ATTACHMENT A

CITY OF OAKLAND
APPEAL FORM
FOR DECISION TO PLANNING COMMISSION, CITY COUNCIL OR HEARING OFFICER

PROJECT INFORMATION

Case No. of Appealed Project: PLN 22189

Project Address of Appealed Project: 5315 COLLEGE AVENUE

Assigned Case Planner/City Staff: NEIL GRAY

APPELLANT INFORMATION:

Printed Name: JOHN ALLEN Phone Number: (510) 421-0084

Mailing Address: 5299 COLLEGE AVE, STE. D Alternate Contact Number: _____

City/Zip Code OAKLAND, CA 94618 Representing: _____

Email: thelastace@hotmail.com

An appeal is hereby submitted on:

☐ **AN ADMINISTRATIVE DECISION (APPEALABLE TO THE CITY PLANNING COMMISSION OR HEARING OFFICER)**

YOU MUST INDICATE ALL THAT APPLY:

- ☐ Approving an application on an Administrative Decision
- ☐ Denying an application for an Administrative Decision
- ☐ Administrative Determination or Interpretation by the Zoning Administrator
- ☐ Other (please specify) _____

Please identify the specific Administrative Decision/Determination Upon Which Your Appeal is Based Pursuant to the Oakland Municipal and Planning Codes listed below:

- ☐ Administrative Determination or Interpretation (OPC Sec. 17.132.020)
- ☐ Determination of General Plan Conformity (OPC Sec. 17.01.080)
- ☐ Design Review (OPC Sec. 17.136.080)
- ☐ Small Project Design Review (OPC Sec. 17.136.130)
- ☐ Minor Conditional Use Permit (OPC Sec. 17.134.060)
- ☐ Minor Variance (OPC Sec. 17.148.060)
- ☐ Tentative Parcel Map (OMC Section 16.304.100)
- ☐ Certain Environmental Determinations (OPC Sec. 17.158.220)
- ☐ Creek Protection Permit (OMC Sec. 13.16.450)
- ☐ Creek Determination (OMC Sec. 13.16.460)
- ☐ City Planner's determination regarding a revocation hearing (OPC Sec. 17.152.080)
- ☐ Hearing Officer's revocation/impose or amend conditions (OPC Sec. 17.152.150 &/or 17.156.160)
- ☐ Other (please specify) _____

(Continued on reverse)

(Continued)

☒ **A DECISION OF THE CITY PLANNING COMMISSION (APPEALABLE TO THE CITY COUNCIL)** ☐ Granting an application to: **OR** ☐ Denying an application to:

YOU MUST INDICATE ALL THAT APPLY:

Pursuant to the Oakland Municipal and Planning Codes listed below:

- ☐ Major Conditional Use Permit (OPC Sec. 17.134.070)
- ☐ Major Variance (OPC Sec. 17.148.070)
- ☐ Design Review (OPC Sec. 17.136.090)
- ☐ Tentative Map (OMC Sec. 16.32.090)
- ☐ Planned Unit Development (OPC Sec. 17.140.070)
- ☐ Environmental Impact Report Certification (OPC Sec. 17.158.220F)
- ☐ Rezoning, Landmark Designation, Development Control Map, Law Change (OPC Sec. 17.144.070)
- ☐ Revocation/impose or amend conditions (OPC Sec. 17.152.160)
- ☐ Revocation of Deemed Approved Status (OPC Sec. 17.156.170)
- ☒ Other (please specify) ENVIRONMENTAL DETERMINATION

FOR ANY APPEAL: An appeal in accordance with the sections of the Oakland Municipal and Planning Codes listed above shall state specifically wherein it is claimed there was an error or abuse of discretion by the Zoning Administrator, other administrative decisionmaker or Commission (Advisory Agency) or wherein their/its decision is not supported by substantial evidence in the record, or in the case of Rezoning, Landmark Designation, Development Control Map, or Law Change by the Commission, shall state specifically wherein it is claimed the Commission erred in its decision. The appeal must be accompanied by the required fee pursuant to the City's Master Fee Schedule.

You must raise each and every issue you wish to appeal on this Appeal Form (or attached additional sheets). Failure to raise each and every issue you wish to challenge/appeal on this Appeal Form (or attached additional sheets), and provide supporting documentation along with this Appeal Form, may preclude you from raising such issues during your appeal and/or in court. However, the appeal will be limited to issues and/or evidence presented to the decision-maker prior to the close of the public hearing/comment period on the matter.

The appeal is based on the following: *(Attach additional sheets as needed.)*

SEE ATTACHED LETTER FROM TAYLOR, WILEY & KEASLING

Supporting Evidence or Documents Attached. *(The appellant must submit all supporting evidence along with this Appeal Form;* however, the appeal will be limited evidence presented to the decision-maker prior to the close of the public hearing/comment period on the matter.

(Continued on reverse)

(Continued)

Signature of Appellant or Representative of Appealing Organization

Date 3/4/24

TO BE COMPLETED BY STAFF BASED ON APPEAL TYPE AND APPLICABLE FEE

APPEAL FEE: $

Fees are subject to change without prior notice. The fees charged will be those that are in effect at the time of application submittal. All fees are due at submittal of application.

Below For Staff Use Only

Date/Time Received Stamp Below:

Cashier's Receipt Stamp Below:

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MARISSA C. FUENTES

March 4, 2024

Neil Gray, Planner IV
City of Oakland Planning and Building Department
Bureau of Planning
1 Frank H. Ogawa Plaza
Oakland, CA 94612

Re: Case File No. PLN22189 (5315 College Avenue, APN 014-124901103) – Appeal of Planning Commission environmental determination on a Minor Conditional Use Permit for childcare facility for 48 students

Dear Mr. Gray:

Taylor, Wiley & Keasling represents John Allen with respect to his appeal of the City of Oakland (City) Planning Commission's environmental determination with respect to a Minor Conditional Use Permit ("CUP") for a community education civic activity (childcare facility) for 48 students at 5315 College Avenue (the "Project"). Mr. Allen owns office buildings adjacent to the proposed project site and is concerned about the incompatibility of the proposed uses with established surrounding uses and the adverse effects of the Project on his more than 65 tenants composed of mental health professionals.

Our appeal of the City Zoning Manager's original approval of the CUP for the Project was heard by the Planning Commission on February 21, 2024. At that meeting, the Planning Commission denied Mr. Allen's appeal and upheld the approval of the Project. It is our understanding that, pursuant to Oakland Planning Code § 17.134.060, the Planning Commission's action with respect to the CUP approval is final, but its action to uphold the environmental determination that a categorical exemption was appropriate to comply with the California Environmental Quality Act ("CEQA") is appealable to the City Council pursuant CEQA. (Cal. Pub. Resources Code § 21151(c).) Accordingly, Mr. Allen appeals the Planning Commission action to affirm the environmental determination for the Project. The basis of our appeal is detailed below.

I. The Planning Commission erroneously upheld the use of CEQA exemptions for the Project. That error was based on false or misleading information provided by City staff with respect to the environmental review of the Project.

The Planning Commission's decision to uphold the City's reliance on CEQA exemptions for the Project was erroneous, because the Commission relied on false or

misleading information provided by City staff with respect to the environmental review of the Project. This false or misleading information pertained to: 1) the noise impacts of the Project and 2) the additional information that would be provided if an environmental impact report ("EIR") were prepared for the Project. The nature of this misinformation is discussed below.

A. The Planning Commission decision to uphold the use of a CEQA exemption for the Project was erroneous because the Commission relied upon the Staff Planner's false statement that the Project condition to require a wooden soundwall was not mitigation for a significant noise impact.

In our written submission on appeal, we indicated that the use of a categorical exemption was inappropriate where mitigation is necessary to avoid a significant environmental impact. We further indicated that the City's noise consultant concluded that noise from the playground would exceed the City's noise standard at neighboring property and, to mitigate that noise impact, the applicant should install an eight-foot board-on-board fence. During the Planning Commission hearing on the appeal, Commissioner Jennifer Renk asked staff planner Neal Gray whether the proposed condition to require the Applicant to construct an 8-foot wooden sound wall was in fact mitigation. Staff planner Gray erroneously informed the Commission that the sound wall was just a "suggestion" and that, while it could be imposed as a condition of approval, it was not mitigation for a significant noise impact.

This statement is false. As discussed below and addressed in the attached letter by noise consultant Wilson Ihrig, the City's own noise consultant, Krause Acoustics, indicated in its report that the Project would have the potential to exceed the applicable City noise standards[1] at two locations in the project vicinity, identified in the noise study as "Locations D and I." As noted in that analysis:

> Locations D and I are on direct sound paths and have sound levels in excess of the limit L20 = 60 dB allowed by the Planning Code.

(Krause Acoustics, p. 10.) Accordingly, that noise study recommended the following mitigation to reduce this potentially significant impact to a less-than-significant level:

> Since the barrier insertion loss will be no more than 20 dB, it is not necessary for the wall to be particularly massive, i.e., concrete or masonry. The barrier must be continuous, without any gaps at the bottom or between panel elements.

[1] As set forth in Oakland Planning Code § 17.120.050. Also, as discussed in further detail below, Krause Acoustics underestimated the noise generation of the Project by basing its noise estimates on a childcare facility with a maximum capacity of only 36 children rather than the proposed capacity of 48 children.

> Recommended barrier design is to use 4 x 4 wood fence framing with a concrete footing to prevent gaps due to damage cause by fence material in contact with damp soil. Each side should have a facing of about one inch thickness. Siding of genuine or faux wood board material should have shiplap or tongue-in-groove edges to prevent gaps between boards; genuine wood should be clear grain and free of knot holes, kiln dried to prevent shrinkage that might cause gaps. Alternate face material for one or both sides is plywood sheathing with cement stucco face.
>
> Recommended barrier height is 8' above the ground elevation at the play yard. The fence top would be 4' above the project porch near the play yard and about 6' above the elevation of the adjacent easement walkway pavement.

(Krause Acoustics, p. 12.) As discussed in greater detail below, the use of a CEQA exemption is not appropriate in circumstances where mitigation is required. This is a clear legal error.

B. <u>The Planning Commission decision to uphold the use of a CEQA exemption was erroneous because it was based on false information provided by the Staff Planner that an EIR would not provide much additional information beyond what had already been studied with respect to the Project.</u>

Our appeal also indicated that the purpose of CEQA is to inform the decisionmakers and the public about the potential impacts of a project prior to taking action on an entitlement request. We asserted that, with the Project, the decisionmakers and the public had been denied such information as a result of the City inappropriately using a CEQA exemption. During the Planning Commission hearing, Commissioner Jonathan Fearn asked staff planner Neal Gray if an EIR would provide additional information beyond what the City already had. Staff planner Gray responded that there would not be much additional information because noise and traffic analyses have already been done for the Project.

This statement is false. In preparing an EIR, the City or its contracted environmental consultant would go through each of the 21 environmental issue areas contained in the Initial Study checklist provided in Appendix G of the CEQA Guidelines to determine whether the Project would have the potential to result in significant or potentially significant impacts with respect to each environmental issue. Based on the information provided in our prior comment letter, such an EIR should consider, at a minimum, issues related to land use, historical resources, noise, and traffic. Moreover, an EIR would require a notice of preparation (NOP), a 30-day public comment period on the NOP regarding the potential scope of the EIR, a further 45-day public comment period on the Draft EIR, and formal responses to environmental issues raised in all comments received on the Draft EIR. Through the EIR process, the decisionmakers would be provided a far more thorough analysis of the project's impacts prior to making a decision, rather than reports being completed after the decision had been rendered as occurred with

the noise study on this project. Additionally, the EIR process would allow for public participation and an obligation for the City to respond to all comments received. Thus, it was misleading to characterize an EIR as providing "not much additional information" than was prepared by the City in connection with its reliance upon CEQA exemptions for the Project.

II. The Planning Commission decision to uphold the use of a CEQA exemption for the Project was erroneous, was not supported by substantial evidence, and constituted an abuse of discretion.

The Planning Commission erroneously upheld the Zoning Manager's determination that the Project was exempt from CEQA pursuant to Sections 15301 and 15183 of the CEQA Guidelines. As discussed below, the Planning Commission's decision to uphold the use of these CEQA exemptions was erroneous, not supported by substantial evidence, and constituted an abuse of discretion in light of the Project's documented potential for significant environmental effects.

A. The Planning Commission's decision to uphold the use of the Class I exemption under Section 15301 of the CEQA Guidelines for the Project is erroneous, not supported by substantial evidence, and constitutes an abuse of discretion.

The Planning Commission upheld the Zoning Manager's determination that the Project qualified for a Class I CEQA exemption under Section 15301 of the CEQA Guidelines. This categorical exemption is for projects involving "negligible or no expansion" to an existing use, as described in the following language from the CEQA Guidelines:

> Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use. The types of "existing facilities" itemized below are not intended to be all-inclusive of the types of projects which might fall within Class 1. *The key consideration is whether the project involves negligible or no expansion of use.*

(CEQA Guidelines §15301.) As noted in the italicized language, "[t]he key consideration is whether the project involves negligible or no expansion of use."

The Project requires substantial expansion to the existing building at 5315 College Avenue. According to the square-footage numbers included in the Project application and plans, the existing structure at 5315 College Avenue includes 1,191 square feet on the first floor and 1,238 square feet of basement. The proposed Project would "lift" the existing structure, enlarge the basement, and modify the existing structure to include a total of 4,699 square feet of interior space between three floors. This represents a 92% increase in

building square footage if you rely on the square-footage numbers included in the Project's application and architectural plans. However, the existing square-footage figures in the application have been inflated by including the partially-finished basement area, which is not usable space as is corroborated by the fact that it is not part of the assessed square-footage for the property. The basement does not have adequate height to be considered habitable space, and a substantial portion of it is dirt crawl space.

As shown in the attached real estate listing and tax records for the property, as well as the City's own traffic impact study, there is actually only 987 square feet of legal square footage in the existing building[2]. The current basement floor is only 4'2" below grade. Only a portion of the basement has a cement floor while the rest of the area is merely a dirt crawl space. With the Project, the new substantially larger basement will be excavated to a depth of 5'10" below grade and will include a teachers' area, offices, and storage, all of which would be improved square footage. Thus, based on existing assessed square footage, the Project would *more than quadruple the total square footage*. Such a substantial increase is not a "negligible" expansion to the size of the existing building as is required for the use of the proposed Class I exemption.

Moreover, the Project would result in a substantial change in the existing use of the property. The current use of the property is as a commercial office. (It has been a quiet law office for decades.) The proposed use as a childcare facility for up to 48 students and 10 teachers represents a substantial change in the current use of the property.

Because the Project would result in far greater than a negligible expansion to the existing building and a substantial change in use from commercial office to a childcare facility for 48 students, the Class I exemption is not appropriate for the Project. Furthermore, substantial evidence does not support the use of the Class I exemption because there is no evidence supporting the purported 2,429 square feet of existing space, while the real estate listing, assessor's records, City's traffic study, and the actual physical condition of the structure support the assertion that the basement and dirt crawl space are not habitable space. As such, the Planning Commission's decision to uphold the use of this CEQA exemption is erroneous, not supported by substantial evidence, and constitutes an abuse of discretion.

B. <u>The Planning Commission's decision to uphold the decision to find the Project exempt from CEQA under Section 15183 of the CEQA Guidelines is erroneous, not supported by substantial evidence, and constitutes an abuse of discretion.</u>

The Planning Commission upheld the Zoning Manager's determination that the Project qualified for a CEQA exemption under Section 15183 of the CEQA Guidelines. This provision allows for projects that are consistent with a community plan or zoning to

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[2] This square footage is also reflected in the original application for the Project and the traffic report that was prepared for the Project by the City's consultant.

rely on the prior EIR that was certified by the lead agency for a zoning action, community plan, or general plan. (CEQA Guidelines § 15183 (d).) However, this section is inapplicable if there are impacts that are peculiar to the parcel that have not been previously addressed in the prior EIR. (CEQA Guidelines § 15183 (c).)

In its February 2024 staff report, the City staff clarified that the prior EIR that purportedly analyzed the impacts of the Project was the EIR that was prepared and certified in 1998 for the City's General Plan Land Use and Transportation Element (LUTE). However, that EIR did not consider the significant site-specific impacts of the Project, such as the noise impacts of converting the building to a large daycare with a playground, such as the cultural impacts of lifting an historic home three floors into the air and quadrupling its size, such as the traffic safety impacts of having a 48-student daycare without any parking or an appropriate and safe drop-off zone, and such as the land use impacts of approving an incompatible uses adjacent to health services, all of which are discussed below in Section III. Nor did it provide the necessary project-specific mitigation measures necessary to address those impacts. As such, reliance on the prior EIR is impermissible and violates CEQA. Therefore, the Planning Commission's decision to uphold the use of this provision to exempt the Project from CEQA review is erroneous, not supported by substantial evidence, and constitutes an abuse of discretion.

C. The Planning Commission's decision to uphold the City's use of CEQA exemptions was erroneous, not supported by substantial evidence, and constituted an abuse of discretion, because the Project requires mitigation measures to reduce significant noise impacts.

Moreover, the City cannot use a CEQA exemption for the Project, because mitigation is required to ensure that the Project does not result in a significant effect on the environment. As has already been discussed, a recent noise analysis of the Project conducted by Krause Acoustics for the City indicates that the Project would have the potential to exceed the applicable City noise standards at two locations in the project vicinity, identified in the noise study as "Locations D and I." As noted in that analysis:

> Locations D and I are on direct sound paths and have sound levels in excess of the limit L20 = 60 dB allowed by the Planning Code.

(Krause Acoustics, p. 10.) Accordingly, the noise study recommends the following mitigation to reduce this potentially significant impact to a less-than-significant level:

> Since the barrier insertion loss will be no more than 20 dB, it is not necessary for the wall to be particularly massive, i.e., concrete or masonry. The barrier must be continuous, without any gaps at the bottom or between panel elements.
>
> Recommended barrier design is to use 4 x 4 wood fence framing with a concrete footing to prevent gaps due to damage cause by fence material in

> contact with damp soil. Each side should have a facing of about one inch thickness. Siding of genuine or faux wood board material should have shiplap or tongue-in-groove edges to prevent gaps between boards; genuine wood should be clear grain and free of knot holes, kiln dried to prevent shrinkage that might cause gaps. Alternate face material for one or both sides is plywood sheathing with cement stucco face.
>
> Recommended barrier height is 8' above the ground elevation at the play yard. The fence top would be 4' above the project porch near the play yard and about 6' above the elevation of the adjacent easement walkway pavement.

