

Appendix I

Transportation Assessment

Memorandum

Date: December 14, 2020
To: Jessica Hays, Bayer
From: Sam Tabibnia, Fehr & Peers
Subject: **Bayer Berkeley Project – CEQA Transportation Findings**

OK20-0367

This memorandum presents our findings for transportation analysis under California Environmental Quality Act (CEQA) for the proposed Development Agreement (DA) for the Bayer Berkeley site. The proposed DA would facilitate development at the Bayer site for the next 30 years.

Based on our evaluation, the project would have less-than-significant impacts on the four transportation-related items in the latest CEQA checklist, including a less-than-significant impact on Vehicle Miles Traveled (VMT).

The remainder of this memorandum provides more detail on the project description and discusses the four CEQA checklist questions on transportation topics for the project.

1. Project Description

This section provides a brief description of the existing conditions at the Bayer Site and describes the project evaluated for the project CEQA document, as well as this memorandum.

Existing Conditions

The Berkeley Bayer site occupies about 46 acres in West Berkeley. The site is generally bounded by the Union Pacific Railroad to the west, Dwight Way to the north, Seventh Street to the east, and Grayson Street to the south, with a separate parking lot on a portion of the block east of Seventh Street and south of Dwight Way. Three parcels north of Carleton Street and west of Seventh Streets are not part of the project site.

The project site primarily provides biopharmaceutical services. Currently, the site is occupied by about 1,180,000 square feet of space, comprised of various uses, including production space,



manufacturing labs, warehouse space, administrative offices, and utility and maintenance facilities. The site has about 1,000 employees under current conditions.

The site provides about 1,100 parking spaces distributed in several parking lots throughout the site that can be accessed through five gated driveways on Dwight Way opposite Sixth Street, on Seventh Street opposite Parker Street, on Eighth Street between Dwight Way and Parker Street, and two driveways on Grayson Street.

Currently, Bayer Berkeley provides a Transportation Demand Management (TDM) Program to reduce single-occupant automobile trips generated by the site. As part of the TDM program, Bayer funds the West Berkeley Shuttle, which operates between the Ashby BART Station and the Bayer site on weekdays during the peak commute periods and is used by about 120 daily riders. Other components of the TDM program include pretax transit benefits, bicycle commuting incentives including secure bicycle parking and showers, and telecommuting options for qualified employees. Bayer would continue to provide the TDM program as part of the proposed project.

Proposed Project

The proposed project consists of an extension to the Development Agreement between the City of Berkeley and Bayer, which would continue to facilitate development at the Bayer site for the next 30 years (2022-2052).

The existing DA for the North Properties, coupled with existing uses on the South Properties, allows the project site to provide up to 1,866,000 square feet of space and accommodate up to 1,892 employees. The proposed project would provide about 148,000 less square feet of space, but would accommodate an additional 108 employees.

The proposed DA would also modify the parking supply required for the project site. The number of required parking spaces would decrease from about 1,900 spaces under current entitlements to about 1,820 spaces under Buildout (Year 30) conditions. It is expected that some of the future parking supply would be accommodated in parking garages, which are currently identified along the project frontage on Grayson Street and at the portion of the site east of Seventh Street.

Under Existing conditions and approved entitlements, the project site provides about one acre of open space accessible to the public along Seventh Avenue. This open space, located primarily along the project frontage on Seventh Street, consists of a path, public art, benches, and landscaping. The proposed DA would increase the open space accessible to the public to about 1.6 acres by expanding the existing open space along Seventh Street, and adjacent to the existing parking lot east of Seventh Street. Similar to the existing open space, the expanded open space would continue to provide paths, public art, benches, landscaping, and other passive uses. The project also proposes landscaping along Dwight Way, but this area (about 0.3 acres) would not increase in size.



2. CEQA Analysis

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. According to these guidelines, the project would have a significant impact on the environment if it would do any of the following.

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curve or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. Result in inadequate emergency access?

Each of the above items are discussed below.

The project would have a significant impact if it would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The project would be consistent with the City's General Plan and West Berkeley Plan goals and policies, which generally promote non-automobile trips over automobile trips. The project is located in an area served by the following non-automobile travel modes:

- As part of the existing TDM program, the project provides funding for the West Berkeley Shuttle, which provides free shuttle service between the project site and the Ashby BART station.
- The project is served by several AC Transit bus lines along Seventh Street including Line 36 which connects the site to Downtown Berkeley, Emeryville, and West Oakland, Line 80 which connect the site to South Berkeley, Albany, and El Cerrito, and Line Z which provides peak period Transbay service to San Francisco. The project is also about 0.25 miles from San Pablo Avenue, which is served by frequent AC Transit service connecting to El Cerrito, Richmond, and Oakland.
- Although no bicycle-designated facilities are provided adjacent to the project site, the site is within a couple of blocks of several bicycle facilities, including bicycle boulevards along Channing Way, Heinz Avenue, and Ninth Street.
- The streets serving the project site provide sidewalks along both sides of the streets and with signals at major intersections providing pedestrian amenities such as pedestrian signal heads.



