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Initial Study – Community Plan Evaluation

Case No.:	**2014-002033ENV**
Project Title:	**429 Beale Street and 430 Main Street**
Zoning/Plan Area:	RH-DTR (Rincon Hill Downtown Residential) District 84-X Height and Bulk District Rincon Hill Area Plan
Block/Lot:	3767/305 and 306
Lot Size:	18,906 square feet
Project Sponsor:	LCL Global-429 Beale Street & 430 Main Street, LLC c/o Mark Loper – Reuben, Junius & Rose (415) 567-9000, mloper@reubenlaw.com
Staff Contact:	Michael Li (415) 575-9107, michael.j.li@sfgov.org

PROJECT DESCRIPTION

The project site, which is in San Francisco's Rincon Hill neighborhood, is on the block bounded by Beale Street on the west, Harrison Street on the north, Main Street on the east, and Bryant Street on the south (see Figure 1). The project site extends from Beale Street to Main Street and consists of two adjacent parcels: Assessor's Block 3767, Lots 305 and 306. Lot 305, the western parcel, fronts on Beale Street and is occupied by a one-story building that was constructed in 1951. Lot 306, the eastern parcel, fronts on Main Street and is occupied by a two-story building that was constructed in 1929. Both buildings are currently occupied by a retail self-storage use. The project site has two existing curb cuts: one on Beale Street and one on Main Street. The project site slopes up from west to east; the western property line is about eight feet lower than the eastern property line.

The proposed project consists of merging the two existing lots into a single 18,906-square-foot lot, demolishing the existing buildings, and constructing a nine-story, 84-foot-tall building containing 144 dwelling units and 73 parking spaces (72 residential spaces and one car-share space). There would be a 15-foot-tall solarium and a 15-foot-tall mechanical penthouse on the roof, resulting in a maximum building height of 99 feet. The parking garage would be on the basement level. Due to the slope of the project site, the parking garage would be about 18 feet below grade on the Main Street side of the project site and about nine feet below grade on the Beale Street side of the project site. The garage door and a new driveway would be provided on Beale Street. The existing 20-foot-wide curb cut on Beale Street would be retained and reduced in width to 11 feet, and the existing curb cut on Main Street would be removed. A total of 119 bicycle parking spaces would be provided; 111 Class 1 spaces would be provided in a storage room on the basement mezzanine level, and eight Class 2 spaces would be provided on the Beale Street and/or Main Street sidewalk adjacent to the project site. Usable open space for the residents of the proposed project would be provided in the form of a ground-level yard, private balconies, and a roof deck. See Exhibit 2 for a complete set of project plans (site plan, floor plans, elevations, sections, and renderings).

SOURCE: San Francisco Planning Department

FIGURE 1: PROJECT LOCATION

Construction of the proposed project would take about 24 months. The proposed building would be supported by a mat foundation; pile driving would not be required. Construction of the proposed project would require excavation to depths ranging from about 10 feet to about 25.5 feet below ground surface and the removal of about 12,052 cubic yards of soil.

Project Approvals

The proposed project would require the following approvals:

- **Section 309.1 Downtown Project Authorization** *(Planning Commission)*
- **Exception from Reduction of Ground-Level Wind Currents** *(Zoning Administrator)*
- **Demolition Permit** *(Planning Department and Department of Building Inspection)*
- **Site/Building Permit** *(Planning Department and Department of Building Inspection)*

The proposed project requires Section 309.1 Downtown Project Authorization from the Planning Commission, which constitutes the Approval Action for the proposed project. The Approval Action date establishes the start of the 30-day appeal period for this CEQA exemption determination pursuant to Section 31.04(h) of the San Francisco Administrative Code.

Previous Environmental Review

In 2007, a previous developer proposed the construction of an eight-story residential building on the project site. In 2009, the Planning Department issued a Certificate of Determination - Exemption from Environmental Review (Community Plan Exemption) for the 2007 project. The Community Plan Exemption was appealed to the San Francisco Board of Supervisors, which upheld the appeal on the grounds that the Community Plan Exemption did not adequately analyze the 2007 project's environmental impacts related to air quality, wind, and greenhouse gas (GHG) emissions. The Board of Supervisors directed the Planning Department to conduct additional environmental review and prepare either a negative declaration or an environmental impact report that analyzes the 2007 project's potential impacts related to air quality, wind, and GHG emissions. The previous developer did not move forward with the 2007 project, so no additional environmental review was conducted.

EVALUATION OF ENVIRONMENTAL EFFECTS

This initial study evaluates whether the environmental impacts of the proposed project are addressed in the Programmatic Environmental Impact Report for the *Rincon Hill Plan* (Rincon Hill PEIR).[1, 2] The initial study indicates whether the proposed project would result in significant impacts that: (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or off-site effects in the PEIR; or (3) are previously identified significant effects, which as a result of substantial new information that was not known at the time that the Rincon Hill PEIR was certified, are determined to have a more severe adverse impact than discussed in the PEIR. Such impacts, if any, will be evaluated in a project-specific Mitigated Negative Declaration or Environmental Impact Report. If no such topics are

[1] The *Rincon Hill Plan* is also known as the *Rincon Hill Area Plan*. The terms are interchangeable. Throughout this document, the term *Rincon Hill Area Plan* is used.

[2] San Francisco Planning Department, *Rincon Hill Plan Final Environmental Impact Report* (hereinafter "Rincon Hill PEIR"), Planning Department Case No. 2000.1081E, State Clearinghouse No. 1984061912, certified May 5, 2005. Available online at http://sf-planning.org/area-plan-eirs, accessed March 16, 2018.

identified, the proposed project is exempt from further environmental review in accordance with Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183.

Mitigation measures identified in the PEIR are discussed under each topic area, and measures that are applicable to the proposed project are provided under the Mitigation and Improvement Measures section at the end of this checklist.

The Rincon Hill PEIR identified significant project-level impacts related to historical resources (archeological resources and historic architecture), transportation (intersection level of service), air quality, wind, and hazardous materials. Mitigation measures were identified for historical resources (archeological resources), air quality, wind, and hazardous materials, and implementation of the identified mitigation measures would reduce the project-level impacts for these topics to less-than-significant levels. Impacts related to historical resources (historic architecture) and transportation (intersection level of service) would not be mitigated to less-than-significant levels and would be significant and unavoidable.

The Rincon Hill PEIR identified significant cumulative impacts related to transportation (intersection level of service). Mitigation measures were identified to address these impacts, but these impacts would not be reduced to less-than-significant levels. Therefore, the cumulative transportation impacts would be significant and unavoidable.

The proposed project would include construction of an 84-foot-tall building containing 144 dwelling units and 73 parking spaces (72 residential spaces and one car-share space). As discussed in this initial study, the proposed project would not result in new significant environmental effects or effects of greater severity than were already analyzed and disclosed in the Rincon Hill PEIR.

AESTHETICS AND PARKING IMPACTS FOR TRANSIT PRIORITY INFILL DEVELOPMENT

In accordance with CEQA Section 21099: Modernization of Transportation Analysis for Transit-Oriented Projects, aesthetics and parking shall not be considered in determining if a project has the potential to result in significant environmental effects, provided the project meets all of the following three criteria:

a) The project is in a transit priority area;

b) The project is on an infill site; and

c) The project is residential, mixed-use residential, or an employment center.

The proposed project meets each of the above three criteria and thus, this initial study does not consider aesthetics or parking in determining the significance of project impacts under CEQA.[3] Project elevations are included in the project description.

AUTOMOBILE DELAY AND VEHICLE MILES TRAVELED

In addition, CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that "promote the reduction of greenhouse gas emissions, the

[3] San Francisco Planning Department, *Eligibility Checklist for CEQA Section 21099: Modernization of Transportation Analysis, 429 Beale Street and 430 Main Street* (hereinafter "*CEQA Section 21099 Checklist*"), October 25, 2017.

development of multimodal transportation networks, and a diversity of land uses." CEQA Section 21099(b)(2) states that upon certification of the revised guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, the OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*[4] recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. On March 3, 2016, in anticipation of the future certification of the revised CEQA Guidelines, the San Francisco Planning Commission adopted the OPR's recommendation to use the VMT metric instead of automobile delay to evaluate the transportation impacts of projects (Resolution No. 19579). The VMT metric does not apply to the analysis of project impacts on non-automobile modes of travel such as riding transit, walking, and bicycling. Therefore, impacts and mitigation measures from the Rincon Hill PEIR associated with automobile delay are not discussed in this checklist, including PEIR Mitigation Measures C.1a, C.1b, and C.1c. Instead, a VMT analysis is provided in the Transportation and Circulation section.

Topics:		*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
1.	**LAND USE AND PLANNING—Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Have a substantial impact upon the existing character of the vicinity?	☐	☐	☐	☒

The *Rincon Hill Area Plan* included a number of legislative amendments that increased height limits and eliminated residential density limits for the purpose of encouraging the continued development of Rincon Hill as a primarily residential neighborhood. The *Rincon Hill PEIR* analyzed the land use impacts of these legislative amendments and the development that would result from these legislative amendments. Development under the *Rincon Hill Area Plan* would not physically divide an established community or have a substantial adverse impact on the character of the vicinity. Furthermore, the *Rincon Hill Area Plan FEIR* determined that the proposed rezoning would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. For these reasons, the *Rincon Hill Area Plan FEIR* concluded that implementation of the *Rincon Hill Area Plan* would not result in significant impacts related to land use and planning, and no mitigation measures were identified.

The division of an established community typically involves the construction of a physical barrier to neighborhood access, such as a new freeway, or the removal of a means of access, such as a bridge or a

[4] This document is available online at: https://www.opr.ca.gov/s_sb743.php.

roadway. The Rincon Hill PEIR determined that implementation of the *Rincon Hill Area Plan* would not construct any physical barriers to neighborhood access or remove any existing means of access that could physically divide established communities.

The Citywide Planning and Current Planning divisions of the Planning Department have determined that the proposed project is permitted in the RH-DTR (Rincon Hill Downtown Residential) Zoning District and is consistent with the height, density, and land uses as specified in the *Rincon Hill Area Plan*, maintaining the mixed character of the area by encouraging residential development.[5, 6]

For these reasons, implementation of the proposed project would not result in significant impacts related to land use and land use planning beyond those identified in the Rincon Hill PEIR.

Topics:		*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
2.	**POPULATION AND HOUSING—Would the project:**				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☐	☒
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Implementation of the *Rincon Hill Area Plan* was expected to increase the supply of housing within the Rincon Hill neighborhood by 3,650 to 4,900 dwelling units and the residential population by 5,000 to 6,700 people. These increases in the housing supply and population are consistent with the growth projections for San Francisco developed by the Association of Bay Area Governments, which is the regional planning agency responsible for developing growth estimates for Bay Area cities and counties. The *Rincon Hill Area Plan* would not displace existing housing units or residents, because the potential development sites were not occupied by residential uses. For these reasons, the *Rincon Hill PEIR* concluded that implementation of the *Rincon Hill Area Plan* would not result in significant impacts related to population and housing, and no mitigation measures were identified.

[5] San Francisco Planning Department, *Community Plan Evaluation Eligibility Determination, Citywide Planning Analysis, 429 Beale Street and 430 M*ain *Street*, February 21, 2018.

[6] San Francisco Planning Department, *Community Plan Evaluation Eligibility Determination, Current Planning Analysis, 429 Beale Street and 430 Main Street*, February 23, 2018.

The proposed project's residential uses are expected to add approximately 202 residents to the project site.[7] These direct effects of the proposed project on population and housing are within the scope of the population growth anticipated under the *Rincon Hill Area Plan* and are evaluated in the Rincon Hill PEIR.

For these reasons, the proposed project would not result in significant impacts related to population and housing beyond those identified in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
3. CULTURAL RESOURCES—Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Historic Architectural Resources

Pursuant to CEQA Guidelines Sections 15064.5(a)(1) and 15064.5(a)(2), historical resources are buildings or structures that are listed, or are eligible for listing, in the California Register of Historical Resources or are identified in a local register of historical resources, such as Articles 10 and 11 of the San Francisco Planning Code. As discussed in the Rincon Hill PEIR, development anticipated under the *Rincon Hill Area Plan* would result in the demolition of historic resources. The Union Oil Company Building at 425 First Street would be demolished and replaced with a new building. In addition, buildings at 347 Fremont Street and 375 Fremont Street could be demolished and replaced with new buildings. Demolition of these two buildings, if it were to occur, would result in the loss of historic resources.[8] For these reasons, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would result in significant and unavoidable impacts on historic architectural resources. Mitigation measures identified in the Rincon Hill PEIR, discussed below, would not reduce these impacts to less-than-significant levels. This impact was addressed in a Statement of Overriding Considerations with Findings and adopted as part of the *Rincon Hill Area Plan* approval on May 5, 2005.

The proposed project would include the demolition of the two existing buildings on the project site. The building at 429 Beale Street was constructed in 1951, and the building at 430 Main Street was constructed in 1929. Both buildings were evaluated for their historic resource status as part of a previous development proposal on the project site and found to be ineligible for listing on a national, state, or local

[7] The analysis in the Rincon Hill PEIR used an average household size of 1.4 persons per household.

[8] Since the certification of the Rincon Hill PEIR in May 2005, the buildings at 425 First Street, 347 Fremont Street, and 375 Fremont Street have been demolished.

register of historic resources.[9] Furthermore, the project site is not located in a historic district. Therefore, the existing buildings are not considered to be historical resources for the purposes of CEQA. As such, the proposed project would not result in the demolition or alteration of any historic resource and would not contribute to the significant impact on historic architectural resources identified in the Rincon Hill PEIR.

PEIR Mitigation Measures I.2a, I.2b, and I.2c are site-specific mitigation measures that apply to the development sites at 425 First Street, 347 Fremont Street, and 375 Fremont Street. These mitigation measures are not applicable to the proposed project. For other development sites not covered by PEIR Mitigation Measures I.2a, I.2b, and I.2c, PEIR Mitigation Measure I.2d requires a project sponsor to conduct a Historic American Building Survey of any historic resource proposed for demolition prior to demolishing said historic resource. Since the proposed project would not result in the demolition of a historic resource, PEIR Mitigation Measure I.2d is not applicable to the proposed project.

For these reasons, the proposed project would not result in significant impacts on historic architectural resources beyond those identified in the Rincon Hill PEIR.

Archeological Resources

As discussed in the Rincon Hill PEIR, the soils underlying the Rincon Hill neighborhood potentially contain archeological resources that date back to the 1850s. Development anticipated under the *Rincon Hill Area Plan* would include substantial excavation for underground parking garages, building foundations, and potential remediation of subsurface hazardous materials. Implementation of the *Rincon Hill Area Plan* could disturb archeological resources, resulting in a potentially significant impact on archeological resources. The Rincon Hill PEIR identified Mitigation Measure I.1 to reduce this potentially significant impact to a less-than-significant level.[10] Under this mitigation measure, any development project that involves soils-disturbing activities is required to mitigate potential impacts on archeological resources based on its location in one of three archeological mitigation zones identified in the Rincon Hill PEIR. For these reasons, the Rincon Hill PEIR concluded that, with mitigation, implementation of the *Rincon Hill Area Plan* would result in less-than-significant impacts on archeological resources.

The three archeological mitigation zones identified in the Rincon Hill PEIR are defined by the potential for significant archeological resources to be present. The project site is in Archeological Mitigation Zone 2 and is subject to PEIR Mitigation Measure I.1b. Under PEIR Mitigation Measure I.1b, a Preliminary Archeological Sensitivity Study (PASS) must be prepared. The PASS shall:

- Determine the historical uses of the project site based on any previous archeological documentation and Sanborn maps;
- Determine types of archeological resources/properties that may have been located within the project site and whether the archeological resources/property types would potentially be eligible for listing in the California Register of Historical Resources (CRHR);

[9] San Francisco Planning Department, *Historic Resource Evaluation Response, 430 Main Street & 429 Beale Street, Case No. 2007.1121E*, April 1, 2008.

[10] Rincon Hill PEIR Mitigation Measure I.1 is subdivided into Mitigation Measures I.1a, I.1b, and I.1c, which correspond to Archeological Mitigation Zones 1, 2, and 3, respectively.

- Determine if 19th or 20th century soils-disturbing activities may have adversely affected the identified potential archeological resources;
- Assess potential project effects in relation to the depth of any identified potential archeological resource;
- Assess whether any CRHR-eligible archeological resources could be adversely affected by the proposed project and recommend appropriate action.

Based on the PASS, the Environmental Review Officer shall determine if an Archeological Research Design and Treatment Plan shall be required to more definitively identify the potential for CRHR-eligible archeological resources to be present within the project site and determine the appropriate action necessary to reduce the potential effect of the proposed project on archeological resources to a less-than-significant level.

The Planning Department conducted a Preliminary Archeological Review (PAR) in lieu of a PASS. The PAR determined that a standard mitigation measure requiring archeological monitoring during soils-disturbing activities would reduce the proposed project's impact on archeological resources to a less-than-significant level.[11] This mitigation measure, identified as Project Mitigation Measure 1, is discussed on pp. 46-49.

For these reasons, the proposed project would not result in significant impacts on archeological resources beyond those identified in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
4. TRANSPORTATION AND CIRCULATION— Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☒

[11] San Francisco Planning Department, *Preliminary Archeological Review, 429 Beale Street/430 Main Street*, February 6, 2018.

Topics:	Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

As discussed in the Rincon Hill PEIR, implementation of the *Rincon Hill Area Plan* would increase the residential and employment populations of the Rincon Hill neighborhood, thus increasing the number of daily person trips to and from the area. These net new person trips would be distributed among different modes of transportation, including automobile, transit, bicycle, and walking. The Rincon Hill PEIR concluded that this anticipated growth would not result in significant impacts on public transit, loading, or pedestrian and bicycle conditions.

However, the Rincon Hill PEIR concluded that this anticipated growth would result in significant traffic impacts on levels of service at three intersections and identified mitigation measures to address these impacts. PEIR Mitigation Measures C.1a, C.1b, and C.1c are specific to the intersections at Beale/Folsom, Main/Folsom, and Spear/Folsom, respectively. The mitigation measures call for specific configurations at each of these intersections (the number of westbound and eastbound lanes, the prohibition of left turns, the use of left- and right-turn pockets, etc.). Even with mitigation, however, it was anticipated that the significant traffic impacts on levels of service at these three intersections could not be fully mitigated. Thus, these impacts were found to be significant and unavoidable with mitigation.

Construction impacts on traffic and circulation are specific to individual development projects and are generally not considered significant due to their short-term, temporary nature. In order to minimize traffic congestion related to construction activities, the *Rincon Hill PEIR* identified one improvement measure applicable to all future development projects in the Rincon Hill neighborhood. Improvement Measure C.2 calls for construction contractors to meet with appropriate City agencies to determine feasible measures for reducing traffic congestion during construction periods. In addition, Improvement Measure C.2 calls for construction contractors to provide parking either on-site or within other off-site parking facilities to meet the temporary parking demand from construction workers.

As previously discussed under "Automobile Delay and Vehicle Miles Traveled," in response to state legislation that called for removing automobile delay from CEQA analysis, the Planning Commission adopted Resolution No. 19579 replacing automobile delay with a vehicle miles traveled (VMT) metric for analyzing transportation impacts of a project. Therefore, impacts and mitigation measures from the Rincon Hill PEIR associated with automobile delay are not discussed in this checklist.

The Rincon Hill PEIR did not evaluate VMT or the potential for induced automobile travel. The VMT analysis presented below evaluates the project's transportation effects using the VMT metric.

The project site is not located within an airport land use plan area, or in the vicinity of a private airstrip. Therefore, initial study topic 4c is not applicable to the proposed project.

Vehicle Miles Traveled (VMT) Analysis

Many factors affect travel behavior. These factors include density, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development at great distance from other land uses, located in areas with poor access to non-private vehicular modes of travel, generate more automobile travel compared to development located in urban areas, where a higher density, mix of land uses, and travel options other than private vehicles are available.

Given these travel behavior factors, San Francisco has a lower VMT ratio than the nine-county San Francisco Bay Area region. In addition, some areas of the City have lower VMT ratios than other areas of the City. These areas of the City can be expressed geographically through transportation analysis zones (TAZs). TAZs are used in transportation planning models for transportation analysis and other planning purposes. The zones vary in size from single city blocks in the downtown core, multiple blocks in outer neighborhoods, to even larger zones in historically industrial areas like the Hunters Point Shipyard.