(Krause Acoustics, p. 12.)

The need for mitigation measures, such as the sound barrier proposed by Krause Acoustics, precludes the use of a categorical exemption for the Project. *Salmon Protection & Watershed v. County of Marin*, 125 Cal.App.4th 1098, 1108 (2004); *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster*, 52 Cal.App.4th 1165, 1199 (1997). An agency should decide whether a project is eligible for a categorical exemption as part of its preliminary review of the project without reference to or reliance upon any proposed mitigation measures. *Salmon*, 125 Cal.App.4th at 1106; *Azusa*, 52 CalApp. 4th at 1199-1200. "Reliance upon mitigation measures (whether included in the application or later adopted) involves an evaluative process of assessing these mitigation measures and weighing them against potential environmental impacts, and that process must be conducted under established CEQA standards and procedures for EIRs or negative declarations." *Salmon*, 125 Cal.App.4th at 1108. Thus, because the Project requires mitigation, the use of a categorical exemption for the Project is not allowed under CEQA.

Therefore, because the Project would result in a significant environmental impact that requires mitigation, the Planning Commission's decision to uphold the use of CEQA exemptions for the Project was erroneous, not supported by substantial evidence, and constitutes an abuse of discretion.

III. The Project could have a significant effect on the environment. Therefore, the Planning Commission should have directed City staff to prepare an environmental impact report (EIR) for the Project.

If there is a fair argument that a project may have a significant effect on the environment, the lead agency must prepare an environmental impact report (EIR) for that project. (Cal. Public Resources Code § 21151(a).) As discussed below, the Project may cause a significant effect with respect to historical resources, noise, traffic, land use, and aesthetics. Therefore, the Planning Commission should have directed City staff to prepare an EIR for the Project. Its failure to do so was erroneous, not supported by substantial evidence, and constituted an abuse of discretion.

A. The Project has the potential to cause a significant impact to a historical resource.

The Project could have a significant impact on a historical resource. "A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." (Cal. Public Resources Code § 21084.1.) For the purposes of CEQA, a historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Places. Cal. Public Resources Code § 21084.1; CEQA Guidelines § 15064.5(a)(1).) As noted in CEQA Guidelines § 15064.5(a)(3):

> Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:
>
> (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
>
> (B) Is associated with the lives of persons important in our past;
>
> (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
>
> (D) Has yielded, or may be likely to yield, information important in prehistory or history.

A "substantial adverse change" in the significance of a historical resource means "demolition, destruction, relocation, or *alteration such that the significance of an historical resource would be impaired.*" (Cal. Public Resources Code § 5020.1(q).)

As indicated in the attached real estate listing, the building was constructed in 1886, much older than the 50-year threshold commonly used for determining eligibility for listing in the California Register of Historical Places. From 1895 to 1936, the building served as the home of Charles Shields, a scenic painter for Oakland Dramatic Theaters, an "important person" of the past that may justify a finding of historical significance. Additionally, the building has glasswork designed by Narcissus Quagliata, who is considered one of the most significant contemporary glass artists in the world. As such, the windows represent the work of an important artist. Having potentially met criteria (B) and (C) for determining historical significance, the building should be treated as a significant historic resource under CEQA.

Moreover, e-mail correspondence from Betty Marvin, the Historic Preservation Planner with the City of Oakland, indicates her thoughts on the Project:

> Turning a one story and basement cottage into a full two-story building with a decorated lower floor is a pretty ambitious undertaking, and not generally advised (false historicism - a further-raised basement would be more appropriate). Turning the stairs around to the side is also a big change to the street presence, as are the wings protruding at the back. My impression is that the applicant is proposing more than the lot and building can hold.
>
> The preliminary survey rating is C3, which translates to secondary importance or superior example, not in an identified potential historic district. (By the way, the rating is shown on the GIS "Complete Parcel Information" screen, two lines down from "PDHP." Translations of ratings are on p.3-2 of the Historic Preservation Element.) The straight C indicates that *the building is pretty much unaltered and puts it in about the top 10% citywide*. As such it is qualified to use the California Historical Building Code, which may make it easier to meet life safety and access requirements in the existing building (in order to protect historic features, and as long as the building does not lose its qualified status due to alterations).
>
> I think it would make more sense to explore separate, frankly modern addition(s), rather than trying to squeeze *three times the space* into and onto the existing cottage. The house is *a familiar and appreciated visual landmark* on this stretch of College and makes a lively architectural zoo along with the Ace Architects cluster.

(E-mail from Betty Martin, January 23, 2023, *emphasis added.*) Thus, even the City's own Historic Preservation Planner notes the historical significance of the building and explains her reservations about making the proposed modifications to the building. These comments alone warrant doing a full historical evaluation rather than attempting to hide these potential impacts from decision-makers by relying upon a CEQA exemption.

B. <u>The Project could result in significant noise impacts that are not analyzed</u>.

The Project could have significant noise impacts on the surrounding community that have not been analyzed. The neighborhood is currently relatively quiet, filled with small commercial stores and office buildings. Additionally, the buildings surrounding the Project site are designed and have been used for more than 30 years for mental health treatment/psychotherapy. These adjacent uses were appropriately categorized as "sensitive receptors" by the City Attorney during the Planning Commission's appeal hearing. Written testimony from mental health professionals with adjacent practices testified to the need for a calm and quiet environment in which to conduct therapy.

As discussed previously and noted in the attached letter from Wilson Ihrig, the City's noise analysis conducted for the Project by Krause Acoustics concluded that the Project could result in noise levels in excess of City standards at several locations in the vicinity of the Project. This would be a significant noise impact at adjacent medical offices. As a result, Krause Acoustics recommended mitigation consisting of an 8-foot tall sound barrier. This is a significant environmental impact that required mitigation, which alone should have precluded the use of the exemptions relied upon by the City.

Moreover, the full extent of the Project's noise impacts have not been analyzed. The City's noise report's conclusions were based on a maximum enrollment of 36 students. (Krause Acoustics, p. 6.) However, the Project that is the subject of this appeal has a maximum enrollment of 48 students. Thus, the noise impacts of the Project with its greater maximum enrollment could be even more severe than those analyzed and disclosed in the City's noise study conducted by Krause Acoustics.

The acoustics, noise, and vibration consulting firm of Wilson Ihrig[3] conducted the attached peer review of the City's noise study. Based on that review, Wilson Ihrig concluded:

- The Krause Acoustics report underestimated noise levels associated with the Project;
- The Project could result in a substantial increase (up to 13 dBA) from the current background ambient noise levels of approximately 48 dBA.
- The Project could result in significant and unavoidable impacts associated with construction noise that were not addressed in the Krause Acoustics analysis
- The recommended mitigation of sound barrier would not be sufficient to mitigate the sound from children at play. Therefore, operational noise impacts of the Project would also be significant and unavoidable.

The information contained in the Wilson Ihrig and Krause Acoustics reports provide substantial evidence that the Project could result in a significant or potentially significant effect on the environment relative to noise. Moreover, the analysis conducted by Wilson Ihrig concludes that the project could have significant and unavoidable noise impacts. Therefore, the City should prepare an EIR for the Project that analyzes the full extent of the Project's noise impacts.

C. <u>The Project could result in significant traffic impacts that are not analyzed</u>.

The Project could have significant traffic impacts that are not addressed. The City relied upon a traffic impact study prepared by Fuad Sweiss, PE, in support of its conclusion that the Project would not have a significant traffic impact. However, as noted in the

[3] A resume for Deborah Jue of Wilson Ihrig is also attached.

attached reports from PHA Transportation Consultants[4], the City's traffic report was inadequate for the following reasons:

- The City's traffic study underestimated that trip generation for the Project. PHA's analysis indicates that the Project will generate 76 a.m. peak hour trips and 76 p.m. peak hour trips, more than double the 36 a.m. peak hour trips and p.m. peak hour trips assumed in the City's traffic study.
- The City's traffic study erroneously applied bus/transit trip adjustment factors based on distance from BART and Amtrak stations, which ignores the fact that parents are not likely to rely on public transportation to drop off or pick up their young children.
- The City's traffic study failed to adequately analyze parking impacts for teachers and employees, who likely would not be able to use the two-hour metered spots in the vicinity of the Project.
- The City's traffic study mistakenly assumed that the City would convert two metered on-street parking places in front of the project site to short-term green curb parking spots. There is actually less than one-and-half parking spots in front of the project site, as the other spot is shared with the frontage of Mr. Allen's property. Moreover, the City is unlikely to be willing to lose the meter revenue from these spots.

Moreover, as noted by PHA Transportation Consultants, the City's traffic report only evaluated the potential trip generation of the proposed daycare center. It failed to address other important traffic and circulation issues such as the environmental setting of the Project, the hours and operational characteristics of the Project, the traffic distribution of Project-generated trips, drop-off and pick-up of children, employee parking, and traffic safety. As noted in the PHA report:

> In summary, College Avenue is an arterial road connecting the cities of Oakland and Berkeley, and providing access to and from the University of California Berkeley Campus. The land use pattern on College Avenue and in particular near the site is all commercial and retail and not compatible with a daycare center. The layout of College Avenue with parking lanes and bike lanes on both sides of the street, difficult site access for vehicles and turnaround, the angle at which Bryant Avenue connects with College Avenue, and the high vehicle speed coming down from Broadway, coupled with the lack of adequate drop-off, pick-up and parking for employees, are reasons why we believe the proposed site is a poor location for a daycare facility.

For these reasons, the Project could result in significant traffic impacts that should be analyzed in an EIR.

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[4] The statement of qualifications for PHA Transportation Consultants is also attached.

Moreover, as noted in our presentation before the Planning Commission, the City proposes to address potential traffic safety impacts by requiring that the applicant submit a "Transportation Plan" after project approval that addresses issues like loading and unloading, parking, and traffic safety. This condition constitutes an illegal deferral of mitigation, which violates CEQA. As noted in CEQA Guidelines § 15126.4(a)(B), "Formulation of mitigation measures should not be deferred until some future time." Without knowing mitigation details, it cannot be ensured that the Project's impacts on traffic and circulation can be reduced to a less-than-significant level. For example, as noted by Mr. Allen, the Project's site plan is based on a faulty survey that extends the property line onto adjacent property. A correct survey would demonstrate that there is insufficient space for the required two-stall drop-off area along the project site's frontage on College Avenue. Thus, the proposed Transportation Plan may not be feasible.

D. The Project could result in significant land use impacts that are not analyzed.

The Project could result in significant land use impacts related to land use compatibility and compliance with state regulations pertaining to childcare facilities. These significant impacts warrant the preparation of an EIR for the Project.

The Project would be incompatible with its surrounding therapeutic office and commercial uses because of its excessive noise and traffic impacts. As indicated in the noise analyses prepared by Wilson Ihrig and Krause Acoustics, the noise associated with the Project will exceed the City's noise standards at several adjacent properties. Moreover, the traffic associated with the Project could adversely affect the livability and use of the abutting properties and the surrounding neighborhood, as discussed above and addressed in the traffic analysis prepared by PHA Associates. Also, the neighboring buildings owned by Mr. Allen currently hold an easement over the property for emergency egress. This easement will be negatively impacted by construction and the proposed change in elevation of the buildings. The project will interfere with the use of the existing easement, which provides critical emergency access to Mr. Allen's property. Additionally, there is no indication in the site plans how the Project's solid waste, i.e., garbage, recycle, and green waste/compost, will be accommodated on-site. The Project should be conditioned to provide a designated location for solid waste collection that does not interfere with or require access from Mr. Allen's property and that meets the City's new, more-stringent standards to combat rodents. These issues result in a significant land use compatibility impact that require the preparation of an EIR for the Project.

Moreover, the Project could conflict with the City's land use regulations. As noted in prior comments, the Project's site plan is based on an incorrect survey that shifts the property line onto Mr. Allen's property by nearly three feet. If that is the case, the Project may not comply with required setbacks specified in the Oakland Planning Code. Staff has sought to defer resolution of this issue by asserting that boundary disputes are a private matter not to be resolved by City staff. However, when the resolution of that dispute would

materially alter conclusions relevant to a pending entitlement request and create a significant environmental land use impact, punting the matter violates CEQA.

Also, the Project does not comply with state regulations pertaining to childcare facilities. Specifically, the state Child Care Facility Licensing Regulations, as found in Title 22 of the California Code of Regulations, require that there be a minimum of 75 square feet of outdoor activity space per child based on the total licensed capacity of the facility. (22 Cal. Code Regs., § 101238.2.) Based on the stated capacity of 48 children for the Project, a total of 3,600 square feet of outdoor activity space is required for the Project. A review of the plans for the Project indicates that the project site is only 3,691 square feet in area and that approximately 1,649 square feet of that lot area would be occupied by the building footprint. Assuming that everything that is not part of the building qualifies as "outdoor activity space," the Project would only offer approximately 1,900 square feet of outdoor activity space. However, the actual dedicated outdoor space for a play area is under 800 square feet, as the remainder of the property is encumbered by or used for other purposes, such as an easement, stairs and the area under the stairs, and a wheelchair lift. Thus, the Project does not comply with the State Child Care Facility Licensing Regulations. This is a potentially significant land use issue that should have been analyzed in an EIR for the Project and resolved prior to project approval.

For these reasons, the Project could result in significant land use impacts that require the preparation of an EIR for the Project.

E. <u>The Project could result in significant aesthetics impacts that are not analyzed.</u>

As discussed previously, the Project would essentially quadruple the size of the existing historic structure at 5315 College Avenue. This change alone could be considered a significant adverse aesthetic change that warrants the preparation of an EIR. Moreover, the proposed substantial change in elevation of the structure would be readily visible from public rights-of-way. The City's own historic preservation planner commented on the aesthetic significance of the building and her concerns about the proposed lifting, rotating, and expansion of a historic structure:

> Turning the stairs around to the side is also a big change to the street presence, as are the wings protruding at the back. My impression is that the applicant is proposing more than the lot and building can hold. . . .
>
> I think it would make more sense to explore separate, frankly modern addition(s), rather than trying to squeeze *three times the space* into and onto the existing cottage. The house is *a familiar and appreciated visual landmark* on this stretch of College and makes a lively architectural zoo along with the Ace Architects cluster.

(E-mail from Betty Martin, January 23, 2023, *emphasis added.*) For these reasons, the Project could result in significant aesthetics impacts that should be analyzed in an EIR.

As discussed above, the Project could have a significant effect on the environment, including significant effects related to historical resources, noise, traffic, land use, and aesthetics. For these reasons, the City should prepare an EIR in accordance with CEQA.

IV. Because the Planning Commission decision to uphold the use of a CEQA exemption for the Project was erroneous, not supported by substantial evidence, and constituted an abuse of discretion, its decision to uphold the approval of the Project based on that determination should be voided.

In summary, the Planning Commission decision to uphold the use of a CEQA exemption was erroneous, not supported by substantial evidence, and constituted an abuse of discretion for the reasons stated above. Because the City has not complied with CEQA with respect to the Project and must prepare an EIR to assess the environmental impacts of the Project. Moreover, because the Planning Commission's decision to uphold the Zoning Manager's approval of the Project was based on that environmental determination, that decision is also invalid and should be reversed by the City Council. Therefore, the City Council should grant the appeal, reverse the Planning Commission's decision to find the Project exempt from CEQA, vacate the Planning Commission's decision to uphold the approval of a minor CUP for the Project that relied upon that environmental determination, and direct staff to prepare an EIR for the Project.

Sincerely,

Jesse J. Yang

Enclosures

cc: Robert Merkamp, Zoning Manager
Catherine Payne Development Planning Manager
Brian Mulry, Supervising Deputy City Attorney
Michael Branson, Deputy City Attorney
John Allen
Jake Allen

OFFICE UNIT FOR SALE LOCATED IN NORTH OAKLAND | OFFERING MEMORANDUM

OFFICE FOR SALE

5315 College Ave, Oakland, CA 94618

AZIZ KHATRI
Director | KW Commercial - Oakland

DRE#: 01050721
510-368-8347
aziz@kw.com

MANO ACEBEDO
Investment Advisor | KW Commercial - Oakland

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EACH PARTY SHALL CONDUCT ITS OWN INDEPENDENT INVESTIGATION AND DUE DILIGENCE.

Any party contemplating or under contract or in escrow for a transaction is urged to verify all information and to conduct their own inspections and investigations including through appropriate third-party independent professionals selected by such party. All financial data should be verified by the party including by obtaining and reading applicable documents and reports and consulting appropriate independent professionals. KW Commercial makes no warranties and/or representations regarding the veracity, completeness, or relevance of any financial data or assumptions. KW Commercial does not serve as a financial advisor to any party regarding any proposed transaction.

All data and assumptions regarding financial performance, including those used for financial modeling purposes, may differ from actual data or performance. Any estimates of market rents and/or projected rents that may be provided to a party do not necessarily mean that rents can be established at, or increased to that level. Parties must evaluate any applicable contractual and governmental limitations, as well as market conditions, vacancy factors, and other issues in order to determine rents from or for the property.