General Plan Policy T-40 (Parking Impacts) states that “parking impacts ... should not be mitigated through the provision of additional parking on the site.” Instead of increasing the on-site parking supply to meet the estimated parking demand generated by additional employees at the site, the project proposes to reduce the parking supply rate at the project site from about 1.1 spaces per employee under existing conditions and 1.0 spaces per employee under existing entitlements to about 0.9 spaces per employee under Buildout (Year 30) condition.

Instead of increasing the parking supply at the same rate as current conditions, the project would continue to implement the existing TDM program, which would continue to provide a variety of measures, including funding for the West Berkeley Shuttle, to encourage site employees to use other travel modes than driving alone to commute to and from the project site. In addition to the operational TDM measures, the project would continue to provide on-site services, such as a cafeteria and fitness facilities, that would discourage midday automobile trips by project employees. Moreover, the project would add significant employee amenities within the project site, including fields, sports courts, pedestrian and bicycle trails, outdoor eating areas, and landscaping, which would further discourage vehicle trips. These provisions are consistent with General Plan Policy T-14 (Private Employees), which encourages “private employers to reduce the demand for automobile travel through transportation demand management programs.”

The project, including the reduced parking supply rate and the continuation of the TDM program would also be consistent with General Plan Policy T-10 (Trip Reduction), which has the goal to “reduce automobile traffic and congestion and increase transit use and alternative modes in Berkeley” and the following goals and policies of the Transportation Element of the West Berkeley Plan, which state a strong preference for discouraging single-occupant automobile travel and promoting other modes of travel:

- Goal 1 - “Improve traffic flow and air quality by reducing reliance on single-occupant automobiles, by encouraging use of alternative means of transportation”
 - Policy 1.1 - “reduction of single-occupant automobile trips through a variety of educational and regulatory efforts.”
- Goal 4 - “Create and maintain adequate parking to support West Berkeley land uses without creating incentives for single occupant automobile use,” with the emphasize that “it is also important to not provide so much free parking that people are encouraged to drive more than they would otherwise.”

The project would also enhance the pedestrian and bicycle trails within the project area to improve the non-motorized connections within the project site, including between the project buildings and site gates and provide long-term and short-term bicycle parking throughout the site. The pedestrian and bicycle facilities within the Bayer site would only be available for the site employees; however, the project would also enhance the pedestrian facilities along the project frontages on Dwight Way and Seventh Street, that would be accessible to the public. These



improvements are consistent with Goal 6 of the Transportation Element of the West Berkeley Plan, which would “Improve pedestrian and bicycle access in and around West Berkeley.”

The project would also be consistent with the City’s 2017 *Bicycle Plan*. The project would continue to provide long-term and short-term bicycle parking to accommodate the bicycle parking demand generated by the project employees and residents. In addition, although the Bicycle Plan does not identify any future bicycle facilities adjacent to the project site, the project would not make any major modifications to the streets serving the project site to preclude the installation of future bicycle facilities on these streets, and would include bicycle trails within the project’s borders.

The project would be consistent with programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and the project impact is less-than-significant, and no mitigation is required.

The project would have a significant impact if it would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

One performance measure used to quantify automobile travel is vehicle miles traveled (VMT). As required by the State, VMT is the metric used to identify impacts of development projects on transportation in CEQA documents published after July 1, 2020.

This section discusses VMT for the Bayer Berkeley site. It starts by presenting the City of Berkeley’s applicable threshold of significance for the project, describes the applicability of VMT screening, and estimates VMT for the existing site, and the future phases of the project.

City of Berkeley Thresholds of Significance

The State Office of Planning and Research’s (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* recommends evaluating VMT impacts using an efficiency-based version of the metric, such as VMT per resident for residential developments or VMT per worker for office or other employment-based developments. Consistent with OPR’s guidelines, City of Berkeley uses the metric of home-work VMT per worker for evaluating the impacts of employment-based uses, such as the Bayer Berkeley site. The home-work VMT per worker measures all of the commute trips between homes and workplaces and divides that total distance by the number of workers at the site.

Based on the City of Berkeley’s guidelines, the following significance threshold is applicable to the project:

- An employment-generating project’s VMT impact is considered less-than-significant if its home-work VMT per worker is at least 15% below the regional average home-work VMT per worker.



