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Memorandum

DATE	February 17, 2021		
TO	Miroo Desai, AICP mdesai@emeryville.org	FROM	Lynette Dias, Principal Meredith Rupp, Senior Planner

RE: CEQA Compliance for Proposed Biomed Final Development Plan (Addendum No. 2 to the Certified Chiron EIR)

The City of Emeryville (City) is in receipt of a Final Development Plan application (FDP19-002) to demolish two existing buildings and surface parking and construct four new multi-tenant research and development buildings and a supporting parking garage in the center, north, and south portions (building sites 1, 2, 3, 8, 13, and 14) of the 22-acre Chiron Life Sciences Center Planned Unit Development/Preliminary Development Plan (PUD/PDP) site. A total of 912,000 square feet of research and development space, 131,507 square feet of publicly accessible open space, and 1,991 parking spaces would be developed under the FDP. The FDP would also provide circulation improvements and utility upgrades. An administrative amendment to the Development Agreement (DA) may be appropriate to reflect updated traffic analysis performed for the FDP19-002 Project and to redirect the applicant's financial contribution due under Section 3.6.3 of the DA to the City's Traffic Impact Fee Fund and would be considered in conjunction with the FDP. The applicant would also be required to fulfill obligations under settlement agreements with the cities of Oakland and Berkeley and AC Transit. The demolition, new construction, and improvements proposed under the FDP, along with a tree removal permit, settlement agreement activities, and administrative amendment to the DA, are collectively referred to as the "FDP19-002 Project" throughout this Addendum.

The purpose of this memorandum is to determine whether the environmental effects of the FDP19-002 Project are adequately analyzed in the Chiron Development Plan Environmental Impact Report (Chiron EIR[1]) or if subsequent environmental review is necessary.

The discussion below is organized as follows:

- **I. Executive Summary.** Describes the California Environmental Quality Act (CEQA) provisions applicable to the FDP19-002 Project analysis and summarizes the memorandum findings.

[1] "Chiron EIR collectively refers to the Chiron Development Plan EIR (February 1995), Chiron Development Plan EIR Responses to Comments on and Text Changes to the Draft EIR (June 1995) and Addendum to the EIR (April 2001) unless otherwise stated.

- **II. Prior Project Approvals and Environmental Analysis.** Provides an overview of the prior PUD/PDP and FDP19-002 Project approvals and associated CEQA documents.
- **III. Proposed Project –FDP19-002 Project.** Describes the FDP19-002 Project and discusses the differences between the approved PUD/PDP and the FDP19-002 Project.
- **IV. CEQA Analysis.** Evaluates whether the FDP19-002 Project falls within the scope of the previously certified EIR and concludes that all the potential environmental impacts associated with the FDP19-002 Project would be within the envelope of impacts already evaluated in the previously certified EIR.

I. EXECUTIVE SUMMARY

This memorandum, prepared pursuant to CEQA Guidelines Section 15164, serves as an Addendum (Addendum No. 2) to the certified Chiron EIR, State Clearinghouse #94063005 (Chiron EIR). The analysis included in this Addendum No. 2 finds that the proposed FDP19-002 Project will not result in significant environmental effects beyond those identified in the Chiron EIR.

CEQA Guidelines Section 15164 states: "The lead agency or a responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." Section 15162 specifies that no subsequent EIR shall be prepared for a project unless:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the

environment, but the project proponents decline to adopt the mitigation measure or alternative.

Likewise, California Public Resources Code Section 21166 states that unless one or more of the following events occur, no subsequent or supplemental environmental impact report shall be required by the lead agency or any responsible agency:

- Substantial changes are proposed in the project which will require major revisions of the environmental impact report;
- Substantial changes occur with respect to circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or
- New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

Although the approval of FDPs was considered in the Chiron EIR, no specific FDP had yet been submitted at the time of EIR certification. Because the environmental impacts of the PUD/PDP were fully identified and evaluated in the Chiron EIR, this Addendum No. 2 focuses the analysis on those aspects of the FDP19-002 Project that differ from the PUD/PDP, to determine if they will have new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Urban Planning Partners reviewed the FDP19-002 Project and based on the analysis in this Addendum concludes that there are: (1) no substantial project changes, (2) substantial changes in circumstances, or (3) new information that collectively or individually would result in any new significant effects or any increase in the severity of a previously identified significant effect. The additional detail provided in the FDP results in less development square footage and parking spaces than what is included in the PUD/PDP, thus incrementally reducing impacts identified for the PUD/PDP. Although changes under which the FDP19-002 Project would be undertaken have occurred (e.g., street alignment, surrounding development) and some new information has become available (e.g., greenhouse gas emission CEQA thresholds) such changes and information would not result in new significant effects or more severe effects than those identified in the Chiron EIR. Therefore, under CEQA Section 21166 and CEQA Guidelines Sections 15162 and 15163, no further environmental review is required.

II. PRIOR PROJECT APPROVALS AND ENVIRONMENTAL REVIEW

On August 8, 1995, the City Council certified the Chiron EIR and adopted a Mitigation Monitoring and Reporting Program (MMRP) and Statement of Overriding Considerations (SOC) for development of the Emeryville Life Sciences Center, a 2.2 million square foot research campus on approximately 22 acres of land bounded by Hollis Street, 45th Street, Stanford Avenue, and the

railroad.[2] PUD 93-2 (Chiron PUD/PDP or PUD/PDP) was subsequently approved by the City Council on August 15, 1995 and a 30-year DA between Chiron Corporation and the City of Emeryville was authorized on September 14, 1995 to ensure the development rights provided under the PUD/PDP.

Approval of the Chiron PUD/PDP required findings related to General Plan consistency; development cohesion and integration; land use suitability; compatibility with neighborhood character, civic service and utility capacity, road capacity, safety, and light; respect for aesthetic and environmental quality; and impacts on environmental quality and property value.[3,4] Given the depth and breadth of these findings, subsequent approvals of FDPs under the PUD/PDP are subject to less discretion during their approval process. Per Emeryville Municipal Code (EMC) Section 9-7.1004(b) F*inal Development Plan: Planning Commission Action*, the Planning Commission must make the following findings to approve an FDP:

1. The final development plan substantially conforms to the preliminary development plan.
2. Changes and conditions of approval specified by the City Council in its approval of the preliminary development plan have been met.

The Chiron PUD/PDP calls for construction of 14 new buildings, including 7 laboratory buildings, 3 office towers, structured parking, a park, and support facilities, over a 30-year period. To date, two buildings, a parking structure, and a park have been developed pursuant to the PUD/PDP and an FDP for two other buildings (B3 and B7b) was approved but never implemented. Table 1 outlines the FDPs approved to date and Figure 1 shows the PUD/PDP site plan (properties outlined in red are owned by the FDP19-002 Project applicant).

TABLE 1 APPROVED FDPS UNDER THE PUD/PDP

FDP	Description	Approval Date	Constructed?	CEQA
First Phase FDP	B4 (laboratory building at Hollis Street/53rd Street intersection), B7A (Central Utility Plant on Chiron Way), and related improvements	August 20, 1996	Yes	Chiron EIR
Building 12a Project FDP	B12a parking structure and approvals to amend the General Plan, zoning, DA, and PUD/PDP relative to the completion of the Horton Street Extension	June 5, 2001	Yes	Addendum No. 1
Buildings 3 and 7b FDP	B3 (research and development building north of B4) and B7B (expansion of B7A)	February 19, 2002	No	Chiron EIR

[2] The Chiron PUD/PDP states that the site is 22 acres and the Chiron EIR states that the site is 25 acres. The Chiron EIR includes the PG&E Tank Farm site (estimated 0.6 acres) and the 53rd Street and Horton Street rights of way (estimated 1.9 acres) in its calculation. This Addendum memorandum will use 22 acres since the Tank Farm site has not been acquired and 53rd Street and Horton Street are proposed as publicly accessible roads instead of service-access only.

[3] City of Emeryville, 2007. Emeryville Municipal Code Section 9-4.85.5. Required Findings.

[4] These are the findings that were required when the Chiron PUD/PDP was approved in 1995. Today the PUD/PDP required findings are similar and are found in EMC Section 9-7.1004.

TABLE 1 APPROVED FDPS UNDER THE PUD/PDP

FDP	Description	Approval Date	Constructed?	CEQA
Hollis Green Park FDP	30,000 square foot publicly accessible park at the corner of Hollis Street and 53rd Street	August 5, 2005	Yes	Chiron EIR

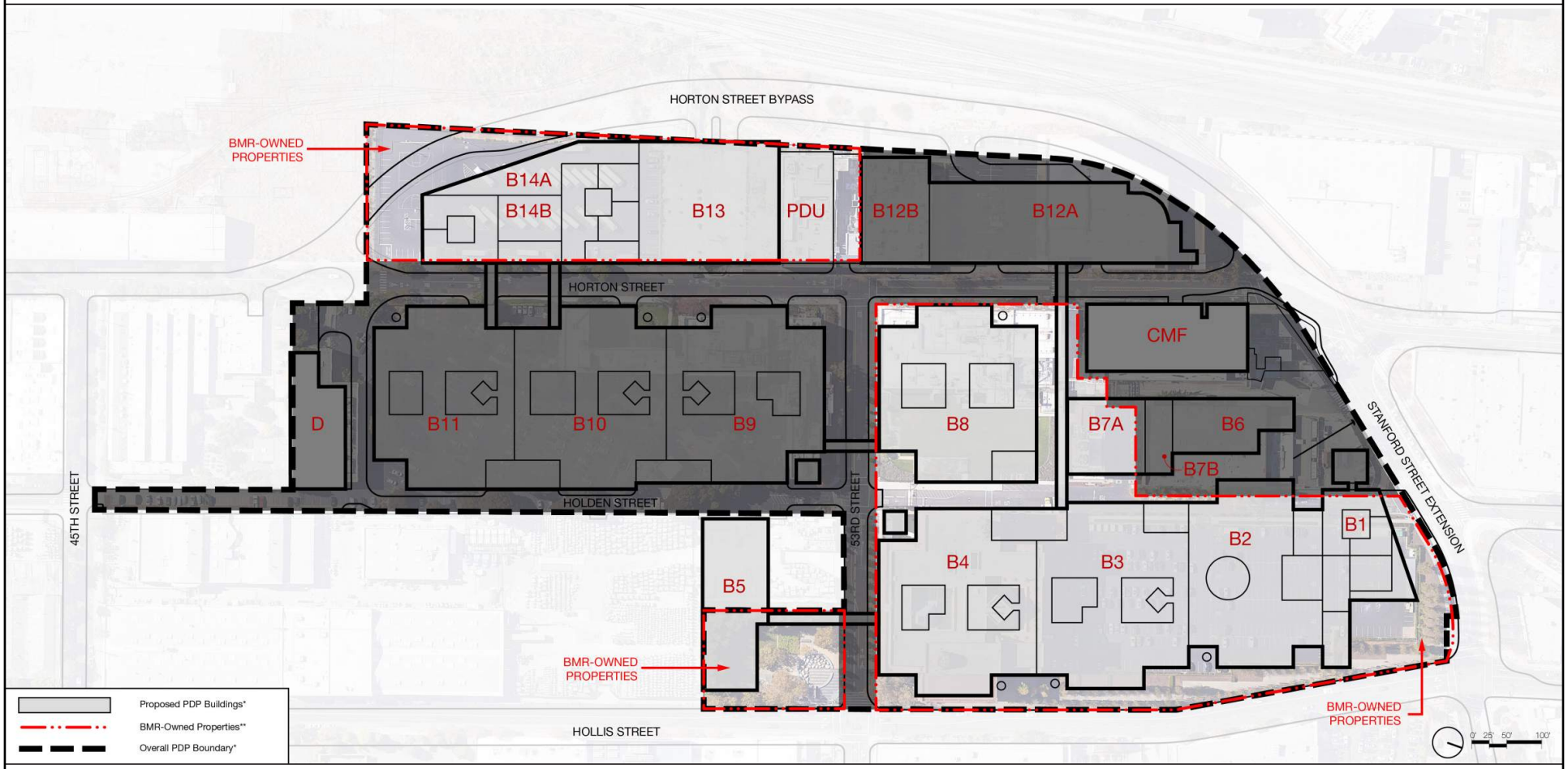
B= building
Source: Urban Planning Partners, 2020 and City of Emeryville, 2020.

Implementation of the PUD/PDP would grow the on-site employment from about 930 then-employees to 4,200 and an increase in gross square feet from about 498,000 to 2.2 million (exclusive of parking). Table 2 shows the buildout completed and remaining to date. Among Chiron' s objectives in pursuing the PUD/PDP were to develop a premier biotechnology research center, enhance pedestrian movement by minimizing motor vehicle movement through and within the site, and to complete the development plan in a cohesive and integrated manner.

TABLE 2 PUD/PDP BUILDOUT TO DATE

Facility Type	Permitted Under PUD/PDP	Existing	Remaining to Construct
Research and Development and Administration[a]	2,200,000 sf	642,494 sf[b]	1,557,506 sf
Open space	287,496 sf[c]	30,000 sf[d]	257,496 sf

[a] The Research and Development and Administration category in this table combines the following categories in the PUD/PDP: Research, Development and Small Scale Manufacturing, Production Scale Manufacturing, Administration, and Mechanical and Utility. In FDPs approved subsequent to the PUD/PDP, the building gross square footage has been proposed together and not delineated like they are in Section 2.2.1 of the PUD/PDP.
[b] Includes gross square footage of B4 (281,194 sf) and an estimate of B7A (14,400 sf) that have been constructed to date, as well as existing buildings on the PUD/PDP site (346,900 sf) that have remain unchanged since the PUD/PDP approval.
[c] Calculated based on requirement that Chiron provide open space (including public, semi-public, and private open space) of no less than 30 percent of the total site area (PUD/PDP Sheet 2-16). 30% of 22 acres = 287,496 sf.
[d] Hollis Green Park is the only open space constructed to date.
Source: Urban Planning Partners, 2021 and City of Emeryville, 2021.



Source: Flad Architects, 2021.

Figure 1
PUD/PDP Illustrative Site Plan and Biomed-Owned Properties

The PUD/PDP and DA required that Chiron provide circulation improvements on Horton Street via one of the following options:

- **Horton Street Extension.** Extend Horton Street from 53rd Street to Stanford Avenue and keep it as a public street.
- **Horton Street Bypass.** Turn Horton Street into a private access drive and create a new right-of-way outside the western boundary of the PUD/PDP site (along the railroad tracks) between the Stanford Avenue Extension/Landregan Street intersection and a point just north of the Horton Street/45 Street intersection.

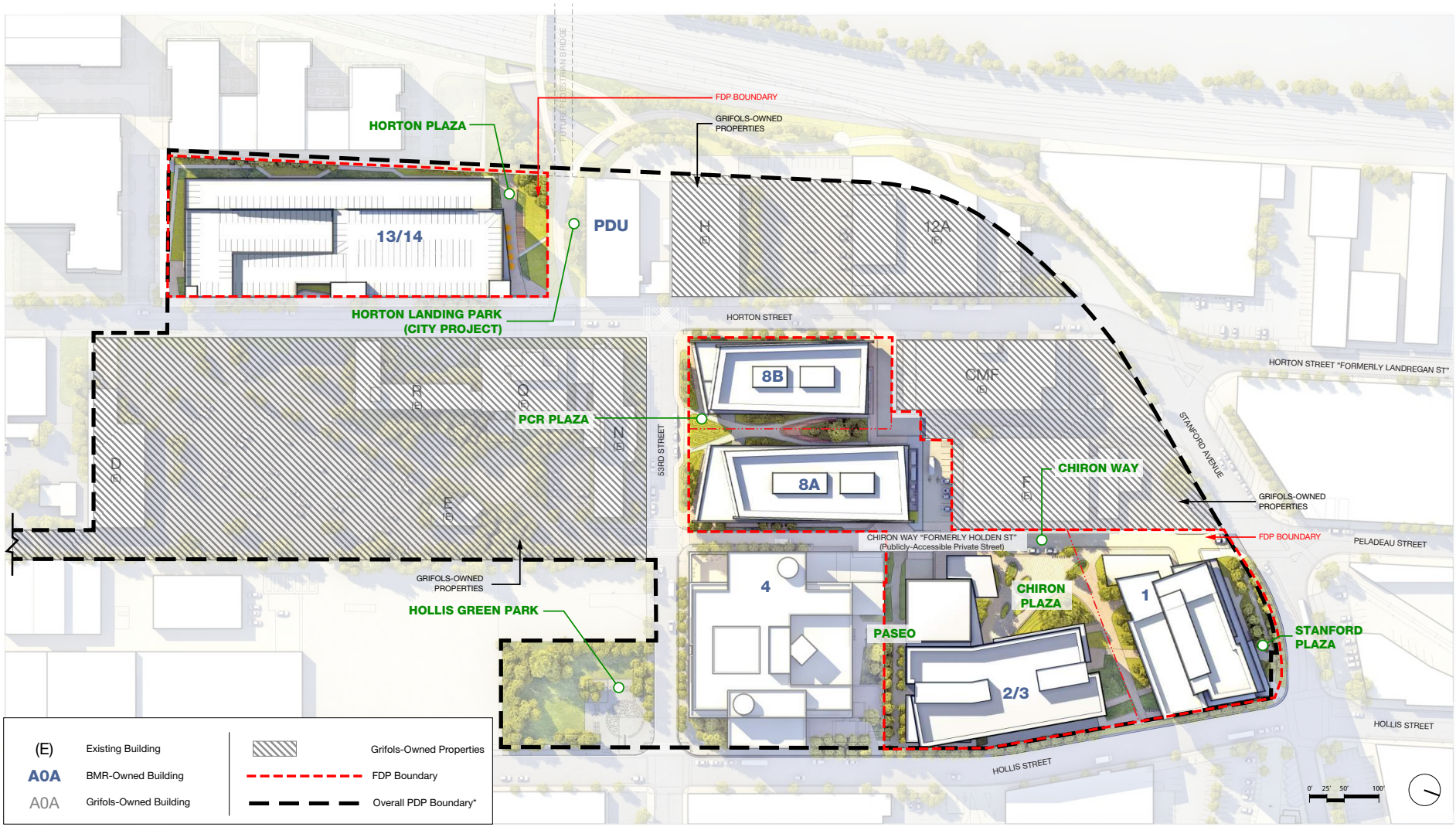
Since approval of the PUD/PDP, the Horton Street Extension has been completed. Amendments to the General Plan, Zoning, PUD/PDP, and DA were approved in conjunction with a 2001 FDP for Building 12a to reflect implementation of the Horton Street Extension, including updating the PUD/PDP site boundaries and permitted land uses for the unused Horton Street Bypass area and the adjacent planned open space adjoining the South Bayfront Pedestrian-Bicycle Bridge. Addendum No. 1 to the Chiron EIR was prepared for the 2001 FDP, which included analysis from Fehr and Peers. Addendum No. 1 concluded that the proposed parking access changes in the 2001 FDP did not change the analysis in the Chiron EIR since the total number of parking spaces and employees underlying the Chiron EIR transportation analysis were unchanged. In addition, in a memorandum addressing the needs of parking garage 12a, Fehr & Peers analyzed level of service (LOS) at intersections on Horton Street which would be most impacted by the Horton Street Extension and development of B12a. Fehr & Peers included access and circulation recommendations to implement on Horton Street, including future signalization of the Horton Street/Stanford Avenue intersection, provision of a three-lane cross-section on Horton Street, and installation of pedestrian lighting and other amenities on Horton Street. The access and circulation recommendations were included as COAs for the 2001 FDP. Addendum No. 1 was adopted on May 15, 2001.