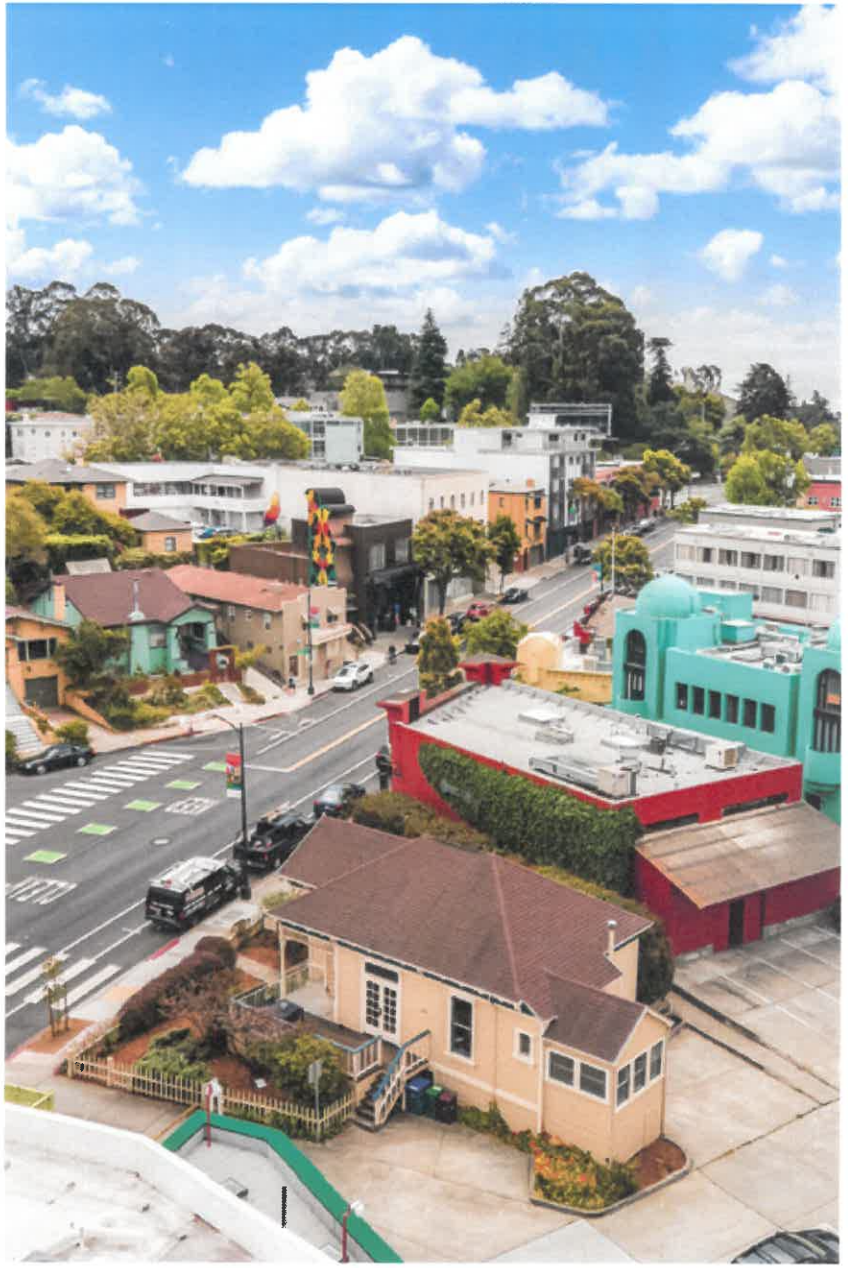
Legal questions should be discussed by the party with an attorney. Tax questions should be discussed by the party with a certified public accountant or tax attorney. Title questions should be discussed by the party with a title officer or attorney. Questions regarding the condition of the property and whether the property complies with applicable governmental requirements should be discussed by the party with appropriate engineers, architects, contractors, other consultants and governmental agencies. All properties and services are marketed by KW Commercial Oakland in compliance with all applicable fair housing and equal opportunity laws.

PROPERTY SUMMARY

The subject property is located in one of the most sought-after districts, Rockridge, in Oakland, CA. Rockridge is at the foot of the Oakland Hills and is a mix of residential and commercial neighborhoods. The property is on the south end of College Ave which is the main strip of the area. This community is thriving with many restaurants, cafes, retail stores, and is home to the Claremont Country Club. Public transportation is served by bus lines and the Rockridge Bart Station just 0.4 miles away. The charming property sits 1 mile to Highway 24 & I-580 making it easily accessible for any commuter in the San Francisco Bay Area. The beautiful building is ideally positioned two blocks from Broadway Ave, a direct route to Downtown Oakland (2.8 miles). With a walk score of 94, many people of all ages come to visit this desirable hub.

Rarely on the market, 5315 College Ave is a commercial office building approximately +/-987 SF situated on a +/-3,733 SF lot. Built in 1886, this unique Queen Anne Victorian was home to Charles Shields, a scenic painter for Oakland Dramatic Theaters from 1895-1936. The property has three office rooms, an open foyer, bathroom, storage closet, large bay windows, patio deck, basement, yard, and three parking spaces. The building exhibits glasswork designed by Narcissus Quagliata, who is considered one of the most significant contemporary glass artists in the world.

Ideally located in the Rockridge district of Oakland, CA, the property is on the south end of College Ave which is the main strip of the area. This fascinating community is thriving with many restaurants, cafes, retail stores, and is home to the Claremont Country Club. Rockridge is a mixed residential and commercial district with a walk score of 94.



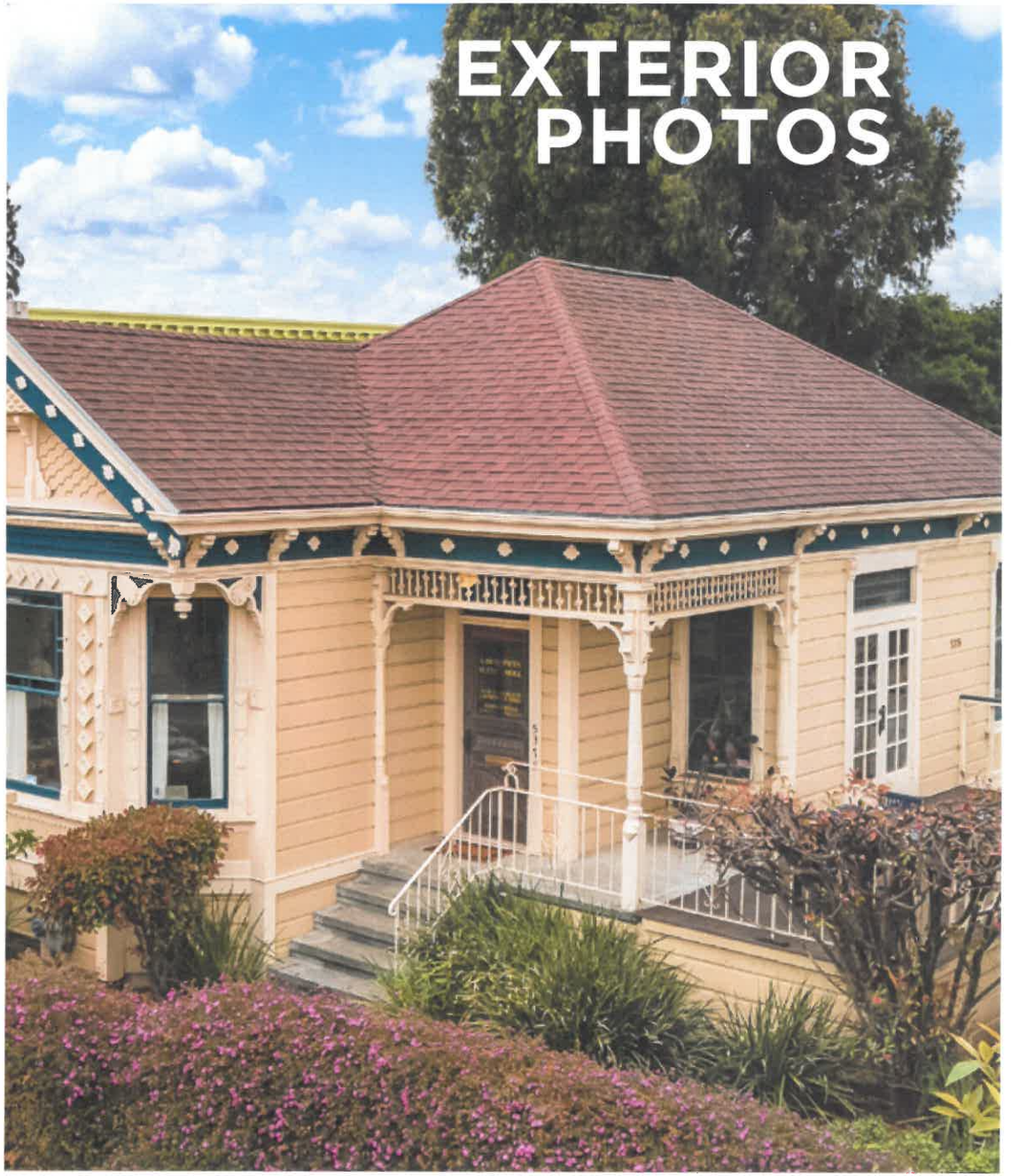
OFFERING SUMMARY

Address	5315 College Ave
City	Oakland, CA 94618
Zoning	CN-1
Lot Size	± 3,733 SF
Building Size	± 987 SF
Market	Oakland
Submarket	North Oakland

PROPERTY HIGHLIGHTS

- Prime location
- CN-1 Zoning
- Ideal for a high-end Owner/User
- Walk score of 94
- High traffic and street visibility
- Queen Anne Victorian style
- Stained glass installations created by Narcissus Quagliata
- Many restaurants, cafes, & retail shops
- 0.4 miles to Rockridge Bart Station

EXTERIOR PHOTOS



INTERIOR PHOTOS

INTERIOR GLASS WORK

AERIAL VIEW

AREA HIGHLIGHTS

Oakland

Oakland is a city in California with a population of **425,097**. Oakland is in Alameda County. Living in Oakland offers residents an urban-suburban mix feel and most residents rent their homes. In Oakland, there are a lot of bars, restaurants, coffee shops, and parks. Many families and young professionals live in Oakland and residents tend to be liberal.

Lake Merritt, Oakland, CA, USA

Oakland Rankings:

Most Diverse Cities in America **#2 of 228**
Most Diverse Places to Live in America **#6 of 18,523**
Best Cities for Outdoor Activities in America **#14 of 228**

Alameda County

Alameda County is located in California with a population of **1,656,754**. In Alameda County, most residents own their homes. Many families and young professionals live in Alameda County and residents tend to be liberal.

Alameda County Rankings:

Best Counties for Young Professionals in California **#1 of 55**
Best Counties for Families in California **#2 of 55**
Best Counties to Live in California **#2 of 55**

Walk Score

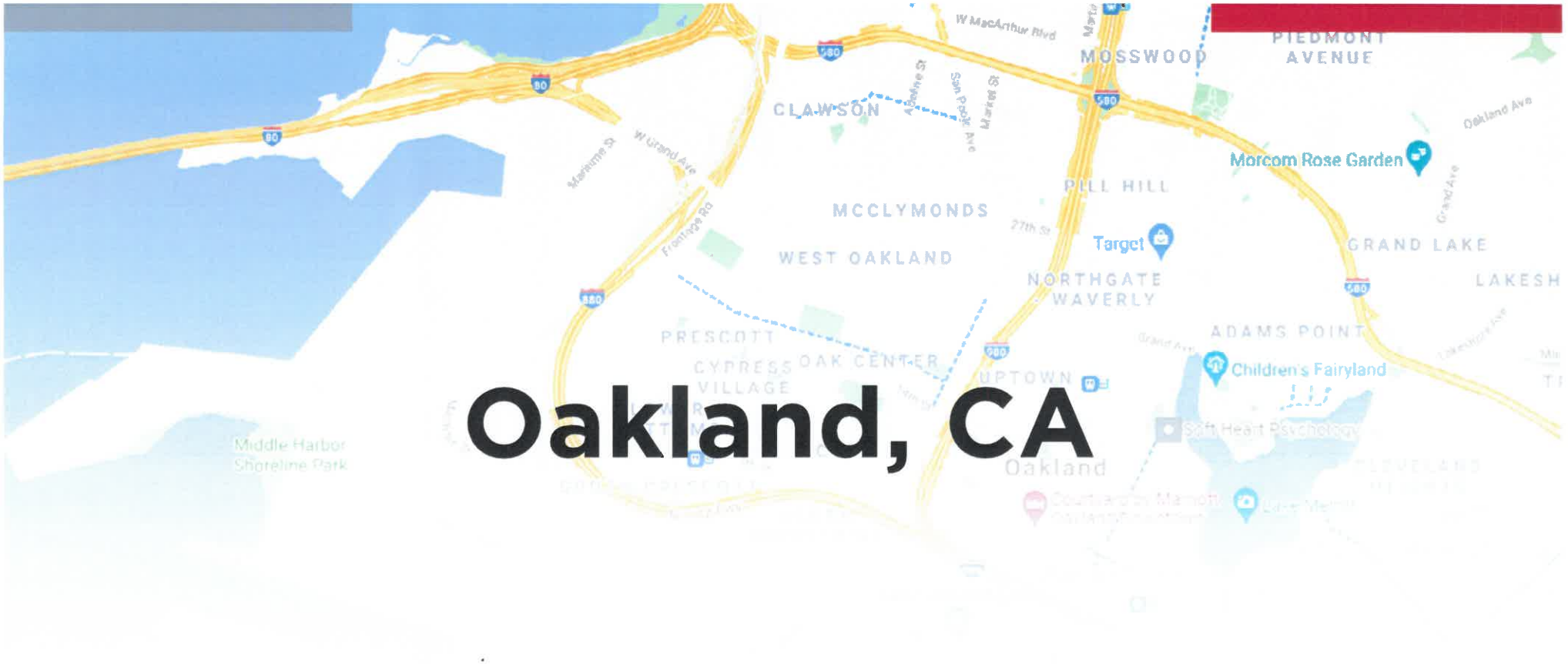
Walker's Paradise
Daily errands do not require a car

Transit Score

Good Transit
Many nearby public transportation options

Bike Score

Very Bikeable
Biking is convenient for most trips



Oakland, CA

Population	Median Household Income	Median Home Value	Median Rent
425,097	$73,692	$687,400	$1,445
	National Average: $62,843	National Average: $217,500	National Average: $1,062

LOCAL DEVELOPMENTS

BLOOM BERKELEY

New condo development by TimeSpace Group at 2747 San Pablo Avenue, Berkeley. Bloom Berkeley has a total of 41 units.

2747 San Pablo Avenue, Berkeley, CA

ELLIS AT CENTRAL STATION

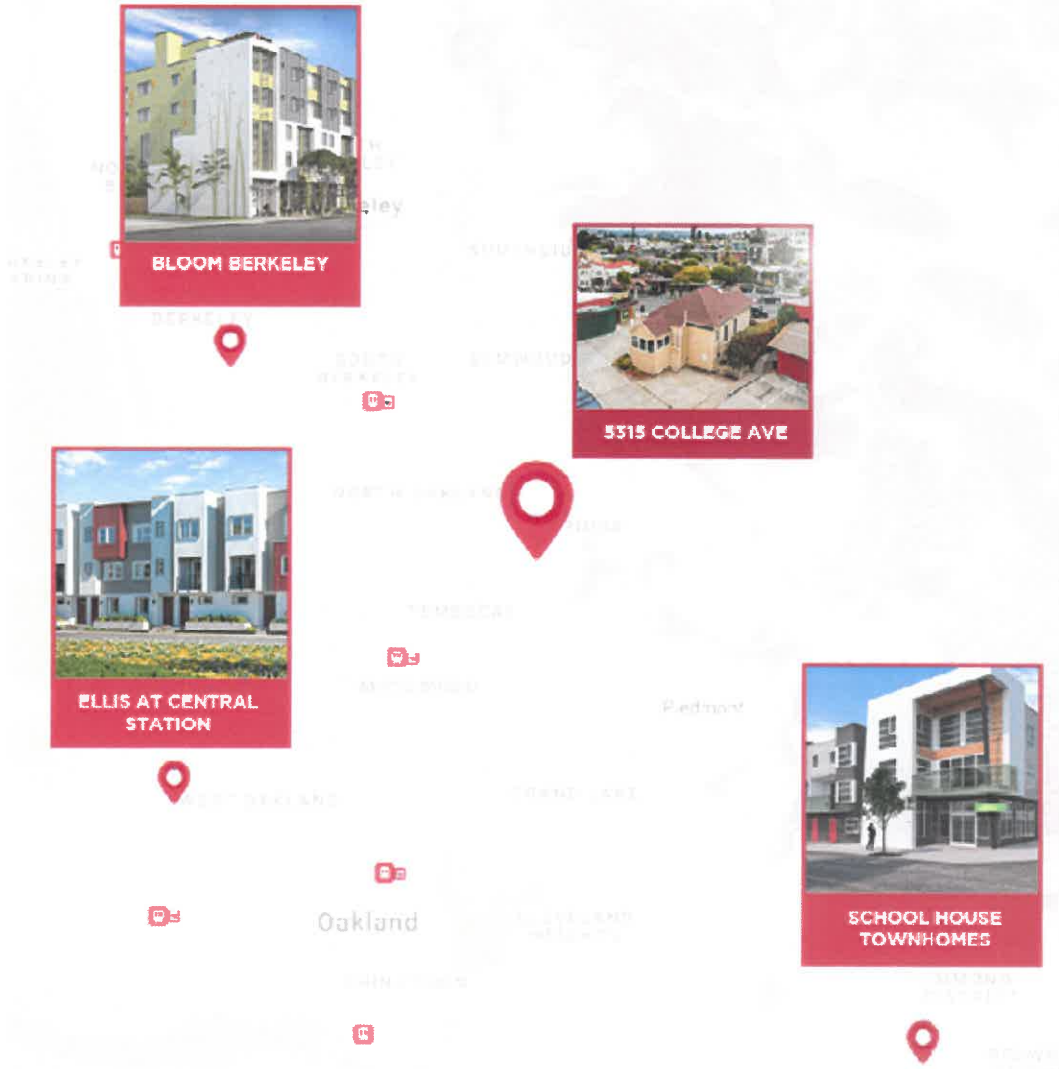
New townhouse development by TRI Pointe Homes currently under construction at 1792 Boxcar Circle, Oakland. Ellis at Central Station has a total of 128 units.

1792 Boxcar Circle, Oakland, CA

SCHOOL HOUSE TOWNHOMES

New townhouse development by Green Oak Builders, Inc. at 3101 35th Avenue, Oakland. School House Townhomes has a total of 8 units.

