISION ZERO TARGET OF ZERO MORTALITY FOR WHALES AND SEA TURTLES

WHEREAS, the City of Berkeley values our state's ocean and coastal waters, which provide habitat to a vast array of wildlife, including fish, whales, sea turtles, and birds that depend on a healthy and clean environment; and

WHEREAS, Berkeley's residents and its visitors enjoy our beaches, local marine life, the San Francisco Bay, and the Pacific Ocean for recreational, commercial, and educational activities, all of which support our local economy; and

WHEREAS, California designated the endangered Pacific leatherback turtle as the state marine reptile in 2012; and

WHEREAS, California designated the Gray Whale as the state marine mammal in 1975; and

WHEREAS, entanglement in fishing gear and vessel strikes are two of the main causes of human-caused serious injury and death for whales and sea turtles; and

WHEREAS, the California Department of Fish and Wildlife has confirmed 37 instances of whales or sea turtles being entangled in fishing gear off the coast of California since 2021; and

WHEREAS, The National Marine Fisheries Service recorded 49 documented instances of ships killing large whales off the California coast between 2007 and 2020 with scientists believing the actual number could be 20 times higher; and

WHEREAS, developing and managing whale and sea turtle safe fisheries is important to operating sustainable fisheries, protecting marine life, and preventing extinction; and

WHEREAS, the California Ocean Protection Council approved the Strategic Plan to Protect California's Coast and Ocean which includes a target of zero mortality (Vision Zero) for whales and sea turtles; and

WHEREAS, in 2014 the City of San Francisco adopted Resolution No. 397-14, supporting the free and safe passage of whales and dolphins and declaring that every whale and dolphin has the right to remain unrestricted in their natural environment; and

WHEREAS, in 2024 the City of Alameda adopted Resolution No.16212, supporting the free and safe passage of whales, sea turtles, and other marine animals in Alameda's coastal waters and the state of California's Vision Zero Target of zero mortality for whales and sea turtles.

NOW, THEREFORE, BE IT RESOLVED, that the City of Berkeley supports the free and safe passage of all whales and sea turtles that traverse our coastal waters; and

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BE IT FURTHER RESOLVED, that the City of Berkeley supports the state of California's commitment to preventing whale and sea turtle entanglements and vessel strikes, commitment to investing in whale-safe fisheries by supporting innovative technologies like on-demand fishing gear, and commitment to ensuring that current and future generations of Californians can enjoy our state's rich marine biodiversity; and

BE IT FURTHER RESOLVED, that the City of Berkeley urges the state to authorize the use of pop-up fishing gear to prevent serious and deadly entanglements in commercial fishing gear; and

BE IT FURTHER RESOLVED, that the City of Berkeley urges the state and the National Marine Fisheries Service to establish mandatory, science-based vessel speed limits to prevent collisions between marine wildlife and vessels; and

FINALLY, BE IT RESOLVED, that upon passage, a copy of this Resolution be sent to Governor Gavin Newsom, State Senator Jesse Arreguín, Assemblymember Buffy Wicks, National Oceanic and Atmospheric Administration (NOAA) Acting Assistant Administrator for Fisheries Emily Menashes, California Department of Fish and Wildlife Director Chuck Bonham, California Fish and Game Commission President Samantha Murray, and Greater Farallones and Cordell Bank National Marine Sanctuaries Superintendent Maria Brown.

2180 Milvia Street, Berkeley, CA 94704 ● (510) 981-7170 ● clunaparra@berkeleyca.gov

14

Office of the City Manager

PUBLIC HEARING
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Scott Gilman, Director, Health, Housing and Community Services Department

Subject: Inclusionary Housing Ordinance In-Lieu Fee; Amending Berkeley Municipal Code Chapter 23.328

RECOMMENDATION

Conduct a public hearing and upon conclusion:

- Adopt a Resolution setting the Inclusionary Housing in-lieu fee at $56.25 per square foot of the Residential Unit Floor Area (RUFA) of a Housing Development Project; and
- Include a provision in the resolution to allow a project paying the full in-lieu fee instead of providing Affordable Units to deduct 5,000 square feet from the RUFA calculation in order to continue to exempt projects under 5,000 square feet in full and proportionally reduce the fee for projects above 5,000 square feet; and
- Include a provision in the resolution dedicating 80% of very low-income Units for Section 8 and Shelter Plus Care voucher holders; and
- Include a provision in the resolution to adjust the fee biennially by the Construction Cost Index (CCI) starting on July 1, 2025; and
- Adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Chapter 23.328 (F) to remove the exemption for projects with 5,000 square feet or less of RUFA.

SUMMARY

The proposed updates to Berkeley's Inclusionary Housing in-lieu fee aim to enhance the financial feasibility of newly constructed residential housing projects while maintaining the City's ability to provide affordable housing. The recommended in-lieu fee maintains the current per square foot fee of $56.25 and would continue to apply to new residential projects not providing on-site Below Market Rate (BMR) units under the Inclusionary Housing Ordinance (IHO). A proposed 5,000 square-foot exemption aims to encourage Middle Housing development (2–19 units), which face market constraints.

Other recommendations include standardizing the in-lieu fee across all projects, and adjusting fees biennially based on construction costs. Additionally, staff recommends dedicating 80% of very low-income units to voucher holders, ensuring balanced support

for low-income populations. These measures intend to support the development of market rate and BMR housing, promote Middle Housing, and sustain funding for 100% affordable housing developments by leveraging external resources.

The Housing Advisory Commission (HAC) recommended excluding detached homes from the proposed 5,000 square foot exemption and initiating a new feasibility study within three years of the adoption of Middle Housing zoning amendments. The Planning Commission (PC) did not support the HAC's proposal related to detached homes.

FISCAL IMPACTS OF RECOMMENDATION

An in-lieu fee of $56.25 per square foot would continue to apply to new residential projects not providing on-site BMR units per IHO requirements. The proposed 5,000 square-foot exemption for projects paying the full fee aims to reduce the fee and stimulate development for Middle Housing projects that currently are not feasible due to a variety of market constraints. Staff do not anticipate this exemption will apply to most large projects, which typically provide on-site BMR units to leverage Density Bonus benefits.

In-lieu fees are deposited in the City's HTF program. Bond measures, such as Measure O, provide a significant but one-time source for affordable housing. The in-lieu fee is Berkeley's primary dedicated funding source to support 100% affordable housing and leverage County, State, and federal funding.

Future affordable housing fee revenue trends are driven by variables outside the City's control (e.g., how projects choose to comply with the IHO, changes in state law, and broader housing market trends). However, staff anticipate consistent revenue generation for affordable housing over the next Housing Element cycle if overall housing development and affordable housing compliance trends continue.

CURRENT SITUATION AND ITS EFFECTS

On February 14, 2023, the Berkeley City Council updated the affordable housing requirements for new market-rate construction, transitioning from the Affordable Housing Mitigation Fee (AHMF) ordinance to the IHO.

This shift re-established on-site BMR housing requirements and introduced an alternative in-lieu fee payment option. The in-lieu fee calculation changed from per unit to per square foot of Residential Unit Floor Area (RUFA), with a set fee of $56.25 per square foot, adjusted biennially with the California Construction Cost Index (CCI).

The fee determination was based on the 2020 AHMF equivalent for typically sized units, to account for market shifts post-COVID-19. Council directed staff to conduct a feasibility analysis of the in-lieu fee in light of current market conditions. A temporary exemption (until April 1, 2025) was adopted for projects under 5,000 square feet to evaluate the in-lieu fee's impact on Middle Housing production. For purposes of this

analysis, Middle Housing refers to housing projects with two to 19 units on sites equivalent to one or two single-family lots.

In addition to the IHO, the City Council recently adopted further policy changes affecting market-rate housing development, including the HARD HATS ordinance, Bird Safe Building ordinance, and prevailing wage requirements within the Southside Plan Area.

The City retained Strategic Economics and Street Level Advisors to analyze the impacts of these requirements on the financial feasibility of new market-rate housing development. Their task was to provide recommendations for the City's affordable housing in-lieu fee amount and application.

Staff presented this analysis and recommendations to the City Council at a work session on May 21, 2024. Each councilmember had the opportunity to meet with staff and the consultants following the work session to further review the material and ask additional questions.

Staff's work session report from May 21, 2024 includes a review of the report's findings and methodology. This is included as Attachment 4. Strategic Economics and Street Level Advisors report is included as Attachment 5.

Recommendations

The recommendations were drafted considering the financial feasibility analysis and the following policy goals:

- Continue producing affordable housing through on-site BMR units and in-lieu fees, which leverage external funding for 100% affordable housing developments.
- Support the financial feasibility of market-rate housing to a) generate on-site BMR units or in-lieu fee funding; and b) expand Berkeley's housing stock.
- Offer flexibility for projects to choose between multiple compliance options depending on different circumstances.
- Promote the development of Middle Housing product types that add between two and 19-unit housing options in Berkeley's neighborhoods.

Recommendation 1: Apply the same in-lieu fee level to all housing development Projects.

- Remove the current exemption from the IHO for projects under 5,000 square feet.
- Remove the tiered fee scale for projects between 5,000 and 12,000 square feet.
- Apply the same in-lieu fee level to all housing development projects.

- Goal: This simplification removes the incentive to manipulate project sizes to avoid higher fees, promoting clarity and fairness in fee application. It will also facilitate a more streamlined application process for staff and applicants.

Recommendation 2: Support Middle Housing by exempting 5,000 square feet of RUFA from the in-lieu fee calculation for any project opting to pay the full fee.

- Exempt 5,000 square feet of RUFA from the in-lieu fee for projects opting to pay the full fee instead of providing on-site BMR units.
- This would continue to exempt projects under 5,000 square feet in full and proportionally reduce the fee for projects above 5,000 square feet.
- Goal: This exemption encourages the development of Middle Housing by facilitating relatively lower fees for Middle Housing projects while maintaining fees for mid-rise and high-rise projects, which typically provide on-site BMR units to access the State Density Bonus ("Density Bonus"). The Density Bonus allows for increased project density in exchange for on-site BMR units, and is commonly used for Berkeley's multi-family housing development. Since Density Bonus provides significant benefits for larger projects, most will likely continue to opt to provide on-site BMR units and pay a pro-rated in-lieu fee for the remaining obligation.

Recommendation 3: Maintain the existing $56.25 maximum in-lieu fee level as the universally applicable in-lieu fee.

- Maintain the maximum in-lieu fee level at $56.25 per square foot, and apply this to all development projects. This is the equivalent of the maximum fee in the current tiered fee scale.
- Goal: Maintaining the current fee level ($56.25 per square foot) achieves close consistency with the maximum justifiable fee determined by applying an Average Local Contribution to Affordable Housing approach ($58.59 per square foot), and avoids imposing new development costs, especially during challenging development conditions.
- This allows the City to maintain a fee that is consistent with what the City spends to create affordable housing in other locations. This has the advantage of leveraging County, State, and federal funding and providing more units across lower income ranges. Using this fee will provide a steady source of funding for affordable housing, reducing the chance of missing out on opportunities to fund these off-site projects if the market changes.

Recommendation 4: Regularly adjust in-lieu fee based on the California Construction Cost Index.

- Continue the current policy of adjusting the In-lieu fee every two years based on the California Construction Cost Index (CCCI).
- Goal: The City's average per unit Housing Trust Fund contribution continues to increase as nonprofit development must manage market fluctuations (e.g., labor, materials, financing costs). Adjusting the fee with CCCI facilitates the City's ability to support future HTF projects as development costs increase.
- This practice supports the fee's ability to address affordable housing needs over time but does not guarantee it will align with the City's HTF costs. This is because the CCCI is a generalized index of labor and materials costs that cannot fully account for all project costs or the unique circumstances of specific local projects.

Staff Recommendation: Dedicate 80% of very-low income units to Section 8 and Shelter Plus Care voucher holders.

- Make the reservations equally split between Shelter Plus Care (40%) and Section 8 (40%). This is consistent with the City's previous policy under the AHMF ordinance.
- Goal: To ensure the City's affordable housing program serves a broad range of community members, Staff recommend adjusting the voucher allocation for very low-income units from 100% to 80%. This revision will allow the City to prioritize voucher holders and other populations the City intends to support through the affordable housing preference policy, including displaced community members and those facing displacement. By reserving 20% of the units for non-voucher holders, the City can ensure a more balanced approach that aligns with its commitment to inclusivity and equity in housing opportunities.

Commission Recommendations

On December 2, 2024, the HAC voted to support staff's recommendations with amendments.

Action: M/S/C (Shere/Twu) to support staff's recommendations with the following amendments:

- Exclude detached homes from the 5,000 square feet exemption; and
- Conduct a new economic feasibility study on the in-lieu fee within three years following the adoption of any Middle Housing zoning amendments.

Vote: Ayes: Bell, Braslaw, Haycox, Potter, Shere, and Twu. Noes: none. Abstain: none. Absent: Mendonca, Ortiz-Cedeño, and Simon-Weisberg.

Staff does not take a position on these amendments. If Council adopts HAC's recommendation, the City should determine whether a nexus study is necessary to establish a new affordable housing impact fee applicable to detached homes. Council would need to allocate funding for a new economic feasibility analysis following the adoption of any zoning amendments.

On December 6, 2024, the PC voted to support staff's recommendations. They did not support the HAC's amendment related to detached homes.

Action: M/S/C (Vincent/Hauser) to recommend staff's proposal to City Council, without the HAC's recommendation to exclude detached homes from the exemption of the first 5,000 square feet of Residential Unit Floor Area for projects that pay the full In-lieu fee instead of providing any on-site affordable units.

Vote: Ayes: Merker, Vincent, Mikiten, Marthinsen, Twu, and Hauser. Noes: None. Abstain: Oatfield. Absent: Ghosh and Moore.

Attachment 3 includes a table comparing the current fee with the proposed fee recommendations from staff and the HAC for various project types.

Figure 1: Current In-Lieu Fee Policy and Recommended Changes.

POLICY	CURRENT IN-LIEU FEE	STAFF/PC RECOMMENDATION	HAC RECOMMENDATION
In-Lieu Fee Amount	$0 per square foot for projects below 5,000 square feet (residential unit floor area) $38.75 for projects between 5,000 and 5,999 square feet, and then incrementally increases for each thousand square feet between 6,000 up to 11,999 square feet	$56.25 per square foot for all projects	Same as PC/Staff

POLICY	CURRENT IN-LIEU FEE	STAFF/PC RECOMMENDATION	HAC RECOMMENDATION
	$56.25 for projects of 12,000 square feet or more		
Application to Projects Opting to Pay the Full Fee and Provide No Qualifying On-Site Inclusionary Units	See above	The first 5,000 square feet would be exempt from the in-lieu fee for any project opting to pay the full fee instead of providing any on-site inclusionary units (Density Bonus projects would not qualify for the exemption)	Detached Homes would be excluded from Staff's 5,000 square feet exemption
Voucher Allocation	100% of very low-income units (50% for Shelter Plus Care/50% for Section 8)	80% of very low income units (40% for Shelter Plus Care/40% for Section 8)	Same as PC/Staff

BACKGROUND

On February 14, 2023, the City Council updated the City's inclusionary housing requirements in response to Council referrals and State laws. Assembly Bill 1505 in 2019 influenced these changes, consolidating affordable housing requirements for rental and ownership properties. The ordinance shifted the fee structure from the Affordable Housing Mitigation to Inclusionary Housing in-lieu fees based on residential unit floor area. A temporary exemption for projects under 5,000 square feet was introduced to assess impacts on Middle Housing.

The current in-lieu fee amount, determined by Street Level Advisors analysis from February 2022, transitioned the 2020 AHMF to a per-square-foot basis in line with the IHO. The Council chose this fee over the adjusted AHMF from July 2022 to enable a thorough analysis of COVID-19 and inflation impacts on the housing market. The previous AHMF was adopted on July 19, 2016 and biennially adjusted with the CCCI.

The inclusionary housing program has provided 575 BMR units across 54 properties (15% of the total units built). Since 2016, the affordable housing mitigation fee/in-lieu fee has generated over $51,000,000 for local affordable housing via the HTF program.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS
This fee relates to the development of infill housing development. Infill housing is generally considered a best practice for environmental sustainability and climate impact mitigation.

RATIONALE FOR RECOMMENDATION
The recommended changes to Berkeley's in-lieu fee aim to balance the need for funding affordable housing with the financial feasibility of housing development. An in-lieu fee of $56.25 per square foot is approximate to the cost of funding off-site affordable housing. There are several factors currently restraining feasibility (e.g., financing, construction costs) and this fee will not be the deciding factor in project feasibility. It will allow the City to continue collecting its primary funding source for 100% affordable housing projects, supporting leveraging external resources like state and federal funds.

The exemption for the first 5,000 square feet of RUFA for projects paying the full fee is intended to address market challenges and encourage Middle Housing production. This exemption reduces fees for smaller projects while preserving incentives for larger developments to include on-site Below Market Rate (BMR) units.

These measures ensure sustained revenue for affordable housing, adaptability to market trends, and expanded housing options in Berkeley's neighborhoods.

ALTERNATIVE ACTIONS CONSIDERED
Alternative actions considered included maintaining the current tiered in-lieu fee structure and temporary exemptions for smaller projects under 5,000 square feet. This approach created administrative complexity in fee applications compared to the proposed recommendation. It may also incentivize developers to manipulate project sizes to avoid higher fees and disincentive Middle Housing construction, potentially hindering efficient policy implementation.

Another alternative was increasing the in-lieu fee to align with the maximum justifiable rates determined by the financial analysis (i.e., the Affordability Gap, the Production Cost Gap). The proposed fee structure is preferred due to concerns about exacerbating financial pressures on market-rate housing development, particularly during challenging economic conditions.

Staff also considered adjusting the fee amount consistent with the AHMF's 2022 CCI adjustment. Staff is recommending the fee consistent with the 2020 fee level given the significant CCCI inflation between 2020 and 2022 that would skew feasibility. The fee is scheduled to increase with CCCI in July 2025.

Raising the fee may limit a potential project moving forward. Alternatively, rescinding or lowering the fee does not guarantee a project will be feasible. The myriad factors

influencing the market (i.e., construction, financing, rates of return) are dynamic and shift over time.

Setting a high fee may encourage developers to include on-site BMR units, expanding the community's affordable housing stock in mixed-income developments. It also heightens development feasibility challenges and project completion delays.

Setting a low fee can better support development feasibility, but would reduce the number of HTF units the City can subsidize when the in-lieu fee is paid. Setting the fee too low also risks losing potential affordable housing funding during favorable development conditions. Limiting in-lieu fee revenue restricts the City's ability to support and leverage external funding for more deeply affordable housing in 100 percent affordable projects.

Staff considered these trade-offs for an in-lieu fee recommendation.

CONTACT PERSON
Mike Uberti, Senior Community Development Project Coordinator, HHCS,
(510) 981-5114

Attachments:
1: Resolution
2: Ordinance – Amendment of Berkeley Municipal Code Chapter 23.328 (F) (track changes and clean copy)
3: Fee Comparison Table
4: Work Session Report regarding Residential Feasibility Analysis and In-Lieu Fee Recommendations (Council meeting of May 21, 2024)
5: Berkeley In-Lieu Fee and Housing Policies Economic Feasibility Analysis. Prepared by Strategic Economics, April 12, 2024.
6: Public Hearing Notice

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

ADOPTING REGULATIONS FOR VOUCHER PROGRAM AND ESTABLISHING AN IN-LIEU FEE TO SUPPORT THE PROVISION OF AFFORDABLE HOUSING PURSUANT TO BERKELEY MUNICIPAL CODE CHAPTER 23.328 AND RESCINDING RESOLUTION 70,698-N.S

WHEREAS, Berkeley Municipal Code ("BMC") Chapter 23.328 establishes a requirement that 20% of Residential Units (as defined) in market-rate developments be offered for rent or sale at affordable rents or prices, as defined ("Affordable Units"); and

WHEREAS, BMC Chapter 23.328 authorizes the City Council to establish by resolution preferences for renting Affordable Units offered for rent to tenants receiving assistance under the Section 8 Program (42 U.S.C. Section 1437f), the Shelter Plus Care Program (42 U.S.C. Section 11403 et. seq.), or similar state or federally-funded rent subsidy programs; and

WHEREAS, BMC Chapter 23.328 authorizes developers of market-rate housing to pay a fee in lieu of complying with the requirement to provide on-site affordable housing ("In-Lieu Fee"); and

WHEREAS, BMC Chapter 23.328 authorizes the City Council to establish the In-Lieu Fee by resolution, and further authorizes the Council to differentiate among types, classes, and locations of Housing Development Projects to the extent permitted by law; to establish separate fees and criteria for the provision of units that are affordable to Very Low Income Households and units that are affordable to Low Income Households; and to establish the method for calculating the In-Lieu Fee; and

WHEREAS, the City retained Strategic Economics to provide analysis and recommendations for updating the City's affordable housing requirements, the scope of which included a financial feasibility study of the City's housing requirements; and

WHEREAS, Strategic Economics' analysis determined that Middle Housing projects between two and nineteen units face the greatest financial barriers and were less likely to provide on-site BMR units; and

WHEREAS, Strategic Economics prepared a Financial Feasibility Analysis dated April 12, 2024, which determined that an In-Lieu Fee of $56.25 per square foot of the residential Gross Floor Area (as defined in BMC Section 23.106.030) would be financially feasible; and

WHEREAS, this Resolution supersedes Resolution No. 70,698-N.S.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley as follows:

1. All Affordable Units shall be offered to tenants in accordance with Council-adopted eligibility preference criteria. 80% of Very Low-Income Units, comprising a portion of the Affordable Units authorized and provided for by BMC Chapter 23.328, must be offered to tenants receiving assistance under the Section 8 Program (42 U.S.C. Section 1437f) or the Shelter Plus Care Program (42 U.S.C. Section 11403 et. seq.) before being marketed to other income-eligible households. The allocations shall be divided equally between the Section 8 Program (40%) and the Shelter Plus Care Program (40%).

2. The In-Lieu Fee authorized and provided for by BMC Chapter 23.328 shall be $56.25 per square foot of the Residential Unit Floor Area of a Housing Development Project (as defined in BMC Chapter 23.328). This fee amount shall be automatically adjusted on July 1, 2025 based on changes to the California Construction Cost Index and shall increase biennially thereafter based on the same index, unless otherwise provided for by BMC Chapter 23.328 or by this Resolution.

3. Housing Development Projects subject to BMC Chapter 23.328 may provide less than the required number of Affordable Units in the Housing Development Project and pay a proportionately reduced In-Lieu Fee, calculated as follows: the fee per square foot multiplied by the total Residential Unit Floor Area of a Housing Development Project, multiplied by the percentage of the applicable requirement remaining after accounting for any on-site Affordable Units provided. Projects that provide no on-site Affordable Units will have an applicable requirement multiplier of one.

4. Housing Development Projects subject to BMC Chapter 23.328 who select to pay the full In-Lieu fee instead of providing Affordable Units shall be entitled to deduct 5,000 square feet from the Residential Unit Floor Area calculation.

BE IT FURTHER RESOLVED, Resolution No. 70,698-N.S. is hereby rescinded and is of no force or effect on any Housing Development Project that obtains a building permit after the effective date of this resolution, but shall continue to apply to those projects that were approved and subject to its provisions or the provisions of predecessor resolutions and ordinances addressing the same subject matter.

BE IT FURTHER RESOLVED, the rescission of Resolution No. 70,698-N.S and this Resolution shall be effective upon the effective date of contemporaneously adopted amendments to BMC Chapter 23.328.

ORDINANCE NO. -N.S.

AMENDING SECTION 23.328.050 (F) TO REMOVE THE SMALL PROJECT EXEMPTION FROM INCLUSIONARY HOUSING REQUIREMENT

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

Section 1. That Berkeley Municipal Code Section 23.328.050(F) is amended to read as follows:

BMC Section 23.328.050(F) Exemptions. The following types of Housing Development Projects and Residential Units are exempt from this Chapter:

1. A Housing Development Project for which either a building permit was issued on or before April 1, 2023 or a preliminary application including all of the information required by subdivision (a) of California Government Code section 65941.1 was submitted on or before April 1, 2023 shall be subject to this Chapter's requirements that were in place as of the preliminary application's submittal date but shall otherwise be exempt from this Chapter. This exemption shall expire upon the occurrence of any of the circumstances defined in paragraphs (2), (6), or (7) of subdivision (o) of California Government Code section 65589.5 or in subdivision (d) of California Government Code section 65941.

~~2. A Housing Development Project with 5,000 square feet or less of Residential Unit Floor Area, unless it is part of a larger Housing Development Project. This exemption shall expire on April 1, 2025, or at such time as the City Council modifies or repeals this exemption, whichever date is sooner.~~

~~3.~~2. A Residential Unit that replaces a unit existing as of April 1, 2023 that has been destroyed by fire, earthquake or other disaster, or that was previously subject to a mitigation fee or inclusionary housing requirement.

~~4.~~3. A Residential Unit existing as of April 1, 2023 that is expanded, renovated, or rehabilitated.

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.

ORDINANCE NO. -N.S.

AMENDING SECTION 23.328.050 (F) TO REMOVE THE SMALL PROJECT EXEMPTION FROM INCLUSIONARY HOUSING REQUIREMENT

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

Section 1. That Berkeley Municipal Code Section 23.328.050(F) is amended to read as follows:

BMC Section 23.328.050(F) Exemptions. The following types of Housing Development Projects and Residential Units are exempt from this Chapter:

1. A Housing Development Project for which either a building permit was issued on or before April 1, 2023 or a preliminary application including all of the information required by subdivision (a) of California Government Code section 65941.1 was submitted on or before April 1, 2023 shall be subject to this Chapter's requirements that were in place as of the preliminary application's submittal date but shall otherwise be exempt from this Chapter. This exemption shall expire upon the occurrence of any of the circumstances defined in paragraphs (2), (6), or (7) of subdivision (o) of California Government Code section 65589.5 or in subdivision (d) of California Government Code section 65941.

2. A Residential Unit that replaces a unit existing as of April 1, 2023 that has been destroyed by fire, earthquake or other disaster, or that was previously subject to a mitigation fee or inclusionary housing requirement.

3. A Residential Unit existing as of April 1, 2023 that is expanded, renovated, or rehabilitated.

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.

NOTICE OF PUBLIC HEARING
BERKELEY CITY COUNCIL
INCLUSIONARY HOUSING ORDINANCE IN-LIEU FEE

The public may participate in this hearing by remote video or in-person.

The Department of Health, Housing, and Community Services is proposing modifications to the Berkeley Municipal Code Section 23.328 and setting a fee via resolution.

The hearing will be held on, February 25, 2025 at 6:00 p.m. in the School District Board Room, located at 1231 Addison Street, Berkeley CA 94702.

A copy of the agenda material for this hearing will be available on the City's website at https://berkeleyca.gov/ as of February 13, 2025. **Once posted, the agenda for this meeting will include a link for public participation using Zoom video technology, as well as any health and safety requirements for in-person attendance.**

For further information, please contact Mike Uberti at 510-981-5400.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, or e-mailed to council@berkeleyca.gov 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 (510) 981-6900 or clerk@berkeleyca.gov for further information.

Published: February 14, 2025 and February 21, 2025 – The Berkeley Voice
Published 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 the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on February 13, 2025.

_____
Mark Numainville, City Clerk
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Example Housing Project	Project Details	In-Lieu Fee Payment: Existing Requirements	In-Lieu Fee Payment: Staff Recommendation	In-Lieu Fee Payment: HAC Modification
Single Family Detached Home	Detached 2,000 square foot house	Total: $0 Per Sq. Ft.: $0	Total: $0 Per Sq. Ft.: $0	Total: $112,500 Per Sq. Ft.: $56.25
Very Large Single Family Detached Home	Detached 6,000 square foot house (New single family homes exceeding 5,000 square feet are exceptionally rare in Berkeley)	Total: $247,500 Per Sq. Ft.: $41.25	Total: $56,250 Per Sq. Ft.: $9.385	Total: $337,500 Per Sq. Ft.: $56.25
Three Single Family Detached Homes on a Typical Single Family Lot Size*	3 detached houses on a .1-acre lot with a combined 4,500 sq. ft. of RUFA	Total: $0 Per Sq. Ft.: $0	Total: $0 Per Sq. Ft.: $0	Total: $253,125 Per Sq. Ft.: $56.25
Three Attached Townhomes on a Typical Single Family Lot Size	3 attached houses on a .1-acre lot with a combined 4,500 sq. ft. of RUFA	Total: $0 Per Sq. Ft.: $0	Total: $0 Per Sq. Ft.: $0	Same as “Staff Recommendation”
10-Unit Small Multifamily Building on a Double Single Family Lot*	10-unit multifamily building on a .2-acre lot with 9,250 sq. ft. of RUFA	Total: $450,937.50 Per Sq. Ft.: $48.75	Total: $239,062.50 Per Sq. Ft.: $25.85	Same as “Staff Recommendation”
4-Story Group Living Accommodation*	36-unit group living accommodation building with 9,400 sq. ft. of RUFA Uses State Density Bonus	$48.75 per sq. ft. fee applies to any remaining “base” project RUFA after subtracting on-site inclusionary unit sq. ft. that meet City requirements	$56.25 per sq. ft. fee applies to any remaining “base” project RUFA after subtracting on-site inclusionary unit sq. ft. that meet City requirements	Same as “Staff Recommendation”
6-Story Midrise Multifamily Building*	75-unit building with 49,460 sq. ft. of RUFA Uses State Density Bonus	$56.25 per sq. ft. fee applies to any remaining “base” project RUFA after subtracting on-site inclusionary unit sq. ft. that meet City requirements	Same as “Existing Requirements”	Same as “Staff Recommendation”
8-Story Midrise Multifamily Building*	120-unit building with 71,320 sq. ft. of RUFA Uses State Density Bonus	$56.25 per sq. ft. fee applies to any remaining “base” project RUFA after subtracting on-site inclusionary unit sq. ft. that meet City requirements	Same as “Existing Requirements”	Same as “Staff Recommendation”
18-Story High-Rise Building*	240-unit building with 165,780 sq. ft. of RUFA Uses State Density Bonus	$56.25 per sq. ft. fee applies to any remaining “base” project RUFA after subtracting on-site inclusionary unit sq. ft. that meet City requirements	Same as “Existing Requirements”	Same as “Staff Recommendation”

*Matches a development prototype analyzed in the *Berkeley In-Lieu Fee and Housing Policies Economic Feasibility Analysis* report

Office of the City Manager

WORKSESSION
May 21, 2024

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Margot Ernst, Interim Deputy Director, Health, Housing, and Community Services

Subject: Residential Feasibility Analysis and In-Lieu Fee Recommendations

SUMMARY

Strategic Economics and Street Level Advisors conducted a financial feasibility analysis of City requirements related to new market-rate housing development in Berkeley. This includes the Inclusionary Housing Ordinance (Berkeley Municipal Code Chapter 23.328), the Helping Achieve Responsible Development with Healthcare and Apprenticeship Training Standards ("HARD HATS") ordinance, the Bird Safe Building ordinance, and the prevailing wage requirements within the Southside Plan area.

Staff are seeking input on potential updates to the City's inclusionary housing In-Lieu fee amount and application based on the analysis findings. The report proposes recommendations to support affordable housing production and medium-density ("Middle Housing") housing development. These include simplifying the fee structure, providing an exemption to support Middle Housing, setting the In-Lieu fee at $56.25 per square foot, and adjusting fees biennially based on the Construction Cost Index. The economic feasibility analysis and policy recommendations are summarized in this report and described in detail in Attachment 1.

In-Lieu fee revenue is deposited in the City's Housing Trust Fund (HTF) program (with a set aside for administration). Bond measures, such as Measure O, provide a significant but one-time source for affordable housing. The In-Lieu fee is Berkeley's primary dedicated funding source to support 100% affordable housing and leverage County, State, and federal funding.

Staff will bring revisions to the Inclusionary Housing Ordinance (Berkeley Municipal Code Chapter 23.328) and a resolution for an inclusionary housing In-Lieu fee to the Housing Advisory Commission, Planning Commission, and City Council later this year.

CURRENT SITUATION AND ITS EFFECTS

On February 14, 2023, the Berkeley City Council updated affordable housing requirements for new market-rate construction, transitioning from the Affordable Housing Mitigation Fee (AHMF) ordinance to the Inclusionary Housing Ordinance (IHO).

This shift established on-site Below Market Rate (BMR) housing requirements and introduced an alternative In-Lieu fee payment option. The In-Lieu fee calculation changed from per unit to per square foot of Residential Unit Floor Area (RUFA), with a set fee of $56.25 per square foot, adjusted biennially with the California Construction Cost Index (CCI).

The fee determination was based on the 2020 AHMF equivalent for typically sized units, to account for market shifts post-COVID-19. Council directed Staff to conduct a feasibility analysis of the In-Lieu fee in light of current market conditions.

A temporary exemption (until April 1, 2025) was adopted for projects under 5,000 square feet to evaluate the In-Lieu fee's impact on Middle Housing production. For purposes of this analysis, Middle Housing refers to housing projects with two to 19 units on sites equivalent to one or two single-family lots.

In addition to the IHO, the City Council recently adopted further policy changes affecting market-rate housing development, including the HARD HATS ordinance, Bird Safe Building ordinance, and prevailing wage requirements within the Southside Plan Area.

The City retained Strategic Economics and Street Level Advisors to analyze the impacts of these requirements on the financial feasibility of new market-rate housing development. Their task was to provide recommendations for the City’s affordable housing In-Lieu fee amount and application.

Recommendations

Staff are seeking the City Council’s input on four recommendations from the Strategic Economics and Street Level Advisors report (Attachment 1). These recommendations were drafted considering the financial feasibility analysis and the following policy goals:

- Continue producing affordable housing through on-site BMR units and In-Lieu fees, which leverage external funding for 100% affordable housing developments.
- Support the financial feasibility of market-rate housing to a) generate on-site BMR units or In-Lieu fee funding; and b) expand Berkeley’s housing stock.
- Offer flexibility for projects to choose between multiple compliance options depending on different circumstances.
- Promote the development of Middle Housing product types that add between two and 19-unit housing options in Berkeley’s neighborhoods.

Staff will incorporate Council’s input and feedback into revisions to the Inclusionary Housing Ordinance (Berkeley Municipal Code Chapter 23.328) and a resolution for an inclusionary housing In-Lieu fee, which staff will present to the Housing Advisory Commission, Planning Commission, and City Council later this year.

Recommendation 1: Apply the same In-Lieu fee level to all housing development projects

- Remove the current In-Lieu fee exemption for projects under 5,000 square feet.
- Remove the tiered fee scale for projects between 5,000 and 12,000 square feet.
- Apply the same In-Lieu fee level to all housing development projects.
- Goal: This simplification removes the incentive to manipulate project sizes to avoid higher fees, promoting clarity and fairness in fee application. It will also facilitate a more streamlined application process for City staff.

Recommendation 2: Support Middle Housing by exempting 5,000 square feet of RUFA from the In-Lieu fee calculation for any project opting to pay the full fee

- Exempt 5,000 square feet of RUFA from the In-Lieu fee for projects opting to pay the full fee instead of providing on-site BMR units.
- Goal: This exemption encourages the development of Middle Housing by facilitating relatively lower fees for Middle Housing projects while maintaining fees for mid-rise and high-rise projects, which typically provide on-site BMR units to access the State Density Bonus ("Density Bonus"). The Density Bonus allows for increased project density in exchange for on-site BMR units, and is commonly used for Berkeley's multi-family housing development. Since Density Bonus provides significant benefits for larger projects, most will likely continue to opt to provide on-site BMR units and pay a pro-rated In-Lieu fee for the remaining obligation.

Recommendation 3: Maintain the existing $56.25 maximum In-Lieu fee level as the universally applicable In-Lieu fee.

- Maintain the maximum In-Lieu fee level at $56.25 per square foot, and apply this to all development projects.
- This is the equivalent of the maximum fee in the current tiered fee scale.
- Goal: Maintaining the current fee level ($56.25 per square foot) achieves close consistency with the maximum justifiable fee determined by applying an Average Local Contribution to Affordable Housing approach ($58.59 per square foot), but avoids imposing new development costs, especially during challenging development conditions. This allows the City to maintain a fee that is approximately equivalent to the City's typical direct contributions to the cost of leveraging off-site affordable housing units at deeper affordability levels. It ensures the City will maintain its primary affordable housing funding source,

mitigating the risk of lost opportunity to secure funding when market conditions shift.

Recommendation 4: Regularly Adjust In-Lieu Fee Based on Construction Cost Index

- Continue the current policy of adjusting the In-Lieu fee every two years based on the California Construction Cost Index (CCCI).
- Goal: The City's average per unit Housing Trust Fund contribution continues to increase as nonprofit development must manage market fluctuations (e.g., labor, materials, financing costs). Adjusting the fee consistent with CCCI facilitates the City's ability to adequately support future HTF projects as development costs shift. This practice supports the fee's ability to address affordable housing needs over time but does not guarantee it will align with the City's HTF costs. This is because the CCCI is a generalized index of labor and materials costs that cannot fully account for all project costs or the unique circumstances of specific local projects.

Figure 1: Current In-Lieu Fee Policy and Recommended Changes

Policy	Current In-Lieu Fee	Recommended Changes
In-Lieu Fee Amount	$0 per square foot for projects below 5,000 square feet (residential unit floor area) $38.75 for projects between 5,000 and 5,999 square feet, and then incrementally increases for each thousand square feet between 6,000 up to 11,999 square feet $56.25 for projects of 12,000 square feet or more	$56.25 per square foot for all projects
Application to Projects Opting to Pay the Full Fee and Provide No Qualifying On-Site Inclusionary Units	See above	The first 5,000 square feet would be exempt from the In-Lieu fee for any project opting to pay the full fee instead of providing any

Policy	Current In-Lieu Fee	Recommended Changes
		on-site inclusionary units (Density Bonus projects would not qualify for the exemption)
Fee Level Adjustment Over Time	The In-Lieu fee is adjusted every two years based on the California Construction Cost Index	Maintain the CCCI adjustment.

Findings

The analysis' findings examine the in-lieu fee from multiple perspectives, including consideration of comparability with the costs of providing on-site BMR units, the cost to produce an off-site affordable housing unit via fee revenue, financial feasibility conditions, and consideration of barriers and opportunities to support Middle Housing.

Justifiable Fee Ranges
The analysis used three approaches to determine a range of potential maximum justifiable in-lieu fee levels. The justifiable In-Lieu fee level is based on an analysis determining the per-square-foot fee equivalent to providing an on-site unit. These fee levels should be considered within the context of external factors influencing housing development. These factors and the methodology of each approach are summarized below.

- Affordability Gap: the maximum justifiable in-lieu fee for the rental prototypes is $117.69 per square foot.

- Production Cost: the maximum justifiable in-lieu fee for the rental prototypes is $103.77 per square foot.

- Average Local Contribution to Affordable Housing: a fee of $58.59 per square foot is approximately equivalent to the City's typical direct contributions to the cost of leveraging off-site affordable housing units. This is approximate to the current maximum fee level of $56.25. The HTF per unit contribution has consistently increased over time to reflect the same market increases (e.g., labor, materials, financing) the private market is experiencing.

Medium Density Middle Housing
Smaller Middle Housing products—Small Lot Single Family and Fourplex/Townhomes—demonstrate financial capacity to support an In-Lieu fee when built as ownership

products, but these housing types are rarely built due to other challenges. The financial feasibility analysis cannot capture the qualitative factors preventing the development of these housing types. The survey of development activity shows that these types of small infill projects are not often built in Berkeley, despite their strong financial performance as a high-end ownership product.

The mismatch between financial performance and actual outcomes is attributable to factors including the lack of small-scale developers with capacity and interest in this type of development and the limited inventory of lower-cost underutilized sites available for sale in existing neighborhoods.

The financial performance of larger Middle Housing products, such as the 10-unit small multifamily, were more limited by financial constraints of current development and market conditions (e.g., construction costs, financing) and did not benefit from economies of scale.

HARD HATS, Prevailing Wage, and Bird Safe Building

HARD HATS and prevailing wage requirements increase development costs at a level comparable to switching from largely non-union labor to union labor for a development project, increasing hard costs (i.e., labor). This would increase costs by approximately 18 to 25 percent for projects that do not otherwise use union labor. These cost increases are the same whether the project invokes one or both requirements if union labor is used.

Cost impacts will be relatively limited for high-rise construction projects since a larger share of trades for these projects typically use union labor. However, smaller mid-rise projects are more likely to use a higher percentage of non-union trades for their development. The additional costs driven by HARD HATS/prevailing wage could become a significant factor for determining when or whether a mid-rise project is built as market conditions shift. Over the past five years, these mid-rise projects comprised approximately two-thirds of new permitted housing units in Berkeley, so these policies could have significant implications for future housing production.

The additional development costs associated with the HARD HATS, prevailing wage, and Bird Safe Glass requirements are not likely to pose an insurmountable barrier to future market-rate residential development in Berkeley when development conditions improve, but the requirements will constrain the likelihood and pace of future housing production.

The Bird Safe Building requirement adds approximately 1.5 percent to the hard costs of construction (i.e., materials). The costs associated with the policy likely will not determine whether a project is built.

State Density Bonus Impact

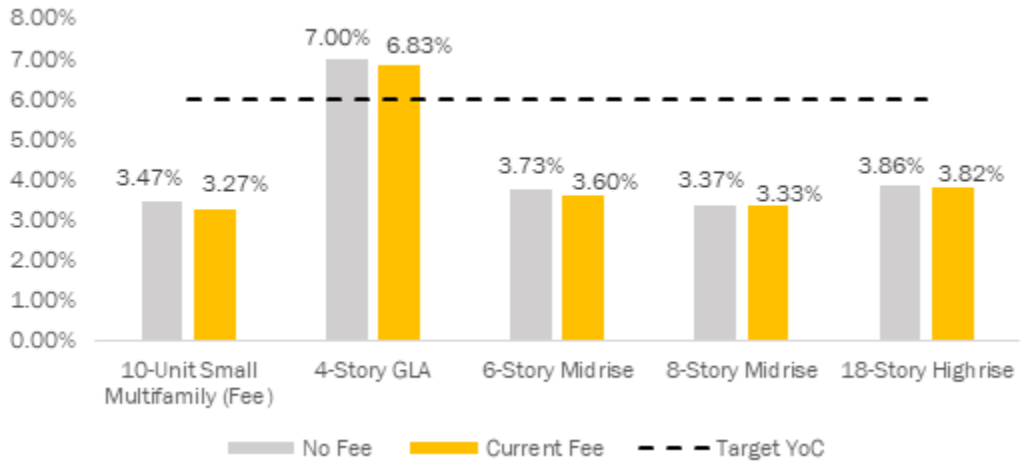
The Density Bonus provides significant incentives (e.g., development capacity, waivers, concessions) for larger development projects in Berkeley to provide on-site BMR units. Most mid-rise and high-rise developments will opt to provide on-site BMR units and a pro-rated In-Lieu fee, regardless of the In-Lieu level, in order to leverage the Density Bonus incentives.

Market Conditions and Context

The financial feasibility results indicate that most development prototypes (except the four-story Group Living Accommodation) cannot support the current cost of development in today's market. This is being driven by increased construction and financing costs that are outpacing projected rental revenue relative to the required rate of return developers must provide to finance a project.

The City's In-Lieu fee increases overall costs and limits a project's potential return. However, this is not the driving factor in determining a project's financial feasibility. The poor financial performance of the development prototypes is primarily attributable to the broader feasibility challenges, noted above, rather than the current in-lieu fee level. For example, the in-lieu fee only results in a negative percent change in project return of between one and six percent for the rental prototypes, as shown in Figure 2.

Figure 2. Impact of In-Lieu Fee on Financial Feasibility of Applicable Prototypes



Source: Strategic Economics, 2024.

This analysis provides a snapshot in time of current market conditions. Sensitivity analysis demonstrates that feasibility shifts as development costs, achievable rents and sales prices, and thresholds for financial return change. In 2023, the City received 25 applications for 2,224 new units and entitled 2,093 units. This pipeline demonstrates that the static models are intended as a guiding barometer of potential market activity rather than a concrete expectation. These factors should be considered when determining an appropriate fee amount.

Trade-Offs
Raising the fee may limit a potential project moving forward. Alternatively, rescinding or lowering the fee does not guarantee a project will be feasible. The myriad factors influencing the market (i.e., construction, financing, rates of return) are dynamic and shift over time.

Setting a high fee may encourage developers to include on-site BMR units, expanding the community's affordable housing stock in mixed-income developments. It also heightens development feasibility challenges and project completion delays. Setting a low fee can better support development feasibility, but would reduce the number of HTF units the City can subsidize when the In-Lieu fee is paid; and setting the fee too low also risks missing out on potential affordable housing funding during favorable development conditions. Limiting In-Lieu fee revenue restricts the City's ability to support and leverage external funding for more deeply affordable housing in 100 percent affordable projects.

The Council should consider these trade-offs when determining an In-Lieu fee amount.

Methodology

Development Prototypes
The study used seven development prototypes to evaluate the financial feasibility impacts of the examined policies and identify development barriers. The prototypes were determined by reviewing Berkeley's recent development trends. Mid-rise (4- to 8-stories) prototypes and the high-rise prototype (18 stories) were modeled on recent projects entitled and completed in Berkeley. Middle Housing prototypes were based on a mix of recent examples in Berkeley and outside examples, given the rarity of these projects in Berkeley. Middle Housing prototypes included the Small-Lot Single Family, Fourplex/Townhomes, and 10-unit Small Multifamily prototypes. These prototypes may not be attainable under potential zoning amendments. Figure 3 provides an overview of the development prototypes.

The mid-rise and high-rise prototypes (four stories and above) incorporate the Density Bonus.

Figure 3. Development Prototypes Summary

Prototype	Description
Small-Lot Single Family*	Multiple single-family homes on a standard single-family lot size.
Fourplex/Townhomes*	Stacked townhomes on a standard single-family lot size.
10-Unit Small Multifamily*	3-story multiplex with surface parking.

Prototype	Description
4-Story Group Living Accommodation (GLA)	Micro-studio units with shared common spaces. Assumed to use Density Bonus.
6-Story Mid-Rise	Podium style mid-rise. Assumed to use Density Bonus.
8-Story Mid-Rise	Podium style mid-rise. Assumed to use Density Bonus.
18-Story High-Rise	Type 1 high-rise. Assumed to use Density Bonus.

* Prototype is designed to represent a Middle Housing type.
Source: Strategic Economics, 2024.

Proforma Analysis

A pro forma model tested the financial feasibility of each prototype against the 1) range of In-Lieu fee options (as identified below) and 2) HARD HATS, Bird Safe, and prevailing wage requirements. The pro forma inputs reflected today's market conditions including prices/rents, construction costs, and financing costs. Cost and revenue assumptions were informed by a review of existing reports, recent development activity, market data, and 13 interviews with developers, general contractors, and architects with experience working in Berkeley and the broader Bay Area. Detailed information about the development prototypes and proforma analysis is provided in Attachment 1.

Feasibility Threshold

Financial feasibility was assessed by considering current market thresholds for financial return requirements, which are shaped by broader market conditions and encompass the range of investment options available to developers and investors. This evaluation employed two metrics: "yield on cost" for rental prototypes and "return on cost" for ownership prototypes. Yield on cost was calculated by dividing the expected net annual operating income at full lease-up by total development costs, while return on cost was determined by dividing the expected net sales revenue by total development costs.
To establish reasonable thresholds for developer returns in Berkeley, Strategic Economics conducted interviews with local developers, reviewed comparable financial analyses in the Bay Area, and examined publications on the local and regional real estate market. As a result, rental projects were deemed feasible at a yield on cost of at least six percent, while ownership projects were considered viable at a return on cost of at least eight percent.

Sensitivity Analysis

Strategic Economics conducted a sensitivity analysis to provide context for the factors influencing the financial performance of the prototypes (e.g., construction costs, labor, rents) and how changing conditions influence the performance of the prototypes.

Development costs, revenues, and required return on investment change over time, and each change influences development feasibility outcomes. Development does not occur

in a vacuum. Every housing project is subject to its own unique development and market conditions that cannot be completely accounted for by static prototype modeling. The findings and recommendations account for these considerations.

Fee Calculations

The analysis used three approaches to determine justifiable fee ranges.

- **Affordability Gap**: This method calculates the maximum In-Lieu fee by comparing the revenues generated from market-rate and affordable rents for a typical new housing unit. The justifiable fee is set at the equivalent revenue loss incurred by providing an on-site BMR unit in a market-rate project, reflecting the perspective of for-profit developers.

- **Production Cost Gap**: This method determines the maximum in-lieu fee by considering the difference between affordable rents and the cost to produce an income-restricted housing unit. It represents the difference between the value of a BMR unit (i.e., rental or sale revenue) and its construction cost, indicating the total cost gap to produce affordable housing.

- **Average Local Contribution to Affordable Housing:** This method calculates an equivalent in-lieu fee based on the average financial contribution from local sources to 100 percent affordable developments. Staff surveyed recent contributions by the City's Housing Trust Fund program to affordable housing projects. This establishes the average minimum fee revenue required for the City to provide its typical contribution toward an affordable housing unit in 100% affordable projects.

These approaches generated a range of potential maximum justifiable In-Lieu fee levels. These fees were then compared against neighboring communities' fees and against the ability of market-rate housing development to support payment of the fees based on current development conditions.

A detailed description of methodology, assumptions, and calculations is included in Attachment 1.

BACKGROUND

On February 14, 2023, the City Council updated the City's inclusionary housing requirements in response to Council referrals and State laws. Assembly Bill 1505 in 2017 influenced these changes, consolidating affordable housing requirements for rental and ownership properties. The ordinance shifted the fee structure from Affordable Housing Mitigation to inclusionary housing In-Lieu fees, now based on Residential Unit Floor Area. An exemption for projects under 5,000 square feet was introduced temporarily to assess impacts on Middle Housing.

The current In-Lieu fee amount, determined by Street Level Advisors analysis from February 2022, transitioned the 2020 AHMF to a per-square-foot basis in line with the IHO. The Council chose this fee over the adjusted AHMF from July 2022 to enable a thorough analysis of COVID-19 and inflation impacts on the housing market. The previous AHMF was adopted on July 19, 2016 and biennially adjusted with the CCCI.

The inclusionary housing program has provided 575 BMR units across 54 properties (15% of the total units built). Since 2016, the affordable housing mitigation fee/in-lieu fee has generated over $51,000,000 for local affordable housing via the HTF program.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Infill affordable housing near transit, jobs, and amenities can reduce greenhouse gas emissions. The proposed plan supports infill development with on-site BMR units and in-lieu fees for the Housing Trust Fund, supporting affordable housing developers.

POSSIBLE FUTURE ACTION

Staff will bring revisions to the Inclusionary Housing Ordinance (Berkeley Municipal Code Chapter 23.328) and a resolution for an inclusionary housing In-Lieu fee to the Housing Advisory Commission, Planning Commission, and City Council later this year.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

An In-Lieu fee of $56.25 per square foot would apply to new residential projects not providing on-site BMR units per IHO requirements. The proposed 5,000 square-foot exemption for projects paying the full fee aims to reduce the fee and stimulate development for Middle Housing projects that currently are not feasible due to a variety of market constraints. Staff do not anticipate this exemption will apply to larger projects, which typically provide on-site BMR units to leverage Density Bonus benefits.

In-Lieu fees are deposited in the City's HTF program. Bond measures, such as Measure O, provide a significant but one-time source for affordable housing. The In-Lieu fee is Berkeley's primary dedicated funding source to support 100% affordable housing and leverage County, State, and federal funding.

Future affordable housing fee revenue trends are driven by variables outside the City's control (e.g., how projects choose to comply with the IHO, changes in state law, and broader housing market trends). However, Staff anticipate consistent revenue generation for affordable housing over the next Housing Element cycle if overall housing development and affordable housing compliance trends continue.

CONTACT PERSON

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Attachments:
1: Berkeley In-Lieu Fee and Housing Policies Economic Feasibility Analysis. Prepared by Strategic Economics, April 12, 2024.

BERKELEY IN-LIEU FEE AND HOUSING POLICIES ECONOMIC FEASIBILITY ANALYSIS

ASSESSMENTS OF THE IN-LIEU FEE AND HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE REQUIREMENTS

Prepared for:

City of Berkeley
April 12, 2024

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EXECUTIVE SUMMARY

Strategic Economics and Street Level Advisors were retained by the City of Berkeley to analyze the current residential development market context and provide recommendations regarding changes to the City's affordable housing "in-lieu" fee amount and application. As part of this study, Strategic Economics analyzed three new City construction requirements to assess their impacts on the financial feasibility of new market rate housing development.

These analyses supplemented and built upon changes made by the City of Berkeley to its affordable housing requirements in 2023. The 2023 changes included applying the in-lieu fee based on square feet of residential unit floor area (instead of a fee per housing unit), applying progressively lower fee amounts for projects below 12,000 square feet, and exempting projects with fewer than 5,000 square feet of housing unit floor area from the fee.

Those updates did not involve changing the equivalent in-lieu fee amount for a typical housing unit, nor did they include a deeper study of barriers to the development of small projects. Instead, the City of Berkeley sought the current study to examine the in-lieu fee level and its application under current market conditions. The resulting recommendations of this study propose further refinements that can help the City of Berkeley meet its housing production goals and encourage the development of small residential developments that diversify the housing stock.

Issues and Policies Studied

In-Lieu Fee Amounts and Policy:

- The purpose of this study was to analyze and recommend revised in-lieu fee amounts; in-lieu fees are an option for fulfilling the requirements applied to market rate housing development projects under the City's Inclusionary Housing Ordinance (IHO).[1] The IHO requires that developers of new housing with 5,000 or greater square feet of residential unit floor area (RUFA)[2] must either provide 20 percent of housing units as Below Market Rate (BMR) deed-restricted affordable housing, pay an in-lieu fee, provide a mix of BMR units and a pro-rated in-lieu fee payment, or pursue specified alternative options.

- A second goal of the in-lieu fee policy analysis was to ensure the policy does not discourage production of Missing Middle housing. As used in this report, the term "Missing Middle" refers to housing development projects with two to 19 housing units at sites equivalent in size to approximately one or two typical single-family lots.[3] Examples include small-lot single family homes (built on a single typically sized residential lot), duplexes, fourplexes, and modest multifamily buildings. The City of Berkeley is considering zoning changes to encourage Missing

[1] Berkeley Municipal Code Chapter 23.328.
[2] RUFA refers to the floor area of the Residential Unit(s) of a Housing Development Project, as measured from the interior walls of each unit.
[3] For purposes of this report, "Missing Middle" refers only to building design, and does *not* refer to any form of deed-restricted affordable or moderate-income BMR housing.

Middle housing; under the City's existing zoning rules, Missing Middle housing is generally not permitted in the City's low-density residential zoning districts.

Impacts of Construction Requirements on Housing Development Feasibility:

- The Helping Achieve Responsible Development with Healthcare and Apprenticeship Training Standards ("HARD HATS") Ordinance, effective January 1, 2024, applies to development projects of 50,000 gross square feet and above and requires that contractors and subcontractors demonstrate that they provide apprenticeship programs and health care coverage for workers.[4]

- The Bird Safe Building Ordinance, effective July 27, 2023, requires the use of materials known to reduce the incidence of bird collisions for development projects above 10,000 gross square feet and 35 feet in height.[5]

- The prevailing wage requirements analyzed in this report would apply to construction projects of 50,000 gross square feet and above, comparable to the policy recently approved by the City Council as part of the Southside Plan Area zoning revisions[6] (but not in effect elsewhere).

Development Prototypes

This study used seven "development prototypes" to assess the financial feasibility impacts of the studied policies and understand barriers to development. Development prototypes are general models that typify recent or potential development projects in the City of Berkeley. The midrise and high-rise prototypes (4 stories and above) were developed to model the use of the State Density Bonus Law (SDBL), which allows for an increase in project size in exchange for the provision of on-site Below Market Rate (BMR) units. Nearly all midrise and high-rise housing development projects in Berkeley now use SDBL to access bonus building area and concessions and waivers from local requirements.

The first three prototypes shown in Figure 1 represent Missing Middle housing products. The 10-Unit Small Multifamily prototype was based on outside examples rather than local projects since this Missing Middle product is rarely built in Berkeley.

[4] Berkeley Municipal Code Chapter 13.107.

[5] Berkeley Municipal Code Section 23.304.150.

[6] Approved January 30, 2024 as Ordinance 7,89-N.S. to amend the Berkeley Municipal Code by adding Chapter 13.108.

FIGURE 1. DEVELOPMENT PROTOTYPES SUMMARY

Prototype	Description
Small-Lot Single Family*	Multiple single-family homes on a standard single family lot size.
Fourplex/Townhomes*	Stacked townhomes on a standard single family lot size.
10-Unit Small Multifamily*	3-story multiplex with surface parking.
4-Story Group Living Accommodation (GLA)	Micro-studio units with shared common spaces. Assumed to use SDBL.
6-Story Midrise	Podium style midrise. Assumed to use State Density Bonus
8-Story Midrise	Podium style midrise. Assumed to use State Density Bonus.
18-Story High-rise	Type 1 high-rise. Assumed to use State Density Bonus.

* Prototype is designed to represent a Missing Middle housing type.
Source: Strategic Economics, 2024.

Financial Feasibility Overview and Impacts of HARD HATS, Bird Safe Building, and Prevailing Wage Requirements

The financial feasibility analysis found that few prototypes are currently feasible even without the additional cost impacts of HARD HATS, Bird Safe Building, and prevailing wage requirements; of the rental prototypes, only the 4-Story GLA was feasible, while the Small-Lot Single Family and Fourplex/Townhomes were the only feasible ownership prototypes. These results are driven by relatively high current construction costs for labor and materials, high financing costs, and comparatively limited rent appreciation in recent years. The residential development types that are currently feasible in Berkeley tend to have relatively lower costs for materials and labor while also commanding high rents per square foot or high overall sales prices.

Although most typical market rate residential development projects are currently financially infeasible, developers may still propose projects or construct projects in anticipation of improved development conditions or due to project-specific factors. The results of the financial feasibility analysis represent outcomes for a developer initiating a typical market rate project under today's typical cost, revenue, and thresholds for return on investment. Multiple factors explain why developers continue to propose or construct housing projects in Berkeley. Developers submitted several project applications in 2023 to potentially avoid being subject to HARD HATS, which took effect in January 2024. Other developers are optimistic and believe that development conditions will change soon—such as increasing achievable rents (driven partly by strong student demand), slowing increases in construction costs, or reduced project financing costs. Individual development projects can also have unique beneficial characteristics that reduce development costs, such as lower land acquisition costs, innovative construction techniques (such as modular construction), or access to unique financing arrangements.

HARD HATS requirements increase development costs at a level comparable to switching from largely non-union labor to union labor for a development project, increasing hard costs (labor and materials) by approximately 18 to 25 percent. The ordinance currently requires contractors to show proof of health insurance contributions for workers six months prior to the start of any construction job. In practice, the HARD HATS requirement largely limits the pool of compliant contractors to those using union labor because health care is included in workers' membership.

A potential prevailing wage requirement would have similar cost implications as HARD HATS requirements, although *not in addition to HARD HATS' cost implications* if a development project is

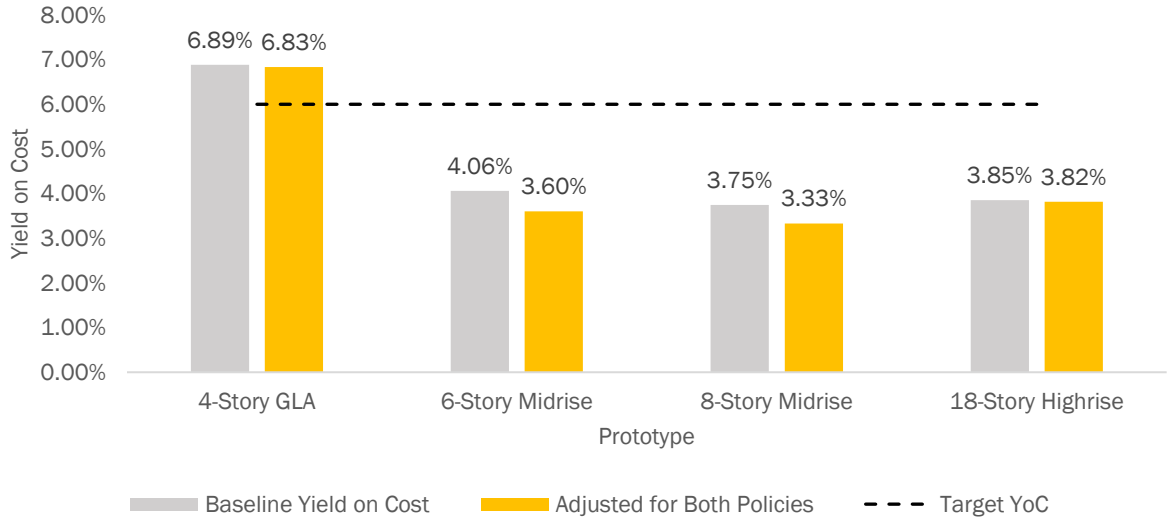
subject to both requirements. This is because prevailing wages incorporate costs corresponding to most of the benefits provided by union membership, such as apprenticeships, retirement contributions, and healthcare.

The Bird Safe Building requirements add an additional 1.5 percent to the hard costs of residential development. This cost impact varies based on the amount of glass in the building's design.

As development conditions improve and more housing types become feasible to build again, the new and proposed labor and construction policies will most significantly increase costs for and weaken the feasibility of midrise residential development in Berkeley. Figure 2 shows the cost impact of HARD HATS and the Bird Safe Building requirements on the financial feasibility of the applicable prototypes. Only the 6-Story and 8-Story midrise prototypes are subject to the full cost impacts of both policies. As shown, the percent change in yield on cost—a measure of return on investment used here to assess financial performance—is negative 11 percent for the 6-Story and 8-Story Midrise prototypes when incorporating HARD HATS and Bird Safe Building requirements, versus less than one percent for the 18-Story Highrise prototype.