III. PROPOSED PROJECT - FDP19-002 PROJECT

Biomed Realty (Biomed) has submitted an FDP to construct four new multi-tenant research and development buildings (B1, B2/3, B8A, and B8B) totaling 911,800 square feet and a supporting parking garage (B13/14), as listed below. See Figure 2 for the proposed site plan.

- **B1.** 11-story (178-foot tall), 300,000 square foot research and development building
- **B2/3.** 7-story (114-foot tall), 261,300 square foot research and development building
- **B8A.** 7-story (114-foot tall), 221,000 square foot research and development building
- **B8B.** 5-story (82-foot tall), 129,500 square foot research and development building
- **B13/14.** 11-story (103-foot tall) parking structure with 1,991 parking spaces

The FDP also includes approximately 131,507 square feet of publicly accessible open space in plazas throughout the campus and a pedestrian paseo between existing B4 and proposed B2/3. See Table 3 for a comparison of FDP19-002 and the PUD/PDP remaining buildout.



Source: Flad Architects, 2021.

Figure 2
Site Plan

TABLE 3 FDP19-002 AND PUD/PDP BUILDOUT TO DATE COMPARISON

Facility Type	Permitted Under PUD/PDP	Remaining to Construct	Proposed in FDP19-002	Remaining after FDP19-002
Research and Development and Administration[a]	2,200,000 sf	1,557,506 sf	911,800 sf	654,706 sf
Open space	287,496 sf[b]	257,496 sf	131,507 sf	125,989 sf

[a] The Research and Development and Administration category in this table combines the following categories in the PUD/PDP: Research, Development and Small Scale Manufacturing, Production Scale Manufacturing, Administration, and Mechanical and Utility. In FDPs approved subsequent to the PUD/PDP, the building gross square footage has been proposed together and not delineated like they are in Section 2.2.1 of the PUD/PDP.
[b] Calculated based on requirement that Chiron provide open space (including public, semi-public, and private open space) of no less than 30 percent of the total site area (PUD/PDP Sheet 2-16). 30% of 22 acres = 287,496 sf.
Source: Urban Planning Partners, 2021.

The FDP19-002 Project would also repurpose a portion of the existing approximately 20,700 square foot Process Development Unit (PDU) for street-activating commercial uses and an Emergency Operations Center, consistent with PUD COAs. All buildings (except the B13/14 parking garage) are also allowed to have up to 10,000 square feet of ground floor commercial use, provided the cumulative total for the Project does not exceed 40,000 square feet.

Implementation of the FDP19-002 Project would require demolition of existing buildings G and T (an estimated combined square footage of 41,500 square feet) at the PUD/PDP B8 site (now proposed to house B8A and B8B) and demolition of surface parking at the FDP sites of B1, B2/3, and B13/14. In addition, removal of 22 street trees is proposed pursuant to the FDP19-002 Project along 53rd Street and Horton Street, which would require a tree removal permit per the Urban Forestry Ordinance (EMC Sections 7-10.01 to 7-10.12).[5] An additional 122 private trees along Hollis Street and Chiron Way would also be removed to accommodate construction of the five buildings. The Project would replace these trees with 75 new street trees and 95 new private trees.[6]

Construction of B1 or B2/3 would be completed in the first phase of the FDP19-002 Project, along with the B13/14 parking structure to ensure adequate parking during implementation of the Project. Sewer and water utility work would also be completed during phase one of FDP19-002 Project construction. Construction of the rest of the Hollis Street frontage (either B1 or B2/3 depending on which is completed in phase one) would be competed in phase two of the FDP19-002 Project, followed by construction B8A and B8B in phase three. Plazas would be developed with construction of the corresponding building near each plaza. Each phase is estimated to last approximately two

[5] Shea, Ellyn, 2021. BioMed Realty (BMR) campus at 5300 Chiron in Emeryville tree removal report Masterplan. February 9, 2021.

[6] In the Chiron EIR, the PUD/PDP's effects on biological resources were found not to be significant because a biologist determined that the dominant vegetation, including landscaping such as street trees, is common for urban environments and provides only limited habitat for common species. According to the consulting arborist Ellyn Shea, the proposal to remove and replant street trees at an approximately 3.4-to-1 ratio exceeds the requirements of the City's Urban Forestry Ordinance and ensures the cumulative diameter of the replacement trees will exceed what was removed. Because the Project would be consistent with the City's tree preservation ordinance, it would not be considered a significant impact under CEQA. Further, under the CEQA Guidelines Section 15301(c), the removal and replacement of trees as part of the minor alteration of an existing street is categorically exempt from CEQA.

years with the subsequent phase commencing around the same time the previous phase ends. Phase one is projected to commence in late Fall 2021 and phase three is estimated to be completed in Fall 2027.

In accordance with federal, State, and local laws, construction and operation of the FDP19-002 Project would comply with current environmentally protective measures, including implementation of California Department of Fish and Wildlife recommendations to protect nesting birds and roosting bats by conducting pre-construction surveys and adherence to the City's Bird Safe Buildings regulations (EMC Section 9-4.801 to 9-4.804). The Project proposes glass and lighting treatments, architectural features, and landscaping to prevent bird strikes. Similarly, the FDP19-002 Project would implement best practices for construction considering current industry practices, regulatory goals, and requirements. The Project would also comply with energy and water efficiency requirements of current building, energy, and landscaping codes, including Cal Green requirements. The Project would obtain LEED Silver certification under LEED version 4.

An administrative amendment to the DA may be appropriate to reflect updated traffic analysis and to redirect the applicant's financial contribution required under Section 3.6.3 to the City's Traffic Impact Fee Fund.

The following sections examine how the FDP19-002 Project relates to the approved PUD/PDP and the Chiron EIR, including areas where the FDP is different than what was detailed in the PUD/PDP, which was fully analyzed in the Chiron EIR.

A. Relationship to PUD/PDP

The PUD/PDP provides parameters which regulate development of the PUD/PDP site (e.g., open space requirements, maximum square footage of final buildout) as well as illustrative examples that demonstrate possibilities of how development *could* occur within the parameters. The PUD/PDP does not dictate the precise location, configuration, and square footage of every use. An illustrative site plan is included in the PUD/PDP showing one possible configuration at full buildout. Figure 1 shows the PUD/PDP illustrative plan, with properties that have been acquired by Biomed outlined in red. The PUD/PDP envisioned one integrated campus for Chiron. Since the PUD/PDP approval in 1995, there have been changes in the site ownership. Biomed and Grifols currently share ownership of the campus with each firm owning different facilities. The Biomed-owned portion is approximately 8.5 acres in size. The PUD/PDP identifies future buildings with numbers (i.e., 1 through 14). In the FDP19-002 Project, Biomed is proposing redevelopment of the PUD/PDP sites identified for future development of Buildings 1, 2, 3, 8, 13, and 14 in the PUD/PDP illustrative buildout illustration. Biomed also owns the sites of B4, the PDU building, and Hollis Green Park. The FDP would repurpose a portion of the PDU building to include commercial uses and Emergency Operations Center. The Project does not propose changes to the B4 or Hollis Green sites.

City staff have evaluated the FDP19-002 Project and found that there is substantial evidence to support a finding that the FDP is in substantial compliance with the PUD/PDP. Where the FDP19-002 Project does deviate from the PUD/PDP, the deviations were deemed minor design deviations,

such as changes in building configuration, massing, and setbacks. Similarly, the FDP19-002 Project will comply with the PUD/PDP Conditions of Approval (COAs) that the City determines are applicable to the FDP19-002 Project, including any mitigation measures incorporated into the PUD/PDP COAs that are necessary to mitigate impacts that remain significant under CEQA.

FDP19-002 Deviations

Implementation of the FDP19-002 Project would provide a different site layout than detailed in the PUD/PDP in terms of building configuration and design, circulation, and parking. These deviations are described below as they are the focus of the analysis in this Addendum No. 2.

Building Configuration and Design

The PUD/PDP does not include development parameters for individual buildings, only campus-wide maximums (i.e., entire buildout of 2.2 million square feet and site FAR maximum of 2.33). The PUD/PDP illustrative plan shows one potential illustrative configuration of this full buildout.

As shown in Table 4, the FDP19-002 Project proposes a different configuration of buildings compared to the PUD/PDP's illustrative buildout. The FDP19-002 Project proposes a single building at times where the PUD/PDP envisioned two, and on the B8 site, the FDP19-002 proposes two buildings instead of one. However, the PUD/PDP site layout is only conceptual and the proposed buildout and development intensity of the FDP19-002 Project is still within the PUD/PDP parameters: with implementation FDP19-002, the entire PUD/PDP site will have approximately 1.5 million gross square feet of development,[7] compared to the 2.2 million allowed under the PUD/PDP. As shown in Table 4, the buildout of the FDP19-002 Project would result in less than 912,000 total square feet, compared to over 1 million square feet depicted for the applicable properties in the PUD/PDP illustrative plan.

TABLE 4 FDP19-002 AND PUD/PDP ILLUSTRATIVE BUILDING CONFIGURATION COMPARISON

PUD/PDP Building Number	PUD/PDP Illustrative Building Area (gsf)[a]	FDP19-002 Building Number	FDP19-002 Proposed Building Area (gsf)[a]
B1	220,000	B1	300,000
B2	195,000	B2/3	261,300
B3	240,000		
B8	220,000	B8A	221,000
		B8B	129,500
B13	--[b]	B13/14	--[b]
B14	160,000		

[7] Biomed Realty, 2021. Emeryville Center of Innovation 2020 FDP Project Description. February 1.

TABLE 4 FDP19-002 AND PUD/PDP ILLUSTRATIVE BUILDING CONFIGURATION COMPARISON

PUD/PDP Building Number	PUD/PDP Illustrative Building Area (gsf)[a]	FDP19-002 Building Number	FDP19-002 Proposed Building Area (gsf)[a]
Total	**1,035,000**		**911,800**
PUD/PDP Max Allowable FAR			2.33
PUD/PDP Site FAR with FDP Buildout			1.57[c]

Note: gsf = gross square feet.
[a] Does not include space for structured parking. PUD/PDP numbers are an illustrative example that show one possible buildout scenario. The PUD/PDP does not have development parameters for individual buildings, only campus-wide maximums (i.e., entire buildout of 2.2 million square feet and site FAR maximum of 2.33)
[b] Parking is not included in the gross total area. B13/14 is proposed as an 11-story parking structure.
[c] Per EMC Section 9-8.206, the FAR calculation excludes B13/14 since it will be used for vehicle parking and loading. FAR calculated as follows: 1,507,000 gross sf of PUD/PDP site with implementation of FDP / 9,588,320 sf PUD/PDP lot area = 1.57 FAR.
Sources: Chiron, 1996 PDP Table 2-3 Buildout Areas by Construction Sequence. Biomed Realty, 2021 Emeryville Center of Innovation 2020 FDP Project Description. Urban Planning Partners, 2021.

The FDP19-002 Project also differs from the PUD/PDP (including its COAs) relative to minor building design and massing configurations. These design modifications are summarized in Table 5. Section 12.1.1 of the DA "acknowledges that variation in configuration [...] is permitted by the Preliminary Development Plan" and City of Emeryville Resolution 02-27 approving an FPD for B3 and B7b states that "building configuration may vary so long as the total square footage allocated to each use at full build out does not exceed the maximum permitted by the PDP."[8] The design modifications described below relate to setbacks, open space configuration, and building design. The FDP19-002 Project would not change the land uses, intensity of development, or essential aspects of the PUD/PDP. Where the FDP19-002 Project does differ from the PUD/PDP, the deviations are consistent with PUD/PDP objectives to consolidate activities into an integrated and interactive campus; enhance the pedestrian environment by minimizing the movement of motor vehicles through and within the site; feature highly distinctive architecture; and complete the project in a cohesive, integrated manner. For these reasons, the deviations are minor design refinements and City staff determined there is substantial evidence to support a finding that FDP19-002 is in substantial compliance with the PUD/PDP.

[8] City of Emeryville, 2002. Resolution No. 02-27. Resolution of the City Council of the City Of Emeryville Approving a Final Development Plan (FDP) For Buildings 3 and 7B for the Chiron Campus Expansion Program. February 19.

TABLE 5 FDP19-002 DESIGN DEVIATIONS

PUD/PDP Requirement	FDP19-002 Proposed Deviation
B1 Frontage and Massing. Set back from Hollis Street by 50 feet (at the north end) and 80 feet (at the south end) with encroachments within 12 feet of the property line allowed for no more than 25% of the frontage and only at heights below 75 feet. Setbacks will have public access easements to create semi-public open space. Setback of 160 feet from Hollis Street for the tower portion of the building. Upper portions also stepped back from Stanford Avenue.	FDP proposes the following setbacks and design elements for B1: ▪ 15 feet from Hollis Street at north end (vs 50 feet). ▪ 19 feet and 9 inches from Hollis Street at south end (vs 80 feet). ▪ 100% encroachment within 12 feet of property line for building height of 178 feet (vs max of 25% for heights below 75 feet). ▪ 15 feet from Hollis Street for Tower, which is entire building (vs 160 feet for the Tower portion). The entire building is setback from Stanford Avenue by 19 feet and 1 inch at the east end and 33 feet and 7 inches at the west end (vs a greater setback for the upper portions). These setbacks are smaller than envisioned in the PUD/PDP.
B1 Design. Slender tower design with average floorplate gsf (+/- 10%) of 7,500 at heights above 175 feet, 11,000 gsf between 130 feet and 175 feet, and 18,000 gsf between 90 and 130 feet.	B1 (11 stories and 178 feet tall) has an average floorplate of approximately 27,300 square feet, with a floorplate of 17,000 gsf on the top floor (Floor 11). Floors 1-10 propose floorplates ranging from 26,000 gsf (Floor 3) to 30,000 gsf (Floors 7-10). These are substantially larger than the prescribed floorplate sizes.
B2 and B3 Height. Height limit of 90 feet for all habitable space (except for certain exceptions that apply to the other FDP19-002 buildings).	One building (B2/3) is proposed for this location instead of two (B2 and B3). B2/3 has a proposed height of 114 feet, exceeding the 90-foot limit. However, the proposed design does not exceed the 200-foot limit allowed in PUD/PDP COA #90 – Height (B).
B3 Hollis Street Frontage. B3 set back from Hollis Street by 55 feet (at the north end) and 45 feet (at the south end) with encroachments to within 12 feet of the property line allowed for no more than 55% of the Hollis Street frontage at heights under 75 feet. Setbacks will have public access easements to create semi-public open space.	One building (B2/3) is proposed for this location instead of two (B2 and B3). B2/3 has an approximately 16-foot setback from the Hollis Street property on the northern end of the building, which is less than the 50-foot setback prescribed for B2 on its northern end. B2/3 has an approximately 16-foot setback from Hollis Street on the southern end of the building, which is less than the 45-foot setback prescribed for B3 on its southern end.
B2 Hollis Street Frontage. B2 set back from Hollis Street by 50 feet (at the north end) and 75 feet (at the south end) with encroachments to within 12 to 30 feet of the property line allowed for no more than 55% of the Hollis Street frontage at heights under 75 feet.	
Hollis Street Frontage Open Space. High-quality garden areas open to the public that meet prescribed depths ranging from 100 feet at B3 to 40 feet at B1 along the Hollis Street frontage. Spaces will be high quality, highly vegetated, and based on varying themes, including water features, sequential gardens, and hardscape/softscape that allows for seating areas.	The Hollis Street frontage will have planting areas on either side of the sidewalk, but not to the depths of the garden areas. Instead, an 11-foot paseo is proposed between existing B4 and B2/3 and two plazas are proposed with access from Hollis Street: the 46,836-square foot Chiron Plaza and 9,204-square foot Stanford Plaza.