3101 35th Avenue, Oakland, CA



LOCAL AMENITIES


COCOON DAY SPA


THE BURRITO SHOP


RIKYU


CLAREMONT VET HOSPITAL


MARICA RESTAURANT


JUDOKU SUSHI


GERMANY'S BEST AUTO SHOP


POWERFORM GYM


BANGKOK GARDEN


WENDY'S

Cocoon Day Spa

The Burrito Shop
Takeout

Rikyu
Takeout • Delivery

Claremont
Veterinary Hospital

5315 College
Ave, Oakland, CA...

Marica
Takeout • Delivery

Takeout • Delivery

Germany's Best
Auto repair shop

Powerform

Bangkok Garden
Takeout • Delivery

Wendy's
Takeout • Delivery

Holy Basil Phó
And Cocktail bar
Takeout • Delivery

A16
Takeout • Delivery

Khana Peena
Indian Cuisine
Takeout • Delivery

Blick Art Materials
Delivery

Broadway Terrace

California College of the
Arts (CCA) Clifton Hall

California College
of the Arts


HOLY BASIL PHÓ AND COCKTAIL BAR


A16


KHANA PEENA INDIAN CUISINE


5315 COLLEGE AVE, OAKLAND, CA


BLICK ART MATERIALS


(CCA) CLIFTON HALL


CALIFORNIA COLLEGE OF THE ARTS

AZIZ KHATRI

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KW COMMERCIAL

KW Commercial Oakland
DRE#02029039

5315 College Ave, Oakland, CA 94618-1416, Alameda County

APN: 014-1249-011-03 CLIP: 8912800378

OWNER INFORMATION

Owner Name	**Marashi Mahta**	Tax Billing Zip	**94618**
Owner Name 2	**Shafiei Mehdi**	Tax Billing ZIP + 4 Code	**1712**
Tax Billing Address	**5690 Broadway Ter**	Owner Occupied	**No**
Tax Billing City & State	**Oakland, CA**		

LOCATION INFORMATION

Census Tract	**4003.00**	Flood Zone Code	**X**
Mailing Carrier Route	**C001**	Flood Zone Panel	**06001C0059G**
Subdivision	**Vernon Park**	Flood Zone Date	**08/03/2009**
School District	**Oakland**	Within 250 Feet of Multiple Flood Zone	**No**
Comm College District Code	**Peralta Jt**		

TAX INFORMATION

APN	**014-1249-011-03**	Lot #	**3**
Tax Area	**17001**	% Improved	**50%**
Block ID	**M**		
Legal Description	**OFFICIAL RECS 4 PG 8 BLK M PART OF LOT 3**		

ASSESSMENT & TAX

Assessment Year	2023	2022	2021
Assessed Value - Total	**$1,111,800**	**$182,067**	**$178,497**
Assessed Value - Land	**$555,900**	**$119,528**	**$117,185**
Assessed Value - Improved	**$555,900**	**$62,539**	**$61,312**
YOY Assessed Change ($)	**$929,733**	**$3,570**	
YOY Assessed Change (%)	**510.65%**	**2%**	

Tax Year	Total Tax	Change ($)	Change (%)
2021	**$4,144**		
2022	**$4,604**	**$460**	**11.1%**
2023	**$17,549**	**$12,945**	**281.16%**

CHARACTERISTICS

Lot Acres	**0.0857**	Construction	**Wood**
Lot Sq Ft	**3,734**	Effective Year Built	**1892**
Style	**L-Shape**	Building Class	**D**
Gross Area	**987**	County Use Code	**One To Five Story Office Build**
Building Sq Ft	**987**	Universal Land Use	**Office Building**
Quality	**Average**	# of Buildings	**1**

MORTGAGE HISTORY

Mortgage Date	03/10/2022	03/10/2022
Mortgage Amount	**$295,000**	**$295,000**
Mortgage Lender	**Private Individual**	**Private Individual**
Borrower Name	**Shafiei Mehdi**	**Shafiei Mehdi**
Borrower Name 2	**Marashi Mahta**	**Marashi Mahta**
Mortgage Purpose	**Resale**	**Resale**
Mortgage Type	**Private Party Lender**	**Private Party Lender**

Krause Acoustics

2635 Monte Vista Ave.
El Cerrito, CA 94530
Tel (510) 685-9987
nickkrause@comcast.net

To: City of Oakland
250 Frank H. Ogawa Plaza
Oakland CA 94612

Attn: Neil Gray, Senior Planner

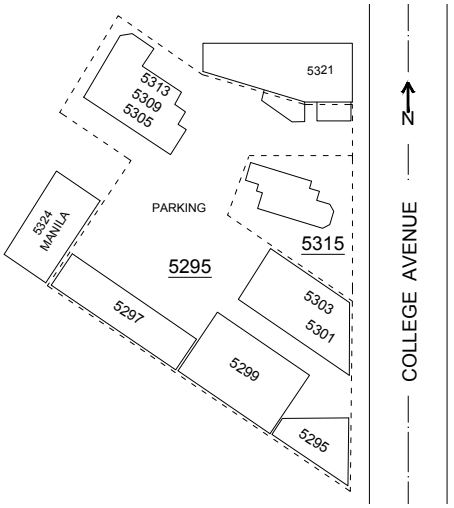
Date: January 2, 2024

Re: Case PLN22189
5315 College Ave. Oakland
Preschool Play Yard Noise Study

1. Introduction

The proposed project is a preschool in a renovated residence. Adjacent property at 5295 College has three office buildings used by health practitioners around an off street parking lot, along with a retail shop and restaurants fronting on College Avenue. Figure 1 shows the project and identifies the buildings on the adjacent lot; both properties are zoned CN-l.

Figure 1 - Project Setting



The primary study objective is to assess the potential impact of project operations with respect to performance standards defined in Chapter 17.120 of the Oakland Planning Code.

A secondary objective is to describe the effect of project noise as perceived inside the adjacent buildings, to address the issue of potential noise intrusion into consultation offices.

The study is based on a sound level survey at the project site to classify existing traffic noise and a play yard noise survey at local preschool. The study uses sound path analysis of the proposed project arrangement to predict the emissions of a similar play yard operation located at the project site.

2. Noise Regulations

Allowable noise levels are defined in City of Oakland Planning Code Section 17.120.050 - Noise, which states as follows:

"All activities shall be so operated that the noise level inherently and regularly generated by these activities across real property lines shall not exceed the applicable values indicated in Subsection A., B., or C. as modified where applicable by the adjustments indicated in Subsection D. or E.

A. Residential Noise Standards ... (N/A)

B. Commercial Noise Level Standards. The maximum allowable noise levels received by any land use activity within any Commercial Zone area ... are described in Table 17.120.02

Table 17.120.02
MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS

Cumulative Minutes in Either the Daytime or Nighttime One Hour Time Period	Anytime
20	65
10	70
5	75
1	80
0	85

C. Industrial Noise Standards ... (N/A)

D. In the event that the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level.

E. Each of the noise level standards specified above in Subsections A., B., and C. shall be reduced by (5) five dBA for a simple tone noise such as a whine, screech, or hum, noise consisting primarily of speech or music, or for recurring impulsive noise such as hammering or riveting.

F. Noise Measurement Procedures. Utilizing the "A" weighting scale of the sound level meter and "slow" meter response (use fast meter response for impulsive type sounds), the noise level shall be measured at a position or positions at any point on the receiver's property. In general, the microphone shall be located four (4) to five (5) feet above the ground; ten (10) feet or more from the nearest reflective surface, where possible. However, in those cases where another elevation is deemed appropriate, the latter shall be utilized."

(Subsection D implies that ambient noise level measurement is a necessary element of the assessment. Subsection E is assumed to be applicable since the noise is primarily speech.)

3. Sound Level Measurement Method

Sound level data was obtained using SPL Graph acoustic analysis software by Studio Six Digital installed in smartphones. Data was sampled at one-second intervals to approximate "Slow" sound level meter response; the system used "A-weighted" frequency response. Instruments were calibrated prior to use with a source traceable to national standards.

The SPL Graph system provides a time-stamped list of the individual data values. These were sorted after acquisition to find the statistical percentile values corresponding to Ln criteria used in the Planning Code. The convention in the following analysis is to use the average noise level L20 as a single descriptor for use in discussion.

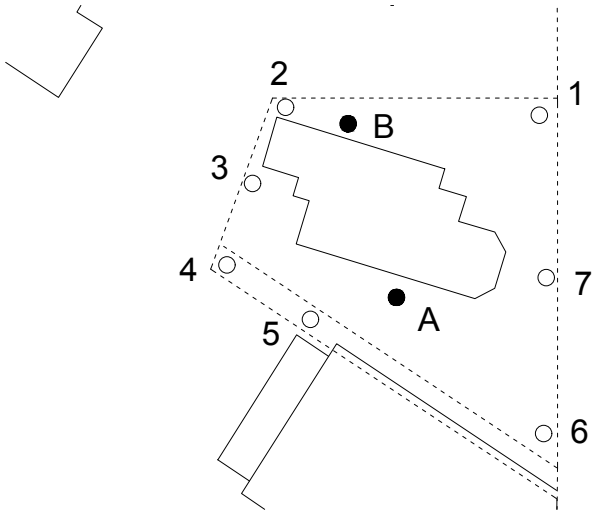
One system logged sound levels continuously at a fixed station and saved the data at the end of each one-hour record. This system used a micW type I436 measurement microphone.

Short-term measurements were made at various other locations around the site using a similar analysis system and the smartphone internal mic. This roving system logged sound levels at one-second intervals and saved the data at the end of each record of length three to five minutes.

4. Site Noise Survey

Figure 2 shows measurement stations used for the site ambient noise survey. Fixed Stations A and B recorded long-term trends of traffic noise from College Avenue on different days. Station A is the nominal location of the proposed play yard. Roving Stations 1 through 7 were used during one session for coincident short-term data to map traffic noise spatial pattern by using the correlations between roving stations and the fixed station.

Figure 2 - Site Noise Survey Stations



The dominant noise source near the project, especially at the front of the building, is vehicle traffic on College Avenue immediately to the east of the site. Noise level is slightly lower at the rear of the project lot due to distance and partial screening by adjacent buildings. Traffic noise level is significantly lower at Station 3 due to near-complete screening by the project building.

This noise is highly variable in both loudness and character, depending on vehicle mix, speed and separation. The traffic flow is intermittent, as influenced by the timing of nearby traffic lights at the intersections with Broadway and Manila.

A secondary source of ambient noise, especially at the rear of the lot, is traffic on Interstate Route 24, an elevated eight-lane freeway with median rail line about 2000 feet to the Northwest of the site. This noise is essentially steady and broadband with only occasional discrete anomalous events; it is audible during lulls in the dominant College Avenue traffic, and it constitutes the residual sound level or noise floor in the project vicinity.

5. Site Survey Results

The first survey session consisted of continuous recording at Station A from 2 p.m. November 30 through 4 p.m. December 1. The microphone was on a mast outside a window at a distance of three feet from the building and eight feet above the ground.

Figure 3 is a typical hourly survey record; Figure 4 is a 5-minute detail of the full hour. The detail shows a series of peaks as vehicles pass by, at a rate of about ten per minute; larger peaks are trucks or buses. The residual noise level is about 52 dB.

Figure 3 - Typical Hourly Survey Record

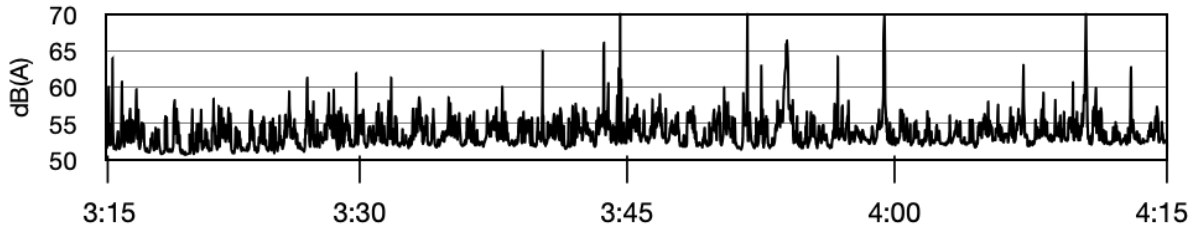


Figure 4 - Hourly Record Detail

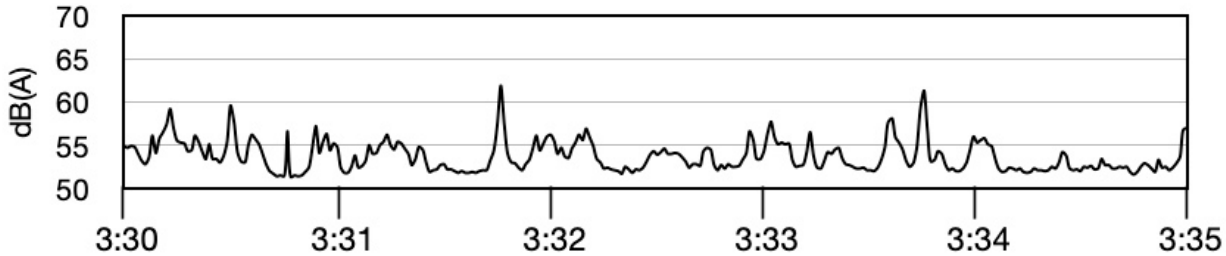


Table 1 lists values of Ln metrics found in analysis of data from five survey sessions at Stations A and B. The table also lists the overall averages of L20 - L0 values.

Table 1a - Site Noise Survey Station A

Date	Time	Station	L20	L10	L05	L01	L0
11/30	2 - 7 p.m.	A	55	56	57	60	70
12/01	7 - 11 a.m.	A	54	56	58	62	78
12/01	12 - 4 p.m.	A	53	55	56	60	71
	Average		54	56	57	61	73

A second survey session consisted of continuous recording at Station B on December 8. The microphone was positioned on a mast outside a window at a distance of two feet from the building and twelve feet above the ground. Portions of the data from 10:00 a.m. to Noon on 12/08 were omitted due to interference from another non-traffic noise source, such as nearby construction activity.

Table 1b - Site Noise Survey Station B

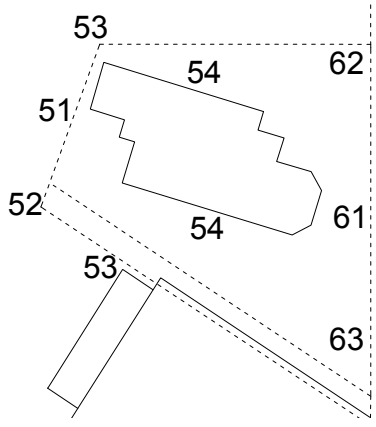
Date	Time	Station	L20	L10	L05	L01	L0
12/08	8 - 10 a.m.	B	55	58	60	68	73
12/08	12 - 5 p.m.	B	54	56	57	62	80
	Average		54	57	58	61	77

The value L20 = 54 dB is used as the basis for reference in the following discussions.

6. Traffic Noise Pattern

A short-term survey was used to assess the variance of traffic noise with respect to location around the property; results are Shown in Figure 5.

Figure 5 - Noise Pattern



A roving sound level meter took short-term records at seven locations, with coincident data taken by the continuous recorder. The roving and base data were compared to find the difference in sound levels.

Highest sound levels are along the east side of the lot near the dominant source of traffic noise, College Avenue.

Sound levels along the west side lot line are similar to the base stations except at the middle, where the house provides significant shielding from the traffic sound path.

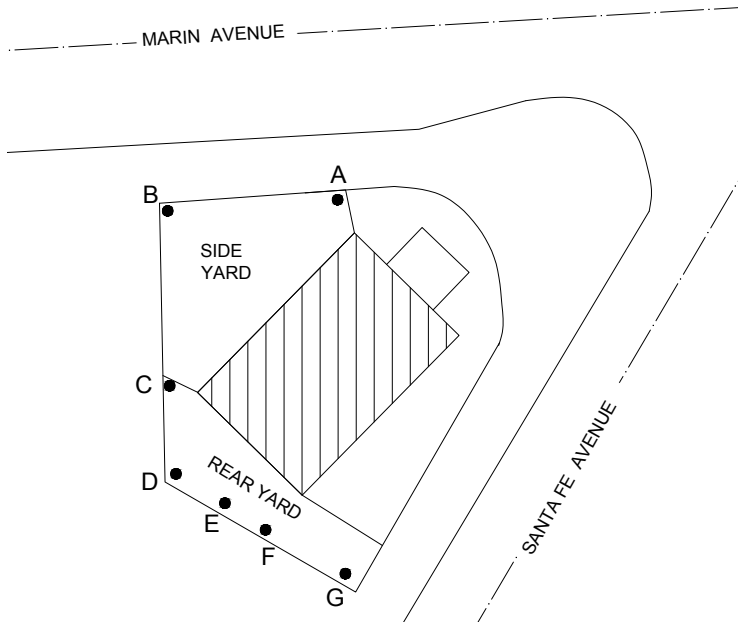
The west side of the house is slightly exposed to noise from Route 24, audible only during lulls in local traffic.

7. Play Yard Noise Survey

A series of sound level measurements was conducted from November 20 to December 5 at a facility similar to the project as shown in Figure 6. This is located at 1370 Marin Avenue in Albany, at the corner of Santa Fe Avenue. The lot has play yard areas at the side and rear of a two-story house, separated by a low fence.

Location C was used as the base station for continuous data recording and observation of yard activities; it has a direct view of both play yards, at a distance of about 30 feet from the center of each. Other stations along the yard perimeter were used for coincident short-term data to find the variance of play yard noise with location. Stations A and B were used for initial observations but were later dismissed due to excessive traffic noise. Stations D thru G were used to observe the shielding effect of the school building on sound paths from the side yard to the rear yard.

Figure 6 - Play Yard Noise Survey Stations



Maximum enrollment of the school is 36, with typically 30 - 32 in attendance. The play yards are used for two sessions each day; the younger kids (3's) use the rear yard and the older kids (4's) use the side yard.

The morning session is split into two halves, with 3's in the rear yard from 10:30 to 11:15 and 4's in the side yard from 11:15 to 12:00.

The afternoon session is from 3:15 to 5:00, with the side yard used the entire time and the rear yard used part time.

8. Play Yard Survey Results

Figure 7 shows examples of data from play yard noise surveys.