The San Francisco County Transportation Authority (Transportation Authority) uses the San Francisco Chained Activity Model Process (SF-CHAMP) to estimate VMT by private automobiles and taxis for different land use types. Travel behavior in SF-CHAMP is calibrated based on observed behavior from the California Household Travel Survey 2010-2012, census data regarding automobile ownership rates and county-to-county worker flows, and observed vehicle counts and transit boardings. SF-CHAMP uses a synthetic population, which is a set of individual actors that represents the Bay Area's actual population, who make simulated travel decisions for a complete day. The Transportation Authority uses tour-based analysis for office and residential uses, which examines the entire chain of trips over the course of a day, not just trips to and from the project. For retail uses, the Transportation Authority uses trip-based analysis, which counts VMT from individual trips to and from the project (as opposed to the entire chain of trips). A trip-based approach, as opposed to a tour-based approach, is necessary for retail projects because a tour is likely to consist of trips stopping in multiple locations, and the summarizing of tour VMT to each location would overestimate VMT.[12, 13]

For residential development, the existing regional average daily VMT per capita is 17.2.[14] Average daily VMT for this land use is projected to decrease under future 2040 cumulative conditions. Please see Table 1: Daily Vehicle Miles Traveled, which includes the TAZ, 766, in which the project site is located.

[12] To state another way: a tour-based assessment of VMT at a retail site would consider the VMT for all trips in the tour, for any tour with a stop at the retail site. If a single tour stops at two retail locations, for example, a coffee shop on the way to work and a restaurant on the way back home, then both retail locations would be allotted the total tour VMT. A trip-based approach allows us to apportion all retail-related VMT to retail sites without double-counting.

[13] San Francisco Planning Department, *Executive Summary: Resolution Modifying Transportation Impact Analysis*, Appendix F, Attachment A, March 3, 2016.

[14] Includes the VMT generated by the households in the development and averaged across the household population to determine VMT per capita.

Table 1: Average Daily Vehicle Miles Traveled

Land Use	Existing			Cumulative 2040		
	Bay Area Regional Average	Bay Area Regional Average minus 15%	TAZ 766 Average	Bay Area Regional Average	Bay Area Regional Average minus 15%	TAZ 766 Average
Households (Residential)	17.2	14.6	3.5	16.1	13.7	2.5

A project would have a significant effect on the environment if it would cause substantial additional VMT. The State Office of Planning and Research's (OPR) *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA* ("proposed transportation impact guidelines") recommends screening criteria to identify types, characteristics, or locations of projects that would not result in significant impacts to VMT. If a project meets one of the three screening criteria provided (Map-Based Screening, Small Projects, and Proximity to Transit Stations), then it is presumed that VMT impacts would be less than significant for the project and a detailed VMT analysis is not required. Map-Based Screening is used to determine if a project site is located within a TAZ that exhibits low levels of VMT. Small Projects are projects that would generate fewer than 100 vehicle trips per day. The Proximity to Transit Stations criterion includes projects that are within a half-mile of an existing major transit stop, have a floor area ratio that is equal to or greater than 0.75, vehicle parking that is less than or equal to that required or allowed by the Planning Code without conditional use authorization, and are consistent with the applicable Sustainable Communities Strategy.

In TAZ 766, the existing average daily household VMT per capita is 3.5, and the future 2040 average daily household VMT per capita is estimated to be 2.5.[15] Given that the project site is located in an area in which the existing and future 2040 residential VMT would be more than 15 percent below the existing and future 2040 regional averages, the proposed project's residential uses would not result in substantial additional VMT, and impacts would be less than significant. Furthermore, the project site meets the Proximity to Transit Stations screening criterion, which also indicates the proposed project's residential uses would not cause substantial additional VMT.[16]

Induced Automobile Travel Analysis

A proposed project would have a significant effect on the environment if it would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network. The OPR's proposed transportation impact guidelines includes a list of transportation project types that would not likely lead to a substantial or measureable increase in VMT. If a project fits within the general types of projects (including combinations of types), then it is presumed that VMT impacts would be less than significant, and a detailed VMT analysis is not required.

The proposed project is not a transportation project. However, the proposed project would include features that would alter the transportation network. The garage door and a new driveway would be

[15] *CEQA Section 21099 Checklist*.

[16] *Ibid*.

provided on Beale Street. The existing 20-foot-wide curb cut on Beale Street would be retained and reduced in width to 11 feet, and the existing curb cut on Main Street would be removed. These features fit within the general types of projects that would not substantially induce automobile travel, and the impacts would be less than significant.[17]

Trip Generation

The proposed project consists of the construction of a nine-story building containing 144 dwelling units 73 automobile parking spaces (72 residential spaces and one car-share space), and 119 bicycle parking spaces.

Localized trip generation of the proposed project was calculated using a trip-based analysis and information in the *2002 Transportation Impacts Analysis Guidelines for Environmental Review* (SF Guidelines) developed by the San Francisco Planning Department.[18] The proposed project would generate an estimated 1,228 person trips (inbound and outbound) on a weekday daily basis, consisting of 441 person trips by auto, 310 transit trips, 408 walk trips, and 69 trips by other modes. During the p.m. peak hour, the proposed project would generate an estimated 212 person trips, consisting of 76 person trips by auto (52 vehicle trips accounting for vehicle occupancy data for this census tract), 53 transit trips, 72 walk trips, and 11 trips by other modes.

Transit

The project site is well served by public transportation. Within one-quarter mile of the project site, the San Francisco Municipal Railway (Muni) operates 10 bus lines (the 5 Fulton, 5R Fulton Rapid, 7 Haight/Noriega, 25 Treasure Island, 30X Marina Express, 38 Geary, 38R Geary Rapid, 41 Union, 81X Caltrain Express, and 82X Levi Plaza Express) and two light rail lines (the N Judah and T Owl). The Bay Area Rapid Transit District's Embarcadero station is one-half mile northwest of the project site.

The proposed project would be expected to generate 310 daily transit trips, including 53 during the p.m. peak hour. These new transit trips would be distributed among the multiple transit lines serving the project vicinity. Given the wide availability of nearby transit, the addition of 53 p.m. peak-hour transit trips would be accommodated by existing capacity. As such, the proposed project would not result in unacceptable levels of transit service or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service could result. In addition, the proposed project would not result in the relocation or removal of existing transit stops or other changes that would alter transit service.

For these reasons, the proposed project would not result in significant impacts on transit beyond those identified in the Rincon Hill PEIR.

[17] *Ibid*.

[18] Kittelson & Associates, Inc., *429 Beale Street/430 Main Street Transportation Impact Study* (hereinafter "*Transportation Impact Study*"), Appendix I, October 27, 2017.

Loading

Freight Loading

Pursuant to Planning Code Section 152.2, a residential project in a Downtown Residential (DTR) District is not required to provide any off-street freight loading spaces. However, a residential project containing more than 100 dwelling units in a DTR District is permitted to provide up to a maximum of two off-street freight loading spaces. The proposed project would not provide any off-street freight loading spaces. There are two existing on-street freight loading zones (yellow curbs) near the project site. One is on the south side of Harrison Street just west of Main Street (about 200 feet north of the project site), and the other is on the west side of Beale Street just north of Harrison Street (about 300 feet north of the project site). The proposed project would generate four loading trips per day, which equates to an average-hour and peak-hour loading demand of less than one space.[19] The peak loading demand for the proposed project could be met by the existing on-street freight loading zones.

Passenger Loading

Some of the daily person trips to and from the project site would be made by other modes (shared mobility service (e.g., Lyft, Uber) or taxi). It is anticipated that residents of and visitors to the project site who use these modes of travel would be picked up and dropped off in one of two existing passenger loading zones (white curbs) near the project site. There is one passenger loading zone on the west side of Beale Street across from the project site and one passenger loading zone on the east side of Main Street across from the project site. Each passenger loading zone is approximately 40 feet long and could accommodate up to two vehicles simultaneously. The passenger loading zones are generally available throughout the day.[20] The estimated passenger loading demand generated by the proposed project could be accommodated by the existing passenger loading zones, would not create potentially hazardous conditions affecting traffic, transit, pedestrians, or bicycles, and would not create significant delays affecting transit.

Residential Move-In/Move-Out Activities

Residential move-in/move-out activities could be accommodated by one of two options: the use of the existing on-street loading zones on Harrison Street and Beale Street or the use of temporary signage on an as-needed basis.[21]

Given the peak-hour freight loading demand of less than one space for the proposed project, the availability of existing on-street freight and passenger loading zones near the project site, and the options for accommodating residential move-in/move-out activities discussed above, the proposed project would not result in significant impacts on loading beyond those identified in the Rincon Hill PEIR.

Pedestrians

Vehicles entering and exiting the project's garage could conflict with pedestrian circulation along the Beale Street sidewalk. Field observations conducted for the transportation impact study (TIS) noted that

[19] *Transportation Impact Study*, pp. 46-47.

[20] *Transportation Impact Study*, p. 48.

[21] Information about the San Francisco Municipal Transportation Agency's temporary signage permits is available at https://www.sfmta.com/permits/temporary-signage. Accessed January 12, 2018.

there are moderate levels of pedestrian activity in the project vicinity.[22] During the p.m peak hour, the proposed project would generate a total of 52 vehicle trips and 72 pedestrian trips (47 inbound trips and 25 outbound trips).[23] The primary pedestrian entrance to the proposed building would be on Main Street, and the proposed garage entrance/exit would be on Beale Street. Based on this design, the proposed project would result in a higher number of pedestrian trips on Main Street than on Beale Street. With fewer pedestrian trips on Beale Street, the number of conflicts between vehicles and pedestrians would be minimized.

For these reasons, the proposed project would not result in significant impacts on pedestrians beyond those identified in the Rincon Hill PEIR.

Bicycles

Vehicles entering and exiting the project's garage could conflict with bicycle circulation on Beale Street. Field observations conducted for the TIS noted that there are moderate levels of bicycle activity in the project vicinity.[24] During the p.m peak hour, the proposed project would generate a total of 52 vehicle trips and 11 bicycle trips.[25, 26] Currently, there is perpendicular parking on the east side of Beale Street between Folsom and Bryant streets. The perpendicular parking flanks both sides of the project site's existing driveway, making it difficult for drivers exiting the project site to see bicyclists riding northbound on Beale Street and vice versa. The proposed project would include multimodal signage at the driveway to increase awareness of vehicles, pedestrians, and bicyclists entering and exiting the project site. Warning devices would be placed at the driveway to alert bicyclists of vehicles exiting the project site. In addition, the perpendicular parking on the east side Beale Street would be eliminated when the sidewalks along Beale Street are widened as part of streetscape improvements proposed under the *Rincon Hill Streetscape Master Plan* and the *Transit Center District Plan Public Realm Plan*. Eliminating the perpendicular parking would improve sight lines for drivers exiting the project site and for bicyclists riding northbound on Beale Street.

For these reasons, the proposed project would not result in significant impacts related to bicycles beyond those identified in the Rincon Hill PEIR.

Conclusion

As discussed above, the proposed project would not result in significant impacts on transit, loading, pedestrians, or bicycles. Therefore, no mitigation measures are necessary. In order to further minimize less-than-significant impacts related to transportation, two improvement measures have been identified. The first improvement measure was identified in the Rincon Hill PEIR, and the second improvement measure was identified in the TIS.

PEIR Improvement Measure C.2 calls for the construction contractor(s) to meet with City agencies to develop feasible measures for reducing traffic congestion during the construction of the proposed project.

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[22] *Transportation Impact Study*, p. 15.
[23] *Transportation Impact Study*, p. 43.
[24] *Transportation Impact Study*, p. 19.
[25] *Transportation Impact Study*, Table 8, p. 26.
[26] It is assumed that all 11 trips made by other modes would be bicycle trips.

PEIR Improvement Measure C.2 is identified as Project Improvement Measure 1 and is discussed on p. 52.

TIS Improvement Measure TR-1 calls for the project sponsor and/or construction contractor(s) to develop a construction management plan for minimizing disruptions to traffic circulation, with a particular focus on ensuring transit, pedestrian, and bicycle connectivity. TIS Improvement Measure TR-1 is identified as Project Improvement Measure 2 and is discussed on p. 52.

Topics:		*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
5.	**NOISE—Would the project:**				
a)	Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b)	Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e)	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒
f)	For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
g)	Be substantially affected by existing noise levels?	☐	☐	☐	☒

The Rincon Hill PEIR identified potential conflicts between proposed residences and existing sources of noise such as the Bay Bridge and Interstate 80. In addition, the Rincon Hill PEIR noted that implementation of the *Rincon Hill Area Plan* would result in construction noise impacts from pile driving and other construction activities. The Rincon Hill PEIR identified one noise mitigation measure that would reduce construction noise impacts to less-than-significant levels.

For all potential development that could occur under the *Rincon Hill Area Plan*, PEIR Initial Study Mitigation Measure 1 requires piles to be pre-drilled whenever feasible and sonic or vibratory pile drivers to be used instead of impact pile drivers, unless impact pile drivers are absolutely necessary. Based on implementation of PEIR Initial Study Mitigation Measure 1, along with required compliance with the provisions of the San Francisco Noise Ordinance (Noise Ordinance), which is codified as Article 29 of the

San Francisco Police Code, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would not result in significant noise impacts.

The proposed building would be supported by a mat foundation; pile driving would not be required. Therefore, PEIR Initial Study Mitigation Measure 1 is not applicable to the proposed project.

All construction activities for the proposed project (approximately 24 months) would be subject to the San Francisco Noise Ordinance (Noise Ordinance), which is codified as Article 29 of the San Francisco Police Code. The Noise Ordinance regulates construction noise and requires that construction work be conducted in the following manner: (1) noise levels of construction equipment, other than impact tools, must not exceed 80 dBA[27] at a distance of 100 feet from the source (the equipment generating the noise); (2) impact tools must have intake and exhaust mufflers that are approved by the Director of San Francisco Public Works (SFPW) or the Director of the Department of Building Inspection (DBI) to best accomplish maximum noise reduction; and (3) if the noise from the construction work would exceed the ambient noise levels at the site property line by 5 dBA, the work must not be conducted between 8:00 p.m. and 7:00 a.m. unless the Director of SFPW authorizes a special permit for conducting the work during that period.

The DBI is responsible for enforcing the Noise Ordinance for private construction projects during normal business hours (8:00 a.m. to 5:00 p.m.), and the Police Department is responsible for enforcing the Noise Ordinance during all other hours. Nonetheless, during the approximately 24-month construction period for the proposed project, occupants of nearby properties could be disturbed by construction noise. There may be times when construction noise could interfere with indoor activities in residences and businesses near the project site and be perceived as an annoyance by the occupants of nearby properties. The increase in project-related construction noise in the project vicinity would not be considered a significant impact of the proposed project, because the construction noise would be temporary (approximately 24 months), intermittent, and restricted in occurrence and level, as the contractor is subject to and would comply with the Noise Ordinance. Compliance with the Noise Ordinance would reduce any construction-related noise effects on nearby residences to the greatest extent feasible.

The project site is not located within an airport land use plan area, within two miles of a public airport, or in the vicinity of a private airstrip. Therefore, initial study checklist topics 5e and 5f are not applicable to the proposed project.

For these reasons, the proposed project would not result in significant noise impacts beyond those identified in the Rincon Hill PEIR.

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[27] The standard method used to quantify environmental noise involves evaluating the sound with an adjustment to reflect the fact that human hearing is less sensitive to low-frequency sound than to mid- and high-frequency sound. This measurement adjustment is called "A" weighting, and the data are reported in A-weighted decibels (dBA).

Topics:		Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
6.	**AIR QUALITY—Would the project:**				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

The Rincon Hill PEIR identified potentially significant air quality impacts related to construction activities that may cause wind-blown dust and pollutant emissions; roadway-related air quality impacts on sensitive land uses; and the siting of uses that emit diesel particulate matter (DPM) and toxic air contaminants (TACs) as part of everyday operations. The Rincon Hill PEIR identified two mitigation measures that would reduce air quality impacts to less-than-significant levels.

Rincon Hill PEIR Mitigation Measure E.1: Construction Air Quality, requires individual projects that include construction activities to include dust control measures and maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants.

Rincon Hill PEIR Mitigation Measure E.2, Operational Air Quality, requires project sponsors to implement various transportation control measures to reduce the rate of increase in the number of passenger vehicle trips and VMT, thus reducing the operational air quality impacts from implementation of the *Rincon Hill Area Plan*. The transportation control measures include but are not limited to: constructing transit facilities (bus turnouts, bulbs, and shelters); providing shuttle service to and from work sites, commercial areas, and transit stations; providing locker and shower facilities for employees who bicycle or walk to work; providing services (banks, cafeterias, childcare, dry cleaners, etc.) to employees at or near their places of employment.

Two types of air quality impacts are generally evaluated: regional air quality impacts to the air basin (criteria air pollutant analysis), and localized impacts (health risk analysis). Project-related air quality effects from short-term construction activities and long-term operational activities are evaluated to determine both the regional and local impact of the project on air quality. A project-specific analysis was conducted for the proposed project and the results of this analysis are discussed below.

Construction Dust Control

Subsequent to the certification of the Rincon Hill PEIR, the Board of Supervisors approved amendments to the San Francisco Building and Health Codes, referred to as the Construction Dust Control Ordinance (Ordinance No. 176-08, effective August 29, 2008). The intent of this ordinance is to reduce the quantity of

fugitive dust generated during site preparation, demolition, and construction work in order to protect the health of the general public and of on-site workers, to minimize public nuisance complaints, and to avoid orders to stop work by the DBI. Project-related construction activities would result in construction dust, primarily from ground-disturbing activities. In compliance with the Construction Dust Control Ordinance, the project sponsor and contractor responsible for construction activities at the project site would be required to control construction dust on the site through a combination of watering disturbed areas, covering stockpiled materials, sweeping streets and sidewalks, and other measures.

The regulations and procedures set forth in the Construction Dust Control Ordinance would ensure that construction dust impacts would not be significant. Therefore, the portion of PEIR Mitigation Measure E.1 that addresses construction dust is not applicable to the proposed project.

Criteria Air Pollutants

In accordance with the state and federal clean air acts, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. In general, the San Francisco Bay Area Air Basin (air basin) experiences low concentrations of most pollutants when compared to federal or state standards. The air basin is designated as either in attainment or unclassified for most criteria pollutants with the exception of ozone, $PM_{2.5}$, and PM_{10}, for which these pollutants are designated as non-attainment for either the state or federal standards.

The air district's *2017 CEQA Air Quality Guidelines* (guidelines)[28] provide methodologies for analyzing air quality impacts. The guidelines also provide screening criteria and thresholds of significance for those criteria air pollutants for which the air basin is in non-attainment. The guidelines and supporting documents[29] provide substantial evidence for the criteria air pollutant thresholds (as shown in Table 2: Daily Project Construction Emissions, below), and are therefore used by the City.

Construction

Construction activities from the proposed project would result in the emission of criteria air pollutants from equipment exhaust, construction-related vehicular activity, and construction worker automobile trips. Construction of the proposed project would occur over an approximately 24-month period and would require excavation to depths ranging from about 10 feet to about 25.5 feet below ground surface and the removal of about 12,052 cubic yards of soil. Construction-related criteria air pollutants generated by the proposed project were quantified using the California Emissions Estimator Model (CalEEMod) and provided in an air quality memorandum.[30] The model, including default data (e.g., emission factors, meteorology, etc.), was developed in collaboration with staff from California's air districts. Default assumptions were used where project-specific information was unknown. Emissions were converted from tons/year to pounds/day using the estimated construction duration of 487 working days. As shown

[28] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, updated May 2017, pp. 2-1 to 2-4.

[29] Bay Area Air Quality Management District, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009,

[30] San Francisco Planning Department, *Air Quality Memorandum, 429 Beale Street and 430 Main Street*, March 8, 2018.

in Table 2, unmitigated project construction emissions would be below the thresholds of significance for reactive organic gases (ROG), oxides of nitrogen (NO_x), exhaust PM_{10}, and exhaust $PM_{2.5}$.

Table 2: Daily Project Construction Emissions

	Pollutant Emissions (Average Pounds per Day)			
	ROG	**NOx**	**Exhaust PM_{10}**	**Exhaust $PM_{2.5}$**
Unmitigated Project Emissions	4.63	7.43	0.28	0.26
Significance Threshold	54.0	54.0	82.0	54.0

Emissions over threshold levels are in **bold**.

SOURCE: Air District, 2017; San Francisco Planning Department, 2018

As shown in Table 2, the proposed project would not exceed the construction-related significance thresholds developed by the air district. As such, the proposed project would not result in significant construction-related criteria air pollutant impacts.

Operation

As discussed above, the air district's guidelines also contain screening criteria that can be used to determine whether a proposed project requires a more detailed air quality analysis. If a proposed project meets the screening criteria, then the project would result in less-than-significant criteria air pollutant impacts. The *CEQA Air Quality Guidelines* note that the screening levels are generally representative of new development on greenfield sites[31] without any form of mitigation measures taken into consideration. In addition, the screening criteria do not account for project design features, attributes, or local development requirements that could also result in lower emissions. The proposed project, with a total of 144 dwelling units, is well below the operational screening criterion of 510 dwelling units for the "apartment, high-rise" land use type. Therefore, the proposed project would not have a significant impact related to criteria air pollutants, and a detailed air quality assessment is not required for operational emissions related to criteria air pollutants.