PUD/PDP Requirement	FDP19-002 Proposed Deviation
53rd Street Open Space Corridors. Corner plazas meeting minimum dimension requirements on both sides of the 53rd Street/Holden Street (now Chiron Way) intersection and 53rd Street/Horton Street intersection.	No intersection plazas are proposed along 53rd Street. Instead, PCR Plaza is proposed midblock on 53rd Street between Chiron Way and Horton Street. The plaza would provide 24,516 square feet of open space accessible to the public. Seating, landscaped areas, and an art sculpture are proposed.
B13/14 Height. Height limit of 75 feet for structures west of Horton Street (except for two allowed administrative towers up to 200 feet in height).	B13/14 is over 102 feet tall, exceeding the 75-foot limit. However, the proposed design does not exceed the 200-foot limit allowed in PUD/PDP COA #90 – Height (B).

Source: Urban Planning Partners, 2020.

Circulation

The approved PUD/PDP considers most of the internal roads within the campus as limited to service and emergency vehicles. In particular, the PUD/PDP assumed that Holden Street (now called Chiron Way) would be limited to service and emergency vehicles, as would most or all of Holden Street. The FDP19-002 Project proposes to maintain full public access on 53rd Street and open up Chiron Way, which is currently gated, to public access as well. Consistent with the PUD/PDP, the FDP19-002 Project would encourage cars on the site perimeter by providing access to B13/14 only off Horton Street, and Chiron Way would be developed as a narrow street primarily for pedestrian circulation. FDP19-002 identifies several loading areas at each of the four new research and development buildings. See Figures 3 and 4 for a comparison of the vehicle circulation in the Chiron PUD/PDP and the FDP19-002 Project.

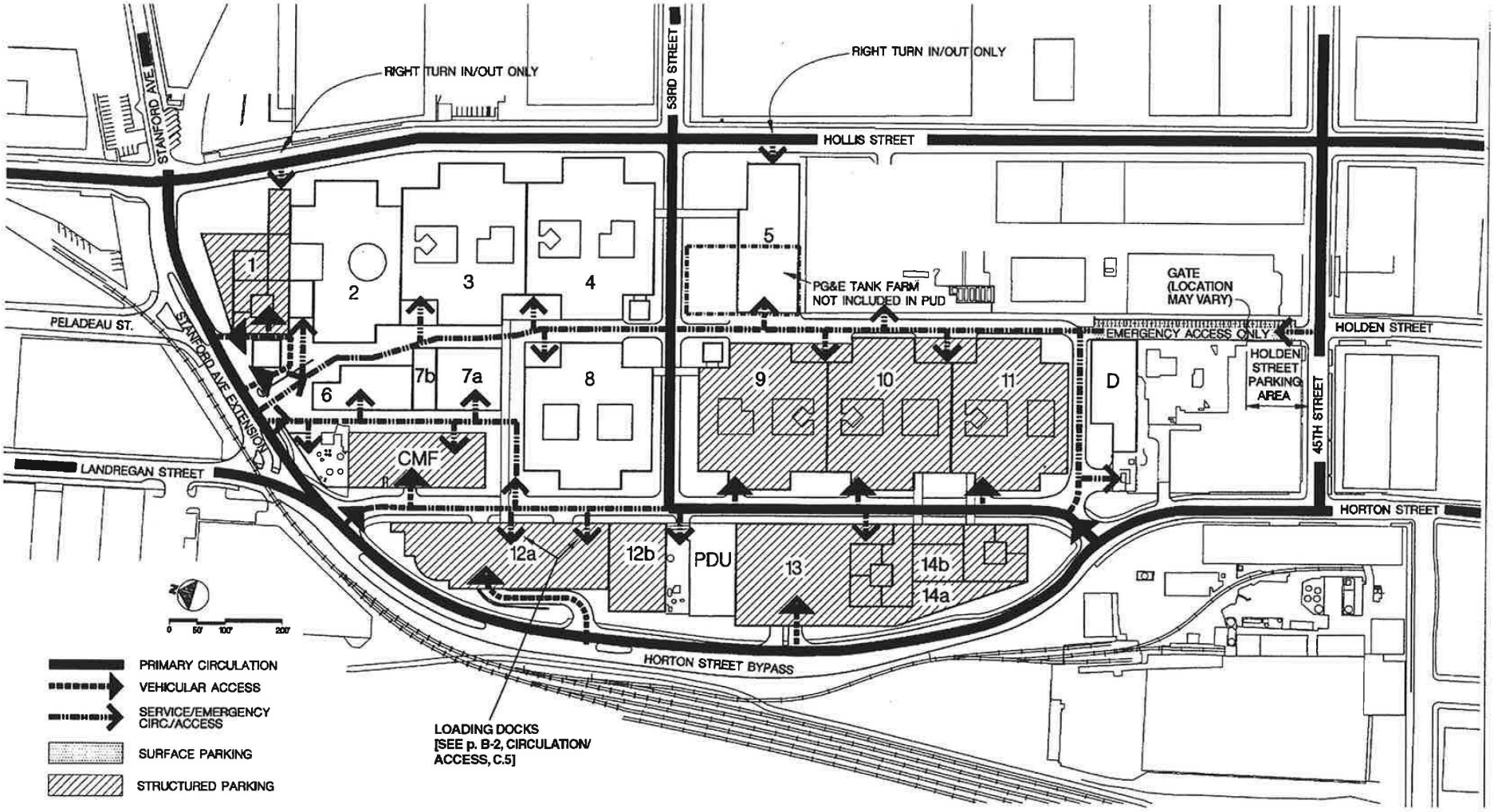
Parking

The PUD/PDP included buildout of 3,400 parking spaces, or 0.81 spaces per employee, primarily located in structures at four locations on the western edge of the site, accessible from Horton Street, Stanford Avenue, and the Horton Street Bypass. The proposed parking supply of 3,400 spaces was below the parking required by the EMC at the time (4,389 spaces).

The FDP19-002 Project proposes 1,991 spaces, which is equivalent to 0.67 spaces per employee. Parking would all be located in B13/14 except for a small surface parking lot south of the proposed B8A. No structured parking would be included in B1, as is assumed in the PUD/PDP.

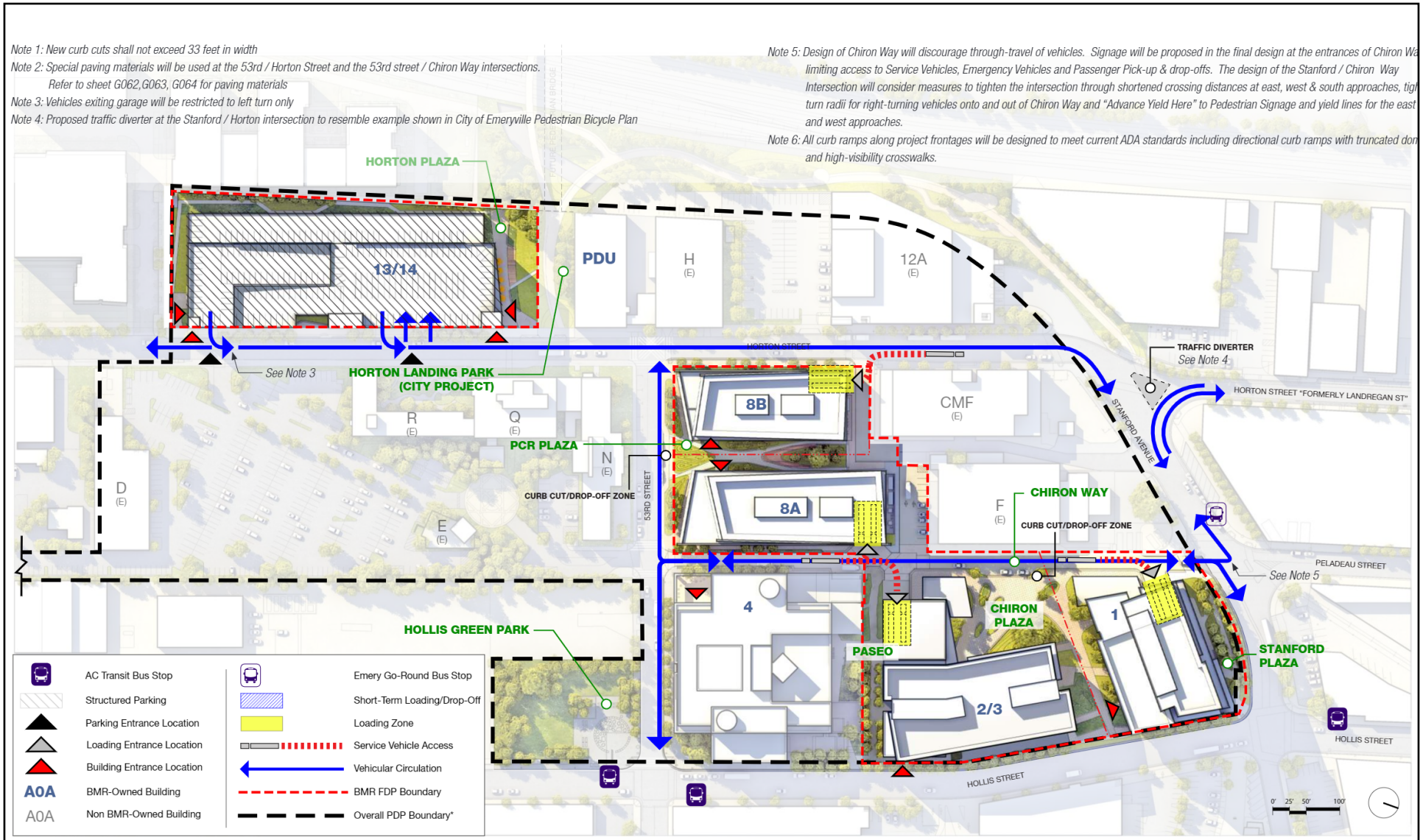
B. Relationship to Chiron EIR

The approval of subsequent FDPs, such as FDP19-002, was considered in the Chiron EIR. The Chiron EIR analyzed demolition of most of the then-existing buildings and construction of the maximum buildout in three phases, with each phase including a mix of uses. Table 6 illustrates the phases analyzed in the Chiron EIR, although the Chiron EIR specifies that the dates associated with the phases are target dates and that the level of development activity would vary over time and "full



Source: Chiron, 1996.

Figure 3
PDP Vehicle Circulation



Source: Flad Architects, 2021.

Figure 4
FDP Vehicle Circulation

buildout for the phases could vary beyond those dates."[9] Similarly, by way of example, the Chiron EIR shows which buildings could be developed to reach the amount of development associated with each phase, but these are illustrative scenarios, not required parameters. Conservative assumptions were made around the timing of construction, intensity of activities, and other conditions to represent the worst-case scenario for construction and operation of the PUD/PDP.

TABLE 6 CHIRON EIR PHASES

Phase (Yr)	Construction (sf)	Demolition (sf)	Net Change (sf)	Cumulative Total (sf)
Chiron EIR Baseline (1994)				
Building gsf				612,000
Parking Structures sf				36,000
Employees				930
Phase 1 (1996): Potential Buildout – Buildings 1, 3, 4, 7a, 12[a]				
Building gsf	824,000	145,000[b]	+679,000	1,290,000
Parking Structures sf	361,000	36,000	+324,000	361,000
Employees			+1,270	2,200
Phase 2 (2000): Potential Buildout – Buildings 2, 8 9, 13, and 12b[a]				
Building gsf	547,000	299,000	+248,000	1,538,000
Parking Structures sf	389,000	0	+389,000	750,000
Employees			+730	2,930
Phase 3 (2010): Potential Buildout – Buildings 5, 6, 7b, 10, 11, and 14a/b[a]				
Building gsf	709,000	48,000	+662,000	2,200,000
Parking Structures sf	367,000	0	+367,000	1,116,000
Employees			+1,280	4,210

Note: Columns may not sum to totals due to rounding.
[a] The Chiron EIR provides examples of which structures may house the estimated buildout in each phase. A different configuration of buildings could satisfy each phase as long as construction is within the parameters of the PUD/PDP and Design Guidelines.
[b] Table II.2 of the Chiron EIR reports a demolition of approximately 63,000 square feet in Phase 1 but summing the individual line items for demolition results in the number shown here: 145,000 square feet. The net change reflects 145,000 square feet of demolition.
Source: City of Emeryville, 1995. Chiron Development Plan EIR.

Total square footage of development on the PUD/PDP site after implementation of the FDP19-002 Project would be 1,507,000 square feet, which is approximately 693,000 square feet less than the 2.2 million square feet analyzed in the Chiron EIR. The total PUD/PDP site buildout with implementation of the FDP19-002 Project (1,507,000 square feet) is more than the total square footage studied in Phase 1 in the Chiron Development Plan EIR (1,290,000 square feet) and less

[9] City of Emeryville, 1995. Chiron Development Plan EIR, pp II.11. February.

than the total square footage of development that would exist at the end of Phase 2 (1,538,000 square feet). To be conservative and to account for modern office space trends of more shared spaces and fewer square feet per employee, Biomed estimates that the employee population will remain the same as projected for the FDP19-002 Project properties in the PUD/PDP and in the Chiron EIR. It is conservatively estimated that the FDP19-002 Project would yield approximately 2,000 net new employees compared to today.[10]

Consistent with the PUD/PDP, the Chiron EIR assumes there will be variation in building configuration, location, density, height, and other design features as the PUD/PDP develops but that the final buildout would remain consistent with the Chiron Development Plan Design Guidelines (Chiron Design Guidelines) proposed as part of the PUD/PDP.

IV. CEQA ANALYSIS

Urban Planning Partners reviewed the FDP19-002 Project relative to the PUD/PDP and its maximum buildout analyzed in the Chiron EIR and found that there are no new significant effects or an increase in the severity of a previously identified significant effect due to: (1) substantial project changes, (2) substantial changes in the project circumstances, or (3) new information of substantial importance which could not have been known with the exercise of reasonable diligence when the Chiron EIR was certified and that would require major revisions of the certified Chiron EIR. Under CEQA Section 21166 and CEQA Guidelines Sections 15162 and 15163, no further environmental review is required.

Each environmental topic assessed under CEQA and in the Chiron EIR was considered, including Aesthetics, Biological Resources, Geology/Soils, Hydrology/Water Quality, Noise, Recreation, Utilities/Service Systems, Cultural Resources, Land Use/Planning, Population/Housing, Transportation, Air Quality, Energy, Hazards and Hazardous Materials, and Public Services. We recognize there are new Appendix G environmental topics categories (e.g., wildfire, tribal cultural resources, greenhouse gas emissions) established since the Chiron EIR's certification. The significance thresholds for wildfire plainly demonstrate that the FDP19-002 Project will not cause a significant impact and no further analysis is necessary. Given that the site has been previously developed and an archeological monitoring program has been established per Chiron EIR MMs O.1 and O.2, new impacts to cultural resources would not be more severe than previously identified and no new analysis is needed. Finally, the topic of greenhouse gas emissions is discussed in detail in Section E of this Addendum No. 2.

The FDP would be required to comply, as applicable, with the MMRP as a COA along with all relevant COAs adopted with the PUD/PDP in Ordinance No. 95-006. See the Project COAs for all relevant MMs. As discussed below, there are no new impacts or more severe impacts not already identified and analyzed in the Chiron EIR that would result due to project changes, new

[10] Fehr & Peers, 2021. BioMed Center of Innovation – Bicycle Facilities Assessment. February 15.

information, or changed circumstances and therefore, no new or different mitigation measures would be required.

An assessment for Land Use, Transportation, Air Quality, Aesthetics, and Energy and Greenhouse Gas Emissions is provided below since these are the topics most likely affected by deviations in parking supply, circulation, and building design and configuration discussed above. The FDP19-002 Project would not change the footprint or intensity of development analyzed under the Chiron EIR. Therefore, the other environmental topics, especially elements that are tied to the site and maximum project buildout (e.g., Geology and Soils, Hydrology and Water Quality, Public Services, and Cultural Resources) would not be affected by project changes, changed circumstances, and/or new information. The environmental resource topics added to CEQA since the approval of the Chiron EIR (including wildfire and tribal cultural resources) also do not require in-depth analysis, as explained above.

A. LAND USE

The Chiron EIR evaluated potential impacts to land use and planning and concluded that these impacts would be less than significant with implementation of MM A.2, which requires implementation of the Chiron Design Guidelines to foster compatibility with surrounding land uses. The Design Guidelines were proposed as part of the PUD/PDP and contain design parameters related to height and density, building materials, landscaping, circulation, and other design considerations.