HARD HATS and prevailing wage policies drive greater cost increases for midrise projects because a relatively larger percentage of their construction labor costs would shift from non-union to union labor. Smaller midrise projects are more likely to use a higher percentage of non-union trades for their development. Specific trades tend to often use union labor, such as those associated with concrete work. However, for trades such as mechanical, electrical, and plumbing (MEP), smaller projects often do not use union labor. In contrast, cost impacts will be relatively limited for high-rise construction projects since a larger share of trades for these projects typically use union labor.

FIGURE 2. FINANCIAL FEASIBILITY IMPACTS OF HARD HATS AND BIRD SAFE BUILDING REQUIREMENTS



Note: Prototypes are feasible when the yield on cost exceeds six percent.
Source: Strategic Economics, 2024.

Development conditions are dynamic, with constant changes over time in achievable rents/prices, components of development costs, and required rates of return on investment. Figure 3 illustrates this principle by showing the impact on project return (expressed as yield on cost) given hypothetical changes in rent and total development costs for one unit of housing from the 6-Story Midrise prototype.

The project return would need to increase from 3.60 percent to 4.06 percent to achieve the same financial performance while absorbing the additional cost impacts of HARD HATS, etc., as shown above in Figure 2. This could be achieved if, for example, rents increased 10 to 15 percent, or if rents increased five to 10 percent and development costs declined five percent.

FIGURE 3. IMPACTS OF CHANGES IN RENT AND DEVELOPMENT COSTS ON THE YIELD ON COST OF ONE RENTAL UNIT

Change in Development Costs	Change in Rent: -10%	-5%	0%	5%	10%	15%
-10%	3.60%	3.80%	4.00%	4.20%	4.40%	4.61%
-5%	3.41%	3.60%	3.79%	3.98%	4.17%	4.36%
0%	3.24%	3.42%	3.60%	3.78%	3.96%	4.14%
5%	3.09%	3.26%	3.43%	3.60%	3.78%	3.95%
10%	2.95%	3.11%	3.28%	3.44%	3.60%	3.77%

Source: Strategic Economics, 2024.
Note: Feasible yield on cost in this analysis is six percent. While the development becomes slightly more feasible as rents increase and development costs decrease, the project is still infeasible in all scenarios displayed above.

The additional development costs associated with the HARD HATS, prevailing wage, and Bird Safe Glass requirements are not likely to pose an insurmountable barrier to future market rate residential development in Berkeley when development conditions improve, but the requirements will constrain the likelihood and pace of future housing production. The magnitude of changes in rents, development costs, and other development conditions required to cover the impacts of HARD HATS and the other requirements is likely achievable over time as market conditions shift. Overall demand for housing is strong in Berkeley, especially given the number of students seeking housing. However, the development cost increases associated with HARD HATS, prevailing wage, and Bird Safe building requirements are significant enough to delay or constrain housing production since the policies increase the required changes in rents/prices, development costs, and market return thresholds necessary before housing development becomes feasible.

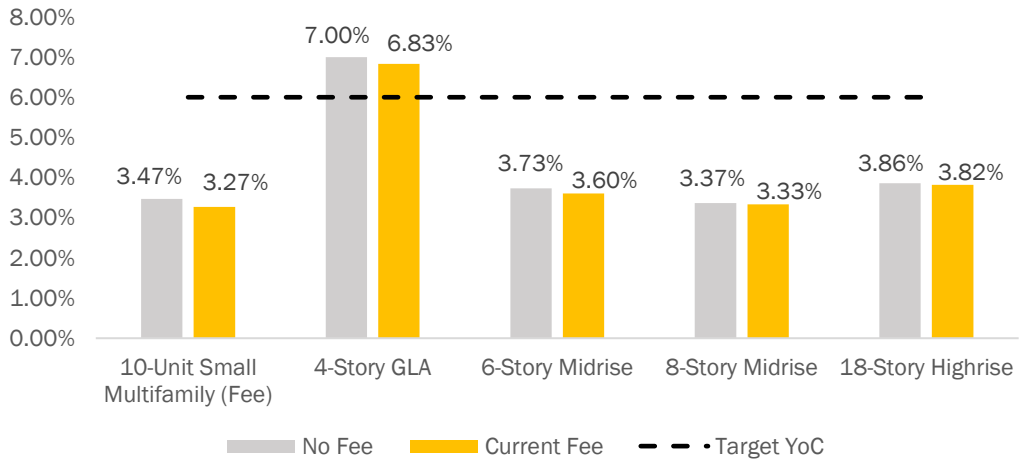
In-lieu Fee Analysis and Recommendations

Strategic Economics examined the in-lieu fee revision from multiple perspectives, including consideration of comparability with the costs of providing on-site Below Market Rate (BMR) units, the cost to produce off-site affordable units via fee revenue, financial feasibility conditions, comparability with fees in other nearby communities, and consideration of barriers and opportunities to support Missing Middle housing. The analyses found the following:

- Nearly all of the analyzed development prototypes are currently financially infeasible to build as a new project under today's development conditions and existing City requirements, except for the 4-Story GLA rental project, Small Lot Single Family ownership product, and Fourplex/Townhomes ownership product.

- The poor financial performance of the development prototypes is primarily attributable to the broader feasibility challenges, noted earlier, rather than the current in-lieu fee level. For example, the in-lieu fee only results in a negative percent change in project return of between one and six percent for the rental prototypes, as shown in Figure 4.

FIGURE 4. IMPACT OF IN LIEU FEE ON FINANCIAL FEASIBILITY OF APPLICABLE PROTOTYPES



Source: Strategic Economics, 2024.

- Smaller Missing Middle products—Small Lot Single Family and Fourplex/Townhomes—demonstrate some financial capacity to support an in-lieu fee under today's development conditions, but these products are rarely built due to challenges such as the lack of small-scale developers with capacity and interest in this type of development and the limited inventory of lower-cost underutilized sites available for sale in existing neighborhoods.

- A variety of tradeoffs must be considered when selecting an in-lieu fee. Setting a high fee can incentivize developers to provide on-site BMR units rather than pay the fee; this adds to the City's affordable housing stock and contributes to mixed-income developments, yet limits City resources to leverage outside funding to produce more deeply affordable housing in 100 percent affordable projects created through the Housing Trust Fund program. Setting a high fee increases development feasibility challenges and can delay when and whether housing projects are built. Setting a low fee can achieve the opposite outcomes—but setting the fee too low can also create a scenario in which the City may "miss the market" by failing to collect potential affordable housing funding when development conditions improve.

- Regardless of the fee level, larger development projects will continue to include and produce on-site BMR units to receive density bonuses; these projects typically also contribute prorated fee revenue. Given the value of SDBL incentives, most midrise and high-rise development projects in Berkeley are likely to be built with density bonuses.

- The current in-lieu fee level is similar to the City's typical contribution toward the cost of providing off-site affordable housing units in 100 percent affordable housing projects before accounting for additional administrative costs. The average funding contributed by the City of Berkeley to produce an equal number of affordable units in a 100 percent affordable housing project is generally equivalent to a per residential square foot in lieu fee of $58.59, or $67.38 after including a 15 percent increase for administrative costs. The City's current maximum in-lieu fee is $56.25 per square foot.

Based on these findings, Strategic Economics prepared recommendations seeking to support the following goals:

1. Produce affordable housing through on-site BMR inclusionary units or through in-lieu fees that the City can use to leverage outside funding to produce affordable units in 100 percent affordable housing developments.
2. Support the financial feasibility of market rate housing development so these projects can in turn generate on-site BMR units or in-lieu fee funding resources.
3. Promote the development of Missing Middle product types that add two- to 19-unit housing options in Berkeley's neighborhoods.

The following table summarizes the current in-lieu fee structure and recommended changes. The recommended changes are explained in the narrative following the table.

FIGURE 5: CURRENT IN-LIEU FEE POLICY AND RECOMMENDED CHANGES

	Current In-Lieu Fee Policy	Recommended Changes
In-Lieu Fee Amount	$0 per square foot for projects below 5,000 square feet (residential unit floor area) $38.75 for projects between 5,000 and 5,999 square feet, and then incrementally increases for each thousand square feet between 6,000 up to 11,999 square feet $56.25 for projects of 12,000 square feet or more	$56.25 per square foot for all projects
Application to Projects Opting to Pay the Full Fee and Provide No Qualifying On-Site Inclusionary Units	See above	The first 5,000 square feet would be exempt from the in-lieu fee for any project opting to pay the full fee instead of providing any on-site inclusionary units (State Density Bonus projects cannot qualify for the exemption since they include qualifying on-site inclusionary units)
Application to Projects Opting to Pay a Prorated Fee Through Mixed Compliance with the Inclusionary Requirements	Fee structure and level remains the same as above; for State Density Bonus projects a prorated fee would apply to the remaining obligation after accounting for on-site BMR units produced to attain density bonus status, and the fee only applies to the base project (i.e., City inclusionary requirements and in-lieu fee cannot apply to the bonus area of the development)	Projects opting to include any on-site inclusionary units (including State Density Bonus projects) would still be obligated to pay any remaining prorated fee obligation, if applicable, with no exemption; the fee itself would now be $56.25 per the first recommended change
Fee Level Adjustment Over Time	The in-lieu fee is adjusted every two years based on the California Construction Cost Index	No change

Recommendation 1: Eliminate the current in-lieu fee structure that exempts projects with less than 5,000 square feet of RUFA from the fee and progressively increases fee levels for projects between 5,000 and 12,000 square feet. Instead, apply the same in-lieu fee level to all housing development projects.

Currently there is an exemption to the affordable housing requirements for new residential development with less than 5,000 square feet of RUFA. Strategic Economics recommends removing this exemption as part of a package of recommendations designed to simplify the affordable housing requirements and support the development of Missing Middle housing in Berkeley. Adjusting the policy to apply to all residential developments, with no "phase in" based on project size, reduces the incentive for developers to pursue projects just under the applicable square footage to avoid triggering higher in-lieu fees. For example, currently a housing project with 4,999 square feet of RUFA would pay zero in-lieu fees, while a project with 5,001 square feet would pay over $193,000 in in-lieu fees.

Recommendation 2: For any project opting to pay the full fee instead of providing any on-site inclusionary units, exempt the first 5,000 square feet of RUFA from the in-lieu fee.

This exemption supports production of Missing Middle housing by ensuring these small developments pay a relatively low fee per square foot of project area, yet developers would no longer be incentivized to reduce the project size to avoid triggering a significantly higher total fee. At the same time, the full fee would still apply to nearly all larger midrise and high-rise housing projects since developers are likely to continue building these product types as SDBL projects that require on-site BMR units.

The policy change would modestly decrease the total in-lieu fee paid by a limited number of housing product types that are rarely built in Berkeley, such as the 10-unit Small Multifamily building tested in this analysis. However, the policy change would also slightly increase fee revenue from other projects, such as the 4-story Group Living Accommodation prototype tested in this analysis.

While the exemption slightly disincentivizes satisfying the affordable housing requirement by providing on-site BMR units—since the fee is lower than the equivalent affordability gap—developers of SDBL projects will continue to provide on-site BMR units to trigger access to the State Density Bonus law's valuable concessions, waivers, and additional development capacity. Since SDBL provides these significant benefits for projects, most larger projects will likely continue to provide on-site units and pay prorated in-lieu fees for the remaining obligation.

Recommendation 3: Maintain the existing $56.25 maximum in-lieu fee level as the universally applicable in-lieu fee.

While the in-lieu fee could justifiably be increased to become equivalent to the cost of producing an on-site BMR unit, Strategic Economics recommends maintaining the new universal in-lieu fee level at its current maximum of $56.25. This supports the production of new housing by not increasing the fee level at a time when project financing and construction materials and labor costs are making residential development particularly challenging. Maintaining the current in-lieu fee level also allows the City of Berkeley to maintain a fee that is approximately equivalent to the City's typical direct contributions to the cost of leveraging an off-site affordable housing unit. By maintaining the current in-lieu fee, the City will maintain its primary affordable housing funding source as development conditions improve, mitigating the risk of lost opportunity to secure funding when development conditions shift.

Recommendation 4: Continue to adjust the in-lieu fee regularly based on the California Construction Cost Index.

Regular adjustment of the fee increases the likelihood that the revenue collected will continue to support a comparable number of affordable units in future 100 percent affordable housing projects.

I. INTRODUCTION: KEY CONCEPTS, APPROACH, AND DEVELOPMENT PROTOTYPES

Purpose of Study

Strategic Economics and Street Level Advisors were retained by the City of Berkeley to analyze the current residential development market context and provide recommendations regarding changes to the City's affordable housing "in-lieu" fee amount and application. As part of this study, Strategic Economics analyzed three new City construction requirements to assess their impacts on the financial feasibility of new market rate housing development.

The analysis of the City of Berkeley's in-lieu fee policy examined maximum supportable fee levels and whether and how to adjust application of the fees. In-lieu fees are paid by market rate developers in lieu of providing on-site affordable housing units required under the City of Berkeley's Inclusionary Housing Ordinance (IHO).

These analyses supplemented and built upon changes made by the City of Berkeley to its affordable housing requirements in 2023. The 2023 changes included applying the in-lieu fee based on square feet of residential unit floor area (instead of a fee per housing unit), applying progressively lower fee amounts for projects below 12,000 square feet, and exempting projects with fewer than 5,000 square feet of housing unit floor area from the fee.

Those updates did not involve changing the equivalent in-lieu fee amount for a typical housing unit, nor did they include a deeper study of barriers to the development of small projects. Instead, the City of Berkeley sought the current study to examine the in-lieu fee level and its application under current market conditions. The resulting recommendations of this study propose further refinements that can help the City of Berkeley meet its housing production goals and encourage the development of small residential developments that diversify the housing stock.

Two new City requirements analyzed by Strategic Economics consisted of those enacted by the Helping Achieve Responsible Development with Healthcare and Apprenticeship Training Standards ("HARD HATS") ordinance and the Bird Safe Building requirements ("Bird Safe Building") ordinance. Strategic Economics also studied the impact of an expanded prevailing wage requirement on certain residential developments; this requirement is currently only in place in the Southside Plan area. Each of these requirements is discussed in detail below.

The study was guided by five key policy questions:

1. How should the in-lieu fee and its application be updated to support the City's policy goals of encouraging new affordable and market rate housing development?
2. What are key barriers to developing small "Missing Middle" infill housing products?
3. How can the in-lieu fee be adjusted to support the development of small missing middle infill housing products?
4. How do recent policy changes, including Bird Safe Building and HARD HATS, impact the financial feasibility of residential development?
5. How does the potential prevailing wage requirement impact the financial feasibility of residential development?

OVERVIEW OF IN-LIEU FEE POLICY AND MISSING MIDDLE HOUSING GOALS

The purpose of this study was to study and recommend revised in-lieu fee amounts based on an analysis of current market conditions for residential development. The in lieu fee is a way in which developers can fulfill the requirements applied to market rate housing development projects under the City's Inclusionary Housing Ordinance (IHO).[7] The IHO requires that developers of new housing with over 5,000 square feet of residential unit floor area (RUFA)[8] must either provide 20 percent of housing units as Below Market Rate (BMR) deed-restricted affordable housing, pay an in-lieu fee, provide a mix of BMR units and pro-rated in-lieu fee payment, or pursue specified alternative options.

The City's current in-lieu fee is tiered based on the total square footage of the development project, with fee levels starting at $38.75 per square foot of RUFA for a 5,000 square foot project. The fee then increases every 1,000 square feet until reaching the maximum current fee of $56.25 per square foot for projects of 12,000 square feet and larger. The fee is automatically adjusted every two years, based on changes to the California Construction Cost Index.

The in-lieu fee analyses and recommendations in this report focus on ensuring that new market rate development projects can and will generate affordable housing units. These units could be generated either through provision of on-site BMR units or through in-lieu fee funding resources. Those resources enable the City to leverage additional outside funding and produce affordable housing units in 100 percent affordable housing projects.

A second goal of the in-lieu fee policy analysis was to ensure the policy does not discourage production of Missing Middle housing. As used in this report, the term "Missing Middle" refers to housing development projects with two to 19 housing units at sites equivalent in size to approximately one or two typical single-family lots.[9] Examples include small-lot single family homes, duplexes, fourplexes, and modest multifamily buildings. This type of housing provides an intermediate density that can increase the number of homes in existing neighborhoods.

The City of Berkeley has pursued multiple efforts to encourage Missing Middle housing, which is not commonly built in the city today. These efforts include City Council referrals to study the issue and to remove exclusionary zoning, Housing Element policies, and preparation of Middle Housing zoning amendments and objective design standards. This study explores the key barriers to developing Missing Middle housing and recommends in-lieu fee policy adjustments intended to support future development of this housing type while simplifying the current in-lieu fee structure.

OVERVIEW OF THE HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE POLICIES

This study analyzed the impact of construction policies on the financial feasibility of residential development to understand the current market conditions that might influence the future direction of the in-lieu fee. The City of Berkeley's HARD HATS Ordinance, effective January 1, 2024, applies to development projects of 50,000 gross square feet and above, which is the equivalent of approximately 50 housing units in a multifamily development project.[10] HARD HATS requires contractor and subcontractor prequalification to demonstrate that these employers provide apprenticeship programs

[7] Berkeley Municipal Code Chapter 23.328.
[8] RUFA refers to the floor area of the Residential Unit(s) of a Housing Development Project, as measured from the interior walls of each unit.
[9] For purposes of this report, "Missing Middle" refers only to building design, and does *not* refer to any form of deed-restricted affordable or moderate-income BMR housing.
[10] Berkeley Municipal Code Chapter 13.107.

and health care coverage for workers. The Bird Safe Building Ordinance, effective July 27, 2023, requires the use of materials known to reduce the incidence of bird collisions for development projects above 10,000 gross square feet and 35 feet in height.[11] The City also sought an analysis of the financial feasibility impacts associated with applying prevailing wage requirements to construction projects of 50,000 gross square feet and above—comparable to those recently approved by the City Council as part of the Southside Plan Area zoning revisions.[12]

Report Structure

This report consists of the following content:

- The remainder of this report introduction describes the approach used to complete the feasibility analyses conducted as part of the study.

- **Section II** describes analysis findings, conclusions, and policy recommendations for adjustments to the in-lieu fee and policy (page 24).

- **Section III** describes the findings and conclusions of the financial feasibility analysis. This includes analysis of the impacts of the HARD HATS, Bird Safe Building, and proposed prevailing wage requirements on the current market conditions for residential development (page 35).

- **Appendix** provides detailed tables describing the key assumptions, inputs, calculations, and outputs of the analyses (page 47).

Financial Feasibility Analysis Concepts

The following content introduces important concepts related to the financial feasibility analysis components of the study. At the most basic level, "financial feasibility" simply refers to whether a development project generates sufficient revenues to justify the costs and risks of building the project.

Because inclusionary housing and in-lieu requirements like Berkeley's seek to leverage the activities of the private market to produce affordable housing, the requirements rely on the financial feasibility of market rate housing projects. This means inclusionary and in-lieu fee policies are reliant on some factors outside of the City's control. Cities can control what types of housing are allowed on each parcel using land use regulation, and whether project proposals are approved. However, a city cannot control whether developers propose projects within those regulations, nor the exact composition of proposed projects. Developers will only propose projects that they assess as being feasible to construct.

Requirements to provide inclusionary affordable units or pay a certain level of additional fees influence development feasibility for market rate housing developers by reducing revenues or increasing costs. Thus, for an inclusionary policy to contribute to affordable housing production, its requirements must be high enough that they result in the production of new on-site affordable units or fee revenues, but not be so high that they prevent market rate housing projects from being feasible. This makes it

[11] Berkeley Municipal Code Section 23.304.150.
[12] Approved January 30, 2024 as Ordinance 7,89-N.S. to amend the Berkeley Municipal Code by adding Chapter 13.108.

important to identify how different in-lieu fee levels relate to the total revenue and expenses of a project.

On the other hand, requiring on-site BMR units or in-lieu fee contributions can help Berkeley meet its affordable housing development goals through multiple means of affordable housing production. Thus, the content of this section explains why financial feasibility of housing development matters for setting inclusionary policies; how "affordable" housing is defined and affects financial feasibility considerations; and how inclusionary policies fit within the context of overall affordable housing production in a community.

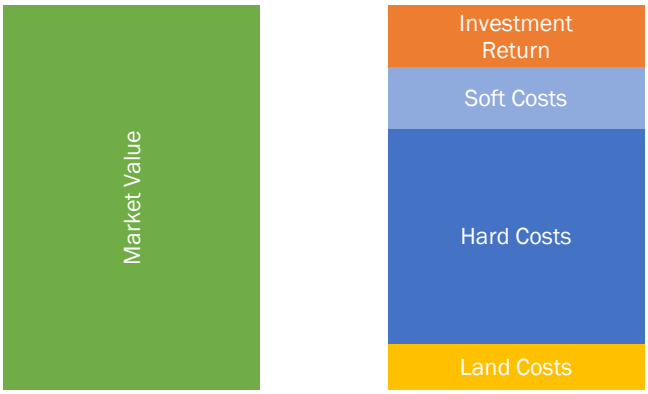
From a market rate housing developer's perspective, development projects are only financially feasible when the market value of the project (based on total net operating income) exceeds project costs and investment return. As shown in Figure 6, this is determined by the following factors.

- Total project revenue is determined by the market value of the project.
    - For for-sale projects, the market value consists of the sales prices the units can obtain.
    - For rental projects, the market value of the project depends on the annual revenue it will generate and the current capitalization rate, which reflects overall project investment risk relative to alternative investments (see the box on Page 13 for more information on investment return metrics).

- Total project costs include hard costs, soft costs, investment return, and land costs.
    - Hard costs include materials and labor associated with physical construction of the building.
    - Soft costs include indirect expenses such as architecture and engineering, taxes, insurance, financing costs, and municipal fees.
    - Investment return consists of the required financial return on investment that a project must achieve to attract developer and lender investment.
    - Land costs refer to the price the developer pays to acquire the land.

Each of these factors is very dynamic; project costs and revenues can fluctuate significantly, and many factors, such as the market rate price of housing, are beyond the City's direct influence. Instead, the market rate price or rental rate for housing is primarily set by local market demand; the price and rent may rise and fall according to the availability of housing supply, presence of amenities, or other factors in the market area.

FIGURE 6. COMPONENTS OF FINANCIAL FEASIBILITY: PROJECT VALUE AND PROJECT COST COMPONENTS



Source: Strategic Economics, 2023.

KEY DEVELOPMENT TERMS AND DEFINITIONS

Net Operating Income (NOI): The total revenue remaining after accounting for all expenses and vacancies.

Capitalization Rate: A ratio of annual net operating income of an asset to its market value. This rate, which accounts for current market conditions, is used for purposes of analysis to translate the revenue from the income-producing rental prototypes into the equivalent sales value of the projects. This study used a capitalization rate of five percent to determine the "capitalized value" of each prototype.

Yield on Cost: The project's potential return on investment as a proportion of total development costs. It is calculated by dividing a property's net operating income by the total cost to develop the property. Yield on cost is typically the metric used for capturing the potential return of rental properties. This study used a yield on cost threshold of six percent to determine financial feasibility.

Return on Cost: The project's potential return on investment as a proportion of total development costs. It is calculated by subtracting total development costs from total revenue, and dividing the remainder by the total cost to develop the property. Return on cost is typically used for capturing the return of ownership properties. This study used a return on cost threshold of eight percent to determine financial feasibility.

An in-lieu fee provides an option for a developer to pay a fixed sum rather than provide on-site units to satisfy the City's affordable housing requirements. The fee can be set in a variety of ways to encourage development in line with the City's priorities for affordable housing production. For example, if a fee is significantly less than the cost of providing additional on-site units, it can disincentivize on-site production of BMR units. However, if the City aims to collect funds for affordable housing, fee payments can be a desirable outcome.

Ultimately, in-lieu fees, HARD HATS, Bird Safe Building, and prevailing wage requirements create costs for development projects while the market value of the project remains the same. These policies create tradeoffs between maximizing the potential pace of housing production versus ensuring housing development contributes to other important City goals.

Approach to the Financial Feasibility Analysis

Strategic Economics performed a financial feasibility analysis to test the impacts of HARD HATS, Bird Safe Building, and prevailing wage requirements on new housing development projects, and to examine the extent to which different market rate housing products in Berkeley can support in-lieu fee contributions.

Strategic Economics first worked with City staff and analyzed information about recent projects to create development "prototypes." Then Strategic Economics built a pro forma model to test the financial feasibility of each prototype under different requirements and fees. Detailed information about the development prototypes is provided in the following section of the report.

Strategic Economics measured the financial feasibility of each prototype and scenario using a static pro forma model that solves for the financial "return on investment" supported by the project. A pro forma model is a tool used to estimate the financial performance of a development project. The base static model reflected today's market conditions such as prices/rents, construction costs, and financing costs. Cost and revenue assumptions were informed by review of existing reports, recent development activity, market data, and 13 interviews with developers, general contractors, and architects with experience working in Berkeley and the broader Bay Area. This report's appendix shows detailed cost and revenue assumptions, other inputs and calculations, and a set of basic pro forma statements.

A project was considered financially feasible when the investment return met current market thresholds. These thresholds are driven by broader market conditions, recognizing that developers and investors have a range of investment options beyond a given development project.

Financial feasibility was assessed using "yield on cost" for rental prototypes and "return on cost" for ownership prototypes. Yield on cost was calculated by dividing the expected net annual operating income at full lease-up by total development costs. Return on cost was calculated by dividing the expected net sales revenue by total development costs.

To establish a reasonable threshold for a developer's rate of return on new development projects in Berkeley, Strategic Economics interviewed local developers, reviewed other similar financial analyses in the Bay Area, and reviewed publications on the local and regional real estate market. Based on this research, the analysis assumed that rental projects were feasible at a yield on cost of at least six percent and ownership projects at a return on cost of at least eight percent.

Development Prototypes Used in the Feasibility Analysis

Strategic Economics created seven development prototypes that represent typical residential developments recently completed or proposed in Berkeley. The prototypes were then used to test the financial feasibility of new and proposed labor and construction policies, as well as potential updates to the in-lieu fee. The creation of the prototypes was completed in collaboration with the City of

Berkeley. The prototypes represent a range of tenures, locations within the city, residential densities, building heights, parking formats, and use of the State Density Bonus Law (see the pullout on the law).

STATE DENSITY BONUS LAW: BACKGROUND, APPLICATION, AND LOCAL CONTEXT

The State Density Bonus Law (SDBL) was originally enacted in 1979 to encourage affordable housing development. The law allows developers to build beyond the maximum allowed density in a jurisdictions' land use plan in exchange for providing a certain number of new deed-restricted affordable dwelling units on site. It also grants developers access to certain incentives that allow for cost reductions as well as waivers to development standards that would otherwise physically preclude the project from being built on the chosen site.

Developers submit applications for SDBL projects that are based on a base project that conforms to the development standards of the site. This base project then has a density bonus applied to it based on the number of on-site affordable units provided and their level of affordability. These elements directly correspond to the increase in density allowed to the project. They also influence the number of incentives and waivers granted to the project. Developments with more below-market rate units and deeper affordability levels (i.e., very low and low income) qualify for larger density bonuses and up to four incentives and waivers. In 2021, the law was modified to allow up to a 50% bonus with the corresponding provision of on-site affordable units. In 2023, AB 1287 was passed, allowing for an additional density bonus with the provision of moderate income units. This study only models projects that use very low and low income units to gain access to a density bonus.

SDBL projects are subject to the inclusionary housing ordinance of the jurisdiction in which they are built. However, the on-site units provided to gain access to the density bonus can be used to satisfy all or part of the local affordable housing requirements, which typically require either the provision of on-site units, the payment of an in-lieu fee, or some combination of both. Inclusionary and in-lieu fees are only applied to the base project version of the SDBL development, which means that the fee is applied based on the square footage of a smaller project than what is eventually built. Since SDBL projects must provide some on-site units to qualify for the density bonus, if they choose to pay a fee to satisfy the remainder of the affordable housing requirements then the fee is prorated. Thus, SDBL projects tend to pay a much smaller in lieu fee than a similarly sized project that does not take a density bonus.

Several of the prototypes used for this study utilize the SDBL. This decision reflects patterns seen in the recent development activity in the City of Berkeley. The City's building permit log from 2022 and 2023 demonstrates the increased use of SDBL for midrise and high-rise development; over half of the permitted midrise projects and all the permitted high-rise projects use the law. Local developers interviewed for this study provided further verification of the importance of SDBL for making residential development projects pencil, as the increased unit count and incentives and waivers provide additional revenue while reducing development costs.

The prototypes were also developed to respond to specific policy questions around underrepresented development types, including Missing Middle housing, which is between two and 19 units. Thus, the Missing Middle prototypes draw from real projects in Berkeley and from outside sources, such as Opticos Design's guidelines for Missing Middle Housing.[13]

The development prototype characteristics are described below and summarized in Figure 7.

Missing Middle Prototypes:

- *Small Lot Single Family:* This prototype was designed to fit three single-family homes on the standard size lot for one single family home in Berkeley, which is approximately 0.1 acres. Each of the three single family homes included in the prototype is three stories, 1,500 gross square feet, and has one garage parking space.
- *Fourplex/Townhomes:* This prototype consists of four townhomes built around a four-car garage. This prototype is also designed on a standard size lot for one single family home (0.1 acres) and is three stories at its highest point. Each townhome is 1,200 square feet.
- *10-Unit Small Multifamily:* This prototype includes ten units split evenly between 1- and 2-bedroom apartments. The one-bedroom units are 750 square feet, and the two-bedroom units are 1,100 square feet.

These prototypes were developed based on existing and proposed developments in Berkeley. However, there are few existing examples of this type of housing in the city, especially for the 10-Unit Small Multifamily prototype. As a result, that prototype draws from Opticos Design's guidelines for a "multiplex" housing type.

Group Living Accommodation (GLA), Midrise, and High-rise Prototypes:

- *4-Story GLA:* This prototype was designed according to the City of Berkeley's definition of a GLA, requires separate sleeping rooms with large common spaces. GLA buildings are typically marketed to students. The prototype fits on a 0.2 acre lot and has 36 units. One unit is a one-bedroom, designed for a resident manager, while the other 35 are micro-studios. The prototype does not include parking.
- *6-Story Midrise:* This prototype was designed on a 0.5 acre lot, with 75 units. It reflects newer developments that have been proposed or built near the Ashby BART station and along the San Pablo corridor.
- *8-Story Midrise:* This prototype was designed on a 0.5 acre lot, with 120 units. It reflects newer developments that have been proposed or built near the Ashby BART station and along the San Pablo corridor.
- *18-Story High-rise:* This prototype is designed on a 0.5 acre lot, with 240 units. This type of development is currently only allowed in the area covered by the Downtown Berkeley Area Plan.

Additional Prototype Characteristics

- **Tenure:** The Small Lot Single Family, Fourplex/Townhome, and 10-unit Small Multifamily prototypes were tested as ownership and rental products. The other prototypes were only tested as rental products since current development conditions greatly disfavor larger condominium development projects—as indicated by minimal development activity of midrise

[13] Opticos Design,"Missing Middle Housing," https://missingmiddlehousing.com/types.

and high-rise condominium projects in and near Berkeley over the past decade. This is largely due to condo construction liability under California state law, which can make insurance costs prohibitively expensive.

- **Project Density:** The prototypes represent various lot sizes and densities found across Berkeley, with denser projects typically located closer to Downtown and the UC Berkeley campus.

- **Common Location:** "Common Location" in Figure 7 notes where the prototype would most likely be developed, based on past development activity.

- **Parking Format:**
    - The Small Lot Single Family and Fourplex/Townhome prototypes have a parking ratio of one space per unit.
    - All other prototypes have lower parking ratios, with those located closest to the UC Berkeley campus and most likely to be targeted to students including zero automobile parking spaces. This reflects real-world development trends since the City removed its minimum parking requirements in 2022.

- **State Density Bonus Law:**
    - Prototypes from the 4-story GLA and larger were all assumed to use the State Density Bonus Law to achieve their unit counts. The prototypes were therefore derived from an assumed base project that has a certain percent of density added, based on the number of inclusionary BMR units provided on site (see Figure 7 for the percentage of on-site BMR units provided per prototype).

FIGURE 7. DEVELOPMENT PROTOTYPE DEFINITIONS AND CHARACTERISTICS

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Description	Multiple single family homes on a standard single family lot size	Stacked townhomes on a standard single family lot size	3-story multiplex with surface parking	Micro-studio units with shared common spaces	Podium style midrise	Podium style midrise	Type 1 high-rise
Common Location	West Berkeley	West Berkeley	West Berkeley	Southside & Downtown	South & Southwest Berkeley	South & Southwest Berkeley	Downtown
Site Size (acres)	0.1	0.1	0.2	0.2	0.5	0.5	0.5
Floors	3	3	3	4	6	8	18
Gross Square Feet	4,500	4,800	11,587	14,520	61,930	89,984	208,727
Residential Square Feet	4,500	4,800	9,250	9,400	49,460	71,320	165,780
Housing Units	3	4	10	36	75	120	240
Density (units/acre)	30	40	50	180	150	240	480
Parking Ratio (spaces/unit)	1	1	0.5	0	0.5	0.125	0
Tenure	Rental & Owner	Rental & Owner	Rental & Owner	Rental	Rental	Rental	Rental
Uses SDBL*	No	No	No	Yes	Yes	Yes	Yes

Note:
* SDBL = State Density Bonus Law.
Source: Strategic Economics, 2024.

II. IN-LIEU FEE ANALYSIS AND RECOMMENDATIONS

This section of the report describes relevant findings and concluding recommendations for updating the City of Berkeley inclusionary housing policy's in-lieu fee amount and application. The findings examine the in-lieu fee revision from multiple perspectives, including consideration of comparability with the costs of providing on-site BMR units, the cost to produce an off-site affordable housing unit via fee revenue, financial feasibility conditions, comparability with fees in other nearby communities, and consideration of barriers and opportunities to support Missing Middle housing (as defined in the introduction to this report).

The City of Berkeley's current in-lieu fees vary depending on the size of the projects. As shown in Figure 8, below, projects with 12,000 square feet or greater pay the full $56.25 fee per square foot of RUFA. Smaller projects pay lower specified fees on the entirety of their square feet of RUFA, and projects below 5,000 square feet do not pay an in-lieu fee and are exempt from inclusionary housing requirements.

FIGURE 8: CURRENT CITY OF BERKELEY IN-LIEU FEES

RESIDENTIAL UNIT FLOOR AREA SQUARE FEET (SQ. FT.)	FEE PER SQUARE FOOT (APRIL 1, 2023 – JUNE 30, 2025)
12,000 sq. ft. or more	$56.25
11,000-11,999 sq. ft.	$53.75
10,000-10,999 sq. ft.	$51.25
9,000-9,999 sq. ft.	$48.75
8,000-8,999 sq. ft.	$46.25
7,000-7,999 sq. ft.	$43.75
6,000-6,999 sq. ft.	$41.25
More than 5,000-5,999 sq. ft.	$38.75

Source: City of Berkeley, 2024.

Approach to Calculating Potential In-Lieu Fee Levels

This study used two methods to calculate a maximum reasonable in-lieu fee: the affordability gap and the production cost affordability gap (production cost). These gaps were then translated into an equivalent fee per square foot of RUFA. These methods establish the maximum fee equivalent to the cost of providing on-site BMR units or a comparable off-site BMR unit. These fees represent the maximum fee that would be justifiable under the City's current Inclusionary Housing Ordinance, which sets out a certain percentage of housing units in new development that must be affordable.

The study then used another approach to calculate the average cost for the City of Berkeley to produce an off-site affordable unit as part of a 100 percent affordable housing project—one of the primary uses of in-lieu fee revenue. This cost was then translated into an equivalent fee per square foot of RUFA.

This equivalent fee represents the fee level at which the City is likely to produce a comparable number of affordable housing units (often at deeper affordability levels) by leveraging in-lieu fee revenue.

These three approaches provide a range of possible fees that were then compared against those of peer cities to contextualize the regional landscape of affordable housing impact fees. Each approach is described in greater detail below:

- **Affordability Gap:** The affordability gap method of calculating a maximum in-lieu fee is based on the difference in revenues between market rate and affordable rents for a typical new housing unit. The maximum fee is equivalent to the reduced revenue associated with providing a BMR unit on site at a new market rate development project. As a result, this method demonstrates the for-profit developer's perspective by capturing the equivalent loss of revenue to provide an on-site BMR unit.

- **Production Cost Affordability Gap:** The production cost affordability gap ("production cost") method of calculating a maximum in-lieu fee is based on the difference between affordable rents and the cost to produce a unit of income-restricted housing. The maximum fee is the difference between the value of the BMR unit (based on its restricted rental rates or sales price) and the cost to construct it. This method demonstrates the total cost gap to produce an affordable housing unit.

- **Average Local Contribution:** The average local contribution method of calculating an equivalent in-lieu fee is based on the average dollar contribution from local sources to 100 percent affordable developments. This method involves a survey of recent affordable housing projects in the jurisdiction to determine the average contribution from the City's Housing Trust Fund program. This method establishes the average minimum in-lieu fee revenue that must be generated for the City of Berkeley to provide its typical contribution toward an affordable housing unit in a 100 percent affordable development project.

These approaches generated a potential range of in-lieu fee levels. These fees were then compared against neighboring communities' fees and against the current ability of market rate housing development to support payment of the fees based on current development conditions. A more detailed description of methodology, assumptions, and calculations is included in this report's Appendix.

The conclusion of Section II describes Strategic Economics' policy recommendations based on the analyses and policy priorities expressed by the City of Berkeley.

Justifiable Maximum In-Lieu Fee Levels

This section describes the results of the approaches to calculating the maximum justifiable in-lieu fee and the result of the average local contribution analysis. The justifiable in lieu fee level is based on an analysis that determines the per square foot fee equivalent to providing an on-site unit. The maximum justifiable in-lieu fee was calculated using the affordability gap and production cost methods. This established the high end of potential in-lieu fees to consider in this study, as these methods directly translate the City's affordable housing requirements into equivalent costs per square foot of building area. The average local contribution analysis provided an in-lieu fee amount that is equivalent to the

average amount of City revenue needed to leverage outside funds to produce an equivalent number of off-site affordable housing units in a 100 percent affordable project.

Using the affordability gap method, the maximum justifiable in-lieu fee for the rental prototypes is $117.69 per square foot (see Figure 9). This method calculates the justifiable cost as the revenue difference between renting or selling new units at market rate and at the affordability levels required by the City's inclusionary housing policy.

Using the production cost method, the maximum justifiable in-lieu fee for the rental prototypes is $103.77 per square foot (see Figure 9). This method calculates the justifiable cost as the difference between the revenue from renting or selling a BMR unit and the cost to produce the unit.

The average local contribution towards 100 percent affordable multifamily rental developments in the city is $58.59 per square foot—similar to today's maximum fee level of $56.25 (see Figure 9). While not the maximum justifiable fee, this average provides an equivalent fee level that supports the City of Berkeley's typical contribution to affordable units in 100 percent affordable housing projects.

The average local contribution fee per square foot does not include the overhead costs for the city to administer its Housing Trust Fund program. Based on City input, these administrative costs add a premium of 15 percent to the per square foot cost of the fee, bringing it to $67.38.

FIGURE 9: IN-LIEU FEE RESULTS BY APPROACH

	Affordability Gap	Production Cost	Local Contribution
Average per BMR Unit	$388,374	$342,432	$193,348
Average per Square Foot of Market Rate Project RUFA	$117.69	$103.77	$58.59

Source: Strategic Economics, 2024.

Supportable In-Lieu Fees from a Development Feasibility Perspective

The following findings describe the results of a sensitivity analysis that examined the financial feasibility of the rental and ownership development prototypes after incorporating the range of fee levels calculated in the preceding section of this report. This analysis provides context for how different in-lieu fees impact the financial feasibility of the development prototypes based on characteristics such as the prototypes' size, density, number of on-site units provided, and use of the SDBL. As described in this report's Introduction, in-lieu fees only apply to a small share of the total square feet in a SDBL project; in those projects, a portion of the inclusionary requirement is satisfied by on-site BMR units, and the prorated remaining in-lieu fee obligation only applies to the "base" project and not the project's "bonus" square feet.

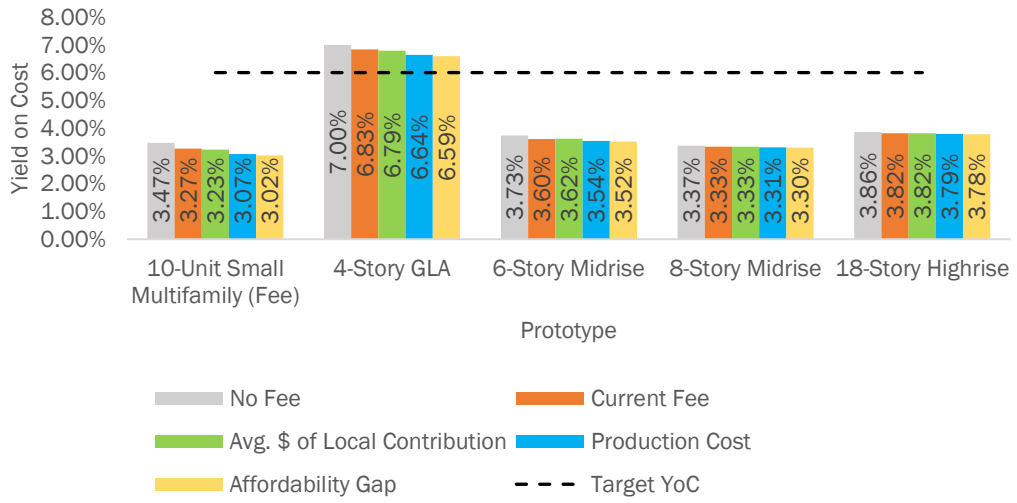
Unlike the "Baseline" analysis presented in the following section of this report, the following feasibility analyses do incorporate the cost impacts of the HARD HATS and Bird Safe Buildings requirements since these requirements are already in effect.

Since all the rental development prototypes are currently infeasible except the GLA, only the GLA is currently capable of supporting any in-lieu fee. Figure 10 shows the impacts of the different

approaches to calculating an in-lieu fee on the financial feasibility of the applicable prototypes. As shown, the negative feasibility impacts of the in-lieu fee are relatively modest for the larger midrise and high-rise prototypes. The fee applies to only a small portion of the overall square feet of these projects since they are assumed to use significant density bonuses. The fee also represents a relatively small share of overall construction costs for these projects due to their size. However, none of these projects are currently financially feasible to build, as they do not achieve a six percent yield on cost return.

The poor financial performance of the development prototypes is primarily attributable to broader development feasibility challenges rather than the current in-lieu fee level. Figure 10 shows the impact of the current fee on the financial feasibility of the applicable prototypes. For the smallest project, the percent change in the yield on cost is a reduction of 5.8 percent, while the largest project sees a much smaller one percent decline. However, both prototypes are currently infeasible, with or without the fee. Developments that are currently being proposed and built in the city likely have unique attributes that have enabled them to progress to this stage or are relying on market conditions improving in the future.

FIGURE 10. IN-LIEU FEE SENSITIVITY ANALYSIS FOR RENTAL PROTOTYPES

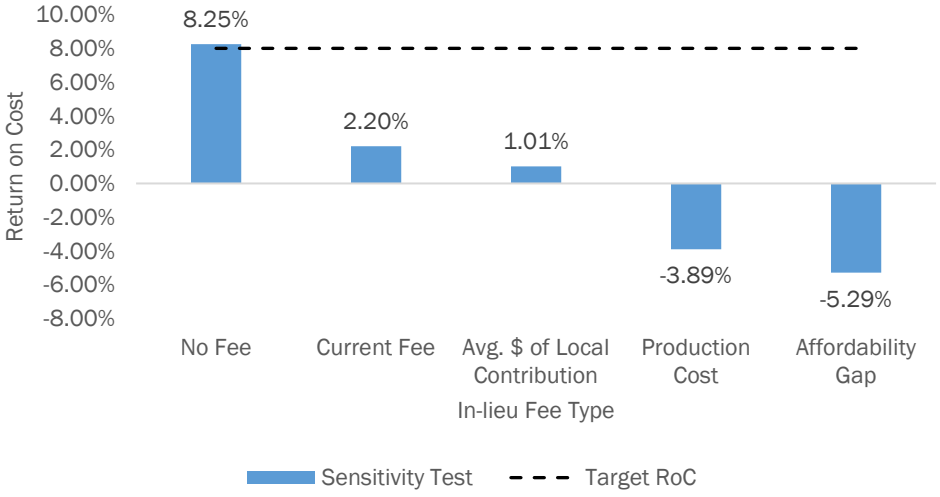


Note: These results incorporate the cost impacts of the Bird Safe Building and HARD HATS ordinances.
Source: Strategic Economics, 2024.

The small 10-Unit multifamily ownership (condo) prototype is infeasible with application of an in-lieu fee. (see Figure 11). The feasibility of this prototype is more sensitive to the size of the in-lieu fee due to the prototype's status as a non SDBL project (which therefore means the fee applies to the entire residential area) and the prototype's lower construction costs per square foot of building area; both factors result in the fee constituting a larger proportion of the total development costs compared to the midrise and high-rise prototypes. However, reducing or removing the fee burden allows this type of development to perform better financially, as the sensitivity analysis without a fee results in a return on cost of 8.25 percent, which is above the target return on cost of eight percent.

As noted earlier, the smaller Missing Middle prototypes are feasible as ownership products under current development conditions. However, they are not currently subject to the affordable housing requirements.

FIGURE 11. IN-LIEU FEE SENSITIVITY ANALYSIS FOR THE 10-UNIT SMALL MULTIFAMILY PROTOTYPE OWNERSHIP



Source: Strategic Economics, 2024.

Consideration of "Peer City" In-Lieu Fee Levels

Housing production in Berkeley does not occur in a vacuum; developers often construct housing in many different areas within a region, and differences in inclusionary requirements can have an impact on where developers choose to pursue projects. Therefore, the analysis compared Berkeley's current inclusionary housing requirements with those of nearby communities. This comparison provides context for potential changes to Berkeley's in-lieu fee level and takes into consideration the market factors that are unique to the city.

The City of Berkeley's current in-lieu fee (and inclusionary requirement) is higher than most peer cities. In-lieu fees in the cities listed in Figure 12 range from $19.37 per square foot on the lowest end to approximately $100 per square foot on the highest. Several cities levy fees on a per housing unit basis; assuming an average unit size of 1,000 square feet, these fees translate to between $12 and $45 per square foot. Berkeley's current in-lieu fee is $56.25 per square foot. Note, however, that cities apply their fees in a variety of ways, including different exemptions, differences depending on locations, and application on either a building area basis or a housing unit basis.

However, the Berkeley housing market differs from that of the peer cities due to Berkeley's strong ongoing demand for housing that is influenced by the large population of students residing in the city. The student population creates consistent and reliable housing demand in the city, particularly in areas close to the UC Berkeley campus such as Downtown and Southside. As a result, Berkeley tends to command relatively high rents and sales prices compared to many peer communities, which can potentially translate to long-term market support for relatively higher City fees. The student market also drives demand for types of housing projects not built elsewhere, such as the group living accommodation prototype tested in this analysis.

FIGURE 12. PEER CITIES' AFFORDABLE HOUSING REQUIREMENTS

City	% On Site Affordable Units Required	In-lieu Fee*	Year Enacted
Alameda	15% for all multifamily projects	$20,342 per unit	2023
Emeryville	20% for all multifamily projects	$31,032 per unit	2023
Fremont	12.9% for rental projects	$27.00 per residential square foot	2022
Hayward	6% for rental, 10% for ownership projects	$19.37 per residential square foot	2017
Livermore	10% for projects downtown, 15% for projects everywhere else	$29.23 per residential square foot	2023
Oakland	10% of project if providing low- or moderate-income units, or 5% if providing very low-income units	For multifamily projects: $22,000 per unit in Zone 1 $17,750 per unit in Zone 2 $12,000 per unit in Zone 3	2023
Pleasanton	15% for all multifamily projects	$45,083 per unit	2023
San Francisco	All requirements below temporarily reduced by 50%: 20% for small projects, 25% for large rental projects, 33% for large ownership projects	50% of $199.50 per gross square foot	2019
San Jose	15% for all multifamily projects	Moderate Market Areas: $18.26 per net residential square foot Strong Market Areas: $43 per net residential square foot	2022/2023

*Note that the exact application of these fees varies from city to city. Examples of potential differences include application based on building area versus unit area, various exemptions, and potential differences within subareas of the cities.
Source: Strategic Economics, 2024.

Key Conclusions of the In-Lieu Fee Analyses

As noted earlier, the financial feasibility results indicate that most development prototypes cannot feasibly support the current in-lieu fee level. This is especially true for the rental prototypes, as only the student-oriented GLA prototype is currently feasible. In general, high construction costs and interest rates are the main factors rendering development infeasible today, while rents have failed to keep pace with these challenges. The GLA performs well due to its relatively low construction costs as a relatively inexpensive to build 4-story wood frame building, its lack of costly parking, and the high achievable rents in the student-oriented submarkets of the city.

Smaller Missing Middle products—Small Lot Single Family and Fourplex/Townhomes—demonstrate some financial capacity to support an in-lieu fee, but these products are rarely built due to other challenges. The financial feasibility analysis cannot capture the qualitative factors preventing the development of these housing types. The survey of development activity shows that these types of small infill projects are not often built in Berkeley, despite their strong financial performance as a high-end ownership product. The mismatch between financial performance and actual outcomes is attributable to factors including the lack of small-scale developers with capacity and interest in this type of development and the limited inventory of lower-cost underutilized sites available for sale in existing neighborhoods.

The multifamily 10-unit Missing Middle prototype is not feasible under current conditions as a rental or ownership product. It is also the worst performing of the rental prototypes when it provides a full fee and no on-site units. This matches trends in recent development activity in Berkeley, which includes no examples of this product being built in the city. The product type does appear marginally feasible as an *ownership* product if no in-lieu fees or inclusionary requirements applied, but this prototype is also subject to the same development challenges as the other Missing Middle prototypes.

It is likely that the fee should not be adopted at the maximum justifiable level determined by the affordability gap or production cost methods; tradeoffs exist when selecting a fee level. A variety of tradeoffs must be considered when selecting an in-lieu fee. For example:

- Setting a high fee can incentivize developers to provide on-site BMR units rather than pay the fee; this adds to the City's affordable housing stock and contributes to mixed-income developments, yet limits City resources to leverage outside funding to produce more deeply affordable housing in 100 percent affordable projects. Setting a high fee worsens development feasibility challenges and can delay when and whether housing projects are built.

- Setting a low fee can achieve the opposite outcomes—but setting the fee too low can also create a scenario in which the City may "miss the market" by failing to collect potential affordable housing funding when development conditions improve.

Regardless of the fee level, larger development projects will continue to include and produce on-site BMR units to receive density bonuses; these projects typically also contribute prorated fee revenue. Given the value of SDBL incentives, most midrise and high-rise development projects in Berkeley are likely to be built with density bonuses. These projects inherently contribute to the City's deed-restricted affordable housing inventory via SDBL's on-site BMR unit requirements, albeit at a lower level than the City's inclusionary requirements.

The current in-lieu fee level is similar to the City's typical contribution toward the cost of providing an equal number of off-site affordable housing units in 100 percent affordable housing projects before accounting for additional administrative costs. The funding contributed by the City of Berkeley to produce an equal number of affordable units in a 100 percent affordable housing project is the equivalent of a $58.59 per residential square foot in-lieu fee level, or $67.38 after including a 15 percent increase for administrative costs. The City's current maximum in-lieu fee is $56.25 per square foot.

A larger in-lieu fee results in a greater relative impact on the financial feasibility of smaller developments—especially Missing Middle products. As a percentage of total project cost, the size of the in-lieu fee plays a greater role in the feasibility of smaller projects, both because of the lower cost per square foot to build these projects and because these projects do not typically make use of SDBL. In addition, since larger SDBL midrise and high-rise projects are more likely to pay a prorated in-lieu fee that applies to a small portion of the total square feet, these projects are less impacted by changes in the fee level.

In-Lieu Fee Policy Recommendations

Strategic Economics prepared the following recommendations for adjusting the City of Berkeley's in-lieu fee amount and application of the fee to different sizes and types of projects. The

recommendations incorporate consideration of the results of the preceding analyses to support the following goals:

1. Continue to produce affordable housing through on-site BMR inclusionary units or through production of in-lieu fee resources that the City can use to leverage outside funding to produce affordable units in 100 percent affordable housing developments.

2. Continue to support the financial feasibility of market rate housing development so these projects can in turn generate on-site BMR units or in-lieu fee funding resources and achieve the City's housing production goals.

3. Promote the development of Missing Middle product types that add two to 19 unit housing options in Berkeley's neighborhoods.

Recommendation 1: Eliminate the current in-lieu fee structure that currently exempts projects with less than 5,000 square feet of RUFA from the fee and increases fee levels for projects between 5,000 and 12,000 square feet. Instead, apply the same in-lieu fee level to all housing development projects.

Currently there is an exemption to the affordable housing requirements for new residential development with less than 5,000 square feet of RUFA. This exemption is set to expire in April 2025. Strategic Economics recommends removing this exemption as part of a package of recommendations designed to simplify the affordable housing requirements and support the development of Missing Middle housing in Berkeley.

Adjusting the policy to apply to all residential developments, with no "phase in" based on project size, reduces the incentive for developers to pursue projects just under the applicable square footage to avoid triggering higher in-lieu fees. For example, currently a housing project with 4,999 square feet of RUFA would pay zero in-lieu fees, while a project with 5,001 square feet would pay over $193,000 in in-lieu fees.

Recommendation 2: For any project opting to pay the full fee instead of providing any on-site inclusionary units, exempt the first 5,000 square feet of RUFA from the in-lieu fee.

This exemption for projects that pay the full fee (rather than a prorated fee that typically occurs for SDBL projects) supports production of Missing Middle housing by ensuring these small developments pay a relatively low fee per square foot of project area. It also removes the incentive to reduce project size to avoid triggering a significantly higher total fee. At the same time, the full fee would still apply to nearly all larger midrise and high-rise housing projects since developers are likely to continue building these product types as SDBL projects that must include some on-site BMR units. For example, Figure 13 shows that the midrise and high-rise prototypes would continue to pay the same fee amount as under the current policy, assuming the fee is maintained at the same maximum level.

The 10-Unit Small Multifamily prototype serves as an illustrative example of the positive feasibility impacts of the exemption for this Missing Middle product type. As shown in Figure 13, the exemption reduces in-lieu fee costs for the rental version of the prototype such that its yield on cost increases by 0.09 percentage points—moving the prototype closer to becoming financially feasible to build. Similarly, the exemption supports the development of higher density Missing Middle ownership housing types. As shown in Figure 14, the 10-Unit Small Multifamily prototype experiences an increase in its return on cost of 2.74 percent with the exemption.

The policy change would modestly decrease the total in-lieu fee revenue paid by a limited number of housing product types. The 10-Unit Small Multifamily prototype in Figure 13 and Figure 14 is an example of a project that would pay reduced fee revenue, with the exemption reducing fee payment by an amount equivalent to the funds needed to leverage 1.1 off-site BMR units. However, these kinds of small but relatively higher-density product types are likely to constitute a very small share of total housing development in Berkeley due to the feasibility and general development challenges noted in this report.

However, the policy change would also slightly *increase* fee revenue from other projects. By removing the phase in, some projects pay a slightly higher amount for the in-lieu fee. An illustrative example is the 4-Story GLA prototype. As shown in Figure 13, the policy change would slightly decrease the prototype's feasibility (yield on cost) and increase its fee payment at a level equivalent to approximately one-quarter of the funds needed to leverage an additional unit.

While the exemption slightly disincentivizes satisfying the affordable housing requirement by providing on-site units—since the fee is lower than the equivalent affordability gap—SDBL projects will continue to provide on-site units. In order to satisfy the state's requirement to be granted valuable additional density, waivers, and concessions, developers of SDBL projects must provide a certain percentage of on-site deed restricted affordable units. Since there are significant advantages for projects qualifying for use of the SDBL, the City of Berkeley will continue to see developments that satisfy the affordable housing requirements through mixed compliance.

Recommendation 3: Maintain the existing $56.25 maximum in-lieu fee level as the universally applicable in-lieu fee.

While the in-lieu fee could justifiably be increased to become equivalent to the cost of producing an on-site BMR unit, Strategic Economics recommends maintaining the new universal in-lieu fee level at its current maximum of $56.25. This supports the production of new housing by not increasing the fee level at a time when project financing and construction materials and labor costs are making residential development particularly challenging. Maintaining the current in-lieu fee level also allows the City of Berkeley to maintain a fee that is approximately equivalent to the City's typical direct contributions to the cost of leveraging an off-site affordable housing unit. By maintaining the current in-lieu fee, the City will maintain its primary affordable housing funding source as development conditions improve, mitigating the risk of lost opportunity to secure funding when development conditions shift.

Recommendation 4: Continue to adjust the in-lieu fee regularly based on the California Construction Cost Index.

Regular adjustment of the fee increases the likelihood that the revenue collected will continue to support a comparable number of affordable units in future 100 percent affordable housing projects.

FIGURE 13. IMPACTS OF THE 5,000 SQUARE FOOT EXEMPTION ON THE RENTAL PROTOTYPES

	Small Lot Single Family [a]	Fourplex/ Townhomes [a]	10-Unit Small Multifamily [b]	4-Story GLA [c]	6-Story Midrise	8-Story Midrise	18-Story High-rise
Yield on Cost: Current Fee Policy	4.03%	3.69%	3.27%	6.83%	3.60%	3.33%	3.82%
Yield on Cost: Recommended Exemption Policy	4.03%	3.69%	3.36%	6.80%	3.60%	3.33%	3.82%
YoC Difference	0.00%	0.00%	0.09%	-0.03%	0.00%	0.00%	0.00%
In-lieu Fee Revenue: Current Fee Policy	$0	$0	$450,938	$202,737	$1,255,416	$723,642	$1,580,453
In-lieu Fee Revenue: Recommended Exemption Policy	$0	$0	$239,063	$246,572	$1,255,416	$723,642	$1,580,453
Difference in Number of Off-site Units Leveraged	0	0	-1.10	0.23	0	0	0

[a] These prototypes are less than 5,000 square feet and are therefore exempt from the in-lieu fee under the existing and recommended in-lieu fee policies.
[b] Based on this prototype's size, the project would be required to pay $48.75 per square foot of its 9,250 square feet of RUFA under the existing policy. As a project that provides no on-site BMR units, the prototype would qualify for the first 5,000 square feet of RUFA to be exempt from the in-lieu fee under the recommended policy, which means the prototype would be required to pay $56.25 for only 4,250 square feet of RUFA.
[c] As an SDBL project with 9,400 square feet of RUFA, this project is currently required to pay $48.75 per square foot for its prorated in-lieu fee obligation on the base version of the bonus project after accounting for on-site affordable units that partially satisfy the City's inclusionary housing requirements. Under the recommended policy, this project would not qualify for any exemption from payment of the in-lieu fee because it provides BMR units to achieve the SDBL status and therefore must use mixed compliance to pay a prorated fee; the project would therefore pay $56.25 per square foot for its remaining prorated in-lieu fee obligation on the base version of the project.
Source: Strategic Economics, 2024.

FIGURE 14. IMPACTS OF 5,000 SQUARE FOOT EXEMPTION ON THE OWNERSHIP PROTOTYPES

	Small Lot Single Family [a]	Fourplex/ Townhomes [a]	10-Unit Small Multifamily [b]
Return on Cost: Current Fee Policy	28.44%	29.16%	2.20%
Return on Cost: Recommended Exemption Policy	28.44%	29.16%	4.94%
Difference	0.00%	0.00%	2.74%
In-lieu Fee Revenue: Current Fee Policy	$0	$0	$450,938
In-lieu Fee Revenue: Recommended Exemption Policy	$0	$0	$239,063
Difference in Number of Off-site Units Leveraged	0.00	0.00	-1.10

[a] These prototypes are less than 5,000 square feet and are therefore exempt from the in-lieu fee under the existing and recommended in-lieu fee policies.
[b] Based on this prototype's size, the project would be required to pay $48.75 per square foot of its 9,250 square feet of RUFA under the existing policy. As a project that provides no on-site BMR units, the prototype would qualify for the first 5,000 square feet of RUFA to be exempt from the in-lieu fee under the recommended policy, which means the prototype would be required to pay $56.25 for only 4,250 square feet of RUFA.
Source: Strategic Economics, 2024.

III. FINANCIAL FEASIBILITY IMPACTS OF HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE REQUIREMENTS

This section of the report describes findings and conclusions of the research and analyses used to assess:

1. The "Baseline" financial feasibility of the development prototypes under current market conditions, inclusionary requirements, and in-lieu fees—but *without* incorporation of the Bird Safe Building, HARD Hats, and prevailing wage policies;
2. How the Bird Safe Building, HARD HATS, and prevailing wage policies impact development costs;
3. Impacts of the three policies on development feasibility outcomes.

Essentially, the Baseline analysis describes development feasibility outcomes under today's conditions as if the Bird Safe Building and HARD HATS policies were not in effect. This provides a point of comparison to understand changes created by those requirements. As noted earlier, the Bird Safe Building policy went into effect July 27, 2023 and the HARD HATS policy on January 1, 2024, while a prevailing wage requirement was recently adopted for the Southside Area Plan only.

Figure 15 displays each of the prototypes and scenarios modeled as part of the analyses. The table describes how different policies apply to each residential development prototype, as summarized below:

- Current Affordable Housing Requirements Applied to the Baseline Analysis:
    - **Inclusionary Requirements for Rental Projects:** Applies to new residential developments above 5,000 gross square feet. 20 percent of units must be provided as Below Market Rate (BMR), with half of the units affordable to Very Low Income households (defined as those making 50 percent of the Area Median Income) and half of the units affordable to Low Income households (defined as those making 80 percent of the Area Median Income). These requirements can be satisfied through a combination of providing units and paying a prorated fee.

    - **Inclusionary Requirements for Ownership Projects:** Applies to new residential developments above 5,000 gross square feet. 20 percent of units must be provided as Below Market Rate (BMR) at levels affordable to Low Income households. These requirements can be satisfied through a combination of providing units and paying a prorated fee.