As discussed above, the proposed project would result in a less-than-significant impact related to operational criteria air pollutant emissions. Therefore, Rincon Hill PEIR Mitigation Measure E.2, which requires project sponsors to implement various transportation control measures to reduce the rate of increase in the number of passenger vehicle trips and VMT, is not applicable to the proposed project. Furthermore, the proposed project is subject to the Transportation Demand Management (TDM) Ordinance, which requires the project sponsor to implement various measures to reduce VMT. The measures specified in the TDM Ordinance are similar to many of the transportation control measures identified in PEIR Mitigation Measure E.2. The proposed project would provide the following TDM measures: bicycle parking, a bicycle repair station, car-share parking and membership, on-site affordable housing, unbundled parking, and parking in an amount below the maximum permitted by the Planning Code.[32]

[31] A greenfield site refers to agricultural or forest land or an undeveloped site earmarked for commercial, residential, or industrial projects.

[32] *Transportation Demand Management Plan Application, 429 Beale & 430 Main*.

Health Risk

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long-duration) and acute (i.e., severe but short-term) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and mortality. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but are regulated by the air district using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.[33]

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 7 days a week, for 30 years.[34] Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter ($PM_{2.5}$) are strongly associated with mortality, respiratory diseases, and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.[35] In addition to $PM_{2.5}$, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (California air board) identified DPM as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans.[36] The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with the air district to conduct a citywide health risk assessment based on an inventory and assessment of air pollution and exposures from mobile, stationary, and area sources within San Francisco. Areas with poor air quality, termed the "Air Pollutant Exposure Zone," were identified based on health-

[33] In general, a health risk assessment is required if the air district concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

[34] California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spot Program Risk Assessment Guidelines*, February, 2015, pp. 4-44, 8-6

[35] SFDPH, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 2008.

[36] California Air Resources Board (ARB), Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," October 1998.

protective criteria that consider estimated cancer risk, exposures to fine particulate matter, proximity to freeways, and locations with particularly vulnerable populations. The project site is located within the Air Pollutant Exposure Zone. Existing excess cancer risk at the closest off-site receptor is about 130 per one million persons exposed, and the existing $PM_{2.5}$ concentration at this receptor point is 9.1 $\mu g/m^3$. The Air Pollutant Exposure Zone criteria are discussed below.

Excess Cancer Risk. The Air Pollution Exposure Zone includes areas where modeled cancer risk exceeds 100 incidents per million persons exposed. This criterion is based on United States Environmental Protection Agency (EPA) guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.[37] As described by the air district, the EPA considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants rulemaking,[38] the EPA states that it "…strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on air district regional modeling.[39]

Fine Particulate Matter. In April 2011, the EPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*, "Particulate Matter Policy Assessment." In this document, EPA staff conclude that the then current federal annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ should be revised to a level within the range of 13 to 11 $\mu g/m^3$, with evidence strongly supporting a standard within the range of 12 to 11 $\mu g/m^3$. The Air Pollutant Exposure Zone for San Francisco is based on the health protective $PM_{2.5}$ standard of 11 $\mu g/m^3$, as supported by the EPA's Particulate Matter Policy Assessment, although lowered to 10 $\mu g/m^3$ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Proximity to Freeways. According to the California air board, studies have shown an association between the proximity of sensitive land uses to freeways and a variety of respiratory symptoms, asthma exacerbations, and decreases in lung function in children. Siting sensitive uses in close proximity to freeways increases both exposure to air pollution and the potential for adverse health effects. As evidence shows that sensitive uses in an area within a 500-foot buffer of any freeway are at an increased health risk from air pollution,[40] parcels that are within 500 feet of freeways are included in the Air Pollutant Exposure Zone.

Health Vulnerable Locations. Based on the air district's evaluation of health vulnerability in the Bay Area, those zip codes (94102, 94103, 94105, 94124, and 94130) in the worst quintile of Bay Area health vulnerability scores as a result of air pollution-related causes were afforded additional protection by

[37] BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, p. 67.

[38] 54 Federal Register 38044, September 14, 1989.

[39] BAAQMD, *Clean Air Plan*, May 2017, p. D-43.

[40] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005. Available online at: http://www.arb.ca.gov/ch/landuse.htm.

lowering the standards for identifying parcels in the Air Pollutant Exposure Zone to: (1) an excess cancer risk greater than 90 per one million persons exposed, and/or (2) $PM_{2.5}$ concentrations in excess of 9 $\mu g/m^3$.[41]

The above citywide health risk modeling was also used as the basis in approving amendments to the San Francisco Building and Health Codes (Ordinance No. 224-14, effective December 7, 2014), referred to as Health Code Article 38: Enhanced Ventilation Required for Urban Infill Sensitive Use Developments (Article 38). For sensitive-use projects within the APEZ as defined by Article 38, such as the proposed project, the ordinance requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by the Department of Public Health (DPH) that achieves protection from $PM_{2.5}$ (fine particulate matter) equivalent to that associated with a Minimum Efficiency Reporting Value 13 filtration. The DBI will not issue a building permit without written notification from the Director of the DPH that the applicant has an approved Enhanced Ventilation Proposal. In compliance with Article 38, the project sponsor submitted an initial application to the DPH.[42] The regulations and procedures set forth in Article 38 would protect the project's proposed sensitive receptors from substantial outdoor pollutant concentrations.

In addition, projects within the Air Pollutant Exposure Zone require special consideration to determine whether the project's activities would add a substantial amount of emissions to areas already adversely affected by poor air quality. The following addresses the project's construction and operational health risk impact.

Construction Health Risks

In terms of construction emissions, off-road equipment (which includes construction-related equipment) is a large contributor to diesel particulate matter emissions in California, although since 2007, the California air board has found the emissions to be substantially lower than previously expected.[43]

Additionally, a number of federal and state regulations are requiring cleaner off-road equipment. Specifically, both the EPA and California air board have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in between 1996 and 2000, and Tier 4 Interim and Final emission standards for all new engines were phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers will be required to produce new engines with advanced emission-control technologies. Although the full benefits of these regulations will not be realized for several years, the EPA estimates that by implementing the federal Tier 4 standards, NO_x and PM emissions will be reduced by more than 90 percent.[44]

In addition, construction activities do not lend themselves to analysis of long-term health risks because of their temporary and variable nature. As explained in the air district's *CEQA Air Quality Guidelines*:

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41 San Francisco Planning Department and San Francisco Department of Public Health, *2014 Air Pollutant Exposure Zone Map (Memo and Map)*, April 9, 2014. These documents are part of San Francisco Board of Supervisors File No. 14806, Ordinance No. 224-14; Amendment to Health Code Article 38.

42 *Application for Article 38 Compliance Assessment, 429 Beale Street & 430 Main Street*, submitted March 1, 2018.

43 ARB, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements, p. 1 and p. 13 (Figure 4), October 2010.

44 USEPA, "Clean Air Nonroad Diesel Rule: Fact Sheet," May 2004.

> "Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk."[45]

Therefore, project-level analyses of construction activities have a tendency to produce overestimated assessments of long-term health risks. However, within the Air Pollutant Exposure Zone, as discussed above, additional construction activity may adversely affect populations that are already at a higher risk for adverse long-term health risks from existing sources of air pollution.

The proposed project would require construction activities for the approximate 24-month construction period. Project construction activities would result in short-term emissions of DPM and other TACs. The project site is located in an area that already experiences poor air quality, and project construction activities would generate additional air pollution, affecting nearby sensitive receptors and resulting in a significant impact. As discussed above, the Rincon Hill PEIR determined that construction emissions from subsequent projects constructed in the Area Plan would result in a significant impact and identified Rincon Hill PEIR Mitigation Measure E.1: Construction Air Quality to reduce impacts to less than significant levels. PEIR Mitigation Measure E.1 requires individual projects that include construction activities to include dust control measures and maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants. Project Mitigation Measure 2: Construction Air Quality, has been identified to implement the portion of PEIR Mitigation Measure E.1 related to emissions exhaust by requiring engines to meet higher emission standards on certain types of construction equipment. Project Mitigation Measure 2 is discussed on pp. 49-51.

Implementation of Project Mitigation Measure 2 would reduce the magnitude of this impact to a less-than-significant level. While emissions reductions from limiting idling, educating workers and the public, and properly maintaining equipment are difficult to quantify, other measures, specifically the requirement for equipment with Tier 2 engines and Level 3 Verified Diesel Emission Control Strategy (VDECS) can reduce construction emissions by 89 to 94 percent compared to equipment with engines meeting no emission standards and without a VDECS.[46] Emissions reductions from the combination of

[45] BAAQMD, *CEQA Air Quality Guidelines*, May 2017, p. 8-7.

[46] PM emissions benefits are estimated by comparing off-road PM emission standards for Tier 2 with Tier 1 and 0. Tier 0 off-road engines do not have PM emission standards, but the United States Environmental Protection Agency's *Exhaust and Crankcase Emissions Factors for Nonroad Engine Modeling – Compression Ignition* has estimated Tier 0 engines between 50 hp and 100 hp to have a PM emission factor of 0.72 g/hp-hr and greater than 100 hp to have a PM emission factor of 0.40 g/hp-hr. Therefore, requiring off-road equipment to have at least a Tier 2 engine would result in between a 25 percent and 63 percent reduction in PM emissions, as compared to off-road equipment with Tier 0 or Tier 1 engines. The 25 percent reduction comes from comparing the PM emission standards for off-road engines between 25 hp and 50 hp for Tier 2 (0.45 g/bhp-hr) and Tier 1 (0.60 g/bhp-hr). The 63 percent reduction comes from comparing the PM emission standards for off-road engines above 175 hp for Tier 2 (0.15 g/bhp-hr) and Tier 0 (0.40 g/bhp-hr). In addition to the Tier 2 requirement, ARB Level 3 VDECSs are required and would reduce PM by an additional 85 percent. Therefore, the mitigation measure would result in a

Tier 2 equipment with Level 3 VDECS is almost equivalent to requiring only equipment with Tier 4 Final engines.

Operational Health Risk

As discussed under "Previous Environmental Review" (p. 3 of the initial study checklist), the Board of Supervisors heard an appeal of a Community Plan Exemption for a 2007 project proposed at the project site. In upholding the appeal, the Board of Supervisors directed the Planning Department to conduct additional environmental review on the air quality impacts of the 2007 project. The developer decided not to move forward with the 2007 project, so no additional environmental review was conducted. However, additional analysis is provided below for this proposed project.

In compliance with the direction provided by the Board of Supervisors on the 2007 project, a detailed air quality analysis was conducted to evaluate how operation of the proposed project would affect localized health risk to on-site and off-site sensitive receptors.[47]

As discussed above, the project site is located within the Air Pollutant Exposure Zone. The threshold of significance used to evaluate health risks from new sources of TACs is based on the potential for the proposed project to substantially affect the geography and severity of the Air Pollutant Exposure Zone at sensitive receptor locations. For projects that could result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria that otherwise would not without the project, a proposed project that would emit $PM_{2.5}$ concentration above 0.3 $\mu g/m^3$ or result in an excess cancer risk greater than 10.0 per million would be considered a significant impact. The 0.3 $\mu g/m^3$ $PM_{2.5}$ concentration and the excess cancer risk of 10.0 per million persons exposed are the levels below which the air district considers new sources not to make a considerable contribution to cumulative health risks.[48] For those locations already meeting the Air Pollutant Exposure Zone criteria, such as the project site, a lower significance standard is required to ensure that a proposed project's contribution to existing health risks would not be significant. In these areas, a proposed project's $PM_{2.5}$ concentrations above 0.2 $\mu g/m^3$ or an excess cancer risk greater than 7.0 per million would be considered a significant impact.[49]

Methodology

The detailed health risk analysis was conducted in accordance with the guidelines and methodologies established by the air district, the California air board, the California Office of Environmental Health Hazard Assessment, and the EPA. The health risk analysis evaluated the estimated cancer risk, chronic

reduction in PM emissions between 89 percent (0.0675 g/bhp-hr) and 94 percent (0.0225 g/bhp-hr), as compared to equipment with Tier 1 (0.60 g/bhp-hr) or Tier 0 engines (0.40 g/bhp-hr).

47 Ramboll Environ, *Air Quality Analysis Technical Report, Proposed Building at 430 Main Street/429 Beale Street*, San Francisco, California (hereinafter "*AQTR*"), March 2018.

48 Bay Area Air Quality Management District, *California Environmental Quality Act Guidelines Update, Proposed Air Quality CEQA Thresholds of Significance*, May 3, 2010. Available online at www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Proposed_Thresholds_Report_%20May_3_2010_Final.ashx?la=en, accessed February 20, 2014.

49 A 0.2 $\mu g/m^3$ increase in $PM_{2.5}$ would result in a 0.28 percent increase in non-injury mortality or an increase of about twenty-one excess deaths per 1,000,000 population per year from non-injury causes in San Francisco. This information is based on Jerrett M et al. 2005. *Spatial Analysis of Air Pollution and Mortality in Los Angeles*. Epidemiology. 16:727-736. The excess cancer risk has been proportionally reduced to result in a significance criteria of 7 per million persons exposed.

hazard index, and concentrations of DPM, total organic gases, and $PM_{2.5}$ associated with the proposed project's operational emissions. The sources of the proposed project's operational emissions include project-related traffic and an emergency diesel generator.

Emissions from project-related traffic were not directly modeled, because the volume of traffic expected to be generated by the proposed project (263 vehicles per day) would not exceed the air district's screening criteria requiring quantification of such emissions (10,000 vehicles per day). However, health risks from the proposed project's expected traffic were evaluated using the air district's Roadway Screening Analysis Calculator. This calculator was used to estimate cancer risk and $PM_{2.5}$ concentrations associated with emissions from project-related traffic. Emissions from the project's proposed emergency generator was modeled using the most recent version of the EPA's atmospheric dispersion modeling system (AERMOD) to estimate the concentrations of TACs at both on-site and off-site sensitive receptor locations. The AERMOD analysis also accounts for building downwash, incorporating nearby building heights. Emissions estimates from AERMOD were then used to assess the potential excess cancer risk at sensitive receptor locations based on exposure assessment guidelines from the California Office of Environmental Health Hazard Assessment and the air district. This methodology also accounts for an anticipated sensitivity to carcinogens of infants and children by incorporation of an age sensitivity factor. The results of this analysis are then added to existing background cancer risk and $PM_{2.5}$ values to determine the existing-plus-project health risk at on-site and off-site sensitive receptor locations.

Findings of AERMOD Analysis

The health risk analysis evaluated the impact of the proposed project's emergency diesel generator and project-related traffic in terms of lifetime excess cancer risk and $PM_{2.5}$ concentration. The results are discussed below.

Table 3: Existing Plus Project Health Risk Analysis (2020), shows the proposed project's contribution to lifetime excess cancer risk and $PM_{2.5}$ concentrations at off-site and on-site sensitive receptor locations. With implementation of the proposed project, the lifetime excess cancer risk at the maximally exposed off-site sensitive receptor would be 132 excess cancer risks per one million persons exposed. The proposed project's total contribution to this cancer risk would be 0.52 excess cancer risks per one million persons exposed, which is well below the significance threshold of 7 excess cancer risks per one million persons exposed. With implementation of the proposed project, $PM_{2.5}$ concentrations at the maximally exposed off-site sensitive receptor would be 9.1 $\mu g/m^3$. The proposed project's total $PM_{2.5}$ contributions to off-site sensitive receptors would be 0.0093 $\mu g/m^3$, which is also well below the significance threshold of 0.2 $\mu g/m^3$. The proposed project's health risk contribution to on-site receptors would be even lower (see Table 3). Therefore, the proposed project would not result in a significant health risk impact, and no mitigation measures are necessary.

Table 3: Existing Plus Project Health Risk Analysis (2020)

Receptor Type	Lifetime Excess Cancer Risk (in a million)		$PM_{2.5}$ Concentration ($\mu g/m^3$)	
	On-Site Receptor	Off-Site Receptor	On-Site Receptor	Off-Site Receptor
Proposed Project Emergency Generator	0.21	0.20	0.00028	0.00026
Project Traffic	0.18	0.32	0.0049	0.0091
Project Total	0.39	0.52	0.0052	0.0093
Existing Background	218	131	9.2	9.1
Existing Plus Project	219	132	9.2	9.1

SOURCE: Ramboll Environ, 2018

Cumulative Air Quality Impacts

By its very nature, regional air pollution (criteria air pollutant analysis) is largely a cumulative impact in that no single project is sufficient in size, by itself, to result in non-attainment of air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.[50] The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. As shown above, the proposed project would not result in significant construction or operational criteria air pollutant impacts. Therefore the project would not result in a cumulatively considerable contribution to regional air quality impacts, and cumulative criteria air pollutant impacts would be less than significant.

In terms of local health risks, a cumulative health risk analysis was conducted under 2040 conditions. This condition accounts for expected vehicle trips in the year 2040 and takes into account future vehicle emissions regulations. Table 4: Cumulative Health Risk Analysis (2040), shows the proposed project's contribution to average annual $PM_{2.5}$ concentrations at on-site and off-site sensitive receptor locations. With implementation of the proposed project, the lifetime excess cancer risk at the maximally exposed off-site sensitive receptor would be 160 excess cancer risks per one million persons exposed. The proposed project's total contribution to this cancer risk would be 0.52 excess cancer risks per one million persons exposed, which is well below the significance threshold of 7 excess cancer risks per one million persons exposed. With implementation of the proposed project, $PM_{2.5}$ concentrations at the maximally exposed off-site sensitive receptor would be 10.0 $\mu g/m^3$. The proposed project's total $PM_{2.5}$ contributions to off-site sensitive receptors would be 0.0093 $\mu g/m^3$, which is also well below the significance threshold of 0.2 $\mu g/m^3$. The proposed project's health risk contribution to on-site receptors would be even lower (see Table 4). Therefore, the proposed project would not result in a significant health risk impact, and no mitigation measures are necessary.

[50] BAAQMD, *CEQA Air Quality Guidelines*, May 2017, p. 2-1.

Table 4: Cumulative Health Risk Analysis (2040)

Receptor Type	Lifetime Excess Cancer Risk (in a million)		$PM_{2.5}$ Concentration ($\mu g/m^3$)	
	On-Site Receptor	Off-Site Receptor	On-Site Receptor	Off-Site Receptor
Proposed Project Emergency Generator	0.21	0.20	0.00028	0.00026
Project Traffic	0.18	0.32	0.0049	0.0091
Project Total	0.39	0.52	0.0052	0.0093
2040 Background	304	160	11.3	10.0
Cumulative 2040	304	160	11.3	10.1

SOURCE: Ramboll Environ, 2018

Computational Fluid Dynamics Air Pollutant Analysis

In addition to the AERMOD analysis, a refined building downwash analysis was conducted using a computational fluid dynamics (CFD) model to evaluate how the proposed project would affect the air flow and the pollutant concentration in the courtyards of BayCrest Towers. Unlike AERMOD, in which building downwash is not directly modeled but is determined by an analytical approximation, CFD modeling involves the direct computation of air flow. With CFD modeling, simulation of wind and pollutant dispersion can be conducted for accurate estimates of pollutant concentrations under different wind speeds and atmospheric conditions.[51] Because the CFD model is not the recommended model by the air district for conducting air pollutant dispersion modeling for CEQA purposes but AERMOD is, the results of this analysis are presented for informational purposes. This analysis also directly addresses the direction provided by the Board of Supervisors on the 2007 project.[52] The CFD analysis evaluated how the proposed building would affect air pollutant flow at BayCrest Towers from Bay Bridge traffic. Therefore, this analysis considered air pollutant levels at BayCrest Towers both with and without the proposed project. The CFD modeling methodology is detailed in the project's Air Quality Analysis Technical Report.

BayCrest Towers has three exterior courtyards (west, central, and east) that are adjacent to and north of the project site. The west courtyard is enclosed by BayCrest Towers on two sides (north and east) and is open on two sides (south and west). The central courtyard is fully enclosed by BayCrest Towers on two sides (west and east), partially enclosed (three stories) by BayCrest Towers on one side (north), and open on one side (south). The east courtyard is enclosed by BayCrest Towers on two sides (north and west) and is open on two sides (south and east). Construction of the proposed project would enclose the south side of each courtyard, although there would be five feet of separation between BayCrest Towers and the proposed project.

[51] *AQTR*, p. 15.
[52] *AQTR*, p. 14.