Figure 7 - Typical Play Yard Noise 11/20/23

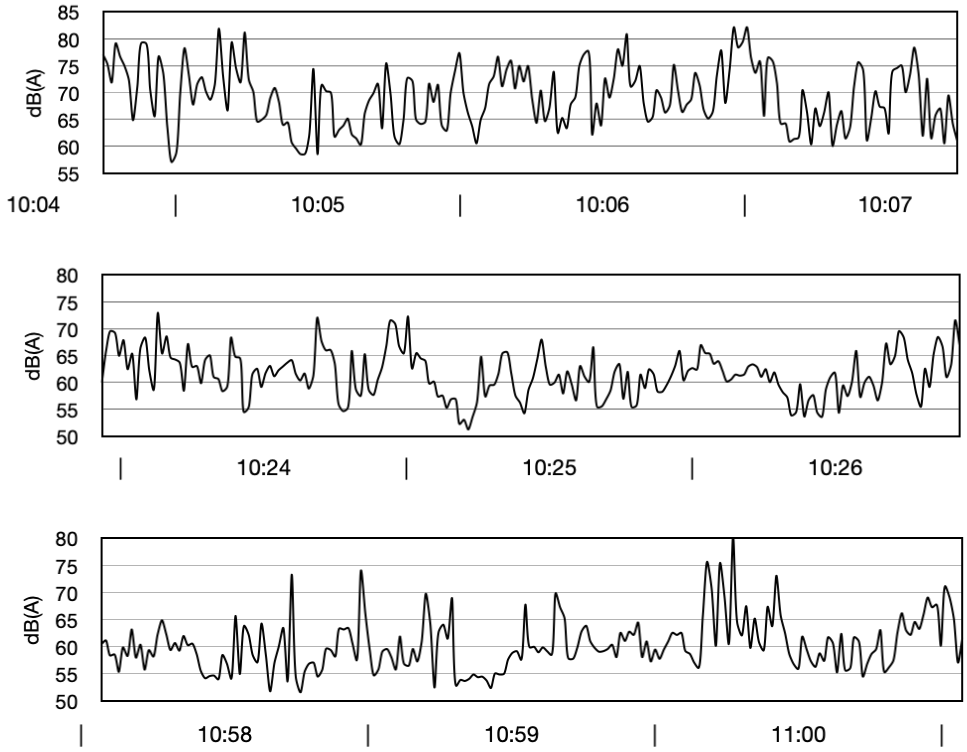


Table 2 lists values of Ln metrics found in analysis of data from four survey sessions on three days. These represent periods of maximum attendance, activity and noise. The table also lists the overall averages of values for L20 - L01 and the overall maximum value for L0.

Table 2 - Play Yard Noise Survey Summary

Date	Time	L20	L10	L05	L01	L0	Kids
11/20	10-11a.m.	68	71	74	79	83	10- 14
11/20	4 - 5 p.m.	65	68	71	74	81	17 - 28
11/28	4 - 5 p.m.	65	69	71	77	82	11 - 27
12/05	4 - 5 p.m.	68	72	75	78	83	15 - 28
	Average	67	70	73	77	83	

Overall average value of L20 = 67 dB @ 30' is taken as the basis for the following analysis.

9. Noise Prediction Method

Sound path analysis includes the effects of sound divergence with distance and diffraction around barriers. The sound level Divergence Attenuation term (Ad) between two points located at distances D1 and D2 from a source is calculated using the formula:

$$Ad = 10 \log(D2 / D1), \text{ dB}$$

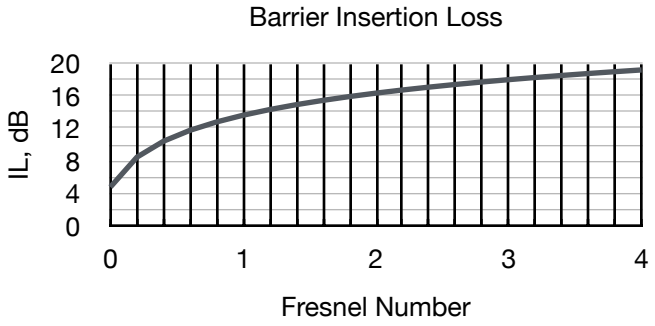
This means that the sound level decreases by about 3 dB if the distance is doubled or increases by 3 dB if the distance is halved.

The barrier attenuation or Insertion Loss (IL) between two points is a function of the Fresnel Number (N), which is the difference (Δ) between the length of the direct sound path and the length of the actual sound path around the barrier, compared to the Wavelength (W) of the sound.

$$N = 2 \times \Delta / W$$

The IL value is determined using the following formula, derived from empirical studies by Maekawa et.al. Practical barrier IL values range from 5 dB to a maximum limit of about 20 dB.

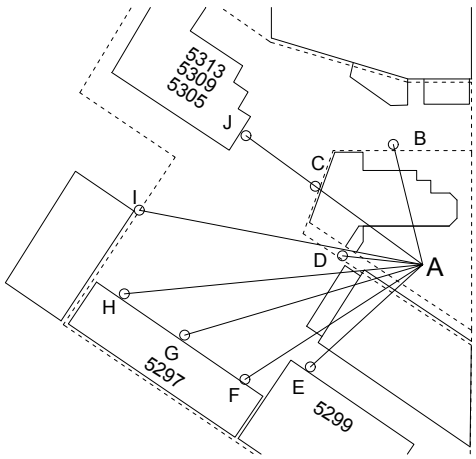
$$IL = 10 \log(3 + 20 N)$$



10. Noise Prediction Sound Paths

Figure 8 shows locations of sound paths around surrounding structures that act as sound barriers. Point A at the play yard center is 5' above the ground, as are Points B, C and D at the project lot line. Point E is at the third story of Building 5299. Points F, G and H are at the second story of Building 5297. Points I and D are along the only direct sound path from A. Point J is at the second story of Building 5305/5309/5313.

Figure 8 - Sound Path Locations



11. Noise Prediction - Base Case

Figure 9 shows the barrier geometries used to find the difference Δ between direct and indirect sound paths. Paths in the horizontal plane go around buildings; paths in the vertical plane go over buildings.

Figure 9 - Sound Path Geometries

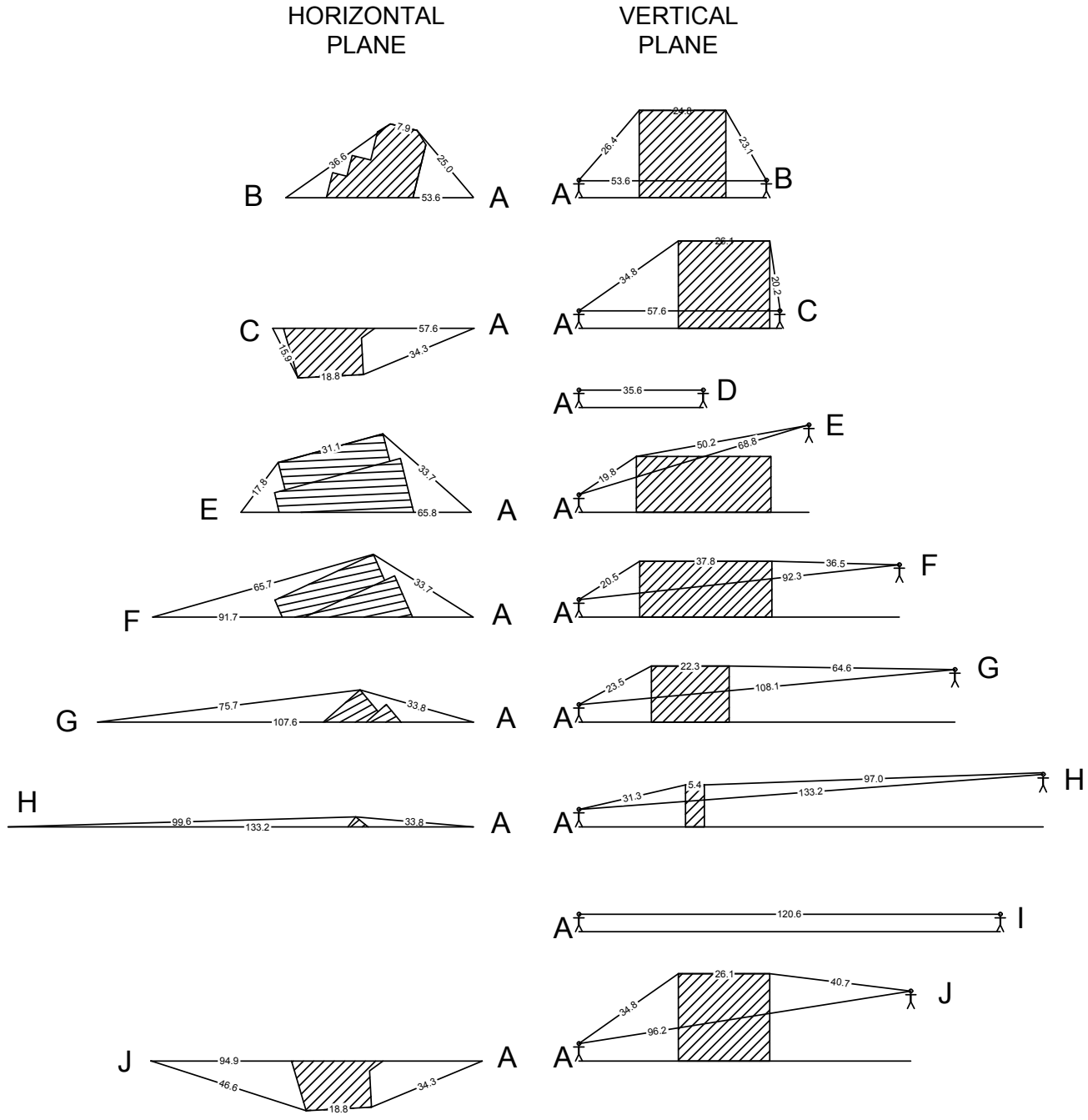


Table 3 lists the barrier calculations used to predict sound levels using the method of Section 7, based on a source of 67 dB at 30' with wavelength of one foot (i.e., 1000 Hz). Insertion Loss values are limited to a maximum of 20 dB for high Fresnel numbers.

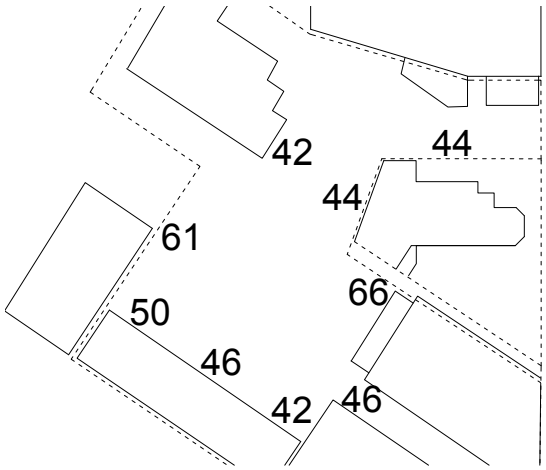
Table 3 - Barrier Calculations

VERT. PLANE	AB	AC	AD	AE	AF	AG	AH	AI	AJ
DIRECT PATH	53.6	57.6	35.6	68.8	92.3	108.1	133.2	120.6	96.2
INDIRECT PATH	74.3	81.1		70.1	94.8	110.4	133.7		101.6
PATH DIFFERENCE	20.7	23.5		1.3	2.5	2.3	0.5		5.4
FRESNEL NUMBER	41.4	47.0		2.6	5.0	4.6	1.0		10.8
INSERTION LOSS	20.0	20.0		17.4	20.0	19.8	13.6		20.0
DISTANCE ATTEN.	2.5	2.8	0.7	3.6	4.9	5.6	6.5	6.0	5.1
TOTAL ATTEN.	22.5	22.8	0.7	21.0	24.9	25.3	20.1	6.0	25.1
SPL	44	44	66	46	42	42	47	61	42

HORIZ. PLANE	AB	AC	AD	AE	AF	AG	AH	AI	AJ
DIRECT PATH	53.6	57.6	35.6	65.8	91.7	108.1	133.2	120.6	96.2
INDIRECT PATH	69.5	69.0		82.6	99.4	109.0	133.4		99.7
PATH DIFFERENCE	15.9	11.4		16.8	7.7	0.9	0.2		3.5
FRESNEL NUMBER	31.8	22.8		33.6	15.4	1.8	0.4		7.0
INSERTION LOSS	20.0	20.0		20.0	20.0	15.9	10.4		20.0
DISTANCE ATTEN.	2.5	2.8	0.7	3.4	4.9	5.6	6.5	6.0	5.1
TOTAL ATTEN.	22.5	22.8	0.7	23.4	24.9	21.5	16.9	6.0	25.1
SPL	44	44	66	44	42	46	50	61	42

Figure 10 shows the results of Base Case sound path predictions. Sound levels at most receiver locations are from 42 to 46 dB except at H, which has a sound path close to a barrier edge. Locations D and I are on direct sound paths and have sound levels in excess of the limit L20 = 60 dB allowed by the Planning Code.

Figure 10 - Predicted Play Yard Noise, Base Case



12. Noise Prediction - Alternate Case

A sound barrier wall could be used to block the direct sound path through the gap between buildings 5303 and 5315. This would be a vertical extension to the security fence between the play yard and the adjacent public access walkway.

Figure 11 - Sound Wall Location

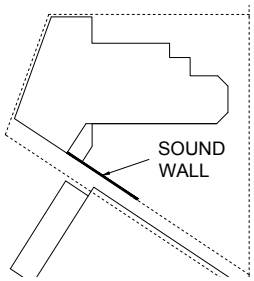


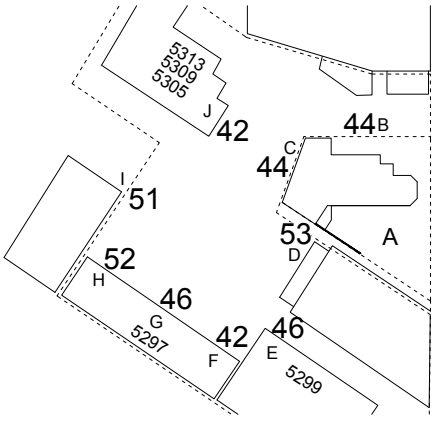
Table 4 lists the results of a study to determine the effect of sound wall height. The direct sound paths to locations D, H and I were analyzed for barrier heights of 8 to 14 feet. The study shows that a height of 8' would reduce sound levels to about 52 dB. Figure 12 shows the results of Alternate Case sound path predictions with 8' barrier hight.

Table 4 - Sound Wall Height Study

SOUND WALL CALCULATIONS: 67 dB @ 30', 1000Hz

VERT. PLANE	AD-8	AD-10	AD-12	AD-14	AH-8	AH-10	AH-12	AH-14	AI-8	AI-10	AI-12	AI-14
DIRECT PATH	35.6	35.6	35.6	35.6	133.2	133.2	133.2	133.2	120.6	120.6	120.6	120.6
INDIRECT PATH	36.1	37.1	38.5	40.1	133.3	133.6	134	134.9	120.8	121.2	121.7	122.4
PATH DIFFERENCE	0.5	1.5	2.9	4.5	0.1	0.4	0.8	1.7	0.2	0.6	1.1	1.8
FRESNEL NUMBER	1.0	3.0	5.8	9.0	0.2	0.8	1.6	3.4	0.4	1.2	2.2	3.6
INSERTION LOSS	13.6	18.0	20.0	20.0	8.5	12.8	15.4	18.5	10.4	14.3	16.7	18.8
DISTANCE ATTEN.	0.7	0.7	0.7	0.7	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0
TOTAL ATTEN.	14.4	18.7	20.7	20.7	14.9	19.3	21.9	25.0	16.5	20.4	22.8	24.8
SPL	53	48	46	46	52	48	45	42	51	47	44	42

Figure 12 - Predicted Play Yard Noise With 8' Barrier



13. Code Compliance Assessment

Commercial Zone noise level standards of Planning Code Section 17.120.050.B, when reduced by 5 dB per the noise characteristic penalty listed in 17.120.050.D, are as follows:

L20	L10	L05	L01	L0
60	65	70	75	80

The ambient sound levels at Stations A and B as summarized in Table 1 do not exceed the values listed above, so the condition of 17.120.050.E does not apply and the above values are the defining allowable limits.

Table 5 lists the LN values at office exterior locations for the alternate case prediction, based on the statistical distribution of the overall average survey result from Table 2. The table shows that the predicted play yard noise of the alternate case is significantly less than the allowable limit in all statistical categories.

Table 5 - Code Compliance Assessment

	L20	L10	L05	L01	L0
CODE LIMIT	60	65	70	75	80
PROJECT	42	45	48	52	58
	44	47	50	54	60
	46	49	52	56	62
	52	55	58	62	68

14. Barrier Construction

Since the barrier insertion loss will be no more than 20 dB, it is not necessary for the wall to be particularly massive, i.e., concrete or masonry. The barrier must be continuous, without any gaps at the bottom or between panel elements.

Recommended barrier design is to use 4 x 4 wood fence framing with a concrete footing to prevent gaps due to damage caused by fence material in contact with damp soil. Each side should have a facing of about one inch thickness. Siding of genuine or faux wood board material should have shiplap or tongue-in-groove edges to prevent gaps between boards; genuine wood should be clear grain and free of knot holes, kiln dried to prevent shrinkage that might cause gaps. Alternate face material for one or both sides is plywood sheathing with cement stucco face.

Recommended barrier height is 8' above the ground elevation at the play yard. The fence top would be 4' above the project porch near the play yard and about 6' above the elevation of the adjacent easement walkway pavement.

15. Conclusions

The site sound level survey did not include stations in the adjacent property parking lot. The following discussion is based on cursory observations made on the initial project walk-around.

Traffic noise level in the parking lot is similar to that at the rear of the project, i.e., a steady residual sound level of about 52 dB due to Route 24 traffic with a variable sound level of 55 dB average and 70 dB maximum due to College Avenue traffic.

The loudest project noise outdoors at stations near office buildings, with the alternate case including the sound barrier, is about 52 dB average and 70 dB maximum at location H. This means that the project noise level is slightly less than the ambient noise level, so the project noise may be audible at times. The project noise will be more audible when a peak in playground activity coincides with a lull in traffic.

The sound level inside offices on the adjacent property will be a function of the sound level outdoors and the noise reduction provided by office windows facing the parking lot.