The FDP19-002 Project's land uses would be consistent with the land uses in the PUD/PDP and those studied in the Chiron EIR (See Section III.A, *Land Use and Land Use Plans and Policies* of the Chiron EIR and Section VI, *Revisions to the Draft EIR* in the Response to Comments document): research and development with some administrative and utility/warehouse uses. The FDP19-002 Project does not change the location or intensity of development and is within the buildout analyzed in the Chiron EIR. Since certification of the Chiron EIR, the area surrounding the PUD/PDP site continues to be a diverse mix of older and newer industrial, commercial, mixed-use, and residential uses.

The PUD/PDP site is no longer owned by Chiron and buildout of the site would serve a variety of biotech tenants instead of one. In addition, the FDP19-002 Project would decrease the parking amount, eliminate parking in B1, and modify site circulation and building designs. These changes do not change the potential for the FDP19-002 Project to result in a significant land use impact (i.e., physical division of an existing community or a conflict with an applicable land use plan or policy adopted to mitigate a physical environmental effect), nor does it trigger the need for any new or substantially different alternatives or mitigations measures not previously identified to reduce significant land use impacts, for the reasons described below.

The FDP19-002 Project is consistent with the main components of the Chiron Design Guidelines that were established to foster compatibility with the surrounding land uses, such as screening utility functions, providing a pedestrian and open space network to link the PUD/PDP to the

neighborhood, and adhering to height and setback limits. The Design Guidelines state that building heights will be up to 125 feet for most of the PUD/PDP site, with a height of up to 300 feet allowed for B1 and 200 feet allowed for B13 and B14. FDP19-002's proposed building heights, which range from 82 feet to 178 feet, are well within these heights. Similarly, the Design Guidelines allow a 0-foot setback from property edges with various reliefs provided through architectural features and landscaping. The proposed FDP setbacks, which range from 0 feet to 46.5 feet, are within the Design Guideline's setback allowances. The FDP19-002 deviations detailed in Table 5 of this Addendum No. 2, such as differences related to building configuration, heights, frontage treatments, and other minor design deviations, would not create any new significant impacts or increase the severity of previously identified impacts because the FDP19-002 Project's land uses remain the same as previously analyzed and the intensity/density are within the PUD/PDP allowable buildout.

Additionally, per PUD/PDP COA #6, *Mitigation Measures*, the FDP19-002 Project would be required to comply with applicable mitigation measures of the Chiron EIR, including MM A.2, which requires implementation of the Design Guidelines. As described above, the FDP19-002 Project is consistent with guidelines related to heights and setbacks. Deviations from the PUD/PDP and Design Guidelines related to the siting of plazas and courtyards and circulation are still consistent with PUD/PDP objectives and improve connectivity and cohesion across the PUD/PDP site. These design refinements do not affect the location, type, or intensity of land uses, and so they do not have implications on land use impacts. Staff have found that there is substantial evidence to support a finding that the FDP19-002 is in substantial compliance with the PUD/PDP, pending Planning Commission (and if needed, City Council) determination.

Therefore, consistent with the Chiron EIR findings, implementation of the FDP19-002 Project would not result in any new significant impacts or substantially more severe impacts related to land use. Furthermore, no new significant land use impacts or substantially more severe land use impacts would result from new information or changed circumstances.

B. TRANSPORTATION

The Chiron EIR determined that six significant and unavoidable transportation-related impacts (See Impacts C.18, C.20, C.36, C.37, C.41, and C.42 in Draft EIR Section III.C, *Traffic, Transportation, Circulation and Parking* and Section VI, *Revisions to the Draft EIR* in the Response to Comments document) would occur despite the identification of mitigation measures because the City of Emeryville did not have the authority to implement those mitigations measures. The six impacts were related to LOS on streets and intersections under the authority of the City of Oakland, City of Berkeley, or Caltrans. Chiron entered into settlement agreements with the Cities of Oakland and Berkeley and AC Transit to address concerns of each agency and Biomed would be responsible for settlement conditions such as emergency response training, information-sharing, payment of fair share contributions, and other measures outlined in the settlement agreements. The Chiron EIR also identified one LOS impact at the Christie Avenue/Powell Street intersection (Impact C.38) that would occur despite mitigation and four significant transportation impacts related to LOS and the

loss of on-street parking (Impacts C.30, C.31, C.39, and C.54) that could not feasibly be addressed by a mitigation measure. Three transportation impacts (C.20, C.41, and C.42) were cumulative impacts from the Chiron PUD/PDP and the 1.6 million square foot Kaiser Permanente Medical Center (Kaiser project) proposed immediately southeast of the PUD/PDP site. All other impacts were found to be less than significant with implementation of mitigation measures.

A supplemental traffic VMT analysis, dated February 2, 2021 and found in Attachment A,[11] was prepared by Fehr & Peers that considered new information since the Chiron EIR was prepared regarding methods for trip generation and thresholds of significance. As of July 1, 2020, Senate Bill (SB) 743 determines that transportation impacts must be determined using vehicle miles traveled (VMT) rather than LOS. The use of VMT in significance criteria is intended to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas emissions, encourage infill development, and improve public health. Under this State law, automobile delay (as measured by LOS) is not considered a significant impact on the environment. For this reason, Chiron EIR MMs established to mitigate an LOS impact are no longer applicable. The State's directive is consistent with the DA, which stipulates that items that are not expressly covered by the DA are subject to the rules, regulations, and ordinances "in effect at the time of Subsequent Approvals are issued, "insomuch as the current regulations do not conflict with the DA or reduce the development rights or assurances provided by the DA. Per Section 2.7 *Applicable Rules* of the DA, the DA, PUD/PDP, and 1995 City rules and policies regulate the FDP19-002 Project relative to permitted land uses, development intensity, building heights and design, and the provision of land for public purposes. Circulation is not expressly mentioned in the *Applicable Rules* DA section and the utilization of VMT as a transportation metric is not in conflict with the DA. Therefore, the Fehr & Peers analysis, provided as Attachments A through C, considers transportation impacts in terms of VMT and current City plans and policies.

City Policy

Since the approval of the PUD/PDP, the City has adopted plans and policies addressing circulation, including the Emeryville Pedestrian and Bicycle Plan (2012). The Pedestrian and Bicycle Plan establishes goals for vehicle volumes on bicycle boulevards of fewer than 1,500 vehicles per day on bicycle boulevards east of Hollis Street and fewer than 3,000 vehicles per day on bicycle boulevards west of Hollis Street because bicycle boulevards are streets meant to have low traffic volumes and speeds to provide a comfortable and safe experience for bicyclists sharing travel lanes with automobiles. Bicycle boulevards on and near the PUD/PDP site include Horton Street, 45th Street, 53rd Street, Stanford Avenue, and Doyle Street.

In a Bicycle Facilities Assessment Memorandum dated February 15, 2021 and found in Attachment B,[12] Fehr & Peers analyzed five bicycle boulevard segments under FDP19-002 Project conditions to assess consistency with the City's bicycle boulevard goal. Two out of five segments already have

[11] Fehr & Peers, 2021. BioMed Center of Innovation – Vehicle Miles Traveled Assessment. February 2.

[12] Fehr & Peers, 2021. BioMed Center of Innovation – Site Plan and TDM Plan Review. February 15.

daily traffic volumes above the bicycle boulevard threshold and the FDP19-002 Project would direct a large proportion of Project traffic to 53rd Street and Hollis Street. The Pedestrian and Bicycle Plan states that providing "additional separation with a bike lane, raised bike lane, cycle track, or other treatment" is recommended where traffic calming or diversion cannot reduce traffic volumes below the bicycle boulevard threshold. Horton Street between Stanford Avenue and 53rd Street currently provides protected bike lanes. Based on projected traffic volumes, City of Emeryville guidelines would require similar upgraded bicycle facilities on segments of Horton Street and 53rd Street. Therefore, consistent with City policy, the FDP19-002 Project would implement one-way cycle tracks on Horton Street between 53rd Street and 45th Street and on 53rd Street between Horton Street and Hollis Street. Design of these cycle tracks would be consistent with guidelines established by the National Association of City Transportation Officials (NACTO) Urban Street Design Guide, which the City has adopted as its design guide. Daily vehicle volumes on 45th Street would be expected to be less than 2,000 vehicles per day, which is consistent with City of Emeryville guidelines for bicycle boulevards, and therefore enhanced bicycle facilities are not necessary. Fehr & Peers' assessment concluded that with the bicycle improvements provided by the Project, bicycle facilities in the project vicinity would meet City guidelines under near-term plus Project traffic conditions and the Project would be consistent with City policies related to bicycle facilities on roadways.

The FDP19-002 Project would also implement traffic calming measures to further City goals of safe and complete streets, including speed bumps, conflict zone striping, left-turn-only restrictions on vehicles exiting the B13/14 garage, a traffic signal at the Horton Street/53rd Street intersection, electronic warning devices at sidewalk/driveway intersections, and a Pedestrian Hybrid Beacon protected crosswalk at the parking structure on Horton Street. The FDP19-002 Project is also consistent with other transportation-related City policies such as providing pedestrian routes across large blocks, reducing the number and width of curb cuts, encouraging transit and multi-modal transportation through TDM measures, reducing the land area devoted to parking, reducing VMT, and funding transit and transportation improvements. Consistent with EMC requirements, the Project proposes convenient and safe bicycle parking and adequate off-site loading areas while reducing conflicts with other transportation modes.

For the reasons discussed above, the Project is consistent with City transportation policies and there are no new transportation impacts related to conflicts with transportation plans and policies beyond what was studied in the Chiron EIR.

VMT

CEQA Guideline Section 15064.3(b)(1) states that lead agencies generally should presume that projects proposed within one-half mile of an existing major transit stop[13] or an existing stop along a

[13] According to Public Resources Code Section 21064.3, "major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

high-quality transit corridor[14] will have a less-than-significant impact on VMT. The Governor's Office of Planning and Research (OPR) December 2018 guidance states that this presumption would not apply if project-specific or location-specific information indicates that the project will still generate significant levels of VMT, such as if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The FDP19-002 Project site is within one-half mile of a major transit stop, the Emeryville Amtrak Station,[15] and a high-quality transit corridor, San Pablo Avenue. The site is also adjacent to three Emery-go-Round stops on the Hollis route that qualify as major transit stops. Emery-go-Round provides fare-free service to the MacArthur Bay Area Rapid Transit (BART) Station and under the DA, its existing 15-minute headways during peak hours would be improved to 7.5 minutes. The FDP19-002 Project would have an FAR of 1.57[16] and provide 410 fewer spaces than required by the PUD/PDP.[17] It would not replace affordable residential units. The FDP19-002 Project would also implement Transportation Demand Management (TDM) measures per the settlement agreements executed with neighboring jurisdictions and AC Transit as well as MMs C.8, C.28, C.52, and C.56 of the Chiron EIR (called a Transportation Systems Management Program in the EIR). For these reasons, the Project could be presumed to have a less-than-significant VMT impact. Even though the FDP19-002 Project is presumed to have a less-than-significant VMT impact, an analysis of VMT impacts was prepared and is summarized here for informational purposes.

Although the City has not formally adopted VMT thresholds, it established a commitment to eliminate LOS evaluations and minimize VMT at new developments with Transportation Element policies T-P-3 and T-P-5 in the Emeryville General Plan. Consistent with these policies and OPR guidance, the following significance threshold is utilized to evaluate the FDP19-002 Project:

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[14] According to Public Resources Code Section 21155, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

[15] The Emeryville Amtrak Station operates regional and interregional passenger rail service and is served by the Capitol Corridor, Coast Starlight, San Joaquins, and California Zephyr lines. On weekdays, Emeryville Amtrak Station is used by 22 trains in each direction. On weekends, 18 trains in each direction use Emeryville Amtrak Station. In 2018, the Emeryville Amtrak Station served 587,985 rail passengers (both arrivals and departures), as well as 199,738 passengers on connecting thruway bus service. Rail Passengers Association, 2019. Amtrak service in Emeryville, CA. Accessed December 8, 2020. https://www.railpassengers.org/site/assets/files/1912/emy.pdf

[16] Per EMC Section 9-8.206, the FAR calculation excludes B13/14 since it will be used for vehicle parking and loading. FAR calculated as follows: 1,507,000 gross sf of PUD/PDP site with implementation of FDP / 9,588,320 sf PUD/PDP lot area = 1.57 FAR.

[17] PDP Section 2.4.10 specifies the parking ratio of 0.81 spaces per employee for the PUD/PDP site. The B13/14 parking structure would serve the FDP buildings and existing B4, which together would employ an estimated 2,964 employees. Therefore, the total number of spaces required in the FDP is 2,401 spaces (2,964 employees * 0.81 spaces = 2,401). The FDP proposes 1,991 spaces. Which would be a parking ratio of 0.67 spaces per employee.

- Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact related to VMT.[18]

Fehr & Peers used the Alameda CTC Travel Demand Model to estimate VMT per employee under 2020 and 2040 conditions. Table 7 shows the region's estimated VMT per employee for the transportation analysis zones (TAZs) containing the FPD19-002 Project site compared to the regional average and the significance threshold (i.e., 85 percent of the regional average). Land uses in the project area are expected to generate approximately 15.8 VMT per employee under 2020 conditions and 14.1 VMT per employee under 2040 conditions.

TABLE 7 AVERAGE VMT PER EMPLOYEE

Geography	2020	2040
Bay Area Region	18.1	18.2
Regional Threshold (85%)	15.4	15.5
Project TAZs[1]	15.8	14.1
Project TAZ with TDM[2]	14.4	12.8
Project TAZ vs Threshold	Within Threshold	Within Threshold

[1] Weighted average of TAZs 119 and 1427.
[2] Assumes implementation of the TDM plan required by the DA. The TDM plans has an estimated minimum effectiveness of a nine percent reduction in VMT.
Source: Fehr & Peers, 2021.

As previously mentioned, the FDP19-002 Project is required to implement a TDM plan per settlement agreements and Chiron EIR MMs, which remain applicable to the FDP19-002 Project. The TDM plan prepared for the PUD/PDP included performance standards to meet required trip reduction objectives, including achieving a drive-alone mode share of 65 percent or less. To monitor implementation and performance, the TDM plan requires annual status reports detailing the implementation of specific elements of the plan, assessing the effectiveness of those elements, and identifying any modifications needed to maximize the effectiveness of the plan. Regional models are not sensitive to site-specific TDM programs. Therefore, the Project's VMT per employee was estimated by reducing the VMT per employee for the Project TAZs by the minimum VMT reduction that would be achieved by implementation of the required TDM plan, producing the most conservative result. Fehr & Peers analyzed the TDM plan's effect on Project VMT and found that implementation of the PUD/PDP TDM plan would reduce VMT by at least nine percent, and the TDM plan may result in additional reductions to VMT depending on the level to which elements like transit subsidies and parking pricing are implemented. As shown in Table 7, implementation of the

[18] VMT per employee is defined as the total VMT from auto vehicle trips between home and work for employees in the specified geographic area divided by the total number of employees.

required TDM plan would therefore ensure that the FDP19-002 Project would not exceed the VMT threshold and the impact would be less than significant.

Hazards

The Chiron EIR studied pedestrian and bicycle impacts, including conflicts between pedestrian routes and vehicles. The EIR found that impacts could be mitigated to less-than-significant levels with implementation of mitigation measures to provide alternative pedestrian routes during construction (MM C.5), provide audio and visual warning devices at the junction of sidewalks with access to garages or loading areas (MMs C.10, C.34 and C.56), install warning devices at major intersections between vehicular and pedestrian paths and potentially stop signs or speed humps at pedestrian crossings of on-site streets (MM C.34), and provide adequate sidewalk widths that comply with City requirements (MM C.56).

The FPD19-002 Project would be subject to these mitigation measures. The FPD19-002 Project would also include additional multi-modal improvements to further minimize conflicts, including the following:

- One-way cycle tracks (protected, with soft or hardscape buffers, or raised) in each direction on Horton Street from 53rd Street to 45th Street
- One-way cycle tracks (protected, with soft or hardscape buffers, or raised) in each direction on 53rd Street from Horton Street to Hollis Street
- Traffic diverters at the Horton Street/Stanford Avenue intersection
- Right-turn prohibition for vehicles exiting the B13/14 parking garage
- Pedestrian Hybrid Beacon protected crosswalk at the parking structure on Horton Street
- Traffic signal at the intersection of Horton Street and 53rd Street and Horton Street

Consistent with the PUD/PDP, the FDP concentrates vehicles at the site perimeter by placing the B13/14 parking structure on Horton Street on the western edge of the site. Measures to promote safe and convenient pedestrian circulation across Horton Street would include wayfinding signage and a mid-block crosswalk with a HAWK or similar signal. In addition, the 53rd Street/Horton Street intersection would be signalized and would include a pedestrian-only cycle (called a pedestrian scramble) under the FPD19-002 Project. The pedestrian scramble would provide safe crossing between the B13/14 garage, the planned South Bayfront Pedestrian-Bicycle Bridge and Horton Landing Park, and the PUD/PDP campus. As previously mentioned, the Project would also implement audio and visual warning devices and signage at the B13/14 garage driveways to increase bicycle and pedestrian visibility and safety.