Findings of CFD Analysis

Table 5: Summary of CFD Analysis for $PM_{2.5}$ Concentration in BayCrest Towers Courtyards, shows the concentrations of Bay Bridge traffic $PM_{2.5}$ in each of the courtyards under existing conditions (without the proposed project) and with the proposed project in place. With implementation of the proposed project, the $PM_{2.5}$ concentrations would decrease in the west courtyard by 0.034 $\mu g/m^3$ and increase in the central and east courtyards by 0.031 $\mu g/m^3$ and 0.1 $\mu g/m^3$, respectively. It is important to note that this analysis does not include background or proposed project $PM_{2.5}$ concentrations. If the proposed project's traffic and emergency generator contributions (0.0093$\mu g/m^3$) were added to these totals, the proposed project's $PM_{2.5}$ contributions would not exceed 0.2 $\mu g/m^3$.

Table 5: Summary of CFD Analysis for $PM_{2.5}$ Concentration in BayCrest Towers Courtyards

Source	Average Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)			
	West Courtyard	Central Courtyard	East Courtyard	Average
Without Proposed Building	0.54	0.44	0.69	0.56
With Proposed Building	0.51	0.47	0.79	0.59
Net Change	-0.034	+0.031	+0.1	+0.032

SOURCE: Ramboll Environ, 2018

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
7. GREENHOUSE GAS EMISSIONS—Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Rincon Hill PEIR

The State CEQA Guidelines were amended in 2010 to require an analysis of a project's GHG emissions on the environment. The Rincon Hill PEIR was certified in May 2005 and, therefore, did not analyze the effects of GHG emissions. In addition, the BAAQMD has prepared guidelines that provide methodologies for analyzing air quality impacts under CEQA, including the impact of GHG emissions. These guidelines are consistent with CEQA Guidelines Sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions and allow for projects that are consistent with a GHG reduction strategy to conclude that the project's GHG impact would be less than significant. The following analysis is based on BAAQMD and CEQA guidelines for

analyzing GHG emissions. As discussed below, the proposed project would not result in any new significant impacts related to GHG emissions.

Proposed Project

San Francisco's *Strategies to Address Greenhouse Gas Emissions*[53] presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's GHG reduction strategy in compliance with the BAAQMD and CEQA guidelines. These GHG reduction actions have resulted in a 23.3 percent reduction in GHG emissions in 2012 compared to 1990 levels,[54] exceeding the year 2020 reduction goals outlined in the BAAQMD's *2010 Clean Air Plan*,[55] Executive Order S-3-05,[56] and Assembly Bill 32 (also known as the Global Warming Solutions Act).[57, 58] In addition, San Francisco's GHG reduction goals are consistent with, or more aggressive than, the long-term goals established under Executive Orders S-3-05[59] and B-30-15[60, 61] and Senate Bill 32.[62, 63] Therefore, projects that are consistent with San Francisco's GHG reduction strategy would not result in GHG emissions that would have a

[53] San Francisco Planning Department, *Strategies to Address Greenhouse Gas Emissions in San Francisco,* November 2010. Available at http://sfmea.sfplanning.org/GHG_Reduction_Strategy.pdf, accessed March 3, 2016.

[54] ICF International, *Technical Review of the 2012 Community-wide GHG Inventory for the City and County of San Francisco*, January 21, 2015. Available at http://sfenvironment.org/sites/default/files/fliers/files/icf_verificationmemo_2012sfecommunityinventory_2015-01-21.pdf, accessed March 16, 2015.

[55] Bay Area Air Quality Management District, *Clean Air Plan*, September 2010. Available at http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans, accessed March 3, 2016.

[56] Office of the Governor, Executive Order S-3-05, June 1, 2005. Available at https://www.gov.ca.gov/news.php?id=1861, accessed March 3, 2016.

[57] California Legislative Information, Assembly Bill 32, September 27, 2006. Available at http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf, accessed March 3, 2016.

[58] Executive Order S-3-05, Assembly Bill 32, and the *Bay Area 2010 Clean Air Plan* set a target of reducing GHG emissions to below 1990 levels by year 2020.

[59] Executive Order S-3-05 sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide equivalent ($MTCO_2E$)); by 2020, reduce emissions to 1990 levels (approximately 427 million $MTCO_2E$); and by 2050, reduce emissions to 80 percent below 1990 levels (approximately 85 million $MTCO_2E$). Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalent," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

[60] Office of the Governor, Executive Order B-30-15, April 29, 2015. Available at https://www.gov.ca.gov/news.php?id=18938, accessed March 3, 2016. Executive Order B-30-15 sets a state GHG emissions reduction goal of 40 percent below 1990 levels by the year 2030.

[61] San Francisco's GHG reduction goals are codified in Section 902 of the Environment Code and include: (i) by 2008, determine City GHG emissions for year 1990; (ii) by 2017, reduce GHG emissions by 25 percent below 1990 levels; (iii) by 2025, reduce GHG emissions by 40 percent below 1990 levels; and by 2050, reduce GHG emissions by 80 percent below 1990 levels.

[62] Senate Bill 32 amends California Health and Safety Code Division 25.5 (also known as the California Global Warming Solutions Act of 2006) by adding Section 38566, which directs that statewide greenhouse gas emissions to be reduced by 40 percent below 1990 levels by 2030.

[63] Senate Bill 32 was paired with Assembly Bill 197, which would modify the structure of the State Air Resources Board; institute requirements for the disclosure of greenhouse gas emissions criteria pollutants and toxic air contaminants; and establish requirements for the review and adoption of rules, regulations, and measures for the reduction of greenhouse gas emissions.

significant effect on the environment and would not conflict with state, regional, and local GHG reduction plans and regulations.

The proposed project would increase the intensity of use of the project site by introducing a total of 144 dwelling units and 73 parking spaces to replace a retail self-storage use. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of residential operations that result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions.

The proposed project would be subject to regulations adopted to reduce GHG emissions as identified in the GHG reduction strategy. As discussed below, compliance with the applicable regulations would reduce the project's GHG emissions related to transportation, energy use, waste disposal, wood burning, and use of refrigerants.

Compliance with the City's Transportation Sustainability Fee, bicycle parking requirements, low-emission car parking requirements, and car sharing requirements would reduce the proposed project's transportation-related GHG emissions. These regulations reduce GHG emissions from single-occupancy vehicles by promoting the use of alternative transportation modes with zero or lower GHG emissions on a per capita basis.

The proposed project would be required to comply with the energy efficiency requirements of the City's Green Building Code, the Stormwater Management Ordinance, the Residential Water Conservation Ordinance, and the Water Efficient Irrigation Ordinance, all of which would promote energy and water efficiency, thereby reducing the proposed project's energy-related GHG emissions.[64]

The proposed project's waste-related emissions would be reduced through compliance with the City's Recycling and Composting Ordinance, Construction and Demolition Debris Recovery Ordinance, and construction and demolition debris recycling requirements. These regulations reduce the amount of materials sent to a landfill, reducing GHGs emitted by landfill operations. These regulations also promote reuse of materials, conserving their embodied energy[65] and reducing the energy required to produce new materials.

Compliance with the City's street tree planting requirements would serve to increase carbon sequestration. Regulations requiring low-emitting finishes would reduce volatile organic compounds (VOCs).[66] Thus, the proposed project was determined to be consistent with San Francisco's GHG reduction strategy.[67]

[64] Compliance with water conservation measures reduces the energy (and GHG emissions) required to convey, pump, and treat water required for the project.

[65] Embodied energy is the total energy required for the extraction, processing, manufacture, and delivery of building materials to the building site.

[66] While not a GHG, VOCs are precursor pollutants that form ground-level ozone. Increased ground-level ozone is an anticipated effect of future global warming that would result in added health effects locally. Reducing VOC emissions would reduce the anticipated local effects of global warming.

[67] San Francisco Planning Department, *Greenhouse Gas Analysis: Compliance Checklist for 429 Beale Street and 430 Main Street*, December 12, 2017.

Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations. Furthermore, the proposed project is within the scope of the development evaluated in the PEIR and would not result in impacts associated with GHG emissions beyond those disclosed in the PEIR. For these reasons, the proposed project would not result in significant GHG emissions that were not identified in the Rincon Hill PEIR, and no mitigation measures are necessary.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
8. WIND AND SHADOW—Would the project:				
a) Alter wind in a manner that substantially affects public areas?	☐	☐	☐	☒
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☐	☐	☐	☒

Wind

The Rincon Hill PEIR analyzed the wind impacts from potential development that could occur under the *Rincon Hill Area Plan*. Development anticipated under the *Rincon Hill Area Plan* was found to have the potential to create new exceedances of the wind hazard criterion established in the Planning Code. Under the Rincon Hill PEIR, a project that causes the wind hazard criterion to be exceeded for more than one hour per year would be considered to have a significant impact. A project that would cause exceedances of the wind comfort criteria, but not the wind hazard criterion, would not be considered to have a significant impact.[68] In order to ensure that implementation of the *Rincon Hill Area Plan* would not result in significant wind impacts, Mitigation Measure G.1, identified in the Rincon Hill PEIR, requires the City to adopt Planning Code controls on wind speeds for the RH-DTR District that are, at a minimum, functionally equivalent to the controls contained in Planning Code Section 148. A legislative amendment was adopted to add Section 825(d) to the Planning Code, which establishes regulations related to ground-level wind currents in the RH-DTR District. Each development project proposed under the *Rincon Hill Area Plan* is required to comply with the provisions of Planning Code Section 825(d). The potential wind impacts of each individual project would have to be assessed, and if it is determined that any individual project would result in exceedances of the wind hazard criterion, design modifications or wind reduction measures would have to be implemented to eliminate those exceedances. For these reasons, the Rincon Hill PEIR concluded that, with mitigation, implementation of the *Rincon Hill Area Plan* would result in less-than-significant wind impacts.

In compliance with Planning Code Section 825(d), the proposed project underwent wind tunnel testing to determine if it would cause hazardous wind conditions (i.e., if it would cause winds to reach or exceed 26 mph for one hour a year). The results of the wind tunnel test are presented in a wind tunnel report and are summarized below.[69]

[68] Rincon Hill PEIR, p. 177.

[69] RWDI, *Pedestrian Wind Study, 430 Main Street, San Francisco, California*, November 1, 2017.

A scale model of the proposed project and its surroundings was constructed and placed in an atmospheric boundary-layer wind tunnel. Fifty sensors were added at various locations in the model to record the wind speed during testing. Three different scenarios were tested: existing conditions, existing-plus-project conditions, and cumulative conditions (existing plus project plus other reasonably foreseeable future projects). No hazardous wind conditions were identified under any of the scenarios tested in the wind tunnel.

For these reasons, the proposed project would not cause significant wind impacts beyond those identified in the Rincon Hill PEIR.

Shadow

Planning Code Section 295 generally prohibits new structures above 40 feet in height that would cast additional shadows on open space that is under the jurisdiction of the San Francisco Recreation and Park Commission between one hour after sunrise and one hour before sunset, at any time of the year, unless that shadow would not result in a significant adverse effect on the use of the open space.

The Rincon Hill PEIR analyzed the shadow impacts on outdoor recreation facilities and other public areas from potential development that could occur under the *Rincon Hill Area Plan*. Development anticipated under the *Rincon Hill Area Plan* would not cast net new shadow on any properties under the jurisdiction of the Recreation and Park Commission, but it would cast net new shadow on other public open spaces,[70] privately owned publicly accessible open spaces (POPOs), and public sidewalks. This net new shadow would not be in excess of what is common and generally expected in densely developed urban environments. For these reasons, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would not result in significant shadow impacts, and no mitigation measures were identified.

The proposed project would be nine stories and 84 feet tall (99 feet to the top of the penthouse structure). The Planning Department prepared a preliminary shadow fan analysis[71] and determined that the proposed project would not cast shadow on any properties under the jurisdiction of the San Francisco Recreation and Park Commission at any time during the year.[72] However, the proposed project has the potential to cast shadow on other publicly accessible open spaces in the vicinity of the project site: Emerald Park (at the intersection of Harrison and Fremont streets), Rincon Hill Dog Park (at the intersection of Beale and Bryant streets), and open spaces at 2 Bryant Street, 300 Beale Street, and 201 Harrison Street. A more detailed shadow analysis was conducted by an independent consultant, and the results of the shadow analysis are summarized below.[73]

The shadow analysis consisted of using a geolocated three-dimensional computer model of the proposed project, the nearby open spaces, and the surrounding urban environment to simulate existing shadow as

[70] Other public open spaces are those that are under the jurisdiction of public agencies other than the Recreation and Park Commission, such as the Port of San Francisco.

[71] A shadow fan is a diagram that shows the maximum potential reach of project shadow, without accounting for intervening buildings that could block the shadow, over the course of an entire year (from one hour after sunrise until one hour before sunset on each day of the year) in relation to the locations of nearby open spaces, recreation facilities, and parks.

[72] San Francisco Planning Department, *429 Beale Street and 430 Main Street Shadow Fan*, September 28, 2017.

[73] PreVision Design, *Shadow Analysis Report for 430 Main Street*, October 23, 2017.

well as new shadow that would be added by the proposed project. The analysis accounts for the period from one hour after sunrise until one hour before sunset.

Shadow cast by the proposed project would not reach Emerald Park, Rincon Hill Dog Park, or open spaces at 2 Bryant Street or 300 Beale Street at any time during the year. Shadow cast by the proposed project would be blocked by existing buildings located between the project site and these four open spaces.

At the time that the independent consultant conducted the shadow analysis, it was not known that the open space at 201 Harrison Street, which is adjacent to and north of the project site, was intended to be publicly accessible.[74] This open space is the westernmost courtyard of BayCrest Towers, and it is used by the residents of BayCrest Towers. This open space is also accessible from Harrison Street through a gate. However, it is unclear how frequently this gate is kept unlocked during daylight hours so that the courtyard can be accessed by the public. During four separate visits to BayCrest Towers, the gate was unlocked on one occasion and locked on the other three occasions.[75] There is no plaque or sign on the Harrison Street façade of the building to inform the public that there is a publicly accessible open space at this location, and this open space is not identified on the Planning Department's list of privately owned public open spaces.[76] On the one occasion when the gate at BayCrest Towers was unlocked and the courtyard was accessible, nobody was observed using this open space.[77]

This open space is currently enclosed on the north and the east by BayCrest Towers and is open on the south and the west. Construction of the proposed project would enclose this open space on the south, leaving only the west side of this open space unenclosed. The proposed project would shadow this open space from the morning until the mid-afternoon throughout the year. During the spring, summer, and autumn, sunlight would still reach this open space in the mid-afternoon. The net new project shadow would make this open space less desirable for individuals seeking sunlight but would not substantially detract from its use when considered in an urban context. Open spaces in Rincon Hill have been developed in conjunction with, and adjacent to, mid- and high-rise development to provide open spaces for residents of and visitors to these buildings. As such, these open spaces are expected to have shadow and sunlight conditions that are generally similar to nearby pedestrian areas such as sidewalks (i.e., they are shadowed daily by related or other nearby mid- and high-rise buildings). As discussed above, there are four other open spaces in the project vicinity that can be used by the public, and these other open spaces would not be affected by the proposed project's shadow. The proposed project's overall shadow impact on publicly accessible open spaces would be less than significant.

Some of the dwelling units at BayCrest Towers face this open space. Construction of the proposed project would reduce the amount of sunlight that these dwelling units receive. Although the affected residents of BayCrest Towers may regard the increase in shadow as undesirable, the shading of private properties

[74] This information was provided by a BayCrest Towers resident during a site visit on Tuesday, February 13, 2018.

[75] Site visits were conducted on the following days: the morning of Tuesday, February 13, 2018; the afternoon of Wednesday, February 28, 2018; the early afternoon of Sunday, March 11, 2018; and the late afternoon of Sunday, March 11, 2018. The gate was unlocked during the first site visit and locked during the subsequent three site visits.

[76] San Francisco Planning Department, *Privately Owned Public Open Space and Public Art*. Available online at http://sf-planning.org/privately-owned-public-open-space-and-public-art-popos, accessed February 27, 2018.

[77] Field observation on Tuesday, February 13, 2018.

as a result of the proposed project is not considered a significant impact under CEQA. The CEQA significance criterion in the initial study checklist considers whether the proposed project would create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas, not whether it substantially affects private properties.

The proposed project would shade portions of nearby streets and sidewalks in the project vicinity at different times of day throughout the year. Shadows on streets and sidewalks would be transitory in nature, would not exceed levels commonly expected in urban areas, and would be considered a less-than-significant impact under CEQA.

For these reasons, the proposed project would not result in significant shadow impacts beyond those identified in the Rincon Hill PEIR.

Topics:		*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
9.	**RECREATION—Would the project:**				
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	☒
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒
c)	Physically degrade existing recreational resources?	☐	☐	☐	☒

The Rincon Hill PEIR determined that implementation of the *Rincon Hill Area Plan* would increase the demand for recreation facilities. Proposed development in the Rincon Hill neighborhood is considered infill development (i.e., it would occur in an area of San Francisco that is already developed and already served by existing recreation facilities). The added growth and increased demand for recreation facilities would be consistent with planned service levels and capacity. In addition, the *Rincon Hill Area Plan* includes objectives and policies calling for developers to provide public open space as part of nonresidential projects and residential open space as part of residential projects. These objectives and policies are reflected in the open space requirements for the RH-DTR District (Planning Code Section 827). For these reasons, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would not result in significant impacts on recreation facilities, and no mitigation measures were identified.

The proposed project would provide usable open space for its residents in the form of a ground-level yard, private balconies, and a roof deck. This usable open space would help alleviate the project-related demand for recreational facilities.

As the proposed project would not degrade recreational facilities and is consistent with the development density established under the *Rincon Hill Area Plan*, there would be no additional impacts on recreation beyond those analyzed in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
10. UTILITIES AND SERVICE SYSTEMS—Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

The Rincon Hill PEIR determined that the anticipated increase in population as a result of Plan implementation would not result in a significant impact on the provision of water, wastewater collection and treatment, and solid waste collection and disposal. No mitigation measures were identified in the PEIR.

Since certification of the PEIR, the San Francisco Public Utilities Commission (SFPUC) adopted the *2010 Urban Water Management Plan* (UWMP) in June 2011. The UWMP update includes citywide demand projections to the year 2035, compares available water supplies to meet demand, and presents water demand management measures to reduce long-term water demand. Additionally, the UWMP update includes a discussion of the conservation requirement set forth in Senate Bill 7, passed in November 2009, mandating a statewide 20 percent reduction in per capita water use by 2020. The UWMP includes a quantification of the SFPUC's water use reduction targets and plan for meeting these objectives. The UWMP projects sufficient water supply in normal years and a supply shortfall during prolonged droughts. Plans are in place to institute varying degrees of water conservation and rationing as needed in response to severe droughts.

In addition, the SFPUC is in the process of implementing the Sewer System Improvement Program, which is a 20-year, multi-billion dollar citywide upgrade to the City's sewer and stormwater infrastructure to ensure a reliable and seismically safe system.

As the proposed project is consistent with the development density established under the *Rincon Hill Area Plan*, there would be no additional impacts on utilities and service systems beyond those analyzed in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
11. PUBLIC SERVICES—Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☐	☒

The Rincon Hill PEIR determined that the anticipated increase in population as a result of Plan implementation would not result in a significant impact on public services, including fire protection, police protection, and public schools. No mitigation measures were identified in the PEIR.

As the proposed project is consistent with the development density established under the *Rincon Hill Area Plan*, there would be no additional impacts on public services beyond those analyzed in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
12. BIOLOGICAL RESOURCES—Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

Topics:	Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The Rincon Hill PEIR disclosed that the Rincon Hill neighborhood is in a developed urban environment that does not provide native natural habitat for any rare or endangered plant or animal species. There are no riparian corridors, estuaries, marshes, or wetlands in the Rincon Hill neighborhood that could be affected by the development anticipated under the *Rincon Hill Area Plan*. In addition, development envisioned under the *Rincon Hill Area Plan* would not substantially interfere with the movement of any resident or migratory wildlife species. For these reasons, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would not result in significant impacts on biological resources, and no mitigation measures were identified.

San Francisco is within the Pacific Flyway, a major north-south route of travel for migratory birds along the western portion of the Americas. Buildings are potential obstacles that can injure or kill birds in the event of a collision, and bird strikes are a leading cause of worldwide declines in bird populations.