- **Bird Safe Building:** Applies to new residential development above 10,000 gross square feet and with an average height above 35 feet.

- **HARD HATS:** Applies to new residential development above 50,000 gross square feet.

- **Prevailing Wage:** Applies to new residential development above 50,000 gross square feet within the Southside Plan Area and is under consideration for citywide applicability.

For the 10-Unit Small Multifamily prototype, two scenarios were tested (as shown in Figure 15): one in which the project meets inclusionary requirements by providing 20 percent of housing units as BMR units, and another in which the project pays an in-lieu fee. Note that the smaller Missing Middle prototypes are exempt from the City's current affordable housing requirements because they are under 5,000 gross square feet.

Also shown in Figure 15, the SDBL prototypes satisfy affordable housing requirements by providing the State-required number of BMR units on-site and paying an in-lieu fee to satisfy the remainder of the City of Berkeley's inclusionary requirement. The analysis followed current City policy to apply the in-lieu fee only to the remainder of the *base* project.

FIGURE 15. APPLICATION OF AFFORDABILITY REQUIREMENTS AND TESTED POLICIES TO DEVELOPMENT PROTOTYPES

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (On-Site BMR Version)	10-Unit Small Multifamily (In-Lieu Fee Version)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Baseline Analysis: Affordable Housing Requirements Applicable to the Rental Prototypes								
Affordable Housing Requirements Applicable to Rental Prototypes	Not applicable (under 5,000 gsf)	Not applicable (under 5,000 gsf)	On site BMR units	Full in-lieu fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee
BMR % of Units	N/A	N/A	20%	0%	10%	10%	15%	15%
Affordability Level	N/A	N/A	Half VLI, half LI**	N/A	All VLI**	All VLI**	All VLI**	All VLI**
Baseline: Affordable Housing Requirements Applicable to the Ownership Prototypes								
Affordable Housing Requirements Applicable to Ownership Prototypes	Not applicable (under 5,000 gsf)	Not applicable (under 5,000 gsf)	On site BMR units	Full in-lieu fee	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)
BMR % of Units	N/A	N/A	20%	0%	N/A	N/A	N/A	N/A
Affordability Level	N/A	N/A	All LI**	N/A	N/A	N/A	N/A	N/A
Bird Safe Building Requirements Applied to Prototypes (regardless of tenure)								
Bird Safe Building Requirements Applicability	Not applicable (under 10,000 gsf)	Not applicable (under 10,000 gsf)	Not applicable (over 10,000 gsf but less than 35 feet high)	Not applicable (over 10,000 gsf but less than 35 feet high)	Applicable	Applicable	Applicable	Applicable
HARD HATS and Prevailing Wage Requirements Applied to Prototypes (regardless of tenure)								
HARD HATS / Prevailing Wage Applicability	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Applicable	Applicable	Applicable

Note:
* SDBL = State Density Bonus Law.
** VLI = Very Low Income; LI = Low Income.
Source: Strategic Economics, 2024

Baseline Financial Feasibility Analysis

The following findings describe the results of the Baseline financial feasibility analysis. The findings describe the performance of the development prototypes under existing City of Berkeley inclusionary and in-lieu fee requirements without the Bird Safe Building, HARD HATS, and prevailing wage requirements. Since the results show that all but two of the development prototypes are currently infeasible, the basic description of the results is followed by findings of a sensitivity analysis. The sensitivity analysis provides context for factors influencing the financial performance of the prototypes and how changing conditions could eventually improve the performance of the prototypes.

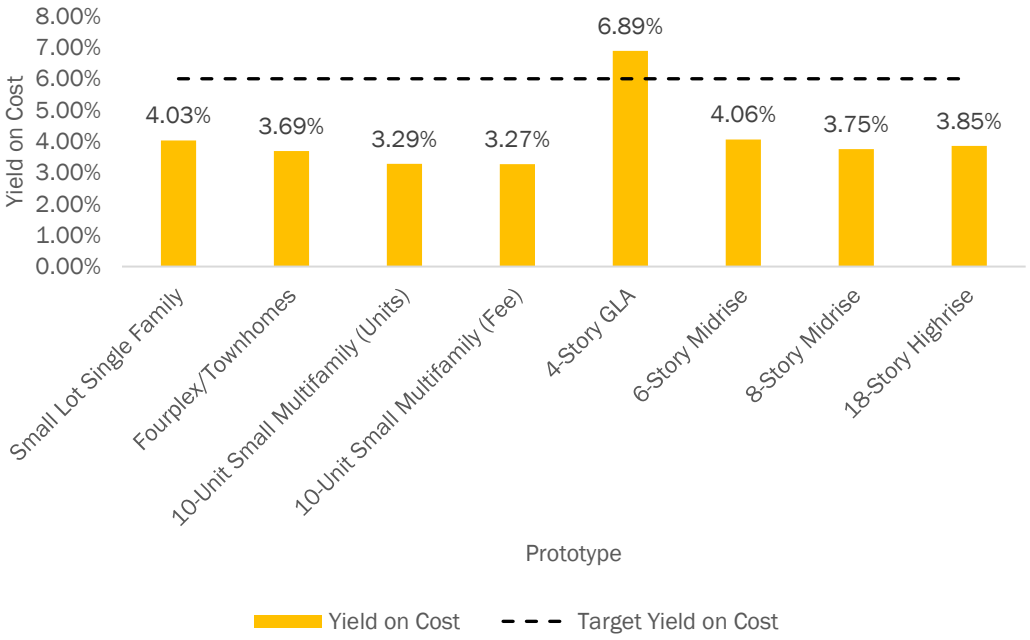
The baseline feasibility analysis is followed by analysis of the feasibility impacts of construction policies to illustrate the current conditions for residential development.

BASELINE FEASIBILITY RESULTS FOR THE RENTAL PROTOTYPES

Under current conditions, the only rental prototype that is financially feasible in Berkeley is the 4-Story GLA. Figure 16 shows results for all tested rental prototypes. As shown, only the 4-Story GLA project achieves the minimum yield on cost threshold of six percent, with all other prototypes achieving a yield on cost of between 3.27 and 4.06 percent.

None of the Missing Middle prototypes are feasible as rental products under current conditions. The 10-Unit Small Multifamily prototype paying the full fee performs the worst of all the prototypes (achieving a yield on cost of 3.27 percent). The other two Missing Middle prototypes, the Small Lot Single Family and Fourplex/Townhomes, which are not currently subject to the City's inclusionary policy, perform slightly better. These prototypes achieve yields of 4.03 percent and 3.69 percent, respectively—still short of the required six percent target yield.

FIGURE 16. BASELINE RENTAL PROTOTYPE FEASIBILITY RESULTS



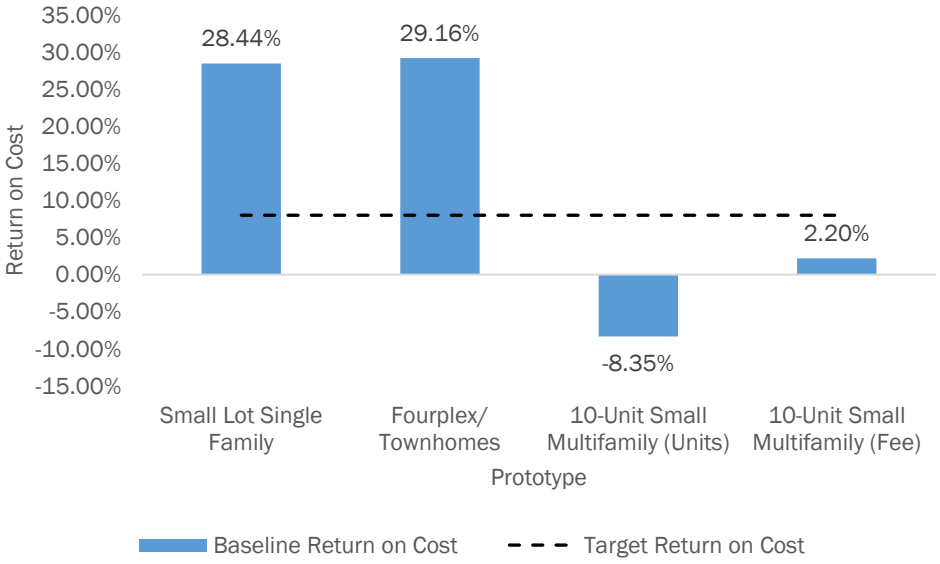
Source: Strategic Economics, 2024.

BASELINE FEASIBILITY RESULTS FOR THE OWNERSHIP PROTOTOYPES

The Small Lot Single Family and Fourplex/Townhomes prototypes are feasible as ownership products (see Figure 17). The target return on cost for the ownership products is eight percent. The Small Lot Single Family and Fourplex/Townhome prototype exceed this with returns of 28.44 percent and 29.16 percent, respectively.

The 10-Unit Small Multifamily prototype is infeasible as an ownership product, both when providing on-site BMR units and when paying a full in-lieu fee (see Figure 17). The multifamily Missing Middle prototype is infeasible under both affordability requirement scenarios. The prototype does, however, perform significantly better when paying the in-lieu fee (return on cost of 2.2 percent) instead of providing on-site units (return on cost of -8.35 percent).

FIGURE 17. BASELINE OWNERSHIP PROTOTYPE FEASIBILITY RESULTS



Source: Strategic Economics, 2024.

COMBINED SUMMARY OF BASELINE FEASIBILITY RESULTS FOR ALL DEVELOPMENT PROTOTYPES

Under current development conditions, very few of the residential prototypes are financially feasible. Only the 4-Story GLA rental, Small Lot Single Family ownership, and Fourplex/Townhomes ownership prototypes are feasible. Figure 18 summarizes the baseline feasibility results for all of the scenarios tested.

Although most typical market rate residential development projects are currently financially infeasible, developers may still propose projects or construct projects in anticipation of improved development conditions or due to project-specific factors. The results of the financial feasibility analysis represent outcomes for a developer initiating a typical market rate project under today's typical cost, revenue, and thresholds for return on investment. Multiple factors explain why developers continue to propose or construct housing projects in Berkeley. Developers submitted several project applications in 2023 to potentially avoid being subject to HARD HATS, which took effect in January 2024. Other developers are optimistic and believe that development conditions will change soon—such as increasing achievable rents (driven partly by strong student demand), slowing increases in construction costs, or

reduced project financing costs. Individual development projects can also have unique beneficial characteristics that reduce development costs, such as lower land acquisition costs, innovative construction techniques (such as modular construction), or access to unique financing arrangements.

FIGURE 18. SUMMARY OF BASELINE FINANCIAL FEASIBILITY RESULTS

Prototype	Yield or Return on Cost	Target	Feasible (Y/N)
Rental Prototypes			
Small Lot Single Family	4.03%	6.00%	N
Fourplex/Townhomes	3.69%	6.00%	N
10-Unit Small Multifamily (Units)	3.29%	6.00%	N
10-Unit Small Multifamily (Fee)	3.27%	6.00%	N
4-Story GLA	6.89%	6.00%	Y
6-Story Midrise	4.06%	6.00%	N
8-Story Midrise	3.75%	6.00%	N
18-Story High-rise	3.85%	6.00%	N
Ownership Prototypes			
Small Lot Single Family	28.44%	8.00%	Y
Fourplex/Townhomes	29.16%	8.00%	Y
10-Unit Small Multifamily (Units)	-8.35%	8.00%	N
10-Unit Small Multifamily (Fee)	2.20%	8.00%	N

Source: Strategic Economics, 2024.

SENSITIVITY ANALYSIS AND CONTEXT FOR THE BASELINE FEASIBILITY RESULTS

Given that all but two of the development prototypes are currently infeasible, Strategic Economics conducted a sensitivity analysis to provide context for the factors influencing the financial performance of the prototypes and how changing conditions could eventually improve the performance of the prototypes.

Development costs, revenues, and required return on investment change over time, and each change influences development feasibility outcomes. The financial feasibility of development is driven by the relationships between the total cost to build a development project, the expected revenue generated by the project, and the current required return on investment. Rents or sales prices determine the expected revenue generated by a development project, while development costs can include a variety of factors, such as construction materials and labor, land, and municipal fees.

The following tables illustrate how changes in development costs and revenues can impact feasibility outcomes. Figure 19 and Figure 20 demonstrate the impact of changes to revenue and development costs on the financial feasibility of one rental housing unit and one ownership housing unit, respectively. The figures represent one rental unit from the 6-Story Midrise prototype and one ownership unit from the Fourplex/Townhomes prototype. The axes show the change in revenue and costs. The cell showing “0 percent” and “0 percent” change shows the estimated feasibility outcome for projects currently, expressed as either yield on cost or return on costs. The “-10 percent,” “10 percent” cell in the top left represents the feasibility outcome for projects if revenues decrease 10 percent and development costs increase 10 percent. Green cells indicate feasibility, while red cells indicate infeasibility.

With current rents and development costs, rental projects are not feasible, with an estimated yield on cost of 3.60 percent. Even with an increase in rents and a decrease in costs, the rental prototype remains unfeasible. The ownership prototype demonstrates how the reduction in sales value and an increase in development costs can make a project infeasible.

As shown, development projects can be highly sensitive to shifting cost and revenue conditions; in reality, the required return on investment would also shift over time, adding additional complexity to when and whether a given development project becomes feasible to build.

FIGURE 19. COST AND REVENUE CHANGE IMPACTS ON THE YIELD ON COST OF ONE RENTAL UNIT

Change in Development Costs	Change in Rent: -10%	-5%	0%	5%	10%	15%
-10%	3.60%	3.80%	4.00%	4.20%	4.40%	4.61%
-5%	3.41%	3.60%	3.79%	3.98%	4.17%	4.36%
0%	3.24%	3.42%	3.60%	3.78%	3.96%	4.14%
5%	3.09%	3.26%	3.43%	3.60%	3.78%	3.95%
10%	2.95%	3.11%	3.28%	3.44%	3.60%	3.77%

Note: Feasible yield on cost is considered 6 percent. Darker red yield on cost outcomes indicate a weaker return on cost, while lighter outcomes indicate a stronger return. However, none of the outcomes presented is financially feasible, even with increased revenue and decreased costs.
Source: Strategic Economics, 2024.

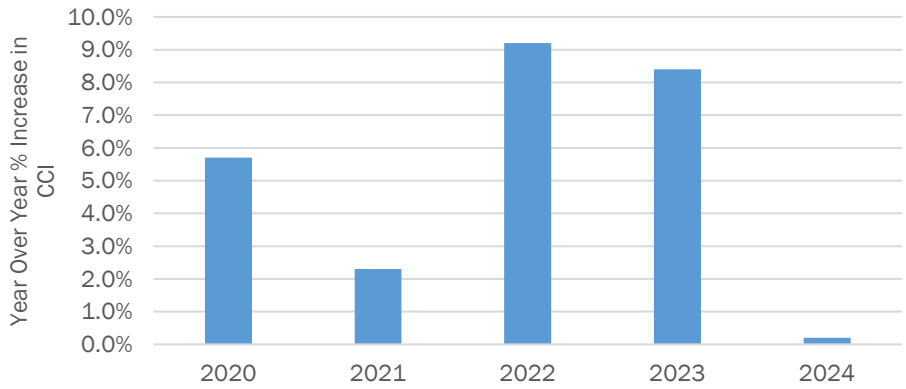
FIGURE 20. COST AND REVENUE CHANGE IMPACTS ON THE RETURN ON COST OF ONE OWNERSHIP UNIT

Change in Development Costs	Change in Sales Value: -10%	-5%	0%	5%	10%
-10%	29.16%	36.33%	43.51%	50.69%	57.86%
-5%	22.36%	29.16%	35.96%	42.76%	49.55%
0%	16.24%	22.70%	29.16%	35.62%	42.08%
5%	10.71%	16.86%	23.01%	29.16%	35.31%
10%	5.68%	11.55%	17.42%	23.29%	29.16%
15%	1.08%	6.70%	12.31%	17.93%	23.54%

Note: Feasible return on cost is considered 8 percent. Return on cost outcomes labelled in green indicate a financially feasible project, while numbers in red indicate an infeasible project. Darker green indicates stronger returns.
Source: Strategic Economics, 2024.

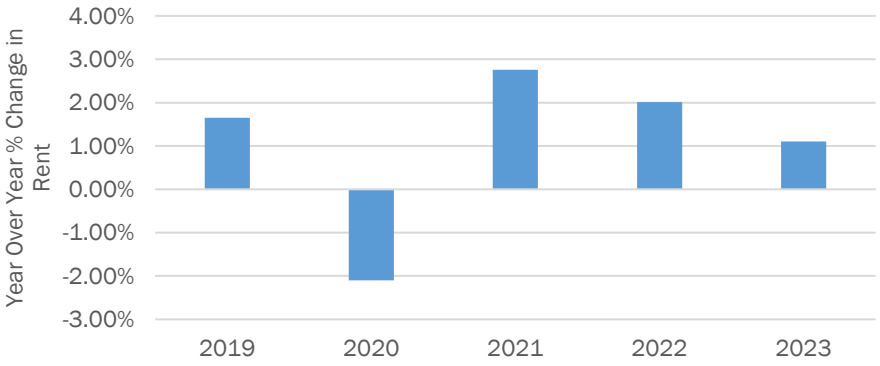
Development costs, revenues, and required return on investment do not often change at the same rate over time. Changes to each factor occur largely independently and at an uneven pace. For example, Figure 21 shows the year over year change in the Construction Cost Index (CCI) tracked by Engineering News Record for San Francisco over the past five years. The chart shows a spike in cost increases in 2022 and 2023 due to supply chain challenges, which are beginning to moderate in 2024. Similarly, rents decreased in Berkeley during the COVID-19 pandemic and have gradually started to increase since 2020—although the increases in rents have been significantly lower than the increases in construction costs since 2020 (see Figure 22).

FIGURE 21. YEAR OVER YEAR CHANGE IN THE CONSTRUCTION COST INDEX FOR SAN FRANCISCO



Source: Engineering News Report, 2024; Strategic Economics, 2024.

FIGURE 22. YEAR OVER YEAR CHANGE IN AVERAGE RENT IN BERKELEY



Source: CoStar, 2024; Strategic Economics, 2024.

Bird Safe Building Ordinance Impacts on Financial Feasibility

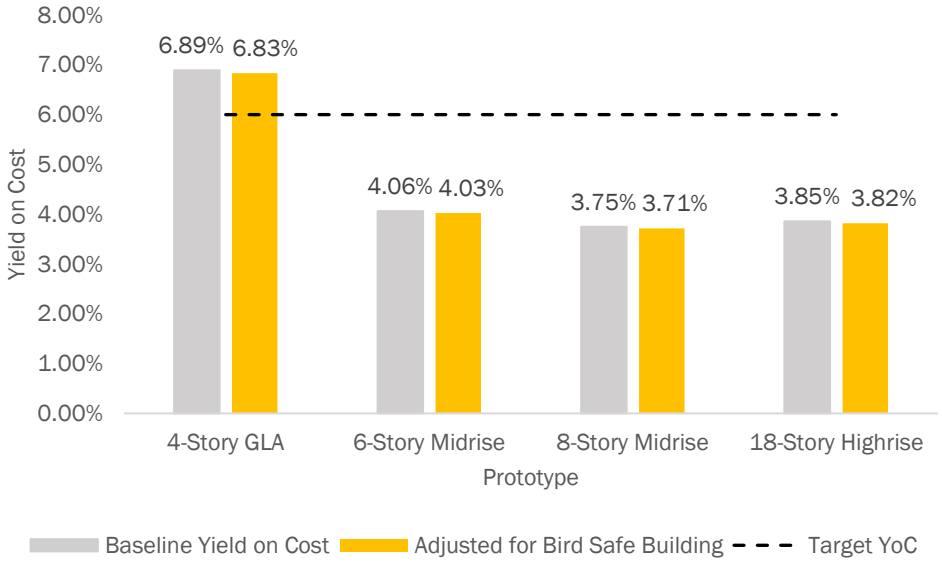
Strategic Economics conducted interviews and research to examine the cost impacts of the Bird Safe Building policy, and then examined the policies' impacts on the financial feasibility of the development prototypes. As noted earlier, the Bird Safe Building requirements took effect in 2023.

The Bird Safe Building requirements increase hard costs of development (i.e., materials and labor) by approximately one percent to 1.5 percent. This range was based on input from general contractors and developers interviewed for this study. The Bird Safe Building Ordinance required that new developments of a certain size use a form of glass or other treatments that reduce the risk of bird collisions and fatalities. This policy change applied to the mid- and high-rise prototypes in this study. The need for and cost of compliance would vary depending on a specific project's design—especially depending on whether the requirement is triggered based on the building's ratio of windows to façade, and the total amount of window area requiring compliance.

The Bird Safe Building requirement marginally negatively impacts the feasibility of the mid- and high-rise prototypes. Figure 23 demonstrates the impact of this increase on the yield on cost of the relevant

prototypes. However, interviews with stakeholders indicated that the cost premium for qualifying glass types might decrease as policies such as this become more common across cities.

FIGURE 23. BIRD SAFE BUILDING REQUIREMENTS IMPACTS ON FINANCIAL FEASIBILITY



Source: Strategic Economics, 2024.

HARD HATS and Prevailing Wage Impacts on Financial Feasibility

Strategic Economics conducted interviews and research to examine the cost impacts of the HARD HATS and prevailing wage policies, and then examined the policies' impacts on the financial feasibility of the development prototypes. As noted earlier, HARD HATS was adopted in 2023 and came into effect in January of 2024. The ordinance requires that contractors provide apprenticeship programs and healthcare to workers on all new construction projects above 50,000 gross square feet. In addition, the City of Berkeley is considering expanding a prevailing wage requirement on new construction projects above 50,000 gross square feet from the Southside Plan Area to the entire city. See Figure 15 for the applicability to the prototypes in this study.

The healthcare requirements of the HARD HATS ordinance, as currently written, effectively require contractors to use union labor on projects above 50,000 gross square feet. The ordinance currently requires contractors to show proof of health insurance contributions for workers six months prior to the start of any construction job and does not contain exemptions for workers who have declined coverage. In practice, the HARD HATS requirement largely limits the pool of compliant contractors to those using union labor because healthcare is included in workers' membership. Local developers and contractors interviewed for this study noted that the healthcare reporting requirements are a major factor that limits the pool of contractors to those using union labor.

A potential prevailing wage requirement would have similar cost implications as HARD HATS requirements, although *not in addition to HARD HATS' cost implications* if a development project is subject to both requirements. The cost differential between non prevailing wage and prevailing wage

is approximately equivalent to the shift from non-union to union labor—the same as the HARD HATS requirement. This is because prevailing wages incorporate costs corresponding to most of the benefits provided by union membership, such as apprenticeships, retirement contributions, and healthcare.

The cost differential between union and non-union labor ranges between an 18 percent to 25 percent increase in total hard costs for a development project. This percentage is influenced by the number of trades that are shifting from non-union to union labor.

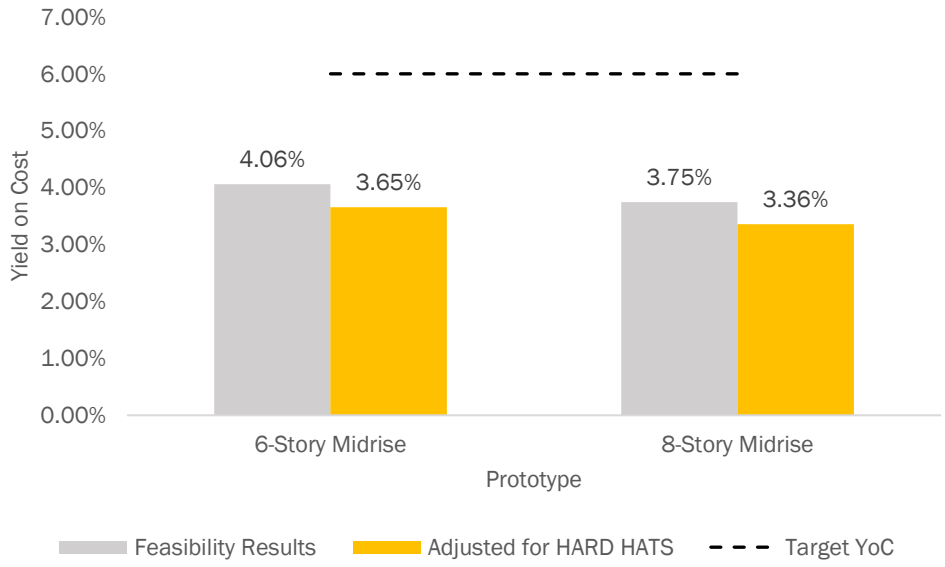
However, this cost differential varies based on project size and design, with smaller projects being more likely to experience an increased cost burden from switching to union labor. This is because smaller midrise projects are more likely to use a higher percentage of non-union trades for their development. Specific trades tend to often use union labor, such as those associated with concrete work. However, for trades such as mechanical, electrical, and plumbing (MEP), smaller projects often do not use union labor.

Larger projects, such as high-rises, are much more likely to use union contractors and subcontractors, making the impact of HARD HATS and a potential prevailing wage requirement less burdensome. Findings from interviews suggest that even if a general contractor on a high-rise project is non-union, they will use about 80 percent of union trades to complete the project. Otherwise, contractors on high-rise projects tend to use union labor, and thus do not experience the cost increase from HARD HATS or the potential prevailing wage requirement.

For this study, HARD HATS and the potential prevailing wage requirement were assumed to have the same impact on project costs—one that represents the shift to costs comparable to a project using entirely union labor. The midrise prototypes were assumed to experience a 20 percent increase in total hard costs and the high-rise was assumed to not experience a change in costs. The 20 percent cost increase represents implementation of one or both requirements, since both essentially increase hard costs to a level comparable with a union labor project. This analysis provides an illustrative example to understand how residential development might be impacted by the recent and proposed policy changes. The midrise prototypes were assumed to experience similar cost increases because they are relatively similar in size. In contrast, the high-rise was assumed to already incorporate union labor costs in the hard cost assumptions for the prototype's pro forma analysis. However, the actual circumstances might vary based on the composition of union and non-union trades used by a specific project.

Based on the 20 percent increase in hard costs, both labor requirements have significant negative impacts on the financial feasibility of the 6- and 8-Story prototypes (see Figure 24). While neither prototype is currently feasible, these requirements significantly increase development costs without changing expected revenues. As a result, a larger magnitude of positive change in rents, return on investment thresholds, or other costs would need to occur before development of these prototypes could move forward in Berkeley, relative to a condition without the requirements.

FIGURE 24. HARD HATS IMPACT ON FINANCIAL FEASIBILITY



Source: Strategic Economics, 2024.

Key Conclusions

Currently, residential development is infeasible for most of the prototypes tested in this study. The exceptions are the 4-Story GLA rental, and the Small Lot Single Family and Townhomes/Fourplex ownership products. While these results can and likely will change as development conditions improve, this baseline was used to gauge current feasibility of different housing prototypes and to test the impacts of the recently adopted and proposed labor and construction policies.

The overall cost impact of the Bird Safe Building requirements is relatively limited, but the requirements do create additional development costs and negatively impact project feasibility. The Bird Safe Building requirement adds development costs, but on its own the costs associated with the policy likely won't determine whether a project is built.

The cost impacts of HARD HATS are significant for midrise development projects, but are limited for high-rise development. While the applicable prototypes are not feasible in current development conditions, the additional costs driven by HARD HATS could become a significant factor for determining when or whether a midrise project is built as conditions improve.

HARD HATS reduces the pool of compliant contractors and their workers available for development projects in Berkeley. As noted, few non-union contractors are likely to meet the requirements of HARD HATS. Over time, however, broad adoption of similar policies by other communities could potentially expand the availability of compliant contractors and workers by creating an incentive for achieving compliance to compete for project bids.

The cost impact of a prevailing wage requirement would be significant for midrise development. A prevailing wage requirement would increase hard costs for development projects at a level comparable to (but not in addition to) the costs associated with the HARD HATS requirement.

The additional development costs associated with the HARD HATS, prevailing wage, and Bird Safe Glass requirements are not likely to pose an insurmountable barrier to future market rate residential development in Berkeley when development conditions improve, but the requirements will constrain the likelihood and pace of future housing production. The magnitude of changes in rents, development costs, and other development conditions required to cover the impacts of HARD HATS, etc. are likely achievable over time as market conditions shift. Overall demand for housing is strong in Berkeley, especially given the number of students seeking housing. However, the development cost increases associated with HARD HATS and other tested policies are significant enough to delay or constrain housing production since the policies increase the required changes in rents/prices, development costs, and market return thresholds necessary before housing development becomes feasible.

APPENDIX

Pro Forma Assumptions

Strategic Economics used a static pro forma to evaluate the financial feasibility impacts of the affordable housing requirements, HARD HATS, Bird Safe Building requirements, and a prevailing wage requirement. This approach involved collecting data on revenue and cost inputs for the pro forma model. Data was collected through interviews with local stakeholders, including developers, general contractors, and architects, as well as through review of existing studies and analysis of data from CoStar and Redfin.

ESTIMATING REVENUES

Revenue inputs were primarily informed by CoStar and Redfin data on recent market rents and sales prices. However, since several of the prototypes have on-site affordable rental or ownership units, revenue inputs were also informed by the California Department of Housing and Community Development county income limits, as well as guidance from the City of Berkeley.

Figure 25 provides a breakdown of unit sizes, types, and affordability levels across the ownership and rental prototypes used in this study.

FIGURE 25. SQUARE FEET PER UNIT AND SHARE OF UNITS BY BEDROOM SIZE AND AFFORDABILITY LEVEL

	Small Lot Single Family (a)	Fourplex/ Townhomes (a)	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise	10-Unit Small Multifamily (Units) (b)
Market Rate Units									
Unit Count									
Studio	-	-	-	-	32	23	78	16	-
One Bedroom	-	-	4	5	1	35	20	41	4
Two Bedroom	-	4	4	5	-	11	10	16	4
Three Bedroom	3	-	-	-	-	-	-	21	-
Units Above 8 Stories (c)									
Studio	-	-	-	-	-	-	-	27	-
One Bedroom	-	-	-	-	-	-	-	45	-
Two Bedroom	-	-	-	-	-	-	-	28	-
Three Bedroom	-	-	-	-	-	-	-	22	-
Total	3	4	8	10	33	69	108	216	8
Unit Size									
Studio	-	-	-	-	250	500	510	400	-
One Bedroom	-	-	750	750	650	660	750	580	750
Two Bedroom	-	1,200	1,100	1,100	-	990	950	800	1,100
Three Bedroom	1,500	-	-	-	-	-	-	1,100	-
Average Unit Size	1,500	1,200	925	925	262	659	595	693	925
BMR Units									
Unit Count - VLI									
Studio	-	-	-	-	3	2	9	5	-
One Bedroom	-	-	1	-	-	3	2	10	-
Two Bedroom	-	-	-	-	-	1	1	5	-
Three Bedroom	-	-	-	-	-	-	-	4	-
Unit Count - LI									
Studio	-	-	-	-	-	-	-	-	-
One Bedroom	-	-	-	-	-	-	-	-	1
Two Bedroom	-	-	1	-	-	-	-	-	1
Three Bedroom	-	-	-	-	-	-	-	-	-
Total	0	0	2	0	3	6	12	24	2
Unit Size									
Studio	-	-	-	-	250	500	510	400	-
One Bedroom	-	-	750	750	-	660	750	580	750
Two Bedroom	-	-	1,100	1,100	-	990	950	800	1,100
Three Bedroom	-	-	-	-	-	-	-	1,100	-
Average Unit Size	N/A	N/A	925	N/A	250	662	587	675	925

Note:
(a) These prototypes have the same unit composition and unit sizes in their rental and ownership forms.
(b) This prototype represents the ownership version, which has different affordability levels for its below-market rate units.
(c) Units above 8 stories were given a premium of $0.75 per square foot for the market rate units. This premium is not applicable to the below-market rate units above 8 stories.
Source: Strategic Economics, 2024.

Market Rate Rents

Market rate rent assumptions were established by using CoStar data from the last year. Submarkets data was used to approximate average rents for the relevant geographic areas of the city. A new construction premium of 10 percent was applied to the rents. The submarket rents were applied to each prototype based on their proposed location in the city, as shown in Figure 26.

Figure 26. Market Rate Rental Assumptions per Month (dollars per month)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Unit Rent							
Studio	-	-	-	2,400	2,800	2,850	3,300
One Bedroom	-	-	3,000	3,500	3,250	3,500	3,750
Two Bedroom	-	4,000	4,100	-	4,500	4,300	4,700
Three Bedroom	5,500	-	-	-	-	-	6,000
Unit Rent - Above 8 Floors							
Studio	-	-	-	-	-	-	3,630
One Bedroom	-	-	-	-	-	-	4,125
Two Bedroom	-	-	-	-	-	-	5,170
Three Bedroom	-	-	-	-	-	-	6,600

Source: Strategic Economics, 2024.

Below Market Rate Rents

The BMR rents used in the pro forma analysis were adopted from the City of Berkely's guidance on gross rent maximums for 2023, shown in Figure 27. Utility costs were then subtracted from the rent from each unit type to determine the net rent maximum.[14] The net rent (see Figure 28) was used in the analysis across all of the rental prototypes. Figure 29 shows the operating cost, vacancy rate, and cap rate used across the market and BMR units.

Figure 27. City of Berkeley Gross Rent Maximums for Very Low- and Low-Income Households

	Studio	1 BR	2BR	3BR	4BR	5BR
50% AMI	$1,295	$1,480	$1,665	$1,849	$1,998	$2,293
80% AMI	$1,964	$2,244	$2,524	$2,804	$3,029	$3,478

Source: City of Berkeley, 2023; Strategic Economics, 2024.

Figure 28. City of Berkeley Net Rent Maximums for Very Low- and Low-Income Households

	Studio	1 BR	2BR	3BR
50% AMI	$1,195	$1,332	$1,473	$1,614
80% AMI	$1,864	$2,096	$2,332	$2,569

Source: City of Berkeley, 2023; Strategic Economics, 2024.

Figure 29. Retail and Rent Assumptions

	Units	Apartments - Market Rate	Apartments - BMR	Retail
Operating Expenses	% of GSI	30.0%	30.0%	0.0%
Vacancy Rate - Market Rate	% of GSI	5.0%	2.5%	10.0%
Cap Rate	NOI / Project Value	5.0%	5.0%	5.0%

Source: Strategic Economics, 2024.

[14] Utilities were calculated using the City's Utility Allowance Schedule for BMR units, available here: https://berkeleyca.gov/sites/default/files/documents/2023%20COB%20BMR%20Utility%20Allowance%20Schedule.pdf.

Market Rate Sales Prices

Market rate sales prices for townhomes, condos, and single-family dwelling units were established using Redfin data for recently built and sold units for similar size developments to those in the for-sale prototypes for this study. Figure 30 provides a summary of the sales prices for each prototype by unit type.

Figure 30. Market Rate Sales Prices by Prototype

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily
Studio	-	-	-
One Bedroom	-	-	$800,000
Two Bedroom	-	$1,200,000	$1,100,000
Three Bedroom	$1,500,000	-	-

Source: Redfin, 2023; Strategic Economics, 2024.

Below Market Rate Sales Prices

Affordable housing prices were identified based on resources from California HCD, which sets income levels and maximum housing costs for federal and state-funded affordable housing programs. The City of Berkeley then provided a specific approach for calculating affordable sales prices. Background research, as well as City requirements, informed the assumptions that were used to calculate affordable sales prices (see Figure 31).

Figure 31. Below Market Rate Homeownership Assumptions

	Assumption	Basis	Source
Loan Type	Conventional	-	-
Down Payment	5%	Sales Price	*City of Berkeley, 2023*
Loan-To-Value (LTV) Ratio	95%	Sales Price	*City of Berkeley, 2023*
Interest Rate	6.76%	Annual	*FreddieMac 52-Week Average for 30-Year FRM, 2023*
Term of Loan	30	Years	*City of Berkeley, 2023*
Monthly HOA Dues	$0.32	Square Foot	*Zillow, 2023*
Property Tax Rate (Annual)	1.25%	Sales Price	*Bekins AMS Relocation, 2023*
Private Mortgage Insurance Premium Rate (Annual)	0.98%	Mortgage Amount	*Urban Institute Housing Finance Policy Center, 2023*
Homeowner's Insurance	0.35%	Sales Price	*QuoteWizard 2023*

Source: Strategic Economics, 2024.

Based on HCD guidelines, the affordable rent was calculated as 30 percent of a household's gross monthly income, minus a deduction for utilities[15]. The maximum monthly housing cost used to calculate the affordable sales price for condos in this study was 30 percent of a household's gross income, minus the cost of utilities. See Figure 32 for the affordable sales price calculation.

[15] Utilities were calculated using the City's Utility Allowance Schedule for BMR units, available here: https://berkeleyca.gov/sites/default/files/documents/2023%20COB%20BMR%20Utility%20Allowance%20Schedule.pdf.

FIGURE 32. BELOW-MARKET RATE CONDO SALES PRICE CALCULATION BY UNIT TYPE

	1 Bedroom	2 Bedroom
Household Size (Persons per HH)	2	3
Annual Household Income at 80% AMI	$89,750	$100,950
Maximum Monthly Housing Cost	$2,244	$2,524
Monthly Deductions		
Utilities	$229	$283
HOA Dues	$237	$348
Property Taxes	$224	$238
Private Mortgage Insurance	$167	$177
Homeowner's Insurance	$63	$67
Monthly Income Available for Mortgage Payment	$1,325	$1,410
Maximum Mortgage Amount	$204,008	$217,239
Down Payment	$10,737	$11,434
Maximum Affordable Sales Price	**$214,745**	**$228,672**

Source: Strategic Economics, 2024.

ESTIMATING DEVELOPMENT COSTS

Development costs were estimated for each of the development prototypes. Development costs include land costs, direct or "hard" construction costs, indirect or "soft" costs, as well as financing costs, a developer fee, and a contingency for overruns.

Assumptions for development costs were informed by interviews and data analysis. This was supplemented by Strategic Economics' general experience with the economics of real estate development projects in the Bay Area.

The development cost assumptions for rental and ownership prototypes are shown below in Figure 34 and Figure 35, respectively. The remainder of this section explains the cost assumptions in more detail.

LAND COST

Land costs typically vary widely, depending on factors such as location, zoning, and the amount of site work required to prepare the land for development. Because the price of land is so strongly tied to what can be built upon it, land costs are characterized in this study as the cost per dwelling unit of development.

Land costs were estimated based on CoStar land sales data from the past five years. When available, the size and unit count of the proposed redevelopment was used to inform the assumption of land cost per unit and per square foot for each of the prototypes in this study. Assumptions were also informed by the general market trend that larger developments command higher land costs per square foot of land, but lower per unit costs.

HARD COSTS

Hard costs refer to both horizontal site costs and vertical construction costs, including the residential area construction and parking construction.

The construction costs also include horizontal/site costs that include demolition, grading, utility connection installation, paving, and landscaping. For the purposes of this analysis, it was assumed that the hypothetical sites are relatively flat, with horizontal costs between $20 to $35 per land square

foot. The 10-Unit Small Multifamily was assumed to have higher horizontal costs because it includes surface parking.

The vertical costs include parking structures and building materials. The construction costs were based on assumptions for the materials used to construct each prototype. Type V construction is the least expensive and is used for wood frame structures. The Missing Middle prototypes and the GLA are constructed entirely with Type V building materials. The midrise prototypes utilize a mix of Type V and Type III building materials. Type III construction is used for developments over five stories, above the Type I podium used for a parking structure. The high-rise prototype utilizes Type I building materials, which is typically reinforced concrete and steel, with high fire safety standards. Total building costs were based on the amount of Type V, III, and I materials corresponding to the prototype design. The costs result in the per unit and per square foot costs as seen in Figure 33.

FIGURE 33. BUILDING AREA HARD COST PER UNIT AND PER SQUARE FOOT

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Cost per Unit	$600,000	$480,000	$463,480	$141,167	$304,567	$344,360	$479,999
Cost per Square Foot	$400	$400	$400	$350	$360	$449	$547

Source: Strategic Economics, 2024.

Parking costs were assumed to be $100 per square foot for garage spaces, and $200 per square foot for podium spaces. Each space was assumed to be 300 square feet.

The construction costs for the ownership prototypes were slightly higher than the rental costs per square foot. This is because the ownership prototypes were assumed to be of slightly higher building quality.

SOFT COSTS

Soft costs refer to necessary costs of development that are not directly related to the physical construction of the building. They include architecture, engineering costs and other professional services fees, as well as other costs associated with doing business, such as insurance and taxes. Finally, soft costs include city permits and fees, and other miscellaneous costs. It is estimated that soft costs are 13 percent of hard costs for the Missing Middle prototypes, and 18 percent for the GLA, midrise, and high-rise prototypes. This was reflected in interviews with local and outside developers. The developer's contingency and overhead also account for an additional five and four percent of hard costs, respectively, though there are no overhead fees for the Missing Middle prototypes.

FINANCING COSTS

Based on input from developers, 55 percent of the project cost would be financed with debt, with interest rates currently in the 7 percent to 9.25 percent range. For the purpose of this study, an interest rate in the middle of this range was selected (8 percent). Financing assumptions are consistent for the for-rent and for-sale prototypes because the hypothetical projects would have similar loan terms and construction timelines. The development period for the Small Lot Single Family and Townhome prototypes was assumed to be 12 months. It was assumed to be 18 months for the 10- Unit Small Multifamily and GLA prototypes, 24 months for the midrise prototypes, and 36 months for the high-

rise. All prototypes incorporate a 1.0 percent construction loan fee, which is a standard industry assumption. See Figure 36 for a summary of financing assumptions.

FEES

City fees were added to the pro forma. These fees include, but are not limited to, the affordable housing in lieu fee. A full breakdown of the fees for each prototype is provided in Figure 37.

FIGURE 34. HARD AND SOFT COST ASSUMPTIONS BY RENTAL PROTOTYPE

	Unit of measure	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Land Costs	per square foot	$150	$150	$175	$200	$325	$500	$850
Hard Costs								
Demolition and Site Work	per sf land	$20	$20	$35	$20	$25	$25	$25
Residential - Type V	per gross sf	$400	$400	$400	$350	$350	-	-
Residential - Type III	per gross sf	-	-	-	-	-	$400	-
Residential - Type I	per gross sf	-	-	-	-	$550	$550	$550
Retail - Type I	per gross sf	$100	$100	-	-	$200	$200	$200
Parking Garage	per space	$30,000	$30,000	$0	$0	$0	$0	$0
Parking Podium	per space	$0	$0	$0	$0	$60,000	$60,000	$0
Tenant Improvement Allowance	per net sf	$0	$0	$0	$0	$100	$100	$100
Soft Costs								
Arch, Eng & Consulting	% of hard costs	5%	5%	5%	8%	8%	8%	8%
Taxes, Insurance, Legal & Accounting	% of hard costs	5%	5%	5%	8%	8%	8%	8%
Other Soft Costs	% of hard costs	3%	3%	3%	3%	3%	3%	3%
Total Soft Costs (Excluding Fees)	% of hard costs	13%	13%	13%	18%	18%	18%	18%
Contingency	% of hard + soft costs	5%	5%	5%	5%	5%	5%	5%

Source: Strategic Economics, 2024.

FIGURE 35. HARD AND SOFT COST ASSUMPTIONS BY OWNERSHIP PROTOTYPE

	Unit of measure	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily
Land Costs	per square foot	$150	$150	$175
Hard Costs				
Demolition and Site Work	per sf land	$20	$20	$35
Residential - Type V	per gross sf	$425	$425	$425
Parking Garage	per space	$30,000	$30,000	$0
Tenant Improvement Allowance	per net sf	$0	$0	$0
Soft Costs				
Arch, Eng & Consulting	% of hard costs	5%	5%	5%
Taxes, Insurance, Legal & Accounting	% of hard costs	5%	5%	5%
Other Soft Costs	% of hard costs	3%	3%	3%
Total Soft Costs (Excluding Fees)	% of hard costs	13%	13%	13%
Contingency	% of hard + soft costs	5%	5%	5%

Source: Strategic Economics, 2024.

FIGURE 36. FINANCING COST ASSUMPTIONS

	Units	Small Lot Single Family	Fourplex/ Townhomes	3-Story Missing Middle (Units)	3-Story Missing Middle (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Total Development Cost (Excl. Financing)	Millions of $	$2.90	$3.10	$7.30	$7.80	$8.90	$41.80	$67.70	$170.97
Amount Financed	% of hard + soft costs	55%	55%	55%	55%	55%	55%	55%	55%
Average Outstanding Balance	% of amount financed	55%	55%	55%	55%	55%	55%	55%	55%
Construction Loan Fee	% of amount financed	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Construction Interest (annual)	% of amount financed	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Term	Months	12	12	18	18	18	24	24	36
Total Cost of Financing	Millions of $	$0.09	$0.09	$0.31	$0.33	$0.37	$2.25	$3.65	$13.35
Financing as Share of TDC	% of total costs	2.8%	2.8%	3.9%	3.9%	3.8%	4.4%	4.4%	6.9%

Source: Strategic Economics, 2024.

FIGURE 37. CITY FEES BY PROTOTYPE (WHEN TESTED UNDER EXISTING IN-LIEU FEE POLICY)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Affordable Housing In-Lieu Fee	$0	$0	$0	$450,938	$202,737	$1,255,416	$723,642	$1,580,453
BUSD Developer Fee	$15,660	$16,704	$40,323	$40,323	$50,530	$215,516	$313,144	$726,370
Building Permit Fees*	$31,850	$33,896	$83,218	$83,218	$115,672	$557,448	$936,523	$2,550,810
Plan Check Fees*	$20,702	$22,032	$54,091	$54,091	$75,187	$362,341	$608,740	$1,658,027
Other Permit Fees (Fire Plan, etc)*	$15,238	$16,216	$39,779	$39,779	$55,283	$266,330	$447,425	$1,218,614
SOSIP (Residential) Fee	$0	$0	$0	$0	$0	$0	$0	$369,689
SOSIP (Commercial) Fee	$0	$0	$0	$0	$0	$0	$0	$3,360
Sewer Connection*	$10,608	$14,144	$36,000	$36,000	$129,600	$270,000	$432,000	$864,000
1% Arts Fee	$0	$0	$3,952	$4,205	$4,205	$20,510	$34,374	$92,755
POPOS	$0	$0	$0	$0	$0	$0	$0	$0

Note:
* Calculated using the City of Berkeley's online fee calculator.
** Assumes $3,600 per unit for multifamily based on similar projects.
Source: Strategic Economics, 2024.

Pro Forma Results

This appendix provides the full pro forma results for the rental and ownership scenarios in Figure 38 and Figure 39. The rental results demonstrate the impacts of HARD HATS/prevailing wage and Bird Safe Building requirements. The section also provides the full pro forma results for the rental and ownership scenarios after the recommended in-lieu fee exemption for the first 5,000 square feet of development is applied in Figure 40 and Figure 41.

FIGURE 38. FULL RENTAL PRO FORMA RESULTS (WITH CURRENT IN-LIEU FEE, BIRD SAFE BUILDING, AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Revenues								
Market Rate Units								
Gross Scheduled Income	$198,000	$192,000	$340,800	$426,000	$963,600	$2,731,800	$4,023,600	$11,776,140
Less Vacancy	-$9,900	-$9,600	-$17,040	-$21,300	-$48,180	-$136,590	-$201,180	-$588,807
Less Operating Expenses	-$59,400	-$57,600	-$102,240	-$127,800	-$289,080	-$819,540	-$1,207,080	-$4,121,649
Below Market Rate Units								
Gross Scheduled Income	$0	$0	$43,968	$0	$43,020	$94,308	$178,704	$397,392
Less Vacancy	$0	$0	-$1,099	$0	-$1,076	-$2,358	-$4,468	-$9,935
Less Operating Expenses	$0	$0	-$2,130	$0	-$2,190	-$5,939	-$11,177	-$38,163
Retail Area	$0	$0	$0	$0	$0	$6,075	$8,100	$8,100
Total Net Operating Income	**$128,700**	**$124,800**	**$262,259**	**$276,900**	**$666,095**	**$1,867,757**	**$2,786,500**	**$7,423,078**
Total Capitalized Value	**$2,574,000**	**$2,496,000**	**$5,245,176**	**$5,538,000**	**$13,321,890**	**$37,355,132**	**$55,729,995**	**$148,461,556**
Development Costs								
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600	$1,742,400	$7,078,500	$10,890,000	$18,513,000
Direct Costs								
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920	$174,240	$544,500	$544,500	$544,500
Building Area	$1,800,000	$1,920,000	$4,634,800	$4,634,800	$5,082,000	$22,842,500	$41,323,200	$115,199,850
Parking	$90,000	$120,000	$0	$0	$0	$2,100,000	$900,000	$0
Tenant Improvements	$0	$0	$0	$0	$0	$150,000	$200,000	$200,000
City Initiatives								
Bird Safe Building	$0	$0	$0	$0	$78,844	$384,555	$644,516	$1,739,165
Hard Hats	$0	$0	$0	$0	$0	$5,127,400	$8,593,540	$0
Indirect Costs								
Soft Costs	$257,026	$276,526	$642,164	$642,164	$946,123	$4,614,660	$7,734,186	$20,869,983
Municipal Fees	$94,058	$102,992	$257,363	$708,553	$633,213	$2,947,561	$3,495,849	$9,064,078
Developer Overhead	$0	$0	$0	$0	$343,119	$1,611,109	$2,603,509	$6,575,656
Financing	$88,554	$93,853	$307,809	$326,669	$372,902	$2,254,902	$3,648,558	$13,352,528
Contingency	$120,838	$130,025	$307,353	$330,855	$377,580	$1,868,262	$3,022,490	$8,290,330
Total Development Costs	**$3,190,995**	**$3,383,915**	**$7,979,008**	**$8,472,561**	**$9,750,421**	**$51,823,948**	**$83,600,348**	**$194,349,091**
Feasibility Summary								
Yield-on-cost	4.03%	3.69%	3.29%	3.27%	6.83%	3.60%	3.33%	3.82%
Target yield-on-cost	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Difference	**-1.97%**	**-2.31%**	**-2.71%**	**-2.73%**	**0.83%**	**-2.37%**	**-2.67%**	**-2.18%**

Source: Strategic Economics, 2024.

FIGURE 39. FULL OWNERSHIP PRO FORMA RESULTS (WITH CURRENT IN-LIEU FEE, BIRD SAFE BUILDING, AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)
Revenues				
Market Rate Units				
Gross Revenue	$4,500,000	$4,800,000	$7,600,000	$9,500,000
Less Marketing Expenses	-$225,000	-$240,000	-$380,000	-$475,000
Below Market Rate Units				
Gross Revenue	$0	$0	$443,417	$0
Less Marketing Expenses	$0	$0	-$22,171	$0
Total Proceeds	**$4,275,000**	**$4,560,000**	**$7,641,246**	**$9,025,000**
Development Costs				
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600
Direct Costs				
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920
Building Area	$1,912,500	$2,040,000	$4,924,475	$4,924,475
Parking	$90,000	$120,000	$0	$0
Tenant Improvements	$0	$0	$0	$0
Indirect Costs				
Soft Costs	$271,651	$292,126	$679,821	$679,821
Municipal Fees	$94,058	$102,992	$258,521	$708,532
Developer Overhead	$0	$0	$0	$0
Financing	$92,329	$97,880	$321,540	$340,350
Contingency	$127,383	$137,006	$324,464	$347,905
Total Development Costs	**$3,328,441**	**$3,530,524**	**$8,338,341**	**$8,830,603**
Feasibility Summary				
Total Revenue	$4,275,000	$4,560,000	$7,641,246	$9,025,000
Total Development Cost	$3,328,441	$3,530,524	$8,338,341	$8,830,603
Net Revenue	**$946,559**	**$1,029,476**	**-$697,095**	**$194,397**
Return-on-Cost	28%	29%	-8%	2%
Target Return on Cost	8%	8%	8%	8%
Difference	**20%**	**21%**	**-16%**	**-6%**

Source: Strategic Economics, 2024.

FIGURE 40. FULL RENTAL PRO FORMA RESULTS WITH RECOMMENDED IN-LIEU FEE EXEMPTION (INCLUDES BIRD SAFE BUILDING AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Revenues								
Market Rate Units								
Gross Scheduled Income	$198,000	$192,000	$340,800	$426,000	$963,600	$2,731,800	$4,023,600	$11,776,140
Less Vacancy	-$9,900	-$9,600	-$17,040	-$21,300	-$48,180	-$136,590	-$201,180	-$588,807
Less Operating Expenses	-$59,400	-$57,600	-$102,240	-$127,800	-$289,080	-$819,540	-$1,207,080	-$4,121,649
Below Market Rate Units								
Gross Scheduled Income	$0	$0	$43,968	$0	$43,020	$94,308	$178,704	$397,392
Less Vacancy	$0	$0	-$1,099	$0	-$1,076	-$2,358	-$4,468	-$9,935
Less Operating Expenses	$0	$0	-$2,130	$0	-$2,190	-$5,939	-$11,177	-$38,163
Retail Area	$0	$0	$0	$0	$0	$6,075	$8,100	$8,100
Total Net Operating Income	**$128,700**	**$124,800**	**$262,259**	**$276,900**	**$666,095**	**$1,867,757**	**$2,786,500**	**$7,423,078**
Total Capitalized Value	**$2,574,000**	**$2,496,000**	**$5,245,176**	**$5,538,000**	**$13,321,890**	**$37,355,132**	**$55,729,995**	**$148,461,556**
Development Costs								
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600	$1,742,400	$7,078,500	$10,890,000	$18,513,000
Direct Costs								
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920	$174,240	$544,500	$544,500	$544,500
Building Area	$1,800,000	$1,920,000	$4,634,800	$4,634,800	$5,082,000	$22,842,500	$41,323,200	$115,199,850
Parking	$90,000	$120,000	$0	$0	$0	$2,100,000	$900,000	$0
Tenant Improvements	$0	$0	$0	$0	$0	$150,000	$200,000	$200,000
City Initiatives								
Bird Safe Glass	$0	$0	$0	$0	$78,844	$384,555	$644,516	$1,739,165
Hard Hats	$0	$0	$0	$0	$0	$5,127,400	$8,593,540	$0
Indirect Costs								
Soft Costs	$257,026	$276,526	$642,164	$642,164	$946,123	$4,614,660	$7,734,186	$20,869,983
Municipal Fees	$94,058	$102,992	$256,436	$496,678	$677,048	$2,947,561	$3,495,849	$9,064,078
Developer Overhead	$0	$0	$0	$0	$344,872	$1,611,109	$2,603,509	$6,575,656
Financing	$88,554	$93,853	$307,770	$317,812	$374,807	$2,254,902	$3,648,558	$13,352,528
Contingency	$120,838	$130,025	$307,304	$319,819	$379,955	$1,868,262	$3,022,490	$8,290,330
Total Development Costs	**$3,190,995**	**$3,383,915**	**$7,977,994**	**$8,240,793**	**$9,800,290**	**$51,823,948**	**$83,600,348**	**$194,349,091**
Feasibility Summary								
Yield-on-cost	4.03%	3.69%	3.29%	3.36%	6.83%	3.60%	3.33%	3.82%
Target yield-on-cost	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Difference	**-1.97%**	**-2.31%**	**-2.71%**	**-2.64%**	**0.83%**	**-2.37%**	**-2.67%**	**-2.18%**

Source: Strategic Economics, 2024.

FIGURE 41. FULL OWNERSHIP PRO FORMA RESULTS WITH RECOMMENDED IN-LIEU FEE EXEMPTION (INCLUDES BIRD SAFE BUILDING AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)
Revenues				
Market Rate Units				
Gross Revenue	$4,500,000	$4,800,000	$7,600,000	$9,500,000
Less Marketing Expenses	-$225,000	-$240,000	-$380,000	-$475,000
Below Market Rate Units				
Gross Revenue	$0	$0	$443,417	$0
Less Marketing Expenses	$0	$0	-$22,171	$0
Total Proceeds	**$4,275,000**	**$4,560,000**	**$7,641,246**	**$9,025,000**
Development Costs				
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600
Direct Costs				
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920
Building Area	$1,912,500	$2,040,000	$4,924,475	$4,924,475
Parking	$90,000	$120,000	$0	$0
Tenant Improvements	$0	$0	$0	$0
Indirect Costs				
Soft Costs	$271,651	$292,126	$679,821	$679,821
Municipal Fees	$94,058	$102,992	$258,521	$497,584
Developer Overhead	$0	$0	$0	$0
Financing	$92,329	$97,880	$321,540	$331,533
Contingency	$127,383	$137,006	$324,464	$336,917
Total Development Costs	**$3,328,441**	**$3,530,524**	**$8,338,341**	**$8,599,849**
Feasibility Summary				
Total Revenue	$4,275,000	$4,560,000	$7,641,246	$9,025,000
Total Development Cost	$3,328,441	$3,530,524	$8,338,341	$8,599,849
Net Revenue	**$946,559**	**$1,029,476**	**-$697,095**	**$425,151**
Return-on-Cost	28%	29%	-8%	5%
Target Return on Cost	8%	8%	8%	8%
Difference	**20%**	**21%**	**-16%**	**-3%**

Source: Strategic Economics, 2024.

Maximum Justifiable In-Lieu Fee Calculation

METHODOLOGY

The following steps illustrate the methodology for calculating the production cost affordability gap:

1. Estimate affordable rents and housing prices for households in target groups (see pages 36 and 37 for a description, and Figure 28 and Figure 32 for affordable rents and sales prices used in this study);
2. Estimate development costs of building new housing units, based on current cost and market data from the pro forma analysis;
3. Calculate the difference between what renters and homeowners can afford to pay for housing, and the cost of developing those rental and for-sale units (see Figure 42).

The following steps illustrate the methodology for calculating the affordability gap:

1. Estimate affordable rents and housing prices for households in target groups (see pages 36 and 37 for a description, and Figure 28 and Figure 32 for affordable rents and sales prices used in this study);
2. Subtract the difference in annual revenue between a market rate and below market rate unit (see Figure 26 for the market rate rents used in this study);
3. Divide the difference by the cap rate to determine the difference in revenue between producing a market rate and BMR unit.

The following steps illustrate the methodology to translate the gap per unit to a gap per square foot for both the production cost and the affordability gap methodologies:

1. Average the gap per unit across the income groups tested to determine the average gap per unit;
2. Multiply the average gap per unit by the required number of BMR units of a test prototype that satisfies the jurisdiction's inclusionary requirement via on-site units;[16]
3. Divide the total gap of the development project by the project's net square feet (see Figure 44).

[16] The test prototype used for this study has 100 units, of which 20 were below market rate. This satisfies the city's 20% inclusionary requirement.

FIGURE 42. PRODUCTION COST AFFORDABILITY GAP CALCULATION BY INCOME LEVEL

Unit Type	Unit Sq Ft	Units	Maximum Monthly Rent	Annual Revenue	Net Operating Income (a)	Available for Debt Service (b)	Supportable Debt (c)	Development Costs	Affordability Gap (d)
Very Low Income (50% AMI)									
Studio	500	33	$1,195	$14,340	$5,222	$4,540	$57,728	$351,000	$293,272
1 Bedroom	660	51	$1,332	$15,984	$6,824	$5,934	$75,449	$463,320	$387,871
2 Bedroom	990	16	$1,473	$17,676	$8,474	$7,369	$93,688	$694,980	$601,292
Average Affordability Gap									**$390,801**
Low Income (80% AMI)									
Studio	500	33	$1,864	$22,368	$13,049	$11,347	$144,265	$351,000	$206,735
1 Bedroom	660	51	$2,096	$25,152	$15,763	$13,707	$174,275	$463,320	$289,045
2 Bedroom	990	16	$2,332	$27,984	$18,524	$16,108	$204,802	$694,980	$490,178
Average Affordability Gap									**$294,064**

Note:
(a) Assumes 2.5% vacancy and $730/month operations cost per unit.
(b) Assumes 1.15 debt coverage ratio.
(c) Assumes 6.76% interest rate and 30 year loan.
(d) Calculated as the difference between development costs and the supportable debt.
Source: Strategic Economics, 2024.

FIGURE 43. AFFORDABILITY GAP CALCULATION BY INCOME LEVEL

Unit Type	Unit Sq Ft	Units	Maximum Monthly Rent	Annual Revenue	Market Rate Rent*	Annual Market Rate Revenue	Annual Difference	Difference/Cap Rate**	Affordability Gap Per Unit
Very Low Income (50% AMI)									
Studio	500	33	$1,195	$14,340	$2,800	$33,600	$19,260	$385,200	$385,200
1 Bedroom	660	51	$1,332	$15,984	$3,250	$39,000	$23,016	$460,320	$460,320
2 Bedroom	990	16	$1,473	$17,676	$4,500	$54,000	$36,324	$726,480	$726,480
Average Affordability Gap									**$478,116**
Low Income (80% AMI)									
Studio	500	33	$1,864	$22,368	$2,800	$33,600	$11,232	$224,640	$224,640
1 Bedroom	660	51	$2,096	$25,152	$3,250	$39,000	$13,848	$276,960	$276,960
2 Bedroom	990	16	$2,332	$27,984	$4,500	$54,000	$26,016	$520,320	$520,320
Average Affordability Gap									**$298,632**

Note:
* Market rate rents are assumed in the pro forma analysis and are based on the rent of the 6-Story Midrise prototype.
** The cap rate is assumed to be 5.0%.
Source: Strategic Economics, 202

FIGURE 44. MAXIMUM JUSTIFIABLE IN-LIEU FEE PER SQUARE FOOT

	Production Cost	Affordability Gap
Prototype		
Units	100	100
Required BMR units	20	20
Weighted Average Unit Sq. Ft.	660	660
Affordability Gap per Unit		
Very Low Income (50% AMI)	$390,801	$478,116
Low Income (80% AMI)	$294,064	$298,632
Average Affordability Gap per Unit	**$342,432**	**$388,374**
Affordability Gap Fee per Sq. Ft.	**$103.77**	**$117.69**

Source: Strategic Economics, 2024.