The FPD19-002 Project differs from the PUD/PDP in that it opens up access to interior roadways, particularly Chiron Way. Chiron Way is proposed as a primarily pedestrian plaza and pathway that can accommodate service traffic, emergency vehicles, and drop-off and pick up. The street would

be narrow to discourage through traffic and would include safety measures to enhance driver visibility of pedestrians.

In a Site Plan and TDM Plan Review Memorandum dated February 15, 2021 and found in Attachment C,[19] Fehr & Peers reviewed the FPD19-002 Project, including the improvements described above, for transportation conflicts and hazards. The analysis found that the FPD19-002 Project provides adequate facilities related to access and circulation and concluded that the Project would not create any unacceptable conflicts or hazards. In addition, the Project's circulation program will need approval from the City Public Works department to ensure consistency with applicable design standards. For these reasons, the FDP19-002 Project would result in less-than-significant impact related to design features and no new mitigation measures are required.

Therefore, consistent with the Chiron EIR findings, implementation of the FPD19-002 Project would not result in any new significant impacts or substantially more severe impacts related to transportation hazards. Furthermore, no new significant impacts or substantially more severe impacts would result from new information or changed circumstances.

Emergency Access

The FPD19-002 Project proposes emergency vehicle access routes on Hollis Street, Chiron Way, and Horton Street in addition to internal routes through on the north and south sides of B13/14. These routes would provide for emergency vehicles access to all buildings on the site from multiple directions and all FDP19-002 Project buildings and roadways would be designed to provide adequate access for emergency vehicles. Per PUD/PDP COA #69 and MM D.3a of the Chiron EIR, the FDP's site and building plans would also need to be approved by the Fire and Police Departments prior to approval of the Project. The FPD19-002 Project would not result in a significant impact related to inadequate emergency vehicle access.

Transportation Conclusion

The Chiron EIR found significant and unavoidable transportation impacts due to the LOS of the PUD/PDP and cumulative impacts with Kaiser and the loss of street parking due to implementation of the PUD/PDP and its mitigation measures. The FPD19-002 Project would not have significant transportation impacts because it is consistent with relevant transportation policies and below the VMT threshold and because it does not pose hazards due to a geometric design features or inadequate emergency access.

The FPD19-002 Project is surrounded by bicycle boulevards as was previously analyzed. It will add more traffic than would otherwise be recommended to certain segments. Consistent with City plans and policies, the Project would upgrade bicycle facilities on Horton Street and 53rd Street and is designed to include features that avoid conflicts between pedestrian and bicycle routes and vehicles, as was done previously. The Project is below the VMT threshold based on both 1) its

[19] Fehr & Peers, 2021. BioMed Center of Innovation – Site Plan and TDM Plan Review. February 15.

proximity to high-quality transit and 2) a VMT analysis. Implementation of the FPD19-002 Project would include bicycle and pedestrian circulation enhancements and would not create any unacceptable conflicts with vehicular traffic or other transportation hazards. The Project is designed to provide adequate access for emergency vehicles to all buildings. Finally, cumulative impacts identified in the Chiron EIR are reduced given that the Kaiser project was never built. For these reasons, implementation of the FPD19-002 Project would not result in any new significant transportation impacts or substantially more severe transportation impacts than those identified in the Chiron EIR and no new significant transportation impacts or substantially more severe transportation impacts would result from new information or changed circumstances.

C. AIR QUALITY

The Chiron EIR determined that significant and unavoidable construction- and operation-related air quality impacts (See Impacts H.1, H.2, H.3, and H.4 in Draft EIR Section III.H, *Air Quality* and Section VI, *Revisions to the Draft EIR* in the Response to Comments document) and cumulative air quality impacts (Impacts H.6, H.7, and H.8) would occur despite implementation of mitigation measures. Analysis for cumulative impacts considered the proposed Kaiser project, a 1.6 million square foot hospital and medical office development that ultimately did not reach development. All other air quality and toxic air contaminant impacts were mitigated to a less-than-significant level with implementation of mitigation measures.

None of the differences between the FDP19-002 Project and the PUD/PDP or changes in existing conditions warrant any new analysis. Since 1995, air quality has improved. In accordance with the Pavley (Assembly Bill 1493) and Low-Emission Vehicle regulations (Title 13, California Code of Regulations, Section 1961.2), emission standards for off-road diesel equipment are required to improve over time. Since the 1990s, construction vehicles have become more highly regulated and best practices have evolved to reduce emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$. Because the Kaiser project would not be undergoing construction at the same time as the FDP19-002 Project, cumulative construction impacts would be less severe than analyzed in the Chiron EIR. According to the City's November 2020 Major Development Projects Progress Report, there are two other projects on a similar timeline as the FPD19-002 Project (1225 65th Street Multi-Unit Residential Project and Sherwin Williams Existing Building FDP). These three projects would total 24 residential units and 74,000 square feet of commercial space,[20] which is substantially less than the 2,177 residential units and 5.1 million square feet of commercial and industrial development assumed in the Chiron EIR cumulative growth scenario.

In addition to the improved circumstances under which Project construction would begin, the scope of construction for the Project would be less than previously analyzed in the Chiron EIR given that the gross square footage of the Project is less than assumed for the same properties in the PUD/PDP. Current construction best practices include limiting vehicle idling times, properly tuning and maintaining all construction equipment, and using electricity for portable equipment. FDP19-

[20] City of Emeryville, 2020. Community Development Department Progress Report – November 2020. December 1.

002 Project construction is also subject to all applicable laws and regulations regarding demolition and the Chiron EIR mitigation measures, including implementation of dust and NOx emission controls. For these reasons, no new significant or substantially more severe air quality impacts are anticipated related to construction.

Buildout of the FDP19-002 Project would result in less than 912,000 total square feet, compared to over 1 million square feet depicted for the applicable properties in the PUD/PDP illustrative plan. In addition, the FDP19-002 Project would reduce the parking ratio from 0.81 spaces per employee in the PUD/PDP to 0.67 spaces per employee. Therefore, Project operations would be less than previously analyzed. Furthermore, operations would also be subject to the mitigation measures identified in the Chiron EIR, including implementation of employee trip reduction measures and standard engineering practices for exhaust system design. Effective January 2020, new Title 24 standards require air filtration systems of MERV 13 or greater, interior lighting occupancy controls for restrooms of any size, decreased wattage allowances for lights, minimum ventilation rates, and minimum exhaust rates. These regulations improve interior air quality and reduce air pollution emissions from the burning of fossil fuels, resulting in less severe impacts than identified in the Chiron EIR. Finally, because the Pixar Animation Studios project constructed south of the PUD/PDP site is smaller and has fewer employees than the Kaiser project[21] that was assumed to be built at the same time as the Chiron PUD/PDP, cumulative operation impacts would also be less severe than analyzed in the Chiron EIR.

Implementation of the FDP19-002 Project would not result in any new significant impacts or substantially more severe impacts related to air quality. Furthermore, no new significant air quality impacts or substantially more severe air quality impacts would result from new information or changed circumstances.

D. AESTHETICS

As described by the Chiron EIR, impacts related to visual and aesthetic character (See Impact N.1 in Draft EIR Section III.N, *Urban Design and Visual Quality* and Section VI, *Revisions to the Draft EIR* in the Response to Comments document) would be less than significant with implementation of the Chiron Development Plan Design Guidelines, which were proposed as part of the PUD/PDP. Similarly, impacts related to light and glare and wind (Impacts N.2 and N.5) were mitigated to less-than-significant levels with implementation of design features like lighting shields and arcades. All other impacts were found to be less than significant.

Under CEQA Section 21099(d), "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall

[21] According to 2014 data, Pixar has 1,155 employees, which is almost 3,000 fewer employees than the 4,140 Kaiser employees studied in the cumulative scenario of the Chiron EIR. City of Emeryville, Administrative Services Department Finance Division, 2014. *Comprehensive Annual Financial Report*. Accessed December 8, 2020. https://www.ci.emeryville.ca.us/ArchiveCenter/ViewFile/Item/2096.

not be considered significant impacts on the environment."[22] Accordingly, aesthetics is no longer considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

1. The project is in a transit priority area.[23]
2. The project is on an infill site.[24]
3. The project is residential, mixed-use residential, or an employment center.[25]

The Project meets all three of the above criteria because it is (1) situated within 0.5 miles of the Emeryville Amtrak Station;[26] (2) on a site that is currently developed and within an urban area of Emeryville that was previously developed; and (3) located on a property for which the PUD zoning district allows for commercial uses up to a proposed FAR of 2.33. Because the Project meets these three criteria, no further analysis of aesthetic impacts is necessary.

Even though potential aesthetic impacts are not considered significant impacts for this FDP19-002 Project, a discussion of aesthetics follows for informational purposes.

Consistent with the Chiron EIR analysis, the project area is urbanized and since approval of the PUD/PDP, has continued to redevelop with an eclectic mix of low- and mise-rise commercial facilities and multi-family residential buildings. The FDP19-002 Project site does not include any scenic resources and scenic vistas of the San Francisco Bay and East Bay hills are blocked by existing development.

Per MM N.1, the FDP19-002 Project would have to comply with the Design Guidelines. The Design Guidelines provide parameters for individual PUD/PDP buildings, including building envelopes, building density and height limits, locations and types of open space, lighting, utility screening, and exterior materials to create a cohesive campus that is sensitive to the site and surrounding landscape while still providing flexibility. Compared to the PUD/PDP and Design Guidelines, the FDP19-002 Project proposes a shorter, wider tower at B1 (178 feet instead of 300 feet in the Design Guidelines and 225 feet in the PUD/PDP) and a taller building at B2/3 (114 feet instead of 125 feet in

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[22] Public Resources Code Section 21099(d)(1).

[23] Public Resources Code Section 21099(a)(7) defines a "transit priority area" as an area within ½ mile of an existing or planned major transit stop. A "major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the AM and PM peak commute periods.

[24] Public Resources Section 21099(a)(4) defines an "infill site" as either (1) a lot within an urban area that was previously developed or (2) a vacant site where at least 75 percent of the site perimeter adjoins (or is separated by only an improved public right-of-way from) parcels that are developed with qualified urban uses.

[25] CEQA Section 21099(a)(1) defines an "employment center" as a project situated on property zoned for commercial uses with a FAR of no less than 0.75 and located within a transit priority area.

[26] The Emeryville Amtrak Station operates regional and interregional passenger rail service and is served by the Capitol Corridor, Coast Starlight, San Joaquins, and California Zephyr lines. On weekdays, Emeryville Amtrak Station is used by 22 trains in each direction. On weekends, 18 trains in each direction use Emeryville Amtrak Station. In 2018, the Emeryville Amtrak Station served 587,985 rail passengers (both arrivals and departures), as well as 199,738 passengers on connecting thruway bus service. Rail Passengers Association, 2019. Amtrak service in Emeryville, CA. Accessed December 8, 2020. https://www.railpassengers.org/site/assets/files/1912/emy.pdf.

the Design Guidelines and 90 feet in the PUD/PDP). The proposed height of B2/3 is still within the height established in the Design Guidelines and the height and unique glass panel façade of B1 maintain its status as a gateway. The Project's proposal to make B1 shorter and B2/3 taller creates a more cohesive skyline for the PUD/PDP and would not create a negative aesthetic impact. Rather, the Project would strengthen cohesion across the project area and better relate to surrounding structures by diminishing the starkness of the tower and creating a more uniform palate of height and bulk.

The FDP19-002 Project would also provide a different configuration of open space than envisioned in the PUD/PDP and Design Guidelines, proposing parks and plazas at key locations between buildings throughout the PUD/PDP site instead of providing pocket parks along the Hollis Street frontage and corner plazas on 53rd Street. Furthermore, the Project would not include pedestrian bridges connecting campus structures and would allow open circulation on internal roads like 53rd Street and Chiron Way instead of service and emergency access only. However, the proposed configuration of open space and circulation, including a paseo, multiple plazas, and pedestrian-oriented Chiron Way, is consistent with the vision of the Design Guidelines to provide functional linkages, a network of common open spaces, and a pedestrian scale.

In addition to required compatibility with the Design Guidelines, the FDP19-002 Project would implement MMs N.2 and N.5 to reduce light and glare and wind through design features. Furthermore, the reduced height of B1 would reduce the impacts analyzed in the Chiron EIR. The EIR concluded that buildings with heights of less than 200 feet would be unlikely to cause substantial changes in pedestrian-level wind conditions. None of the proposed buildings in the FDP19-002 Project would exceed 200 feet.

As described above, small deviations from the PUD/PDP and Design Guidelines related to the siting of plazas and courtyards are still consistent with PUD/PDP objectives and improve connectivity and cohesion. These design refinements do not affect scenic vistas or scenic resources and the FDP19-002 Project is consistent with the height and bulk parameters of the Design Guidelines. Therefore, consistent with the Chiron EIR findings, implementation of the Project would not result in any new significant impacts or substantially more severe impacts related to aesthetics. Furthermore, no new significant aesthetic impacts or substantially more severe aesthetic impacts would result from new information or changed circumstances.

E. Energy and Greenhouse Gas Emissions

As described in the Chiron EIR, implementation of the PUD/PDP would require a substantial upgrade of the local energy supply infrastructure, but this impact would be mitigated to a less-than-significant level with payment of fair share contributions to PG&E. No significant Project or cumulative energy impacts would occur with implementation of mitigation measures. Greenhouse gas emissions were not analyzed in the Chiron EIR.

None of the FDP19-002 Project minor deviations or changes in existing conditions warrant new analysis. Since 1995, energy conservation measures and vehicle standards have improved and there

have been no other substantial adverse changes that would substantially increase the severity of impacts identified in the Chiron EIR. Buildout of the FDP19-002 Project would reduce the parking ratio from 0.81 spaces per employee in the PUD/PDP to 0.67 spaces per employee. With reduced parking and adherence to current energy efficiency requirements, implementation of the FDP19-002 Project would minimize adverse impacts. The Project would also implement applicable mitigation measures identified in the Chiron EIR.

The Bay Area Air Quality Management District (BAAQMD) has revised its CEQA thresholds with respect to air quality and global climate change, including thresholds for greenhouse gases since certification of the Chiron EIR. Although greenhouse gas emissions were not quantified and analyzed in the Chiron EIR, the greenhouse effect and the potential for GHG impacts was known at the time. Therefore, new CEQA thresholds and the information used to help develop these thresholds do not represent "new information" as specifically defined under CEQA.[27] As a result, an analysis of the FDP19-002 Project according to the recommended May 2017 BAAQMD CEQA Guidelines and Thresholds is not required.

Implementation of the FDP19-002 Project would not result in any new significant impacts or substantially more severe impacts related to energy and greenhouse gas emissions. Furthermore, no new significant impacts or substantially more severe impacts would result from new information or changed circumstances.

V. CONCLUSION

For the reasons set forth above, the minor modifications in the FDP19-002 Project are not substantially different from those described in the Chiron EIR or Addendum No. 1. None of the conditions described in CEQA Section 21166 or CEQA Guidelines Sections 15162 and 15163 exist, therefore preparation of a subsequent or supplemental EIR is not warranted. Specifically, there are no substantial changes proposed in the FDP19-002 Project nor changes in circumstances under which the FDP19-002 Project will be undertaken which would result in new or substantially increased significant effects, and there is no other relevant new information of substantial importance which will require any major revisions to the Chiron EIR. Therefore, no further environmental review is required and in considering approval of the FDP19-002 Project, the City should rely on the previously certified Chiron EIR.

- Attachment A: Fehr & Peers VMT Assessment Memorandum
- Attachment B: Fehr & Peers Bicycle Facilities Assessment Memorandum
- Attachment C: Fehr & Peers Site Plan and TDM Plan Review Memorandum

[27] The 2011 CEQA case, *CREED v. City of San Diego* (2011) 184 Cal.App.4th 1032, held that climate change is not new information requiring a supplemental EIR because information about greenhouse gases have been available since the late 1970s. See also, *San Diego Navy Broadway Complex Coalition v. City of San Diego* (2010) 185 Cal.App.4th 924. Further, *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301 held that the BAAQMD CEQA Guidelines are not "new information" that require the preparation of a subsequent EIR.

ATTACHMENT A: FEHR & PEERS VMT ASSESSMENT MEMORANDUM

FEHR PEERS

Memorandum

Date: February 2, 2021

To: Miroo Desai, City of Emeryville

From: Jordan Brooks and Kathrin Tellez, Fehr & Peers

Subject: BioMed Center of Innovation – Vehicle Miles Traveled Assessment

OK20-0384

This memorandum documents the vehicle miles traveled (VMT) assessment conducted by Fehr & Peers for the BioMed Center of Innovation project (Project) in the City of Emeryville. The analysis assessed the Project's consistency with City of Emeryville policies concerning VMT as well as new CEQA guidelines related to the implementation of Senate Bill 743 (SB 743). As part of implementing SB 743, the California Governor's Office of Planning and Research (OPR) identified VMT as the most appropriate metric to evaluate the environmental effects of a project from a transportation perspective and prohibited the use of delay-based metrics for the purposes of identifying transportation impacts under the California Environmental Quality Act (CEQA).