Planning Code Section 139: Standards for Bird-Safe Buildings, establishes building design standards to reduce avian mortality rates associated with bird strikes. This ordinance focuses on location-specific hazards and building feature-related hazards. Location-specific hazards apply to buildings in, or within 300 feet of and having a direct line of sight to, an Urban Bird Refuge, which is defined as an open space "two acres and larger dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, or wetlands, or open water." The project site is not in or within 300 feet of an Urban Bird Refuge, so the standards related to location-specific hazards are not applicable to the proposed project. Feature-related hazards, which can occur on buildings anywhere in San Francisco, are defined as freestanding glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments of 24 square feet or larger. The standards of Planning Code Section 139 that focus on feature-related hazards are applicable to the proposed project. Required compliance with the standards of Planning Code Section 139 would ensure that the proposed project would not result in any significant impacts related to bird strikes.

As the proposed project is consistent with the development density established under the *Rincon Hill Area Plan*, there would be no additional impacts on biological resources beyond those analyzed in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
13. GEOLOGY AND SOILS—Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☐	☒
g) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

The Rincon Hill PEIR disclosed that, like the entire San Francisco Bay Area, the Rincon Hill neighborhood is subject to ground shaking during an earthquake, and portions of the Rincon Hill neighborhood are in or adjacent to an area of liquefaction potential and an area susceptible to landslides. Compliance with applicable codes and recommendations made in project-specific geotechnical analyses would not eliminate earthquake risk, but would reduce them to acceptable levels given the seismically active characteristics of the San Francisco Bay Area. Therefore, the Rincon Hill PEIR concluded that implementation of the *Rincon Hill Area Plan* would not result in significant impacts related to geology and soils, and no mitigation measures were identified.

A geotechnical investigation was conducted to assess the geologic conditions underlying the project site and provide recommendations related to the proposed project's design and construction. The findings and recommendations are presented in a geotechnical report and are summarized below.[78]

The geotechnical investigation consisted of the drilling of three test borings on the project site to depths ranging from 15.5 feet to 62.5 feet below ground surface (bgs). In addition, four cone penetration tests (CPTs) were conducted on the project site. The CPTs were advanced to depths ranging from 3.5 feet to 17 feet below the tops of the basement slabs in the existing buildings. Based on the test borings and CPTs, the project site is underlain by fill, sand, clay, and bedrock. Groundwater was encountered at depths ranging from 16 feet to 19 feet bgs. There are no known active earthquake faults that run underneath the project site or in the project vicinity; the closest active fault to the project site is the San Andreas Fault, which is about 8.5 miles to the west. The project site is not in a landslide hazard zone, but the eastern end of the project site is in a liquefaction hazard zone.[79]

The geotechnical report recommends that the proposed building be supported by a mat foundation bearing on native dense sand or bedrock. The proposed building would be supported by a mat foundation; pile driving would not be required. Construction of the proposed project would require excavation to depths ranging from about 10 feet to about 25.5 feet below ground surface and the removal of about 12,052 cubic yards of soil. The geotechnical report includes recommendations related to foundations, floor slabs, permanent below-grade walls, seismic design, temporary cut slopes and shoring, dewatering, construction monitoring, site preparation, earthwork, and utilities. The project sponsor has agreed to implement the recommendations in the geotechnical report.

Since the project site is in a liquefaction hazard zone, the Seismic Hazards Mapping Act (SHMA) requires that (1) the seismic hazard area on the project site be identified and (2) the DBI ensures that the geotechnical recommendations to address the seismic hazard issues be made conditions of the building permit.

In addition, the proposed project is required to comply with the Building Code, which ensures the safety of all new construction in San Francisco. The DBI will review the project-specific geotechnical report during its review of the building permit application for the proposed project. In addition, the DBI may require additional site-specific soils report(s) as needed. Implementation of the recommendations in the geotechnical report as required by the SHMA, in combination with the requirement for a geotechnical report and the review of the building permit application pursuant to the DBI's implementation of the Building Code would minimize the risk of loss, injury, or death due to seismic or other geologic hazards.

For these reasons, the proposed project would not result in significant impacts related to geology and soils beyond those identified in the Rincon Hill PEIR, and no mitigation measures are necessary.

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[78] Langan Treadwell Rollo, *Geotechnical Investigation, 430 Main Street, San Francisco, California*, June 6, 2016.

[79] San Francisco Planning Department, GIS database geology layer, accessed December 26, 2017.

Topics:	Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
14. HYDROLOGY AND WATER QUALITY—Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

The Rincon Hill PEIR determined that the anticipated increase in population as a result of Plan implementation would not result in a significant impact related to hydrology and water quality, including the combined sewer system and the potential for combined sewer outflows. No mitigation measures were identified in the PEIR.

The entire project site is currently covered by impervious surfaces, and the proposed building's footprint would cover the entire project site. As a result, the proposed project would not result in an increase in the amount of impervious surface area on the project site or an increase in the amount of runoff and drainage from the project site. In accordance with the Stormwater Management Ordinance (Ordinance No. 83-10, effective May 22, 2010), the proposed project is subject to and would comply with the Stormwater Design

Guidelines, incorporating low impact design approaches and stormwater management systems into the project. Therefore, the proposed project would not adversely affect runoff and drainage.

For these reasons, the proposed project would not result in any significant impacts related to hydrology and water quality beyond those identified in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
15. HAZARDS AND HAZARDOUS MATERIALS—Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

The Rincon Hill PEIR identified less-than-significant impacts related to the routine transport, use, or disposal of hazardous material and the potential for subsequent development projects within the Plan Area to expose people or structures to potential fire hazards (including those associated with hydrant water pressure and emergency access). Impacts related to contaminated soil and/or groundwater and hazardous materials are discussed below.

Contaminated Soil and Groundwater

The Rincon Hill PEIR identified a significant impact from the release of contaminated soil and/or groundwater during the construction of projects under the *Rincon Hill Area Plan* and identified two mitigation measures to reduce these impacts to less-than-significant levels.

PEIR Mitigation Measure H.1 applies to any development project on a site that is not covered by the Maher Ordinance (Article 22A of the Health Code). The sponsor of such a project is required to conduct a Phase I Environmental Site Assessment (ESA). If warranted by the Phase I ESA, and in consultation with the Department of Public Health (DPH), the sponsor shall prepare a Phase II environmental assessment that includes sampling of soil and/or groundwater. If contaminated soil and/or groundwater is discovered, the sponsor shall (1) enter into a voluntary cleanup agreement with the DPH, (2) prepare and implement a Site Mitigation Plan (SMP) that is approved by the DPH, (3) prepare and implement a Site Health and Safety Plan, and (4) if required, record a deed restriction limiting the site to future uses that are compatible with any remaining hazardous materials.

Mitigation Measure H.2 applies to any development project that requires dewatering during construction. In consultation with the Bureau of Environmental Regulation of the San Francisco Public Utilities Commission, the sponsor of such a project shall follow the recommendations of the site assessment/remediation consultant regarding the treatment of any pumped groundwater prior to its discharge into the sewer system. Any groundwater encountered during construction of such a project would be subject to the San Francisco Industrial Waste Ordinance, which requires pumped groundwater to meet specified water quality standards before it may be discharged into the sewer system.

PEIR Mitigation Measure H.1 applies to projects on sites that are not covered by the Maher Ordinance. As discussed below, the proposed project is subject to the Maher Ordinance. Therefore, PEIR Mitigation Measure H.1 is not applicable to the proposed project.

The project site is located in a Maher Area, meaning that it is known or suspected to contain contaminated soil and/or groundwater.[80] The proposed project would require excavation to depths ranging from 10 feet to 25.5 feet below ground surface and the disturbance of more than 50 cubic yards of soil. For these reasons, the proposed project is subject to the Maher Ordinance, which is administered by the DPH.

The Maher Ordinance requires sponsors for projects that disturb more than 50 cubic yards of soil to retain the services of a qualified professional to prepare a Phase I ESA that meets the requirements of Health Code Section 22.A.6. The Phase I ESA would determine the potential for site contamination and level of exposure risk associated with the proposed project. Based on that information, the project sponsor may be required to conduct soil and/or groundwater sampling and analysis. Where such analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor is required to submit an SMP to the DPH or other appropriate state or federal agencies and to remediate any site contamination in accordance with an approved SMP prior to the issuance of any building permit.

In compliance with the Maher Ordinance, the project sponsor has submitted a Maher Ordinance Application to the DPH, and a Phase I ESA has been prepared to assess the potential for site contamination.[81, 82] The Phase I ESA found no evidence of hazardous substances or petroleum products, no evidence of unidentified containers, and no evidence of improper solid waste management or

[80] San Francisco Planning Department, GIS database Maher Map layer, accessed December 18, 2017.

[81] *Maher Ordinance Application, 429 Beale Street and 430 Main Street*, submitted December 20, 2017.

[82] EBI Consulting, *Phase I Environmental Site Assessment, 429 Beale Street and 430 Main Street, San Francisco, California* (hereinafter "*Phase I ESA*"), May 2, 2014.

improper disposal of hazardous substances or petroleum products at the project site.[83] The Phase I ESA found no existing storage tanks, either aboveground or underground, on or adjacent to the project site.[84] In summary, the Phase I ESA concluded that there are no Recognized Environmental Conditions associated with the project site.[85]

Construction of the proposed project would require excavation to depths ranging from about 10 feet to 25.5 feet bgs. During the geotechnical investigation, groundwater was encountered at depths ranging from 16 feet to 19 feet bgs. For these reasons, PEIR Mitigation Measure H.2 is applicable to the proposed project. PEIR Mitigation Measure H.2 is identified as Project Mitigation Measure 3: Dewatering During Construction, and is discussed on p. 51.

Required compliance with the Maher Ordinance and implementation of Project Mitigation Measure 3 would reduce potential impacts related to contaminated soil and/or groundwater to less-than-significant levels.

Hazardous Building Materials

The proposed project would include the demolition of the two existing buildings on the project site. The building at 429 Beale Street was constructed in 1951, and the building at 430 Main Street was constructed in 1929. Because these buildings were constructed before the 1970s, hazardous building materials such as polychlorinated biphenyls (PCBs), mercury, asbestos and lead-based paint are likely to be present in these buildings. Demolishing the existing buildings could expose workers or the community to hazardous building materials. The proposed project involves the demolition of the existing buildings on the project site. All hazardous building materials containing PCBs, mercury, asbestos, or lead-based paint must be removed and properly disposed of in accordance with applicable federal, state, and local laws prior to the start of demolition and/or renovation of an existing structure. Required compliance with applicable federal, state, and local regulations would reduce potential impacts related to hazardous building materials to less-than-significant levels.

Conclusion

As discussed above, implementation of Project Mitigation Measure 3 and compliance with all applicable federal, state, and local regulations would ensure that the proposed project would not result in significant impacts related to hazards or hazardous materials beyond those identified in the Rincon Hill PEIR.

Topics:	*Significant Impact Peculiar to Project or Project Site*	*Significant Impact not Identified in PEIR*	*Significant Impact due to Substantial New Information*	*No Significant Impact not Previously Identified in PEIR*
16. MINERAL AND ENERGY RESOURCES—Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

[83] *Phase I ESA*, pp. 32-33.
[84] *Phase I ESA*, p. 33.
[85] *Phase I ESA*, p. 39.

Topics:	Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☐	☒

In California, energy consumption in buildings is regulated by Title 24 of the California Code of Regulations. Title 24 includes standards that regulate energy consumption for the heating, cooling, ventilation, and lighting of residential and nonresidential buildings. In San Francisco, documentation demonstrating compliance with Title 24 standards is required to be submitted with a building permit application. Compliance with Title 24 standards is enforced by the DBI. Each development project proposed under the *Rincon Hill Area Plan* is required to comply with current state and local regulations related to energy consumption, including Title 24. Based on required compliance with state and local regulations, the Rincon Hill PEIR concluded that implementation of the Rincon Hill Area Plan would not result in significant impacts on mineral and energy resources, and no mitigation measures were identified.

As the proposed project is consistent with the development density established under the *Rincon Hill Area Plan*, there would be no additional impacts on mineral and energy resources beyond those analyzed in the Rincon Hill PEIR.

Topics:	Significant Impact Peculiar to Project or Project Site	Significant Impact not Identified in PEIR	Significant Impact due to Substantial New Information	No Significant Impact not Previously Identified in PEIR
17. AGRICULTURE AND FOREST RESOURCES:—Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	☐	☐	☐	☒

The *Rincon Hill PEIR* did not discuss impacts on agriculture and forest resources that could result from implementation of the *Rincon Hill Area Plan*, because there are no agriculture or forest resources in the area covered by the *Rincon Hill Area Plan*.

The project site does not contain agricultural uses, forest land, or timberland, and it is not zoned for such uses. The proposed project would not convert farmland to non-agricultural use and would not convert forest land or timberland to non-forest use. For these reasons, implementation of the proposed project would have no impacts on agriculture or forest resources, and no mitigation measures are necessary.

MITIGATION MEASURES

Project Mitigation Measure 1 – Archeological Monitoring (Implementing Rincon Hill PEIR Mitigation Measure I.1b)

Based on the reasonable potential that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the rotational Qualified Archeological Consultants List (QACL) maintained by the Planning Department (Department) archeologist. The project sponsor shall contact the Department archeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the Environmental Review Officer (ERO) for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of *construction* can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a) and (c).

Consultation with Descendant Communities. On discovery of an archeological site[86] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative[87] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.

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[86] The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

[87] An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and, in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

Archeological Monitoring Program (AMP). The archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and the ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils-disturbing activities commencing. The ERO, in consultation with the project archeologist, shall determine what project activities shall be archeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the potential risk these activities pose to archeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving or deep foundation activities (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving or deep foundation activities may affect an archeological resource, the pile driving or deep foundation activities shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, present the findings of this assessment to the ERO.

If the ERO, in consultation with the archeological consultant, determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor, either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

B) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

If an archeological data recovery program is required by the ERO, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The project archeological consultant, project sponsor, and the ERO shall meet and consult on the scope of the ADRP. The

archeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis*. Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy*. Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program*. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures*. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report*. Description of proposed report format and distribution of results.
- *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and, in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The ERO shall also be immediately notified upon discovery of human remains. The archeological consultant, project sponsor, ERO, and MLD shall have up to, but not beyond, six days after the discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such an agreement has been made or, otherwise, as determined by the archeological consultant and the ERO. If no agreement is reached, State regulations shall be followed, including the reburial of the human remains and associated

burial objects with appropriate dignity on the property in a location not subject to further subsurface disturbance (Pub. Res. Code Sec. 5097.98).

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: the California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning Division of the Planning Department shall receive one bound, one unbound, and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Project Mitigation Measure 2 – Construction Air Quality (Implementing Rincon Hill PEIR Mitigation Measure E.1)

The project sponsor or the project sponsor's Contractor shall comply with the following:

A. *Engine Requirements.*

1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (ARB) Tier 2 off-road emission standards, and have been retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy. Equipment with engines meeting Tier 4 Interim or Tier 4 Final off-road emission standards automatically meet this requirement.
2. Where access to alternative sources of power are available, portable diesel engines shall be prohibited.
3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes, at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The Contractor shall post legible and visible signs in English, Spanish, and Chinese, in designated queuing areas and at the construction site to remind operators of the two-minute idling limit.
4. The Contractor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in

accordance with manufacturer specifications.

B. *Waivers.*

1. The Planning Department's Environmental Review Officer (ERO) or designee may waive the alternative source of power requirement of Subsection (A)(2) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the Contractor must submit documentation that the equipment used for on-site power generation meets the requirements of Subsection (A)(1).

2. The ERO may waive the equipment requirements of Subsection (A)(1) if: a particular piece of off-road equipment with an ARB Level 3 VDECS is technically not feasible; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or, there is a compelling emergency need to use off-road equipment that is not retrofitted with an ARB Level 3 VDECS. If the ERO grants the waiver, the Contractor must use the next cleanest piece of off-road equipment, according to the table below.

Table – Off-Road Equipment Compliance Step-down Schedule

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 2	ARB Level 2 VDECS
2	Tier 2	ARB Level 1 VDECS
3	Tier 2	Alternative Fuel*

How to use the table: If the ERO determines that the equipment requirements cannot be met, then the project sponsor would need to meet Compliance Alternative 1. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the Contractor must meet Compliance Alternative 2. If the ERO determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the Contractor must meet Compliance Alternative 3. Alternative fuels are not a VDECS.

C. *Construction Emissions Minimization Plan.* Before starting on-site construction activities, the Contractor shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the Contractor will meet the requirements of Section A.

1. The Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine

serial number, and expected fuel usage and hours of operation. For VDECS installed, the description may include: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used.

2. The ERO shall ensure that all applicable requirements of the Plan have been incorporated into the contract specifications. The Plan shall include a certification statement that the Contractor agrees to comply fully with the Plan.

3. The Contractor shall make the Plan available to the public for review on-site during working hours. The Contractor shall post at the construction site a legible and visible sign summarizing the Plan. The sign shall also state that the public may ask to inspect the Plan for the project at any time during working hours and shall explain how to request to inspect the Plan. The Contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way.

D. *Monitoring.* After start of construction activities, the Contractor shall submit quarterly reports to the ERO documenting compliance with the Plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the Plan.

Project Mitigation Measure 3 – Dewatering During Construction (Implementing Rincon Hill PEIR Mitigation Measure H.2)

If dewatering is necessary, the project sponsor shall follow the recommendations of the site assessment/remediation consultant, in consultation with the Bureau of Environmental Regulation (BERM) of the San Francisco Public Utilities Commission, regarding treatment, if any, of pumped groundwater prior to discharge to the combined sewer system. Any groundwater encountered during construction of the proposed project would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance No. 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system. The BERM must be notified of projects necessitating dewatering. That office may require water analysis before discharge.

If dewatering is necessary, groundwater pumped from the development site shall be retained in a holding tank to allow suspended particles to settle, if this is determined necessary by the BERM to reduce the amount of sediment entering the combined sewer system. The project sponsor shall require the general contractor to install and maintain sediment traps if determined necessary by the BERM.

IMPROVEMENT MEASURES

Project Improvement Measure 1 – Construction Traffic (Implementing Rincon Hill PEIR Improvement Measure C.2)

Construction contractor(s) for the proposed project should meet with the Municipal Transportation Agency, the Fire Department, the Planning Department, and other City agencies to determine feasible measures to reduce traffic congestion, including any potential transit disruption and pedestrian circulation impacts during construction of the project. In addition, the temporary parking demand by construction contractor(s) should be met on-site or within other off-site parking facilities, and the construction contractor(s) should determine the location of an off-site parking facility for construction workers during the construction period.

Project Improvement Measure 2 – Construction Management Plan (Implementing Project TIS Improvement Measure TR-1)

To minimize potential disruptions to traffic, transit, pedestrians, and bicyclists, the project sponsor and/or construction contractor should develop a Construction Management Plan that could include, but not necessarily be limited to, the following:

- Identify optimal truck routes to and from the site to minimize impacts to traffic, transit, pedestrians, and bicyclists;
- Identify off-street parking alternatives for construction workers;
- Encourage construction workers to use transit when commuting to and from the project site, reducing the need for parking.

The Construction Management Plan would disseminate appropriate information to contractors and affected agencies with respect to coordinating construction activities to minimize overall disruptions and ensure that overall circulation in the area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle connectivity. The program would supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by the San Francisco Municipal Transportation Agency, the San Francisco Public Works, other City agencies, and Caltrans.