LOCAL CONTRIBUTION EQUIVALENT IN-LIEU FEE

In order to determine the equivalent local contribution needed to leverage funding for one off-site affordable unit, Strategic Economics reviewed recent data from the City of Berkeley on its financial support for 100 percent affordable tax credit projects (Figure 45).

The steps to calculate the local contribution fee include:

1. Calculate the average per unit contribution of local funding towards 100 percent affordable projects;
2. Multiply the average gap per unit by the required number of BMR units of a test prototype that satisfies the jurisdiction's inclusionary requirement via on-site units;[17]
3. Divide the total gap of the development project by its net square feet (see Figure 46).

FIGURE 45: CITY OF BERKELEY'S LOCAL CONTRIBUTION PER UNIT TO TAX CREDIT PROJECTS

	Ephesian	St Paul Terrace	Supportive Housing in People's Park	BUSD Workforce Housing	1740 San Pablo	Maudelle	Blake Apartments	Hope Center PSH + BRIDGE Affordable*
$ per unit	$228,958	$250,000	$121,691	$224,771	$150,000	$197,674	$193,548	$180,142

Note:
* Hope Center PSH and BRIDGE Affordable were combined because they are part of the same development project.
Source: City of Berkeley, 2023; Strategic Economics, 2024.

FIGURE 46. LOCAL CONTRIBUTION EQUIVALENT IN-LIEU FEE PER SQUARE FOOT

	Local Contribution
Prototype	
Units	100
Required BMR units	20
Weighted Average Unit Sq. Ft.	660
Average Contribution per Unit	**$193,348**
Local Contribution per Sq. Ft.	**$58.59**

Source: Strategic Economics, 2023.

[17] The test prototype used for this study has 100 units, of which 20 were below market rate. This satisfies the city's 20% inclusionary requirement.

BERKELEY IN-LIEU FEE AND HOUSING POLICIES ECONOMIC FEASIBILITY ANALYSIS

ASSESSMENTS OF THE IN-LIEU FEE AND HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE REQUIREMENTS

Prepared for:

City of Berkeley
November 18, 2024
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EXECUTIVE SUMMARY

Strategic Economics and Street Level Advisors were retained by the City of Berkeley to analyze the current residential development market context and provide recommendations regarding changes to the City's affordable housing "in-lieu" fee amount and application. As part of this study, Strategic Economics analyzed three new City construction requirements to assess their impacts on the financial feasibility of new market rate housing development.

These analyses supplemented and built upon changes made by the City of Berkeley to its affordable housing requirements in 2023. The 2023 changes included applying the in-lieu fee based on square feet of residential unit floor area (instead of a fee per housing unit), applying progressively lower fee amounts for projects below 12,000 square feet, and exempting projects with fewer than 5,000 square feet of housing unit floor area from the fee.

Those updates did not involve changing the equivalent in-lieu fee amount for a typical housing unit, nor did they include a deeper study of barriers to the development of small projects. Instead, the City of Berkeley sought the current study to examine the in-lieu fee level and its application under current market conditions. The resulting recommendations of this study propose further refinements that can help the City of Berkeley meet its housing production goals and encourage the development of small residential developments that diversify the housing stock.

Issues and Policies Studied

In-Lieu Fee Amounts and Policy:

- The purpose of this study was to analyze and recommend revised in-lieu fee amounts; in-lieu fees are an option for fulfilling the requirements applied to market rate housing development projects under the City's Inclusionary Housing Ordinance (IHO).[1] The IHO requires that developers of new housing with 5,000 or greater square feet of residential unit floor area (RUFA)[2] must either provide 20 percent of housing units as Below Market Rate (BMR) deed-restricted affordable housing, pay an in-lieu fee, provide a mix of BMR units and a pro-rated in-lieu fee payment, or pursue specified alternative options.

- A second goal of the in-lieu fee policy analysis was to ensure the policy does not discourage production of Missing Middle housing. As used in this report, the term "Missing Middle" refers to housing development projects with two to 19 housing units at sites equivalent in size to approximately one or two typical single-family lots.[3] Examples include small-lot single family homes (built on a single typically sized residential lot), duplexes, fourplexes, and modest multifamily buildings. The City of Berkeley is considering zoning changes to encourage Missing

[1] Berkeley Municipal Code Chapter 23.328.
[2] RUFA refers to the floor area of the Residential Unit(s) of a Housing Development Project, as measured from the interior walls of each unit.
[3] For purposes of this report, "Missing Middle" refers only to building design, and does *not* refer to any form of deed-restricted affordable or moderate-income BMR housing.

Middle housing; under the City's existing zoning rules, Missing Middle housing is generally not permitted in the City's low-density residential zoning districts.

Impacts of Construction Requirements on Construction Costs and Housing Development Feasibility:

- The Helping Achieve Responsible Development with Healthcare and Apprenticeship Training Standards ("HARD HATS") Ordinance, effective January 1, 2024, applies to development projects of 50,000 gross square feet and above and requires that contractors and subcontractors demonstrate that they provide apprenticeship programs and health care coverage for workers.[4]

- The Bird Safe Building Ordinance, effective July 27, 2023, requires the use of materials known to reduce the incidence of bird collisions for development projects above 10,000 gross square feet and 35 feet in height.[5]

- The prevailing wage requirements analyzed in this report would apply to construction projects of 50,000 gross square feet and above, comparable to the policy recently approved by the City Council as part of the Southside Plan Area zoning revisions[6] (but not in effect elsewhere).

Development Prototypes

This study used seven "development prototypes" to assess the financial feasibility impacts of the studied policies and understand barriers to development. Development prototypes are general models that typify recent or potential development projects in the City of Berkeley. The midrise and high-rise prototypes (4 stories and above) were developed to model the use of the State Density Bonus Law (SDBL), which allows for an increase in project size in exchange for the provision of on-site Below Market Rate (BMR) units. Nearly all midrise and high-rise housing development projects in Berkeley now use SDBL to access bonus building area and concessions and waivers from local requirements.

The first three prototypes shown in Figure 1 represent Missing Middle housing products. The 10-Unit Small Multifamily prototype was based on outside examples rather than local projects since this Missing Middle product is rarely built in Berkeley.

[4] Berkeley Municipal Code Chapter 13.107.

[5] Berkeley Municipal Code Section 23.304.150.

[6] Approved January 30, 2024 as Ordinance 7,89-N.S. to amend the Berkeley Municipal Code by adding Chapter 13.108.

FIGURE 1. DEVELOPMENT PROTOTYPES SUMMARY

Prototype	Description
Small-Lot Single Family*	Multiple single-family homes on a standard single family lot size.
Fourplex/Townhomes*	Stacked townhomes on a standard single family lot size.
10-Unit Small Multifamily*	3-story multiplex with surface parking.
4-Story Group Living Accommodation (GLA)	Micro-studio units with shared common spaces. Assumed to use SDBL.
6-Story Midrise	Podium style midrise. Assumed to use State Density Bonus
8-Story Midrise	Podium style midrise. Assumed to use State Density Bonus.
18-Story High-rise	Type 1 high-rise. Assumed to use State Density Bonus.

* Prototype is designed to represent a Missing Middle housing type.
Source: Strategic Economics, 2024.

Financial Feasibility Overview and Impacts of HARD HATS, Bird Safe Building, and Prevailing Wage Requirements

The financial feasibility analysis found that few prototypes are currently feasible even without the additional cost impacts of HARD HATS, Bird Safe Building, and prevailing wage requirements; of the rental prototypes, only the 4-Story GLA was feasible, while the Small-Lot Single Family and Fourplex/Townhomes were the only feasible ownership prototypes. These results are driven by relatively high current construction costs for labor and materials, high financing costs, and comparatively limited rent appreciation in recent years. The residential development types that are currently feasible in Berkeley tend to have relatively lower costs for materials and labor while also commanding high rents per square foot or high overall sales prices.

Although most typical market rate residential development projects are currently financially infeasible, developers may still propose projects or construct projects in anticipation of improved development conditions or due to project-specific factors. The results of the financial feasibility analysis represent outcomes for a developer initiating a typical market rate project under today's typical cost, revenue, and thresholds for return on investment. Multiple factors explain why developers continue to propose or construct housing projects in Berkeley. Developers submitted several project applications in 2023 to potentially avoid being subject to HARD HATS, which took effect in January 2024. Other developers are optimistic and believe that development conditions will change soon—such as increasing achievable rents (driven partly by strong student demand), slowing increases in construction costs, or reduced project financing costs. Individual development projects can also have unique beneficial characteristics that reduce development costs, such as lower land acquisition costs, innovative construction techniques (such as modular construction), or access to unique financing arrangements.

The reported increase in total hard costs for a typical midrise development project to meet the HARD HATS requirements ranges between 18 percent to 25 percent. This percentage reflects the approximate reported cost increase to shift from a midrise project built with largely non-union labor to instead use union labor. This reported cost increase is influenced by the number of trades that are shifting from non-union to union labor. The healthcare requirements of the HARD HATS ordinance are most readily met through use of union labor, although a subset of non-union contractors also comply. The ordinance currently requires contractors to show proof of health insurance contributions for workers six months prior to the start of any construction job and does not contain exemptions for workers who have declined coverage.

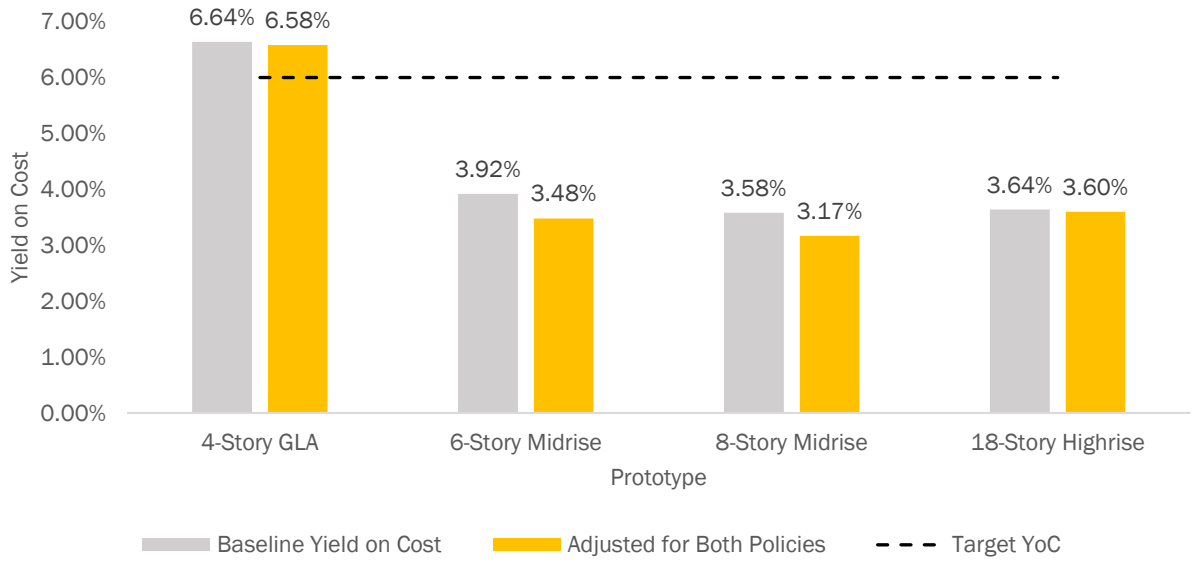
This cost differential varies based on project size and design, with smaller midrise projects being more likely to experience an increased cost burden and high-rise projects experiencing minimal cost increases. This is because smaller midrise projects are more likely to use a higher percentage of non-union trades for their construction, or trades with a larger share of contractors that do not otherwise comply with HARD HATS. Larger projects, such as high-rises, are much more likely to use union contractors and subcontractors, minimizing the costs associated with meeting HARD HATS requirements and a potential prevailing wage requirement.

A potential prevailing wage requirement would have similar cost implications as HARD HATS requirements if met through use of union labor, although *not in addition to HARD HATS' cost implications* if a development project is subject to both requirements. The cost differential between non prevailing wage and prevailing wage is approximately equivalent to the shift from non-union to union labor. This is because prevailing wages incorporate costs corresponding to most of the benefits provided by union membership, such as apprenticeships, retirement contributions, and healthcare.

The Bird Safe Building requirements add an additional 1.5 percent to the hard costs of residential development. This cost impact varies based on the amount of glass in the building's design.

As development conditions improve and more housing types become feasible to build again, the new and proposed labor and construction policies will most significantly increase costs for and reduce the feasibility of midrise residential development in Berkeley. Figure 2 shows the cost impact of HARD HATS and the Bird Safe Building requirements on the financial feasibility of the applicable prototypes. Only the 6-Story and 8-Story midrise prototypes are subject to the full cost impacts of both policies. As shown, the percent change in yield on cost—a measure of return on investment used here to assess financial performance—is negative 11 percent for the 6-Story Midrise prototype and negative 12 percent for the 8-Story Midrise when incorporating HARD HATS and Bird Safe Building requirements. For the 18-Story Highrise prototype, the impact is less than one percent.

FIGURE 2. FINANCIAL FEASIBILITY IMPACTS OF HARD HATS AND BIRD SAFE BUILDING REQUIREMENTS



Note: Prototypes are feasible when the yield on cost exceeds six percent.
Source: Strategic Economics, 2024.

The cost premium associated with meeting HARD HATS and prevailing wage requirements is likely to decline over time due to a variety of state legislation and legislation in other cities that will incentivize or expand use of contractors meeting or exceeding these labor standards. California housing legislation, such as AB 2011 and SB 6, imposes labor requirements like prevailing wages and employing skilled and trained labor. As more cities adopt similar measures, a larger pool of contractors may qualify for HARD HATS requirements—potentially increasing competition and reducing associated costs.

The City of Berkeley could potentially complete a future study to clarify the actual cost impacts of HARD HATS based on completed projects. This report's findings on HARD HATS construction costs are based on current information and conditions. As no projects have been built under HARD HATS yet, a more accurate cost assessment could be conducted in three to five years or during the City's next re-study of inclusionary or in-lieu fee requirements.

The City of Berkeley could also consider studying the HARD HATS policy beyond its impact on construction costs. This study focused solely on the construction cost impacts associated with the HARD HATS requirements. A broader analysis of HARD HATS would allow consideration of the policy's broader benefits and drawbacks.

Development conditions are dynamic, with constant changes over time in achievable rents/prices, components of development costs, and required rates of return on investment. Figure 3 illustrates this principle by showing the impact on project return (expressed as yield on cost) given hypothetical changes in rent and total development costs for one unit of housing from the 6-Story Midrise prototype. The project return would need to increase from 3.48 percent to 3.92 percent to achieve the same financial performance while absorbing the additional cost impacts of HARD HATS, etc., as shown above in Figure 2. This could be achieved if, for example, rents increased 10 percent, or if rents increased five percent and development costs declined five percent.

FIGURE 3. IMPACTS OF CHANGES IN RENT AND DEVELOPMENT COSTS ON THE YIELD ON COST OF ONE RENTAL UNIT

Change in Development Costs	Change in Rent: -10%	-5.00%	0.00%	5.00%	10.00%	15.00%
-10%	3.31%	3.59%	3.86%	4.14%	4.42%	4.70%
-5%	3.13%	3.40%	3.66%	3.92%	4.19%	4.45%
0%	2.98%	3.23%	3.48%	3.73%	3.98%	4.23%
5%	2.84%	3.07%	3.31%	3.55%	3.79%	4.03%
10%	2.71%	2.93%	3.16%	3.39%	3.62%	3.84%

Source: Strategic Economics, 2024.
Note: Feasible yield on cost in this analysis is six percent. While the development becomes slightly more feasible as rents increase and development costs decrease, the project is still infeasible in all scenarios displayed above.

The additional development costs associated with the HARD HATS, prevailing wage, and Bird Safe Glass requirements are not likely to pose an insurmountable barrier to future market rate residential development in Berkeley when development conditions improve, but the requirements will constrain the likelihood and pace of future housing production. The magnitude of changes in rents, development costs, and other development conditions required to cover the impacts of HARD HATS and the other requirements is likely achievable over time as market conditions shift. Overall demand for housing is strong in Berkeley, especially given the number of students seeking housing. However, the development cost increases associated with HARD HATS, prevailing wage, and Bird Safe building

requirements are significant enough to delay or constrain housing production since the policies increase the required changes in rents/prices, development costs, and market return thresholds necessary before housing development becomes feasible.

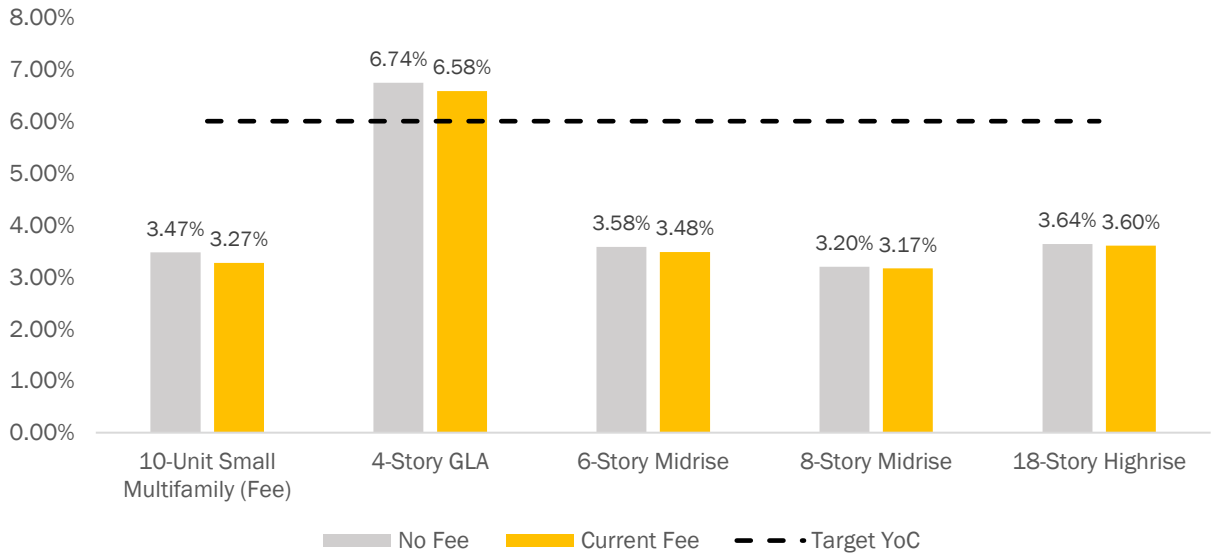
In-lieu Fee Analysis and Recommendations

Strategic Economics examined the in-lieu fee revision from multiple perspectives, including consideration of comparability with the costs of providing on-site Below Market Rate (BMR) units, the cost to produce off-site affordable units via fee revenue, financial feasibility conditions, comparability with fees in other nearby communities, and consideration of barriers and opportunities to support Missing Middle housing. The analyses found the following:

- Nearly all of the analyzed development prototypes are currently financially infeasible to build as a new project under today's development conditions and existing City requirements, except for the 4-Story GLA rental project, Small Lot Single Family ownership product, and Fourplex/Townhomes ownership product.

- The poor financial performance of the development prototypes is primarily attributable to the broader feasibility challenges, noted earlier, rather than the current in-lieu fee level. For example, the in-lieu fee only results in a negative percent change in project return of between one and six percent for the rental prototypes, as shown in Figure 4.

FIGURE 4. IMPACT OF IN LIEU FEE ON FINANCIAL FEASIBILITY OF APPLICABLE PROTOTYPES



Source: Strategic Economics, 2024.

- Smaller Missing Middle products—Small Lot Single Family and Fourplex/Townhomes—demonstrate some financial capacity to support an in-lieu fee under today's development conditions, but these products are rarely built due to challenges such as the lack of small-scale developers with capacity and interest in this type of development and the limited inventory of lower-cost underutilized sites available for sale in existing neighborhoods.

- A variety of tradeoffs must be considered when selecting an in-lieu fee. Setting a high fee can incentivize developers to provide on-site BMR units rather than pay the fee; this adds to the City's affordable housing stock and contributes to mixed-income developments, yet limits City resources to leverage outside funding to produce more deeply affordable housing in 100 percent affordable projects created through the Housing Trust Fund program. Setting a high fee increases development feasibility challenges and can delay when and whether housing projects are built. Setting a low fee can achieve the opposite outcomes—but setting the fee too low can also create a scenario in which the City may "miss the market" by failing to collect potential affordable housing funding when development conditions improve.

- Regardless of the fee level, larger development projects will continue to include and produce on-site BMR units to receive density bonuses; these projects typically also contribute prorated fee revenue. Given the value of SDBL incentives, most midrise and high-rise development projects in Berkeley are likely to be built with density bonuses.

- The current in-lieu fee level is similar to the City's typical contribution toward the cost of providing off-site affordable housing units in 100 percent affordable housing projects before accounting for additional administrative costs. The average funding contributed by the City of Berkeley to produce an equal number of affordable units in a 100 percent affordable housing project is generally equivalent to a per residential square foot in lieu fee of $58.59, or $67.38 after including a 15 percent increase for administrative costs. The City's current maximum in-lieu fee is $56.25 per square foot.

Based on these findings, Strategic Economics prepared recommendations seeking to support the following goals:

1. Produce affordable housing through on-site BMR inclusionary units or through in-lieu fees that the City can use to leverage outside funding to produce affordable units in 100 percent affordable housing developments.
2. Support the financial feasibility of market rate housing development so these projects can in turn generate on-site BMR units or in-lieu fee funding resources.
3. Promote the development of Missing Middle product types that add two- to 19-unit housing options in Berkeley's neighborhoods.

The following table summarizes the current in-lieu fee structure and recommended changes. The recommended changes are explained in the narrative following the table.

FIGURE 5: CURRENT IN-LIEU FEE POLICY AND RECOMMENDED CHANGES

	Current In-Lieu Fee Policy	Recommended Changes
In-Lieu Fee Amount	$0 per square foot for projects below 5,000 square feet (residential unit floor area) $38.75 for projects between 5,000 and 5,999 square feet, and then incrementally increases for each thousand square feet between 6,000 up to 11,999 square feet $56.25 for projects of 12,000 square feet or more	$56.25 per square foot for all projects
Application to Projects Opting to Pay the Full Fee and Provide No Qualifying On-Site Inclusionary Units	See above	The first 5,000 square feet would be exempt from the in-lieu fee for any project opting to pay the full fee instead of providing any on-site inclusionary units (State Density Bonus projects cannot qualify for the exemption since they include qualifying on-site inclusionary units)
Application to Projects Opting to Pay a Prorated Fee Through Mixed Compliance with the Inclusionary Requirements	Fee structure and level remains the same as above; for State Density Bonus projects a prorated fee would apply to the remaining obligation after accounting for on-site BMR units produced to attain density bonus status, and the fee only applies to the base project (i.e., City inclusionary requirements and in-lieu fee cannot apply to the bonus area of the development)	Projects opting to include any on-site inclusionary units (including State Density Bonus projects) would still be obligated to pay any remaining prorated fee obligation, if applicable, with no exemption; the fee itself would now be $56.25 per the first recommended change
Fee Level Adjustment Over Time	The in-lieu fee is adjusted every two years based on the California Construction Cost Index	No change

Recommendation 1: Eliminate the current in-lieu fee structure that exempts projects with less than 5,000 square feet of RUFA from the fee and progressively increases fee levels for projects between 5,000 and 12,000 square feet. Instead, apply the same in-lieu fee level to all housing development projects.

Currently there is an exemption to the affordable housing requirements for new residential development with less than 5,000 square feet of RUFA. Strategic Economics recommends removing this exemption as part of a package of recommendations designed to simplify the affordable housing requirements and support the development of Missing Middle housing in Berkeley. Adjusting the policy to apply to all residential developments, with no "phase in" based on project size, reduces the incentive for developers to pursue projects just under the applicable square footage to avoid triggering higher in-lieu fees. For example, currently a housing project with 4,999 square feet of RUFA would pay zero in-lieu fees, while a project with 5,001 square feet would pay over $193,000 in in-lieu fees.

Recommendation 2: For any project opting to pay the full fee instead of providing any on-site inclusionary units, exempt the first 5,000 square feet of RUFA from the in-lieu fee.

This exemption supports production of Missing Middle housing by ensuring these small developments pay a relatively low fee per square foot of project area, yet developers would no longer be incentivized to reduce the project size to avoid triggering a significantly higher total fee. At the same time, the full fee would still apply to nearly all larger midrise and high-rise housing projects since developers are likely to continue building these product types as SDBL projects that require on-site BMR units.

The policy change would modestly decrease the total in-lieu fee paid by a limited number of housing product types that are rarely built in Berkeley, such as the 10-unit Small Multifamily building tested in this analysis. However, the policy change would also slightly increase fee revenue from other projects, such as the 4-story Group Living Accommodation prototype tested in this analysis.

While the exemption slightly disincentivizes satisfying the affordable housing requirement by providing on-site BMR units—since the fee is lower than the equivalent affordability gap—developers of SDBL projects will continue to provide on-site BMR units to trigger access to the State Density Bonus law's valuable concessions, waivers, and additional development capacity. Since SDBL provides these significant benefits for projects, most larger projects will likely continue to provide on-site units and pay prorated in-lieu fees for the remaining obligation.

Recommendation 3: Maintain the existing $56.25 maximum in-lieu fee level as the universally applicable in-lieu fee.

While the in-lieu fee could justifiably be increased to become equivalent to the cost of producing an on-site BMR unit, Strategic Economics recommends maintaining the new universal in-lieu fee level at its current maximum of $56.25. This supports the production of new housing by not increasing the fee level at a time when project financing and construction materials and labor costs are making residential development particularly challenging. Maintaining the current in-lieu fee level also allows the City of Berkeley to maintain a fee that is approximately equivalent to the City's typical direct contributions to the cost of leveraging an off-site affordable housing unit. By maintaining the current in-lieu fee, the City will maintain its primary affordable housing funding

source as development conditions improve, mitigating the risk of lost opportunity to secure funding when development conditions shift.

Recommendation 4: Continue to adjust the in-lieu fee regularly based on the California Construction Cost Index.

Regular adjustment of the fee increases the likelihood that the revenue collected will continue to support a comparable number of affordable units in future 100 percent affordable housing projects.

I. INTRODUCTION: KEY CONCEPTS, APPROACH, AND DEVELOPMENT PROTOTYPES

Purpose of Study

Strategic Economics and Street Level Advisors were retained by the City of Berkeley to analyze the current residential development market context and provide recommendations regarding changes to the City's affordable housing "in-lieu" fee amount and application. As part of this study, Strategic Economics analyzed three new City construction requirements to assess their impacts on the financial feasibility of new market rate housing development.

The analysis of the City of Berkeley's in-lieu fee policy examined maximum supportable fee levels and whether and how to adjust application of the fees. In-lieu fees are paid by market rate developers in lieu of providing on-site affordable housing units required under the City of Berkeley's Inclusionary Housing Ordinance (IHO).

These analyses supplemented and built upon changes made by the City of Berkeley to its affordable housing requirements in 2023. The 2023 changes included applying the in-lieu fee based on square feet of residential unit floor area (instead of a fee per housing unit), applying progressively lower fee amounts for projects below 12,000 square feet, and exempting projects with fewer than 5,000 square feet of housing unit floor area from the fee.

Those updates did not involve changing the equivalent in-lieu fee amount for a typical housing unit, nor did they include a deeper study of barriers to the development of small projects. Instead, the City of Berkeley sought the current study to examine the in-lieu fee level and its application under current market conditions. The resulting recommendations of this study propose further refinements that can help the City of Berkeley meet its housing production goals and encourage the development of small residential developments that diversify the housing stock.

Two new City requirements analyzed by Strategic Economics consisted of those enacted by the Helping Achieve Responsible Development with Healthcare and Apprenticeship Training Standards ("HARD HATS") ordinance and the Bird Safe Building requirements ("Bird Safe Building") ordinance. Strategic Economics also studied the impact of an expanded prevailing wage requirement on certain residential developments; this requirement is currently only in place in the Southside Plan area. Each of these requirements is discussed in detail below.

The study was guided by five key policy questions:

1. How should the in-lieu fee and its application be updated to support the City's policy goals of encouraging new affordable and market rate housing development?
2. What are key barriers to developing small "Missing Middle" infill housing products?
3. How can the in-lieu fee be adjusted to support the development of small missing middle infill housing products?
4. How do recent policy changes, including Bird Safe Building and HARD HATS, impact the financial feasibility of residential development?
5. How does the potential prevailing wage requirement impact the financial feasibility of residential development?

OVERVIEW OF IN-LIEU FEE POLICY AND MISSING MIDDLE HOUSING GOALS

The purpose of this study was to study and recommend revised in-lieu fee amounts based on an analysis of current market conditions for residential development. The in lieu fee is a way in which developers can fulfill the requirements applied to market rate housing development projects under the City's Inclusionary Housing Ordinance (IHO).[7] The IHO requires that developers of new housing with over 5,000 square feet of residential unit floor area (RUFA)[8] must either provide 20 percent of housing units as Below Market Rate (BMR) deed-restricted affordable housing, pay an in-lieu fee, provide a mix of BMR units and pro-rated in-lieu fee payment, or pursue specified alternative options.

The City's current in-lieu fee is tiered based on the total square footage of the development project, with fee levels starting at $38.75 per square foot of RUFA for a 5,000 square foot project. The fee then increases every 1,000 square feet until reaching the maximum current fee of $56.25 per square foot for projects of 12,000 square feet and larger. The fee is automatically adjusted every two years, based on changes to the California Construction Cost Index.

The in-lieu fee analyses and recommendations in this report focus on ensuring that new market rate development projects can and will generate affordable housing units. These units could be generated either through provision of on-site BMR units or through in-lieu fee funding resources. Those resources enable the City to leverage additional outside funding and produce affordable housing units in 100 percent affordable housing projects.

A second goal of the in-lieu fee policy analysis was to ensure the policy does not discourage production of Missing Middle housing. As used in this report, the term "Missing Middle" refers to housing development projects with two to 19 housing units at sites equivalent in size to approximately one or two typical single-family lots.[9] Examples include small-lot single family homes, duplexes, fourplexes, and modest multifamily buildings. This type of housing provides an intermediate density that can increase the number of homes in existing neighborhoods.

The City of Berkeley has pursued multiple efforts to encourage Missing Middle housing, which is not commonly built in the city today. These efforts include City Council referrals to study the issue and to remove exclusionary zoning, Housing Element policies, and preparation of Middle Housing zoning amendments and objective design standards. This study explores the key barriers to developing Missing Middle housing and recommends in-lieu fee policy adjustments intended to support future development of this housing type while simplifying the current in-lieu fee structure.

OVERVIEW OF THE HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE POLICIES

This study analyzed the impact of construction policies on the financial feasibility of residential development to understand the current market conditions that might influence the future direction of the in-lieu fee. The City of Berkeley's HARD HATS Ordinance, effective January 1, 2024, applies to development projects of 50,000 gross square feet and above, which is the equivalent of approximately 50 housing units in a multifamily development project.[10] HARD HATS requires contractor and subcontractor prequalification to demonstrate that these employers provide apprenticeship programs

[7] Berkeley Municipal Code Chapter 23.328.
[8] RUFA refers to the floor area of the Residential Unit(s) of a Housing Development Project, as measured from the interior walls of each unit.
[9] For purposes of this report, "Missing Middle" refers only to building design, and does *not* refer to any form of deed-restricted affordable or moderate-income BMR housing.
[10] Berkeley Municipal Code Chapter 13.107.

and health care coverage for workers. The Bird Safe Building Ordinance, effective July 27, 2023, requires the use of materials known to reduce the incidence of bird collisions for development projects above 10,000 gross square feet and 35 feet in height.[11] The City also sought an analysis of the financial feasibility impacts associated with applying prevailing wage requirements to construction projects of 50,000 gross square feet and above—comparable to those recently approved by the City Council as part of the Southside Plan Area zoning revisions.[12]

Report Structure

This report consists of the following content:

- The remainder of this report introduction describes the approach used to complete the feasibility analyses conducted as part of the study.

- Section II describes analysis findings, conclusions, and policy recommendations for adjustments to the in-lieu fee and policy (page 25).

- Section III describes the findings and conclusions of the financial feasibility analysis. This includes analysis of the impacts of the HARD HATS, Bird Safe Building, and proposed prevailing wage requirements on the current market conditions for residential development (page 36).

- Appendix provides detailed tables describing the key assumptions, inputs, calculations, and outputs of the analyses (page 47).

Financial Feasibility Analysis Concepts

The following content introduces important concepts related to the financial feasibility analysis components of the study. At the most basic level, "financial feasibility" simply refers to whether a development project generates sufficient revenues to justify the costs and risks of building the project.

Because inclusionary housing and in-lieu requirements like Berkeley's seek to leverage the activities of the private market to produce affordable housing, the requirements rely on the financial feasibility of market rate housing projects. This means inclusionary and in-lieu fee policies are reliant on some factors outside of the City's control. Cities can control what types of housing are allowed on each parcel using land use regulation, and whether project proposals are approved. However, a city cannot control whether developers propose projects within those regulations, nor the exact composition of proposed projects. Developers will only propose projects that they assess as being feasible to construct.

Requirements to provide inclusionary affordable units or pay a certain level of additional fees influence development feasibility for market rate housing developers by reducing revenues or increasing costs. Thus, for an inclusionary policy to contribute to affordable housing production, its requirements must be high enough that they result in the production of new on-site affordable units or fee revenues, but not be so high that they prevent market rate housing projects from being feasible. This makes it

[11] Berkeley Municipal Code Section 23.304.150.

[12] Approved January 30, 2024 as Ordinance 7,89-N.S. to amend the Berkeley Municipal Code by adding Chapter 13.108.

important to identify how different in-lieu fee levels relate to the total revenue and expenses of a project.

On the other hand, requiring on-site BMR units or in-lieu fee contributions can help Berkeley meet its affordable housing development goals through multiple means of affordable housing production. Thus, the content of this section explains why financial feasibility of housing development matters for setting inclusionary policies; how "affordable" housing is defined and affects financial feasibility considerations; and how inclusionary policies fit within the context of overall affordable housing production in a community.

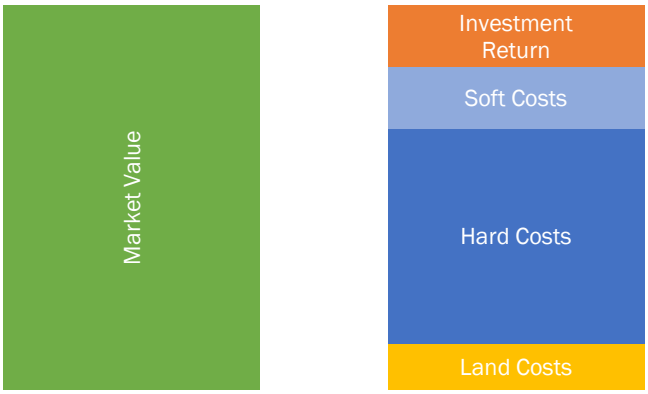
From a market rate housing developer's perspective, development projects are only financially feasible when the market value of the project (based on total net operating income) exceeds project costs and investment return. As shown in Figure 6, this is determined by the following factors.

- Total project revenue is determined by the market value of the project.
    - For for-sale projects, the market value consists of the sales prices the units can obtain.
    - For rental projects, the market value of the project depends on the annual revenue it will generate and the current capitalization rate, which reflects overall project investment risk relative to alternative investments (see the box on Page 13 for more information on investment return metrics).

- Total project costs include hard costs, soft costs, investment return, and land costs.
    - Hard costs include materials and labor associated with physical construction of the building.
    - Soft costs include indirect expenses such as architecture and engineering, taxes, insurance, financing costs, and municipal fees.
    - Investment return consists of the required financial return on investment that a project must achieve to attract developer and lender investment.
    - Land costs refer to the price the developer pays to acquire the land.

Each of these factors is very dynamic; project costs and revenues can fluctuate significantly, and many factors, such as the market rate price of housing, are beyond the City's direct influence. Instead, the market rate price or rental rate for housing is primarily set by local market demand; the price and rent may rise and fall according to the availability of housing supply, presence of amenities, or other factors in the market area.

FIGURE 6. COMPONENTS OF FINANCIAL FEASIBILITY: PROJECT VALUE AND PROJECT COST COMPONENTS



Source: Strategic Economics, 2023.

KEY DEVELOPMENT TERMS AND DEFINITIONS

Net Operating Income (NOI): The total revenue remaining after accounting for all expenses and vacancies.

Capitalization Rate: A ratio of annual net operating income of an asset to its market value. This rate, which accounts for current market conditions, is used for purposes of analysis to translate the revenue from the income-producing rental prototypes into the equivalent sales value of the projects. This study used a capitalization rate of five percent to determine the "capitalized value" of each prototype.

Yield on Cost: The project's potential return on investment as a proportion of total development costs. It is calculated by dividing a property's net operating income by the total cost to develop the property. Yield on cost is typically the metric used for capturing the potential return of rental properties. This study used a yield on cost threshold of six percent to determine financial feasibility.

Return on Cost: The project's potential return on investment as a proportion of total development costs. It is calculated by subtracting total development costs from total revenue, and dividing the remainder by the total cost to develop the property. Return on cost is typically used for capturing the return of ownership properties. This study used a return on cost threshold of eight percent to determine financial feasibility.

An in-lieu fee provides an option for a developer to pay a fixed sum rather than provide on-site units to satisfy the City's affordable housing requirements. The fee can be set in a variety of ways to encourage development in line with the City's priorities for affordable housing production. For example, if a fee is significantly less than the cost of providing additional on-site units, it can disincentivize on-site production of BMR units. However, if the City aims to collect funds for affordable housing, fee payments can be a desirable outcome.

Ultimately, in-lieu fees, HARD HATS, Bird Safe Building, and prevailing wage requirements create costs for development projects while the market value of the project remains the same. These policies create tradeoffs between maximizing the potential pace of housing production versus ensuring housing development contributes to other important City goals.

Approach to the Financial Feasibility Analysis

Strategic Economics performed a financial feasibility analysis to test the impacts of HARD HATS, Bird Safe Building, and prevailing wage requirements on new housing development projects, and to examine the extent to which different market rate housing products in Berkeley can support in-lieu fee contributions.

Strategic Economics first worked with City staff and analyzed information about recent projects to create development "prototypes." Then Strategic Economics built a pro forma model to test the financial feasibility of each prototype under different requirements and fees. Detailed information about the development prototypes is provided in the following section of the report.

Strategic Economics measured the financial feasibility of each prototype and scenario using a static pro forma model that solves for the financial "return on investment" supported by the project. A pro forma model is a tool used to estimate the financial performance of a development project. The base static model reflected today's market conditions such as prices/rents, construction costs, and financing costs. Cost and revenue assumptions were informed by review of existing reports, recent development activity, market data, and 13 interviews with developers, general contractors, and architects with experience working in Berkeley and the broader Bay Area. This report's appendix shows detailed cost and revenue assumptions, other inputs and calculations, and a set of basic pro forma statements.

A project was considered financially feasible when the investment return met current market thresholds. These thresholds are driven by broader market conditions, recognizing that developers and investors have a range of investment options beyond a given development project.

Financial feasibility was assessed using "yield on cost" for rental prototypes and "return on cost" for ownership prototypes. Yield on cost was calculated by dividing the expected net annual operating income at full lease-up by total development costs. Return on cost was calculated by dividing the expected net sales revenue by total development costs.

To establish a reasonable threshold for a developer's rate of return on new development projects in Berkeley, Strategic Economics interviewed local developers, reviewed other similar financial analyses in the Bay Area, and reviewed publications on the local and regional real estate market. Based on this research, the analysis assumed that rental projects were feasible at a yield on cost of at least six percent and ownership projects at a return on cost of at least eight percent.

Development Prototypes Used in the Feasibility Analysis

Strategic Economics created seven development prototypes that represent typical residential developments recently completed or proposed in Berkeley. The prototypes were then used to test the financial feasibility of new and proposed labor and construction policies, as well as potential updates to the in-lieu fee. The creation of the prototypes was completed in collaboration with the City of

Berkeley. The prototypes represent a range of tenures, locations within the city, residential densities, building heights, parking formats, and use of the State Density Bonus Law (see the pullout on the law).

STATE DENSITY BONUS LAW: BACKGROUND, APPLICATION, AND LOCAL CONTEXT

The State Density Bonus Law (SDBL) was originally enacted in 1979 to encourage affordable housing development. The law allows developers to build beyond the maximum allowed density in a jurisdictions' land use plan in exchange for providing a certain number of new deed-restricted affordable dwelling units on site. It also grants developers access to certain incentives that allow for cost reductions as well as waivers to development standards that would otherwise physically preclude the project from being built on the chosen site.

Developers submit applications for SDBL projects that are based on a base project that conforms to the development standards of the site. This base project then has a density bonus applied to it based on the number of on-site affordable units provided and their level of affordability. These elements directly correspond to the increase in density allowed to the project. They also influence the number of incentives and waivers granted to the project. Developments with more below-market rate units and deeper affordability levels (i.e., very low and low income) qualify for larger density bonuses and up to four incentives and waivers. In 2021, the law was modified to allow up to a 50% bonus with the corresponding provision of on-site affordable units. In 2023, AB 1287 was passed, allowing for an additional density bonus with the provision of moderate income units. This study only models projects that use very low and low income units to gain access to a density bonus.

SDBL projects are subject to the inclusionary housing ordinance of the jurisdiction in which they are built. However, the on-site units provided to gain access to the density bonus can be used to satisfy all or part of the local affordable housing requirements, which typically require either the provision of on-site units, the payment of an in-lieu fee, or some combination of both. Inclusionary and in-lieu fees are only applied to the base project version of the SDBL development, which means that the fee is applied based on the square footage of a smaller project than what is eventually built. Since SDBL projects must provide some on-site units to qualify for the density bonus, if they choose to pay a fee to satisfy the remainder of the affordable housing requirements then the fee is prorated. Thus, SDBL projects tend to pay a much smaller in lieu fee than a similarly sized project that does not take a density bonus.

Several of the prototypes used for this study utilize the SDBL. This decision reflects patterns seen in the recent development activity in the City of Berkeley. The City's building permit log from 2022 and 2023 demonstrates the increased use of SDBL for midrise and high-rise development; over half of the permitted midrise projects and all the permitted high-rise projects use the law. Local developers interviewed for this study provided further verification of the importance of SDBL for making residential development projects pencil, as the increased unit count and incentives and waivers provide additional revenue while reducing development costs.

The prototypes were also developed to respond to specific policy questions around underrepresented development types, including Missing Middle housing, which is between two and 19 units. Thus, the Missing Middle prototypes draw from real projects in Berkeley and from outside sources, such as Opticos Design's guidelines for Missing Middle Housing. [13]

The development prototype characteristics are described below and summarized in Figure 7.

Missing Middle Prototypes:

- *Small Lot Single Family:* This prototype was designed to fit three single-family homes on the standard size lot for one single family home in Berkeley, which is approximately 0.1 acres. Each of the three single family homes included in the prototype is three stories, 1,500 gross square feet, and has one garage parking space.
- *Fourplex/Townhomes:* This prototype consists of four townhomes built around a four-car garage. This prototype is also designed on a standard size lot for one single family home (0.1 acres) and is three stories at its highest point. Each townhome is 1,200 square feet.
- *10-Unit Small Multifamily:* This prototype includes ten units split evenly between 1- and 2-bedroom apartments. The one-bedroom units are 750 square feet, and the two-bedroom units are 1,100 square feet.

These prototypes were developed based on existing and proposed developments in Berkeley. However, there are few existing examples of this type of housing in the city, especially for the 10-Unit Small Multifamily prototype. As a result, that prototype draws from Opticos Design's guidelines for a "multiplex" housing type.

Group Living Accommodation (GLA), Midrise, and High-rise Prototypes:

- *4-Story GLA:* This prototype was designed according to the City of Berkeley's definition of a GLA, requires separate sleeping rooms with large common spaces. GLA buildings are typically marketed to students. The prototype fits on a 0.2 acre lot and has 36 units. One unit is a one-bedroom, designed for a resident manager, while the other 35 are micro-studios. The prototype does not include parking.
- *6-Story Midrise:* This prototype was designed on a 0.5 acre lot, with 75 units. It reflects newer developments that have been proposed or built near the Ashby BART station and along the San Pablo corridor.
- *8-Story Midrise:* This prototype was designed on a 0.5 acre lot, with 120 units. It reflects newer developments that have been proposed or built near the Ashby BART station and along the San Pablo corridor.
- *18-Story High-rise:* This prototype is designed on a 0.5 acre lot, with 240 units. This type of development is currently only allowed in the area covered by the Downtown Berkeley Area Plan.

Additional Prototype Characteristics

- **Tenure:** The Small Lot Single Family, Fourplex/Townhome, and 10-unit Small Multifamily prototypes were tested as ownership and rental products. The other prototypes were only tested as rental products since current development conditions greatly disfavor larger condominium development projects—as indicated by minimal development activity of midrise

[13] Opticos Design,"Missing Middle Housing," https://missingmiddlehousing.com/types.

and high-rise condominium projects in and near Berkeley over the past decade. This is largely due to condo construction liability under California state law, which can make insurance costs prohibitively expensive.

- **Project Density:** The prototypes represent various lot sizes and densities found across Berkeley, with denser projects typically located closer to Downtown and the UC Berkeley campus.

- **Common Location:** "Common Location" in Figure 7 notes where the prototype would most likely be developed, based on past development activity.

- **Parking Format:**
    - The Small Lot Single Family and Fourplex/Townhome prototypes have a parking ratio of one space per unit.
    - All other prototypes have lower parking ratios, with those located closest to the UC Berkeley campus and most likely to be targeted to students including zero automobile parking spaces. This reflects real-world development trends since the City removed its minimum parking requirements in 2022.

- **State Density Bonus Law:**
    - Prototypes from the 4-story GLA and larger were all assumed to use the State Density Bonus Law to achieve their unit counts. The prototypes were therefore derived from an assumed base project that has a certain percent of density added, based on the number of inclusionary BMR units provided on site (see Figure 7 for the percentage of on-site BMR units provided per prototype).

FIGURE 7. DEVELOPMENT PROTOTYPE DEFINITIONS AND CHARACTERISTICS

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Description	Multiple single family homes on a standard single family lot size	Stacked townhomes on a standard single family lot size	3-story multiplex with surface parking	Micro-studio units with shared common spaces	Podium style midrise	Podium style midrise	Type 1 high-rise
Common Location	West Berkeley	West Berkeley	West Berkeley	Southside & Downtown	South & Southwest Berkeley	South & Southwest Berkeley	Downtown
Site Size (acres)	0.1	0.1	0.2	0.2	0.5	0.5	0.5
Floors	3	3	3	4	6	8	18
Gross Square Feet	4,500	4,800	11,587	14,520	61,930	89,984	208,727
Residential Square Feet	4,500	4,800	9,250	9,400	49,460	71,320	165,780
Housing Units	3	4	10	36	75	120	240
Density (units/acre)	30	40	50	180	150	240	480
Parking Ratio (spaces/unit)	1	1	0.5	0	0.5	0.125	0
Tenure	Rental & Owner	Rental & Owner	Rental & Owner	Rental	Rental	Rental	Rental
Uses SDBL*	No	No	No	Yes	Yes	Yes	Yes

Note:
* SDBL = State Density Bonus Law.
Source: Strategic Economics, 2024.

II. IN-LIEU FEE ANALYSIS AND RECOMMENDATIONS

This section of the report describes relevant findings and concluding recommendations for updating the City of Berkeley inclusionary housing policy's in-lieu fee amount and application. The findings examine the in-lieu fee revision from multiple perspectives, including consideration of comparability with the costs of providing on-site BMR units, the cost to produce an off-site affordable housing unit via fee revenue, financial feasibility conditions, comparability with fees in other nearby communities, and consideration of barriers and opportunities to support Missing Middle housing (as defined in the introduction to this report).

The City of Berkeley's current in-lieu fees vary depending on the size of the projects. As shown in Figure 8, below, projects with 12,000 square feet or greater pay the full $56.25 fee per square foot of RUFA. Smaller projects pay lower specified fees on the entirety of their square feet of RUFA, and projects below 5,000 square feet do not pay an in-lieu fee and are exempt from inclusionary housing requirements.

FIGURE 8: CURRENT CITY OF BERKELEY IN-LIEU FEES

RESIDENTIAL UNIT FLOOR AREA SQUARE FEET (SQ. FT.)	FEE PER SQUARE FOOT (APRIL 1, 2023 – JUNE 30, 2025)
12,000 sq. ft. or more	$56.25
11,000-11,999 sq. ft.	$53.75
10,000-10,999 sq. ft.	$51.25
9,000-9,999 sq. ft.	$48.75
8,000-8,999 sq. ft.	$46.25
7,000-7,999 sq. ft.	$43.75
6,000-6,999 sq. ft.	$41.25
More than 5,000-5,999 sq. ft.	$38.75

Source: City of Berkeley, 2024.

Approach to Calculating Potential In-Lieu Fee Levels

This study used two methods to calculate a maximum reasonable in-lieu fee: the affordability gap and the production cost affordability gap (production cost). These gaps were then translated into an equivalent fee per square foot of RUFA. These methods establish the maximum fee equivalent to the cost of providing on-site BMR units or a comparable off-site BMR unit. These fees represent the maximum fee that would be justifiable under the City's current Inclusionary Housing Ordinance, which sets out a certain percentage of housing units in new development that must be affordable.

The study then used another approach to calculate the average cost for the City of Berkeley to produce an off-site affordable unit as part of a 100 percent affordable housing project—one of the primary uses of in-lieu fee revenue. This cost was then translated into an equivalent fee per square foot of RUFA.

This equivalent fee represents the fee level at which the City is likely to produce a comparable number of affordable housing units (often at deeper affordability levels) by leveraging in-lieu fee revenue.

These three approaches provide a range of possible fees that were then compared against those of peer cities to contextualize the regional landscape of affordable housing impact fees. Each approach is described in greater detail below:

- **Affordability Gap:** The affordability gap method of calculating a maximum in-lieu fee is based on the difference in revenues between market rate and affordable rents for a typical new housing unit. The maximum fee is equivalent to the reduced revenue associated with providing a BMR unit on site at a new market rate development project. As a result, this method demonstrates the for-profit developer's perspective by capturing the equivalent loss of revenue to provide an on-site BMR unit.

- **Production Cost Affordability Gap:** The production cost affordability gap ("production cost") method of calculating a maximum in-lieu fee is based on the difference between affordable rents and the cost to produce a unit of income-restricted housing. The maximum fee is the difference between the value of the BMR unit (based on its restricted rental rates or sales price) and the cost to construct it. This method demonstrates the total cost gap to produce an affordable housing unit.

- **Average Local Contribution:** The average local contribution method of calculating an equivalent in-lieu fee is based on the average dollar contribution from local sources to 100 percent affordable developments. This method involves a survey of recent affordable housing projects in the jurisdiction to determine the average contribution from the City's Housing Trust Fund program. This method establishes the average minimum in-lieu fee revenue that must be generated for the City of Berkeley to provide its typical contribution toward an affordable housing unit in a 100 percent affordable development project.

These approaches generated a potential range of in-lieu fee levels. These fees were then compared against neighboring communities' fees and against the current ability of market rate housing development to support payment of the fees based on current development conditions. A more detailed description of methodology, assumptions, and calculations is included in this report's Appendix.

The conclusion of Section II describes Strategic Economics' policy recommendations based on the analyses and policy priorities expressed by the City of Berkeley.

Justifiable Maximum In-Lieu Fee Levels

This section describes the results of the approaches to calculating the maximum justifiable in-lieu fee and the result of the average local contribution analysis. The justifiable in lieu fee level is based on an analysis that determines the per square foot fee equivalent to providing an on-site unit. The maximum justifiable in-lieu fee was calculated using the affordability gap and production cost methods. This established the high end of potential in-lieu fees to consider in this study, as these methods directly translate the City's affordable housing requirements into equivalent costs per square foot of building area. The average local contribution analysis provided an in-lieu fee amount that is equivalent to the

average amount of City revenue needed to leverage outside funds to produce an equivalent number of off-site affordable housing units in a 100 percent affordable project.

Using the affordability gap method, the maximum justifiable in-lieu fee for the rental prototypes is $117.69 per square foot (see Figure 9). This method calculates the justifiable cost as the revenue difference between renting or selling new units at market rate and at the affordability levels required by the City's inclusionary housing policy.

Using the production cost method, the maximum justifiable in-lieu fee for the rental prototypes is $103.77 per square foot (see Figure 9). This method calculates the justifiable cost as the difference between the revenue from renting or selling a BMR unit and the cost to produce the unit.

The average local contribution towards 100 percent affordable multifamily rental developments in the city is $58.59 per square foot—similar to today's maximum fee level of $56.25 (see Figure 9). While not the maximum justifiable fee, this average provides an equivalent fee level that supports the City of Berkeley's typical contribution to affordable units in 100 percent affordable housing projects.

The average local contribution fee per square foot does not include the overhead costs for the city to administer its Housing Trust Fund program. Based on City input, these administrative costs add a premium of 15 percent to the per square foot cost of the fee, bringing it to $67.38.

FIGURE 9: IN-LIEU FEE RESULTS BY APPROACH

	Affordability Gap	Production Cost	Local Contribution
Average per BMR Unit	$388,374	$342,432	$193,348
Average per Square Foot of Market Rate Project RUFA	$117.69	$103.77	$58.59

Source: Strategic Economics, 2024.

Supportable In-Lieu Fees from a Development Feasibility Perspective

The following findings describe the results of a sensitivity analysis that examined the financial feasibility of the rental and ownership development prototypes after incorporating the range of fee levels calculated in the preceding section of this report. This analysis provides context for how different in-lieu fees impact the financial feasibility of the development prototypes based on characteristics such as the prototypes' size, density, number of on-site units provided, and use of the SDBL. As described in this report's Introduction, in-lieu fees only apply to a small share of the total square feet in a SDBL project; in those projects, a portion of the inclusionary requirement is satisfied by on-site BMR units, and the prorated remaining in-lieu fee obligation only applies to the "base" project and not the project's "bonus" square feet.

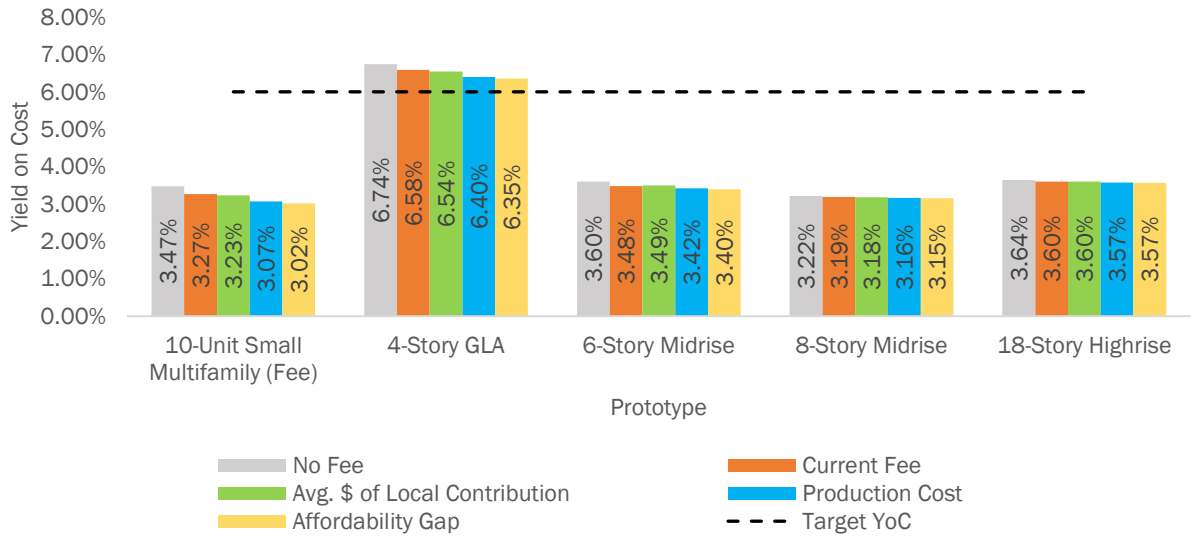
Unlike the "Baseline" analysis presented in the following section of this report, the following feasibility analyses do incorporate the cost impacts of the HARD HATS and Bird Safe Buildings requirements since these requirements are already in effect.

Since all the rental development prototypes are currently infeasible except the GLA, only the GLA is currently capable of supporting any in-lieu fee. Figure 10 shows the impacts of the different

approaches to calculating an in-lieu fee on the financial feasibility of the applicable prototypes. As shown, the negative feasibility impacts of the in-lieu fee are relatively modest for the larger midrise and high-rise prototypes. The fee applies to only a small portion of the overall square feet of these projects since they are assumed to use significant density bonuses. The fee also represents a relatively small share of overall construction costs for these projects due to their size. However, none of these projects are currently financially feasible to build, as they do not achieve a six percent yield on cost return.

The poor financial performance of the development prototypes is primarily attributable to broader development feasibility challenges rather than the current in-lieu fee level. Figure 10 shows the impact of the current fee on the financial feasibility of the applicable prototypes. For the smallest project, the percent change in the yield on cost is a reduction of 5.8 percent, while the largest project sees a much smaller one percent decline. However, both prototypes are currently infeasible, with or without the fee. Developments that are currently being proposed and built in the city likely have unique attributes that have enabled them to progress to this stage or are relying on market conditions improving in the future.

FIGURE 10. IN-LIEU FEE SENSITIVITY ANALYSIS FOR RENTAL PROTOTYPES

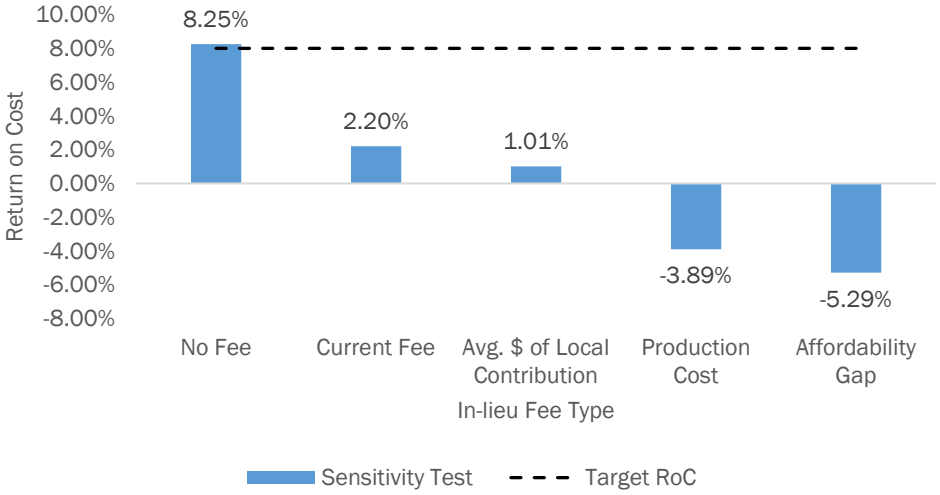


Note: These results incorporate the cost impacts of the Bird Safe Building and HARD HATS ordinances.
Source: Strategic Economics, 2024.

The small 10-Unit multifamily ownership (condo) prototype is infeasible with application of an in-lieu fee (see Figure 11). The feasibility of this prototype is more sensitive to the size of the in-lieu fee due to the prototype's status as a non SDBL project (which therefore means the fee applies to the entire residential area) and the prototype's lower construction costs per square foot of building area; both factors result in the fee constituting a larger proportion of the total development costs compared to the midrise and high-rise prototypes. However, reducing or removing the fee burden allows this type of development to perform better financially, as the sensitivity analysis without a fee results in a return on cost of 8.25 percent, which is above the target return on cost of eight percent.

As noted earlier, the smaller Missing Middle prototypes are feasible as ownership products under current development conditions. However, they are not currently subject to the affordable housing requirements.

FIGURE 11. IN-LIEU FEE SENSITIVITY ANALYSIS FOR THE 10-UNIT SMALL MULTIFAMILY PROTOTYPE OWNERSHIP



Source: Strategic Economics, 2024.

Consideration of "Peer City" In-Lieu Fee Levels

Housing production in Berkeley does not occur in a vacuum; developers often construct housing in many different areas within a region, and differences in inclusionary requirements can have an impact on where developers choose to pursue projects. Therefore, the analysis compared Berkeley's current inclusionary housing requirements with those of nearby communities. This comparison provides context for potential changes to Berkeley's in-lieu fee level and takes into consideration the market factors that are unique to the city.

The City of Berkeley's current in-lieu fee (and inclusionary requirement) is higher than most peer cities. In-lieu fees in the cities listed in Figure 12 range from $19.37 per square foot on the lowest end to approximately $100 per square foot on the highest. Several cities levy fees on a per housing unit basis; assuming an average unit size of 1,000 square feet, these fees translate to between $12 and $45 per square foot. Berkeley's current in-lieu fee is $56.25 per square foot. Note, however, that cities apply their fees in a variety of ways, including different exemptions, differences depending on locations, and application on either a building area basis or a housing unit basis.

However, the Berkeley housing market differs from that of the peer cities due to Berkeley's strong ongoing demand for housing that is influenced by the large population of students residing in the city. The student population creates consistent and reliable housing demand in the city, particularly in areas close to the UC Berkeley campus such as Downtown and Southside. As a result, Berkeley tends to command relatively high rents and sales prices compared to many peer communities, which can potentially translate to long-term market support for relatively higher City fees. The student market also drives demand for types of housing projects not built elsewhere, such as the group living accommodation prototype tested in this analysis.