VMT Screening Assessment

According to the OPR's Technical Advisory, screening thresholds can be used to quickly identify projects that can be expected to cause a less than significant impact without conducting a detailed study. The City of Berkeley guidelines include several screening criteria. The criterion applicable to the Bayer project is the Projects in Low VMT Areas criterion.

According to the Low VMT Areas criterion, projects that are located in low-VMT areas and that have characteristics similar to other uses already located in those areas can be presumed to generate VMT at similar rates. The low-VMT areas in Berkeley are defined based on the results of the Alameda County Transportation commission (CTC) Travel Demand Model, and are summarized in maps. **Figure 1** shows the City of Berkeley' map for low-VMT areas for employment-based uses.

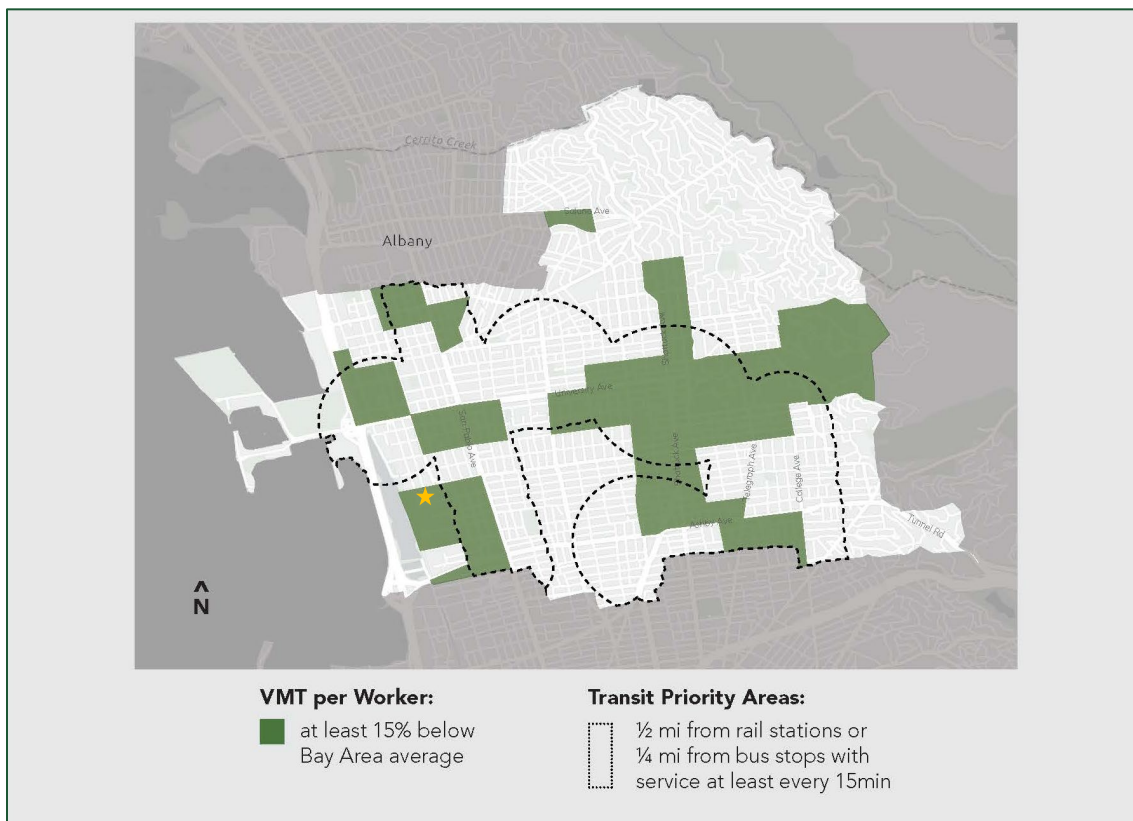


Figure 1: City of Berkeley Low VMT Areas for Workers.



Based on the City of Berkeley’s screening map, the Bayer project is located in a low-VMT area. In addition, the future phases of the project would continue to have similar uses as the current uses at similar development densities. The project at buildout would also provide parking at a lower ratio than current conditions.² Therefore, it can be presumed that the Bayer project would have a less-than-significant impact on VMT.

Project VMT Analysis

Since screening criteria are typically used for small development projects, and considering the size of the Bayer project, a more detailed VMT analysis for the project is completed using the Alameda CTC Travel Demand Model as a very conservative measure.

The Alameda CTC Model, which covers the entire nine county Bay Area, is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes, transit ridership, and VMT using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. 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.

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 transportation system changes. The Model was used to estimate home-work VMT per worker generated by the project and the entire nine-county Bay Area region under 2020 and 2040 conditions.

Table 1 summarizes the VMT estimates under 2020 and 2040 conditions as estimated by the Alameda CTC Model. The table also compares the home-work VMT per worker for the project with the regionwide average and 15% below the regionwide average, which is the threshold used to determine the significance of the VMT impact.