Building 5305/5309/5313 windows appear to have double-hung wood frames with single glazing; this type of assembly provides about 15 dB of noise reduction, so interior noise level due to traffic is about 40 dB average and 55 dB maximum. The project noise will be about 10 dB less than the traffic noise and therefore inaudible.

Building 5297 windows appear to be double-hung metal frames with single glazing; there are numerous through-the-window air conditioning units, apparently one for each office. This arrangement provides noise reduction of only about 10 dB due to sound passage thru the air conditioners. Interior noise level at location H due to both traffic and the project will be about 45 dB average and 60 dB maximum; the project noise will be slightly audible some of the time and more audible when a peak in playground activity coincides with a lull in traffic. Interior noise level at location F due to the project will be about 10 dB less than the traffic noise and therefore inaudible.

This Report Prepared by:
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To: City of Oakland
250 Frank H. Ogawa Plaza
Oakland CA 94612

Attn: Neil Gray, Senior Planner

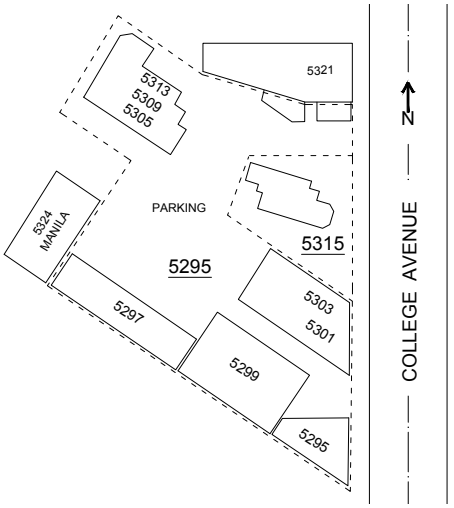
Date: January 2, 2024

Re: Case PLN22189
5315 College Ave. Oakland
Preschool Play Yard Noise Study

1. Introduction

The proposed project is a preschool in a renovated residence. Adjacent property at 5295 College has three office buildings used by health practitioners around an off street parking lot, along with a retail shop and restaurants fronting on College Avenue. Figure 1 shows the project and identifies the buildings on the adjacent lot; both properties are zoned CN-l.

Figure 1 - Project Setting



The primary study objective is to assess the potential impact of project operations with respect to performance standards defined in Chapter 17.120 of the Oakland Planning Code.

A secondary objective is to describe the effect of project noise as perceived inside the adjacent buildings, to address the issue of potential noise intrusion into consultation offices.

The study is based on a sound level survey at the project site to classify existing traffic noise and a play yard noise survey at local preschool. The study uses sound path analysis of the proposed project arrangement to predict the emissions of a similar play yard operation located at the project site.

2. Noise Regulations

Allowable noise levels are defined in City of Oakland Planning Code Section 17.120.050 - Noise, which states as follows:

"All activities shall be so operated that the noise level inherently and regularly generated by these activities across real property lines shall not exceed the applicable values indicated in Subsection A., B., or C. as modified where applicable by the adjustments indicated in Subsection D. or E.

A. Residential Noise Standards ... (N/A)

B. Commercial Noise Level Standards. The maximum allowable noise levels received by any land use activity within any Commercial Zone area ... are described in Table 17.120.02

Table 17.120.02
MAXIMUM ALLOWABLE RECEIVING NOISE LEVEL STANDARDS

Cumulative Minutes in Either the Daytime or Nighttime One Hour Time Period	Anytime
20	65
10	70
5	75
1	80
0	85

C. Industrial Noise Standards ... (N/A)

D. In the event that the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level.

E. Each of the noise level standards specified above in Subsections A., B., and C. shall be reduced by (5) five dBA for a simple tone noise such as a whine, screech, or hum, noise consisting primarily of speech or music, or for recurring impulsive noise such as hammering or riveting.

F. Noise Measurement Procedures. Utilizing the "A" weighting scale of the sound level meter and "slow" meter response (use fast meter response for impulsive type sounds), the noise level shall be measured at a position or positions at any point on the receiver's property. In general, the microphone shall be located four (4) to five (5) feet above the ground; ten (10) feet or more from the nearest reflective surface, where possible. However, in those cases where another elevation is deemed appropriate, the latter shall be utilized."

(Subsection D implies that ambient noise level measurement is a necessary element of the assessment. Subsection E is assumed to be applicable since the noise is primarily speech.)

3. Sound Level Measurement Method

Sound level data was obtained using SPL Graph acoustic analysis software by Studio Six Digital installed in smartphones. Data was sampled at one-second intervals to approximate "Slow" sound level meter response; the system used "A-weighted" frequency response. Instruments were calibrated prior to use with a source traceable to national standards.

The SPL Graph system provides a time-stamped list of the individual data values. These were sorted after acquisition to find the statistical percentile values corresponding to Ln criteria used in the Planning Code. The convention in the following analysis is to use the average noise level L20 as a single descriptor for use in discussion.

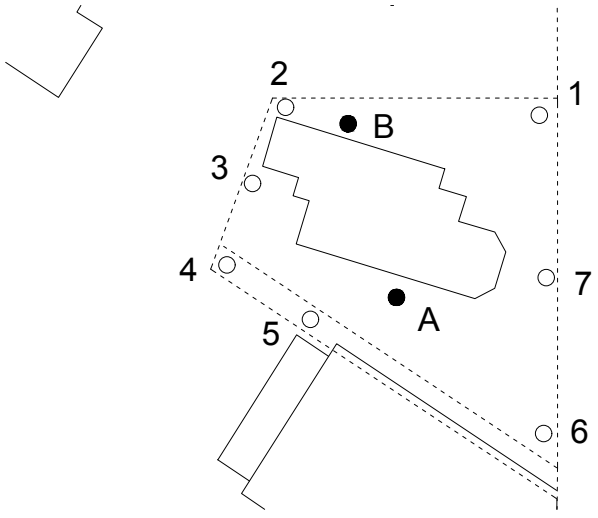
One system logged sound levels continuously at a fixed station and saved the data at the end of each one-hour record. This system used a micW type I436 measurement microphone.

Short-term measurements were made at various other locations around the site using a similar analysis system and the smartphone internal mic. This roving system logged sound levels at one-second intervals and saved the data at the end of each record of length three to five minutes.

4. Site Noise Survey

Figure 2 shows measurement stations used for the site ambient noise survey. Fixed Stations A and B recorded long-term trends of traffic noise from College Avenue on different days. Station A is the nominal location of the proposed play yard. Roving Stations 1 through 7 were used during one session for coincident short-term data to map traffic noise spatial pattern by using the correlations between roving stations and the fixed station.

Figure 2 - Site Noise Survey Stations



The dominant noise source near the project, especially at the front of the building, is vehicle traffic on College Avenue immediately to the east of the site. Noise level is slightly lower at the rear of the project lot due to distance and partial screening by adjacent buildings. Traffic noise level is significantly lower at Station 3 due to near-complete screening by the project building.

This noise is highly variable in both loudness and character, depending on vehicle mix, speed and separation. The traffic flow is intermittent, as influenced by the timing of nearby traffic lights at the intersections with Broadway and Manila.

A secondary source of ambient noise, especially at the rear of the lot, is traffic on Interstate Route 24, an elevated eight-lane freeway with median rail line about 2000 feet to the Northwest of the site. This noise is essentially steady and broadband with only occasional discrete anomalous events; it is audible during lulls in the dominant College Avenue traffic, and it constitutes the residual sound level or noise floor in the project vicinity.

5. Site Survey Results

The first survey session consisted of continuous recording at Station A from 2 p.m. November 30 through 4 p.m. December 1. The microphone was on a mast outside a window at a distance of three feet from the building and eight feet above the ground.

Figure 3 is a typical hourly survey record; Figure 4 is a 5-minute detail of the full hour. The detail shows a series of peaks as vehicles pass by, at a rate of about ten per minute; larger peaks are trucks or buses. The residual noise level is about 52 dB.

Figure 3 - Typical Hourly Survey Record

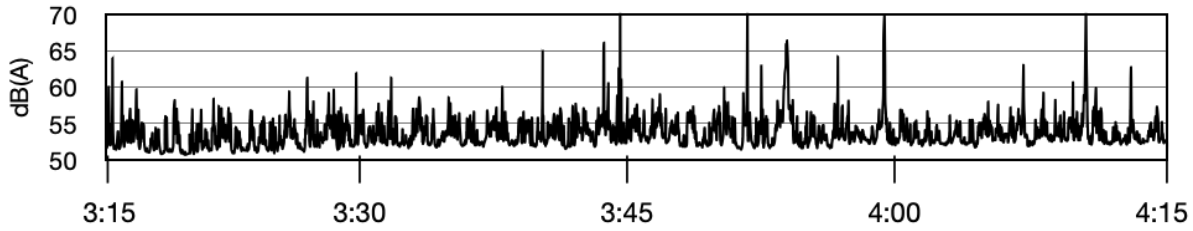


Figure 4 - Hourly Record Detail

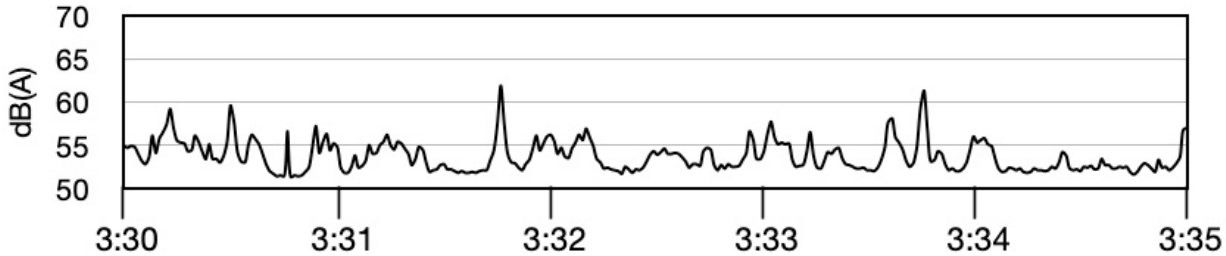


Table 1 lists values of Ln metrics found in analysis of data from five survey sessions at Stations A and B. The table also lists the overall averages of L20 - L0 values.

Table 1a - Site Noise Survey Station A

Date	Time	Station	L20	L10	L05	L01	L0
11/30	2 - 7 p.m.	A	55	56	57	60	70
12/01	7 - 11 a.m.	A	54	56	58	62	78
12/01	12 - 4 p.m.	A	53	55	56	60	71
	Average		54	56	57	61	73

A second survey session consisted of continuous recording at Station B on December 8. The microphone was positioned on a mast outside a window at a distance of two feet from the building and twelve feet above the ground. Portions of the data from 10:00 a.m. to Noon on 12/08 were omitted due to interference from another non-traffic noise source, such as nearby construction activity.

Table 1b - Site Noise Survey Station B

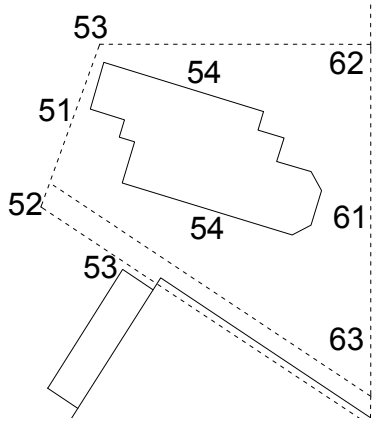
Date	Time	Station	L20	L10	L05	L01	L0
12/08	8 - 10 a.m.	B	55	58	60	68	73
12/08	12 - 5 p.m.	B	54	56	57	62	80
	Average		54	57	58	61	77

The value L20 = 54 dB is used as the basis for reference in the following discussions.

6. Traffic Noise Pattern

A short-term survey was used to assess the variance of traffic noise with respect to location around the property; results are Shown in Figure 5.

Figure 5 - Noise Pattern



A roving sound level meter took short-term records at seven locations, with coincident data taken by the continuous recorder. The roving and base data were compared to find the difference in sound levels.

Highest sound levels are along the east side of the lot near the dominant source of traffic noise, College Avenue.

Sound levels along the west side lot line are similar to the base stations except at the middle, where the house provides significant shielding from the traffic sound path.

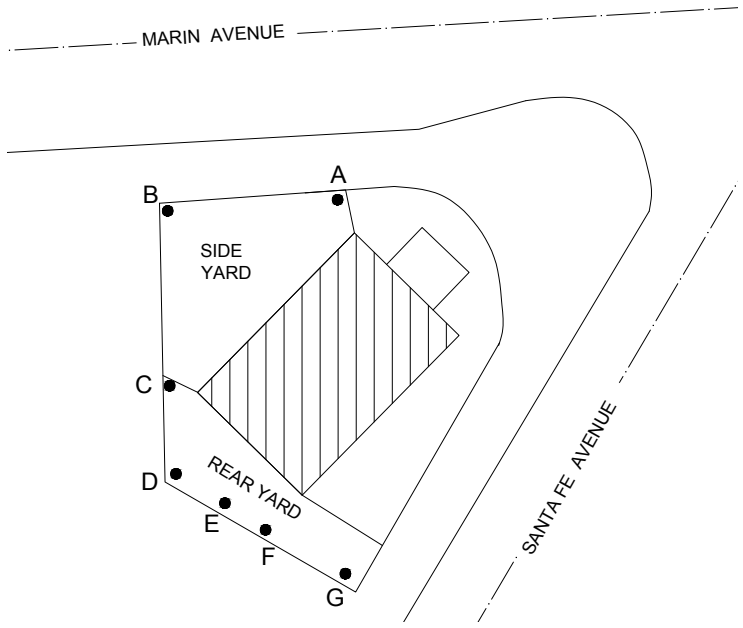
The west side of the house is slightly exposed to noise from Route 24, audible only during lulls in local traffic.

7. Play Yard Noise Survey

A series of sound level measurements was conducted from November 20 to December 5 at a facility similar to the project as shown in Figure 6. This is located at 1370 Marin Avenue in Albany, at the corner of Santa Fe Avenue. The lot has play yard areas at the side and rear of a two-story house, separated by a low fence.

Location C was used as the base station for continuous data recording and observation of yard activities; it has a direct view of both play yards, at a distance of about 30 feet from the center of each. Other stations along the yard perimeter were used for coincident short-term data to find the variance of play yard noise with location. Stations A and B were used for initial observations but were later dismissed due to excessive traffic noise. Stations D thru G were used to observe the shielding effect of the school building on sound paths from the side yard to the rear yard.

Figure 6 - Play Yard Noise Survey Stations



Maximum enrollment of the school is 36, with typically 30 - 32 in attendance. The play yards are used for two sessions each day; the younger kids (3's) use the rear yard and the older kids (4's) use the side yard.

The morning session is split into two halves, with 3's in the rear yard from 10:30 to 11:15 and 4's in the side yard from 11:15 to 12:00.

The afternoon session is from 3:15 to 5:00, with the side yard used the entire time and the rear yard used part time.

8. Play Yard Survey Results

Figure 7 shows examples of data from play yard noise surveys.

Figure 7 - Typical Play Yard Noise 11/20/23

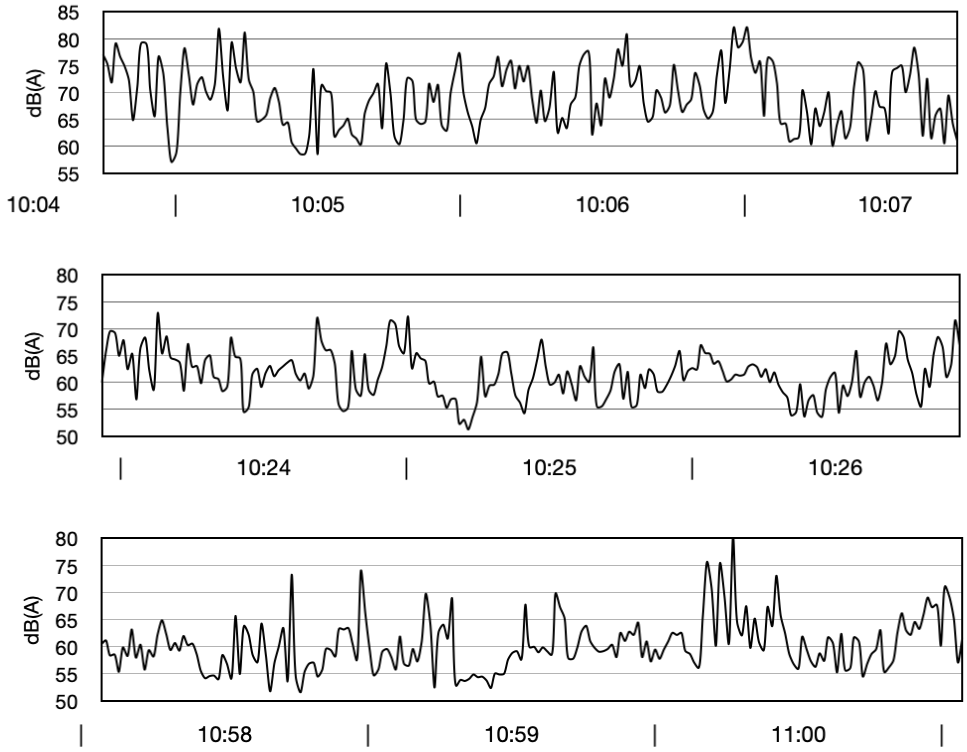


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Table 2 - Play Yard Noise Survey Summary

Date	Time	L20	L10	L05	L01	L0	Kids
11/20	10-11a.m.	68	71	74	79	83	10- 14
11/20	4 - 5 p.m.	65	68	71	74	81	17 - 28
11/28	4 - 5 p.m.	65	69	71	77	82	11 - 27
12/05	4 - 5 p.m.	68	72	75	78	83	15 - 28
	Average	67	70	73	77	83	

Overall average value of L20 = 67 dB @ 30' is taken as the basis for the following analysis.