Based on the findings of this analysis, the Project can be presumed to have a less-than-significant impact on VMT and would be consistent with City policies concerning VMT.

Policy Context

Senate Bill (SB) 743, passed in 2013, required OPR to develop new CEQA guidelines that establish criteria for determining the significance of transportation impacts of projects that moves away from driver-based estimates of delay and instead focuses on the environmental effects of vehicle travel. Beginning in July 2020, vehicle-delay based level of service calculations cannot be the sole metric used to evaluate a project's impacts to the transportation system, and instead a vehicle miles of travel (VMT) metric is to be evaluated.

The City of Emeryville has not yet formally adopted VMT thresholds to apply to projects for which it serves as the CEQA lead agency. The Alameda County Transportation Commission (Alameda CTC)

has not made any recommendations regarding VMT thresholds. Although the City of Emeryville has not formally adopted VMT thresholds, it established a commitment to eliminate level of service evaluations and minimize VMT at new developments with the following policies in the Transportation Element of the Emeryville General Plan:

- Policy T-P-3: A "Quality of Service" standard that seeks to optimize travel by all transportation modes shall be developed and used to measure transportation performance. The City does not recognize "Level of Service" (LOS) as a valid measure of overall transportation operations, and sets no maximum or minimum acceptable LOS levels, with the exception of streets that are part of the regional Congestion Management Agency network. (These streets may change, but as of 2008 include San Pablo Avenue, Frontage Road, and Powell and Adeline streets). LOS shall not be used to measure transportation performance in environmental review documents or for any other purpose unless it is mandated by another agency over which the City has no jurisdiction (such as Caltrans, Berkeley, Oakland, and the Congestion Management Agency), and then it shall only be used for the purposes mandated by that agency.
- Policy T-P-5: The City encourages development that minimizes VMT.

In the absence of specific local thresholds related to VMT, guidance from OPR's December 2018 Technical Advisory[1] has been reviewed. Concepts presented in the Technical Advisory have been applied to the Project, consistent with the intent of SB 743 to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

Screening Criteria

The OPR guidance suggests the use of screening criteria to assess whether land use development projects can be presumed to have a less-than-significant impact on VMT. Three of these screening criteria are relevant to the Project:

1. Small Projects: Projects that generate fewer than 110 vehicle trips per day may be presumed to have a less-than-significant impact on VMT.
2. Map-Based Screening: Residential and office projects that are located in areas with low VMT based on maps created with existing VMT data may be presumed to have a less-than-significant impact on VMT.

[1] https://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

3. Near Transit Stations: Projects that are within a half-mile of an existing major transit stop[2] or an existing stop along a high-quality transit corridor[3] may be presumed to have a less-than-significant impact on VMT, except in cases where the project:
    - Has a Floor Area Ratio (FAR) of less than 0.75;
    - Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
    - Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
    - Replaces affordable residential units with a smaller number of moderate- or high-income residential units

The Project is expected to generate over 7,000 vehicle trips per day and so does not meet Criterion #1. VMT maps have not been prepared for the City of Emeryville, and the City has not adopted VMT thresholds. Screening by Criterion #2 is therefore not currently available.

However, the Project would meet Criterion #3. The Project is within a half-mile of the Emeryville Amtrak station, as well as existing bus stops on San Pablo Avenue, which qualifies as a high-quality transit corridor. Additionally, the Project would:

- Have an FAR of greater than 0.75;
- Provide 1,991 parking spaces for an estimated 2,964 employees, which corresponds to 0.67 spaces per employee, less than the 0.81 spaces per employee established in the PDP;
- Be located in the Emeryville Mixed-Use Core Priority Development Area, consistent with the Metropolitan Transportation Commission's Sustainable Communities Strategy; and
- Would not replace any affordable residential units.

Because the Project meets Criterion #3, it can be presumed to have a less-than-significant impact on VMT.

[2] A major transit stop is a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[3] A high-quality transit corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

VMT Thresholds

Although the Project can be presumed to have a less-than-significant impact on VMT based on OPR guidance, a detailed VMT analysis was performed for informational purposes. OPR guidance recommends the use of numerical thresholds for projects that are not presumed to have a less-than-significant impact on VMT. The OPR guidance recommends the following threshold for office projects:

- Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact related to VMT.

In cases where the region is substantially larger than the geography over which most employees would be expected to live, it might be appropriate to refer to a smaller geography, such as the county, that includes the area over which nearly all employees would be expected to live. Given the interrelated nature of employment and commuting in the nine-county Bay Area region, the regional average was used to assess the Project's VMT absent other locally adopted thresholds.

VMT Estimation

This analysis uses the Alameda CTC Travel Demand Model (Alameda CTC Model) to estimate VMT per employee, which is consistent with standard practice for VMT assessments conducted by the City of Emeryville. The Alameda CTC Model is a regional travel demand model covering the nine-county Bay Area that uses socioeconomic data and roadway and transit network assumptions to forecast traffic volumes, transit ridership, and VMT. This process accounts for changes in travel patterns due to future growth and expected changes in the transportation network. This analysis uses the latest version of the Alameda CTC Model, which was released in May 2019. The model is based on the Metropolitan Transportation Commission (MTC) Plan Bay Area 2040 (i.e. Sustainable Communities Strategy) transportation network and land uses for 2020 and 2040. Additional details regarding the model can be found on the Alameda CTC website.[4]

As a regional planning tool, the Alameda CTC Model was developed through an extensive model validation process and is intended to replicate existing vehicular travel behavior. Therefore, it can provide a reasonable estimate of the VMT generated in various geographic areas on a typical weekday, as well as estimate future VMT that reflects planned local and regional land use and

[4] Alameda County Transportation Commission, 2015. Countywide Travel Demand Model. Full documentation can be found here: https://www.alamedactc.org/planning/congestion-management/countywide-travel-demand-model/

transportation system changes. The Alameda CTC Model contains approximately 2,800 transportation analysis zones (TAZs) to represent land uses in the region. The City of Emeryville is comprised of 17 TAZs in the Alameda CTC travel demand model. The Project site is represented by TAZs 119 and 1427, which also includes the land uses associated with some neighboring development. Although the Alameda CTC Model underwent an extensive validation and calibration process, there are limitations of the model results, especially at the individual project level, to fully capture the specific nuances of the project context, as well as transportation demand management strategies that might be employed at the individual project level.

The model was used to estimate VMT per employee under 2020 and 2040 conditions for the TAZs containing the Project and the entire Bay Area region. VMT per employee is defined as the total VMT from auto vehicle trips between home and work for employees in the specified geographic area divided by the total number of employees.

The Project is required to implement a transportation demand management (TDM) plan that is not a requirement of all employment land uses in the Project TAZs, and regional models are not sensitive to site-specific TDM programs. Therefore, the Project's VMT per employee was estimated by reducing the VMT per employee for the Project TAZs by the minimum VMT reduction that would be achieved by implementation of the required TDM plan, producing the most conservative result. A description of the elements and estimated effectiveness of the TDM plan are described later in this memorandum. **Table 1** summarizes the estimated VMT per employee under 2020 and 2040 conditions.

Table 1: Average VMT Per Employee[1]

Geography	2020	2040
Bay Area Region	18.1	18.2
Regional Threshold (85%)	15.4	15.5
Project TAZs[2]	15.8	14.1
Project TAZs[2] with TDM[3]	14.4	12.8
Project TAZs[2] with TDM vs Threshold	**Within Threshold**	**Within Threshold**

Notes:
1. Based on the Alameda CTC Travel Demand Model.
2. Weighted average of TAZs 119 and 1427.
3. Assuming implementation of the TDM plan required by the Development Agreement. As described subsequently in this memorandum, that TDM plan has an estimated minimum effectiveness of a nine percent reduction in VMT.

Source: Fehr & Peers, 2021.

As shown in Table 1, with the implementation of the required TDM plan, the Project would be expected to generate approximately 14.4 VMT per employee under 2020 conditions and 12.8 VMT per employee under 2040 conditions. Both values are below the threshold values for the VMT per employee established by OPR for assessing significant impacts related to VMT. Thus, the Project would have a less-than-significant impact on VMT with the implementation of the required TDM plan even if it were not presumed so based on the VMT screening criteria.

TDM Plan Elements

A TDM plan was prepared for the PDP, which it referred to as the Trip Reduction Program. The TDM plan called for a phased increase in the TDM programs, building on top of existing programs in place at the campus. The Project is required to implement this TDM plan and provide annual monitoring reports. Initial elements of the TDM plan that would be required for the Project include:

- Contributing to a BART shuttle
- Provide an intra-campus shuttle
- Encouraging ridesharing through on-site education and matching
- Encouraging carpool/vanpool through on-site education, preferential parking, and a guaranteed ride home
- Offering transit subsidies and on-site transit sales, as well as on-site education
- Monitoring parking permit use
- Encouraging telecommuting
- Supporting the planning and implementation of a Transportation Management Association

TDM program elements were to be strengthened alongside growth of the campus and would also be required for the Project. These enhancements included:

- Increasing transit subsidies
- Providing covered bicycle parking
- Acquiring vehicles to be used during the day by employees who rideshare or take transit and for the guaranteed ride home program
- Hiring a full-time employee transportation coordinator
- Charging for parking
- Acquiring a fleet of bicycles available for intercampus travel or other short trips

The TDM plan included performance standards to meet required trip reduction objectives, including achieving a drive-alone mode share of 65 percent or less. To monitor implementation and

performance, the TDM plan requires annual status reports detailing the implementation of specific elements of the plan, assessing the effectiveness of those elements, and identifying any modifications needed to maximize the effectiveness of the plan.

The effect of the TDM plan elements on Project VMT was analyzed using information provided by the California Air Resource Board and the California Air Pollution Control Officers Association. Based on this analysis, implementation of the above TDM plan elements is estimated to reduce VMT by at least nine percent. The TDM plan may result in additional reductions to VMT depending on the level to which plan elements like transit subsidies and parking pricing are implemented.

Conclusion

Based on the findings of this analysis, the Project can be presumed to have a less-than-significant impact on VMT and would be consistent with City policies concerning VMT. Implementation of the TDM plan required by the Development Agreement would reduce VMT generated by the Project such that the Project would have a less-than-significant impact on VMT even if it were not presumed so based on the OPR screening criteria.

Please contact Jordan Brooks (j.brooks@fehrandpeers.com or 510-587-9429) with questions or comments.

ATTACHMENT B: FEHR & PEERS BICYCLE FACILITIES ASSESSMENT MEMORANDUM

FEHR PEERS

Memorandum

Date: February 15, 2021

To: Miroo Desai, City of Emeryville

From: Jordan Brooks and Kathrin Tellez, Fehr & Peers

Subject: BioMed Center of Innovation – Bicycle Facilities Assessment

OK20-0384

Fehr & Peers assessed the effect of daily vehicle traffic volumes that could be generated by the proposed BioMed Center of Innovation project (Project) on nearby City of Emeryville Bicycle Boulevards and how the bicycle facilities proposed by the Project would affect bicycle circulation in the Project vicinity.

The Horton Street Turn Restriction Assessment (December 14, 2015) prepared for the Sherwin-Williams project (2015 Assessment) recommended the implementation of traffic diverters to address impacts to the Horton Street Bicycle Boulevard from vehicle traffic associated with the Sherwin-Williams project. While the 2015 Assessment included some vehicle traffic that could be generated by the Project, there were many unknown variables, and the full effect of the Project as currently contemplated was not evaluated as part of the 2015 Assessment. Therefore, an alternative diverter scenario was developed to more fully address the added Project traffic, based on discussions with City of Emeryville staff. This scenario included the diverters described in the 2015 Assessment at the Horton Street/40th Street intersection and relocated the diverters at the Horton Street/53rd Street intersection to the Horton Street/Stanford Avenue intersection, as well as prohibited right turns from the Project garage.

The Project proposes to implement the Horton Street/Stanford Avenue diverters and garage turn restrictions, and this memorandum assumes the Sherwin-Williams project would provide diverters at Horton Street/40th Street. The Project would also extend the existing one-way protected cycle tracks on Horton Street south to 45th Street and provide one-way cycle tracks on 53rd Street between Horton Street and Hollis Street. One-way cycle tracks provided by the Project would be protected, with soft or hardscape buffers, or raised.

This memorandum assesses how the Project affects City of Emeryville Bicycle Boulevards and bicycle circulation in the Project vicinity. Analysis of the Project's consistency with City transportation

policies and guidelines besides bicycle facility selection are described in the BioMed Center of Innovation – Site Plan and TDM Plan Review (February 15, 2021) memorandum (site plan review memorandum).

Policy Context

The City of Emeryville General Plan and Pedestrian and Bicycle Plan include policies relating to the establishment and maintenance of "complete streets" for all ages and abilities and a network of Bicycle Boulevards:

- General Plan Policy T-P-2: The design, construction, operation, and maintenance of city streets shall be based on a "complete streets" concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.
- General Plan Policy T-P-3: A "Quality of Service" standard that seeks to optimize travel by all transportation modes shall be developed and used to measure transportation performance. The City does not recognize "Level of Service" (LOS) as a valid measure of overall transportation operations, and sets no maximum or minimum acceptable LOS levels, with the exception of streets that are part of the regional Congestion Management Agency network. (These streets may change, but as of 2008 include San Pablo Avenue, Frontage Road, and Powell and Adeline streets). LOS shall not be used to measure transportation performance in environmental review documents or for any other purpose unless it is mandated by another agency over which the City has no jurisdiction (such as Caltrans, Berkeley, Oakland, and the Congestion Management Agency), and then it shall only be used for the purposes mandated by that agency.
- Pedestrian and Bicycle Plan Policy 3.3: The City will construct the network of bicycle boulevards and monitor them for performance goals, as indicated in Chapter 6 of this Plan.

To support these policies, the City of Emeryville adopted in 2013 the National Organization of City Transportation Officials (NACTO) Urban Street Design Guide (2012) and any subsequent publications as the City's design guidance to provide a network of complete streets. The NACTO Urban Bikeway Design Guide defines the following bicycle facility types referenced in this assessment:

- **Bicycle boulevards** – Bicycle boulevard facilities, as defined by NACTO[1], are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle boulevard facilities use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.
- **Conventional bike lanes** – Conventional bike lanes designate an exclusive space for bicyclists directly adjacent to motor vehicle travel lanes through the use of pavement markings and signage.
- **Buffered bike lanes** – Buffered bike lanes are conventional bicycle lanes paired with a designated painted buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. If bollards or other physical protections are placed in the buffer space, the facility is considered a protected cycle track.
- **Protected cycle tracks** – Protected cycle tracks are bikeways that are at street level and provide physical protection from passing vehicle traffic through bollards, planters, concrete curb, a parking lane, or other method.
- **Raised cycle tracks** – Raised cycle tracks are bicycle facilities that are vertically separated from motor vehicle traffic. Raised cycle tracks may be at the level of the adjacent sidewalk or set at an intermediate level between the roadway and sidewalk to segregate the cycle track from the pedestrian area. A raised cycle track may be placed adjacent to a vehicle travel lane, or it may be combined with a parking lane or other barrier, such as bollards or street furniture, between the cycle track and the travel lane.

The NACTO guidance for selecting an all ages and abilities bikeway recommends bicycle boulevard facilities for streets with no centerline, less than 50 motor vehicles in the peak direction of the peak hour, and either a) target vehicle speeds of 20 miles per hour or less and up to 2,000 vehicles per day or b) target vehicle speeds of 25 miles per hour or less and up to 1,500 vehicles per day. The NACTO guidance recommends bike lanes or cycle tracks for streets with a single striped lane in each direction, target vehicle speeds of 25 miles per hour or less, and up to 3,000 vehicles per day. For streets with a single striped lane in each direction, target vehicle speeds of 25 miles per hour or less, and between 3,000 and 6,000 vehicles per day, buffered bike lanes (but not conventional bike lanes) or cycle tracks are recommended. NACTO recommends cycle tracks for streets with greater than 6,000 vehicles per day, target vehicle speeds over 25 miles per hour, or multiple lanes per direction. Cycle tracks may be either one-way, with two-way roadways potentially providing one-

[1] NACTO defines bicycle boulevards as a type of bicycle facility where bicycles and automobiles are expected to share travel lanes safely. For the purposes of the City of Emeryville Pedestrian and Bicycle Plan, Bicycle Boulevards are a roadway classification indicating where bicycle boulevard facilities (as defined by NACTO) are intended, but these roadways do not necessarily provide bicycle boulevard facilities and may instead provide bike lanes or cycle tracks. To distinguish between the two definitions, this memorandum refers to "NACTO bicycle boulevard facilities" and "City of Emeryville Bicycle Boulevards."

way cycle tracks on each side of the road, or two-way, which allows bicycle movements in both directions on one side of the road.

The City of Emeryville Pedestrian and Bicycle Plan established a desired level of vehicle traffic on City of Emeryville Bicycle Boulevards of less than 3,000 vehicles per day on Bicycle Boulevards west of Hollis Street and less than 1,500 vehicles per day on Bicycle Boulevards east of Hollis Street. However, higher volumes are permitted for short segments with additional treatments. If additional treatments are not possible, or if treatments are unlikely to result in conditions that meet vehicle volume and speed goals, the City should consider a bicycle facility other than NACTO bicycle boulevard facilities. This analysis assesses City of Emeryville Bicycle Boulevard traffic volumes based on the desired standards established in the Pedestrian and Bicycle Plan.