² The existing Bayer site provide 1,100 parking spaces for 1,000 employees, which corresponds to 1.1 parking spaces per employee. At Buildout (Year 30), the site is expected to have 1,820 parking spaces for 2,000 employees, corresponding to 0.9 parking spaces per employee.



Table 1: VMT Summary

Geographic Area	Home-Work VMT per Worker (2020)	Home-Work VMT per Worker (2040)
Project	11.5	11.6
Bay Area Region Average	18.1	18.2
Bay Area Region Average minus 15% (i.e., threshold of significance)	15.4	15.5

Notes:

1. Based on the results of the Alameda CTC Countywide Travel Demand Model for the nine-county Bay Area region.

Source: Fehr & Peers, 2020

Under 2020 conditions, the home-work VMT per worker for the project is estimated to be 11.5. The threshold of significance for home-work VMT per worker under 2020 conditions is 15.4 (i.e., 15% below the regionwide average). The home-work VMT per worker for the project is about 25% less than the 2020 threshold.

Under 2040 conditions, the home-work VMT per worker for the project is estimated to be 11.6. The threshold of significance for home-work VMT per worker under 2040 conditions is 15.2 (i.e., 15% below the regionwide average). The home-work VMT per worker for the project is about 24% less than the 2020 threshold.

Since the home-work VMT per worker for the project would be more than 15 percent below the regionwide average, the project impact on VMT is less-than-significant, and no mitigation is required.

The project would have a significant impact if it substantially increases hazards due to a geometric design feature (e.g., sharp curve or dangerous intersections) or incompatible uses (e.g., farm equipment).

The proposed DA extension is a planning level entitlement, and circulation elements have not undergone design-level planning. This level of planning will occur after subsequent approvals implementing the extended DA's land use plan. Nevertheless, sufficient detail is present to undertake an analysis.

The project would include minor modifications to the public right-of-way, which would include new driveways, enhancements to pedestrian facilities, or other similar modifications. Access to the project site would continue to be provided through the same existing driveways, except the existing driveway on Dwight Way opposite Sixth Street would be closed and a new driveway on Seventh Street opposite Pardee Street would be provided. Although not fully designed, this driveway would be aligned with Pardee Street to the extent feasible in order to form a four-



legged intersection and provide a left-turn lane on northbound Seventh Street to allow access onto this new driveway. If the new driveway cannot be aligned with Pardee Street, it would be restricted to right-in/right-out only. The design and control for this driveway would be finalized as part of the access and circulation modifications in the southeast portion of the project site. The individual components within the project site, such as buildings, parking facilities, and internal streets, also have not undergone design-level planning, but internal circulation elements will be compliant with California Fire Code and other safety requirements.

The final design for project components within the project site or modifications within the public right-of-way will be reviewed by the City. This will ensure that they meet the required standards for access and circulation, such as emergency access requirements and adequate sight distance at new driveways between vehicles entering and exiting the driveways and pedestrians on the adjacent sidewalk as well as vehicles on the adjacent street.

Similar to the existing conditions at the project site, the project would primarily consist of a mix of administrative, manufacturing, and research uses that would be generally consistent with the existing uses in the surrounding areas. Thus, the project is expected to generate mostly passenger vehicle trips, with some pedestrian, bike, transit, and heavy truck trips, and would be compatible with existing uses at the site and the surrounding areas.

The project would not substantially increase hazards due to a geometric design feature or incompatible uses, and the impact is less-than-significant, and no mitigation is required.

The project would have a significant impact if it results in inadequate emergency access.

All streets within the project site will be designed and constructed according to the applicable fire and safety standards at the time of their construction. All buildings within the project site would be accessible by fire and emergency vehicles through public streets, private streets within the site, and/or fire lanes, which will be designed and constructed according to the applicable fire and safety standards at the time of their construction.

Bayer will continue to operate its own emergency vehicle and equipment to respond to most emergency needs within the project site. Bayer's emergency response team would continue to be supplemented by outside emergency response personnel, including the City of Berkeley's Fire Department, when necessary. The nearest fire station to the Bayer site is Berkeley Fire Station #1 at 2442 Eighth Street just north of Dwight Way, and about one block east of the project site. Emergency vehicles would use Seventh Street, Dwight Way, Carleton Street, and/or Grayson Street to access the project site. The project would not propose any major modifications to the roadway network outside the project site that would affect emergency vehicle access. In addition, all streets serving the project area provide adequate space for other vehicles to pull over and allow emergency vehicles to pass without blocking the streets.



Thus, the impact on emergency access is less-than-significant, and no mitigation is required.

3. Conclusions

Based on the analysis presented above, the project would result in less-than-significant impacts on transportation topics, including VMT, under CEQA.

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