FIGURE 12. PEER CITIES' AFFORDABLE HOUSING REQUIREMENTS

City	% On Site Affordable Units Required	In-lieu Fee*	Year Enacted
Alameda	15% for all multifamily projects	$20,342 per unit	2023
Emeryville	20% for all multifamily projects	$31,032 per unit	2023
Fremont	12.9% for rental projects	$27.00 per residential square foot	2022
Hayward	6% for rental, 10% for ownership projects	$19.37 per residential square foot	2017
Livermore	10% for projects downtown, 15% for projects everywhere else	$29.23 per residential square foot	2023
Oakland	10% of project if providing low- or moderate-income units, or 5% if providing very low-income units	For multifamily projects: $22,000 per unit in Zone 1 $17,750 per unit in Zone 2 $12,000 per unit in Zone 3	2023
Pleasanton	15% for all multifamily projects	$45,083 per unit	2023
San Francisco	All requirements below temporarily reduced by 50%: 20% for small projects, 25% for large rental projects, 33% for large ownership projects	50% of $199.50 per gross square foot	2019
San Jose	15% for all multifamily projects	Moderate Market Areas: $18.26 per net residential square foot Strong Market Areas: $43 per net residential square foot	2022/2023

*Note that the exact application of these fees varies from city to city. Examples of potential differences include application based on building area versus unit area, various exemptions, and potential differences within subareas of the cities.
Source: Strategic Economics, 2024.

Key Conclusions of the In-Lieu Fee Analyses

As noted earlier, the financial feasibility results indicate that most development prototypes cannot feasibly support the current in-lieu fee level. This is especially true for the rental prototypes, as only the student-oriented GLA prototype is currently feasible. In general, high construction costs and interest rates are the main factors rendering development infeasible today, while rents have failed to keep pace with these challenges. The GLA performs well due to its relatively low construction costs as a relatively inexpensive to build 4-story wood frame building, its lack of costly parking, and the high achievable rents in the student-oriented submarkets of the city.

Smaller Missing Middle products—Small Lot Single Family and Fourplex/Townhomes—demonstrate some financial capacity to support an in-lieu fee, but these products are rarely built due to other challenges. The financial feasibility analysis cannot capture the qualitative factors preventing the development of these housing types. The survey of development activity shows that these types of small infill projects are not often built in Berkeley, despite their strong financial performance as a high-end ownership product. The mismatch between financial performance and actual outcomes is attributable to factors including the lack of small-scale developers with capacity and interest in this type of development and the limited inventory of lower-cost underutilized sites available for sale in existing neighborhoods.

The multifamily 10-unit Missing Middle prototype is not feasible under current conditions as a rental or ownership product. It is also the worst performing of the rental prototypes when it provides a full fee and no on-site units. This matches trends in recent development activity in Berkeley, which includes no examples of this product being built in the city. The product type does appear marginally feasible as an *ownership* product if no in-lieu fees or inclusionary requirements applied, but this prototype is also subject to the same development challenges as the other Missing Middle prototypes.

It is likely that the fee should not be adopted at the maximum justifiable level determined by the affordability gap or production cost methods; tradeoffs exist when selecting a fee level. A variety of tradeoffs must be considered when selecting an in-lieu fee. For example:

- Setting a high fee can incentivize developers to provide on-site BMR units rather than pay the fee; this adds to the City's affordable housing stock and contributes to mixed-income developments, yet limits City resources to leverage outside funding to produce more deeply affordable housing in 100 percent affordable projects. Setting a high fee worsens development feasibility challenges and can delay when and whether housing projects are built.

- Setting a low fee can achieve the opposite outcomes—but setting the fee too low can also create a scenario in which the City may "miss the market" by failing to collect potential affordable housing funding when development conditions improve.

Regardless of the fee level, larger development projects will continue to include and produce on-site BMR units to receive density bonuses; these projects typically also contribute prorated fee revenue. Given the value of SDBL incentives, most midrise and high-rise development projects in Berkeley are likely to be built with density bonuses. These projects inherently contribute to the City's deed-restricted affordable housing inventory via SDBL's on-site BMR unit requirements, albeit at a lower level than the City's inclusionary requirements.

The current in-lieu fee level is similar to the City's typical contribution toward the cost of providing an equal number of off-site affordable housing units in 100 percent affordable housing projects before accounting for additional administrative costs. The funding contributed by the City of Berkeley to produce an equal number of affordable units in a 100 percent affordable housing project is the equivalent of a $58.59 per residential square foot in-lieu fee level, or $67.38 after including a 15 percent increase for administrative costs. The City's current maximum in-lieu fee is $56.25 per square foot.

A larger in-lieu fee results in a greater relative impact on the financial feasibility of smaller developments—especially Missing Middle products. As a percentage of total project cost, the size of the in-lieu fee plays a greater role in the feasibility of smaller projects, both because of the lower cost per square foot to build these projects and because these projects do not typically make use of SDBL. In addition, since larger SDBL midrise and high-rise projects are more likely to pay a prorated in-lieu fee that applies to a small portion of the total square feet, these projects are less impacted by changes in the fee level.

In-Lieu Fee Policy Recommendations

Strategic Economics prepared the following recommendations for adjusting the City of Berkeley's in-lieu fee amount and application of the fee to different sizes and types of projects. The

recommendations incorporate consideration of the results of the preceding analyses to support the following goals:

1. Continue to produce affordable housing through on-site BMR inclusionary units or through production of in-lieu fee resources that the City can use to leverage outside funding to produce affordable units in 100 percent affordable housing developments.

2. Continue to support the financial feasibility of market rate housing development so these projects can in turn generate on-site BMR units or in-lieu fee funding resources and achieve the City's housing production goals.

3. Promote the development of Missing Middle product types that add two to 19 unit housing options in Berkeley's neighborhoods.

Recommendation 1: Eliminate the current in-lieu fee structure that currently exempts projects with less than 5,000 square feet of RUFA from the fee and increases fee levels for projects between 5,000 and 12,000 square feet. Instead, apply the same in-lieu fee level to all housing development projects.

Currently there is an exemption to the affordable housing requirements for new residential development with less than 5,000 square feet of RUFA. This exemption is set to expire in April 2025. Strategic Economics recommends removing this exemption as part of a package of recommendations designed to simplify the affordable housing requirements and support the development of Missing Middle housing in Berkeley.

Adjusting the policy to apply to all residential developments, with no "phase in" based on project size, reduces the incentive for developers to pursue projects just under the applicable square footage to avoid triggering higher in-lieu fees. For example, currently a housing project with 4,999 square feet of RUFA would pay zero in-lieu fees, while a project with 5,001 square feet would pay over $193,000 in in-lieu fees.

Recommendation 2: For any project opting to pay the full fee instead of providing any on-site inclusionary units, exempt the first 5,000 square feet of RUFA from the in-lieu fee.

This exemption for projects that pay the full fee (rather than a prorated fee that typically occurs for SDBL projects) supports production of Missing Middle housing by ensuring these small developments pay a relatively low fee per square foot of project area. It also removes the incentive to reduce project size to avoid triggering a significantly higher total fee. At the same time, the full fee would still apply to nearly all larger midrise and high-rise housing projects since developers are likely to continue building these product types as SDBL projects that must include some on-site BMR units. For example, Figure 13 shows that the midrise and high-rise prototypes would continue to pay the same fee amount as under the current policy, assuming the fee is maintained at the same maximum level.

The 10-Unit Small Multifamily prototype serves as an illustrative example of the positive feasibility impacts of the exemption for this Missing Middle product type. As shown in Figure 13, the exemption reduces in-lieu fee costs for the rental version of the prototype such that its yield on cost increases by 0.09 percentage points—moving the prototype closer to becoming financially feasible to build. Similarly, the exemption supports the development of higher density Missing Middle ownership housing types. As shown in Figure 14, the 10-Unit Small Multifamily prototype experiences an increase in its return on cost of 2.74 percent with the exemption.

The policy change would modestly decrease the total in-lieu fee revenue paid by a limited number of housing product types. The 10-Unit Small Multifamily prototype in Figure 13 and Figure 14 is an example of a project that would pay reduced fee revenue, with the exemption reducing fee payment by an amount equivalent to the funds needed to leverage 1.1 off-site BMR units. However, these kinds of small but relatively higher-density product types are likely to constitute a very small share of total housing development in Berkeley due to the feasibility and general development challenges noted in this report.

However, the policy change would also slightly *increase* fee revenue from other projects. By removing the phase in, some projects pay a slightly higher amount for the in-lieu fee. An illustrative example is the 4-Story GLA prototype. As shown in Figure 13, the policy change would slightly decrease the prototype's feasibility (yield on cost) and increase its fee payment at a level equivalent to approximately one-quarter of the funds needed to leverage an additional unit.

While the exemption slightly disincentivizes satisfying the affordable housing requirement by providing on-site units—since the fee is lower than the equivalent affordability gap—SDBL projects will continue to provide on-site units. In order to satisfy the state's requirement to be granted valuable additional density, waivers, and concessions, developers of SDBL projects must provide a certain percentage of on-site deed restricted affordable units. Since there are significant advantages for projects qualifying for use of the SDBL, the City of Berkeley will continue to see developments that satisfy the affordable housing requirements through mixed compliance.

Recommendation 3: Maintain the existing $56.25 maximum in-lieu fee level as the universally applicable in-lieu fee.

While the in-lieu fee could justifiably be increased to become equivalent to the cost of producing an on-site BMR unit, Strategic Economics recommends maintaining the new universal in-lieu fee level at its current maximum of $56.25. This supports the production of new housing by not increasing the fee level at a time when project financing and construction materials and labor costs are making residential development particularly challenging. Maintaining the current in-lieu fee level also allows the City of Berkeley to maintain a fee that is approximately equivalent to the City's typical direct contributions to the cost of leveraging an off-site affordable housing unit. By maintaining the current in-lieu fee, the City will maintain its primary affordable housing funding source as development conditions improve, mitigating the risk of lost opportunity to secure funding when development conditions shift.

Recommendation 4: Continue to adjust the in-lieu fee regularly based on the California Construction Cost Index.

Regular adjustment of the fee increases the likelihood that the revenue collected will continue to support a comparable number of affordable units in future 100 percent affordable housing projects.

FIGURE 13. IMPACTS OF THE 5,000 SQUARE FOOT EXEMPTION ON THE RENTAL PROTOTYPES

	Small Lot Single Family [a]	Fourplex/ Townhomes [a]	10-Unit Small Multifamily [b]	4-Story GLA [c]	6-Story Midrise	8-Story Midrise	18-Story High-rise
Yield on Cost: Current Fee Policy	4.03%	3.69%	3.27%	6.58%	3.48%	3.17%	3.60%
Yield on Cost: Recommended Exemption Policy	4.03%	3.69%	3.36%	6.55%	3.48%	3.17%	3.60%
YoC Difference	0.00%	0.00%	0.09%	-0.03%	0.00%	0.00%	0.00%
In-lieu Fee Revenue: Current Fee Policy	$0	$0	$450,938	$202,737	$1,255,416	$723,642	$1,580,453
In-lieu Fee Revenue: Recommended Exemption Policy	$0	$0	$239,063	$246,572	$1,255,416	$723,642	$1,580,453
Difference in Number of Off-site Units Leveraged	0	0	-1.10	0.23	0	0	0

[a] These prototypes are less than 5,000 square feet and are therefore exempt from the in-lieu fee under the existing and recommended in-lieu fee policies.
[b] Based on this prototype's size, the project would be required to pay $48.75 per square foot of its 9,250 square feet of RUFA under the existing policy. As a project that provides no on-site BMR units, the prototype would qualify for the first 5,000 square feet of RUFA to be exempt from the in-lieu fee under the recommended policy, which means the prototype would be required to pay $56.25 for only 4,250 square feet of RUFA.
[c] As an SDBL project with 9,400 square feet of RUFA, this project is currently required to pay $48.75 per square foot for its prorated in-lieu fee obligation on the base version of the bonus project after accounting for on-site affordable units that partially satisfy the City's inclusionary housing requirements. Under the recommended policy, this project would not qualify for any exemption from payment of the in-lieu fee because it provides BMR units to achieve the SDBL status and therefore must use mixed compliance to pay a prorated fee; the project would therefore pay $56.25 per square foot for its remaining prorated in-lieu fee obligation on the base version of the project.
Source: Strategic Economics, 2024.

FIGURE 14. IMPACTS OF 5,000 SQUARE FOOT EXEMPTION ON THE OWNERSHIP PROTOTYPES

	Small Lot Single Family [a]	Fourplex/ Townhomes [a]	10-Unit Small Multifamily [b]
Return on Cost: Current Fee Policy	28.44%	29.16%	2.20%
Return on Cost: Recommended Exemption Policy	28.44%	29.16%	4.94%
Difference	0.00%	0.00%	2.74%
In-lieu Fee Revenue: Current Fee Policy	$0	$0	$450,938
In-lieu Fee Revenue: Recommended Exemption Policy	$0	$0	$239,063
Difference in Number of Off-site Units Leveraged	0.00	0.00	-1.10

[a] These prototypes are less than 5,000 square feet and are therefore exempt from the in-lieu fee under the existing and recommended in-lieu fee policies.
[b] Based on this prototype's size, the project would be required to pay $48.75 per square foot of its 9,250 square feet of RUFA under the existing policy. As a project that provides no on-site BMR units, the prototype would qualify for the first 5,000 square feet of RUFA to be exempt from the in-lieu fee under the recommended policy, which means the prototype would be required to pay $56.25 for only 4,250 square feet of RUFA.
Source: Strategic Economics, 2024.

III. FINANCIAL FEASIBILITY IMPACTS OF HARD HATS, BIRD SAFE BUILDING, AND PREVAILING WAGE REQUIREMENTS

This section of the report describes findings and conclusions of the research and analyses used to assess:

1. The "Baseline" financial feasibility of the development prototypes under current market conditions, inclusionary requirements, and in-lieu fees—but *without* incorporation of the Bird Safe Building, HARD Hats, and prevailing wage policies;
2. How the Bird Safe Building, HARD HATS, and prevailing wage policies potentially impact development costs;
3. Influence of the three policies on development feasibility outcomes.

Essentially, the Baseline analysis describes development feasibility outcomes under today's conditions as if the Bird Safe Building and HARD HATS policies were not in effect. This provides a point of comparison to understand changes created by those requirements. As noted earlier, the Bird Safe Building policy went into effect July 27, 2023 and the HARD HATS policy on January 1, 2024, while a prevailing wage requirement was recently adopted for the Southside Area Plan only.

The analysis examined the financial feasibility and cost impacts of the policies under today's conditions based on available information; the analysis was not a broader assessment of the outcomes and merits of these policies. Information about the specific development cost impacts of the policies is also somewhat speculative, since no projects have yet been completed under these requirements.

Figure 15 displays each of the prototypes and scenarios modeled as part of the analyses. The table describes how different policies apply to each residential development prototype, as summarized below:

- Current Affordable Housing Requirements Applied to the Baseline Analysis:
    - **Inclusionary Requirements for Rental Projects:** Applies to new residential developments above 5,000 gross square feet. 20 percent of units must be provided as Below Market Rate (BMR), with half of the units affordable to Very Low Income households (defined as those making 50 percent of the Area Median Income) and half of the units affordable to Low Income households (defined as those making 80 percent of the Area Median Income). These requirements can be satisfied through a combination of providing units and paying a prorated fee.

    - **Inclusionary Requirements for Ownership Projects:** Applies to new residential developments above 5,000 gross square feet. 20 percent of units must be provided as Below Market Rate (BMR) at levels affordable to Low Income households. These requirements can be satisfied through a combination of providing units and paying a prorated fee.

- **Bird Safe Building:** Applies to new residential development above 10,000 gross square feet and with an average height above 35 feet.

- **HARD HATS:** Applies to new residential development above 50,000 gross square feet.

- **Prevailing Wage:** Applies to new residential development above 50,000 gross square feet within the Southside Plan Area and is under consideration for citywide applicability.

For the 10-Unit Small Multifamily prototype, two scenarios were tested (as shown in Figure 15): one in which the project meets inclusionary requirements by providing 20 percent of housing units as BMR units, and another in which the project pays an in-lieu fee. Note that the smaller Missing Middle prototypes are exempt from the City's current affordable housing requirements because they are under 5,000 gross square feet.

Also shown in Figure 15, the SDBL prototypes satisfy affordable housing requirements by providing the State-required number of BMR units on-site and paying an in-lieu fee to satisfy the remainder of the City of Berkeley's inclusionary requirement. The analysis followed current City policy to apply the in-lieu fee only to the remainder of the *base* project.

FIGURE 15. APPLICATION OF AFFORDABILITY REQUIREMENTS AND TESTED POLICIES TO DEVELOPMENT PROTOTYPES

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (On-Site BMR Version)	10-Unit Small Multifamily (In-Lieu Fee Version)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Baseline Analysis: Affordable Housing Requirements Applicable to the Rental Prototypes								
Affordable Housing Requirements Applicable to Rental Prototypes	Not applicable (under 5,000 gsf)	Not applicable (under 5,000 gsf)	On site BMR units	Full in-lieu fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee	On site units to satisfy SDBL*; prorated fee
BMR % of Units	N/A	N/A	20%	0%	10%	10%	15%	15%
Affordability Level	N/A	N/A	Half VLI, half LI**	N/A	All VLI**	All VLI**	All VLI**	All VLI**
Baseline: Affordable Housing Requirements Applicable to the Ownership Prototypes								
Affordable Housing Requirements Applicable to Ownership Prototypes	Not applicable (under 5,000 gsf)	Not applicable (under 5,000 gsf)	On site BMR units	Full in-lieu fee	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)	N/A (Not tested as an ownership product)
BMR % of Units	N/A	N/A	20%	0%	N/A	N/A	N/A	N/A
Affordability Level	N/A	N/A	All LI**	N/A	N/A	N/A	N/A	N/A
Bird Safe Building Requirements Applied to Prototypes (regardless of tenure)								
Bird Safe Building Requirements Applicability	Not applicable (under 10,000 gsf)	Not applicable (under 10,000 gsf)	Not applicable (over 10,000 gsf but less than 35 feet high)	Not applicable (over 10,000 gsf but less than 35 feet high)	Applicable	Applicable	Applicable	Applicable
HARD HATS and Prevailing Wage Requirements Applied to Prototypes (regardless of tenure)								
HARD HATS / Prevailing Wage Applicability	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Not applicable (under 50,000 gsf)	Applicable	Applicable	Applicable

Note:
* SDBL = State Density Bonus Law.
** VLI = Very Low Income; LI = Low Income.
Source: Strategic Economics, 2024

Baseline Financial Feasibility Analysis

The following findings describe the results of the Baseline financial feasibility analysis. The findings describe the performance of the development prototypes under existing City of Berkeley inclusionary and in-lieu fee requirements without the Bird Safe Building, HARD HATS, and prevailing wage requirements. Since the results show that all but two of the development prototypes are currently infeasible, the basic description of the results is followed by findings of a sensitivity analysis. The sensitivity analysis provides context for factors influencing the financial performance of the prototypes and how changing conditions could eventually improve the performance of the prototypes.

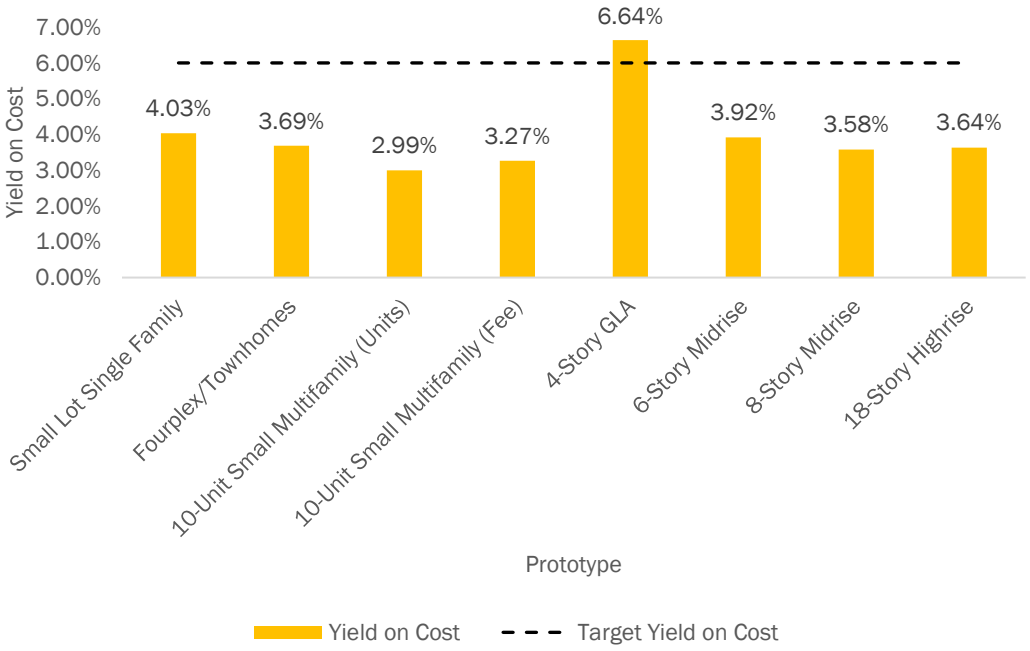
The baseline feasibility analysis is followed by analysis of the feasibility impacts of construction policies to illustrate the current conditions for residential development.

BASELINE FEASIBILITY RESULTS FOR THE RENTAL PROTOTYPES

Under current conditions, the only rental prototype that is financially feasible in Berkeley is the 4-Story GLA. Figure 16 shows results for all tested rental prototypes. As shown, only the 4-Story GLA project achieves the minimum yield on cost threshold of six percent, with all other prototypes achieving a yield on cost of between 2.99 and 4.03 percent.

None of the Missing Middle prototypes are feasible as rental products under current conditions. The 10-Unit Small Multifamily prototype paying the full fee performs the worst of all the prototypes (achieving a yield on cost of 3.27 percent). The other two Missing Middle prototypes, the Small Lot Single Family and Fourplex/Townhomes, which are not currently subject to the City's inclusionary policy, perform slightly better. These prototypes achieve yields of 4.03 percent and 3.69 percent, respectively—still short of the required six percent target yield.

FIGURE 16. BASELINE RENTAL PROTOTYPE FEASIBILITY RESULTS



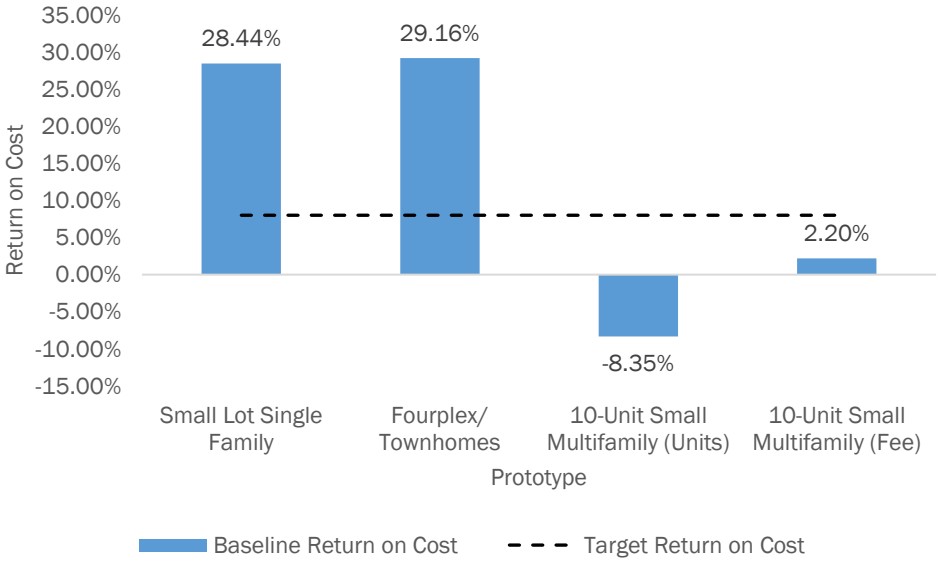
Source: Strategic Economics, 2024.

BASELINE FEASIBILITY RESULTS FOR THE OWNERSHIP PROTOTOYPES

The Small Lot Single Family and Fourplex/Townhomes prototypes are feasible as ownership products (see Figure 17). The target return on cost for the ownership products is eight percent. The Small Lot Single Family and Fourplex/Townhome prototype exceed this with returns of 28.44 percent and 29.16 percent, respectively.

The 10-Unit Small Multifamily prototype is infeasible as an ownership product, both when providing on-site BMR units and when paying a full in-lieu fee (see Figure 17). The multifamily Missing Middle prototype is infeasible under both affordability requirement scenarios. The prototype does, however, perform significantly better when paying the in-lieu fee (return on cost of 2.2 percent) instead of providing on-site units (return on cost of -8.35 percent).

FIGURE 17. BASELINE OWNERSHIP PROTOTYPE FEASIBILITY RESULTS



Source: Strategic Economics, 2024.

COMBINED SUMMARY OF BASELINE FEASIBILITY RESULTS FOR ALL DEVELOPMENT PROTOTYPES

Under current development conditions, very few of the residential prototypes are financially feasible. Only the 4-Story GLA rental, Small Lot Single Family ownership, and Fourplex/Townhomes ownership prototypes are feasible. Figure 18 summarizes the baseline feasibility results for all of the scenarios tested.

Although most typical market rate residential development projects are currently financially infeasible, developers may still propose projects or construct projects in anticipation of improved development conditions or due to project-specific factors. The results of the financial feasibility analysis represent outcomes for a developer initiating a typical market rate project under today's typical cost, revenue, and thresholds for return on investment. Multiple factors explain why developers continue to propose or construct housing projects in Berkeley. Developers submitted several project applications in 2023 to potentially avoid being subject to HARD HATS, which took effect in January 2024. Other developers are optimistic and believe that development conditions will change soon—such as increasing achievable rents (driven partly by strong student demand), slowing increases in construction costs, or

reduced project financing costs. Individual development projects can also have unique beneficial characteristics that reduce development costs, such as lower land acquisition costs, innovative construction techniques (such as modular construction), or access to unique financing arrangements.

FIGURE 18. SUMMARY OF BASELINE FINANCIAL FEASIBILITY RESULTS

Prototype	Yield or Return on Cost	Target	Feasible (Y/N)
Rental Prototypes			
Small Lot Single Family	4.03%	6.00%	N
Fourplex/Townhomes	3.69%	6.00%	N
10-Unit Small Multifamily (Units)	2.99%	6.00%	N
10-Unit Small Multifamily (Fee)	3.27%	6.00%	N
4-Story GLA	6.64%	6.00%	Y
6-Story Midrise	3.92%	6.00%	N
8-Story Midrise	3.58%	6.00%	N
18-Story High-rise	3.64%	6.00%	N
Ownership Prototypes			
Small Lot Single Family	28.44%	8.00%	Y
Fourplex/Townhomes	29.16%	8.00%	Y
10-Unit Small Multifamily (Units)	-8.35%	8.00%	N
10-Unit Small Multifamily (Fee)	2.20%	8.00%	N

Source: Strategic Economics, 2024.

SENSITIVITY ANALYSIS AND CONTEXT FOR THE BASELINE FEASIBILITY RESULTS

Given that all but two of the development prototypes are currently infeasible, Strategic Economics conducted a sensitivity analysis to provide context for the factors influencing the financial performance of the prototypes and how changing conditions could eventually improve the performance of the prototypes.

Development costs, revenues, and required return on investment change over time, and each change influences development feasibility outcomes. The financial feasibility of development is driven by the relationships between the total cost to build a development project, the expected revenue generated by the project, and the current required return on investment. Rents or sales prices determine the expected revenue generated by a development project, while development costs can include a variety of factors, such as construction materials and labor, land, and municipal fees.

The following tables illustrate how changes in development costs and revenues can impact feasibility outcomes. Figure 19 and Figure 20 demonstrate the impact of changes to revenue and development costs on the financial feasibility of one rental housing unit and one ownership housing unit, respectively. The figures represent one rental unit from the 6-Story Midrise prototype and one ownership unit from the Fourplex/Townhomes prototype. The axes show the change in revenue and costs. The cell showing “0 percent” and “0 percent” change shows the estimated feasibility outcome for projects currently, expressed as either yield on cost or return on costs. The “-10 percent,” “10 percent” cell in the top left represents the feasibility outcome for projects if revenues decrease 10 percent and development costs increase 10 percent. Green cells indicate feasibility, while red cells indicate infeasibility.

With current rents and development costs, rental projects are not feasible, with an estimated yield on cost of 3.48 percent. Even with an increase in rents and a decrease in costs, the rental prototype remains unfeasible. The ownership prototype demonstrates how the reduction in sales value and an increase in development costs can make a project infeasible.

As shown, development projects can be highly sensitive to shifting cost and revenue conditions; in reality, the required return on investment would also shift over time, adding additional complexity to when and whether a given development project becomes feasible to build.

FIGURE 19. COST AND REVENUE CHANGE IMPACTS ON THE YIELD ON COST OF ONE RENTAL UNIT

Change in Development Costs \ Change in Rent	-10%	-5.00%	0.00%	5.00%	10.00%	15.00%
-10%	3.31%	3.59%	3.86%	4.14%	4.42%	4.70%
-5%	3.13%	3.40%	3.66%	3.92%	4.19%	4.45%
0%	2.98%	3.23%	3.48%	3.73%	3.98%	4.23%
5%	2.84%	3.07%	3.31%	3.55%	3.79%	4.03%
10%	2.71%	2.93%	3.16%	3.39%	3.62%	3.84%

Note: Feasible yield on cost is considered 6 percent. Darker red yield on cost outcomes indicate a weaker return on cost, while lighter outcomes indicate a stronger return. However, none of the outcomes presented is financially feasible, even with increased revenue and decreased costs.
Source: Strategic Economics, 2024.

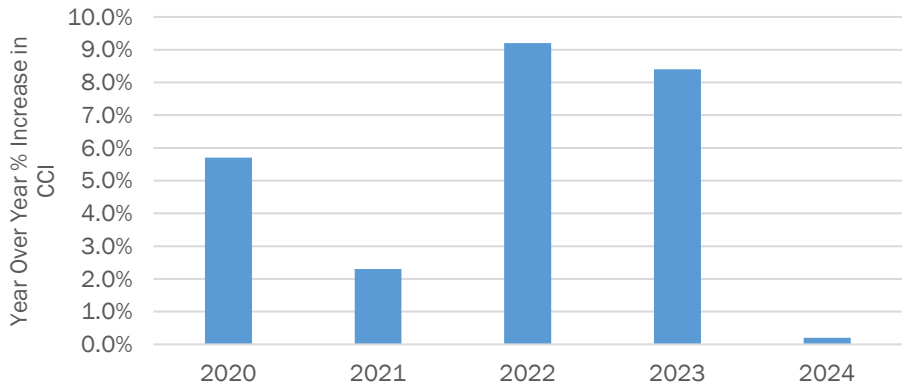
FIGURE 20. COST AND REVENUE CHANGE IMPACTS ON THE RETURN ON COST OF ONE OWNERSHIP UNIT

Change in Development Costs \ Change in Sales Value	-10%	-5%	0%	5%	10%
-10%	29.16%	36.33%	43.51%	50.69%	57.86%
-5%	22.36%	29.16%	35.96%	42.76%	49.55%
0%	16.24%	22.70%	29.16%	35.62%	42.08%
5%	10.71%	16.86%	23.01%	29.16%	35.31%
10%	5.68%	11.55%	17.42%	23.29%	29.16%
15%	1.08%	6.70%	12.31%	17.93%	23.54%

Note: Feasible return on cost is considered 8 percent. Return on cost outcomes labelled in green indicate a financially feasible project, while numbers in red indicate an infeasible project. Darker green indicates stronger returns.
Source: Strategic Economics, 2024.

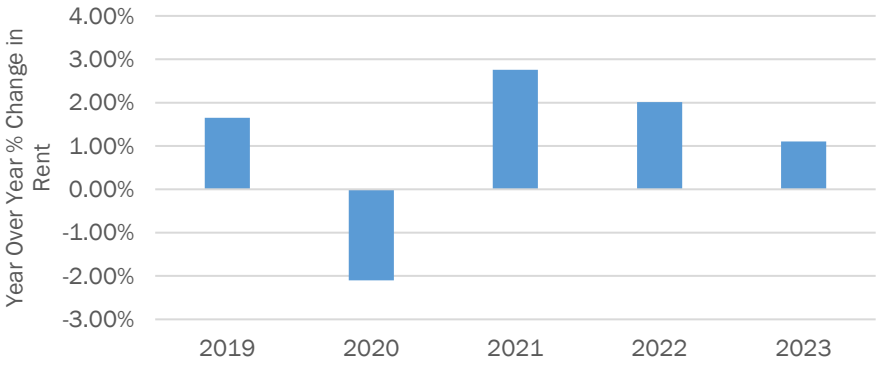
Development costs, revenues, and required return on investment do not often change at the same rate over time. Changes to each factor occur largely independently and at an uneven pace. For example, Figure 21 shows the year over year change in the Construction Cost Index (CCI) tracked by Engineering News Record for San Francisco over the past five years. The chart shows a spike in cost increases in 2022 and 2023 due to supply chain challenges, which are beginning to moderate in 2024. Similarly, rents decreased in Berkeley during the COVID-19 pandemic and have gradually started to increase since 2020—although the increases in rents have been significantly lower than the increases in construction costs since 2020 (see Figure 22).

FIGURE 21. YEAR OVER YEAR CHANGE IN THE CONSTRUCTION COST INDEX FOR SAN FRANCISCO



Source: Engineering News Report, 2024; Strategic Economics, 2024.

FIGURE 22. YEAR OVER YEAR CHANGE IN AVERAGE RENT IN BERKELEY



Source: CoStar, 2024; Strategic Economics, 2024.

Bird Safe Building Ordinance Impacts on Financial Feasibility

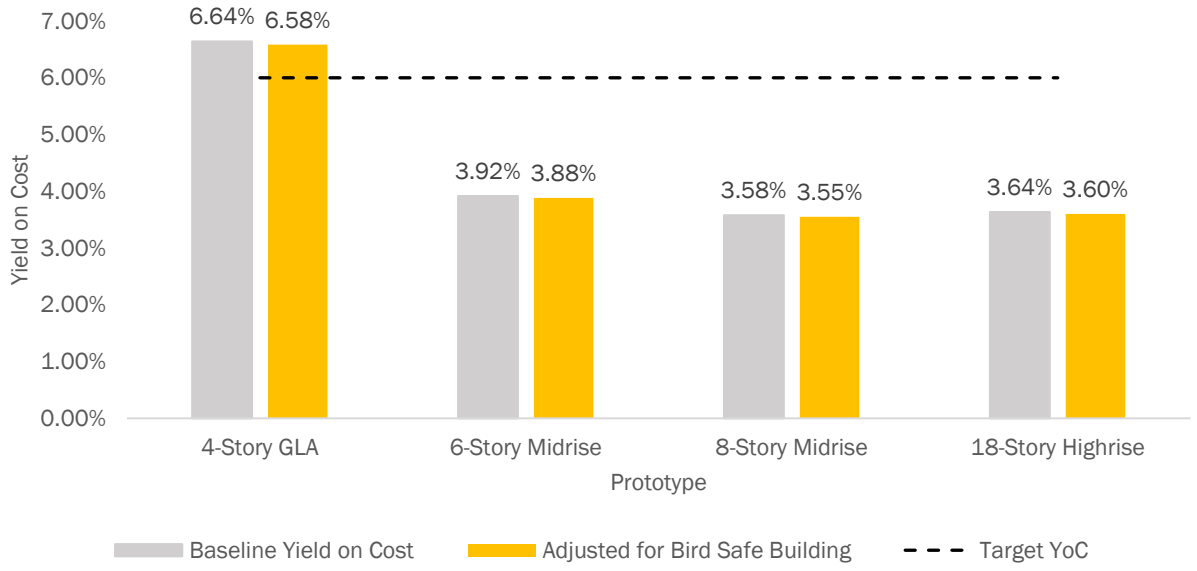
Strategic Economics conducted interviews and research to examine the cost impacts of the Bird Safe Building policy, and then examined the policies' impacts on the financial feasibility of the development prototypes. As noted earlier, the Bird Safe Building requirements took effect in 2023.

The Bird Safe Building requirements increase hard costs of development (i.e., materials and labor) by approximately one percent to 1.5 percent. This range was based on input from general contractors and developers interviewed for this study. The Bird Safe Building Ordinance required that new developments of a certain size use a form of glass or other treatments that reduce the risk of bird collisions and fatalities. This policy change applied to the mid- and high-rise prototypes in this study. The need for and cost of compliance would vary depending on a specific project's design—especially depending on whether the requirement is triggered based on the building's ratio of windows to façade, and the total amount of window area requiring compliance.

The Bird Safe Building requirement marginally negatively impacts the feasibility of the mid- and high-rise prototypes. Figure 23 demonstrates the impact of this increase on the yield on cost of the relevant

prototypes. However, interviews with stakeholders indicated that the cost premium for qualifying glass types might decrease as policies such as this become more common across cities.

FIGURE 23. BIRD SAFE BUILDING REQUIREMENTS IMPACTS ON FINANCIAL FEASIBILITY



Source: Strategic Economics, 2024.

HARD HATS and Prevailing Wage Impacts on Financial Feasibility

Strategic Economics conducted interviews and research to examine the potential cost impacts of the HARD HATS and prevailing wage policies, and then examined the policies' impacts on the financial feasibility of the development prototypes. As noted earlier, HARD HATS was adopted in 2023 and came into effect in January of 2024. The ordinance requires that contractors provide or fund apprenticeship programs and provide healthcare to workers on all new construction projects above 50,000 gross square feet. In addition, the City of Berkeley is considering expanding a prevailing wage requirement on new construction projects above 50,000 gross square feet from the Southside Plan Area to the entire city. See Figure 15 for the applicability to the prototypes in this study.

The cost impacts of HARD HATS are based on current conditions and available information—which is limited since no projects have yet been completed under the HARD HATS requirements. The actual impacts of HARD HATS will be clarified over time as projects are proposed or built under the requirements.

The healthcare requirements of the HARD HATS ordinance, as currently written, are most readily met through use of union labor, although a subset of non-union contractors also comply. The ordinance currently requires contractors to show proof of health insurance contributions for workers six months prior to the start of any construction job and does not contain exemptions for workers who have declined coverage. In practice, the HARD HATS requirement is most readily met through use of contractors using union labor because healthcare is included in workers' membership and these contractors also meet the apprenticeship program requirements. Local developers and contractors

interviewed for this study noted that the healthcare reporting requirements are a major factor that limits the pool of contractors to those using union labor. However, a smaller subset of non-union contractors are also likely to comply with the policy.

A potential prevailing wage requirement would have similar cost implications as HARD HATS requirements if met through use of union labor, although *not in addition to HARD HATS' cost implications* if a development project is subject to both requirements. The cost differential between non prevailing wage and prevailing wage is approximately equivalent to the shift from non-union to union labor. This is because prevailing wages incorporate costs corresponding to most of the benefits provided by union membership, such as apprenticeships, retirement contributions, and healthcare.

The reported increase in total hard costs for a typical midrise development project to meet the HARD HATS requirements ranges between 18 percent to 25 percent. This percentage reflects the approximate reported cost increase to shift from a project built with largely non-union labor to instead use union labor. This reported cost increase is influenced by the number of trades that are shifting from non-union to union labor.

This cost differential varies based on project size and design, with smaller midrise projects being more likely to experience an increased cost burden. This is because smaller midrise projects are more likely to use a higher percentage of non-union trades for their development, or trades with a larger share of contractors that do not otherwise comply with HARD HATS. Specific trades tend to often use union labor and would automatically qualify under HARD HATS, such as those associated with concrete work. However, for trades such as mechanical, electrical, and plumbing (MEP), smaller projects' contractors often do not meet the requirements.

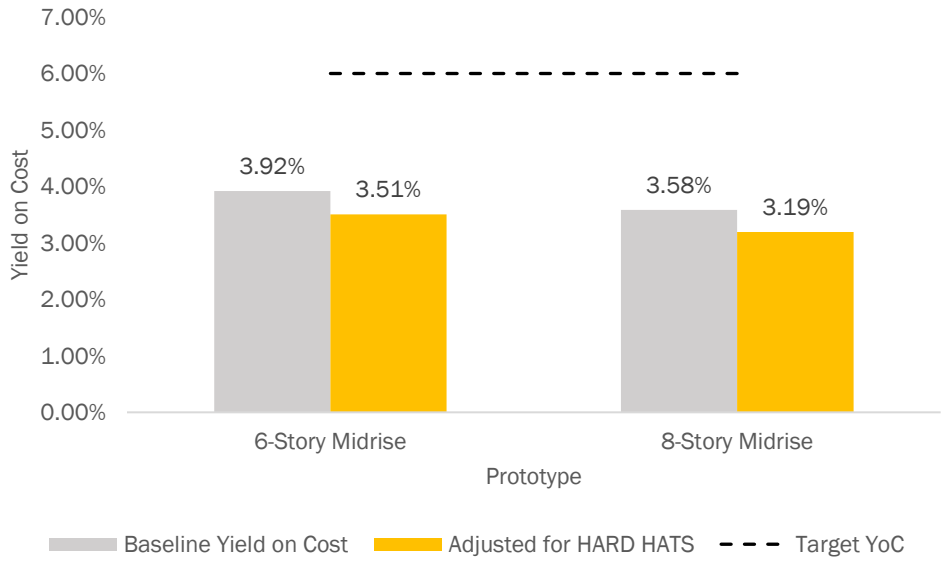
Larger projects, such as high-rises, are much more likely to use union contractors and subcontractors, minimizing the costs associated with meeting HARD HATS requirements and a potential prevailing wage requirement. Findings from interviews suggest that even if a general contractor on a high-rise project is non-union, they will use about 80 percent of union trades to complete the project. Otherwise, contractors on high-rise projects tend to use union labor, and thus do not experience the cost increase from HARD HATS or the potential prevailing wage requirement.

For this study, HARD HATS and the potential prevailing wage requirement were assumed to have the same impact on project costs—one that represents the shift to costs comparable to a project using entirely union labor since this is the current means of most readily meeting the requirements. The midrise prototypes were assumed to experience a 20 percent increase in total hard costs and the high-rise was assumed to not experience a change in costs. The 20 percent cost increase represents implementation of one or both requirements, since both essentially increase hard costs to a level comparable with a union labor project. This analysis provides an illustrative example to understand how residential development might be impacted by the recent and proposed policy changes. The midrise prototypes were assumed to experience similar cost increases because they are relatively similar in size. In contrast, the high-rise was assumed to already incorporate costs for contractors already meeting the requirements in the hard cost assumptions for the prototype's pro forma analysis. However, the actual circumstances might vary based on the composition of union and non-union trades used by a specific project.

Based on the 20 percent increase in hard costs, both labor requirements negatively impact the financial feasibility of the 6- and 8-Story prototypes (see Figure 24). While neither prototype is currently feasible, these requirements significantly increase development costs without changing expected revenues. As a result, a larger magnitude of positive change in rents, return on investment thresholds,

or other costs would need to occur before development of these prototypes could move forward in Berkeley, relative to a condition without the requirements.

FIGURE 24. HARD HATS IMPACT ON FINANCIAL FEASIBILITY



Source: Strategic Economics, 2024.

Key Conclusions

Currently, residential development is infeasible for most of the prototypes tested in this study. The exceptions are the 4-Story GLA rental, and the Small Lot Single Family and Townhomes/Fourplex ownership products. While these results can and likely will change as development conditions improve, this baseline was used to gauge current feasibility of different housing prototypes and to test the impacts of the recently adopted and proposed labor and construction policies.

The overall cost impact of the Bird Safe Building requirements is relatively limited, but the requirements do create additional development costs and negatively impact project feasibility. The Bird Safe Building requirement adds development costs, but on its own the costs associated with the policy likely won't determine whether a project is built.

The cost impacts of HARD HATS are significant for midrise development projects, but are limited for high-rise development. While the applicable prototypes are not feasible in current development conditions, the additional costs driven by HARD HATS could become a significant factor for determining when or whether a midrise project is built as conditions improve.

HARD HATS reduces the pool of compliant contractors and their workers available for development projects in Berkeley. As noted, a limited percentage of non-union contractors are currently likely to meet the requirements of HARD HATS.

The cost impact of a prevailing wage requirement would be significant for midrise development. A prevailing wage requirement would increase hard costs for development projects at a level comparable to (but not in addition to) the costs associated with the HARD HATS requirement.

The additional development costs associated with the HARD HATS, prevailing wage, and Bird Safe Glass requirements are not likely to pose an insurmountable barrier to future market rate residential development in Berkeley when development conditions improve, but any cost impacts associated with the requirements will constrain the likelihood and pace of future housing production. The magnitude of changes in rents, development costs, and other development conditions required to cover the impacts of HARD HATS, etc. are likely achievable over time as market conditions shift. Overall demand for housing is strong in Berkeley, especially given the number of students seeking housing. However, the development cost increases associated with HARD HATS and other tested policies are significant enough to delay or constrain housing production since the policies increase the required changes in rents/prices, development costs, and market return thresholds necessary before housing development becomes feasible.

The cost premium associated with meeting HARD HATS and prevailing wage requirements is likely to decline over time due to a variety of state legislation and legislation in other cities that will incentivize or expand use of contractors meeting or exceeding these labor standards. Many state housing laws require developers to meet labor requirements to qualify for benefits. For example, the ministerial approval benefits under AB 2011 require payment of prevailing wages to construction workers, while SB 6 requires use of a "skilled and trained workforce"—most readily met through use of union contractors. Other California cities are also considering or adopting additional labor requirements. As a result, a greater share of contractors may qualify for HARD HATS requirements over time. This would expand the pool of competing contractors and potentially reduce the cost premiums associated with meeting HARD HATS requirements.

The City of Berkeley could potentially complete a future study to clarify the actual cost impacts of HARD HATS based on completed projects. This report's findings regarding the construction costs associated with HARD HATS were based on available information and current conditions. However, developers have not yet built any housing development projects subject to HARD HATS. The City of Berkeley could potentially re-study the HARD HATS construction cost and development feasibility impacts after several projects subject to the requirements are proposed or completed—potentially in three to five years and during the City's next re-study of inclusionary or in-lieu fee requirements.

The City of Berkeley could also consider studying the HARD HATS policy beyond its impact on construction costs. This study focused solely on the construction cost impacts associated with the HARD HATS requirements. A broader analysis of HARD HATS would allow consideration of the policy's broader benefits and drawbacks.

APPENDIX

Pro Forma Assumptions

Strategic Economics used a static pro forma to evaluate the financial feasibility impacts of the affordable housing requirements, HARD HATS, Bird Safe Building requirements, and a prevailing wage requirement. This approach involved collecting data on revenue and cost inputs for the pro forma model. Data was collected through interviews with local stakeholders, including developers, general contractors, and architects, as well as through review of existing studies and analysis of data from CoStar and Redfin.

ESTIMATING REVENUES

Revenue inputs were primarily informed by CoStar and Redfin data on recent market rents and sales prices. However, since several of the prototypes have on-site affordable rental or ownership units, revenue inputs were also informed by the California Department of Housing and Community Development county income limits, as well as guidance from the City of Berkeley.

Figure 25 provides a breakdown of unit sizes, types, and affordability levels across the ownership and rental prototypes used in this study.

FIGURE 25. SQUARE FEET PER UNIT AND SHARE OF UNITS BY BEDROOM SIZE AND AFFORDABILITY LEVEL

	Small Lot Single Family (a)	Fourplex/ Townhomes (a)	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise	10-Unit Small Multifamily (Units) (b)
Market Rate Units									
Unit Count									
Studio	-	-	-	-	32	23	78	16	-
One Bedroom	-	-	4	5	1	35	20	41	4
Two Bedroom	-	4	4	5	-	11	10	16	4
Three Bedroom	3	-	-	-	-	-	-	21	-
Units Above 8 Stories (c)									
Studio	-	-	-	-	-	-	-	27	-
One Bedroom	-	-	-	-	-	-	-	45	-
Two Bedroom	-	-	-	-	-	-	-	28	-
Three Bedroom	-	-	-	-	-	-	-	22	-
Total	3	4	8	10	33	69	108	216	8
Unit Size									
Studio	-	-	-	-	250	500	510	400	-
One Bedroom	-	-	750	750	650	660	750	580	750
Two Bedroom	-	1,200	1,100	1,100	-	990	950	800	1,100
Three Bedroom	1,500	-	-	-	-	-	-	1,100	-
Average Unit Size	1,500	1,200	925	925	262	659	595	693	925
BMR Units									
Unit Count - VLI									
Studio	-	-	-	-	3	2	9	5	-
One Bedroom	-	-	1	-	-	3	2	10	-
Two Bedroom	-	-	-	-	-	1	1	5	-
Three Bedroom	-	-	-	-	-	-	-	4	-
Unit Count - LI									
Studio	-	-	-	-	-	-	-	-	-
One Bedroom	-	-	-	-	-	-	-	-	1
Two Bedroom	-	-	1	-	-	-	-	-	1
Three Bedroom	-	-	-	-	-	-	-	-	-
Total	0	0	2	0	3	6	12	24	2
Unit Size									
Studio	-	-	-	-	250	500	510	400	-
One Bedroom	-	-	750	750	-	660	750	580	750
Two Bedroom	-	-	1,100	1,100	-	990	950	800	1,100
Three Bedroom	-	-	-	-	-	-	-	1,100	-
Average Unit Size	N/A	N/A	925	N/A	250	662	587	675	925

Note:
(a) These prototypes have the same unit composition and unit sizes in their rental and ownership forms.
(b) This prototype represents the ownership version, which has different affordability levels for its below-market rate units.
(c) Units above 8 stories were given a premium of $0.75 per square foot for the market rate units. This premium is not applicable to the below-market rate units above 8 stories.
Source: Strategic Economics, 2024.

Market Rate Rents

Market rate rent assumptions were established by using CoStar data from the last year. Submarkets data was used to approximate average rents for the relevant geographic areas of the city. A new construction premium of 10 percent was applied to the rents. The submarket rents were applied to each prototype based on their proposed location in the city, as shown in Figure 26.

Figure 26. Market Rate Rental Assumptions per Month (dollars per month)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Unit Rent							
Studio	-	-	-	2,400	2,800	2,850	3,300
One Bedroom	-	-	3,000	3,500	3,250	3,500	3,750
Two Bedroom	-	4,000	4,100	-	4,500	4,300	4,700
Three Bedroom	5,500	-	-	-	-	-	6,000
Unit Rent - Above 8 Floors							
Studio	-	-	-	-	-	-	3,630
One Bedroom	-	-	-	-	-	-	4,125
Two Bedroom	-	-	-	-	-	-	5,170
Three Bedroom	-	-	-	-	-	-	6,600

Source: Strategic Economics, 2024.

Below Market Rate Rents

The BMR rents used in the pro forma analysis were adopted from the City of Berkely's guidance on gross rent maximums for 2023, shown in Figure 27. Utility costs were then subtracted from the rent from each unit type to determine the net rent maximum.[14] The net rent (see Figure 28) was used in the analysis across all of the rental prototypes. Figure 29 shows the operating cost, vacancy rate, and cap rate used across the market and BMR units.

Figure 27. City of Berkeley Gross Rent Maximums for Very Low- and Low-Income Households

	Studio	1 BR	2BR	3BR	4BR	5BR
50% AMI	$1,295	$1,480	$1,665	$1,849	$1,998	$2,293
80% AMI	$1,964	$2,244	$2,524	$2,804	$3,029	$3,478

Source: City of Berkeley, 2023; Strategic Economics, 2024.

Figure 28. City of Berkeley Net Rent Maximums for Very Low- and Low-Income Households

	Studio	1 BR	2BR	3BR
50% AMI	$1,195	$1,332	$1,473	$1,614
80% AMI	$1,864	$2,096	$2,332	$2,569

Source: City of Berkeley, 2023; Strategic Economics, 2024.

[14] Utilities were calculated using the City's Utility Allowance Schedule for BMR units, available here: https://berkeleyca.gov/sites/default/files/documents/2023%20COB%20BMR%20Utility%20Allowance%20Schedule.pdf.

FIGURE 29. RETAIL AND RENT ASSUMPTIONS

	Units	Market Rate Apartments (All except 18-story High-rise)	Market Rate Apartments (18-story High-rise)	Below Market Rate Apartments	Retail
Operating Expenses	% of GSI	30.0%	35.0% (*See [a]*)	*See [b]*	0.0%
Vacancy Rate - Market Rate	% of GSI	5.0%	5.0%	2.5%	10.0%
Cap Rate	NOI / Project Value	5.0%	5.0%	5.0%	5.0%

[a] The operating expense ratio assumption of 35 percent for the 18-story High-rise prototype was assumed to be higher than the other prototypes to reflect the additional staffing costs of front desk reception and 24-hour security typical of high-rise developments.
[b] Operating expenses for BMR units were assumed to be the same as market rate units, i.e., 30% of the gross scheduled income (or 35% of GSI for the 18-Story High-rise prototype) for an equivalent market rate unit.
Source: Strategic Economics, 2024.

MARKET RATE SALES PRICES

Market rate sales prices for townhomes, condos, and single-family dwelling units were established using Redfin data for recently built and sold units for similar size developments to those in the for-sale prototypes for this study. Figure 30 provides a summary of the sales prices for each prototype by unit type.

FIGURE 30. MARKET RATE SALES PRICES BY PROTOTYPE

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily
Studio	-	-	-
One Bedroom	-	-	$800,000
Two Bedroom	-	$1,200,000	$1,100,000
Three Bedroom	$1,500,000	-	-

Source: Redfin, 2023; Strategic Economics, 2024.

BELOW MARKET RATE SALES PRICES

Affordable housing prices were identified based on resources from California HCD, which sets income levels and maximum housing costs for federal and state-funded affordable housing programs. The City of Berkeley then provided a specific approach for calculating affordable sales prices. Background research, as well as City requirements, informed the assumptions that were used to calculate affordable sales prices (see Figure 31).

FIGURE 31. BELOW MARKET RATE HOMEOWNERSHIP ASSUMPTIONS

	Assumption	Basis	Source
Loan Type	Conventional	-	-
Down Payment	5%	Sales Price	*City of Berkeley, 2023*
Loan-To-Value (LTV) Ratio	95%	Sales Price	*City of Berkeley, 2023*
Interest Rate	6.76%	Annual	*FreddieMac 52-Week Average for 30-Year FRM, 2023*
Term of Loan	30	Years	*City of Berkeley, 2023*
Monthly HOA Dues	$0.32	Square Foot	*Zillow, 2023*
Property Tax Rate (Annual)	1.25%	Sales Price	*Bekins AMS Relocation, 2023*
Private Mortgage Insurance Premium Rate (Annual)	0.98%	Mortgage Amount	*Urban Institute Housing Finance Policy Center, 2023*
Homeowner's Insurance	0.35%	Sales Price	*QuoteWizard 2023*

Source: Strategic Economics, 2024.

Based on HCD guidelines, the affordable rent was calculated as 30 percent of a household's gross monthly income, minus a deduction for utilities [15]. The maximum monthly housing cost used to calculate the affordable sales price for condos in this study was 30 percent of a household's gross income, minus the cost of utilities. See Figure 32 for the affordable sales price calculation.

FIGURE 32. BELOW-MARKET RATE CONDO SALES PRICE CALCULATION BY UNIT TYPE

	1 Bedroom	2 Bedroom
Household Size (Persons per HH)	2	3
Annual Household Income at 80% AMI	$89,750	$100,950
Maximum Monthly Housing Cost	$2,244	$2,524
Monthly Deductions		
Utilities	$229	$283
HOA Dues	$237	$348
Property Taxes	$224	$238
Private Mortgage Insurance	$167	$177
Homeowner's Insurance	$63	$67
Monthly Income Available for Mortgage Payment	$1,325	$1,410
Maximum Mortgage Amount	$204,008	$217,239
Down Payment	$10,737	$11,434
Maximum Affordable Sales Price	**$214,745**	**$228,672**

Source: Strategic Economics, 2024.

ESTIMATING DEVELOPMENT COSTS

Development costs were estimated for each of the development prototypes. Development costs include land costs, direct or "hard" construction costs, indirect or "soft" costs, as well as financing costs, a developer fee, and a contingency for overruns.

Assumptions for development costs were informed by interviews and data analysis. This was supplemented by Strategic Economics' general experience with the economics of real estate development projects in the Bay Area.

The development cost assumptions for rental and ownership prototypes are shown below in Figure 34 and Figure 35, respectively. The remainder of this section explains the cost assumptions in more detail.

LAND COST

Land costs typically vary widely, depending on factors such as location, zoning, and the amount of site work required to prepare the land for development. Because the price of land is so strongly tied to what can be built upon it, land costs are characterized in this study as the cost per dwelling unit of development.

Land costs were estimated based on CoStar land sales data from the past five years. When available, the size and unit count of the proposed redevelopment was used to inform the assumption of land cost per unit and per square foot for each of the prototypes in this study. Assumptions were also informed by the general market trend that larger developments command higher land costs per square foot of land, but lower per unit costs.

[15] Utilities were calculated using the City's Utility Allowance Schedule for BMR units, available here: https://berkeleyca.gov/sites/default/files/documents/2023%20COB%20BMR%20Utility%20Allowance%20Schedule.pdf.

HARD COSTS

Hard costs refer to both horizontal site costs and vertical construction costs, including the residential area construction and parking construction.

The construction costs also include horizontal/site costs that include demolition, grading, utility connection installation, paving, and landscaping. For the purposes of this analysis, it was assumed that the hypothetical sites are relatively flat, with horizontal costs between $20 to $35 per land square foot. The 10-Unit Small Multifamily was assumed to have higher horizontal costs because it includes surface parking.

The vertical costs include parking structures and building materials. The construction costs were based on assumptions for the materials used to construct each prototype. Type V construction is the least expensive and is used for wood frame structures. The Missing Middle prototypes and the GLA are constructed entirely with Type V building materials. The midrise prototypes utilize a mix of Type V and Type III building materials. Type III construction is used for developments over five stories, above the Type I podium used for a parking structure. The high-rise prototype utilizes Type I building materials, which is typically reinforced concrete and steel, with high fire safety standards. Total building costs were based on the amount of Type V, III, and I materials corresponding to the prototype design. The costs result in the per unit and per square foot costs as seen in Figure 33.

FIGURE 33. BUILDING AREA HARD COST PER UNIT AND PER SQUARE FOOT

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Cost per Unit	$600,000	$480,000	$463,480	$141,167	$304,567	$344,360	$479,999
Cost per Square Foot	$400	$400	$400	$350	$360	$449	$547

Source: Strategic Economics, 2024.

Parking costs were assumed to be $100 per square foot for garage spaces, and $200 per square foot for podium spaces. Each space was assumed to be 300 square feet.

The construction costs for the ownership prototypes were slightly higher than the rental costs per square foot. This is because the ownership prototypes were assumed to be of slightly higher building quality.

SOFT COSTS

Soft costs refer to necessary costs of development that are not directly related to the physical construction of the building. They include architecture, engineering costs and other professional services fees, as well as other costs associated with doing business, such as insurance and taxes. Finally, soft costs include city permits and fees, and other miscellaneous costs. It is estimated that soft costs are 13 percent of hard costs for the Missing Middle prototypes, and 18 percent for the GLA, midrise, and high-rise prototypes. This was reflected in interviews with local and outside developers. The developer's contingency and overhead also account for an additional five and four percent of hard costs, respectively, though there are no overhead fees for the Missing Middle prototypes.

FINANCING COSTS

Based on input from developers, 55 percent of the project cost would be financed with debt, with interest rates currently in the 7 percent to 9.25 percent range. For the purpose of this study, an interest rate in the middle of this range was selected (8 percent). Financing assumptions are consistent for the for-rent and for-sale prototypes because the hypothetical projects would have similar loan terms and construction timelines. The development period for the Small Lot Single Family and Townhome prototypes was assumed to be 12 months. It was assumed to be 18 months for the 10- Unit Small Multifamily and GLA prototypes, 24 months for the midrise prototypes, and 36 months for the high-rise. All prototypes incorporate a 1.0 percent construction loan fee, which is a standard industry assumption. See Figure 36 for a summary of financing assumptions.

FEES

City fees were added to the pro forma. These fees include, but are not limited to, the affordable housing in lieu fee. A full breakdown of the fees for each prototype is provided in Figure 37.

FIGURE 34. HARD AND SOFT COST ASSUMPTIONS BY RENTAL PROTOTYPE

	Unit of measure	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Land Costs	per square foot	$150	$150	$175	$200	$325	$500	$850
Hard Costs								
Demolition and Site Work	per sf land	$20	$20	$35	$20	$25	$25	$25
Residential - Type V	per gross sf	$400	$400	$400	$350	$350	-	-
Residential - Type III	per gross sf	-	-	-	-	-	$400	-
Residential - Type I	per gross sf	-	-	-	-	$550	$550	$550
Retail - Type I	per gross sf	$100	$100	-	-	$200	$200	$200
Parking Garage	per space	$30,000	$30,000	$0	$0	$0	$0	$0
Parking Podium	per space	$0	$0	$0	$0	$60,000	$60,000	$0
Tenant Improvement Allowance	per net sf	$0	$0	$0	$0	$100	$100	$100
Soft Costs								
Arch, Eng & Consulting	% of hard costs	5%	5%	5%	8%	8%	8%	8%
Taxes, Insurance, Legal & Accounting	% of hard costs	5%	5%	5%	8%	8%	8%	8%
Other Soft Costs	% of hard costs	3%	3%	3%	3%	3%	3%	3%
Total Soft Costs (Excluding Fees)	% of hard costs	13%	13%	13%	18%	18%	18%	18%
Contingency	% of hard + soft costs	5%	5%	5%	5%	5%	5%	5%

Source: Strategic Economics, 2024.

FIGURE 35. HARD AND SOFT COST ASSUMPTIONS BY OWNERSHIP PROTOTYPE

	Unit of measure	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily
Land Costs	per square foot	$150	$150	$175
Hard Costs				
Demolition and Site Work	per sf land	$20	$20	$35
Residential - Type V	per gross sf	$425	$425	$425
Parking Garage	per space	$30,000	$30,000	$0
Tenant Improvement Allowance	per net sf	$0	$0	$0
Soft Costs				
Arch, Eng & Consulting	% of hard costs	5%	5%	5%
Taxes, Insurance, Legal & Accounting	% of hard costs	5%	5%	5%
Other Soft Costs	% of hard costs	3%	3%	3%
Total Soft Costs (Excluding Fees)	% of hard costs	13%	13%	13%
Contingency	% of hard + soft costs	5%	5%	5%

Source: Strategic Economics, 2024.