EXHIBIT 2
PROJECT PLANS

430 MAIN

309.1 LARGE PROJECT AUTHORIZATION APPLICATION

NPDR UPDATE 2014046 | 2018.03.14

LCL GLOBAL - 429 BEALE & 430 MAIN STREET, LLC

ARCHITECT
SOLOMON CORDWELL BUENZ
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T 415.216.2450

DEVELOPER
LCL GLOBAL - 429 BEALE & 430 MAIN STREET, LLC
564 MARKET STREET
SAN FRANCISCO, CA 94104
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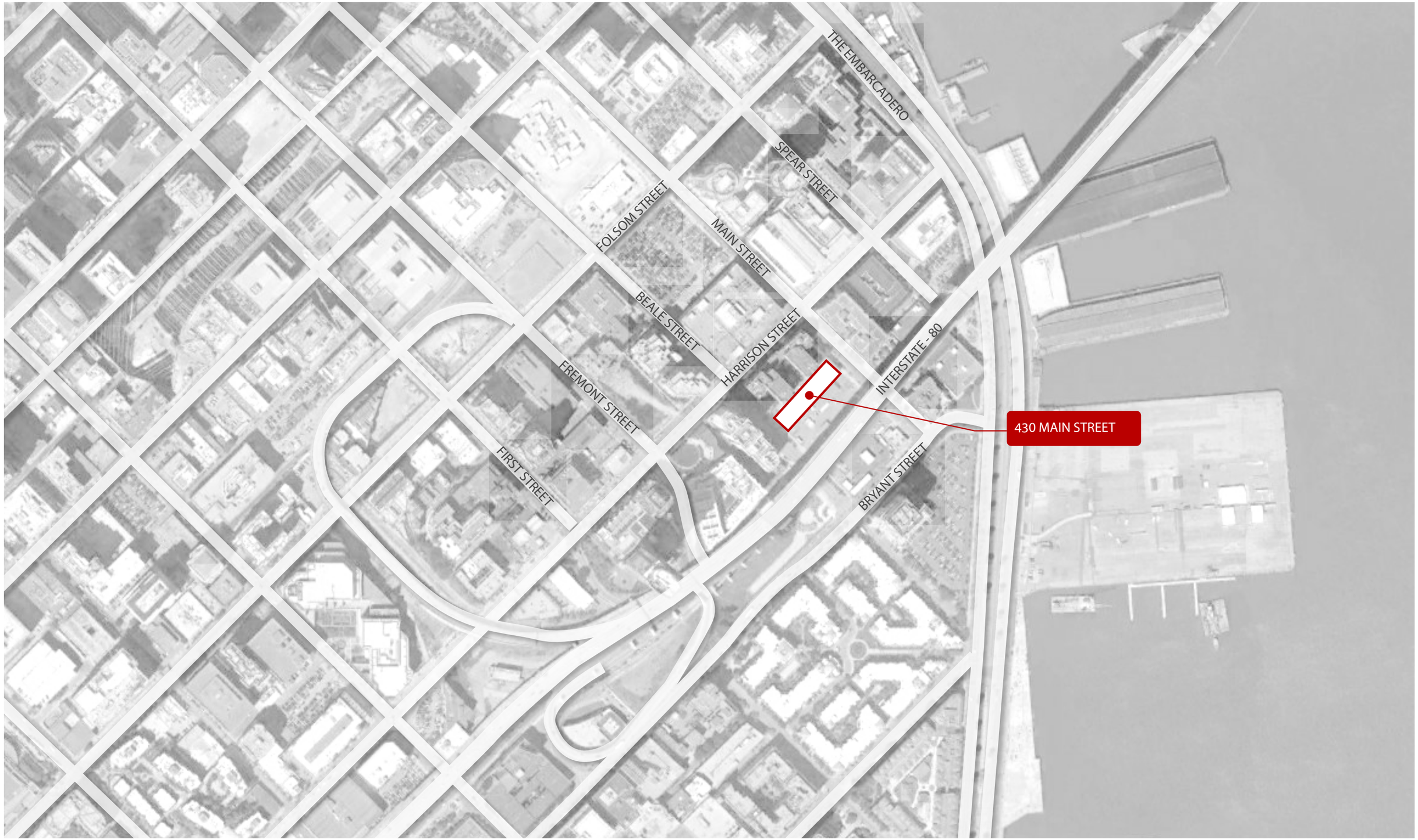
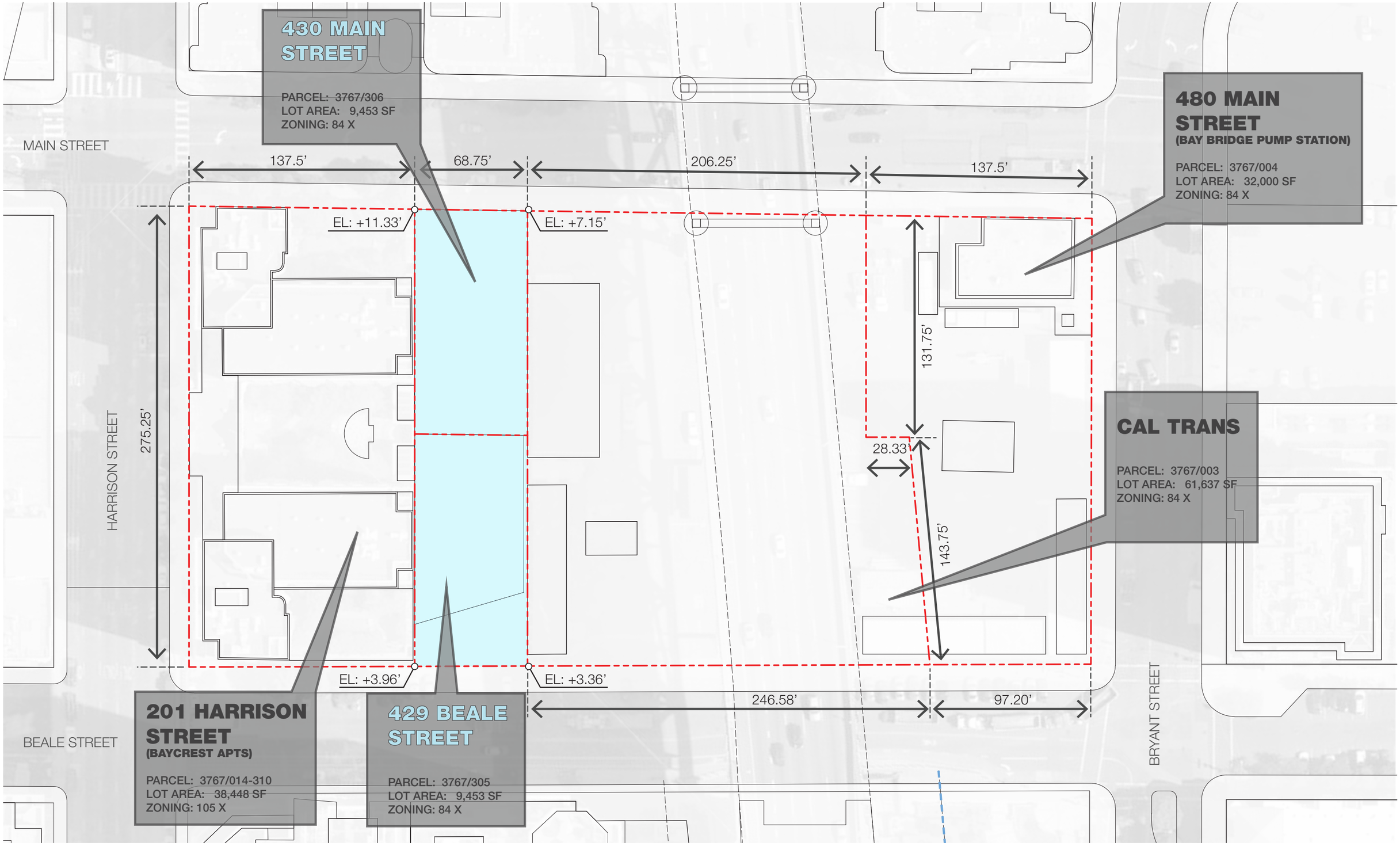
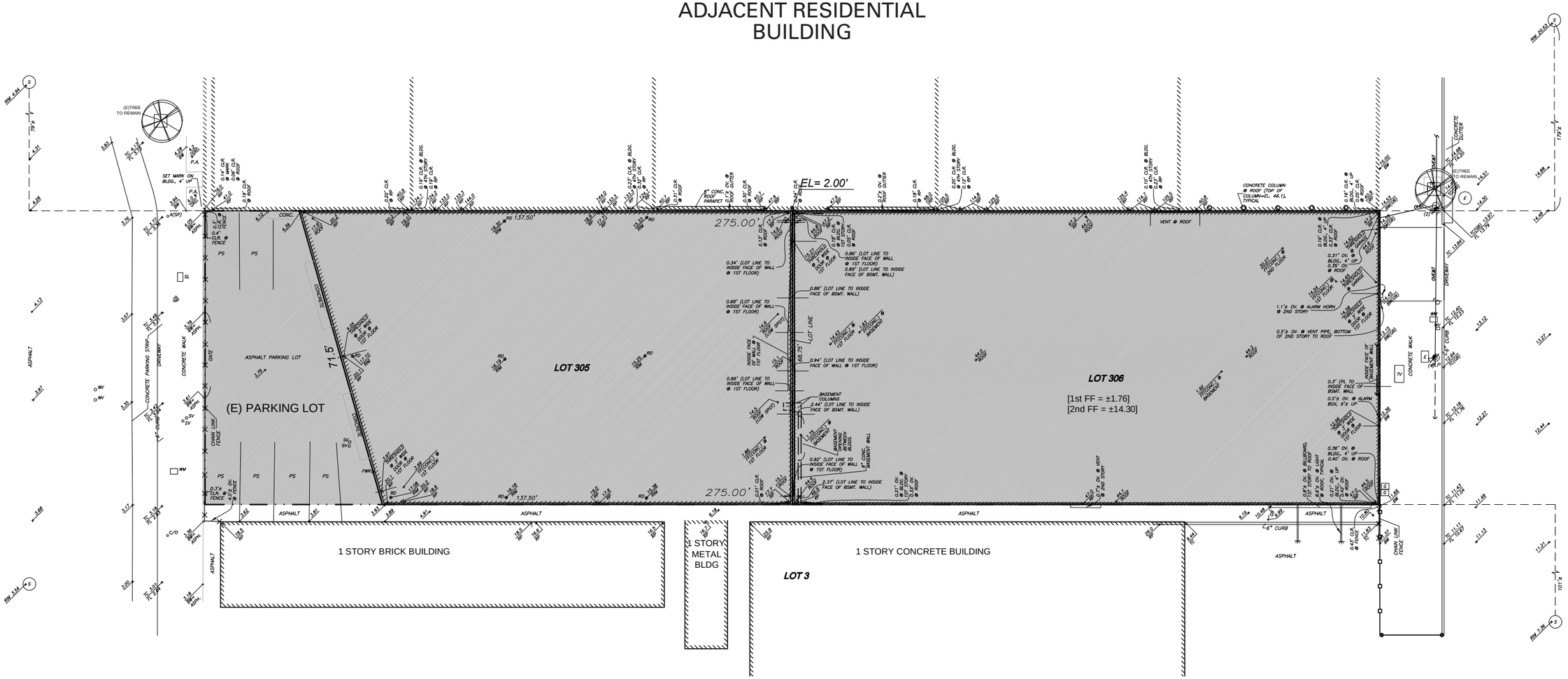


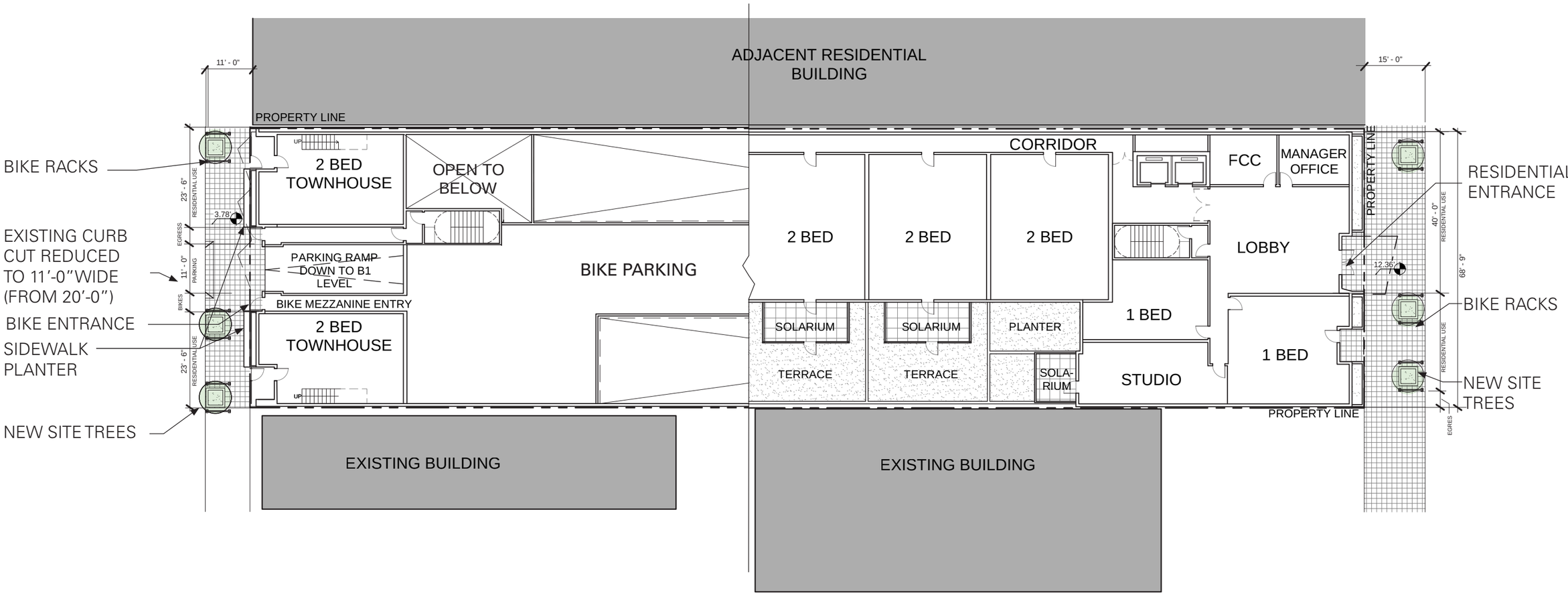
SITE 430 MAIN STREET



EXISTING SITE ADJACENT PARCELS

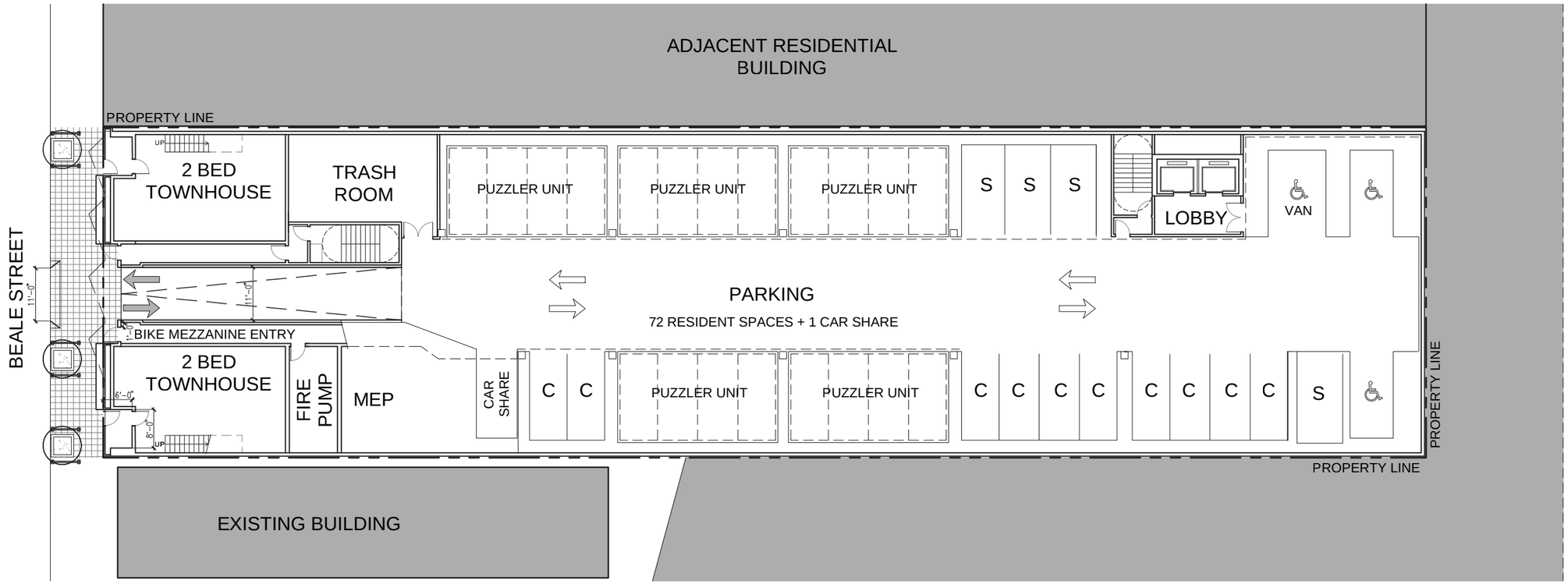


EXISTING SITE SURVEY

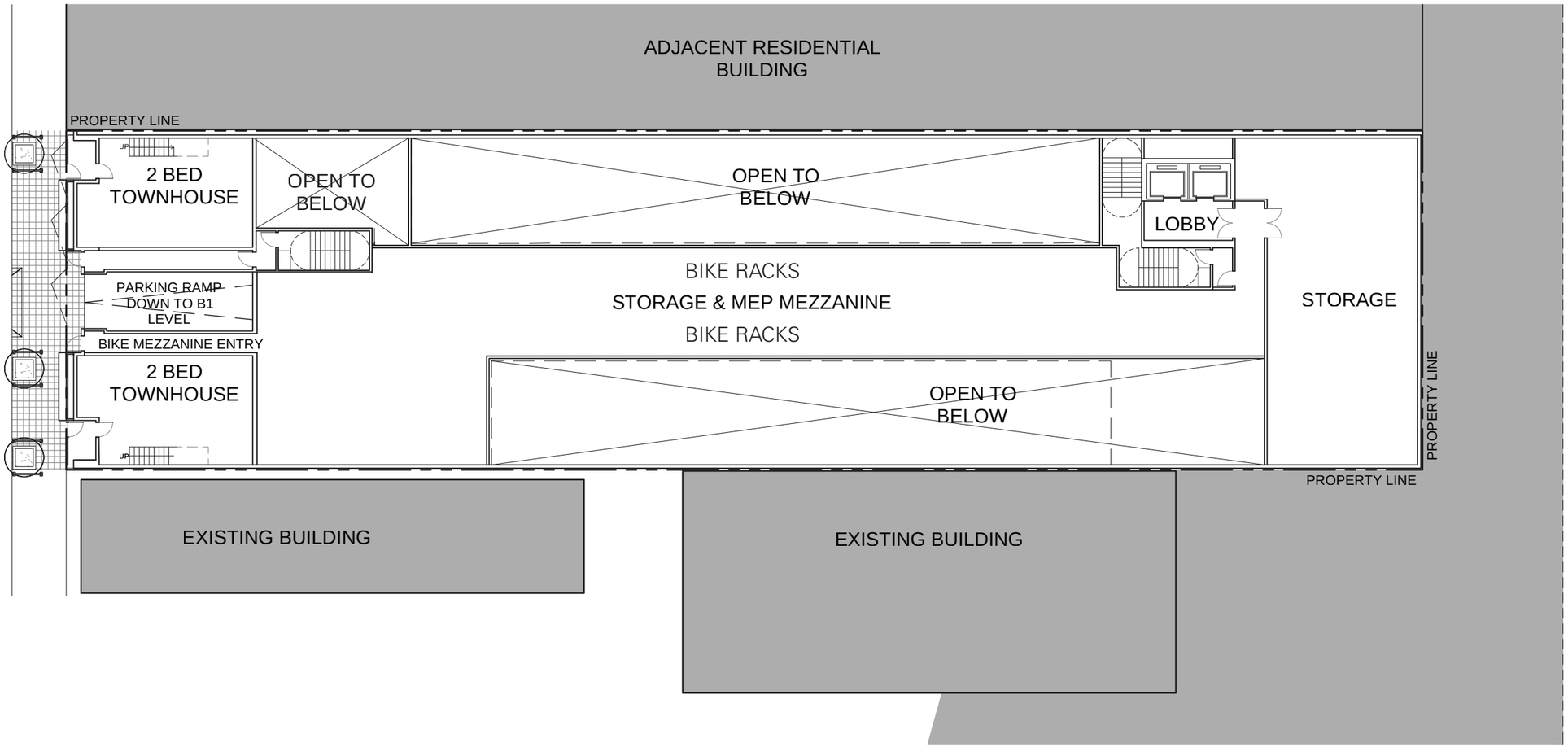


* PER PLANNING CODE 145.1(B)(2)(A) THE RESIDENTIAL UNITS QUALIFY AS ACTIVE USE AS THEY PROVIDE DIRECT, INDIVIDUAL PEDESTRIAN ACCESS TO THE STREET. PER SECTION 145.1(B)(2)(C) THE BUILDING LOBBY ALSO QUALIFIES AS ACTIVE USE. PER SECTION 145.1(B)(3) THE PARKING ACCESS, BUILDING EGRESS AND ACCESS TO MECHANICAL AREAS ARE ALLOWABLE EXCEPTIONS. THERE ARE NO NON RESIDENTIAL ACTIVE USES ON THE STREET FRONTAGES, SECTION 145.1(B)(6) IS NOT APPLICABLE.