Daily traffic volumes on roadways in the Project vicinity were analyzed under near-term plus Project conditions, including traffic expected to be generated by the Sherwin-Williams project, other approved projects in the area, and considering full occupancy of the Project. Proposed bicycle facilities in the Project vicinity were compared against City policies and guidelines based on expected traffic volumes.

Project Description

The Project would construct four research and development (R&D) buildings, totaling approximately 912,000 square feet, and a parking garage with 1,991 spaces. The Project would implement the Chiron Preliminary Development Plan (PDP), which was studied in the Chiron Development Plan Environmental Impact Report.

In addition to development of the R&D buildings and parking garage, the Project would implement several roadway improvements with the goal of improving the safety and comfort of bicycle travel within the PDP area. These changes to roadway operations include:

- Traffic diverters at the Horton Street/Stanford Avenue intersection that would prohibit through movements on southbound Horton Street and left-turn movements from westbound Stanford Avenue to southbound Horton Street
- Right-turn prohibition for vehicles exiting the Project parking garage
- One-way cycle tracks (protected, with soft or hardscape buffers, or raised) in both the northbound and southbound directions on Horton Street between 53rd Street and 45th Street
- One-way cycle tracks (protected, with soft or hardscape buffers, or raised) in both the eastbound and westbound directions on 53rd Street between Horton Street and Hollis Street

Additionally, it is assumed for this analysis that diverters are implemented at the Horton Street/40th Street intersection, as described in the 2015 Assessment. These diverters would prohibit through movements on northbound Horton Street, left-turn movements from eastbound 40th Street to northbound Horton Street, and right-turn movements from westbound 40th Street to northbound Horton Street.

Project Trip Generation, Distribution, and Assignment

To help assess the effects of Project traffic on City of Emeryville Bicycle Boulevards, the Project vehicle trip generation was estimated and assigned to the roadway network.

Trip Generation

Trip generation is the process of estimating the level of activity that is expected to be generated by a site, with a focus on the number of vehicles that would likely access the Project on any given day. Vehicle trip generation estimates for the Project were based on trip generation rates from the Chiron EIR. The Chiron EIR rates were estimated from traffic counts collected at other Chiron facilities in 1993 and are represented as trips per employee. The surveyed facilities used to derive the trip generation rates were subject to a TDM program. Because these rates were developed over 25 years ago, they were compared to other published rates for similar land uses based on data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation (10th Edition)* for research and development and single-tenant office building land uses. **Table 1** compares trip generation rates from the Chiron EIR and ITE.

Table 1: Chiron and ITE Trip Generation Rates

Source	Daily[1]	AM Peak[1]	PM Peak[1]
ITE – Land Use Code 715 (Single Tenant Office Building)	3.77	0.53	0.51
ITE – Land Use Code 760 (Research and Development Center)	3.29	0.51	0.52
Chiron Nov 1993 Trip Generation Study	3.63	0.43	0.43

Note:
1. Trip generation rates are presented as a number of trips per employee.
Sources: ITE Trip Generation Manual (10th Edition); Chiron EIR; Fehr & Peers, 2021.

The use of those rates to estimate trip generation for the Project is appropriate, as they are based on data collected at nearby similar land uses, are similar to other published trip generation rates, and reflect components of the required TDM program that will be implemented by BioMed as a part of the PDP Conditions of Approval.

Based on the PDP's projected population growth numbers, the Project would be expected to add 1,800 net new employees. However, the Project parking garage would provide 1,991 parking spaces

and provide replacement parking for an existing 371-space surface parking lot that would be developed as part of the Project, resulting in an area-wide net increase of 1,620 parking spaces. The Chiron EIR estimated parking demand for the campus as 0.81 spaces per employee, meaning that a net increase of 1,620 parking spaces would support 2,000 new employees. Therefore, to present a conservative analysis of traffic volumes at Project garage driveways and on nearby roadways, Project trip generation estimates assume the Project would result in 2,000 new employees.

Although BioMed may add more than 2,000 employees with the planned 912,000 square feet of building area, growth above 2,000 employees would contribute limited additional vehicle trips due to constrained capacity at the Project parking garage.

Table 2 presents the Project vehicle trip generation estimates. The Project parking garage would be expected to generate 8,920 daily vehicle trips and 1,057 peak hour vehicle trips. Factoring in the elimination of the existing surface parking lot, the Project would be expected to generate 7,620 net new daily vehicle trips and 860 net new peak hour vehicle trips on local roadways.

Table 2: Project Automobile Trip Generation

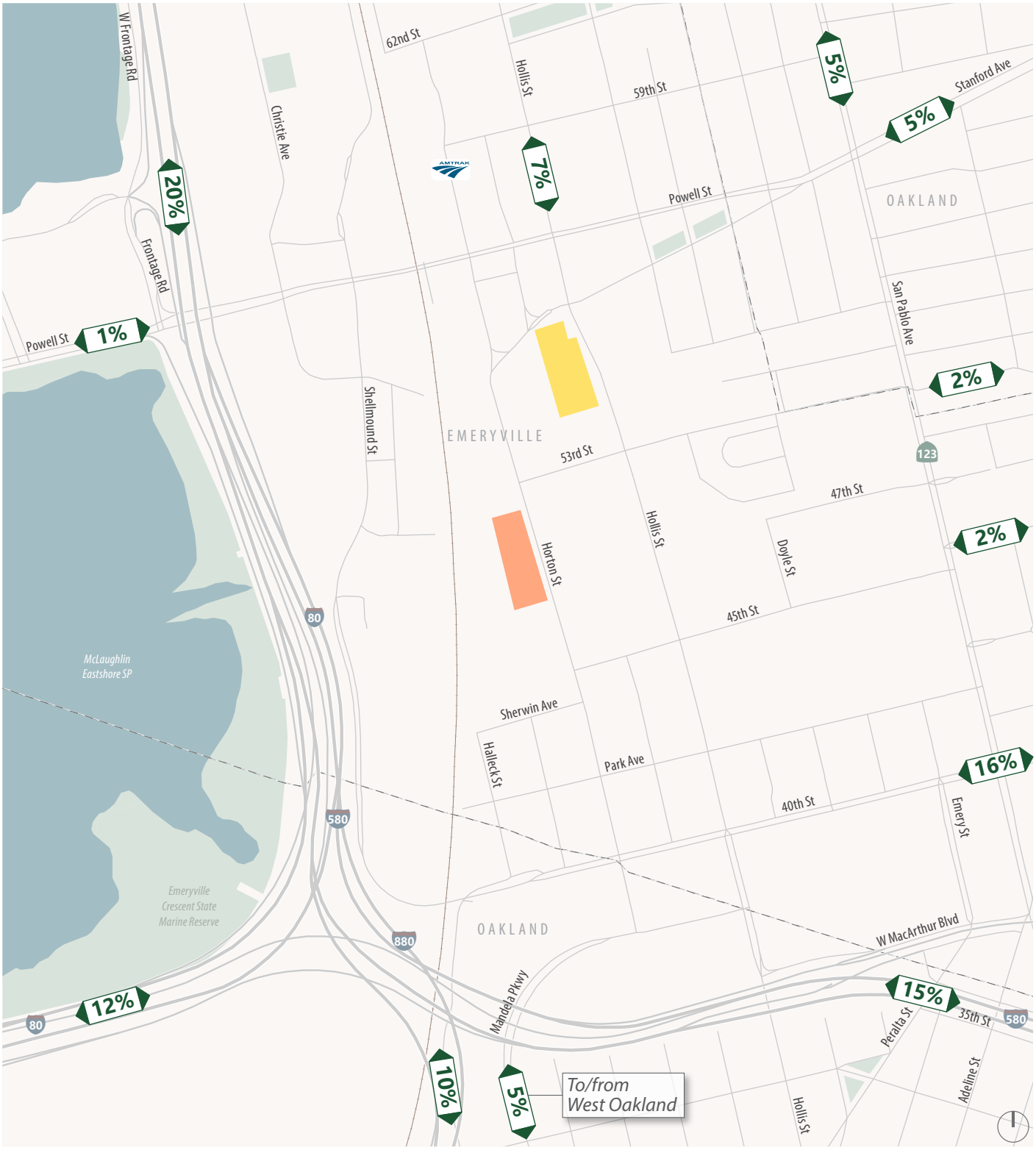
Land Use	Spaces	Associated Employees[1]	Daily Trips[2]	Weekday AM Peak Hour[2]			Weekday PM Peak Hour[2]		
				In[3]	Out[3]	Total	In[3]	Out[3]	Total
New Parking Garage	1,991	2,460	8,920	910	147	1,057	172	885	1,057
Existing Surface Lot	*-371*	*-460*	*-1,660*	*-170*	*-27*	*-197*	*-32*	*-165*	*-197*
Net New Project Trips		***2,000***	***7,260***	***740***	***120***	***860***	***140***	***720***	***860***

Notes:
1. Derived from estimated parking demand of 0.81 spaces per employee from the Chiron EIR.
2. Trip generation rates are taken from the Chiron EIR, which estimated 3.63 daily trips per employee and 0.43 weekday peak hour trips per employee.
3. Peak hour in-out splits based on ITE Trip Generation Manual (10th Edition) data for land use code 760 (Research and Development Center).

Sources: ITE Trip Generation Manual (10th Edition); Chiron EIR; Fehr & Peers, 2021.

Trip Distribution and Assignment

A trip distribution and assignment process is used to estimate how the vehicle trips generated by the Project would be distributed across the roadway network. The trip distribution developed for the office component of the Sherwin-Williams project, which was based on the Alameda CTC travel demand model, was used to estimate the trip distribution of the Project. This distribution is presented on **Figure 1**. Project trips were then assigned to the roadway network, with new trips beginning/ending at the Project garage added to the roadway network and existing trips beginning/ending at the existing surface lot removed from the roadway network.



Project Parking Garage

Existing Surface Parking Lot to be Removed

XX% Project Trip Distribution

Figure 1

Project Trip Distribution

Project trip assignment accounted for the turning movement restrictions implemented by the Project from the diverter at the Horton Street/Stanford Avenue intersection and right-turn prohibition at the Project garage, as well as restrictions expected to be implemented by the Sherwin-Williams project from the diverter at the Horton Street/40th Street intersection. Near-term traffic not generated by the Project was also reassigned based on the turn restrictions expected from the Horton Street traffic diverters. The presence of these diverters would not change regional trip distribution patterns, but they would affect the assignment of vehicles on the roadway network.

Roadway Segment Daily Operations

The 2015 Assessment evaluated traffic volumes on eight City of Emeryville Bicycle Boulevard segments in the vicinity of the Sherwin-Williams project. This memorandum focuses on the four of those segments that are within the boundary of the PDP. Horton Street north of 53rd Street (including Segment A) currently provides one-way protected cycle tracks in the northbound and southbound directions, and the other study segments provide NACTO bicycle boulevard facilities. The segment of Horton Street between 53rd Street and 45th Street was separated into two component segments north and south of the Project garage driveway, as traffic volumes on those segments would differ. The five study segments, which are also shown on **Figure 2**, are as follows:

- Segment A – Horton Street between Stanford Avenue and 53rd Street
- Segment B1 – Horton Street between 53rd Street and the garage driveway
- Segment B2 – Horton Street between the garage driveway and 45th Street
- Segment D – 53rd Street between Horton Street and Hollis Street
- Segment E – 45th Street between Horton Street and Holden Street

Fehr & Peers used the Project trip generation, distribution, and assignment characteristics described above, as well as estimates of near-term traffic volumes from analysis performed for the Sherwin-Williams project, as a baseline for analysis.

The resulting daily traffic volumes anticipated at full Project buildout are presented in **Table 3**. As shown in Table 1, under existing conditions, daily traffic volumes on Horton Street between 53rd Street and 45th Street exceed City of Emeryville guidelines for providing NACTO bicycle boulevard facilities on City of Emeryville Bicycle Boulevards. Although traffic volumes would increase under near-term plus Project conditions, the Project would provide one-way cycle tracks on all study segments where daily traffic volumes would exceed City guidelines for providing NACTO bicycle boulevard facilities on City of Emeryville Bicycle Boulevards. Therefore, implementation of the Project would meet City and NACTO guidelines for bicycle facility selection on all study segments.

Project Parking Garage

Existing Surface Parking Lot to be Removed

X Daily Traffic Analysis Location

Figure 2

Roadway Study Segments

Table 3: Daily Traffic Volumes on City of Emeryville Bicycle Boulevards

	Roadway Segment	Existing	Near-Term Plus Project[1]
Standard of <3,000 daily trips[2]			
A	Horton St between Stanford Ave and 53rd St[3]	3,480	4,470
B1	Horton St between 53rd St and garage driveway[4]	***3,530***	10,020
B2	Horton St between garage driveway and 45th St[4]	***3,530***	4,590
D	53rd St between Horton St and Hollis St[4]	600	5,970
E	45th St between Horton St and Holden St	1,080	1,760

Notes: ***Italics*** indicates roadway segments providing NACTO bicycle boulevard facilities where daily traffic volumes exceed City of Emeryville guidelines for Bicycle Boulevards.

1. Includes volumes from the Sherwin-Williams project and other near-term developments in the Project vicinity. Assumes diverters are installed at the Horton Street/40th Street and Horton Street/Stanford Avenue intersections and a right-turn restriction exiting the Project garage.
2. According to City of Emeryville guidelines, the desired level of vehicle traffic on City of Emeryville Bicycle Boulevards that provide NACTO bicycle boulevard facilities is less than 3,000 vehicles per day west of Hollis Street and less than 1,500 vehicles per day east of Hollis Street.
3. Horton Street between Stanford Avenue and 53rd Street currently provides one-way protected cycle tracks.
4. The Project proposes to provide one-way cycle tracks on Horton Street between 53rd Street and 45th Street and on 53rd Street between Horton Street and Hollis Street.

Sources: Fehr & Peers, 2021.

Project Effects on Roadway Operations

The traffic diverters on Horton Street and turn restrictions at the Project garage implemented with the Project would direct a large proportion of Project traffic to 53rd Street. Based on projected traffic volumes, City of Emeryville guidelines would require upgraded bicycle facilities on Horton Street between 53rd Street and 45th Street and on 53rd Street between Horton Street and Hollis Street. The Project would provide one-way cycle tracks on those segments that are consistent with NACTO guidelines for bicycle facility selection. These facilities would require the elimination of westbound left turn lane at the 53rd Street/Chiron Way intersection and the eastbound left turn at the 53rd Street/Hollis Street intersection. The elimination of these turn lanes is not expected to have a substantial effect on traffic operations based on the left-turn volumes and conflicting through-traffic expected with the addition of Project traffic volumes.

Diverters on Horton Street would also be expected to shift a substantial amount of traffic onto Hollis Street, including both through-traffic and Project traffic making southbound rights at the Hollis Street/53rd Street intersection. All Project traffic arriving from north of the Project site would make a right turn from southbound Hollis Street onto westbound 53rd Street, representing over 400 turns during the AM peak hour. These right-turning vehicles would slow through-traffic, including transit vehicles, due to slower turning speeds and the need to yield to crossing pedestrians. Any negative effects from the Project on transit operations would be addressed

through the Settlement Agreement between Chiron and AC Transit. Separating the right-turn phase from the pedestrian phase should be explored to minimize the potential for vehicles waiting to turn right blocking transit vehicles along Horton Street, especially during peak periods when vehicle and pedestrian conflicts would be highest.

Daily vehicle volumes on 45th Street would be expected to be less than 2,000 vehicles per day, which is consistent with City of Emeryville guidelines for Bicycle Boulevards without enhanced features. Therefore, the existing NACTO bicycle boulevard facility on 45th Street should be retained.

Turn restrictions at the garage driveway would necessitate one exit lane at each parking garage driveway, as Horton Street only has one receiving lane. The Project would provide one exit lane at the south driveway and one exit lane and two entry lanes at the north driveway, which would be expected to maintain the queueing reductions described for the two-lane entry/two-lane exit garage option described in the site plan review memorandum.

Table 4 summarizes transportation effects of the Project on roadways in the vicinity of the Project.

Project Bicycle Facility Assessment

As described previously, Horton Street north of 53rd Street currently provides one-way protected cycle tracks, and the Project would extend those cycle tracks on Horton Street south to 45th Street. Additionally, the Project would provide one-way cycle tracks on 53rd Street between Horton Street and Hollis Street. One-way cycle tracks provided by the Project would be protected, with soft or hardscape buffers, or raised. The NACTO bicycle boulevard facility on 45th Street would be maintained. Each of these bicycle facility types within the PDP would advance City policies and guidelines based on daily traffic volumes.

The Project site plan states that all proposed bicycle facilities implemented by the Project will be consistent with NACTO guidelines for one-way cycle tracks. According to NACTO guidelines, for a one-way protected cycle track, the desired minimum width of the bicycle travel lane is five feet, and the desired minimum width of the buffer is three feet. For one-way raised cycle tracks adjacent to a vehicle travel lane, the desired minimum width of the bicycle travel lane is 6.5 feet, and the desired minimum width of a mountable curb is one foot. If buffer space on a one-way raised cycle track is used to locate materials like bollards, street furniture, or vegetation, the desired minimum width of the buffer is three feet.