FIGURE 36. FINANCING COST ASSUMPTIONS

	Units	Small Lot Single Family	Fourplex/ Townhomes	3-Story Missing Middle (Units)	3-Story Missing Middle (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Total Development Cost (Excl. Financing)	Millions of $	$2.90	$3.10	$7.30	$7.80	$8.90	$41.80	$67.70	$170.97
Amount Financed	% of hard + soft costs	55%	55%	55%	55%	55%	55%	55%	55%
Average Outstanding Balance	% of amount financed	55%	55%	55%	55%	55%	55%	55%	55%
Construction Loan Fee	% of amount financed	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Construction Interest (annual)	% of amount financed	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Term	Months	12	12	18	18	18	24	24	36
Total Cost of Financing	Millions of $	$0.09	$0.09	$0.31	$0.33	$0.37	$2.25	$3.65	$13.35
Financing as Share of TDC	% of total costs	2.8%	2.8%	3.9%	3.9%	3.8%	4.4%	4.4%	6.9%

Source: Strategic Economics, 2024.

FIGURE 37. CITY FEES BY PROTOTYPE (WHEN TESTED UNDER EXISTING IN-LIEU FEE POLICY)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story High-rise
Affordable Housing In-Lieu Fee	$0	$0	$0	$450,938	$202,737	$1,255,416	$723,642	$1,580,453
BUSD Developer Fee	$15,660	$16,704	$40,323	$40,323	$50,530	$215,516	$313,144	$726,370
Building Permit Fees*	$31,850	$33,896	$83,218	$83,218	$115,672	$557,448	$936,523	$2,550,810
Plan Check Fees*	$20,702	$22,032	$54,091	$54,091	$75,187	$362,341	$608,740	$1,658,027
Other Permit Fees (Fire Plan, etc)*	$15,238	$16,216	$39,779	$39,779	$55,283	$266,330	$447,425	$1,218,614
SOSIP (Residential) Fee	$0	$0	$0	$0	$0	$0	$0	$369,689
SOSIP (Commercial) Fee	$0	$0	$0	$0	$0	$0	$0	$3,360
Sewer Connection*	$10,608	$14,144	$36,000	$36,000	$129,600	$270,000	$432,000	$864,000
1% Arts Fee	$0	$0	$3,952	$4,205	$4,205	$20,510	$34,374	$92,755
POPOS	$0	$0	$0	$0	$0	$0	$0	$0

Note:
* Calculated using the City of Berkeley's online fee calculator.
** Assumes $3,600 per unit for multifamily based on similar projects.
Source: Strategic Economics, 2024.

Pro Forma Results

This appendix provides the full pro forma results for the rental and ownership scenarios in Figure 38 and Figure 39. The rental results demonstrate the impacts of HARD HATS/prevailing wage and Bird Safe Building requirements. The section also provides the full pro forma results for the rental and ownership scenarios after the recommended in-lieu fee exemption for the first 5,000 square feet of development is applied in Figure 40 and Figure 41.

FIGURE 38. FULL RENTAL PRO FORMA RESULTS (WITH CURRENT IN-LIEU FEE, BIRD SAFE BUILDING, AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	3-Story Missing Middle (Units)	3-Story Missing Middle (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story Highrise
Revenues								
Market Rate Units								
Gross Scheduled Income	$198,000	$192,000	$340,800	$426,000	$963,600	$2,731,800	$4,023,600	$11,776,140
Less Vacancy	-$9,900	-$9,600	-$17,040	-$21,300	-$48,180	-$136,590	-$201,180	-$588,807
Less Operating Expenses	-$59,400	-$57,600	-$102,240	-$127,800	-$289,080	-$819,540	-$1,207,080	-$4,121,649
Below Market Rate Units								
Gross Scheduled Income	$0	$0	$43,968	$0	$43,020	$94,308	$178,704	$397,392
Less Vacancy	$0	$0	-$1,099	$0	-$1,076	-$2,358	-$4,468	-$9,935
Less Operating Expenses	$0	$0	-$25,560	$0	-$26,280	-$71,264	-$134,120	-$457,961
Retail Area	$0	$0	$0	$0	$0	$6,075	$8,100	$8,100
Total Net Operating Income	**$128,700**	**$124,800**	**$238,829**	**$276,900**	**$642,005**	**$1,802,431**	**$2,663,556**	**$7,003,280**
Total Capitalized Value	**$2,574,000**	**$2,496,000**	**$4,776,576**	**$5,538,000**	**$12,840,090**	**$36,048,619**	**$53,271,128**	**$140,065,604**
Development Costs								
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600	$1,742,400	$7,078,500	$10,890,000	$18,513,000
Direct Costs								
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920	$174,240	$544,500	$544,500	$544,500
Building Area	$1,800,000	$1,920,000	$4,634,800	$4,634,800	$5,082,000	$22,842,500	$41,323,200	$115,199,850
Parking	$90,000	$120,000	$0	$0	$0	$2,100,000	$900,000	$0
Tenant Improvements	$0	$0	$0	$0	$0	$150,000	$200,000	$200,000
City Initiatives								
Bird Safe Glass	$0	$0	$0	$0	$78,844	$384,555	$644,516	$1,739,165
Hard Hats	$0	$0	$0	$0	$0	$5,127,400	$8,593,540	$0
Indirect Costs								
Soft Costs	$257,026	$276,526	$642,164	$642,164	$946,123	$4,614,660	$7,734,186	$20,869,983
Municipal Fees	$94,058	$102,992	$257,363	$708,553	$633,213	$2,947,561	$3,495,849	$9,064,078
Developer Overhead	$0	$0	$0	$0	$343,119	$1,611,109	$2,603,509	$6,575,656
Financing	$88,554	$93,853	$307,809	$326,669	$376,197	$2,554,902	$4,146,489	$13,488,357
Contingency	$120,838	$130,025	$307,353	$330,855	$377,745	$1,868,262	$3,047,387	$8,297,121
Total Development Costs	**$3,190,995**	**$3,383,915**	**$7,979,008**	**$8,472,561**	**$9,753,881**	**$51,823,948**	**$84,123,175**	**$194,491,711**
Feasibility Summary								
Yield-on-cost	4.03%	3.69%	2.99%	3.27%	6.58%	3.48%	3.17%	3.60%
Target yield-on-cost	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Difference	**-1.97%**	**-2.31%**	**-3.01%**	**-2.73%**	**0.58%**	**-2.52%**	**-2.83%**	**-2.40%**

Source: Strategic Economics, 2024.

FIGURE 39. FULL OWNERSHIP PRO FORMA RESULTS (WITH CURRENT IN-LIEU FEE, BIRD SAFE BUILDING, AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)
Revenues				
Market Rate Units				
Gross Revenue	$4,500,000	$4,800,000	$7,600,000	$9,500,000
Less Marketing Expenses	-$225,000	-$240,000	-$380,000	-$475,000
Below Market Rate Units				
Gross Revenue	$0	$0	$443,417	$0
Less Marketing Expenses	$0	$0	-$22,171	$0
Total Proceeds	**$4,275,000**	**$4,560,000**	**$7,641,246**	**$9,025,000**
Development Costs				
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600
Direct Costs				
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920
Building Area	$1,912,500	$2,040,000	$4,924,475	$4,924,475
Parking	$90,000	$120,000	$0	$0
Tenant Improvements	$0	$0	$0	$0
Indirect Costs				
Soft Costs	$271,651	$292,126	$679,821	$679,821
Municipal Fees	$94,058	$102,992	$258,521	$708,532
Developer Overhead	$0	$0	$0	$0
Financing	$92,329	$97,880	$321,540	$340,350
Contingency	$127,383	$137,006	$324,464	$347,905
Total Development Costs	**$3,328,441**	**$3,530,524**	**$8,338,341**	**$8,830,603**
Feasibility Summary				
Total Revenue	$4,275,000	$4,560,000	$7,641,246	$9,025,000
Total Development Cost	$3,328,441	$3,530,524	$8,338,341	$8,830,603
Net Revenue	**$946,559**	**$1,029,476**	**-$697,095**	**$194,397**
Return-on-Cost	28%	29%	-8%	2%
Target Return on Cost	8%	8%	8%	8%
Difference	**20%**	**21%**	**-16%**	**-6%**

Source: Strategic Economics, 2024.

FIGURE 40. FULL RENTAL PRO FORMA RESULTS WITH RECOMMENDED IN-LIEU FEE EXEMPTION (INCLUDES BIRD SAFE BUILDING AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	3-Story Missing Middle (Units)	3-Story Missing Middle (Fee)	4-Story GLA	6-Story Midrise	8-Story Midrise	18-Story Highrise
Revenues								
Market Rate Units								
Gross Scheduled Income	$198,000	$192,000	$340,800	$426,000	$963,600	$2,731,800	$4,023,600	$11,776,140
Less Vacancy	-$9,900	-$9,600	-$17,040	-$21,300	-$48,180	-$136,590	-$201,180	-$588,807
Less Operating Expenses	-$59,400	-$57,600	-$102,240	-$127,800	-$289,080	-$819,540	-$1,207,080	-$4,121,649
Below Market Rate Units								
Gross Scheduled Income	$0	$0	$43,968	$0	$43,020	$94,308	$178,704	$397,392
Less Vacancy	$0	$0	-$1,099	$0	-$1,076	-$2,358	-$4,468	-$9,935
Less Operating Expenses	$0	$0	-$25,560	$0	-$26,280	-$71,264	-$134,120	-$457,961
Retail Area	$0	$0	$0	$0	$0	$6,075	$8,100	$8,100
Total Net Operating Income	**$128,700**	**$124,800**	**$238,829**	**$276,900**	**$642,005**	**$1,802,431**	**$2,663,556**	**$7,003,280**
Total Capitalized Value	**$2,574,000**	**$2,496,000**	**$4,776,576**	**$5,538,000**	**$12,840,090**	**$36,048,619**	**$53,271,128**	**$140,065,604**
Development Costs								
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600	$1,742,400	$7,078,500	$10,890,000	$18,513,000
Direct Costs								
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920	$174,240	$544,500	$544,500	$544,500
Building Area	$1,800,000	$1,920,000	$4,634,800	$4,634,800	$5,082,000	$22,842,500	$41,323,200	$115,199,850
Parking	$90,000	$120,000	$0	$0	$0	$2,100,000	$900,000	$0
Tenant Improvements	$0	$0	$0	$0	$0	$150,000	$200,000	$200,000
City Initiatives								
Bird Safe Glass	$0	$0	$0	$0	$78,844	$384,555	$644,516	$1,739,165
Hard Hats	$0	$0	$0	$0	$0	$5,127,400	$8,593,540	$0
Indirect Costs								
Soft Costs	$257,026	$276,526	$642,164	$642,164	$946,123	$4,614,660	$7,734,186	$20,869,983
Municipal Fees	$94,058	$102,992	$256,436	$496,678	$677,048	$2,947,561	$3,495,849	$9,064,078
Developer Overhead	$0	$0	$0	$0	$344,872	$1,611,109	$2,603,509	$6,575,656
Financing	$88,554	$93,853	$307,770	$317,812	$378,103	$2,554,902	$4,146,489	$13,488,357
Contingency	$120,838	$130,025	$307,304	$319,819	$380,119	$1,868,262	$3,047,387	$8,297,121
Total Development Costs	**$3,190,995**	**$3,383,915**	**$7,977,994**	**$8,240,793**	**$9,803,750**	**$51,823,948**	**$84,123,175**	**$194,491,711**
Feasibility Summary								
Yield-on-cost	4.03%	3.69%	2.99%	3.36%	6.55%	3.48%	3.17%	3.60%
Target yield-on-cost	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Difference	**-1.97%**	**-2.31%**	**-3.01%**	**-2.64%**	**0.55%**	**-2.52%**	**-2.83%**	**-2.40%**

Source: Strategic Economics, 2024.

FIGURE 41. FULL OWNERSHIP PRO FORMA RESULTS WITH RECOMMENDED IN-LIEU FEE EXEMPTION (INCLUDES BIRD SAFE BUILDING AND HARD HATS REQUIREMENTS)

	Small Lot Single Family	Fourplex/ Townhomes	10-Unit Small Multifamily (Units)	10-Unit Small Multifamily (Fee)
Revenues				
Market Rate Units				
Gross Revenue	$4,500,000	$4,800,000	$7,600,000	$9,500,000
Less Marketing Expenses	-$225,000	-$240,000	-$380,000	-$475,000
Below Market Rate Units				
Gross Revenue	$0	$0	$443,417	$0
Less Marketing Expenses	$0	$0	-$22,171	$0
Total Proceeds	**$4,275,000**	**$4,560,000**	**$7,641,246**	**$9,025,000**
Development Costs				
Land Costs	$653,400	$653,400	$1,524,600	$1,524,600
Direct Costs				
Demolition and Site Work	$87,120	$87,120	$304,920	$304,920
Building Area	$1,912,500	$2,040,000	$4,924,475	$4,924,475
Parking	$90,000	$120,000	$0	$0
Tenant Improvements	$0	$0	$0	$0
Indirect Costs				
Soft Costs	$271,651	$292,126	$679,821	$679,821
Municipal Fees	$94,058	$102,992	$258,521	$497,584
Developer Overhead	$0	$0	$0	$0
Financing	$92,329	$97,880	$321,540	$331,533
Contingency	$127,383	$137,006	$324,464	$336,917
Total Development Costs	**$3,328,441**	**$3,530,524**	**$8,338,341**	**$8,599,849**
Feasibility Summary				
Total Revenue	$4,275,000	$4,560,000	$7,641,246	$9,025,000
Total Development Cost	$3,328,441	$3,530,524	$8,338,341	$8,599,849
Net Revenue	**$946,559**	**$1,029,476**	**-$697,095**	**$425,151**
Return-on-Cost	28%	29%	-8%	5%
Target Return on Cost	8%	8%	8%	8%
Difference	**20%**	**21%**	**-16%**	**-3%**

Source: Strategic Economics, 2024.

Maximum Justifiable In-Lieu Fee Calculation

METHODOLOGY

The following steps illustrate the methodology for calculating the production cost affordability gap:

1. Estimate affordable rents and housing prices for households in target groups (see pages 36 and 37 for a description, and Figure 28 and Figure 32 for affordable rents and sales prices used in this study);
2. Estimate development costs of building new housing units, based on current cost and market data from the pro forma analysis;
3. Calculate the difference between what renters and homeowners can afford to pay for housing, and the cost of developing those rental and for-sale units (see Figure 42).

The following steps illustrate the methodology for calculating the affordability gap:

1. Estimate affordable rents and housing prices for households in target groups (see pages 36 and 37 for a description, and Figure 28 and Figure 32 for affordable rents and sales prices used in this study);
2. Subtract the difference in annual revenue between a market rate and below market rate unit (see Figure 26 for the market rate rents used in this study);
3. Divide the difference by the cap rate to determine the difference in revenue between producing a market rate and BMR unit.

The following steps illustrate the methodology to translate the gap per unit to a gap per square foot for both the production cost and the affordability gap methodologies:

1. Average the gap per unit across the income groups tested to determine the average gap per unit;
2. Multiply the average gap per unit by the required number of BMR units of a test prototype that satisfies the jurisdiction's inclusionary requirement via on-site units; [16]
3. Divide the total gap of the development project by the project's net square feet (see Figure 44).

[16] The test prototype used for this study has 100 units, of which 20 were below market rate. This satisfies the city's 20% inclusionary requirement.

FIGURE 42. PRODUCTION COST AFFORDABILITY GAP CALCULATION BY INCOME LEVEL

Unit Type	Unit Sq Ft	Units	Maximum Monthly Rent	Annual Revenue	Net Operating Income (a)	Available for Debt Service (b)	Supportable Debt (c)	Development Costs	Affordability Gap (d)
Very Low Income (50% AMI)									
Studio	500	33	$1,195	$14,340	$5,222	$4,540	$57,728	$351,000	$293,272
1 Bedroom	660	51	$1,332	$15,984	$6,824	$5,934	$75,449	$463,320	$387,871
2 Bedroom	990	16	$1,473	$17,676	$8,474	$7,369	$93,688	$694,980	$601,292
Average Affordability Gap									**$390,801**
Low Income (80% AMI)									
Studio	500	33	$1,864	$22,368	$13,049	$11,347	$144,265	$351,000	$206,735
1 Bedroom	660	51	$2,096	$25,152	$15,763	$13,707	$174,275	$463,320	$289,045
2 Bedroom	990	16	$2,332	$27,984	$18,524	$16,108	$204,802	$694,980	$490,178
Average Affordability Gap									**$294,064**

Note:
(a) Assumes 2.5% vacancy and $730/month operations cost per unit.
(b) Assumes 1.15 debt coverage ratio.
(c) Assumes 6.76% interest rate and 30 year loan.
(d) Calculated as the difference between development costs and the supportable debt.
Source: Strategic Economics, 2024.

FIGURE 43. AFFORDABILITY GAP CALCULATION BY INCOME LEVEL

Unit Type	Unit Sq Ft	Units	Maximum Monthly Rent	Annual Revenue	Market Rate Rent*	Annual Market Rate Revenue	Annual Difference	Difference/Cap Rate**	Affordability Gap Per Unit
Very Low Income (50% AMI)									
Studio	500	33	$1,195	$14,340	$2,800	$33,600	$19,260	$385,200	$385,200
1 Bedroom	660	51	$1,332	$15,984	$3,250	$39,000	$23,016	$460,320	$460,320
2 Bedroom	990	16	$1,473	$17,676	$4,500	$54,000	$36,324	$726,480	$726,480
Average Affordability Gap									**$478,116**
Low Income (80% AMI)									
Studio	500	33	$1,864	$22,368	$2,800	$33,600	$11,232	$224,640	$224,640
1 Bedroom	660	51	$2,096	$25,152	$3,250	$39,000	$13,848	$276,960	$276,960
2 Bedroom	990	16	$2,332	$27,984	$4,500	$54,000	$26,016	$520,320	$520,320
Average Affordability Gap									**$298,632**

Note:
* Market rate rents are assumed in the pro forma analysis and are based on the rent of the 6-Story Midrise prototype.
** The cap rate is assumed to be 5.0%.
Source: Strategic Economics, 202

FIGURE 44. MAXIMUM JUSTIFIABLE IN-LIEU FEE PER SQUARE FOOT

	Production Cost	Affordability Gap
Prototype		
Units	100	100
Required BMR units	20	20
Weighted Average Unit Sq. Ft.	660	660
Affordability Gap per Unit		
Very Low Income (50% AMI)	$390,801	$478,116
Low Income (80% AMI)	$294,064	$298,632
Average Affordability Gap per Unit	**$342,432**	**$388,374**
Affordability Gap Fee per Sq. Ft.	**$103.77**	**$117.69**

Source: Strategic Economics, 2024.

LOCAL CONTRIBUTION EQUIVALENT IN-LIEU FEE

In order to determine the equivalent local contribution needed to leverage funding for one off-site affordable unit, Strategic Economics reviewed recent data from the City of Berkeley on its financial support for 100 percent affordable tax credit projects (Figure 45).

The steps to calculate the local contribution fee include:

1. Calculate the average per unit contribution of local funding towards 100 percent affordable projects;
2. Multiply the average gap per unit by the required number of BMR units of a test prototype that satisfies the jurisdiction's inclusionary requirement via on-site units; [17]
3. Divide the total gap of the development project by its net square feet (see Figure 46).

FIGURE 45: CITY OF BERKELEY'S LOCAL CONTRIBUTION PER UNIT TO TAX CREDIT PROJECTS

	Ephesian	St Paul Terrace	Supportive Housing in People's Park	BUSD Workforce Housing	1740 San Pablo	Maudelle	Blake Apartments	Hope Center PSH + BRIDGE Affordable*
$ per unit	$228,958	$250,000	$121,691	$224,771	$150,000	$197,674	$193,548	$180,142

Note:
* Hope Center PSH and BRIDGE Affordable were combined because they are part of the same development project.
Source: City of Berkeley, 2023; Strategic Economics, 2024.

FIGURE 46. LOCAL CONTRIBUTION EQUIVALENT IN-LIEU FEE PER SQUARE FOOT

	Local Contribution
Prototype	
Units	100
Required BMR units	20
Weighted Average Unit Sq. Ft.	660
Average Contribution per Unit	**$193,348**
Local Contribution per Sq. Ft.	**$58.59**

Source: Strategic Economics, 2023.

[17] The test prototype used for this study has 100 units, of which 20 were below market rate. This satisfies the city's 20% inclusionary requirement.

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Office of the City Manager

PUBLIC HEARING
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Jordan Klein, Director, Planning and Development Department

Subject: Zoning Ordinance Amendments to Title 23 of the Berkeley Municipal Code for Consistency with State Law Related to Electric Vehicle Charging and Technical Edits

RECOMMENDATION

Conduct a public hearing and upon conclusion, adopt the first reading of an Ordinance amending the following sections of the Zoning Ordinance to align the Berkeley Municipal Code (BMC) with state law related to electric vehicle charging, as well as additional non-substantive edits and corrections:

- 23.106.020 Lot Coverage
- 23.106.080 Building Separation
- 23.202.020 Allowed Land Uses (Residential Districts)
- 23.204.020 Allowed Land Uses (Commercial Districts)
- 23.204.090 C-NS North Shattuck Commercial District
- 23.204.100 C-SA South Area Commercial District
- 23.204.130 C-DMU Downtown Mixed-Use District
- 23.204.140 C-W West Berkeley Commercial District
- 23.204.150 C-AC Adeline Corridor Commercial District
- 23.206.020 Allowed Land Uses and Permit Requirements (Manufacturing Districts)
- 23.206.040 Use-Specific Regulations (Manufacturing Districts)
- 23.206.050 Protected Uses (Manufacturing)
- 23.302.070 Use-Specific Regulations (Supplemental Use Regulations)
- 23.306.010 Purpose (Accessory Dwelling Units)
- 23.306.030 Development Standards (Accessory Dwelling Units)

- 23.306.040 Permit Procedures (Accessory Dwelling Units)
- 23.310.020 General Requirements Excluding Incidental Beer and Wine
- 23.310.030 Alcohol Beverage Standards When Incidental to Food Service
- 23.322.030 Required Parking Spaces
- 23.322.080 Parking Layout and Design
- 23.334.030 Transportation Demand Management Program Requirements
- 23.502.020 Defined Terms (Glossary)

SUMMARY

The following is a summary of the proposed amendments to incorporate state law requirements and non-substantive technical edits.

State Law: Electric Vehicle Charging Stations (AB 1236 & AB 970)

AB 1236 (2015) and AB 970 (2021) require all cities to approve applications to install an electric vehicle charging station with a building permit or similar nondiscretionary permit. Any zoning review for electric vehicle charging stations is prohibited by state law. Therefore, the proposed zoning amendments remove the Electrical Vehicle Charging Station use from the Allowed Uses in the Commercial Districts Table and clarify that an Electric Vehicle Charging Station is considered an allowed use in all zoning districts in the Glossary. Electrical vehicle charging stations would still be required to obtain a Building Permit.

State Law: Accessory Dwelling Units (ADUs)

The proposed updates to the Berkeley Municipal Code (BMC) reflect changes in state law and ensure compliance with requirements from the California Department of Housing and Community Development (HCD). Senate Bill 477 (SB 477) reorganized and re-numbered sections of the Government Code related to Accessory Dwelling Units (ADUs) and Junior Accessory Dwelling Units (JADUs). To align with these changes, the proposed zoning amendments update references in the Zoning Code and adjust local regulations to meet state requirements.

The proposed amendments also revise the ADU application review process by removing the neighborhood notification requirement for an application to be deemed complete. While neighborhood notifications will continue to be provided as a courtesy, they are no longer required for application processing under state law. Additionally, the amendments update the JADU owner-occupancy requirements to include a codified exemption for governmental agencies, land trusts, or housing organizations.

These updates aim to streamline the approval process, enhance clarity, and ensure compliance with state and HCD standards.

Technical Edits

The proposed zoning amendments include non-substantive changes to correct mistakes and errors and to codify existing practice.

FISCAL IMPACTS OF RECOMMENDATION
Adoption of the recommended amendments would not result in any costs or revenues to the City.

CURRENT SITUATION AND ITS EFFECTS
The Zoning Ordinance must comply with state laws, including those related to land use and zoning. The 2023 California Legislative Session saw the enactment of a number of significant new housing laws and extensions of existing laws.

While some state laws may require more extensive amendments or require changes to the City's internal permitting procedures to be consistent, the proposed zoning amendments constitute only minor technical amendments to maintain consistency.

The proposed Zoning Ordinance amendments are summarized below in Table 1:

Table 1 Policy Summary and Zoning Amendment Proposals

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
1.	**Lot Coverage, Measurement and Projections**	• Clarify that lot coverage includes pergolas, trellises, and similar horizontal features. • Clarify that the lot coverage calculation excludes the first 24 inches of eaves. • Correct transmittal error and clarify that the number of stories of a main building shall be used to determine lot coverage, where applicable.	1

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
		• Clarify that building separation is measured from main or ADU buildings within the same lot.	2
2.	**Residential Allowed Land Uses Table**	• Correct the Allowable Land Uses in Residential Districts table to include Residential, Hotel use. • Correct an error that transposed the required permits for Alcohol Beverage Service in the R-SMU and R-BMU zoning districts.	3
3.	**Commercial Allowed Land Uses Table**	• Remove permitting requirements for Electric Vehicle Charging to be consistent with state law. • Correct an error in the Allowed Land Uses in the Commercial Districts table that incorrectly showed blank spaces instead of dashes for some uses in the C-NS district.	4
4.	**C-NS Development Standards**	• Correct an error in the C-NS Development Standards Table to clarify that Maximum FAR should only apply to non-residential projects (not mixed-use residential projects).	5

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
5.	**C-SA South Area Commercial District**	• Correct omission of a reference to 23.304.130 (Non-residential Districts Abutting a Residential District).	6
6.	**C-DMU Setbacks**	• Correct an error in C-DMU Setbacks that unintentionally limited ZAB's ability to modify setback standards.	7
7	**C-W Land Use Regulations**	• Correct a transmittal error: the definition for automotive uses in C-W *does not* include vehicle parts store. • Replace "Lodging," which is not defined in the BMC, with "Tourist Hotel and Tourist Motel" in the list of C-W Ground Floor Uses • Revise the C-W Designated Node maps to clarify that they indicate entire parcels, not just frontages.	8 9 10 11
8	**C-AC Development Standards**	• Update C-AC Subarea Development Standards footnote to include the 100% affordable housing use, consistent with state law.	12

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
9.	**C-AC North and South Subareas Adeline Development Standards**	• Correct formatting error related to Maximum Lot Coverage in C-AC North and South Adeline Subarea Development Standards table. • Update C-AC Subarea Development Standards table notes to include 100% affordable housing use, consistent with state law	13
10.	**Alcoholic Beverage Service and Sales and Outdoor Seating**	• Correct permitting threshold in R-SMU and R-BMU, which were inadvertently switched. • Correct a section reference under MU-R in Allowed Uses in Manufacturing Districts table. • Clarify that outdoor sales or food service is *permitted*, consistent with Berkeley Business amendments adopted in February, 2024. • Provide a more detailed definition of what constitutes an increase in alcoholic beverage sale or service. • Correct section and subsection titles to match Glossary terms.	3 14 15 27 28 29
11.	**Manufacturing Allowed Use Table**	• Removal of unnecessary asterisks.	14
12.	**Manufacturing District Protected Uses**	• Correct a transmittal error to clarify that permit findings are only applicable to projects that meet certain thresholds.	16 17

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
		• Correct a transmittal error related to conversions to non-protected industrial use across multiple buildings. The requirement is that 25% *or more* of the floor area remain protected, not 25% or less. • Clarifying outdoor café seating is permitted in the MU-LI and MU-R zoning districts with an AUP.	18
13.	**California Government Code Update**	• Update sections of the BMC which reference missing or moved California Government Code sections. • Clarify ADU conversion is applicable to existing buildings or accessory structures, per state law.	19 20 24 26 30
14.	**Accessory Dwelling Units**	• Clarify that certain building elements may project two feet into *any setback*, not just a front or side setback. • Update language consistent with state law requirements for review of ADU applications. Remove neighborhood notice as a requirement for a completed application. (Note: neighborhood notice will still occur.) • Clarify that certain types of housing are exempt from ADU owner-	21 22 23 24 25

	Berkeley Municipal Code	Proposed Zoning Change	Ordinance Sections (Att. 1)
		occupancy requirements, per state law. • Grammatical clarifications.	
15.	**Parking Layout and Design and**	• Clarify that off-street parking for an ADU is permitted in any configuration regardless of parking requirements.	31
16.	**Transportation Demand Management Update**	• Clarify that group living accommodation uses must still provide transit benefits.	32
17.	**Glossary**	• Clarify that there can be more than one main building on a lot. • Clarify that Electric Vehicle Charging is considered an allowed use in all zoning districts.	33 34

BACKGROUND

On October 12, 2021, the City Council passed Ordinance No. 7,787-N.S., a thorough revision of Title 23 of the Berkeley Municipal Code, to make the City's Zoning Ordinance easier to understand and administer. The City Council gave staff direction to make minor changes to comply with state law or codify prior zoning interpretations. Staff was directed to regularly return to the Planning Commission and City Council with amendments necessary to maintain the integrity of the new Zoning Ordinance.

The proposed zoning amendments are required for compliance with recently adopted state laws, and make other corrections and technical edits to ensure consistency throughout the Zoning Ordinance (***Attachment 1***).

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

The removal of zoning review for electric vehicle charging stations would streamline the approval process for charging stations, which could result in an increased number of charging stations in Berkeley. The increased availability of charging stations could

encourage the purchase and use of electric vehicles, which produce fewer greenhouse gas emissions per vehicle mile travelled than gas-powered vehicles.

The proposed ordinance includes revisions related to vehicle charging requirements as well as technical edits which correct or clarify language. The proposed zoning ordinance amendments do not include any allowances for additional development capacity or other new physical changes to the environment that are not already permitted and previously evaluated under CEQA. Adoption of the proposed amendments would in no way have a significant effect on the environment, and therefore is not subject to CEQA (CEQA Guidelines Section 15061(b)(3), Common Sense Exemption).

RATIONALE FOR RECOMMENDATION

The proposed Zoning Ordinance amendments are required to ensure compliance with all applicable state laws and maintains the integrity of the Zoning Ordinance. All recommended changes either reflect ordinances that have previously been specifically authorized by City Council, or that are required by state law.

ALTERNATIVE ACTIONS CONSIDERED

The Council could consider taking no action on the recommendations proposed by staff. In this scenario, Title 23 would remain unchanged, leaving the BMC inconsistent with state law. As a result, state law would take precedence, potentially leading to challenges in enforcement.

CONTACT PERSON

Robert Rivera, Senior Planner, Land Use and Development Department, (510) 981-7480

Attachments:
1: Draft Ordinance
2: PC Staff Report 7-17-24
3: Public Hearing Notice

ORDINANCE NO. -N.S.

AMENDMENTS TO THE RULES OF MEASUREMENT CHAPTER (BMC 23.106), RESIDENTIAL DISTRICT CHAPTER (BMC 23.202), COMMERCIAL DISTRICT CHAPTER (BMC 23.204), MANUFACTURING DISTRICT CHAPTER (BMC 23.206), USE-SPECIFIC REGULATIONS CHAPTER (BMC 23.302), ACCESSORY DWELLING UNITS CHAPTER (BMC 23.306), ALCOHOLIC BEVERAGE SALES AND SERVICE CHAPTER (BMC 23.310), PARKING AND LOADING CHAPTER (BMC 23.322), TRANSPORTATION DEMAND MANAGEMENT CHAPTER (BMC 23.334), AND GLOSSARY (BMC 23.502) FOR CONSISTENCY WITH STATE LAW, AND TECHNICAL EDITS

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

Section 1. That BMC Section 23.106.020 is amended to read as follows:

A. **Lot Coverage Defined.** Lot coverage means all the area of a lot, as projected on a horizontal plane, which is:

1. Enclosed by the exterior walls of buildings or enclosed accessory structures; or
2. Covered by decks, porches, stairs and/or landings which cover an enclosed space or paved ground area.
3. ~~2.~~ Covered by a pergola, trellises or similar horizontal features.

B. **Exclusions.** The lot coverage calculation excludes:

1. Uncovered porches, landings and stairs;
2. Uncovered decks, except that a deck on the roof of a building or accessory structure or over an enclosed space or paved ground area is included in the lot coverage calculation; and
3. The area of the roof of a subterranean structure, when such a structure is not more than 3 feet above finished grade.
4. ~~3.~~ The first 24 inches of eaves extending from a building or structure.
5. ~~4.~~ The area of any existing or proposed accessory dwelling unit or junior accessory dwelling unit, up to 800 square feet per lot. See 23.306 Accessory Dwelling Units.

C. **Lot Coverage Standards**. Number of stories of main building(s) shall be used to determine the allowable lot coverage where applicable.

Section 2. That BMC Section 23.106.080(A) is amended to read as follows:

A. **Measurement.** Building separation is measured as the distance between the surface of a main building or ADU's outer wall and the outer wall surface of the closest main building or ADU on the same lot.

Section 3. That the lines named "Alcoholic Beverage Service" is amended and the lines "Hotel, Residential" are hereby added, within Table 23.202-1 within BMC 23.202.020 to read as follows

Table 23.202-1: Allowed Land Uses in Residential Districts

ZC = Zoning Certificate **AUP = ADMINISTRATIVE USE PERMIT** UP(PH) = Use Permit NP = Not Permitted * Use-Specific Regulations Apply **Required permits for specific uses are set forth in the R-BMU Master Development Permit (MDP). See 23.202.150.A and 23.202.150.D	**RESIDENTIAL DISTRICTS**										**USE-SPECIFIC REGULATIONS** **APPLIES TO USES WITH AN ASTERISK FOLLOWING THE PERMIT REQUIREMENT (E.G., ZC*)**
	R-1	**ES-R**	**R-2**	**R-2A**	**R-3**	**R-4**	**R-5**	**R-S**	**R-SMU**	**R-BMU****	
Residential Uses											
Hotel, Residential	NP	NP	NP	NP	NP	UP(PH)	UP(PH)	UP(PH)	UP(PH)	NP	
Commercial Uses											
Alcoholic Beverage Service	NP	NP	NP	NP	NP	NP	NP	NP	~~ZC~~ UP (PH)*	~~UP(PH)~~ ZC*	23.310—Alcoholic Beverage Sales and Service

Section 4. That the lines named “Electric Vehicle Charging Station”, “Vehicle Parts Store”, “Construction Products”, “Light Manufacturing”, “Pesticides/Herbicides/Fertilizers”, “Petroleum Refining and Products”, “Pharmaceuticals”, and “Warehouse-based Non-Store Retailer”, are amended in Table 23.204-1 within BMC 23.204.020 to read as follows:

Table 23.204-1. Allowed Uses in the Commercial Districts

ZC = Zoning Certificate AUP = Administrative Use Permit UP(PH) = Use Permit NP = Not Permitted -- = Permitted with AUP, see 23.204.020(B) [#] = Table Note Permit Requirement * Use-Specific Regulations Apply	COMMERCIAL DISTRICTS											USE-SPECIFIC REGULATIONS
	C-C	C-U	C-N	C-E	C-NS	C-SA	C-T	C-SO	C-DMU	C-W	C-AC	
Vehicle Service and Sales Uses												
~~Electric Vehicle Charging Station~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP~~	~~AUP*~~	~~AUP~~	
Vehicle Parts Store	ZC	NP	ZC	ZC	ZC	ZC	ZC	ZC	NP	AUP [1] *	ZC	
Industrial and Heavy Commercial Uses												
Construction Products	–	–	–	–	=	–	–	–	–	UP(PH)	--	
Light Manufacturing	–	–	–	–	=	–	–	–	–	AUP [1]	--	
Pesticides/Herbicides/ Fertilizers	–	–	–	–	=	–	–	–	–	UP(PH)	--	
Petroleum Refining and Products	–	–	–	–	=	–	–	–	–	UP(PH)	--	
Pharmaceuticals	–	–	–	–	=	–	–	–	–	UP(PH)	--	
Warehouse-Based Non-Store Retailer	–	–	–	–	=	–	–	–	–	–	--	

Section 5. That Table 23.204-24 within BMC Chapter 23.204.090 is amended to read as follows:

TABLE 23.204--24: C-NS DEVELOPMENT STANDARDS

	Project Land Use		Supplemental Standards
	Non-Residential and Mixed Use	Residential Only	
Lot Area, Minimum			23.304.020
New Lots	4,000 sq. ft.	5,000 sq. ft.	
Per Group Living Accommodation Resident	350 sq. ft. [1]		
Usable Open Space, Minimum			23.304.090–Usable Open Space
Per Dwelling Unit	40 sq. ft. [2]	200 sq. ft.	
Per Group Living Accommodation Resident	No minimum	90 sq. ft.	
Floor Area Ratio, Maximum	1.0 [3]	No maximum	
Main Building Height [~~43~~]			
Minimum	2 stories	No minimum	
Maximum	35 ft. and 3 stories	28 ft. and 2 stories	
Lot Line Setbacks, Minimum			23.304.030
Abutting/Confronting a Non-residential District	No minimum	See Table 23.204-25	
Abutting/Confronting a Residential District	See 23.304.030.C.2		
Building Separation, Minimum	No minimum [54]	See Table 23.204-25	23.304.040
Lot Coverage, Maximum	100%	See Table 23.204-26	23.304.120

	Project Land Use		Supplemental Standards
	Non-Residential and Mixed Use	Residential Only	
Notes: [1] One additional resident is allowed for remaining lot area between 200 and 350 square feet. [2] For mixed use projects, usable open space dimensions may be smaller than required in 23.304.090.B.3, but no dimension may be less than 6 feet. ~~[2]~~[3] For mixed-use residential projects, no maximum floor area ratio. ~~[3]~~[4] Basement levels devoted exclusively to parking are not counted as a story. ~~[4]~~[5] For mixed-use projects, minimum building separation shall be as required for residential-only projects. See Table 23.204-25			

Section 6. That BMC 23.204.100(D)(2) is hereby amended to read as follows:

2. **Lots Abutting or Confronting a Residential District.** See 23.304.130 (Non-Residential Districts Abutting a Residential District) for additional building feature requirements for lots that abut or confront a Residential District.

~~2.~~3. **Modification for Mixed Use and Residential Projects.** The ZAB may modify development standards in Table 23.204-27, Table 23.204-28, and Table 23.204-29, and Table 23.20430 – excluding FAR - for a mixed-use or residential-only project with a Use Permit upon making one of the following findings:

a. The project encourages utilization of public transit and existing off-street parking facilities in the area of the proposed building;

b. The modification allows consistency with the building setbacks existing in the immediate area where a residential building setback would not serve a useful purpose;

c. The modification facilitates the construction of affordable housing as defined by the U.S. Department of Housing and Urban Development (HUD) Guidelines; or

d. The modification provides consistency with the purposes of the district as listed in Section 23.204.100.A (District Purpose).

Section 7. That BMC 23.204.130(E)(3)(b) is amended to read as follows:

(b) **Modifications to Standards.** The ZAB may modify ~~the~~ all C-DMU district setback standards ~~in Table 23.204-38~~ with a Use Permit upon finding that the

modified setbacks will not unreasonably limit solar access or create significant increases in wind experienced on the public sidewalk.

Section 8. That BMC Section 23.204.140(B)(3)(a) is amended to read as follows:

(a) As used in this paragraph, “automotive use” means a use classified in Table 23.204-1 as a vehicle service and sales use, except for vehicle parts store. “Automotive site” means a site which was legally used or approved for use as an automotive use as of March 1, 1997.

Section 9. That BMC Section 23.204.140(D)(3) is amended to read as follows:

3. **Ground Floor Uses.** The ground floor of buildings in designated nodes may be used only for the following:

(b) Retail sales

(c) Personal and household services

(d) Retail financial services (banks)

(e) Food and alcohol service

(f) ~~Lodging~~ Tourist Hotel and Tourist Motel

(g) Entertainment and assembly uses

(h) Gasoline/vehicle fuel stations

(i) Vehicle repair uses

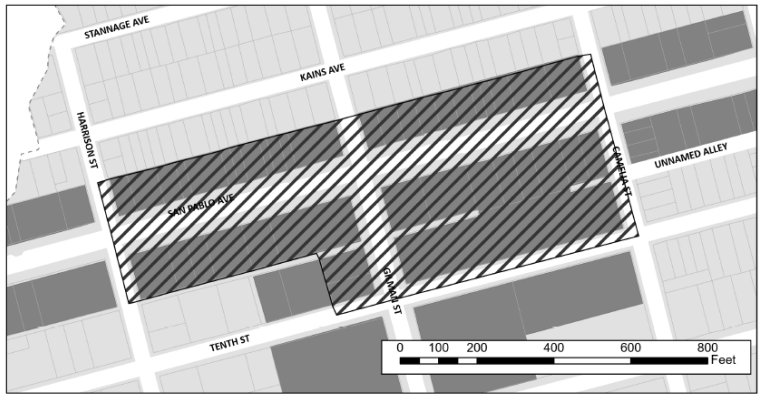
(j) New car sales

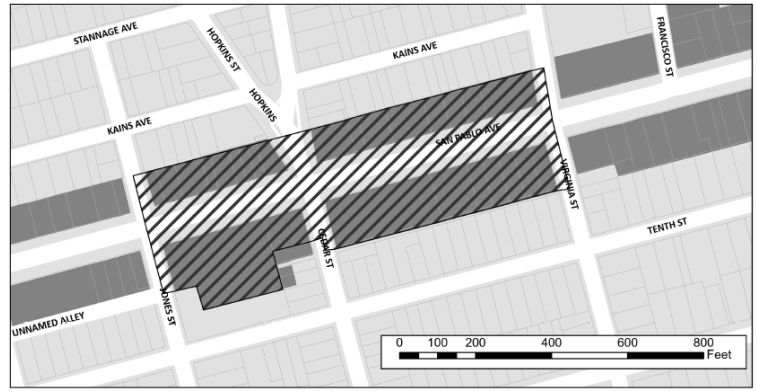
(k) Used vehicles sales

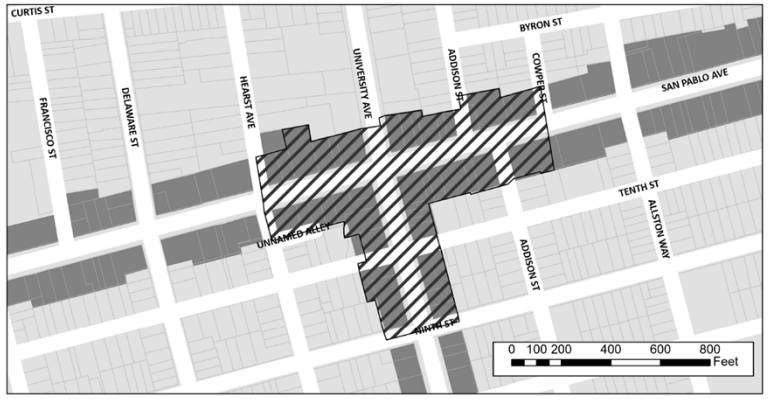
(l) Required access to and lobbies serving upper-story uses

Section 10. That Figure 23.204-7 C-W Designated Nodes within BMC Chapter 23.204.140 is amended to read as follows:

FIGURE 23.204-7: C-W DESIGNATED NODES






CURTIS ST
FRANCISCO ST
DELAWARE ST
HEARST AVE
UNIVERSITY AVE
ADDISON ST
BYRON ST
COWPER ST
SAN PABLO AVE
TENTH ST
ALLSTON WAY
ADDISON ST
UNNAMED ALLEY
NINTH ST
0 100 200 400 600 800
Feet

N
West Berkeley Commercial (C-W)
Node 3: University and San Pablo

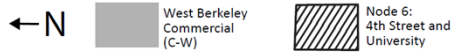

BROWNING ST
MATHEWS ST
WALLACE ST
CURTIS ST
BLAKE ST
PARKER ST
CARLETON ST
DERBY ST
WARD ST
GRAYSON ST
CHAUCER ST
CHANNING WAY
BYRON ST
PARDEE ST
SAN PABLO AVE
DWIGHT WAY
TENTH ST
CARLETON ST
NINTH ST
0 100 200 400 600 800
Feet

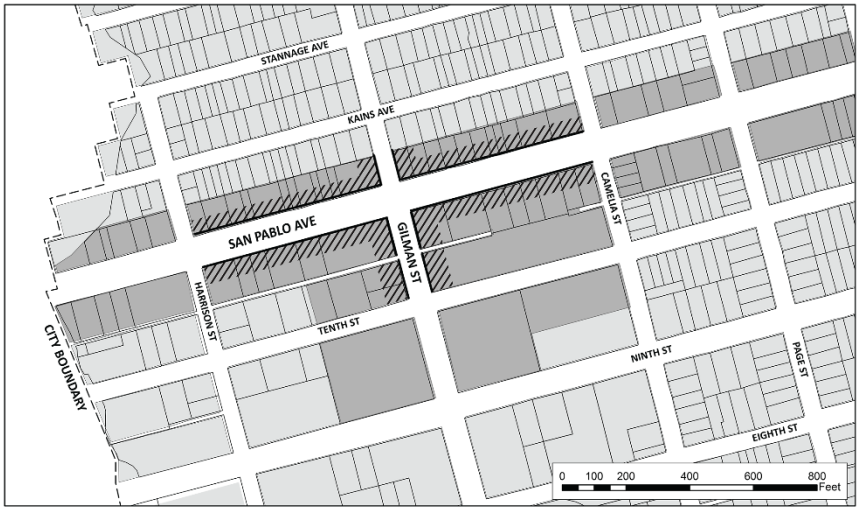
N
West Berkeley Commercial (C-W)
Node 4: Dwight and San Pablo


MABEL ST
MATHEWS ST
RUSSELL ST
BURNETT ST
ASHBY AVE
CARRISON ST
HASKELL ST
WALLACE ST
OREGON ST
WALLACE ST
SAN PABLO AVE
GRAYSON ST
HEINZ AVE
TENTH ST
MURRAY ST
FOLGER AVE
NINTH ST
0 100 200 400 600 800
Feet


N
West Berkeley Commercial (C-W)
Node 5: Ashby and San Pablo


SEVENTH ST
DELAWARE ST
SIXTH ST
ALLSTON WAY
HEARST AVE
FIFTH ST
ADDISON ST
VIRGINIA ST
DELAWARE ST
FOURTH ST
UNIVERSITY AVE OVERPASS
UNIVERSITY AVE
BOLVAR DR
SECOND ST
0 100 200 400 600 800
Feet


N
West Berkeley Commercial (C-W)
Node 6: 4th Street and University

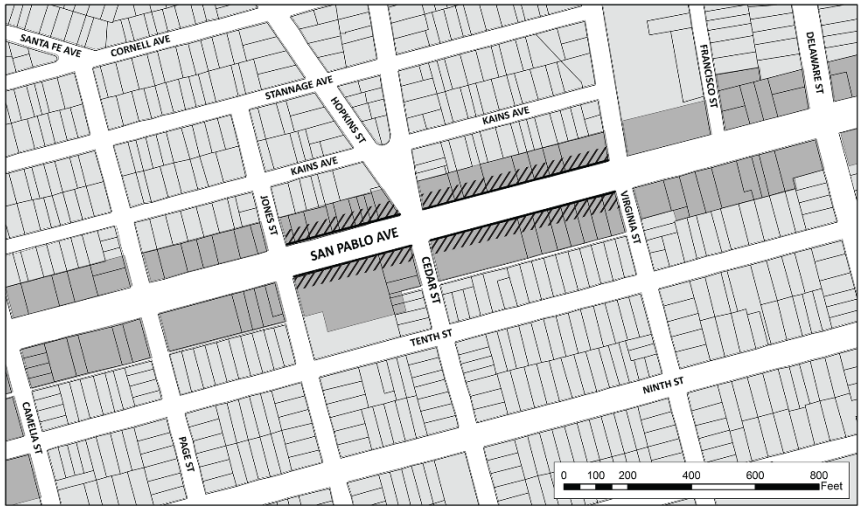


N

West Berkeley Commercial (C-W)

Node 1: Gillman and San Pablo

Parcel boundaries as of [adoption date]



N

West Berkeley Commercial (C-W)

Node 2: Cedar and San Pablo

Parcel boundaries as of [adoption date]



N

West Berkeley Commercial (C-W)

Node 3: University and San Pablo

Parcel boundaries as of [adoption date]



N

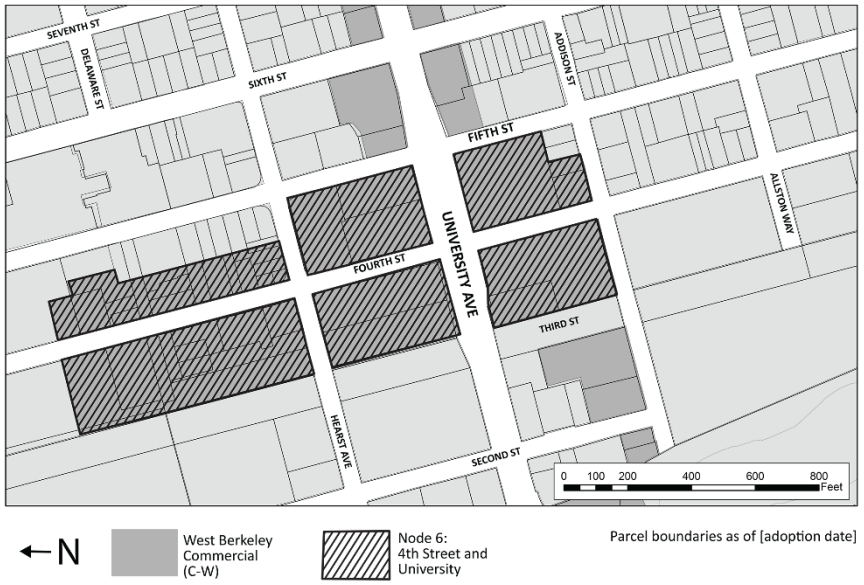
West Berkeley Commercial (C-W)

Node 4: Dwight and San Pablo

Parcel boundaries as of [adoption date]

Section 11. That Figure 23.204-8 within BMC Chapter 23.204.140 is removed:





Section 12. That the line "Notes," in Table 23.204-43, C-AC South Shattuck Subarea Development Standards, within BMC Chapter 23.204.150, C-AC Adeline Corridor Commercial District, is amended to read as follows:

TABLE 23.204-43: C-AC SOUTH SHATTUCK SUBAREA DEVELOPMENT STANDARDS

Notes:
[1] One additional resident is allowed for remaining lot area between 200 and 350 square feet.
[2] For the purposes of calculating the State Density Bonus the Tier 1 density shall constitute the maximum allowable gross residential density. Tier 2, 3, and 4 density and 100 percent affordable housing density is authorized as a local density bonus under Government Code section 65915(n).
[3] An AUP may be granted to reduce usable open space requirements if shown to be necessary to build an all-electric building.
[4] Each square-foot of open space that is designated as publicly accessible open space shall be counted as two square-feet of required on-site open space.
[5] Affordable units calculated as percentage of total units

Section 13. That Table 23.204-44, C-AC North and South Adeline Subarea Development Standards, within BMC Chapter 23.204.150, C-AC Adeline Corridor Commercial District, is amended to read as follows:

TABLE 23.204-44: C-AC NORTH AND SOUTH ADELINE SUBAREA DEVELOPMENT STANDARDS

	Project Land Use [6]							
	Residential and Mixed Use Tier 1 (Less than 14% affordable housing)	Residential & Mixed Use Tier 2 (14% affordable housing)	Residential & Mixed Use Tier 3 (21% affordable housing)	Residential & Mixed Use Tier 4 (25% affordable housing)	Residential & Mixed Use (100% affordable housing)	Group Living Accommodation	Non-Residential	Supplemental Standards
Lot Area Minimum								23.304.020-Lot Requirements

New Lots	No minimum							
Per Group Living Accommodation Resident	N/A					350 sq. ft. [1]	N/A	
Usable Open Space, Minimum [3]	40 sq. ft.							
Per Dwelling Unit/GLA Resident [4]	N/A					40 sq. ft.		23.304.090-Usable Open Space
Floor Area Ratio, Maximum	2.0	3.5	4.0	5.0	5.0	2.5	2.8	
Residential Density, Maximum (du/acre) [2]	100	150	210	250	250	1 GLA resident per 350 sf of lot area	N/A	
Main Building Height, Maximum	3 stories 35 feet	5 stories 55 feet	6 stories 65 feet	7 stories 75 feet	7 stories 80 feet	4 stories 45 feet	3 stories 45 feet	
Lot Line Setbacks, Minimum								
Abutting/Confronting a Non-residential District	No minimum							23.304.030-Setbacks

Abutting/Confronting a Residential District	10 ft 20 ft from any shared lot line for any portion exceeding 35 feet 45 ft from front property line for any portion exceeding 45 feet						N/A	23.304.030-Setbacks 23.204.150.E.5
Building Separation, Minimum	No minimum							23.304.040-Building Separation in Residential Districts
Lot Coverage, Maximum								
Interior Lot	60%	90%	90%	90%	90%	60%	100%	
Corner Lot	70%	90%	90%	95%	95%	70%	100%	
~~Lot Coverage, Maximum~~	~~100%~~							

Notes:

[1] One additional resident is allowed for remaining lot area between 200 and 350 square feet.

[2] For the purpose State Density Bonus calculation, the Tier 1 density is the maximum allowable gross residential density. Tier 2, 3, and 4 density and 100 percent affordable density is authorized as a local density bonus under Government Code section 65915(n).

[3] An AUP may be granted to reduce useable open space requirements if shown to be necessary to build an all-electric building.

[4] Each square-foot of open space that is designated as publicly accessible open space shall be counted as two square-feet of required on-site open space.

[5] Affordable units calculated as percentage of total units

Section 14. That the lines named "Bar/Cocktail Lounge/Tavern/Tap Room/Wine Tasting," "Construction Products," and "Light Manufacturing," in Table 23.206-1, within BMC 23.206.020 are amended to read as follows:

Table 23.206-1. Allowed Uses in Manufacturing Districts

ZC = Zoning Certificate AUP = Administrative Use Permit UP(PH) = Use Permit -- = Permitted with an AUP, see 23.206.020(B) NP = Not Permitted [#] = Floor Area Permit Requirement * Use-Specific Standards Apply	**MANUFACTURING DISTRICTS**				**Use-Specific Standards** Applies to uses with an asterisk following the permit requirement (e.g., ZC*)
	M	**MM**	**MU-LI**	**MU-R**	**Use-Specific Regulation**
Bar/Cocktail Lounge/Tavern/Tap Room/Wine Tasting	NP	NP	NP	See ~~23.306~~ 23.310	
Construction Products	ZC* [9]	ZC* [9]	UP(PH)	NP	
Light Manufacturing	ZC* [7]	ZC* [7]	ZC* [1]	AUP* [3]	23.206.090(B)(5)

Section 15. That Berkeley Municipal Code 23.206.040(I)(3) be removed:

~~3. Outdoor sales or food service is not permitted.~~

Section 16. That Berkeley Municipal Code 23.206.050(A)(3) is amended to read as follows:

3. Permit Findings.

(a) To approve a Use Permit ~~required by Table 23.206-6 for~~ to changes ~~to~~ any amount of ground-floor protected industrial use ~~in the MM and MU-LI districts~~to a non-protected use in the MM district, or to change more than 20,000 square feet or 25 percent or more of a protected use to a non-protected use in the MU-LI district, the ~~review authority~~ Zoning Adjustments Board (ZAB) must find that replacement space is provided as required by Paragraph 4 (Replacement Space) below.

(b) To approve a Use Permit in the MU-LI district ~~for a~~ to change 25 percent or more of the floor area ~~to~~ from a protected industrial use to a non-protected use~~in the MU-LI district~~, the ZAB must ~~Zoning Adjustments Board (ZAB) must~~ also find that either:

(1) The City has approved necessary Use Permits to provide comparable quality replacement space in Berkeley at a comparable rent that will be available before the demolition or change of use of the space; or

(2) Both of the following:

1. As a result of lawful business and building activities, there are exceptional physical circumstances (exclusive of the presence of hazardous materials in the building(s), soil or groundwater) found at the building not generally found in industrial buildings in the MU-LI district which make it financially infeasible to reuse the building for any of protected industrial uses permitted in the district. The analysis of the financial feasibility effects (which shall be verified by the City) of these physical circumstances shall consider those costs necessary to make the building meet current minimum standards for manufacturing, wholesale trade or warehouse buildings.

2. Appropriate mitigation has been made for loss of the protected industrial use space in excess of 25 percent of that space through providing such space elsewhere in the City, payment into the West Berkeley Building Acquisition Fund, or by other appropriate means.

Section 17. That Berkeley Municipal Code 23.206.050(A)(7)(d)(ii) is amended to read as follows:

ii. 25 percent or ~~less~~ more of the total gross floor area in all buildings on the lot(s) remains as a protected industrial use.

Section 18. That Berkeley Municipal Code 23.302.070(E)(1) is amended to read as follows:

1. Outdoor Cafe Seating.

(a) Outdoor cafe seating on private property outside of the public right-of-way is allowed in the commercial districts with the following permits:

(1) Zoning Certificate when seating does not abut a residential district.

(3) AUP when seating abuts a residential district.

(b) Outdoor cafe seating on private property outside of the public right of-way is allowed in the MU-LI and MU-R districts with an AUP.

~~(b)~~(c) Sidewalk cafe seating within the public right-of-way is subject to 23.302.060 (Sidewalk Cafe Seating).

Section 19. That Berkeley Municipal Code 23.306.010(A) is amended to read as follows:

A. Implement California Government Code Title 7, Division 1, Chapter 13. Accessory Dwelling Units ~~Sections 65852.1, 65852.2 and 65852.22.~~

Section 20. That Berkeley Municipal Code 23.306.030(A)(1) is amended to read as follow:

1. *Existing Building or Accessory Structure Conversion.* An ADU created entirely through conversion with no modifications to the existing building or accessory structure envelope that exceeds the development standards for maximum gross floor area in Table 23.306-2, ADU Development Standards, is allowed a physical addition of no more than 150 square feet. The addition must comply with maximum height and setback requirements.

Section 21. That Berkeley Municipal Code 23.306.030(A)(2) is amended to read as follow:

2. *Duplex or Multi-Family Dwelling Conversion.* Interior ADU(s) must be created entirely through non-habitable residential portions of ~~the~~ an existing main building that are not within the living space of a dwelling unit (e.g. basement, attic, garages, storage room).

Section 22. That Berkeley Municipal Code 23.306.030(A)(8) is amended to read as follows:

8. *Attached ADU, New Construction Height.* Attached ADUs with maximum building height up to 25 ~~ft.~~ feet allowed with a Zoning Certificate.

Section 23. That Berkeley Municipal Code 23.306.030(C)(1) is amended to read as follows:

1. *Outside of the Hillside Overlay*. Chimneys, water heater enclosures, flues, heating and cooling equipment, eaves, cornices, canopies, awnings, bay windows, and balconies may project two feet into the required ~~front and side~~ setbacks, so long as there remains at least a two-foot setback from property lines. Bay windows and balconies may not project into a required rear ADU setback.

Section 24. That Berkeley Municipal Code 23.306.040(A) is amended to read as follows:

A. Zoning Certificate. An application for an ADU or Junior ADU shall be allowed with a Zoning Certificate. Review must be completed within 60 days of submission of a completed application. A completed application must include evidence of compliance with this Chapter, including development standards and~~,~~ deed restrictions~~., and neighborhood noticing~~.

1. If an application to create an ADU or Junior ADU is submitted as part of a project that requires discretionary review, a Zoning Certificate for a building permit shall not be issued for the ADU or Junior ADU until the discretionary approval(s) has/have been granted and any applicable appeal periods have expired. See 23.404.060(A) Post-Decision Provisions (Effective Dates).

2. Issuance of a Zoning Certificate shall not be denied for the construction or conversion of an ADU or Junior ADU that complies with the requirements of Government Code Section 66314 ~~65852.2(e)(1)~~.

3. Issuance of a Zoning Certificate for the construction or conversion of an ADU or Junior ADU shall not be denied based on the failure of an applicant to correct a nonconforming zoning condition.

Section 25. That Berkeley Municipal Code 23.306.040(C)(4) is amended to read as follows:

4. If the property includes a Junior ADU, the Junior ADU or the Single Family Dwelling in which the Junior ADU is located shall be owner-occupied. Owner-occupancy shall not be required if the owner is another governmental agency, land trust, or housing organization.

Section 26. That Berkeley Municipal Code 23.306.040(D) is amended to read as follows:

D. ADUs Developed by a Qualified Nonprofit Developer. An ADU built or developed by a "qualified nonprofit corporation" may be sold or conveyed separately from the main building to a "qualified buyer," as such terms are defined in ~~subdivision (b) of~~ Section 66341~~65852.26 of~~ the California Government Code. The ADU must be held pursuant to a recorded tenancy in common agreement recorded on or after December 31, 2021 that includes the following elements:

1. Delineation of all areas of the property that are for the exclusive use of a cotenant;

2. Delineation of each cotenant's responsibility for the costs of taxes, insurance, utilities, general maintenance and repair, and improvements associated with the property;

3. Procedures for dispute resolution among cotenants before resorting to legal action;
4. Allocates to each qualified buyer an undivided, unequal interest in the property based on the size of the dwelling each qualified buyer occupies;
5. A repurchase option that requires the qualified buyer to first offer the qualified nonprofit corporation to buy the ADU or primary dwelling if the buyer desires to sell or convey the property;
6. A requirement that the qualified buyer occupy the ADU or primary dwelling as the buyer's principal residence; and
7. Affordability restrictions on the sale and conveyance of the ADU or primary dwelling that ensure the ADU and primary dwelling will be preserved for low-income housing for 45 years for owner-occupied housing units and will be sold or resold to a qualified buyer.
8. If requested by a utility providing service to the primary residence, the ADU shall have a separate water, sewer, or electrical connection to that utility.