PROPOSED SITE PLAN

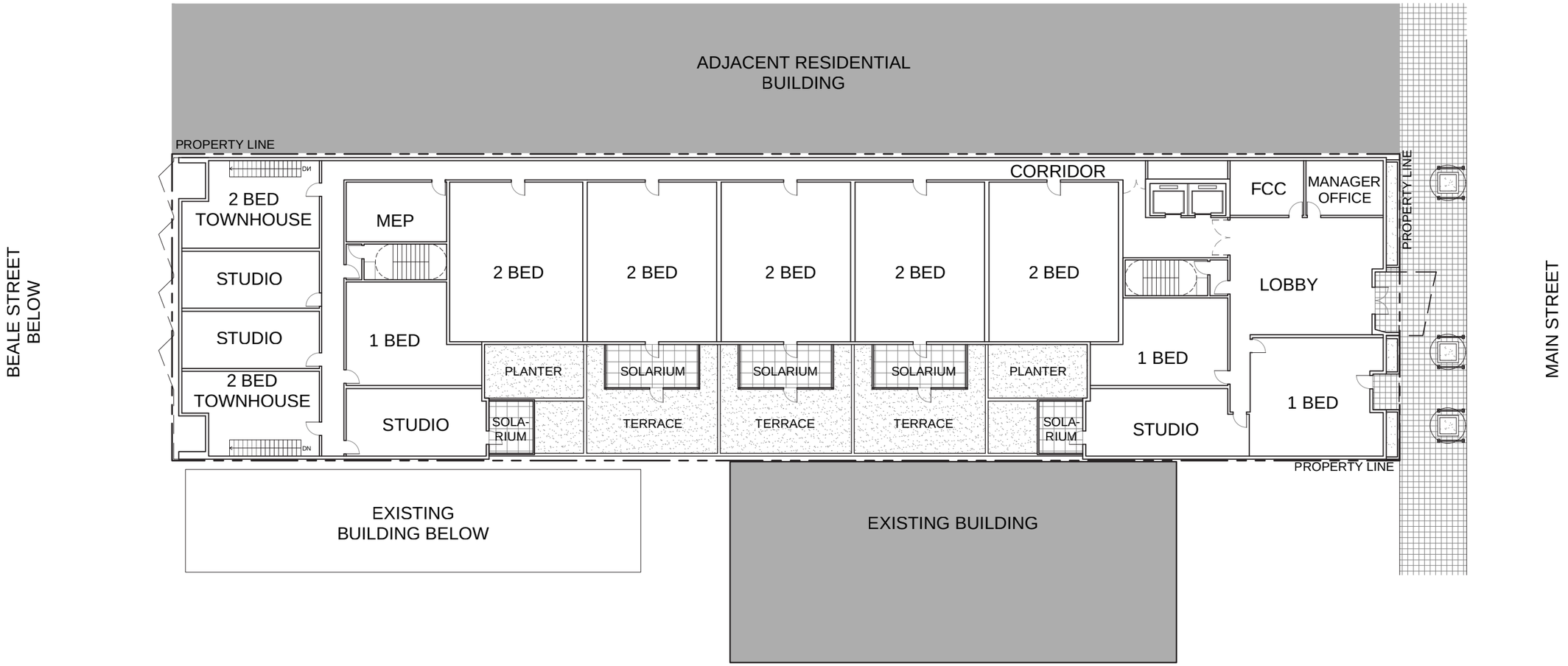


FLOOR PLAN - BASEMENT LEVEL

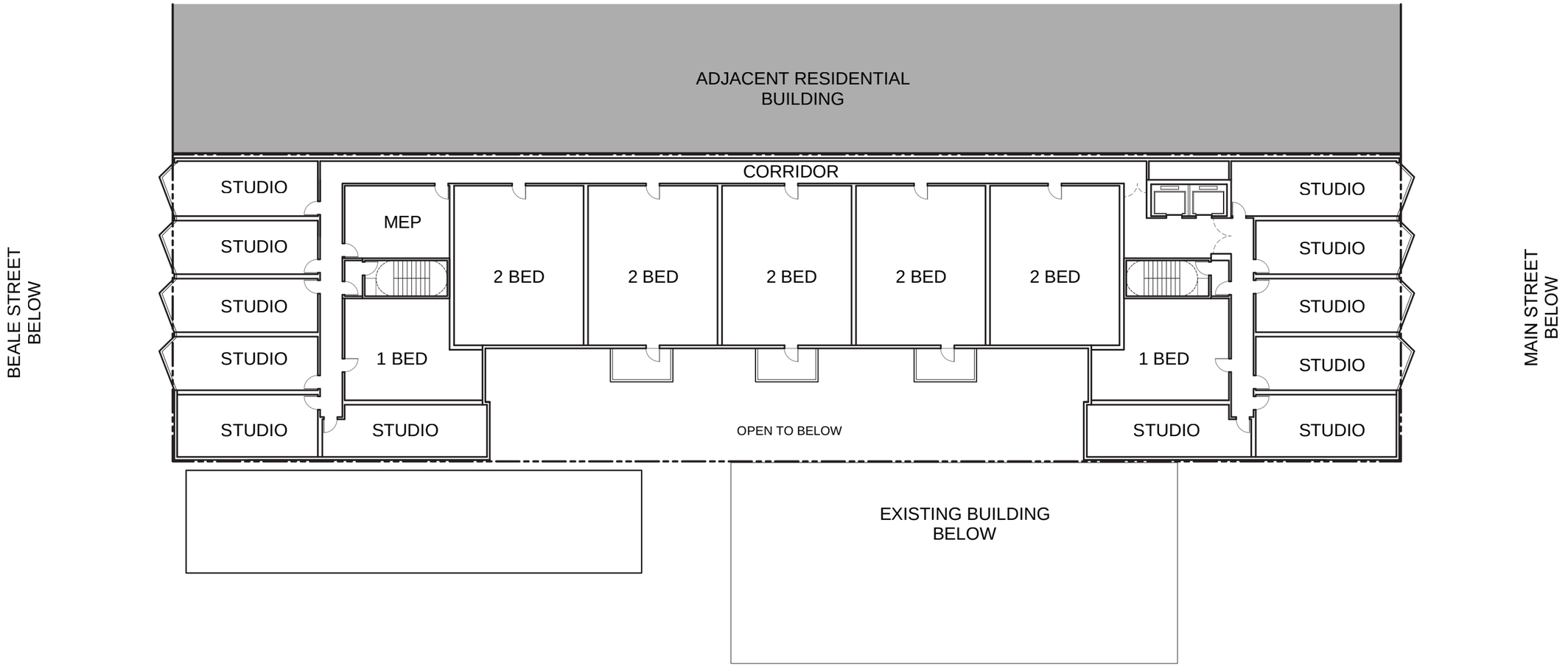


FLOOR PLAN - MEZZANINE

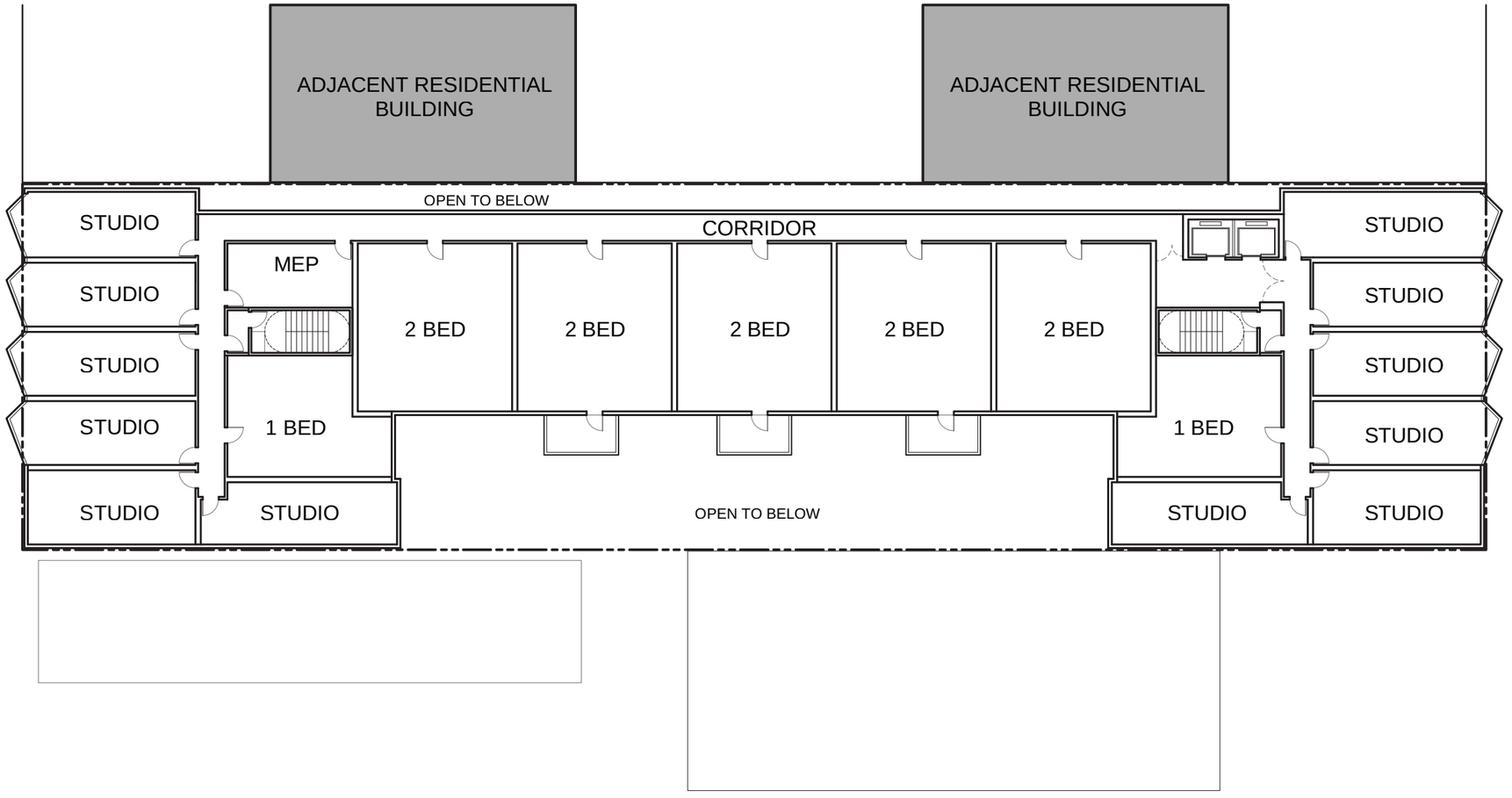
0 25



FLOOR PLAN - GROUND LEVEL



FLOOR PLAN - LEVELS 2-3



FLOOR PLAN - LEVEL 4

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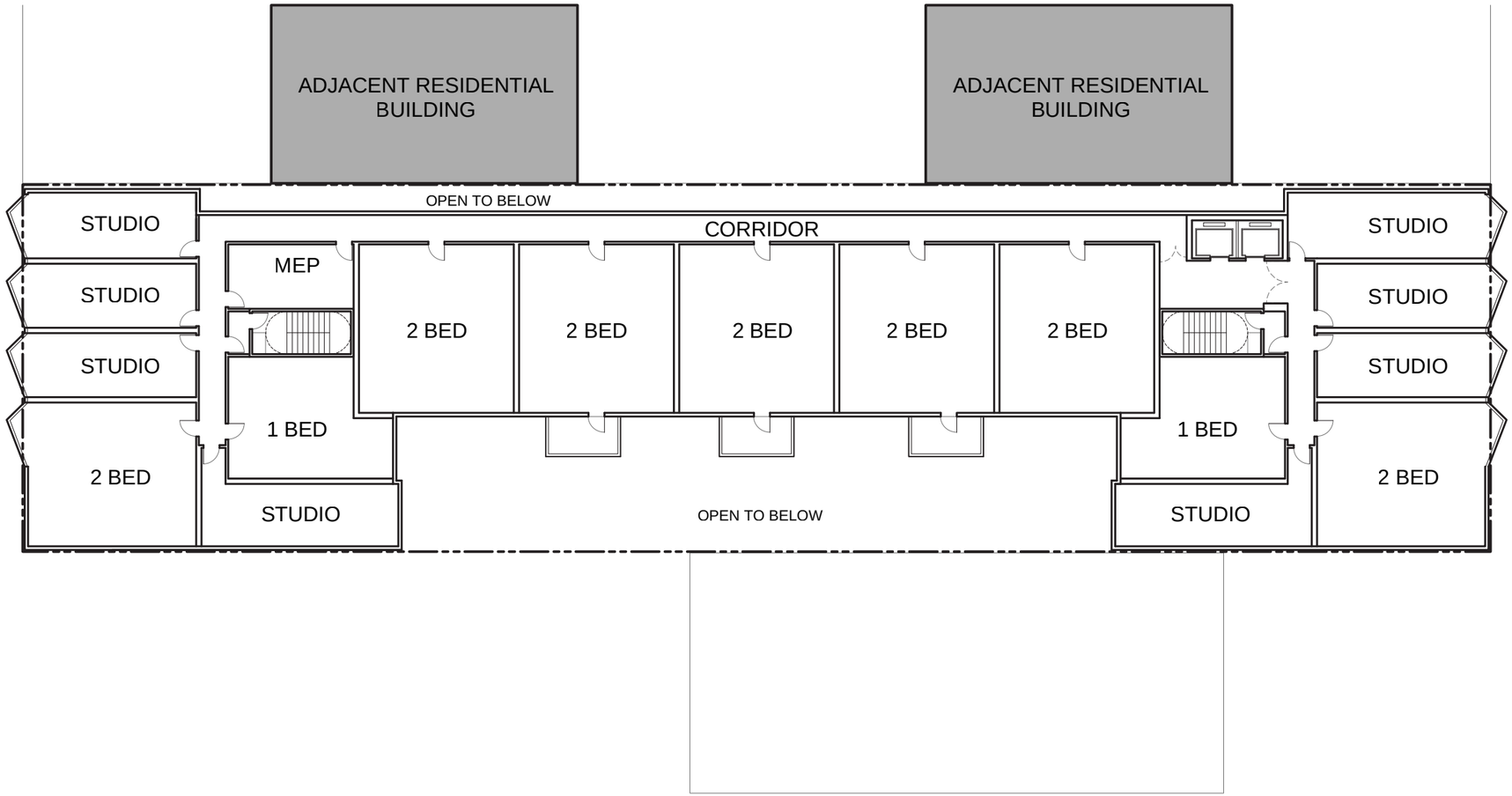
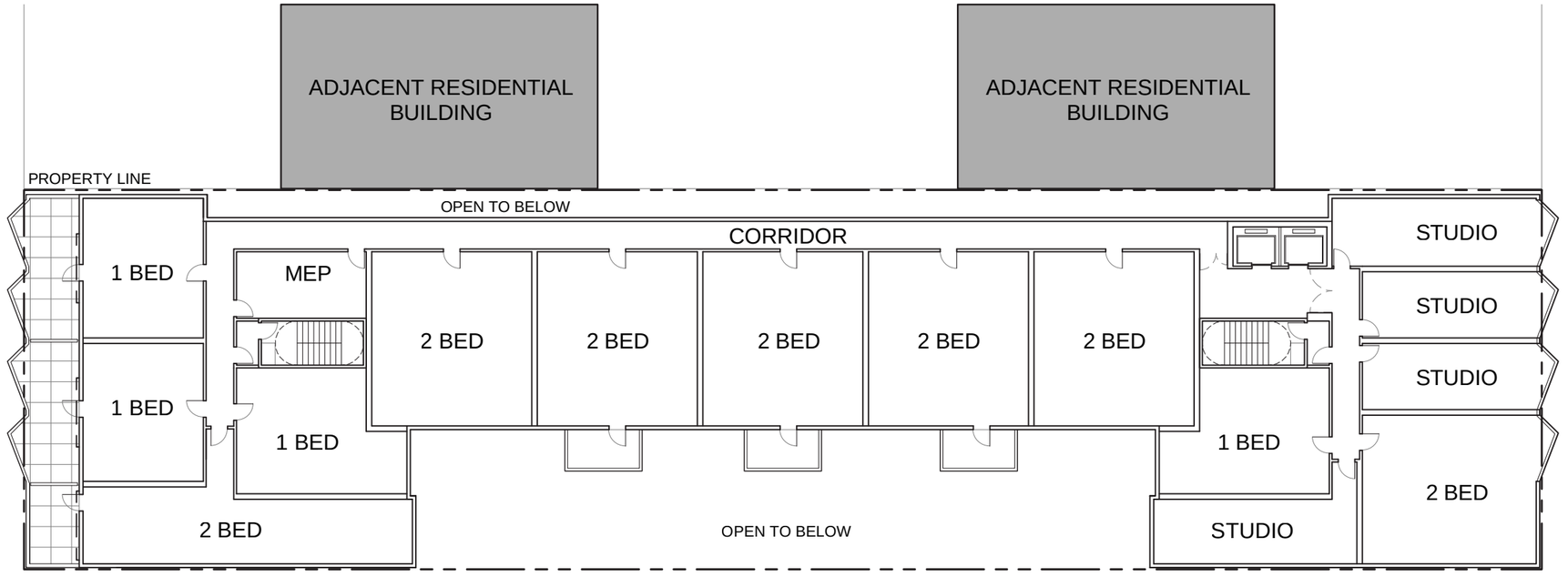
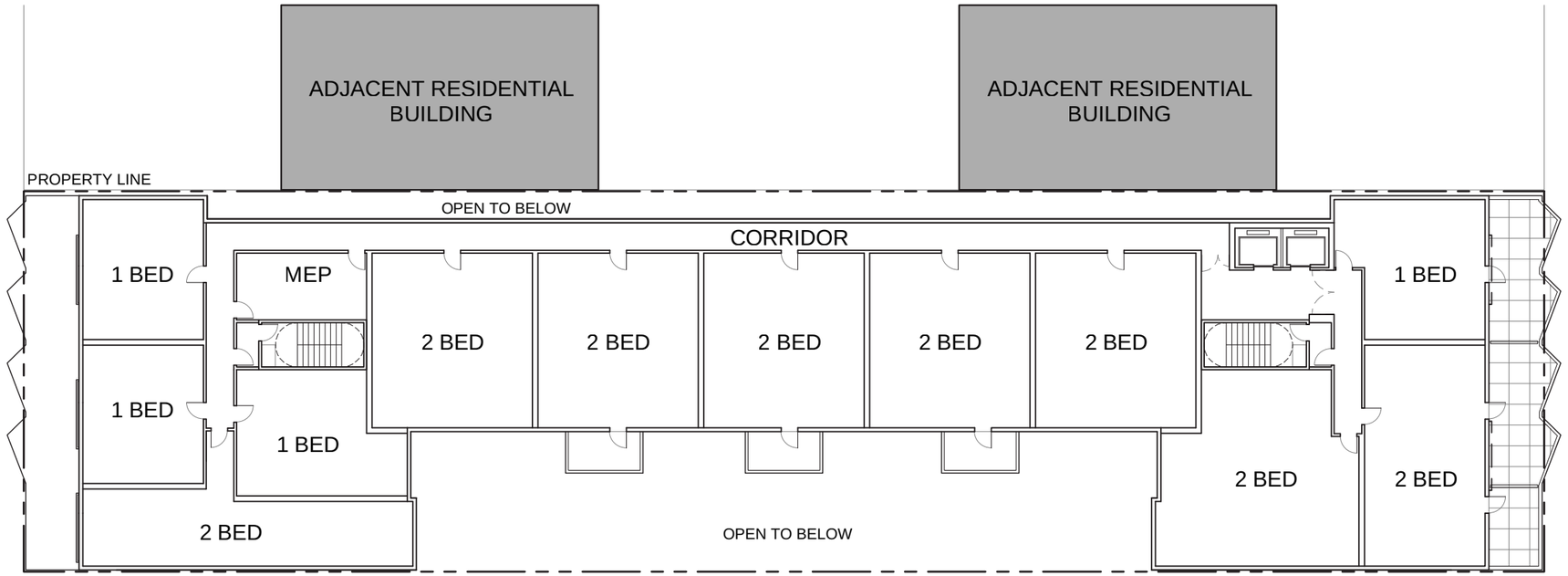