9. Noise Prediction Method

Sound path analysis includes the effects of sound divergence with distance and diffraction around barriers. The sound level Divergence Attenuation term (Ad) between two points located at distances D1 and D2 from a source is calculated using the formula:

$$Ad = 10 \log(D2 / D1), \text{ dB}$$

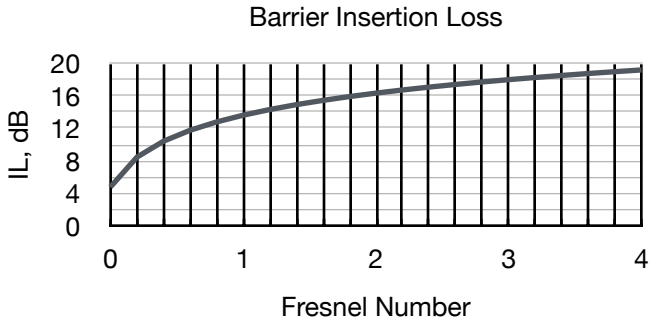
This means that the sound level decreases by about 3 dB if the distance is doubled or increases by 3 dB if the distance is halved.

The barrier attenuation or Insertion Loss (IL) between two points is a function of the Fresnel Number (N), which is the difference (Δ) between the length of the direct sound path and the length of the actual sound path around the barrier, compared to the Wavelength (W) of the sound.

$$N = 2 \times \Delta / W$$

The IL value is determined using the following formula, derived from empirical studies by Maekawa et.al. Practical barrier IL values range from 5 dB to a maximum limit of about 20 dB.

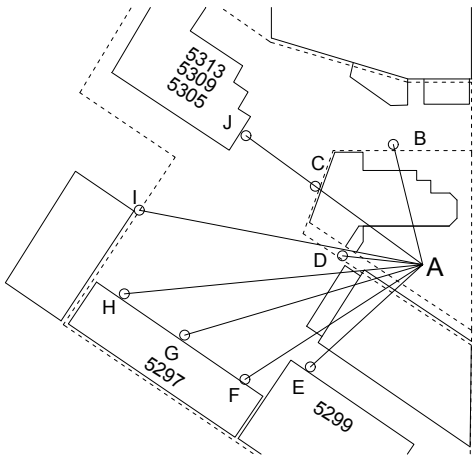
$$IL = 10 \log(3 + 20 N)$$



10. Noise Prediction Sound Paths

Figure 8 shows locations of sound paths around surrounding structures that act as sound barriers. Point A at the play yard center is 5' above the ground, as are Points B, C and D at the project lot line. Point E is at the third story of Building 5299. Points F, G and H are at the second story of Building 5297. Points I and D are along the only direct sound path from A. Point J is at the second story of Building 5305/5309/5313.

Figure 8 - Sound Path Locations



11. Noise Prediction - Base Case

Figure 9 shows the barrier geometries used to find the difference Δ between direct and indirect sound paths. Paths in the horizontal plane go around buildings; paths in the vertical plane go over buildings.

Figure 9 - Sound Path Geometries

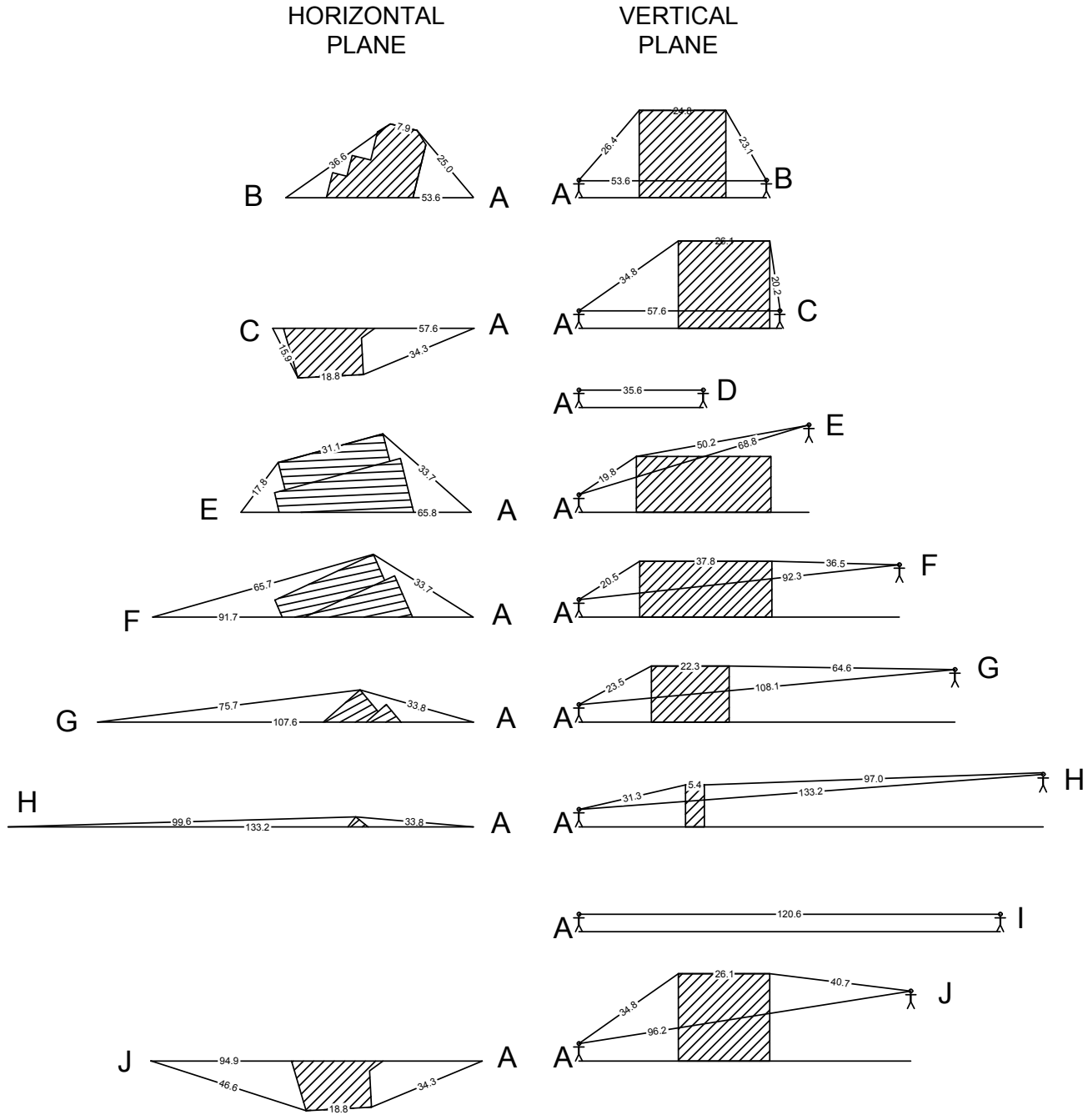


Table 3 lists the barrier calculations used to predict sound levels using the method of Section 7, based on a source of 67 dB at 30' with wavelength of one foot (i.e., 1000 Hz). Insertion Loss values are limited to a maximum of 20 dB for high Fresnel numbers.

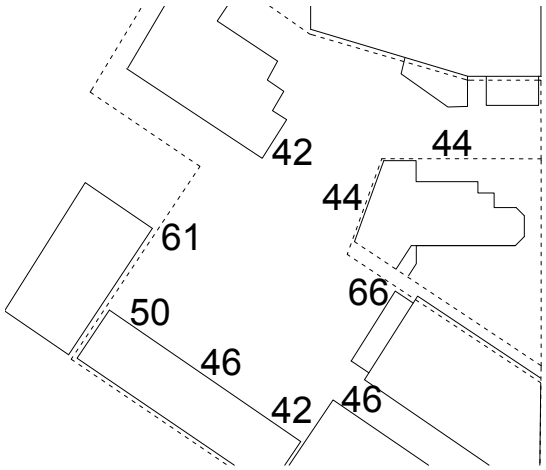
Table 3 - Barrier Calculations

VERT. PLANE	AB	AC	AD	AE	AF	AG	AH	AI	AJ
DIRECT PATH	53.6	57.6	35.6	68.8	92.3	108.1	133.2	120.6	96.2
INDIRECT PATH	74.3	81.1		70.1	94.8	110.4	133.7		101.6
PATH DIFFERENCE	20.7	23.5		1.3	2.5	2.3	0.5		5.4
FRESNEL NUMBER	41.4	47.0		2.6	5.0	4.6	1.0		10.8
INSERTION LOSS	20.0	20.0		17.4	20.0	19.8	13.6		20.0
DISTANCE ATTEN.	2.5	2.8	0.7	3.6	4.9	5.6	6.5	6.0	5.1
TOTAL ATTEN.	22.5	22.8	0.7	21.0	24.9	25.3	20.1	6.0	25.1
SPL	44	44	66	46	42	42	47	61	42

HORIZ. PLANE	AB	AC	AD	AE	AF	AG	AH	AI	AJ
DIRECT PATH	53.6	57.6	35.6	65.8	91.7	108.1	133.2	120.6	96.2
INDIRECT PATH	69.5	69.0		82.6	99.4	109.0	133.4		99.7
PATH DIFFERENCE	15.9	11.4		16.8	7.7	0.9	0.2		3.5
FRESNEL NUMBER	31.8	22.8		33.6	15.4	1.8	0.4		7.0
INSERTION LOSS	20.0	20.0		20.0	20.0	15.9	10.4		20.0
DISTANCE ATTEN.	2.5	2.8	0.7	3.4	4.9	5.6	6.5	6.0	5.1
TOTAL ATTEN.	22.5	22.8	0.7	23.4	24.9	21.5	16.9	6.0	25.1
SPL	44	44	66	44	42	46	50	61	42

Figure 10 shows the results of Base Case sound path predictions. Sound levels at most receiver locations are from 42 to 46 dB except at H, which has a sound path close to a barrier edge. Locations D and I are on direct sound paths and have sound levels in excess of the limit L20 = 60 dB allowed by the Planning Code.

Figure 10 - Predicted Play Yard Noise, Base Case



12. Noise Prediction - Alternate Case

A sound barrier wall could be used to block the direct sound path through the gap between buildings 5303 and 5315. This would be a vertical extension to the security fence between the play yard and the adjacent public access walkway.

Figure 11 - Sound Wall Location

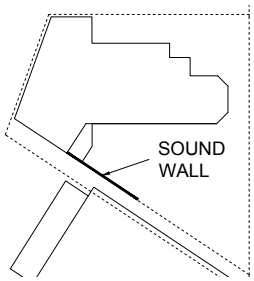


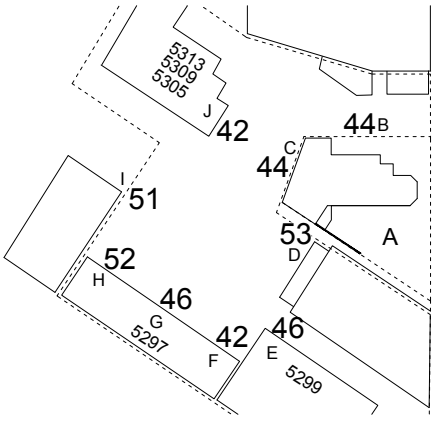
Table 4 lists the results of a study to determine the effect of sound wall height. The direct sound paths to locations D, H and I were analyzed for barrier heights of 8 to 14 feet. The study shows that a height of 8' would reduce sound levels to about 52 dB. Figure 12 shows the results of Alternate Case sound path predictions with 8' barrier hight.

Table 4 - Sound Wall Height Study

SOUND WALL CALCULATIONS: 67 dB @ 30', 1000Hz

VERT. PLANE	AD-8	AD-10	AD-12	AD-14	AH-8	AH-10	AH-12	AH-14	AI-8	AI-10	AI-12	AI-14
DIRECT PATH	35.6	35.6	35.6	35.6	133.2	133.2	133.2	133.2	120.6	120.6	120.6	120.6
INDIRECT PATH	36.1	37.1	38.5	40.1	133.3	133.6	134	134.9	120.8	121.2	121.7	122.4
PATH DIFFERENCE	0.5	1.5	2.9	4.5	0.1	0.4	0.8	1.7	0.2	0.6	1.1	1.8
FRESNEL NUMBER	1.0	3.0	5.8	9.0	0.2	0.8	1.6	3.4	0.4	1.2	2.2	3.6
INSERTION LOSS	13.6	18.0	20.0	20.0	8.5	12.8	15.4	18.5	10.4	14.3	16.7	18.8
DISTANCE ATTEN.	0.7	0.7	0.7	0.7	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0
TOTAL ATTEN.	14.4	18.7	20.7	20.7	14.9	19.3	21.9	25.0	16.5	20.4	22.8	24.8
SPL	53	48	46	46	52	48	45	42	51	47	44	42

Figure 12 - Predicted Play Yard Noise With 8' Barrier



13. Code Compliance Assessment

Commercial Zone noise level standards of Planning Code Section 17.120.050.B, when reduced by 5 dB per the noise characteristic penalty listed in 17.120.050.D, are as follows:

L20	L10	L05	L01	L0
60	65	70	75	80

The ambient sound levels at Stations A and B as summarized in Table 1 do not exceed the values listed above, so the condition of 17.120.050.E does not apply and the above values are the defining allowable limits.

Table 5 lists the LN values at office exterior locations for the alternate case prediction, based on the statistical distribution of the overall average survey result from Table 2. The table shows that the predicted play yard noise of the alternate case is significantly less than the allowable limit in all statistical categories.

Table 5 - Code Compliance Assessment

	L20	L10	L05	L01	L0
CODE LIMIT	60	65	70	75	80
PROJECT	42	45	48	52	58
	44	47	50	54	60
	46	49	52	56	62
	52	55	58	62	68

14. Barrier Construction

Since the barrier insertion loss will be no more than 20 dB, it is not necessary for the wall to be particularly massive, i.e., concrete or masonry. The barrier must be continuous, without any gaps at the bottom or between panel elements.

Recommended barrier design is to use 4 x 4 wood fence framing with a concrete footing to prevent gaps due to damage caused by fence material in contact with damp soil. Each side should have a facing of about one inch thickness. Siding of genuine or faux wood board material should have shiplap or tongue-in-groove edges to prevent gaps between boards; genuine wood should be clear grain and free of knot holes, kiln dried to prevent shrinkage that might cause gaps. Alternate face material for one or both sides is plywood sheathing with cement stucco face.

Recommended barrier height is 8' above the ground elevation at the play yard. The fence top would be 4' above the project porch near the play yard and about 6' above the elevation of the adjacent easement walkway pavement.

15. Conclusions

The site sound level survey did not include stations in the adjacent property parking lot. The following discussion is based on cursory observations made on the initial project walk-around.

Traffic noise level in the parking lot is similar to that at the rear of the project, i.e., a steady residual sound level of about 52 dB due to Route 24 traffic with a variable sound level of 55 dB average and 70 dB maximum due to College Avenue traffic.

The loudest project noise outdoors at stations near office buildings, with the alternate case including the sound barrier, is about 52 dB average and 70 dB maximum at location H. This means that the project noise level is slightly less than the ambient noise level, so the project noise may be audible at times. The project noise will be more audible when a peak in playground activity coincides with a lull in traffic.

The sound level inside offices on the adjacent property will be a function of the sound level outdoors and the noise reduction provided by office windows facing the parking lot.

Building 5305/5309/5313 windows appear to have double-hung wood frames with single glazing; this type of assembly provides about 15 dB of noise reduction, so interior noise level due to traffic is about 40 dB average and 55 dB maximum. The project noise will be about 10 dB less than the traffic noise and therefore inaudible.

Building 5297 windows appear to be double-hung metal frames with single glazing; there are numerous through-the-window air conditioning units, apparently one for each office. This arrangement provides noise reduction of only about 10 dB due to sound passage thru the air conditioners. Interior noise level at location H due to both traffic and the project will be about 45 dB average and 60 dB maximum; the project noise will be slightly audible some of the time and more audible when a peak in playground activity coincides with a lull in traffic. Interior noise level at location F due to the project will be about 10 dB less than the traffic noise and therefore inaudible.

This Report Prepared by:
Nicholas Krause, P.E.

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

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WASHINGTON
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WI #23-141

February 8, 2024

Matthew S. Keasling, Esq.
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Sacramento, California 95814

SUBJECT: Comments on Proposed Child Daycare Center at 5315 College Avenue Noise Study, Oakland, PLN22189

Dear Mr. Keasling,

Per your request, we have reviewed the analysis prepared by Mr. Nicholaus Krause of Krause Acoustics, dated January 2, 2024 (Noise Study). We have also reviewed the City of Oakland Approval Letter for this project, dated October 12, 2023 (Approval) and the project Design Review Drawings, dated April 20, 2023 (Drawings). The proposed project involves lifting the existing residential wood-framed structure to sit atop a new basement and full height ground floor level, which would also relocate the structure slightly to the west. The project would allow a maximum of 48 children who could potentially use the yard or sing and play indoors at various times of the day from 7 AM to 7 PM. The project is surrounded by psychotherapy offices to the west (5305, 5309, 5315 College Ave) and southwest (5297 College Ave), commercial/retail to the north (5321 College Ave) and south (5301/5303 College Ave), and College Avenue to the east. There is also a higher floor of psychotherapy offices at 5299 College Avenue which has line of site to the subject building. Residences are located further west and to the east across College Avenue. It is our understanding that this project has applied for a Categorical Exemption.

Wilson Ihrig is an acoustical consulting firm that has practiced exclusively in the field of acoustics since 1966. During our almost 58 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Roadway Construction Noise Model (RCNM), SoundPLAN, and CadnaA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise[1]

The health effects of noise are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes), and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments.

Projects with Mitigation Do Not Qualify for Categorical Exemptions

Per CEQA, a Categorical Exemption can only be applied to projects which have no significant effects. Per Title 14, 15300.2 (c), "a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." Thus, a project that has significant, or ***potentially significant***, effects cannot qualify for a categorical exemption. If a measure can be identified which lowers the impact below the significance threshold, then a significant impact has been identified and the project requires an Environmental Impact Report, or at the very least a Mitigated Negative Declaration. The Noise Study identifies that a sound wall is required to reduce sounds from the play yard to meet the identified noise limit. This barrier would shield the play yard as shown in Figure 11 and Figure 12, but this barrier does not appear in the project drawings, and thus the barrier is not part of the proposed project. The Noise Study has identified a **mitigation measure**, and for this reason the project does not qualify for a categorial exemption.