Section 27. That the title of BMC Section 23.310.020 is amended to read as follows:

23.310.020 General Requirements Excluding When Incidental to Food ~~Beer and Wine~~ Service

Section 28. That BMC 23.310.020(B) is amended to read as follows:

B. **Permit Required.**

1. An Administrative Use Permit is required to begin service of alcoholic beverages, except as provided in 23.310.030 (Alcoholic Beverage Service When Incidental to Food Service).
2. To increase sales and service of alcoholic beverages, an existing Administrative Use Permit or Use Permit may be modified with an AUP regardless of the original review authority. An increase in alcoholic beverage sales or service includes, but is not limited to:

(a) Adding the sales or service of distilled spirits to any existing sales or service of beer and/or wine; or

(b) Adding to the capacity, floor area, or shelf space devoted to alcoholic beverages of any establishment that sells or serves any alcoholic beverages.

Section 29. That Berkeley Municipal Code 23.310.030(B) is amended to read as follows:

B. Incidental ~~Beer and Wine~~ Alcoholic Beverage Standards. The following standards apply to ~~beer and wine~~alcoholic beverage service incidental to a food service establishment.

1. Licensing.

   (a) The food service establishment shall comply with all applicable regulations of the California Department of Alcoholic Beverage Control.

   (b) An operator of the licensed establishment may not have a prior licensed establishment that was the subject of verified complaints or violations regarding alcohol, public safety, or nuisance statutes or regulations before issuance or transfer of a business license at this location.

2. Service.

   (a) ~~Beer and wine~~ Alcoholic beverage service shall be incidental to the primary food service use.

   (b) ~~Beer and wine~~ Alcoholic beverage service incidental to seated food service shall only be allowed at a bona fide eating place making actual and substantial sales of meals as determined and required by the California Department of Alcoholic Beverage Control.

   (c) The sale of ~~beer and wine~~ alcoholic beverages for off-site consumption is not permitted.

   (d) Hours of operation are subject to review and amendment by the review authority as necessary to avoid detriment to the neighborhood or to achieve conformance with revised City of Berkeley standards or policies.

3. Operation.

   (a) The food service establishment must operate at least five days a week.

   (b) The service of ~~beer and wine~~ alcoholic beverage shall be limited to normal meal hours (per California Department of Alcoholic Beverage Control) during the food service establishment's hours of operation.

   (c) During the food service establishment's hours of operation, all customer accessible areas shall be available for meal service and the food service establishment must possess the necessary utensils, and condiment dispensers with which to serve meals to the public.

   (d) The owner or operator of the establishment shall take reasonable measures to prevent disturbances by patrons in the immediate vicinity. Such measures shall include:

i. Signs reminding patrons of nearby residences and requests not to congregate or loiter near such residences nor operate vehicles in a noisy manner on residential streets; and

ii. Surveillance to public areas near the establishment, keeping public areas free of trash and litter, providing lighting, and otherwise preventing conduct that might disturb the peace and quiet of residences in the vicinity.

(e) The operator shall assume reasonable responsibility for ensuring that patrons do not block the entrance or interfere with pedestrian activity on the adjacent public sidewalk.

(f) The applicant shall establish cash handling procedures to reduce the likelihood of robberies and theft.

4. Advertising.

(a) Establishments shall comply with Municipal Code Chapter 20.67 (Alcohol Product Advertising)

5. Training.

(a) The operator shall finish a Crime Prevention through Environmental Design (CPTED) survey before beginning alcohol service.

(b) All employees selling and/or serving alcoholic beverages ~~beer and wine~~, or directly supervising such sales and/or service, shall comply with Municipal Code Section 9.84.030 (Responsible Beverage Service Training) and finish the Licensee Education on Alcohol and Drugs (LEAD) program, or another equivalent program offered or certified by the California Department of Alcoholic Beverage Control within 90 days of employment at the establishment. Employees who have finished the course within the last 12 months are exempt from this requirement.

Section 30. That the lines named “Accessory Dwelling Unit” Table 23.322-1, within BMC 23.322.030 is amended to read as follows:

Land Use	**Number of Required Off-street Parking Spaces**
Residential Uses	
Accessory Dwelling Unit	Junior ADU: None required ADU outside of Hillside Overlay: None required ADU within Hillside Overlay: 1 per ADU unless the parcel satisfies the criteria in subdivision (a~~d~~) of Government Code Section 66322 ~~65852.2~~, using the definition of public transit as

Land Use	Number of Required Off-street Parking Spaces
	established in subdivision (~~lj)(11~~) of Government Code 66313 ~~65852.2~~

Section 31. That Berkeley Municipal Code 23.322.080(G) is amended to read as follows:

G. **Placement—ADU.**

1. On a lot with an existing or proposed ADU, replacement of ~~required~~ off-street parking for ~~the~~ a main building, or ~~required~~ off-street parking for an ADU, is allowed in any configuration on the lot, including within the front setback; or
2. Within the Hillside Overlay on a lot with an existing or proposed ADU, where no legal off-street parking exists for the main building, required parking provided for the main building is allowed in any configuration on the lot, including within the front ~~yard~~ setback.

Section 32. That Berkeley Municipal Code 23.334.030(B) is hereby amended to read as follows:

B. **Transit Benefit.**

1. At least one of the following transit benefits shall be offered, at no cost, to project residents for a period of ten years after the issuance of a Certificate of Occupancy.

(a) A monthly pass for unlimited local bus transit service; or

(b) A functionally equivalent transit benefit in an amount at least equal to the price of a non-discounted unlimited monthly local bus pass. Any benefit proposed as a functionally equivalent transportation benefit shall be approved by the Zoning Officer in consultation with the Transportation Division Manager.

2. For projects that include 99 dwelling units or fewer, the project shall provide one transit benefit per bedroom, up to a maximum of two benefits per dwelling unit. For projects of 100 dwelling units or more, the project shall provide one transit benefit for every bedroom in each dwelling unit.

3. ~~3.~~ For projects that include Group Living Accommodations, the project shall provide one transit pass per Group Living Accommodation bedroom.

~~3.~~4. A notice describing these transportation benefits shall be posted in a location or locations visible to residents.

Section 33. That Berkeley Municipal Code 23.502.020(B)(11)(b) is hereby amended to read as follows:

b) *Main Building*. A building which is designed for, or in which is conducted, the primary use of the lot on which it is situated. In any residential district any dwelling, except an accessory dwelling unit, is ~~the~~ a main building on the lot.

Section 34. That Berkeley Municipal Code 23.502.020(E)(2) is hereby amended to read as follows:

2. **Electrical Vehicle Charging Station.** A facility that supplies electric energy for the recharging of plug-in electric vehicles. An electric vehicle charging station is considered an allowed use in all zoning districts.

Section 35. 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.

ATTACHMENT 2



opment Department
ivision

STAFF REPORT

DATE: July 17, 2024

TO: Members of the Planning Commission

FROM: Robert Rivera, Senior Planner

SUBJECT: Amendments to Title 23 for Consistency with State Law Related Electric Vehicle Charging and Technical Edits

---

RECOMMENDATION

Conduct a public hearing, receive public comment, and upon conclusion make a recommendation to City Council on proposed amendments to Title 23 (***Attachment 1***) to align the Berkeley Municipal Code (BMC) with state law related to electric vehicle charging, as well as additional non-substantive edits and corrections. The proposed changes apply to the sections of the Berkeley Municipal Code listed below:

- 23.106.020 Lot Coverage
- 23.106.080 Building Separation
- 23.202.020 Allowed Land Uses (Residential Districts)
- 23.204.020 Allowed Land Uses (Commercial Districts)
- 23.204.090 C-NS North Shattuck Commercial District
- 23.204.100 C-SA South Area Commercial District
- 23.204.130 C-DMU Downtown Mixed-Use District
- 23.204.140 C-W West Berkeley Commercial District
- 23.204.150 C-AC Adeline Corridor Commercial District
- 23.206.020 Allowed Land Uses and Permit Requirements (Manufacturing Districts)
- 23.206.040 Use-Specific Regulations (Manufacturing Districts)
- 23.206.050 Protected Uses (Manufacturing)
- 23.302.070 Use-Specific Regulations (Supplemental Use Regulations)
- 23.306.010 Purpose (Accessory Dwelling Units)

- 23.306.030 Development Standards (Accessory Dwelling Units)
- 23.306.040 Permit Procedures (Accessory Dwelling Units)
- 23.310.020 General Requirements Excluding Incidental Beer and Wine
- 23.310.030 Alcohol Beverage Standards When Incidental to Food Service
- 23.322.030 Required Parking Spaces
- 23.322.080 Parking Layout and Design
- 23.334.030 Transportation Demand Management Program Requirements
- 23.502.020 Defined Terms (Glossary)

SUMMARY

In response to recent changes in state laws, staff has prepared Zoning Ordinance amendments to align land use standards with state law requirements for electrical vehicle charging. Furthermore, staff has incorporated technical, non-substantive amendments to maintain consistency and accuracy throughout the Zoning Ordinance.

CURRENT SITUATION AND ITS EFFECTS

The Zoning Ordinance must comply with state laws, including those related to land use and zoning. The 2023 California Legislative Session saw the enactment of a number of significant new housing laws and extensions of existing laws.

While some state laws may require more extensive amendments or require changes to the City's internal permitting procedures to be consistent, the proposed zoning amendments constitute only minor technical amendments to maintain consistency.

BACKGROUND

On October 12, 2021, the City Council passed Ordinance No. 7,787-N.S., which replaced Title 23 of the Berkeley Municipal Code and adopted a new Title 23 to make the City's Zoning Ordinance easier to understand and administer. The City Council gave staff direction to make minor changes to comply with state law or codify prior zoning interpretations. Staff was directed to regularly return to the Planning Commission and City Council with amendments necessary to maintain the integrity of the new Zoning Ordinance.

The proposed zoning amendments are required for compliance with recently adopted state laws and include corrections and technical edits to ensure consistency throughout the Zoning Ordinance. **(*Attachment 1*)**

DISCUSSION

The following is a summary of state law requirements and also non-substantive technical edits. Each section provides a brief summary of the relevant law and the proposed zoning amendment. A summary table is below in Table 1.

Electric Vehicle Charging Stations (AB 1236 & AB 970)

AB 1236 (2015) and AB 970 (2021) require all cities to approve applications to install an electric vehicle charging station through the issuance of a building permit or similar nondiscretionary permit. All zoning review for electric vehicle charging stations are prohibited by state law. Therefore, the proposed zoning amendments remove the electrical vehicle charging station use from the allowable land use table and clarify as such in the glossary definition.

Technical Edits

The proposed zoning amendments include non-substantive changes to correct mistakes and errors and to codify existing practice. The following technical edits are proposed:

Table 1 Policy Summary and Zoning Amendment Proposals

	Policy	Proposed Zoning Change	Ordinance Sections (Attachment 1)
1.	**Lot Coverage, Measurement and Projections**	• Clarify that lot coverage includes pergolas, trellises, and similar horizontal features. • Clarify that the lot coverage calculation excludes the first 24 inches of eaves. • Correct transmittal error and clarify that the number of stories of a main building shall be used to determine lot coverage, where applicable. • Clarify building separation is measured from main or ADU buildings within the same lot.	1 2
2.	**Residential Allowed Land Uses Table**	• Correct the Allowable Use Table to include missing Residential, Hotel use. • Correct an error that transposed the required permits for Alcohol Beverage Service in the R-SMU and R-BMU zoning districts.	3
3.	**Commercial Allowed Land Uses Table**	• Correct an error in the Allowed Uses table that incorrectly shows blank spaces instead of dashes for some uses in the C-NS district. • Remove permitting requirements for Electric Vehicle Charging to be consistent with state law.	4
4.	**C-NS Development Standards**	• Correct an error in the C-NS Development Standards Table to clarify that Maximum FAR should only apply to non-residential projects (not mixed-use residential projects).	5

	Policy	Proposed Zoning Change	Ordinance Sections (Attachment 1)
5.	**C-SA South Area Commercial District**	• Correct omission of a reference to 23.304.130 (Non-residential Districts Abutting a Residential District).	6
6.	**C-DMU Setbacks**	• Correct an error in C-DMU Setbacks that unintentionally limited ZABs ability to modify setback standards.	7
7	**C-W Land Use Regulations**	• Correct a transmittal error: the definition for automotive uses in C-W *does not* include vehicle parts store. • Replace C-W Ground Floor Use called "Lodging," which is not defined in the BMC, with "Tourist Hotel and Tourist Motel" which are. • Clarify that C-W Designated Node figures so they indicate entire parcels, not just frontages.	8 9 10 11
8	**C-AC Development Standards**	• Update C-AC Subarea Development Standards to include 100% affordable housing density, consistent with state law.	12
9.	**C-AC North and South Subareas Adeline Development Standards**	• Correct formatting error related to Maximum Lot Coverage in C-AC North and South Adeline Subarea Development Standards table. • Update C-AC Subarea Development Standards to include 100% affordable housing density, consistent with state law	13
10.	**Alcohol Beverage and Sales and Outdoor Seating**	• Correct permitting threshold in R-SMU and R-BMU which were incorrectly switched. • Correct section reference under MU-R in allowed use table. • Clarify that outdoor sales or food service is *permitted*, consistent with Berkeley Business amendments. • Provide more detailed definition of an increase in alcoholic beverage sale or service. • Correct section title to match glossary terms.	3 14 15 27 28 29

	Policy	Proposed Zoning Change	Ordinance Sections (Attachment 1)
11.	**Manufacturing Allowed Use Table**	• Removal of unnecessary asterisks.	14
12.	**Manufacturing District Protected Uses**	• Correct transmittal error to clarify that permit findings are only applicable to projects that meet certain thresholds. • Correct transmittal error related to conversions to non-protected industrial use across multiple buildings. The requirement is that 25% *or more* of the floor area remain protected, not 25% or less. • Clarifying outdoor café seating is permitted in the MU-LI and MU-R districts with an AUP.	16 17 18
13.	**California Government Code Update**	• Update sections of the BMC which reference missing or moved California Government Code sections. • Clarify ADU conversion is applicable to existing buildings or accessory structures, per State law.	19 20 24 26 30
14.	**Accessory Dwelling Units**	• Clarify that certain building elements may project two feet into *any setback*, not just a front or side setback. • Update language consistent with state law requirements for review of ADU applications. Remove neighborhood notice as a requirement for a completed application. (Note: neighborhood notice will still occur.) • Clarify that certain types of housing are exempt from ADU owner-occupancy requirements, per State law. • Grammatical clarifications.	21 22 23 24 25
15.	**Parking Layout and Design and**	• Clarifying that off-street parking for an ADU is permitted in any configuration regardless of parking requirements.	31
16.	**Transportation Demand Management Update**	• Clarifying group living accommodation must still provide transit benefits.	32
17.	**Glossary**	• Clarify that there can be more than one main building on a lot.	33 34

	Policy	Proposed Zoning Change	Ordinance Sections (Attachment 1)
		• Clarify that Electric Vehicle Charging is considered an allowed use in all zoning districts.	

ENVIRONMENTAL REVIEW

The proposed ordinance includes revisions related to vehicle charging requirements as well as technical edits which correct or clarify language. The proposed zoning ordinance amendments do not include any allowances for additional development capacity or other new physical changes to the environment that are not already permitted and previously evaluated under CEQA. Adoption of the proposed amendments would in no way have a significant effect on the environment, and therefore is not subject to CEQA (CEQA Guidelines Section 15061(b)(3), Common Sense Exemption).

NEXT STEPS

Upon a recommendation from the Planning Commission, the City Council will conduct a public hearing on the proposed ordinance. The proposed zoning amendments would be effective 30 days after the second reading of the ordinance by the City Council.

CONTACT PERSON

Robert Rivera, Senior Planner, Planning and Development Department, 510-981-7480

ATTACHMENTS

1. Draft Ordinance – Zoning Ordinance Amendments
2. Public Hearing Notice

NOTICE OF PUBLIC HEARING
BERKELEY CITY COUNCIL
AMENDMENTS TO BMC TITLE 23 ZONING

The public may participate in this hearing by remote video or in-person.

The Planning and Development Department is proposing amendments to the following sections of the City's Zoning Ordinance (Title 23) to align the Berkeley Municipal Code (BMC) to State laws and technical edits and corrections which do not include any substantive policy changes.

- 23.106.020 Lot Coverage
- 23.106.080 Building Separation
- 23.202.020 Allowed Land Uses (Residential Districts)
- 23.204.020 Allowed Land Uses (Commercial Districts)
- 23.204.090 C-NS North Shattuck Commercial District
- 23.204.100 C-SA South Area Commercial District
- 23.204.130 C-DMU Downtown Mixed-Use District
- 23.204.140 C-W West Berkeley Commercial District
- 23.204.150 C-AC Adeline Corridor Commercial District
- 23.206.020 Allowed Land Uses and Permit Requirements (Manufacturing Districts)
- 23.206.040 Use-Specific Regulations (Manufacturing Districts)
- 23.206.050 Protected Uses (Manufacturing)
- 23.302.070 Use-Specific Regulations (Supplemental Use Regulations)
- 23.306.010 Purpose (Accessory Dwelling Units)
- 23.306.030 Development Standards (Accessory Dwelling Units)
- 23.306.040 Permit Procedures (Accessory Dwelling Units)
- 23.310.020 General Requirements Excluding Incidental Beer and Wine
- 23.310.030 Alcohol Beverage Standards When Incidental to Food Service
- 23.322.030 Required Parking Spaces
- 23.322.080 Parking Layout and Design
- 23.334.030 Transportation Demand Management Program Requirements
- 23.502.020 Defined Terms (Glossary)

The hearing will be held on, **February 25, 2025** at 6:00 p.m. in the School District Board Room, located at 1231 Addison Street, Berkeley CA 94702.

A copy of the agenda material for this hearing will be available on the City's website at https://berkeleyca.gov/ as of February 13, 2025. **Once posted, the agenda for this meeting will include a link for public participation using Zoom video technology, as well as any health and safety requirements for in-person attendance.**

For further information, please contact Robert Rivera at (510) 981-7480.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, or e-mailed to council@berkeleyca.gov 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 (510) 981-6900 or clerk@berkeleyca.gov for further information.

Published: February 14, 2025 – The Berkeley Voice

Public Hearing required by BMC 23.412.050 and Govt Code 65853; notice provided according to Govt Code 65090 and BMC 23.404.040.

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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 February 13, 2025.

_____

Mark Numainville, City Clerk
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Office of the City Manager

INFORMATION CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council

From: Paul Buddenhagen, City Manager

Submitted by: Scott Gilman, Director, Health, Housing, and Community Services

Subject: Community Health Assessment Report

INTRODUCTION

On April 11, 2023, the Berkeley City Council adopted Resolution 70,754 N.S. authorizing the City Manager to execute a contract and any amendments with JSI Research & Training Institute, Inc. to serve as a Community Health Assessment, Innovation, and Improvement Plan consultant for the City of Berkeley's Health, Housing, and Community Services (HHCS) Department.

CURRENT SITUATION AND ITS EFFECTS

As a local public health jurisdiction, the City's core public health functions include assessing and improving the health of the community's population. HHCS has managed and supported JSI Research & Training Institute's (JSI) landscape scan for partnership opportunities to reduce chronic racial disparities and improve Berkeley's public health strategies.

JSI completed a Community Health Assessment (CHA) in collaboration with a Community Steering Committee - a group of ten diverse individuals who live and/or work in Berkeley who are committed to the city's health and wellness. They play a central role in ensuring the CHA and Community Health Improvement Plan (CHIP) remain community-led.

The CHA has identified four health priority areas: behavioral health, housing, climate health, and community safety. The Community Steering Committee is currently working on developing a CHIP in collaboration with HHCS, and other city staff. The CHIP will outline goals and interventions to address the disparities within the health priority areas that were identified in the CHA.

HHCS' health equity work is a Strategic Plan Priority Project, advancing our goal to champion and demonstrate social and racial equity and achieving health equity.

BACKGROUND

The State of California encourages all public health jurisdictions to complete regular Community Health Assessments and develop Community Health Improvement Plan. These are prerequisites for public health department accreditation, which has been discussed as a state priority.

The City of Berkeley is a thriving community with considerable wealth, high levels of educational attainment, and a rich culture that all contribute to a healthy community. However, Berkeley is not a city where all people are living long and healthy lives and achieving the highest possible level of health. In Berkeley, African American/Black and other people of color are more likely to die prematurely and experience a wide variety of adverse health conditions throughout their lives.

As reported in the 2018 City of Berkeley Health Status Report, a higher incidence of disease is linked to neighborhoods that have been historically under-resourced and overexposed to unhealthy conditions. These neighborhoods have more people living in poverty and more people of color than surrounding neighborhoods. Like other jurisdictions, these historic and ongoing health inequities have been exacerbated by the impacts of the COVID-19 pandemic. Communities of color, specifically African American/Black and Hispanic/Latinx residents, have a higher COVID-19 positivity rate, hospitalizations, and deaths compared to White residents.

Since 2018, extensive work has been done by HHCS to analyze and identify solutions to overcome the underlying issues that perpetuate these health inequities. HHCS programs serve individuals who are most impacted in Berkeley and continue to make progress toward addressing health inequities that have existed and been worsened by the COVID-19 pandemic.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

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

POSSIBLE FUTURE ACTION

Council could request a presentation by staff to provide an overview of the findings from the Community Health Assessment at a future Council meeting or session.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

None.

CONTACT PERSON

Janice Chin, Manager, Public Health Division, HHCS, 510-981-5308

Attachments:
1: Berkeley Wellness Blueprint Community Health Assessment Report



BERKELEY WELLNESS BLUEPRINT

COMMUNITY HEALTH ASSESSMENT

ACKNOWLEDGEMENTS

This Community Health Assessment is the result of robust input and partnership from all of the individuals below:

Berkeley Health, Housing, and Community Services Department

Tanya Bustamante, Interim Deputy Director

Janice Chin, Manager, Public Health Division

Kellie Knox, Future of Public Health Coordinator

Catherine Roseman, Public Health Promotion & Prevention Officer, Community Services Specialist III

Patricia Zialcita, Supervising Epidemiologist

Community Steering Committee

Rosio Almaguer Andrade

Penelope Collins

Michai Freeman

JW Frye

Kaitlyn (Kati) Khov

Isabella Ledezema

Matt Matusiewicz

Israel Nikodimos

Claritza Rios

Michael Rodriguez

JSI Research & Training Institute

Jeremy Cantor

Emma Gier

Deanna Lewis

Corina Pinto

Alison Salomon

Anupam Sharma

Hannah Young

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Introduction

In 2023, the City of Berkeley Health, Housing and Community Services (HHCS) Department engaged JSI Research and Training Institute (JSI) to lead a Community Health Assessment (CHA) and create a Community Health Improvement Plan (CHIP). Together, the CHA and CHIP processes are called the Berkeley Wellness Blueprint (BWB). This CHA document is the culmination of an extensive research process, guided by the community steering committee (CSC). The CSC is a diverse group of individuals who live and/or work in Berkeley who are committed to the city's health and wellness. They play a central role in ensuring the CHA and CHIP remain community-led. (For more details on the research methods and CSC members, see Appendix B & C.)

Taken as a whole, Berkeley looks like a pretty healthy place, but that misses the ways in which health in the city is significantly worse for some groups of people, in certain neighborhoods, and for people experiencing specific health and social challenges. This CHA report aims to present a snapshot of health, safety, and equity in Berkeley informed by data. It also seeks to highlight community perspectives on key topics in a way that is easy to digest. Ultimately, this will lay the foundation for the development of the CHIP.

BERKELEY AT A GLANCE

Berkeley is a vibrant city in the heart of the San Francisco Bay Area, known for its progressive politics, social and academic innovation,culture and history. Home to over 121,000 people, Berkeley's diverse population reflects a multitude of racial and ethnic groups, with nearly half (48%) identifying as non-white. The city is also home to a significant immigrant community: more than one out of every five residents (22%) was born outside of the United States and over 6% of the population has limited English proficiency. Berkeley is also home to the world-renown University of California, Berkeley. A large number of students and staff associated with the university live in Berkeley, and account for approximately one-third of the overall population. (See Appendix A for a city health profile).

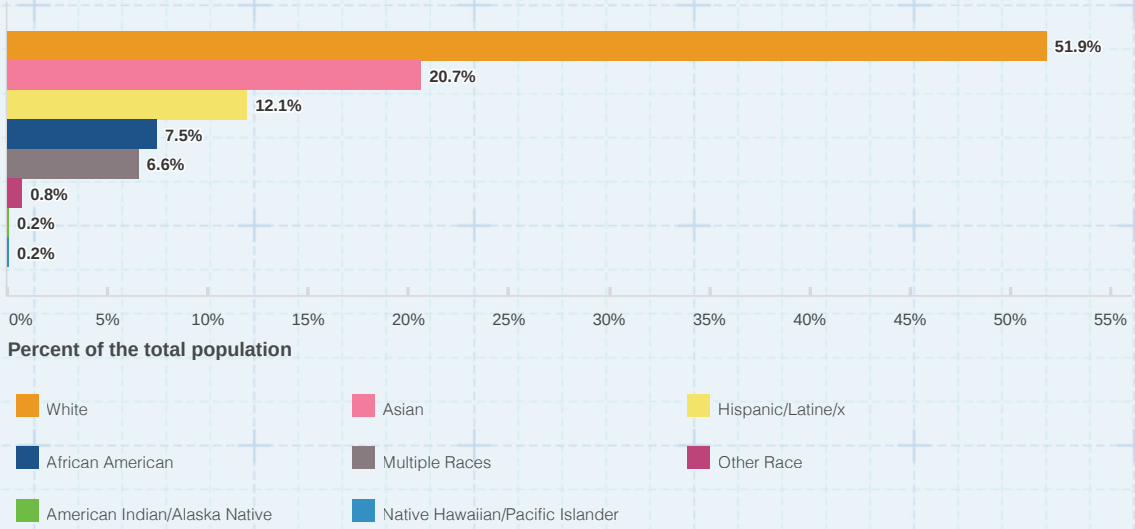
121,385
Total Population
Source: US Census Bureau ACS 5-year 2018-2022

21.5%
Immigrant Population
Source: US Census Bureau ACS 5-year 2018-2022

6.4%
of People ages 5+
Limited English Proficiency
Source: US Census Bureau ACS 5-year 2018-2022
Note: Limited English Proficiency is definied as speaking English less than "very well."

51.8%
Bachelor's Degree
Source: US Census Bureau ACS 5-year 2018-2022

Percent of the Population by Race/Ethnicity

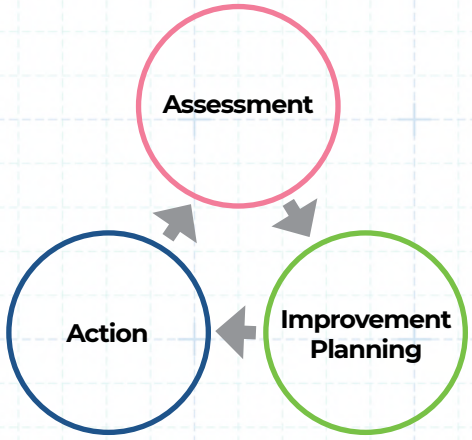


Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

PURPOSE AND PROCESS

This assessment is one part of a health and wellness improvement process that is intended to be repeated over time (see Figure 1). We decided to use the metaphor of a blueprint because there are parallels to building a physical structure. First, information is gathered and a vision is developed (Assessment); then, specific and workable plans are drawn (Improvement Planning); and finally, work begins (Action). Similar to a building process, new information and challenges will emerge along the way that require consideration and problem solving. It is crucial to have clear accountability and space for collective thinking and course correction.

FIGURE 1: Health and Wellness Improvement Process



GOALS OF THE COMMUNITY HEALTH ASSESSMENT (CHA)

The goals of this CHA phase are to:

- Engage community members in deepening shared understanding of the health and wellness status of Berkeley residents;
- Gather existing data on health, resiliency, and equity in Berkeley's communities; and
- Have enough information at the end of this phase to make an informed decision on priorities for the CHIP.

FRAMEWORK

There are a range of factors that shape health, safety, and equity in a city like Berkeley. In the Berkeley Wellness Blueprint, we are thinking about three groups of factors:

INDIVIDUAL: What does each person need to be healthy and flourishing? **Examples**: access to affordable culturally appropriate services, ability to afford basic needs, opportunities for connection and belonging.

COMMUNITY: What are the characteristics of communities that support individual health? **Examples:** safe and appealing parks, enough affordable housing, clean air and water.

SYSTEMS: How do systems and policies support the health of communities and individuals? **Examples:** How are harmful products and substances controlled? How are historic racist housing policies being addressed? How are resources distributed throughout the city?

These domains are useful both to understand what is currently happening and to organize action. For example, if we were trying to increase physical activity in Berkeley, we might focus on getting information about exercise classes into doctor's offices (individual), cleaning up parks in areas of the city with low physical activity rates (community) or providing additional funding to afterschool sports programs (systems). In many cases, effective solutions are going to involve strategies in more than one domain.

CHA PROCESS

This report comes at the end of a data collection and analysis process that began in fall of 2023. JSI and the CSC, with substantive input from the Berkeley HHCS team, have:

- Reviewed existing reports related to health and wellbeing in Berkeley, such as the Alameda County Department of Public Health health assessment;
- Searched databases of health information including the census and national health interview survey as well as locally collected data;
- Conducted over 15 interviews with local leaders and community members;
- Held 4 community focus groups; and
- Fielded a community wellness survey completed by over 320 community members from across Berkeley.

PRIORITY POPULATIONS, HEALTH TOPICS, & THE COMMUNITY SURVEY

Following an initial data review and first round of key informant interviews (n=16), several priority populations were identified by JSI and the CSC.

Priority Populations

An extra emphasis was placed on including information and perspectives from these populations.

- Black/African American people
- Latine/Latinx/Hispanic people
- LGBTQIA+ people
- Residents of South and West Berkeley
- Youth

Individuals from these priority populations were engaged via focus group discussions (n=4), additional interviews (n=6) and were target audiences for the community wellness survey (n=320). The reports, data review, interviews, and focus groups were analyzed by JSI and the CSC.

From that analysis, ten topics were identified (see right sidebar) that shaped the community-wide health survey. The survey aimed to gather a diverse range of perspectives on these topics. More details on the CHA methods, including the survey development and response, are available in the appendices.

TABLE 1: HEALTH TOPICS

Community Safety: how often people get hurt or experience violence and whether everyone feels safe in all areas of Berkeley

Disparities in Health: some people have better or worse health based on their race, ethnicity, and/or where they live in Berkeley

Drugs and Alcohol Use: use, misuse, and availability of legal and illegal drugs and alcohol, and if people can get the help they need

Environmental Health: being safe from things like pollution and wildfires, having clean air, water, and land, having access to parks and green spaces, and dealing with the effects of climate change

Government Responsiveness: City follow through and communication on health projects, and how much Berkeley residents help make decisions

Housing: being able to live in a place that is safe, affordable, and stable

Jobs and Money: having a steady job that pays enough for food, childcare, healthcare, school, and savings

Mental Health: how common mental health problems are (like depression, anxiety, and stress), and if people can get the care they need

Physical Health: how often people get sick, hurt, or have long-term health problems, and if they can get the care they need

Sense of Belonging: feeling included, respected, and connected



Key Findings

KEY FINDINGS

At the conclusion of the community survey, JSI and the CSC systematically reviewed all of the data collected via survey, interviews, focus groups, reports and statistics. Based on that review, a set of 6 key findings emerged. Although not all of the input, data and voices could be included in full detail, this report summarizes the information as best as possible to tell a clear story of the current situation and perspectives in Berkeley regarding health and wellness.

Finding 1: There is a lot to be proud of when it comes to wellness in Berkeley

Finding 2: Diversity is highly valued and racism is deeply rooted

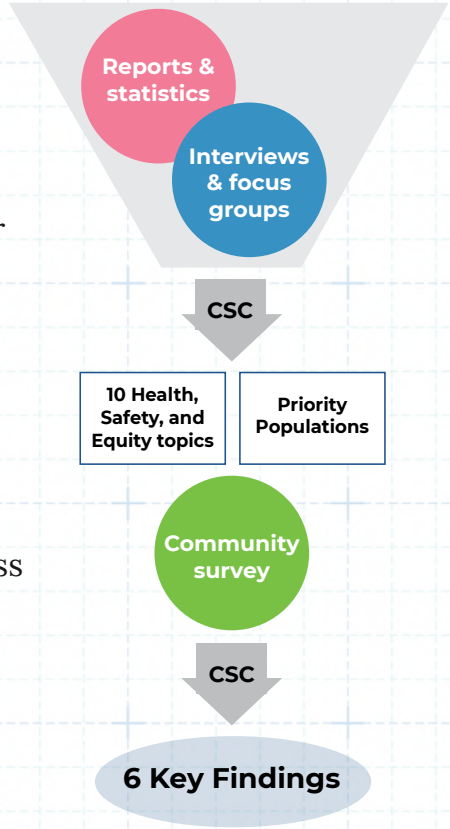
Finding 3: Health is connected to where people live

Finding 4: More transparency and collaboration are needed to increase trust and effectiveness of health improvement efforts

Finding 5: Berkeley is becoming a more diffcult place for people to afford to live well

Finding 6: Connection and safety are essential for supporting mental and physical well-being

FIGURE 2: CHA Process



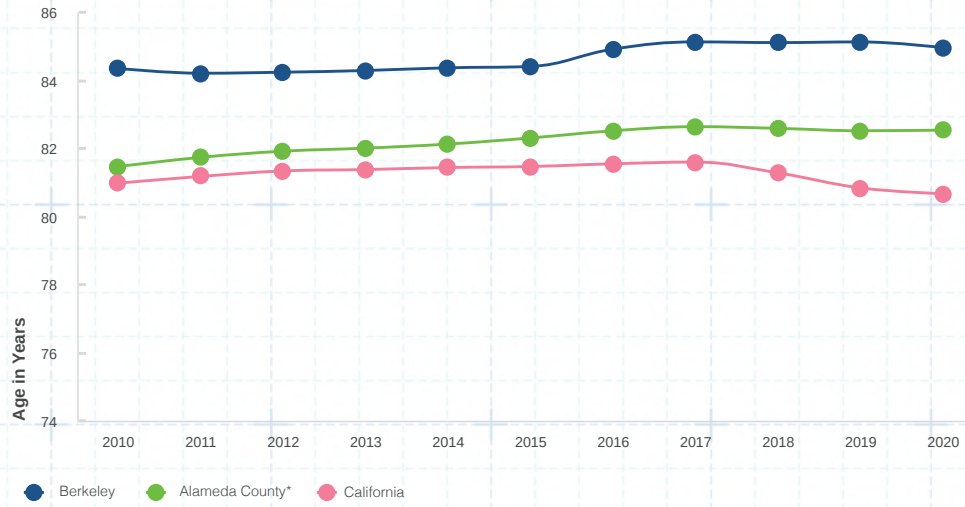


FINDING 1

There is a lot to be proud of when it comes to wellness in Berkeley

Berkeley residents consistently highlight three strengths that contribute to the city's health and wellness: its inviting physical environment, the diversity and character of its people, and the effectiveness of local community organizations. Citywide health statistics are generally positive compared with other geographies. For example, Berkeley has consistently had a higher life expectancy than Alameda County and California (see figure 3).

FIGURE 3: Life Expectancy at Birth



*Source: California Department of Public Health, California Community Burden of Disease and Cost Engine *Estimates are for Alameda County excluding Berkeley*

PHYSICAL ENVIRONMENT

In Berkeley, it's easy to step outside and find a place to walk, roll, or simply breathe. Home to 59 parks, Berkeley boasts almost 6 parks per square mile.[1] The community sees this as more than convenience—these walkable, wheelable routes bring people closer to nature, reduce stress, and create a more connected environment. The numbers support these general sentiments: Berkeley stands out for its high walkability, scoring 15.9 on the Environmental Protection Agency's Walkability Index - surpassing the county (14.2), state (12.4) and national (9.8) averages.[2]

"There's so many pretty places to go. And it's right on the water. There's the Berkeley Marina. I have great memories there with my dog and my kids at different stages in our life"

- FOCUS GROUP PARTCIPANT

Berkeley is filled with places where people naturally come together. Whether it's a farmers market, the Ed Roberts Campus, a church, or a senior center, these gathering spots foster a strong sense of belonging. They are spaces where people connect, feel seen, and know they belong.

"Quiero [tratar de] relacionarme con gente, platicar con gente, eso mismo como que te va a ayudar a no hundirte y hay unas tiendas donde puedes encontrar ese ambiente, donde se puede simplemente [conversar]."

- FOCUS GROUP PARTICIPANT

Translation: "I want to [try] to relate with people, talk to people, that will help to not further dig into a hole and there are stores where you can find that environment, where you can simply [converse]."



COMMUNITY MEMBERS

At the heart of Berkeley's community are the people who live here. Residents describe themselves and their neighbors as resilient, caring, diverse, and passionate, from people looking out for one another to city leaders' commitment to the city. Berkeley also has a proud tradition of activism. It was the first city to start municipal recycling, make sidewalks wheelchair accessible, and implement a sugar-sweetened beverage tax. Residents engage with issues of justice and equity both historically and today. This dedication to advocating for change strengthens the entire community and inspires future generations to continue the work of creating a better, more inclusive city.

"The community is really connected [...] even if [...] we don't know each other, the people from the Todos Santos de Cuchamatán are united. So if one of our community members is hurting or in danger or their family member had an accident and they need support and anything."

- COMMUNITY INTERVIEW PARTICIPANT

COMMUNITY ORGANIZATIONS

Community organizations–such as the Multicultural Institute, Center for Independent Living, and Healthy Black Families–bring a feeling of connectedness and support the Berkeley community to feel healthy, well, seen and understood. They are powerful resources, providing essential support, services, and advocacy. In many ways, community residents see these organizations as the backbone of Berkeley's health and wellness, working to meet the diverse needs of the community and foster a sense of belonging for all.

"I was going to the food pantries. I have 3 kids and it's all different types of people and the volunteers that work there are so kind they never make you feel less than, are always smiling, and they really love what they do."

- FOCUS GROUP PARTICIPANT





FINDING **2**

Diversity is highly valued and racism is deeply rooted

Berkeley has a reputation as a diverse and welcoming city, not afraid to be at the vanguard of social and cultural movements. This diversity is a source of pride and a significant strength to the community. Activists and leaders in Berkeley continue to work on a range of issues through many initiatives. However, as in other places, issues related to demographics and identity are complicated and reflect historical and structural factors that are difficult to address. The data on disparities in health make both the magnitude of advantages based on race/ethnicity and opportunities for improvement abundantly clear–the greatest opportunities to advance wellness in Berkeley lie in improving health among people who experience the worst outcomes.

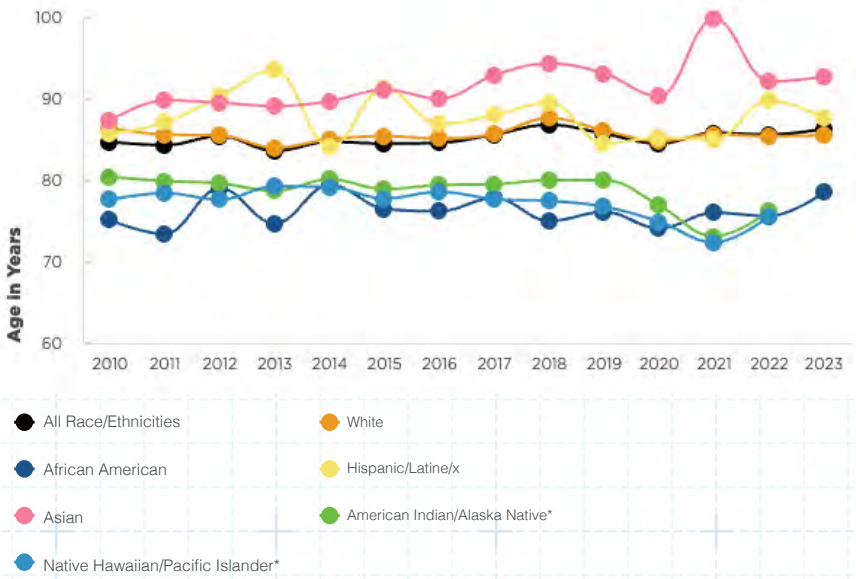
"I love Berkeley because of the diversity...I just appreciate how open Berkeley is. Ideas and different types of people."

- FOCUS GROUP PARTCIPANT

DISPARITIES ACROSS RACIAL GROUPS

Across nearly every indicator of health and wellbeing collected for Berkeley there are significant differences for racial and ethnic groups. For the most comprehensive health indicator, life expectancy at birth, African Americans have consistently been projected to live 9 fewer years than the overall city average. It is also estimated that the life expectancy among American Indian/Alaska Native (AI/AN) and Native Hawaiian/Pacific Islanders (NH/PI) is significantly lower than the overall life expectancy of Berkeley residents based on California data (see Figure 4). African American residents also have higher rates of many health conditions, including diagnoses for common cancers (breast, prostate, lung) and chronic conditions such as diabetes.[3]

FIGURE 4: Life Expectancy at Birth in Berkeley

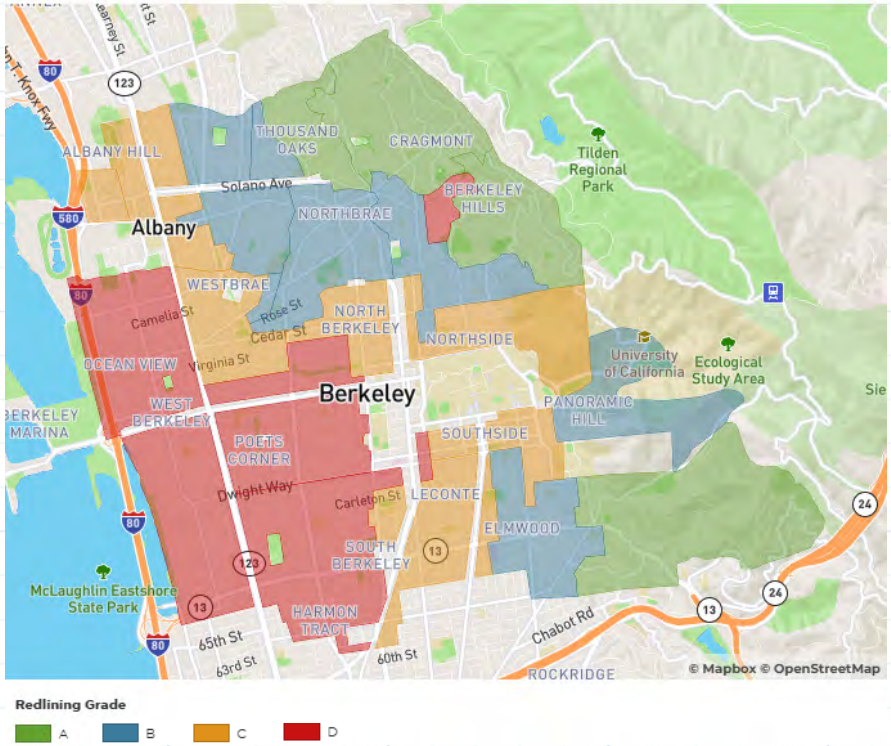


Source: City of Berkeley Public Health Officer Unit, Epidemiology & Vital Statistics, US Census Bureau
**Due to small population sizes, life expectancy estimates presented for American Indian/Alaska Native and Native Hawaiian/Pacific Islander are based on data for the entire State of California.*

Health disparities are the result of decisions, practices, and policies enacted over time that provide unjust advantages to some based on race and ethnicity, geography, and/or socioeconomic status. Any data point that highlights differences by race should be taken as a measure of the effects of racism.[4] This type of **systematic racism** is evident across all sectors including housing, education, employment, and law enforcement. For example, numerous housing policies in Berkeley restricted non-white residents to certain neighborhoods and limited their ability to build wealth through property ownership (see Figure 5). The city's recent Preferential Housing Policy[5] acknowledges and attempts to respond to a number of these historical policies. Similarly, the Berkeley Unified School District's Reparations Task Force[6] looked at structural racism in education.

> "There's a lot of redlining in [Berkeley]...I think historically, if we have a community that has been here long enough to remember the train tracks and they talk about not crossing the train tracks, that is generational...it's historical trauma that they experienced."
>
> **- FOCUS GROUP PARTCIPANT**

FIGURE 5: Historical Redlining Grades



Redlining, a practice sanctioned by the federal government from the 1930s until the late 1960s, systematically denied access to mortgages, not only to individuals but to entire neighborhoods, based on their racial and ethnic composition. The above map of the City of Berkeley shows how neighborhoods were rated for mortgage lending using this practice. Red areas were labeled "hazardous" and deemed the riskiest for lending. Yellow areas were considered "declining" with elevated risk. Blue areas were marked as "still desirable" with lower risk, while green areas were identified as the "most desirable" and least risky.

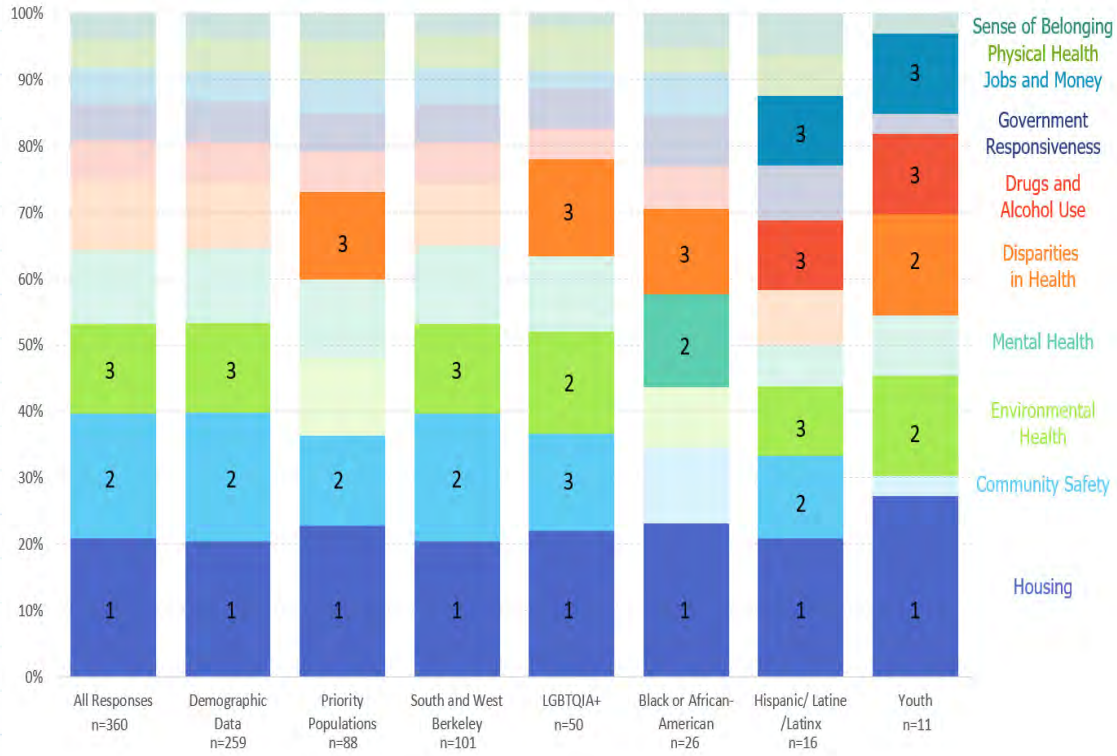
DIFFERENT PERSPECTIVES

Based on survey data and input from focus groups and interviews, it is clear that members of identified priority populations view their own health and the health of their communities differently from other Berkeley residents. For example, of the ten health topics (See Table 1), mental health ranked as the second highest priority for African American survey respondents, but it did not make the top three in the overall survey results. Similarly, drugs and alcohol use ranked among the top three priorities for both Hispanic/ Latine/ Latinx respondents and youth respondents, yet it fell into the bottom half of priorities in the overall results. Disparities in health was another high-ranking concern among priority populations, placing third for African American respondents and LGBTQIA+ respondents and tying for second among youth, but it fell outside the top three in the overall rankings (See figure 6).

"As a person of color and minority, I have experienced or know others who have experienced worse living conditions or limitations in access to health and resources because of socioeconomic factors in which race plays an important role, historically speaking."

- COMMUNITY SURVEY RESPONDENT

FIGURE 6: Community Survey Responses by Population



Differences are also reflected in responses to other community survey questions. For instance, 20% fewer youth agreed with the statement "Berkeley residents have access to resources necessary to be healthy" compared to the overall survey results. Similarly, nearly 40% fewer African Americans agreed with the statement, "Overall, I'm satisfied with my quality of life [health, comfort, happiness] in Berkeley."



FINDING 3

Health is connected to where people live

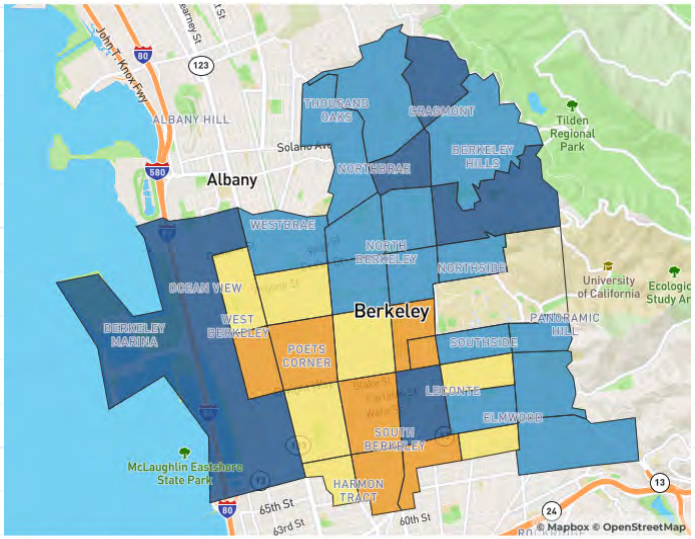
Berkeley has neighborhoods with distinctive geographic, architectural, and cultural features that elicit strong feelings of connection from residents. However, some neighborhoods in the city face greater health challenges than others. South and West Berkeley residents, in particular, experience worse health outcomes and face more environmental hazards compared to those in the North and East, underscoring the importance of addressing geographic inequities to improve community health.[7]

LIFE EXPECTANCY

The average Berkeley resident can expect to live to age 86 (see Figure 4), an impressive number that reflects the city's overall health. However, this longevity is not evenly distributed. Residents in the Berkeley Hills, where resources are more abundant, have the highest life expectancy in the city, with one census tract averaging 91 years. In contrast, residents in South and West Berkeley face significantly shorter life expectancies; one tract averages just 78 years – a striking 13-year gap (see Figure 7).

> "I live in a part of the city that sometimes feels as if it is not as well-resourced as other parts of the city, and I'd like to see a more equitable distribution of resources".
>
> **- COMMUNITY SURVEY RESPONDENT**

FIGURE 7: Life Expectancy at Birth by Census Tract



Source: City of Berkeley Public Health Officer Unit, Epidemiology & Vital Statistics, US Census Bureau 5-year estimate 2019-2023

Note: Life expectancy for the census tract where the University of California, Berkeley campus is located is omitted because a very small number of people actually live in this census tract.

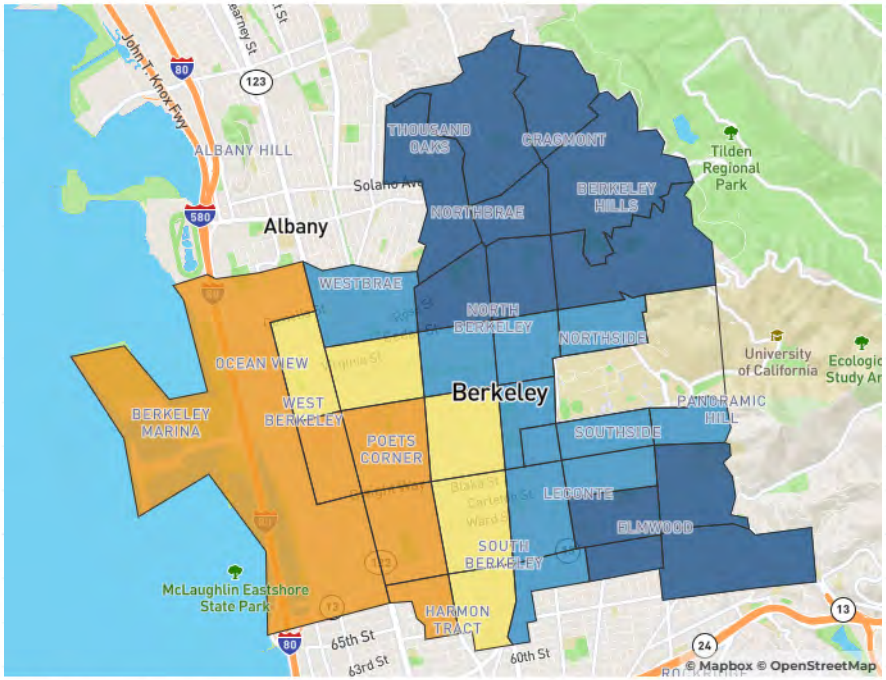
ENVIRONMENTAL RISK

Berkeley faces significant environmental risks, which are unevenly distributed across the city and exacerbated by climate change. Areas in West and Southwest Berkeley are disproportionately burdened by pollution, including diesel exhaust from vehicles, toxic emissions from facilities, and hazardous chemicals from cleanup sites (see Figure 8). These areas experience higher rates of asthma-related hospitalizations compared to the rest of the city.[8] Meanwhile, in the eastern, wealthier neighborhoods, residents face growing wildfire risks due to changing weather patterns and drier conditions.[9]

> "Climate change is the number one collective issue impacting all of us. Low-income communities of color are disproportionately impacted and need support to be safe during these precarious times."
>
> **- COMMUNITY SURVEY RESPONDENT**

In addition to these localized hazards, Berkeley as a whole is increasingly affected by worsening air quality. Climate change has led to more frequent and severe wildfire seasons in California, causing spikes in particulate matter and "bad air days" that pose serious health risks for everyone, particularly children, the elderly, and those with pre-existing respiratory conditions. However, as highlighted throughout this report, some communities face greater risk due to social vulnerability, leaving them less equipped to withstand these environmental hazards (see Figure 9).

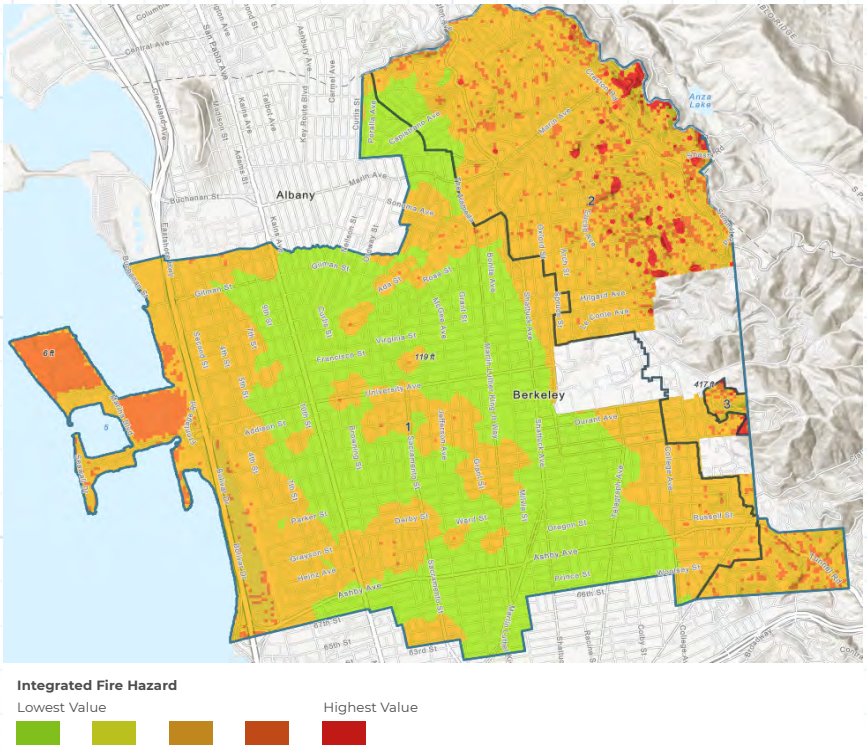
FIGURE 8: Environmental Hazard Vulnerability Percentile by Census Tract



Source: California Office of Environmental Health Hazard, CalEnvironScreen 4.0 2021

Note: The CalEnvironScreen 4.0 percentile for the census tract where the University of California, Berkeley campus is located is omitted because there is a very small number of poeple that actually live in this census tract

FIGURE 9: Integrated Fire Hazard by Berkeley Fire Zones



Source: City of Berkeley's Community Wildfire Protection Plan (CWPP) Community Base Map, last updated 2023
Note: The percentile for the census tract where the University of California, Berkeley campus is located is omitted because there is a very small number of poeple that actually live in this census tract

In the community survey, the environmental health topic emerged among the top three for both the general population and for many of the priority populations. It was ranked as the third most important topic area for South and West Berkeley residents and the Hispanic/ Latine/ Latinx community, and it emerged as the second most important topic for LGBTQIA+ and Youth respondents (See figure 6). Community survey respondents also highlighted climate change as a key area of concern and a desire for more efforts like the Climate Action Plan[10] that reflect commitment to broader climate action.

"If you die in a fire or have your health ruined from breathing polluted air, the question of how much you enjoy living here becomes no longer relevant."

- COMMUNITY SURVEY RESPONDENT



FINDING 4

More transparency and collaboration are needed to increase trust and effectiveness of health improvement efforts

Berkeley is known for a very active and participatory political culture. Robust debates and campaigns are not uncommon on a range of topics. There are more than 30 boards and commissions to guide aspects of public decision making. Berkeley is also one of only three cities in California to have a Public Health Department, along with Long Beach and Pasadena. This is intended to allow for more responsiveness to community needs. However, there are substantive concerns about capacity and follow-through when it comes to community collaboration.

"Even though Berkeley has some incredibly difficult bureaucracies to deal with... when you can make contact with an individual, you feel seen and heard and cared for, which is not what I've experienced in other cities in California"

- COMMUNITY INTERVIEW PARTCIPANT



CAPACITY

Most sentiments about city employees were positive, though there was a consistent thread about agencies and departments being understaffed, over-stretched, and operating in limited siloes. Community members referenced limited capacity and lack of collaboration specifically around mental health, a topic where residents see a lot of complexity and barriers to service. Barriers mentioned included limited coverage, the need for different providers depending on condition and severity, and lack of integration with physical health and other social services such as housing.

"If Multicultural Institute wasn't here. If Berkeley Food Network wasn't here offering the food to folks. If Lifelong wasn't offering those services, who would be offering the services? Would the city have the capacity and the ability to offer services the way that our community organizations are able to offer it in a more appropriate way...the answer right now I think is no, right?

- COMMUNITY INTERVIEW PARTICIPANT

Berkeley has diverse and strong Community Based Organizations (CBOs) that are deeply connected to communities. However, systems can be difficult to navigate for both clients and staff at these CBOs. Referrals across organizations of care require multiple steps and often organizations cannot share data with one another. Increased coordination with each other and the City would further their impact and efficiency. However, funding for developing and improving operations and collaboration is hard to come by.

PROCESS ACCOUNTABILITY

There are many planning and assessment processes underway at any moment in Berkeley. While seeking community input is an important step and intention, relationships are undermined when a process ends with simply identifying problems. Community members can feel frustrated and lose trust when they are not included in sharing power to design solutions or when there is little follow-up or communication about progress.

"A lot of requests are for the community to tell us your story and then in return, they feel like they don't get anything so...there's a feeling of hopelessness. If you're gonna promise people things, at the very baseline deliver on that promise."

- COMMUNITY INTERVIEW PARTICIPANT

PANDEMIC EFFECTS

The COVID-19 pandemic caused, or exacerbated, a wave of health, mental health, and social challenges that extended far beyond the direct deaths and illnesses it caused.[11] As one survey respondent put it, "Understand that all of us have PTSD from the pandemic." Young people in particular are experiencing significantly higher rates of anxiety and depression.[12] For many, connections to neighbors and friends became a matter of life-or-death, especially for the most vulnerable, such as older adults, people with pre-existing conditions, and those who were unhoused. At the same time, the pandemic revealed both weaknesses and strengths in relationships between public agencies, CBOs, and the public. Efforts like rapid testing and masking protocols, brought these dynamics to light. Despite all the challenges, the pandemic taught some big lessons, like how important connection and resilience across systems are during extreme stress.





FINDING **5**

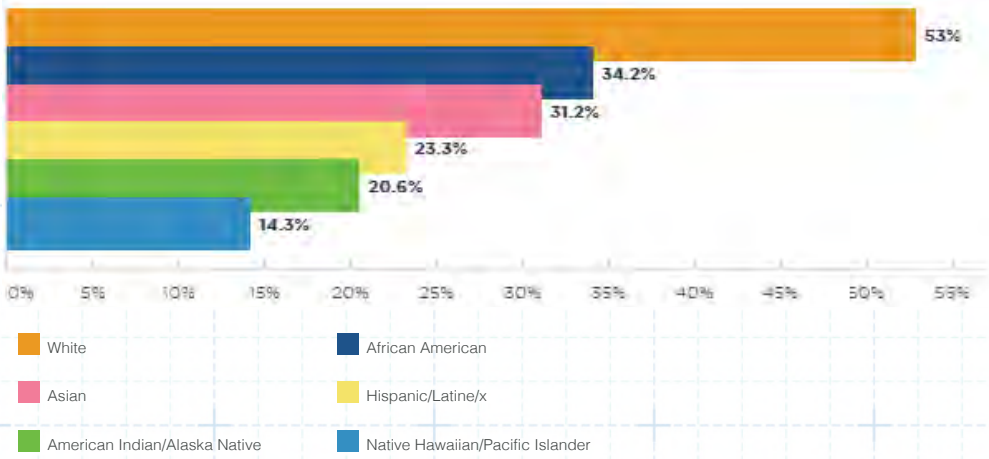
Berkeley is becoming a more difficult place for people to afford to live well

Berkeley residents feel strongly about their community and want their families to have the option to stay in the city. However, the high cost of living, particularly housing, has created a lot of stress, displacing long-time residents and forcing individuals and families to make difficult economic decisions. These decisions–like whether to prioritize spending on housing, utilities, food, or medicine–have profound impacts on health and wellbeing.