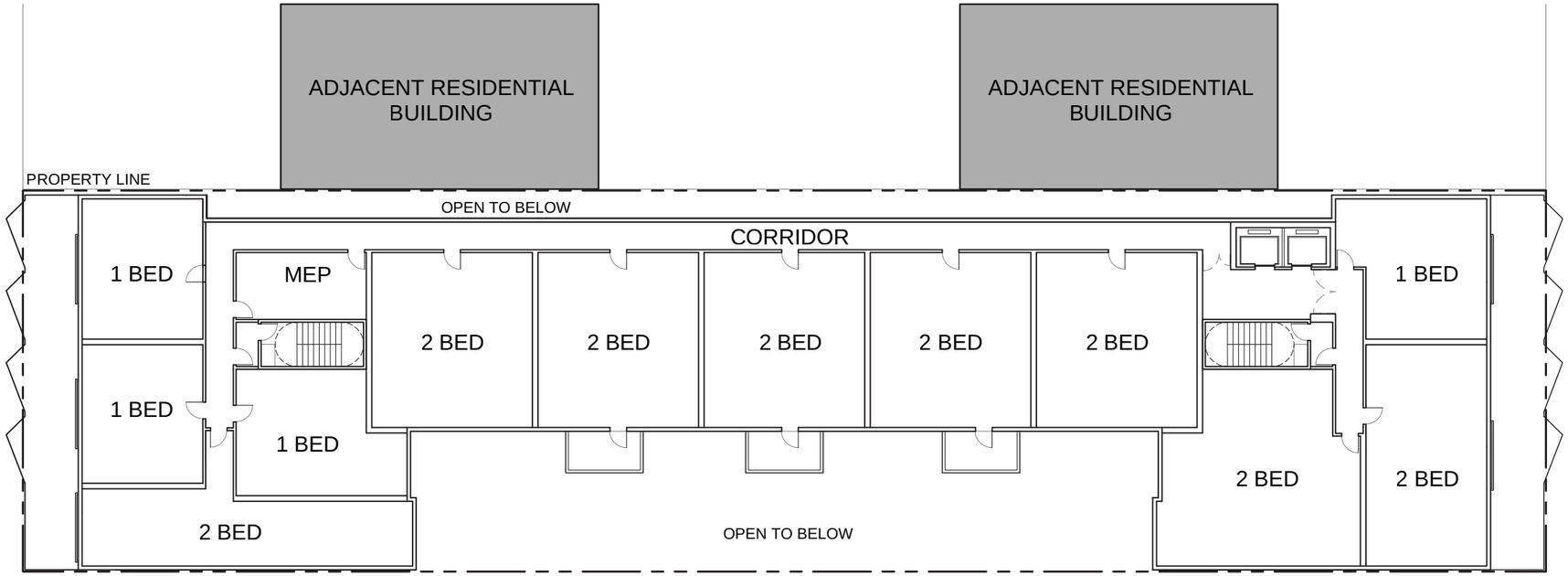
FLOOR PLAN - LEVELS 5-6



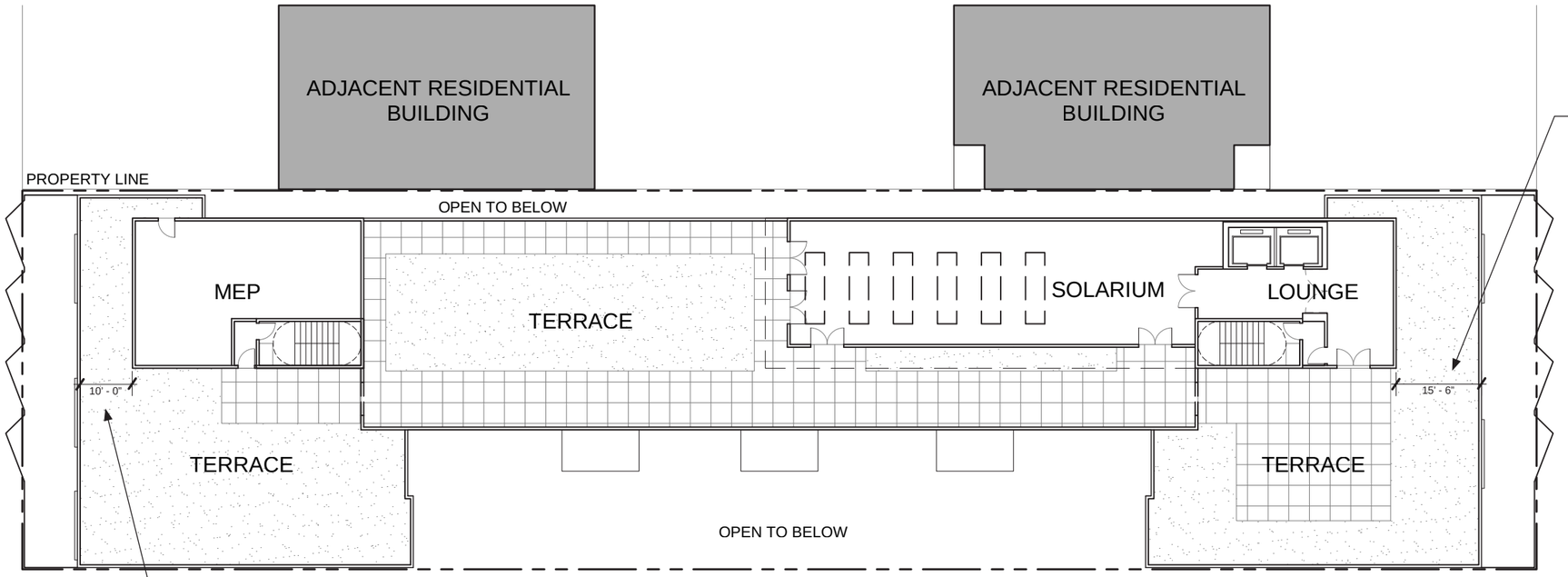
FLOOR PLAN - LEVEL 7



FLOOR PLAN - LEVEL 8

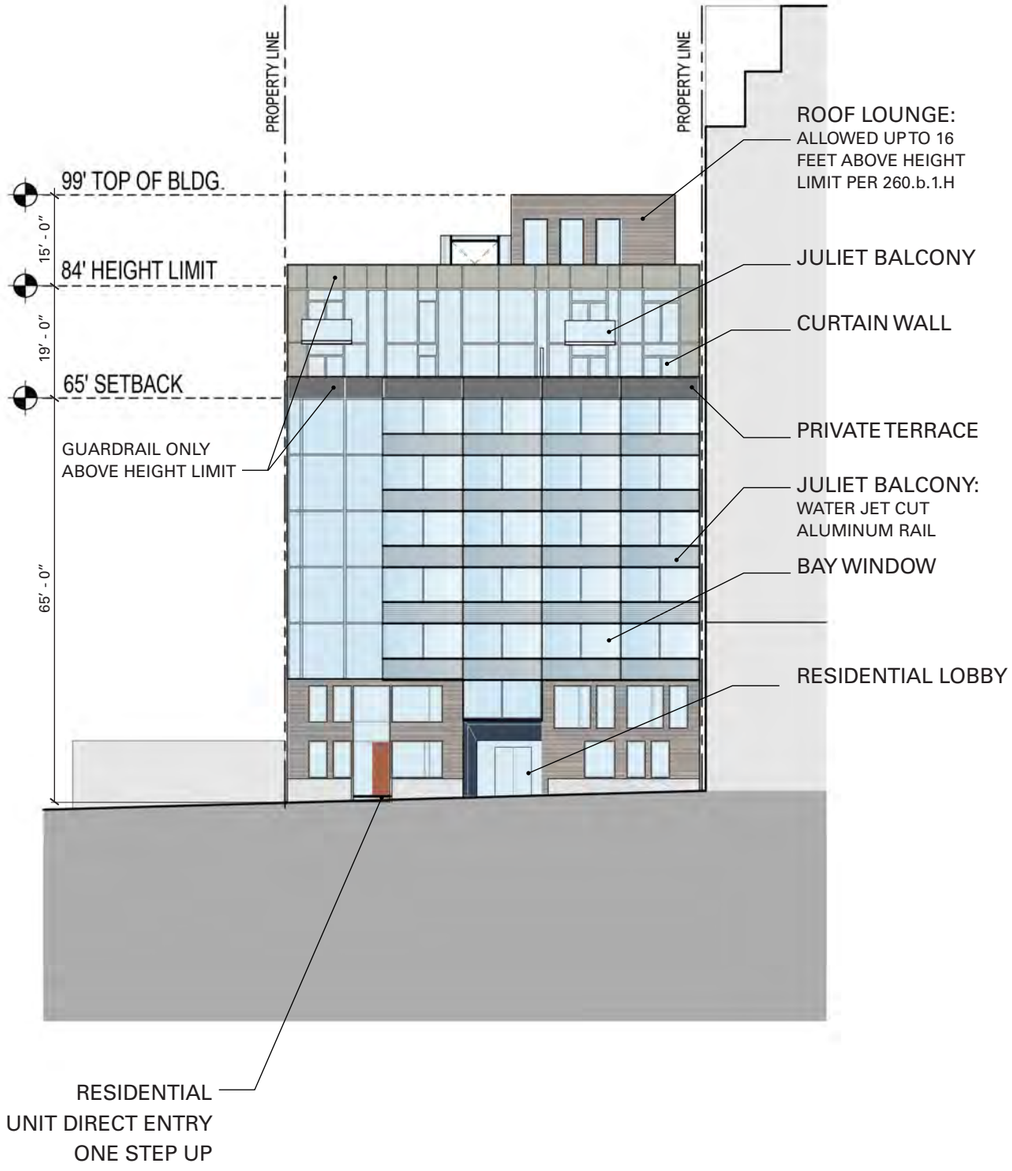


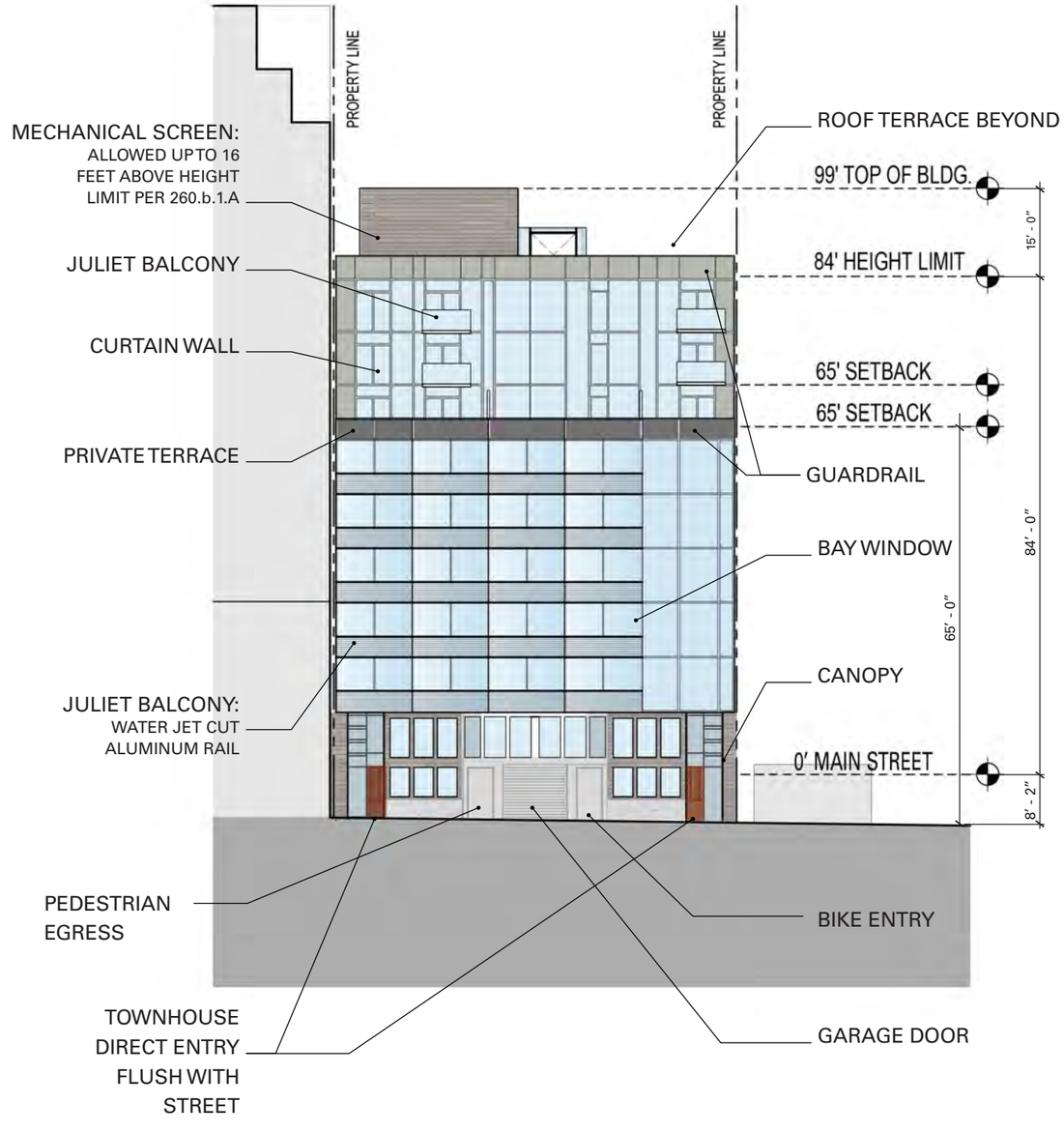
FLOOR PLAN - LEVEL 9



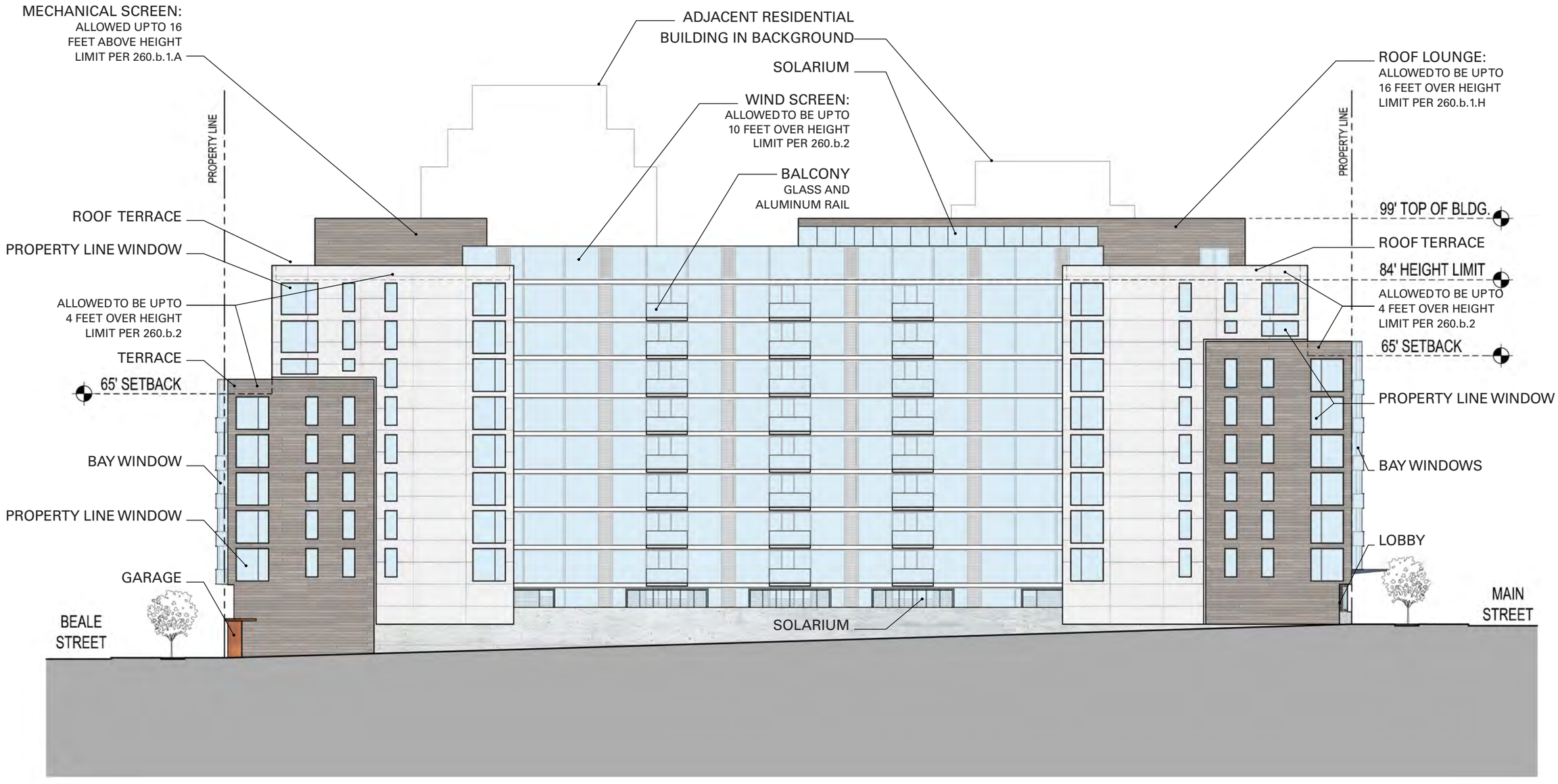
TOTAL HORIZONTAL ROOF AREA:	13,038 SQFT
TOTAL AREA OF ROOF STRUCTURES:	1,753 SQFT
% UTILIZATION OF ROOF AREA:	14%
% ALLOCATED TO FUTURE SOLAR (SEE LEVEL ABOVE)	1,955 SQFT

FLOOR PLAN - ROOF TERRACE

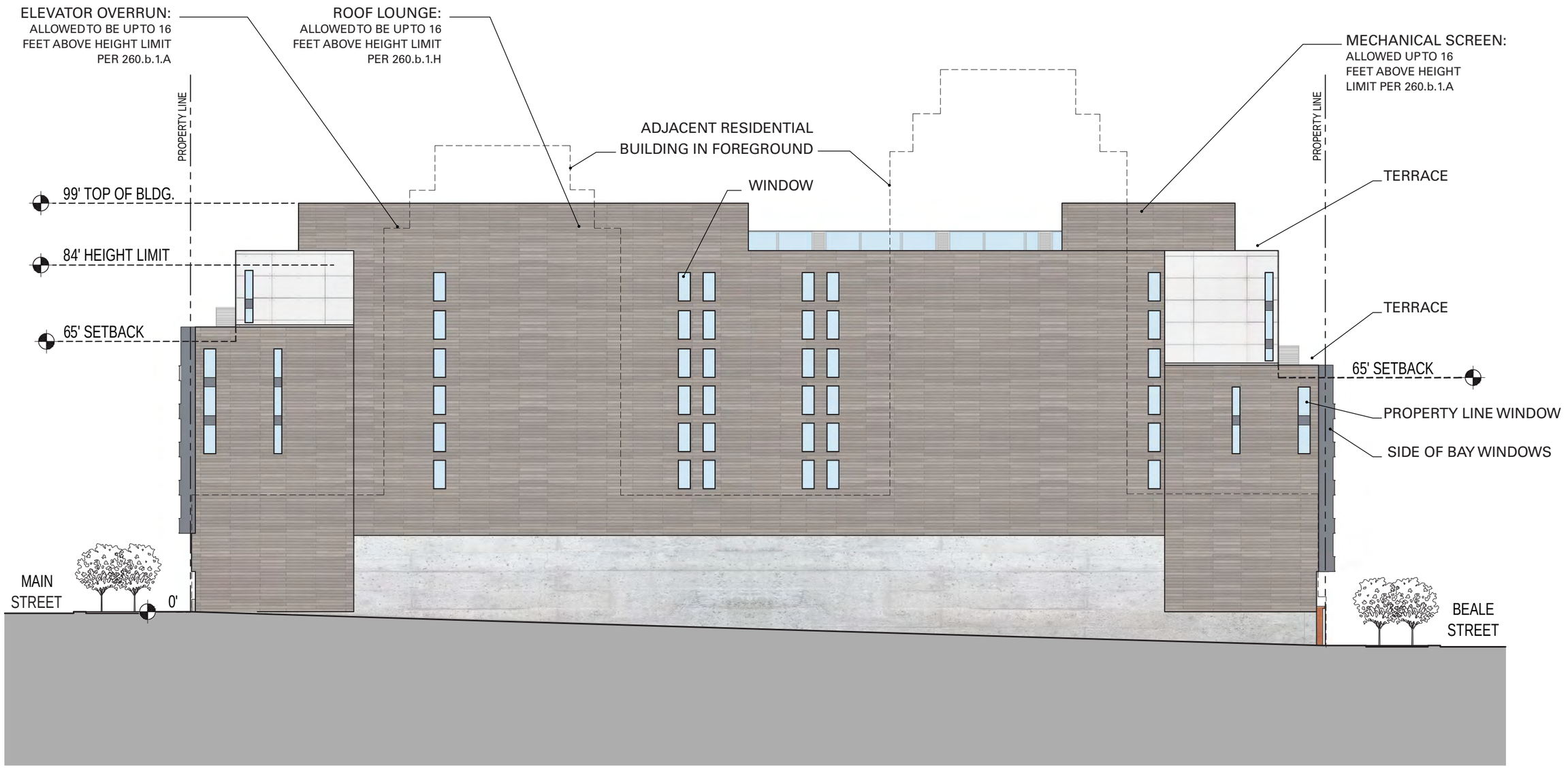




EAST AND WEST ELEVATIONS



SOUTH ELEVATION



NORTH ELEVATION

PERSPECTIVE VIEW

PERSPECTIVE VIEW