The NACTO guidelines recommend vehicle travel lane widths of 10 feet in urban areas. Travel lane widths of 10 feet generally provide adequate safety in urban settings while discouraging speeding. If 10-foot wide vehicle travel lanes are provided, one-way cycle tracks would have eight feet of total width available on Horton Street between 53rd Street and 45th Street and eleven feet of total width available on 53rd Street between Horton Street and Chiron Way. These widths would be adequate to provide either protected or raised cycle tracks that meet NACTO minimum desired widths.

Table 4: Project Transportation Effects

Location	Project Effect
Bicycle Facility Improvements[1]	
Horton Street between 53rd Street and 45th Street	One-way cycle tracks (protected, with soft or hardscape buffers, or raised)
53rd Street between Horton Street and Hollis Street	One-way cycle tracks (protected, with soft or hardscape buffers, or raised)
45th Street between Horton Street and Hollis Street	Bicycle boulevard facility (retain existing)
Changes to On-Street Parking Supply	
Horton Street between 53rd Street and 45th Street	Elimination of 13 spaces
45th Street between Horton Street and Hollis Street	None
Effects on Multimodal Operations	
On Hollis Street	Substantially increased through-traffic volumes and SBR turning movements at 53rd may delay transit vehicles; any negative effects on transit operations would be addressed through the Settlement Agreement between Chiron and AC Transit.
On Horton Street	Driveways conflict with bicyclists traveling in bicycle lanes; the Project would address these conflicts with audio and visual warning devices, alert system for the garage, "Do Not Block" signage, and colored pavement for the bicycle lane across the garage.
On 53rd Street	Increased traffic volumes and elimination of left-turn lanes may have moderate effect on vehicle delay
On 45th Street	Limited
At the Project parking garage	Requires one exit lane at each driveway
Consistency with Bicycle/Pedestrian Plan Recommended Treatments	
Horton Street treatments	Associated with recommended traffic diverter at Horton/40th and a modified diverter at Horton/Stanford; the NACTO bicycle boulevard facility would be upgraded to one-way cycle tracks

Note:
1. All bicycle facilities would conform to NACTO standards, as described in this memorandum.

Source: Fehr & Peers, 2021.

On 53rd Street between Chiron Way and Hollis Street, one-way cycle tracks would have seven feet of width available if 10-foot wide vehicle travel lanes are provided, which would not meet all minimum desired widths per NACTO. However, NACTO guidance is intended to be used as part of a flexible, results-oriented design process on each street. According to NACTO, bicycle facilities that

do not meet all NACTO criteria may still substantively improve local bicycling conditions, and jurisdictions should not use an inability to meet all criteria as reason to avoid implementing a bikeway. On this segment, implementing one-way cycle tracks with 10-foot wide vehicle travel lanes would improve bicycle comfort and safety and would therefore be consistent with NACTO guidelines.

Conclusion

The Project would provide one-way cycle tracks (protected, with soft or hardscape buffers, or raised) on Horton Street between 53rd Street and 45th Street and on 53rd Street between Horton Street and Hollis Street. These facilities would meet NACTO guidelines for selecting all ages and abilities bikeways. The Project would design the cycle tracks to conform to NACTO minimum desired widths where feasible, with minimum five-foot wide bicycle travel lanes and minimum three-foot wide buffers for one-way protected cycle tracks and minimum 6.5-foot wide bicycle travel lanes and minimum one-foot wide mountable curbs or minimum three-foot wide buffers for one-way raised cycle tracks adjacent to vehicle travel lanes. On 53rd Street between Chiron Way and Hollis Street, providing the minimum desired bicycle facility widths is not feasible, but one-way cycle tracks on that segment would still be consistent with NACTO guidelines by improving bicycle safety and comfort.

With the upgraded bicycle facilities provided by the Project, all City of Emeryville Bicycle Boulevards in the project vicinity would provide bicycle facilities that meet City guidelines under near-term plus Project traffic conditions, and the Project would be consistent with all City policies related bicycle facilities on roadways. Analysis of the Project's consistency with City transportation policies and guidelines besides bicycle facility selection are described in the site plan review memorandum.

Please contact Jordan Brooks (j.brooks@fehrandpeers.com or 510-587-9429) with questions or comments.

ATTACHMENT C: FEHR & PEERS SITE PLAN AND TDM PLAN REVIEW MEMORANDUM

FEHR PEERS

Memorandum

Date: February 15, 2021

To: Miroo Desai, City of Emeryville

From: Jordan Brooks and Kathrin Tellez, Fehr & Peers

Subject: BioMed Center of Innovation – Site Plan and TDM Plan Review

OK20-0384

Fehr & Peers conducted a site plan review of the BioMed Center of Innovation project (Project) in Emeryville, based on site plans dated February 9, 2021. The Project would construct four research and development (R&D) buildings, totaling approximately 912,000 square feet, and a parking garage with 1,991 spaces. The Project would implement the Chiron Preliminary Development Plan (PDP), which was studied in the Chiron Development Plan EIR (Chiron EIR). Fehr & Peers' review covered the following topics:

- Bicycle Circulation and Parking
- Pedestrian Circulation
- Transit Access
- Parking Garage Operations

In addition, Fehr & Peers reviewed the existing travel demand management (TDM) plan for the PDP and assessed the extent to which implementation of the measures in that plan, or lack thereof, would affect the findings of this analysis. Fehr & Peers also recommended components to include in a baseline report on project travel demand and subsequent TDM monitoring updates.

Site Plan Review

Fehr & Peers assessed the Project site plans dated February 9, 2021 for consistency with City of Emeryville plans and policies.

Bicycle Circulation and Parking

The Project would provide one-way cycle tracks on Horton Street between 53rd Street and 45th Street and on 53rd Street between Horton Street and Hollis Street. Design of these cycle tracks

would be consistent with guidelines established by the National Association of City Transportation Officials (NACTO) Urban Street Design Guide, which the City of Emeryville has adopted as its design guide. The BioMed Center of Innovation – Bicycle Facilities Assessment (February 15, 2021) memorandum assesses the bicycle facilities that would be provided on City of Emeryville Bicycle Boulevards in the Project vicinity for consistency with City policies and guidelines. That memorandum concludes that with the upgraded bicycle facilities provided by the Project, all City of Emeryville Bicycle Boulevards in the Project vicinity would provide bicycle facilities that meet City guidelines under near-term plus Project traffic conditions, and the Project would be consistent with all City policies related bicycle facilities on roadways.

The southbound bicycle facility on Horton Street, as well as pedestrians walking along the Project garage frontage, would experience conflicting traffic volumes at the garage driveways. To address conflicts at the garage driveways, the Project provides several improvements to bicycle and pedestrian visibility and safety:

- Audio and visual warning devices at the junctions of the sidewalk with automobile and truck access to the garage
- Alert system for the garage that detects bicyclists and pedestrians and warns drivers using the garage to yield
- "Do Not Block" signage referring to the bicycle lane and sidewalk that activates when vehicle stacking beyond the limits of the parking garage is detected
- Signage, striping, and colored pavement at the parking garage driveways

Final plans for the garage should also ensure that adequate sight distance is provided between exiting motorists and pedestrians on the adjacent sidewalk. Adequate sight distance is defined as a clear line-of-sight between a motorist ten feet back from the sidewalk and a pedestrian 10 feet away on each side of the driveway.

General Plan Policy T-P-24 establishes that "safe, secure and convenient short- and long-term bicycle parking shall be provided near destinations for all users," and City of Emeryville Municipal Code requires that short-term bicycle parking be provided within a convenient distance of, and clearly visible from, the main entrance to the building. Short-term bicycle parking would be provided at locations throughout the Project site and clearly visible from main building entrances. Long-term bicycle parking would be provided in the Project garage and on the ground floor of the R&D buildings, convenient to the main entrances, building elevators, and locker/shower facilities. The bicycle parking facilities provided by the project would therefore be consistent with City policies.

Pedestrian Circulation

Large volumes of pedestrians would walk between the Project garage and the R&D buildings. As described previously, garage driveways are potential conflict points for crossing pedestrians. The Project would improve safety not only by providing the warning devices described above, but also by providing a safe and convenient midblock crossing using a HAWK pedestrian crossing signal at the existing midblock crossing near the southern pedestrian garage access location to reduce the number of pedestrians crossing garage driveways. Additionally, treatments to prevent crossing outside of a crosswalk and encourage crossing at the signal would be provided along the garage frontage. The HAWK signal would replace the RRFB proposed for the south crosswalk of the Horton Street/46th Street intersection as part of the Sherwin-Williams project.

According to General Plan Policy TP-P-15, "Walking will be encouraged through building design and ensuring that automobile parking facilities are designed to facilitate convenient pedestrian access within the parking area and between nearby buildings and adjacent sidewalks." The Project would be consistent with this policy through the improvements described above.

Pedestrian volumes are expected to be very high at the Horton Street/53rd Street intersection from people traveling between the Project parking garage and the R&D buildings, and most pedestrians would be expected to cross multiple legs of the intersection. The Project would install a traffic signal with a pedestrian scramble phase to shorten pedestrian wait times and reduce conflicts with turning vehicles at the Horton Street/53rd Street intersection, which is currently all-way stop-controlled.

To evaluate the need for a traffic signal at the Horton Street/53rd Street intersection with the Project, Signal Warrant 4B (*CA MUTCD,* Chapter 4C, Pedestrian Warrant) was analyzed under near-term plus Project conditions for the AM and PM peak hours. Signal Warrant 4B is appropriate to use at this intersection due to the expected high volume of conflicting vehicles and pedestrians with the Project. Based on expected pedestrian and vehicle volumes, Warrant 4B would be met in both the AM and PM peak hours under near-term plus Project conditions. Additionally, a pedestrian scramble phase would be warranted at this signal due to the high expected pedestrian volumes. Bicycles traveling on Horton Street would conflict with the very high expected east-west pedestrian crossing volumes at this intersection and would therefore not be recommended to be included in the scramble phase.

According to Pedestrian and Bicycle Plan Policy P2.11, "the City will use the best possible technology as feasible to create the shortest possible wait time for pedestrians at signalized intersections. Particularly, where pedestrian volumes are high, automatic pedestrian walk signals will be provided, where timing allows. Where activation is needed to get a walk signal, a mechanism will be provided to show activation and pedestrian countdown." The installation of a traffic signal with a pedestrian scramble phase at the Horton Street/53rd Street intersection is consistent with this policy.

The Project would allow public access along Chiron Way (renamed from Holden Street), which would be a shared street for bicyclists, pedestrians, and automobiles. The Project would configure Chiron Way as a narrow street with speed humps, cushions, or pillows to discourage motor vehicles except for service and emergency vehicles and passenger pick-ups and drop-offs, and an unsignalized marked midblock crosswalk across Chiron Way would be provided with safety measures that increase visibility of the pedestrian crosswalk to motorists. According to Pedestrian and Bicycle Plan Policy P1.6, "the City will implement strategies that manage traffic speed in order to improve safety for pedestrians, bicyclists, and motorists," and the reconfiguration of Chiron Way would be consistent with this policy.

Transit Access

Implementation of traffic diverters on Horton Street would direct more traffic onto Hollis Street, which serves AC Transit and Emery Go-Round bus routes. This additional traffic may increase transit travel times along Hollis Street. Additionally, the Project may increase demands on bus stop amenities. The Project would address any negative effects on transit operations through the Settlement Agreement between Chiron and AC Transit.

According to General Plan Policy T-P-16, "safe pedestrian walkways that link to streets and adjacent bus stops will be required of new development." The closest bus stops to the Project are located at the Hollis Street/53rd Street, Hollis Street/Stanford Avenue, and Stanford Avenue/Chiron Way intersections, and the Project would provide pedestrian walkways that connect the Project buildings with these bus stops. The Project would therefore be consistent with this policy.

Parking Garage Operations

Vehicle circulation inside the Project garage would be provided primarily by 24-foot wide two-way drive aisles, with perpendicular parking spaces on one or both sides. The proposed drive aisle width would provide adequate space for vehicles to maneuver into and out of the parking spaces. In some short segments, the garage would provide a narrower one-way drive aisle. These drive aisles would provide adequate width for circulation and would not be used to directly access parking spaces.

Pedestrian paths to stairwells, elevators, and pedestrian exits are proposed to provide clear designations to improve pedestrian wayfinding and would avoid the garage driveways. Final plans should include garage lighting that ensures pedestrians are visible to people driving, as there may be dark spots within the garage even during daytime hours.

The TDM Plan that applies to the PDP identifies carpool and vanpool strategies to reduce the number of single-occupant vehicle trips generated by the site. The garage would provide designated carpool parking spaces that are convenient to the elevators/stairwells for people who share rides to provide added incentive for carpools and vanpools. Final plans should consider designating additional parking spaces as carpool spaces help achieve the goals of the TDM Plan.

The parking garage would provide two driveways on Horton Street. The north driveway would provide two inbound lanes and one outbound lane. The south driveway would provide one outbound lane. Right turns would be prohibited for vehicles exiting the garage. An analysis of vehicle queueing that considered the effects of conflicting movements between pedestrians and bicycles and vehicles entering and exiting the garage was conducted for the AM peak hour, when the potential for queueing from garage driveways to extend onto local roadways would be highest.

The Project's maximum vehicle queue during the AM peak hour was estimated to be five vehicles. The garage would provide two lanes with 68 feet of internal queue storage each, providing total internal storage for approximately six entering vehicles. Therefore, vehicle queues are not expected to extend outside of the garage onto Horton Street. Additionally, should instances occur where vehicle queues do extend outside the provided garage storage, the Project would provide the "Do Not Block" signage described above to improve pedestrian and bicycle safety and minimize conflicts between people driving and people walking or cycling.

TDM Plan Review

A TDM Plan was prepared for the PDP, which it referred to as the Trip Reduction Program. The TDM Plan called for a phased increase in the TDM programs, building on top of existing programs in place at the campus. The Project is required to implement this TDM Plan and provide annual monitoring reports. Initial elements of the TDM Plan that would be required for the Project include:

- Contributing to a BART shuttle
- Provide an intra-campus shuttle
- Encouraging ridesharing through on-site education and matching
- Encouraging carpool/vanpool through on-site education, preferential parking, and a guaranteed ride home
- Offering transit subsidies and on-site transit sales, as well as on-site education
- Monitoring parking permit use
- Encouraging telecommuting
- Supporting the planning and implementation of a Transportation Management Association

TDM program elements were to be strengthened alongside growth of the campus and would also be required for the Project. These enhancements included:

- Increasing transit subsidies
- Providing covered bicycle parking
- Acquiring vehicles to be used during the day by employees who rideshare or take transit and for the guaranteed ride home program

- Hiring a full-time employee transportation coordinator
- Charging for parking
- Acquiring a fleet of bicycles available for intercampus travel or other short trips

The TDM Plan included performance standards to meet required trip reduction objectives, including a drive-alone mode share of 65 percent or less. This memorandum has assumed that effective TDM programs would be in place with the development of the Project. If effective TDM programs are not put in place, development of the Project may result in parking overflows, assuming the staffing levels used in this memorandum. In that situation, garage operations would be not be expected to be substantially different, but operations on streets in the surrounding areas may be affected.

Baseline TDM Report and Monitoring

To monitor implementation and performance, the TDM Plan requires annual status reports detailing the implementation of specific elements of the plan, assessing the effectiveness of those elements, and identifying any modifications needed to maximize the effectiveness of the Plan.

A baseline TDM report is needed to establish a benchmark against which progress can be assessed and the need for modifications to TDM programs determined. This baseline report shall be provided by BioMed Realty prior to the granting of a certificate of occupancy for the first R&D building constructed as part of the Project and include information regarding:

- Current number of employees
- Existing mode shares, including information on parking locations and carpooling
- Commute trip lengths
- Typical work schedules, including time of day and days per week
- Parking facility operations and occupancy by time of day
- Existing TDM program elements in place

Monitoring reports shall be prepared annually for review and approval by the City following the granting of a certificate of occupancy for the first R&D building constructed as part of the Project. These monitoring reports shall document the status and effectiveness of the TDM program, including updates to the information collected in the baseline report.

If deemed necessary, the City may elect to have a peer review consultant, paid for by the Project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the Project applicant has failed to implement the TDM Plan, the Project will be considered in violation of the Conditions of Approval, and the City may initiate enforcement action. The Project shall not be considered in violation of this Condition if the TDM Plan is implemented but the TDM goals are not achieved.

If in two successive years the Project's TDM goals are not satisfied, site management shall implement additional TDM measures, which may include consulting with AC Transit on measures to increase bus ridership consistent with Section VI of the Settlement Agreement between Chiron and AC Transit. If in five successive years the Project is found to meet the stated TDM goal, the City may suspend additional surveys and monitoring.

Conclusion

The Project site plan is consistent with City of Emeryville policies and plans and would provide adequate facilities related to access and circulation. With the inclusion of the bicycle and pedestrian improvements shown on the Project site plan, the Project would not create any unacceptable conflicts or hazards. The Project is required to implement and monitor a TDM Plan as described in this memorandum.

Please contact Jordan Brooks (j.brooks@fehrandpeers.com or 510-587-9429) with questions or comments.