HOUSING AFFORDABILITY AND DISPLACEMENT

The rise in housing costs has significantly impacted Berkeley residents, forcing some to live in overcrowded conditions, move to other communities, or become unhoused. Displacement due to unaffordable housing can have serious health and social consequences, such as living in homes with health hazards, losing access to essential services, and becoming disconnected from communities of belonging.

FIGURE 10: Percent of Homeowners by Race/Ethnicity in Berkeley



Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

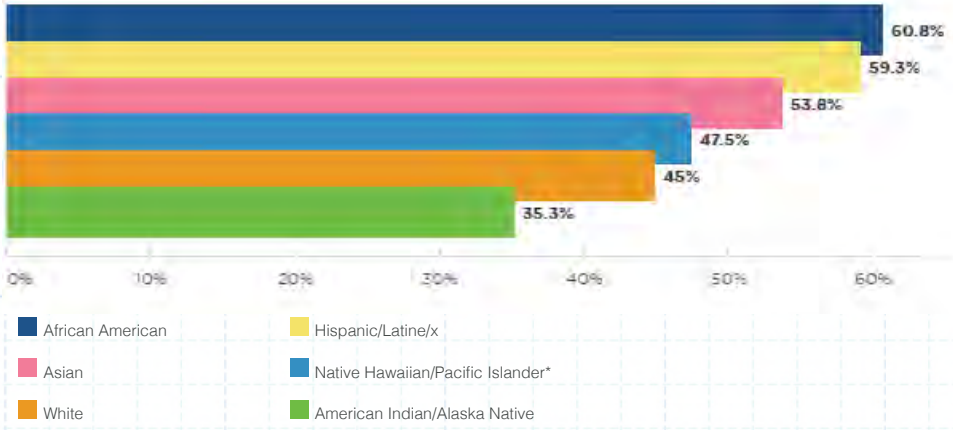
Importantly, rising housing costs have not affected all groups equally (see Figure 11). White residents, for example, are much more likely to own homes than other racial and ethnic groups (see Figure 10). This inequity is particularly felt by Berkeley's African American population, which has declined by more than 50% over the past 50 years.[13] Today, African Americans make up just 7.5% of the city's population but account for over 40% of its unhoused residents. For African American residents who are housed, many face significant housing challenges, with the majority renting their homes (66%) and struggling to afford them. Over 60% of African American renters in Berkeley are considered housing cost burdened, meaning they spend more than 30% of their income on rent (see Figure 11).

UC Berkeley students, who account for a large share of the city's renters, also face challenges, with 10% of undergraduate and graduate students reporting being unhoused due to the high cost of living and education expenses.[14]

"There have been several people that I've met who are living in a car or staying with friends living on a couch, and if you don't have secure housing and food, you can't have good mental health. You can't have good health. You're stymied from the beginning."

FOCUS GROUP PARTICIPANT

FIGURE 11: Percent of Berkeley Households Paying More Than 30% of Their Income for Rent by Race/Ethnicity



Sources: US Department of Housing and Development, Comprehensive Housing Affordability Strategy Data 2017-2021
**Due to the small number of households that identify as Native Hawaiian/Pacific Islander, the percent shown for this race are based on data for the entire state of California.*

Individuals who do not have stable housing have much worse physical and mental health outcomes and also affect the overall health of the city by overtaxing systems and services. While the city recently reported significant improvements[15] in the number of unhoused individuals, the reality for those lacking shelter remains grave. Housing emerged as the top issue for both the overall survey respondent pool and for all five priority populations.

"Berkeley has so much affluence, but resources are not equitably distributed. I have seen many families of color leave my area in South Berkeley because the rent became too high to afford. Better public services and more affordable housing could allow people to stay in Berkeley."

- COMMUNITY SURVEY RESPONDENT

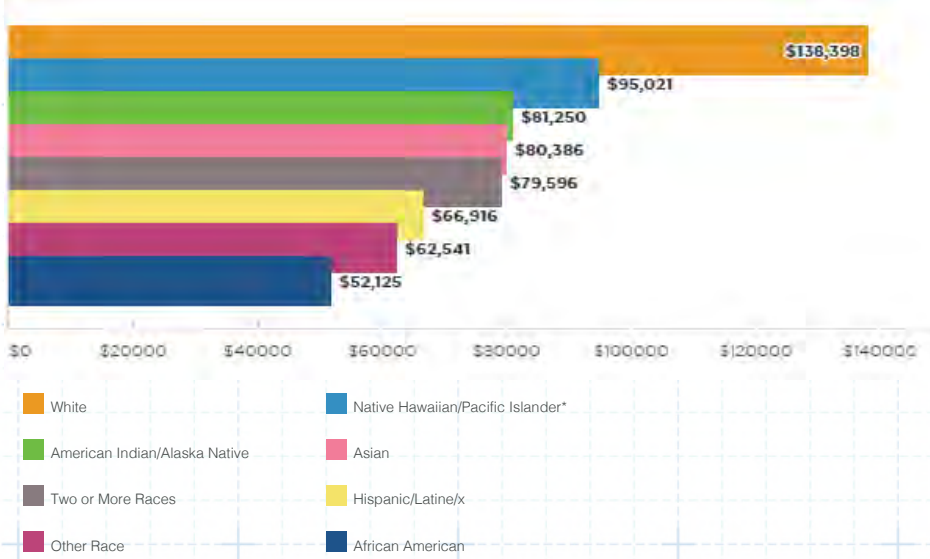
INCOME INEQUALITY

Median household income, a key measure of economic stability that is highly correlated with home ownership, is just under $105,000 for the city overall; well above the median for the state ($92,000) and the nation ($75,000). However, this overall number masks significant disparities: when disaggregated by race and ethnicity, we see the median household income for African American households is $52,000, not even half that of the citywide media (see Figure 12).

> "We're going on strike because we're not getting paid salaries that are livable anymore. A lot of teachers are on strike as well because the wages aren't affordable. No one could afford to live in Berkeley anymore. It's a reality, right?"
>
> **- FOCUS GROUP PARTICIPANT**

The median for Hispanic/Latine/Latinx households ($67,000) is also much lower than the average. Much like life expectancy, median household income in Berkeley varies significantly by geography. Census tracts in the Berkeley Hills report the highest median household income levels (more than $200,000) while census tracts in South Berkeley and West Berkeley report the lowest levels (less than $100,000).[16] In the community survey, the topic of jobs and money was near the bottom for the overall population, but it was ranked as the third most important topic by two priority populations: Hispanic/Latine / Latinx and Youth.

FIGURE 12: Median Income of Berkeley Households by Race/Ethnicity



Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022
**Due to the small number of households that identify as Native Hawaiian/Pacific Islander, the percent shown for this race are based on data for the entire state of California.*

There is a deep emotional component that underlies these statistics. The influx of white and affluent residents, that many describe as gentrification, threatens the character and long-standing narrative of Berkeley as home to an economically thriving Black and Brown community at the forefront of social movements.[17] Although the toll of displacement is hard to measure, there is not only a need to prevent displacement but to remember the stories of the communities that shaped Berkeley into the place that so many people hold dear.



FINDING **6**

Connection and safety are essential for supporting mental and physical wellbeing

Community safety ranked just behind housing in the community survey. Notably, the two highest-ranking topics are not directly related to health or within the jurisdiction of public health agencies. This suggests that members of the Berkeley community are thinking broadly about what determines health and how to achieve wellness. The responses to the survey and discussions in our focus groups and interviews about safety reflected a focus on reducing crime but also on reducing stress and creating spaces where people from diverse backgrounds can come together to build connections.

The violent crime rate in Berkeley has fluctuated over the years but has remained lower than rates in Alameda County, while rates of non-violent crime are consistently higher in Berkeley than the county as a whole (see figures 17 & 18). Crime, particularly violent crime, spiked upwards across the country during the COVID 19 pandemic and has since declined sharply. The city is in the midst of an extensive, community-involved process to reimagine public safety[18] that includes holistic framing of safety and connection similar to this report.

"[I prioritized Community Safety because] I think it can be an indicator of community wellness. No, I do not think we need more police, nor do I think they need more funding. But I would love to see more funding for social services, including providing housing security for our unhoused residents."

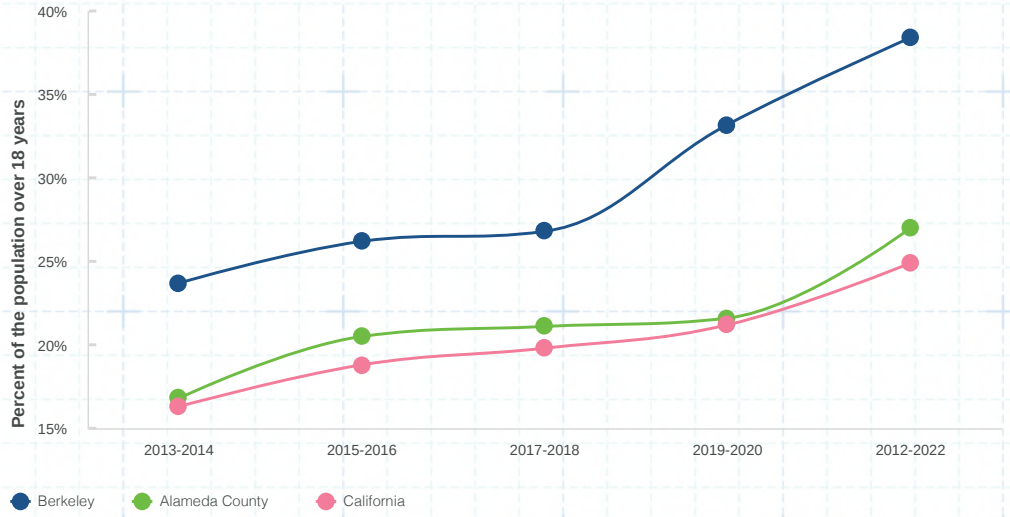
- COMMUNITY SURVEY PARTCIPANT

MENTAL HEALTH AND CONNECTEDNESS

Mental Health emerged as a significant concern, ranking as the fourth highest priority in the overall survey and the second-highest priority among African American respondents. Many participants correlated their mental health with feelings of safety and community connectedness and belonging. In addition, responses reflected a desire for responses that address a range of mental health issues from anxiety and loneliness to serious and persistent illness as well as the need for more mental health services that accept insurance and are culturally responsive. As with other issues discussed previously, there are significant disparities by race for mental health issues and service utilization (see Figure 14).

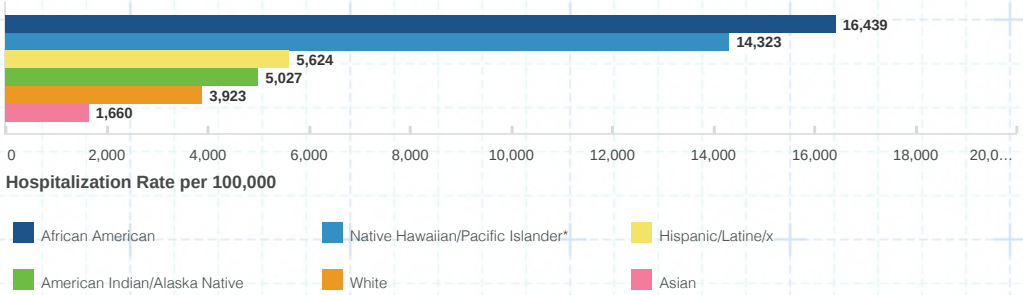
> "When folks feel like they are part of a community, they're happier, they feel more included. They feel overall better."
>
> **COMMUNITY INTERVIEW PARTICIPANT**

FIGURE 13: Percent of Residents 18 Years Old+ that Needed Help for Mental Health Problems



Source: University of California, Los Angeles, California Health Interview Survey, Neighborhood Edition

FIGURE 14: Rate of Mental Health Related Hospitalization Among Residents 18 Years old+ by Race/Ethnicity in Berkeley



Source: California Department of Health Care Access and Information, Hospitalization Data 2020-2022, Esri Demographics 2020-2022

Note: Due to the small number of hospitalizations among residents 18 and older that that identify as Native Hawaiian/ Pacific Islander, the percent shown for this race are based on data for the entire state of California.

LGBTQIA+ SAFETY

Participants shared particular concerns about the health and safety of the LGBTQIA+ community, especially the mental health and personal safety of LGBTQIA+ youth. Young people who identify as LGBTQIA+ experience higher rates of attempted suicide, depression and anxiety. There are very few programs that provide mental health services to this demographic. Existing services may also not be set up to meet the specific needs of LGBTQIA+ people. For example, individuals who identify as nonbinary and/or trans may experience unsafe situations when seeking stable housing due to programs that separate based on male and female identities.

"[LGBTQIA youth have] over 120% higher chance of being unhoused than non-queer youth. Youth may feel the need to do survival sex work...LGBTQIA youth are at risk, they are a population that is not prioritized in funding...I want to see LGBTQIA youth prioritized as a population."

- COMMUNITY INTERVIEW PARTICIPANT



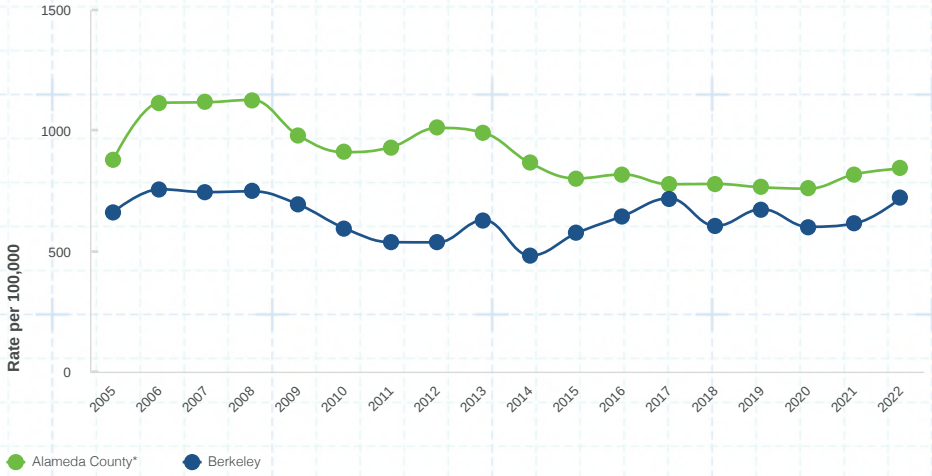
DIVERSE PERSPECTIVES ON SAFETY STRATEGIES

There are a range of ideas about how to improve safety in Berkeley including support for expanded resources for the Berkeley Police Department, a focus on community connected law enforcement, diversion of police resources into alternative response models, a focus on improving traffic safety, and a recognition that safety is connected to a number of other issues, like housing, economic security, and belonging. As noted above, many participants in this assessment discussed safety in terms of both physical and psychological effects and also in terms of individual, neighborhood and systems level solutions.

"... when we actually center connection and belonging as a public health matter, we can see that the community starts healing itself."

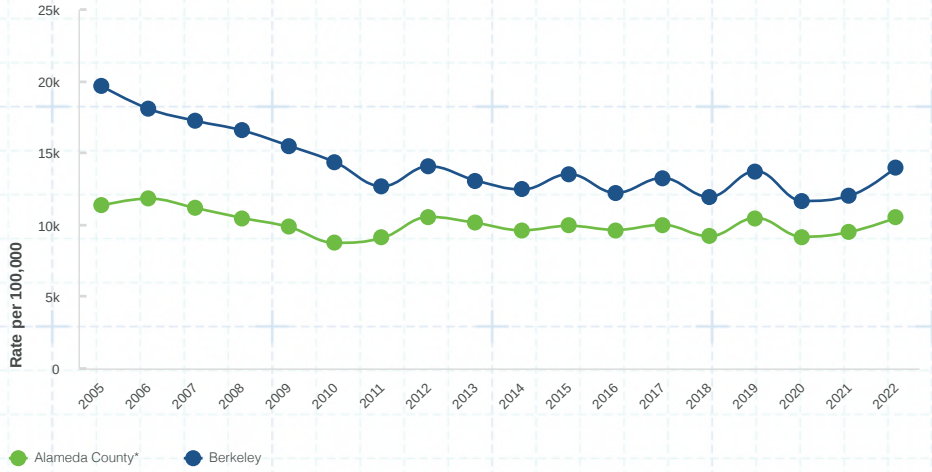
- COMMUNITY INTERVIEW PARTICIPANT

FIGURE 15: Rate of Violent Crimes



*Source: State of California Department of Justice, OpenJustice Data Portal, Esri Demographics 2005-2022 *Estimates are for Alameda County excluding Berkeley*

FIGURE 16: Rate of Non-violent Crimes



*Source: State of California Department of Justice, OpenJustice Data Portal, Esri Demographics 2005-2022 *Estimates are for Alameda County excluding Berkeley*



Conclusion

Berkeley is considered a great place to live, start a family, and grow old. Its physical and social environments make it a unique small city. However, there is still work to do to ensure that Berkeley is a place where all people thrive. The priority populations that were identified during the CHA process deserve particular focus and investment in order to advance and achieve health equity.

Participants in the CHA process expressed desire that the city of Berkeley provide sustainable investments to improve services, center community voice in non-extractive ways, encourage collaboration across community organizations, and work to change harmful systems.

Although the challenges are significant, with commitment and thoughtful allocation of resources, the Berkeley community can improve the ability of all residents–regardless of factors such as neighborhood, race, ethnicity, sexual orientation and gender identity– to live healthy, fulfilling lives.

Endnotes

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https://dailycal-projects.netlify.app/2022-01-21-exodus

14 UC Office of Planning and Analysis, Housing Survey Findings, https://housing.berkeley.edu/wp-content/uploads/HousingSurvey_03022018.pdf.

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16 ACS 2018-2022 5 year estimates.

17 Truly CA. "Welcome to the Neighborhood". 2018. PBS. https://www.pbs.org/video/welcome-to-the-neighborhood-truly-ca-zag6fb/

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APPENDICES

Appendix A: Berkeley Health Profile

Appendix B: Methodology

Appendix C: Community Steering Committee Members and Bios

Appendix D: Participating Organizations

Appendix E: Principles

Appendix F: Qualitative Data Findings

Appendix G: Survey Findings

APPENDIX A: BERKELEY HEALTH PROFILE

This section includes a selection of data points relevant for understanding the landscape of wellness in Berkeley.

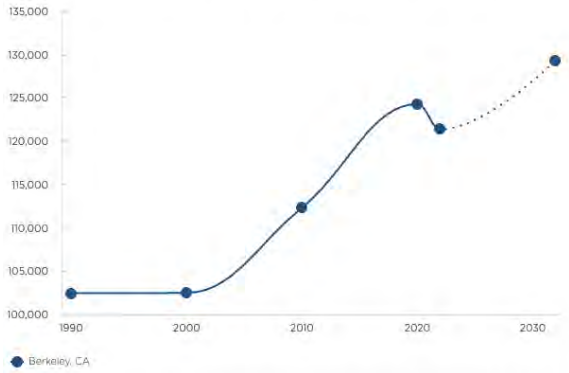
Demographics

The population of the City of Berkeley continues to grow. Close to half (48%) of Berkeley's population identifies as a race other than white.[1] Approximately one-third of Berkeley's overall population are students and staff associated with the world-renowned University of California, Berkeley.[2] Over 20% of the population are immigrants that speak a number of different languages (Spanish, Indo-European languages, languages from Asia and the Pacific Islands, etc.). The population is clustered by race/ethnicity and socioeconomic status across the city map.

[1] US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

[2] University of California, Berkeley, Office of Planning and Analysis Quick Facts 2024; US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

Berkeley's population is projected to continue to grow over the next decade



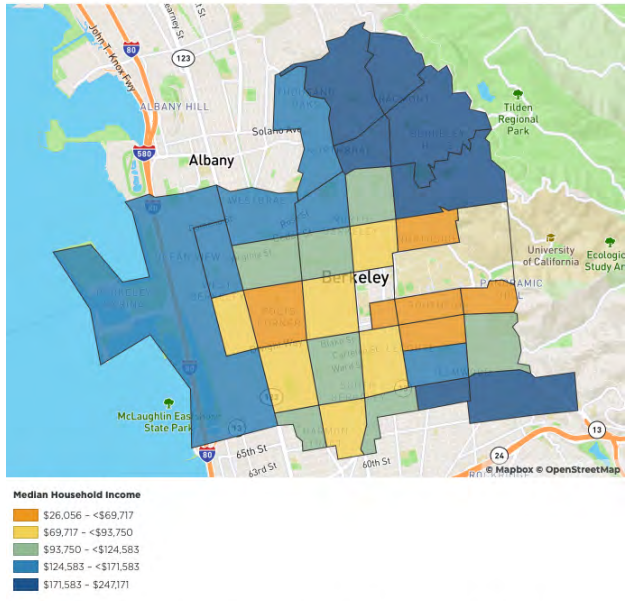
Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

Languages Spoken in Berkeley



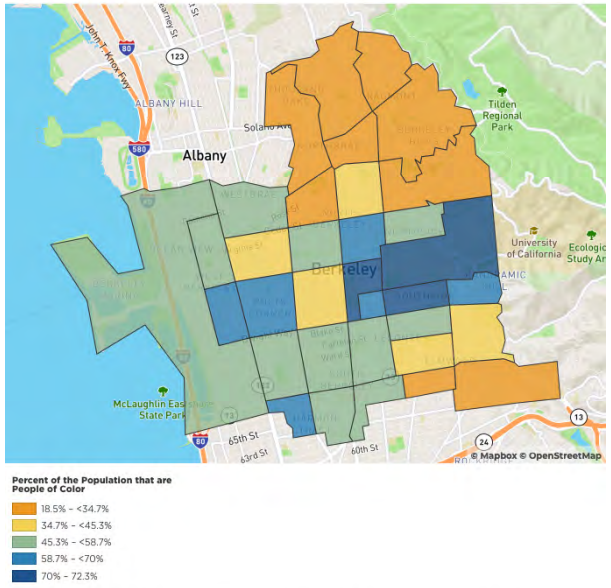
Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

Northeast Berkeley Residents Have Higher Median Household Income



Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

Higher Concentrations of People of Color in West, Central, and South Berkeley

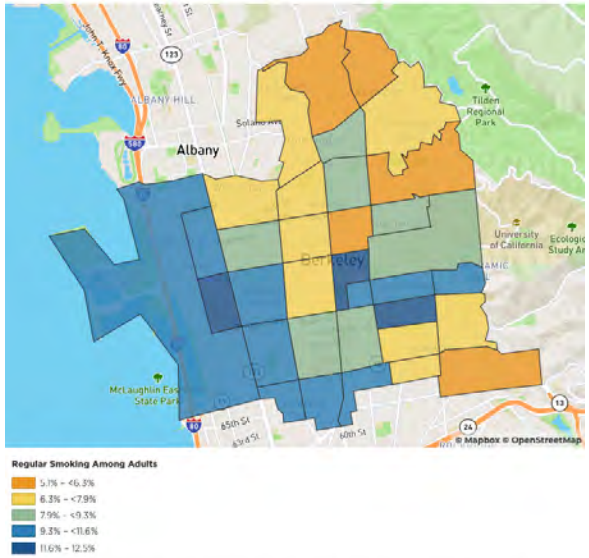


Source: US Census Bureau, American Community Survey Data, 5-year estimates 2018-2022

Behaviors

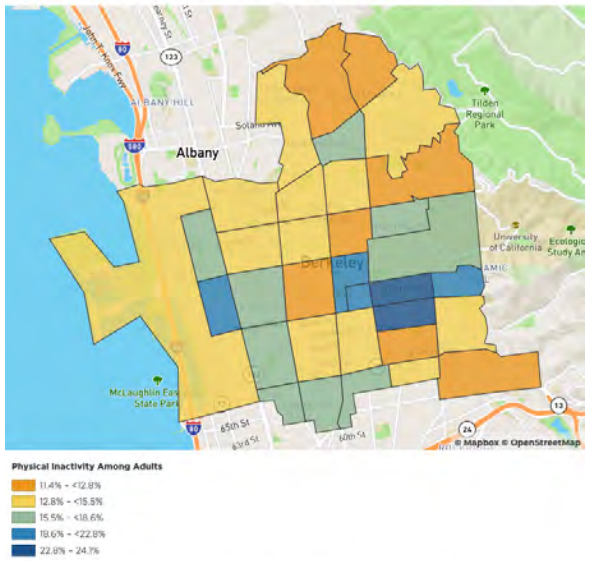
Differences in socioeconomic status and other social determinants of health affect the health behaviors of people. People with less resources have been found to be more likely to smoke tobacco, be less physically active, and are less likely to attend routine, preventative medical check-ups than people with more resources. In Berkeley, disparities in socioeconomic status are across different races and ethnicities, which correlate to the disparities seen geographically.

Higher Smoking Rates Amongst Adults in West, South, and Central Berkeley



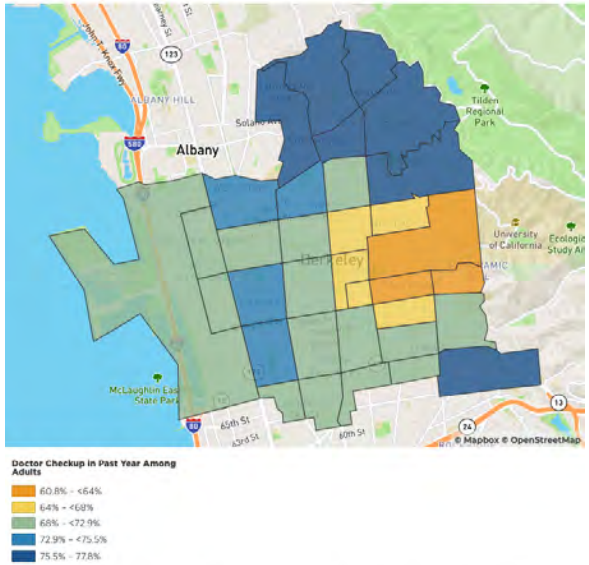
Source: Centers for Disease Control, Behavioral Risk Factors Surveillance System PLACES 2022

Lower Exercise Rates in West, South, and Central Berkeley



Source: Centers for Disease Control, Behavioral Risk Factors Surveillance System PLACES 2022
Note: Physical inactivity represents the proportion of adults who report no physical activity outside of work in the past month.

Lower Doctor Visit Rates amongst Adults in West, Central, and South Berkeley

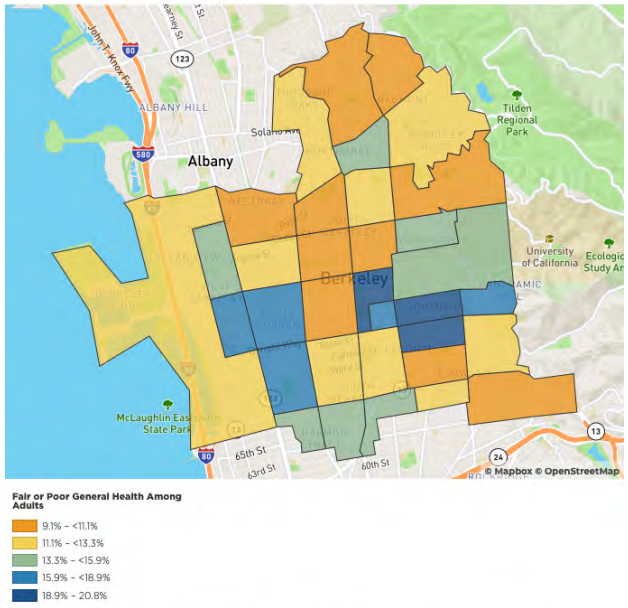


Source: Centers for Disease Control, Behavioral Risk Factors Surveillance System PLACES 2022

Health Outcomes

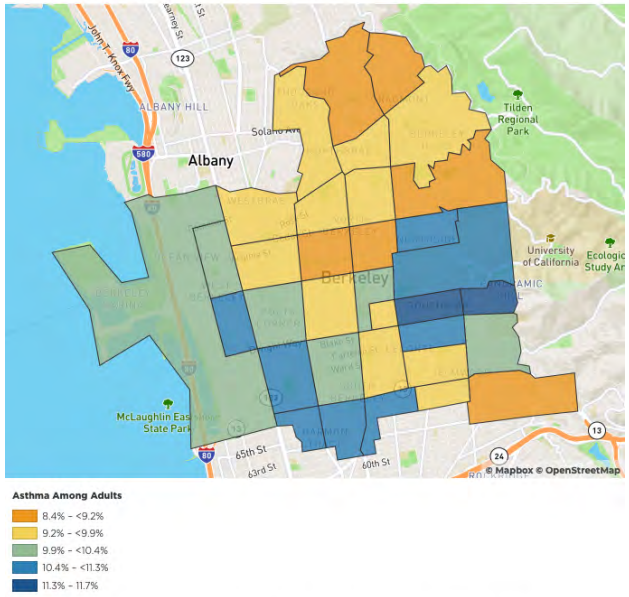
Disparities in resources and health behaviors result in impacts on health outcomes. More adults in West and South Berkeley report fair or poor general health than in other parts of the city. Rates of asthma are higher in West, Central and South Berkeley. Death rates from all types of cancer are different among the different racial and ethnic groups in Berkeley, with African Americans experiencing the highest mortality rates from cancer. Overall, African Americans suffer a disproportionate number of years of potential life lost, which estimates the years of life lost to premature death. Of the total number of years of potential life lost in Berkeley, African Americans account for 27.7% while only comprising 8% of the entire population.

Higher Percent of Adults in Fair or Poor General Health in West and South Berkeley



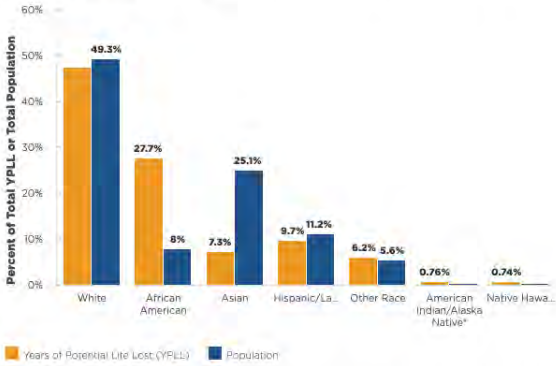
Source: Centers for Disease Control, Behavioral Risk Factors Surveillance System PLACES 2022

Higher Rates of Adult Asthma in West, South and Central Berkeley



Source: Centers for Disease Control, Behavioral Risk Factors Surveillance System PLACES 2022

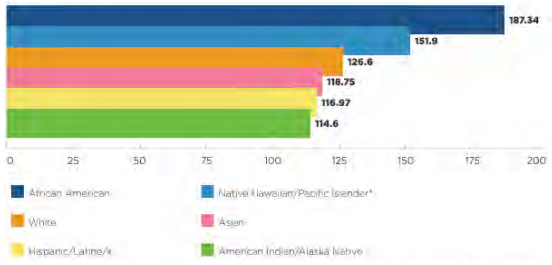
African Americans in Berkeley Experience a Disproportionate Number of Years of Potential Life Lost



Source: City of Berkeley Public Health Officer Unit, Epidemiology & Vital Statistics, 2020-2022; US Census Bureau, 2020-2022; California Department of Public Health, California Community Burden of Disease and Cost Engine, 2020-2022

** Due to small number of deaths, estimates of years of potential life lost for American Indian/Alaska Native and Native Hawaiian/Pacific Islander are based on data for the entire state of California.*

Higher Rates of Cancer Deaths Among African American Residents in Berkeley



Source: City of Berkeley Public Health Officer Unit, Epidemiology & Vital Statistics, 2020-2022; US Census Bureau, 2020-2022; California Department of Public Health, California Community Burden of Disease and Cost Engine, 2020-2022

** Due to small number of deaths due to cancer, estimates for Native Hawaiian/Pacific Islander are based on data for the entire state of California.*

APPENDIX B: METHODOLOGY

Formation of the Community Steering Committee

To ensure that the Berkeley Wellness Blueprint is a community-driven process, the JSI team assembled a community steering committee (CSC). CSC members are expected to:

- Attend regular meetings for the duration of the project
- Provide feedback on the design of the CHA and CHIP process
- Review materials that will be distributed to the community
- Support in prioritizing action items for the CHIP
- Help to identify and connect with community members and organizations to participate in interviews and focus groups
- Help develop data collection tools such as the questions that are asked during an interview or focus group
- Lead or co-lead community engagement activities, such as focus groups or community listening sessions

Recruitment

An open application was used to recruit CSC members, with flyers distributed both electronically and in public spaces throughout Berkeley (e.g., libraries, community organizations, parks, grocery stores). Over 60 applications were submitted. The eight members were selected based on several criteria: residency or employment in Berkeley; a demonstrated interest in Berkeley's health and wellness; experience with accessing, providing, or advocating for improved services or policies; diverse identities and backgrounds; and the capacity and availability to participate throughout the project. Additionally, two youth representatives were added to the CSC with assistance from the Youth Employment Program.

Acknowledging that each member would be making a significant time commitment, a stipend was given to either the individual or to the community-based organization they represent. Due to resource limitations, the CSC was only eligible to individuals who are comfortable communicating in English.

Qualitative Data Collection Plan

Through a codesign process with the CSC, four guiding questions emerged:

1. In what spaces do you feel cared for, seen, and loved?
2. How does lived experience and identity affect the way individuals interact and feel connected with(in) the Berkeley community?
3. What are the assets and challenges in the Berkeley community that affect health and wellness? And how can assets be used differently to address challenges?
4. What initiatives (existing or not) would help in achieving a vision of wellness for all Berkeley residents?

These guiding questions shaped engagement methods used for CHA, as well as questions to be asked during interviews and focus groups, and the analysis plan for the data collected.

Identifying Priority Populations

While it would have been ideal to engage with every group represented in Berkeley, this was not feasible. As a result, it became necessary to prioritize populations for the Community Health Assessment (CHA) data collection. CSC members, drawing on information from the landscape scan as well as their knowledge and experiences in Berkeley, were asked to:

- Define priority groups for CHA data collection
- Provide insights into the best ways to engage with each priority population
- Identify key locations and spaces for connecting with these groups
- Determine how to engage in a respectful, culturally relevant manner that fostered trust and avoided an extractive approach

Through this process, several priority populations were identified as disproportionately affected by health inequities in Berkeley. These included asylum seekers, immigrants, refugees, the Black community in South and West Berkeley, the Latinx/Latine community in South and West Berkeley,

and the LGBTQIA+ community. These perspectives were crucial to center in the CHA data collection, as they were likely to be most impacted by the recommendations emerging from the Community Health Improvement Plan (CHIP). In line with our commitment to health equity, the interviews and focus groups conducted during the CHA centered the voices of those facing the greatest challenges, our priority populations

Priority Populations

- Black/African Americans
- Latine/Latinx/ Hispanics
- LGBTQIA+
- Youth
- Residents in South and West Berkeley

We spoke to members of these communities along with staff from organizations who directly work with these groups.

Recruitment of CHA Interviewees and Focus Group Participants

After prioritization, the CSC and JSI team began recruiting individuals and organizations who either represented the priority populations or who worked closely with the priority groups. Existing relationships were crucial in recruitment. We conducted five individual interviews, 2 group interviews, and three focus groups.

Interviews were completed with community and nonprofit leaders as well as direct service providers. The three focus groups engaged priority populations and were completed in collaboration with nonprofit organizations based in Berkeley who have established relationships with and trust among community members. The focus groups took place with 1) the Pacific Center for Human Growth, the oldest LGBTQIA+ center in the Bay Area whose mission is to enhance the mental health and overall well-being of the LGBTQIA+ and QTBIPOC communities by providing culturally responsive therapy, peer to peer support groups, community outreach services, and facilitated workshops; 2) the Multicultural Institute, a nonprofit organization focused on accompanying immigrants in their transition to workforce participation and prosperity, and 3) the South Berkeley Senior Center which offers a variety of enrichment activities and support services designed to empower seniors to learn, grow, and discover new ways to be actively engaged in living. This center also supports seniors living in prioritized geographic locations and the attendees are largely African American.

All focus group participants were given a $50 gift card for their participation in the discussion and for filling out a demographic questionnaire. Organizations were provided with a $200 gift card for their support in organizing and recruiting participants for the focus groups.

It is important to emphasize that, while the number of participants may seem small compared to the total population of Berkeley, the purpose of the interviews and focus groups, and qualitative data collection more generally, is to gain deeper insights into perspectives and experiences. Rather than seeking a large volume of responses, this approach aimed to explore the complexity and nuance of lived experiences of community members, particularly those from priority populations and individuals who work closely with them.

We also acknowledge that people hold multiple intersecting identities, which cannot be fully captured by a single checkbox. We encouraged participants to share any aspects of their lived experience they felt comfortable discussing, knowing that identity is multifaceted. Additionally, we recognize that one person's experience reflects their unique perspective and does not necessarily represent the views of everyone who shares a similar identity. Our goal was not to generalize but to gain a deeper, more nuanced understanding of the challenges and strengths within these communities.

Qualitative Data Analysis

Following interviews and focus groups, a team of three analyzed the notes and transcripts to identify a set of themes and sub themes that emerged (see table below). For example, if a focus group participant talked about how they feel appreciated and heard when they spend time in the senior center that quote was highlighted and coded as a community strength, sub-theme community organization.

All findings and coded passages were de-identified and quotes were presented in a way that did not directly attribute it to any participants. These major themes and de-identified quotes were then brought to two sense-making sessions, one with JSI

team members and the second with CSC members. The goal of the sense making sessions was to understand what story the data was telling and what major themes emerged. These sessions also informed and shaped aspects of the community survey.

Community Survey

The stories and insights that emerged during interviews and focus groups and internal sense making sessions were utilized to inform a community-wide survey aimed at assessing people's views on health and wellbeing in Berkeley. The goal of the survey was to receive input from the wider Berkeley community on their health status and recommendations on the priorities for the Community Health Improvement Plan (CHIP).

The CSC guided the development of the survey to ensure that the survey was accessible to the wider Berkeley community.

The survey had three main sections: Sentiment Statements, Focus Area Prioritization and Demographics (Appendix J). We collected extensive demographic data in order to disaggregate and analyze the responses from priority populations.

For the second section of the survey, respondents were asked to prioritize three out of ten areas as "the most important for the Berkeley Wellness Blueprint to focus on in order to improve community health and wellbeing in Berkeley." These ten focus areas emerged from the Landscape Scan, interviews, focus groups and CSC consultation.

Community surveys provide valuable insights but have inherent limitations that can affect the representativeness and accuracy of results. One challenge is participation bias, as individuals who choose to respond may differ significantly from those who do not. Respondents are often people with more time, higher education levels, or stronger opinions, which can lead to an overrepresentation of certain perspectives.

Additionally, access and outreach barriers may prevent some groups - such as individuals with limited internet access, non-native speakers, or those with lower literacy - from participating. Even among those reached, survey fatigue can reduce response quality, with some participants choosing not to complete the survey and dropping off part way through.

For this survey, we had low engagement from some of the priority populations we had identified, meaning that key perspectives may be missing from the data. In particular, we struggled to reach non-English speakers and individuals identifying as Hispanic Latine/ Latinx. These limitations underscore the importance of using complementary methods, such as focus groups and interviews, to ensure representative and actionable insights.

APPENDIX C: COMMUNITY STEERING MEMBERS AND BIOS

Rosio Almaguer Andrade (she/they) Rosio works at Berkeley's Ecology Center focusing on food systems and is currently getting their master's in urban planning. They identify as a non-binary, Latinx first-generation college graduate who works with farmers market professionals as well as local government and community members to expand food access. Rosio views public health through the intersectional lens of food justice and urban planning and hopes the Community Steering Committee experience will give them the opportunity to continue their current avenue of work.

Penelope Collins (she/her) Penelope is a retired veterinarian who is currently on the Commission on Aging for the City of Berkeley and whose family has lived in Berkeley for generations. She currently lives in the South Berkeley house her grandparents built in 1929 and brings a deep understanding of Berkeley's history with hopes it can help inform the development of realistic wellness goals for Berkeley residents. Penelope doesn't want Berkeley to lose the magic she has experienced as a lifelong resident.

Michai Freeman (she/her) Michai is the Systems Change Advocate at the Center for Independent Living where she works to reduce barriers to accessibility and inclusion in community and public programs. She identifies as black woman with a physical disability, with experience in disability and health education, as well as wellness delivery services. Michai feels it is essential for people with disabilities to be involved in the Berkeley Wellness Blueprint, especially when it comes to community engagement.

JW Frye (he/him) J.W. is the Executive Director at Rebuilding Together East Bay Network where his work focuses on addressing health equity in housing and senior services through workforce development, opportunities for older adults, as well as intergenerational engagement and skill sharing. He believes there are ways to continue improving public health through uplifting the diverse lived experiences of Berkeley's residents. J.W. sees his background in public service as valuable to the Community Steering Committee to ensure any recommendations are informed by community members.

Kaitlyn (Kati) Khov (she/they) Kati is a transfer student at UC Berkeley majoring in urban studies who has experience in advocating for policy change and proposal writing. As a cancer survivor and member of the disabled and LGBTQIA+ communities, her goal for the Community Steering Committee is to work collaboratively to inform funding initiatives and development in disenfranchised communities. Kati's highest priority is to serve local communities in highly exposed areas facing displacement.

Isabella Ledezema (she/her) Isabella is a junior at Berkeley High and is also involved with Berkeley's Youth Equity Partnership with experience presenting deliverables to the city and school district. She is excited to be part of action oriented work to impact community health.

Matt Matusiewicz (he/him) Matt is a research analyst for the Division of Health Equity and Society in the Department of Medicine at the University of California, San Francisco. Drawing on his family's experiences and strength, Matt is dedicated to advancing the health and well-being of low-income and immigrant communities. Since 2019, he has been heavily involved with East Bay Sanctuary Covenant/Santuario in Berkeley, working to enhance the health and welfare of asylum seekers through comprehensive social, legal, and health services. As a graduate from UC Berkeley with experience in health and social service provision focused on housing, homelessness, and immigration, Matt is committed to supporting the Steering Committee in its mission to shape impactful policies that improve the well-being of Berkeley's residents.

Israel Nikodimos (she/her) Israel is a student at Berkeley High who also has been involved in Berkeley's Youth Equity Partnership is a volunteer at UCSF children's hospital shadowing doctors and seeing what it means to be heavily involved in medicine. She has participated in a numerous amount of services that help benefit my community such as black student union president and student council as well as read and reviewed grants to help fund our local programs that help benefit young children.

Claritza Rios (she/her) Claritza is a physician from South Berkeley who has experience providing care in emergency, internal, and palliative medicine. She identifies as an immigrant Latina as well as a member of the LGBTQIA+ community who wants to be able to "slam doors open for people," by being an agent of change towards health equity and becoming a voice for the oppressed. Claritza appreciates the importance of addressing health equity by tackling social determinants of health and advocating for better services and policies for her community.

Michael Rodriguez (he/him) Michael is a physician and the Executive Director of the California Alliance for Academics and Communities for Public Health Equity and currently resides in Berkeley's Oceanview neighborhood. As a bi-lingual, first-generation Latino American, he has experience providing health care for low income communities and people with mental illness. Michael has a passion for promoting health equity in his city and around the world.

APPENDIX D: PARTICIPATING ORGANIZATIONS

Pacific Center for Human Growth

Provides resources and services supporting and enhancing the mental health and well-being of LGBTQIA+ and QTBIPOC people.

Multicultural Institute

Provides resources and services for immigrant communities, particularly Hispanic/Latinx/Latine immigrants.

Healthy Black Families

Provides resources and services to support and uplift Black individuals and families in Berkeley

La Peña Cultural Center

Fosters and hosts cultural events, gatherings, and performances rooted in the Latin American and Caribbean diaspora.

East Bay Sanctuary Covenant

Provides programming to asylum seekers, refugee, and immigrant communities for legal, social, and advocacy services.

APPENDIX E: GUIDING PRINCIPLES FOR THE CHA

Principles

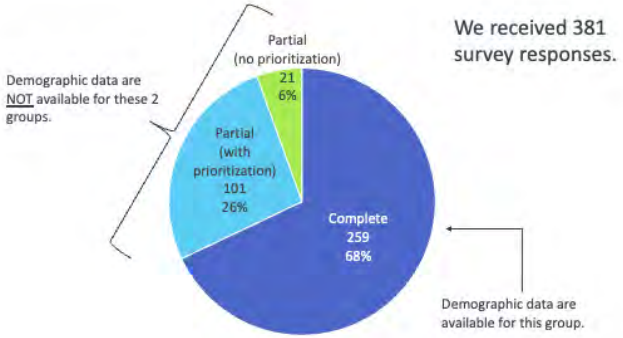
- Share and build from existing information: We aren't asking questions without providing relevant data (conclusions from other reports and assessments, quantitative data); qualitative data collection should help interpret quantitative information.
- Lead toward solutions: Qualitative processes should both expand understanding of needs/issues and point toward potential solutions; community perspectives should be centered throughout the CHA/CHIP.
- Emphasize balance between upstream and downstream perspectives: Questions and dialogues should make connections between health and safety outcomes and community and structural factors.
- Emphasize balance between asset and deficit perspectives: Assessment processes tend to focus on what is wrong; it is important to also identify community strengths as those can be instrumental to solutions.
- Acknowledge but don't be limited by resource and accountability constraints: Set realistic expectations for participants; some ideas are more readily actionable than others, but we want a genuine perspective on the issues that are shaping health in Berkeley.
- Strive for broad understanding: Bias and professional language can create barriers and misunderstandings; focus on deeply listening and providing space for arriving at shared meaning.

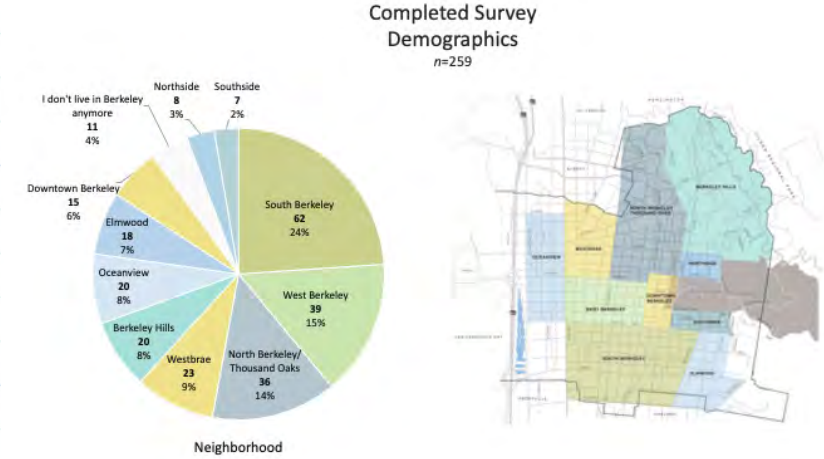
APPENDIX F: QUALITATIVE DATA FINDINGS

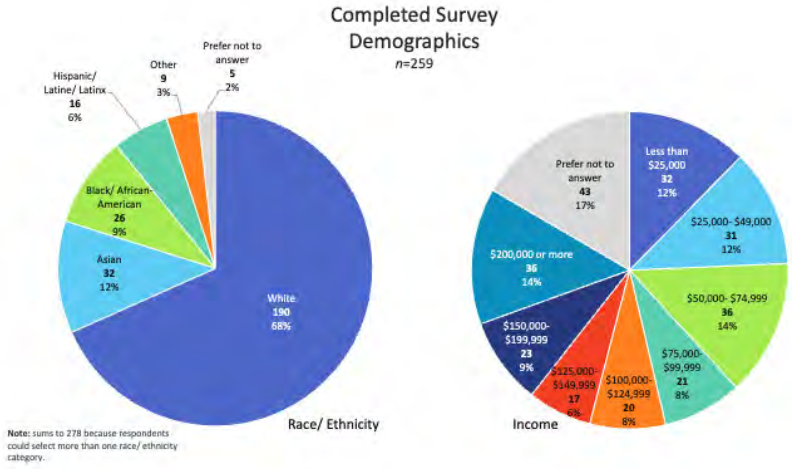
The table is a summary of the themes and findings from CHA data collection. This included focus groups (n=4), and community interviews (n=6)

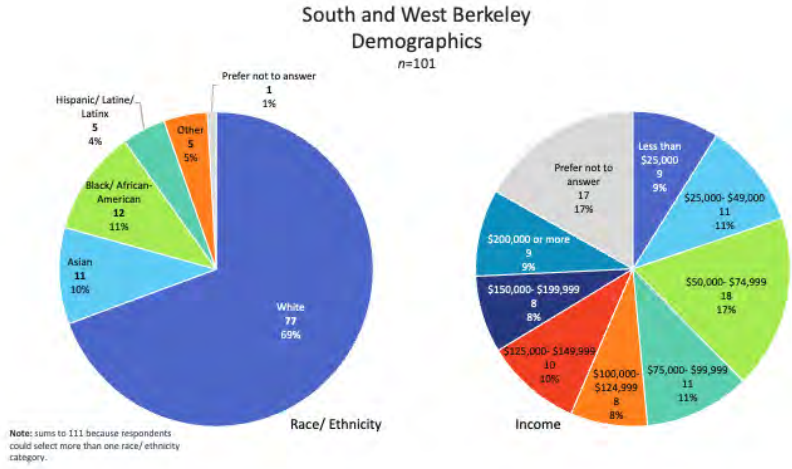
Theme	Analysis from CHA Community Data Collection
Strength	In Berkeley, the physical environment is: Accessible and walkable/wheelable routes Nature: like Parks, Mountains, Water the environment as places of connection and acceptance
Strength	In Berkeley, community members Characteristics: Resilient, Passionate, Caring, Treat people well, Diverse, Welcoming Passionate and caring city leadership Build spaces of connection and networks of support Community activism
Strength	In Berkeley, Community Organizations Are helpful and kind Places where community members feel seen, heard, and understood Have a good amount of resources and services
Opportunity for Improvement	Jobs and Money in Berkeley Need for more access to jobs that pay a living wage Job training and placement services and supports HIgh cost of basic necessities and services (food, transportation, healthcare)
Opportunity for Improvement	Housing in Berkeley People are having to live in overcrowded housing situations Low access to affordable housing Concerns about the health and safety of unhoused people Gentrification and displacement a topic of concern
Opportunity for Improvement	Mental Health in Berkeley Need for more access and affordability of mental health services Need for more availability of a range of services and supports that match community need Need efforts to destigmatize mental health issues Need more coordination across mental health, physical health, and other social services Stress and social isolation are connected to mental health
Opportunity for Improvement	Sense of Belonging in Berkeley Need for more safety and welcoming public spaces Need to create spaces where people come together and build connections
Opportunity for Improvement	Unsupportive Systems and Structures in Berkeley challenge around government accountability need for improved community engagement Lacking representation, discrimination and racism is prevalent

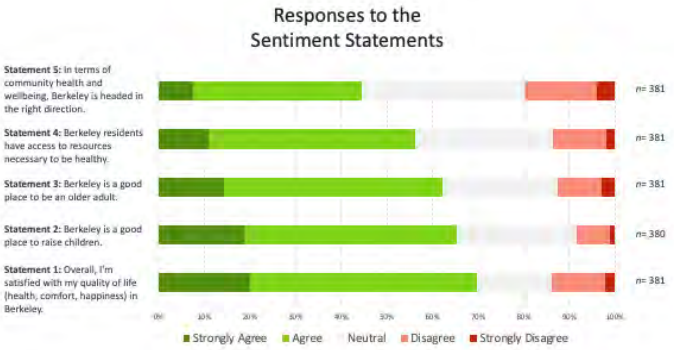
APPENDIX G: SURVEY FINDINGS

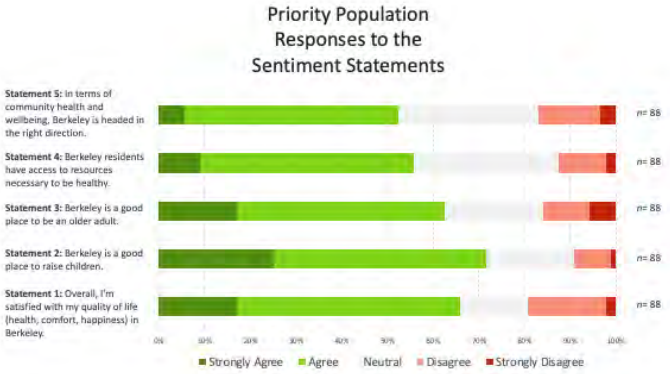


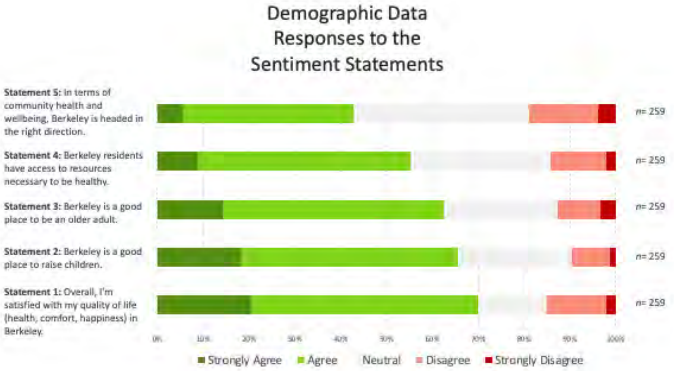


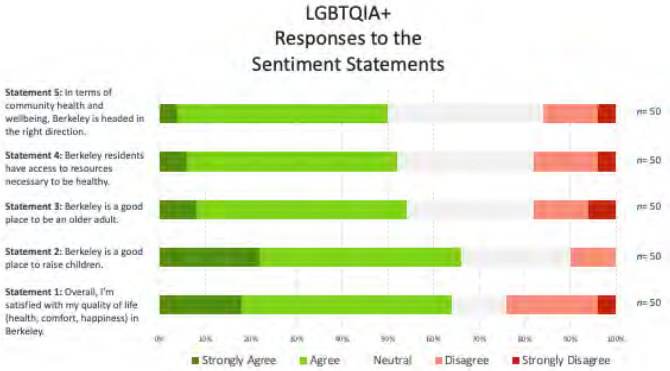


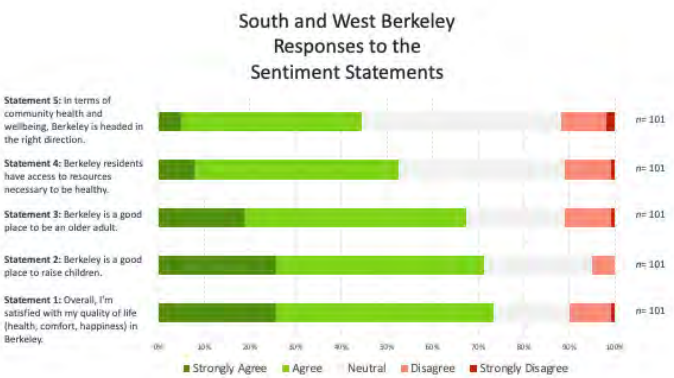


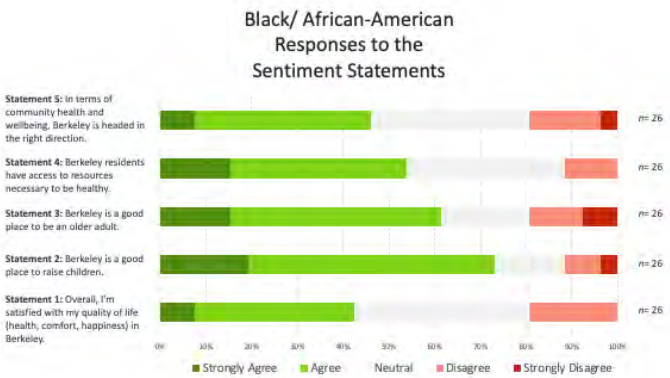

Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 381
n= 381
n= 381
n= 380
n= 381
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

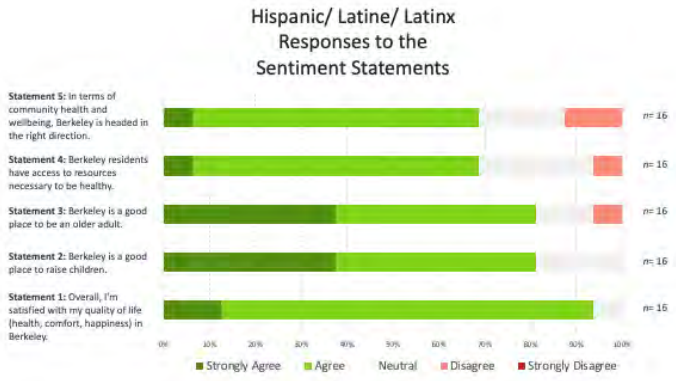

Priority Population
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 88
n= 88
n= 88
n= 88
n= 88
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

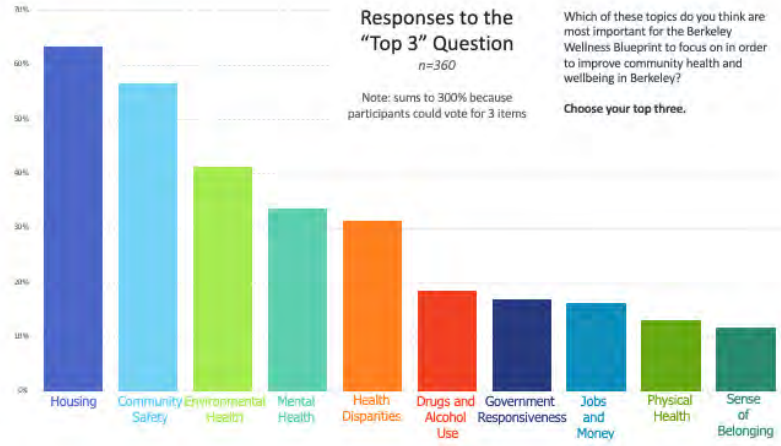

Demographic Data
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 259
n= 259
n= 259
n= 259
n= 259
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

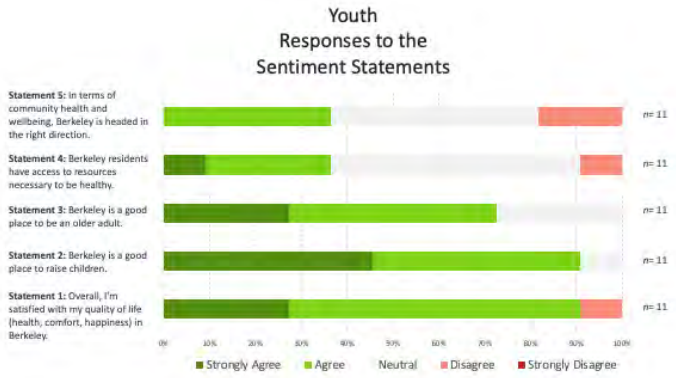

LGBTQIA+
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 50
n= 50
n= 50
n= 50
n= 50
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

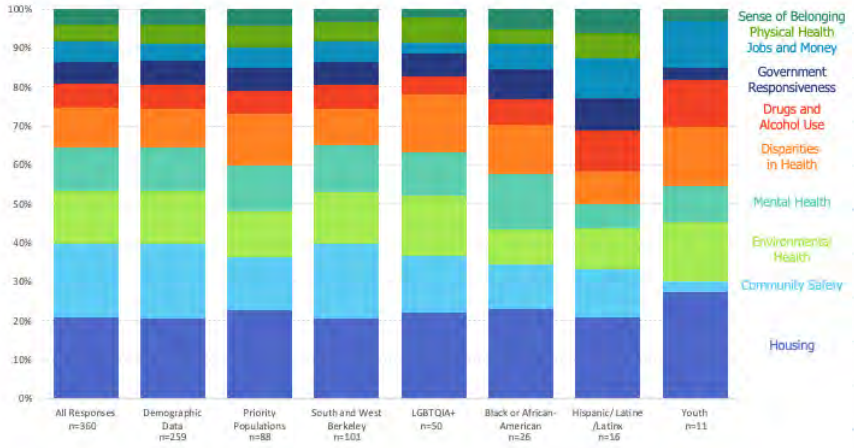

South and West Berkeley
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 101
n= 101
n= 101
n= 101
n= 101
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Black/ African-American
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 26
n= 26
n= 26
n= 26
n= 26
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Hispanic/ Latine/ Latinx
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 16
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Responses to the
"Top 3" Question
n=360
Note: sums to 300% because participants could vote for 3 items
Which of these topics do you think are most important for the Berkeley Wellness Blueprint to focus on in order to improve community health and wellbeing in Berkeley?
Choose your top three.
Housing
Community Safety
Environmental Health
Mental Health
Health Disparities
Drugs and Alcohol Use
Government Responsiveness
Jobs and Money
Physical Health
Sense of Belonging


Youth
Responses to the
Sentiment Statements
Statement 5: In terms of community health and wellbeing, Berkeley is headed in the right direction.
Statement 4: Berkeley residents have access to resources necessary to be healthy.
Statement 3: Berkeley is a good place to be an older adult.
Statement 2: Berkeley is a good place to raise children.
Statement 1: Overall, I'm satisfied with my quality of life (health, comfort, happiness) in Berkeley.
n= 11
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Sense of Belonging
Physical Health
Jobs and Money
Government Responsiveness
Drugs and Alcohol Use
Disparities in Health
Mental Health
Environmental Health
Community Safety
Housing
All Responses n=360
Demographic Data n=259
Priority Populations n=88
South and West Berkeley n=101
LGBTQIA+ n=50
Black or African-American n=26
Hispanic/ Latine /Latinx n=16
Youth n=11

Communications

All communications submitted to the City Council are public record. Communications are not published directly to the City's website. Copies of individual communications are available for viewing at the City Clerk Department and through Records Online.

City Clerk Department
2180 Milvia Street
Berkeley, CA 94704
(510) 981-6900

Records Online
https://records.cityofberkeley.info/

To search for communications associated with a particular City Council meeting using Records Online:

1. Select Search Type = “Public – Communication Query (Keywords)”
2. From Date: Enter the date of the Council meeting
3. To Date: Enter the date of the Council meeting (this may match the From Date field)
4. Click the “Search” button
5. Communication packets matching the entered criteria will be returned
6. Click the desired file in the Results column to view the document as a PDF