[1] More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (https://www.who.int/docstore/peh/noise/Comnoise-1.pdf)

Baseline Ambient Environment Lacks Information

The Noise Study presents statistical calculations measured over several hours in Tables 1a and 1b. Given that the standard of care for a Categorical Exemption is to address potentially significant effects which may be caused by "unusual circumstances", the Noise Study must characterize worst case scenarios, not typical conditions. Thus, since the neighboring psychotherapy offices rely on quiet conditions it is vital to characterize the existing ambient by identifying the quietest 50 minute periods occurring during project operating hours. Psychotherapy sessions are typically conducted in 50 minute increments, and they do not always start on the hour. The background noise can be characterized by the noise level exceeded 99% of the time, or L_{99}. See Figure 1, which was measured at the porch level of 5309 College Avenue in 2023 on December 21 (partial), 26, 27 and 28 (partial).

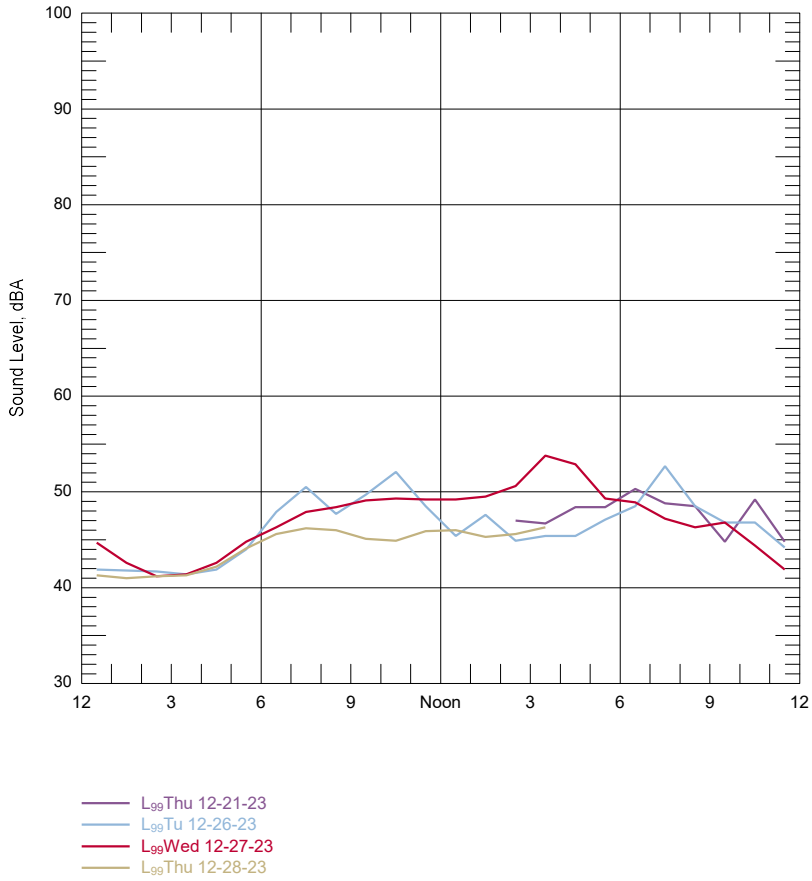

Figure 1 Background (L_{99})

To demonstrate that these results in Figure 1 are comparable to the noise environment shown in the Noise Study, Figure 2 shows the L_{20} and L_{10} measured at the same time as data shown in Figure 1. These data are directly comparable to the L_{10} results shown in Tables 1a and 1b of the Noise Study, demonstrating that despite the different dates the noise environment was similar to the Noise Study environment. Thus, the background noise levels shown in Figure 1 should be valid to consider for the purposes of CEQA, which show an average value around 48 dBA.

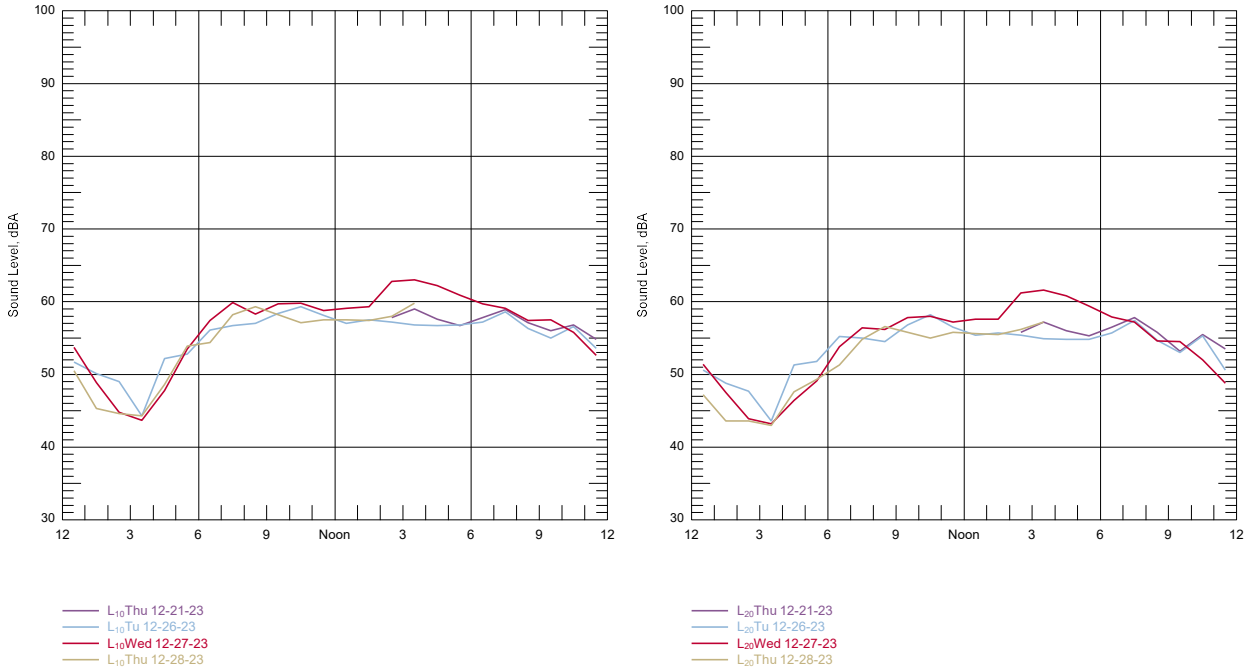

Figure 2 Frequently Occurring Noise (L_{10}, left), Noise Levels Exceeded 20% of the time (L_{10}, right)

Thresholds of Significance are Not Properly Developed

Per the CEQA noise checklist[2], the noise analysis should address the impacts from temporary and permanent (operational) noise and vibration sources, and it should evaluate whether the project noise would generate a substantial increase in the ambient noise. As noted above the standard of care for the Noise Study that supports a Categorical Exemption is to assess the noise impacts from worst case scenarios. These are presented as if these would be sufficient The Noise Study identifies only the noise limits from the City of Oakland Planning Code (17.120.050) and the L_{20} noise exceedance limit of 60 dBA has been applied to operational noise sources such as children at play. The Approval Attachment B cites the City of Oakland's Standard Conditions of Approval (SCA) as if those measures would be sufficient to avoid any impacts. SCA #26 affirms that the project would be subject to the Planning Code, but it also cites the Municipal Code section that addresses Nuisances. Per 8.18.010 "excessive or annoying noises" are prohibited near sensitive uses.

The Noise Study lacks thresholds to evaluate the following:

- Substantial noise increases over the existing background and ambient on an on-going and variable basis,
- Significance of noise and vibration during construction of the project (Table 17.120.04),
- Significance of daily and intermittent noises from daycare activities such as children at play and group singing to cause annoyance or speech interference in nearby psychotherapy offices,

[2] Available online https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/ceqa-checklist-a11y.docx

- Significance of noises from daycare activities to interfere with concentration in nearby offices while psychotherapists prepare notes and review medical studies.

Additionally, it may be difficult to quantify the potentially significant effect of stress caused by the proposed project on psychotherapists and their patients if the proposed project increases and changes the noise environment and generates uncertainty for the future.

Impact Analyses are Incomplete

Children at Play and Singing

The Noise Study does not appear to provide any information regarding the maximum number of children permitted for the project. The Approval cites that the project proposes a maximum occupancy of 48 children. The Noise Study measured approximately 10 to 28 children at the 1370 Marin Avenue facility which has a maximum capacity of 36 (Noise Study p. 6). Scaling for number of children, if all children at the project are outside at play, the results should be increased by at least 2 dBA and possibly by 7 dBA.

The sound paths used in the Noise Study assume a source height of 5 feet (Section 10, page 8) at the center of the play yard. The play structure shown on Drawing C0.3 indicates that the platform height is 48" (4 feet), and accounting for the height of the children (30 to 41" or 2.5 to 3.5 feet), the source height should be 7 feet high.

While the effects of shielding provided by the existing building have been taken into account in the Noise Study, the reverberant conditions where the voices reflect between buildings has not been taken into account, and this effect could add another 2 to 3 dBA to the results shown for the Base (Figure 10, page 10).

The Approval letter makes an unsubstantiated claim on page 4, per Section 17.134.050 item 1, which claims that neighbors would be "... buffered from noise produced at the landscaping and walls at the side and rear property...". The Drawings do not show any walls that would reduce noise. The Noise Study, prepared in January 2024 after the Approval letter was provided in October 2023, evaluates an Alternate Case with a sound barrier which is not included in the project. The Noise Study provides no evaluation of the benefits of landscaping.

Lively activities and fun would also occur indoors during periods of the day. It is reasonable to contemplate a concert or party where all 48 of the children could sing together, possibly with the windows open, and this could be significant. The Noise Study does not consider this possibility. With singing or similar activity occurring on the second floor with windows open there would be direct line of sight to the offices at 5299 College Avenue.

Substantial Increase in the Ambient

Even though traffic on College Avenue is variable, the character of vehicle noise is different from noise generated by children's voices emanating from a day care facility. There is a reasonable possibility that during what happens to be a quiet time of the day the children could generate sound that may be significant. The Noise Study does not consider this possibility.

With a background level around 48 dBA, the project noise from some children in the play yard would be as much as 13 dBA higher than the background (Figure 10, page 10) near the residence at 5324 Manila Ave. This would be perceived as more than twice as loud as the existing background environment.

Construction Noise and Vibration

Significant changes are being made to the existing site and structure; the existing building would be lifted and rotated. These actions will require demolition equipment and activities, excavation and vacuum trucks, concrete pump trucks, hammering, pneumatic tools, etc. The overall construction work would last several months, and it is possible that specific activities would last more than 10 days. Most common types of construction equipment and machinery used for this kind of project can generate maximum noise levels of 75 to 90 dBA[3] at a distance of 50 feet. With at least two in operation at the same time, the total noise could reach 78 to 88 dBA at a distance of 50 feet. The property line of 5315 College is closer than 40 feet to its nearest psychotherapy neighbor, and it could experience a noise level of 80 to 90 dBA at the façade if equipment is sited at the closest edge of the property. This would be well above the ambient exterior environment and would be substantial, significant and potentially unavoidable. At the interior of the nearby psychotherapy offices the noise level would be reduced by 10 to 15 dBA, or about 63 to 78 dBA at 50 feet distance, or 65 to 80 dBA at 40 feet distance which would cause speech disturbance.

In fact, Approval on page 13, Standard Conditional Use Item #13 would allow extreme construction noise (over 90 dBA). Such noise would also cause speech interference and greatly disrupt therapy sessions at nearby psychotherapy offices and generate significant and potentially unavoidable impacts.

Approval page 14, Item #24 cites noise reduction measures, claiming that some of them could achieve 5 to 10 dBA, but even with these measures, construction noise would still be greater than 45 dBA inside the psychotherapy offices and be significant and unavoidable.

Approval page 14,Item 25 requires a construction noise management plan if the project might exceed 90 dBA. As demonstrated above, most of the construction activities would be significant and unavoidable. A construction noise management plan should be required regardless of whether extreme noise would be generated, and it should also include provisions for temporary noise barriers or sound blankets to reduce construction noise by a minimum 15 dBA at all psychotherapy offices facing the construction. Even so, the construction noise would still be significant and unavoidable.

Mitigation Measures are Inadequate

The Noise Study incorrectly concludes that the children's voices will be inaudible (last two paragraphs, page 13). As the traffic on College Avenue is variable, such statements must be based on comparison with the background noise level. With a background level around 48 dBA, the children's voices would need to be reduced to 38 dBA or less to be hard to hear. Thus, based on the modeled

[3] FHWA Construction Noise Handbook, available online
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

noise results in the Noise Study with the 8 feet high barrier (Figure 12, page 11), the children's voices would be 42 to 52 dBA which would still allow voices to be heard. Since the children's voices would be substantially different in character from traffic on College Avenue or distant noise from Highway 24, the children's voices would be clearly audible at many times of the day.

As noted above, the Noise Study provided no analysis of construction noise and vibration and necessary mitigation measures. The Noise Study also does not contemplate other group events, such as singing, or events that could occur indoors with the windows open (on the second floor). The analysis of children at play could underrepresent the noise as it does not appear to include all of the children who could be outside at any given time. The recommended sound barrier is not sufficient to mitigate the sound from children at play. The noise impacts would be significant and unavoidable.

Please feel free to contact me with any questions on this information.

Very truly yours,

WILSON IHRIG

Deborah A. Jue, INCE-USA
Principal

wilson ihrig 5315 proposed day care020924.docx

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #23-141

March 1, 2024

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Sacramento, California 95814

SUBJECT: Proposed Child Daycare Center at 5315 College Avenue, Oakland, PLN22189

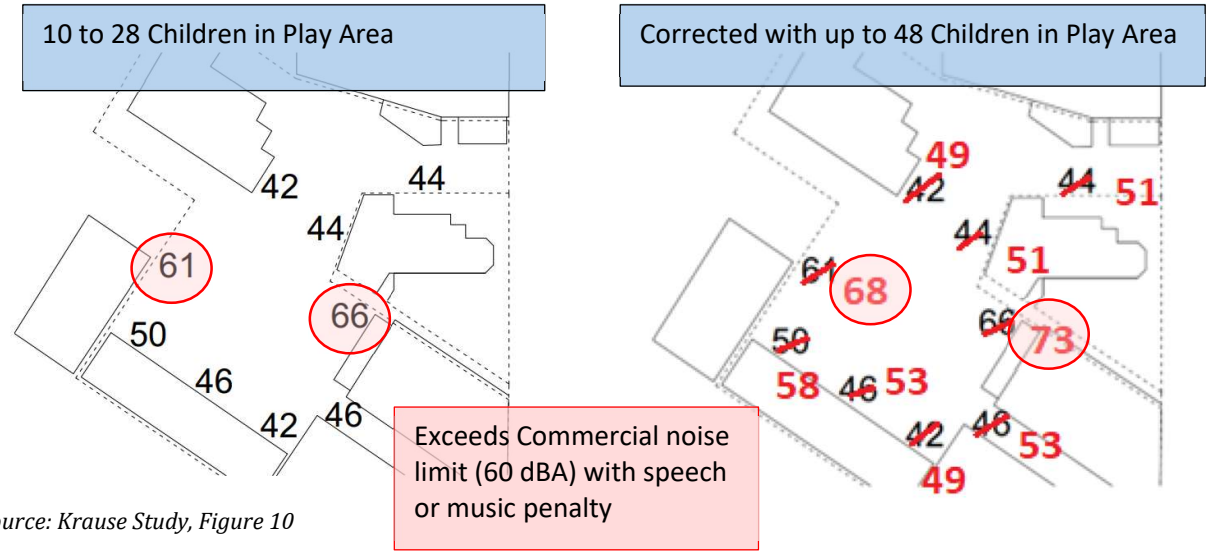
Dear Mr. Keasling,

We attended the Planning Commission Appeal Hearing on February 21, 2024 and reviewed the Staff Report that was prepared for the hearing. We have previously provided comments on the CEQA inadequacy of the Noise Study prepared by Krause Acoustics (Krause Report), dated January 2, 2024 in our letter dated February 9, 2024. This letter provides some additional comments in light of the Staff Report and discussions at the Hearing.

1 Sound Barrier Wall is Mitigation.

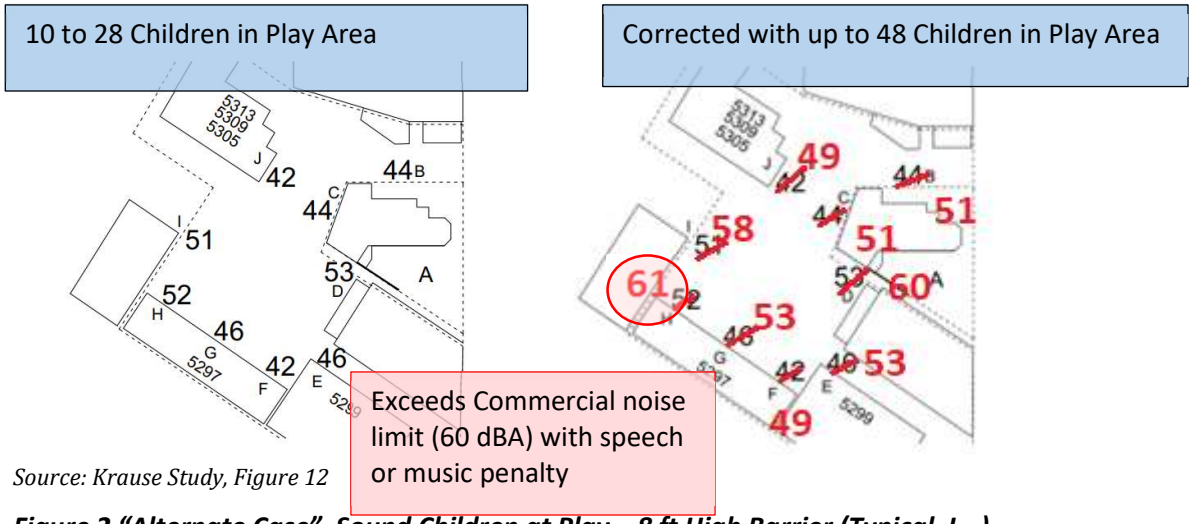
The Planning Commission was given erroneous information by staff indicating that the proposed sound barrier wall was merely a "suggestion" and not mitigation for a significant noise impact. The Conditioned sound barrier wall is in fact mitigation for a significant noise impact. That impact was detailed in the Krause report based on projected noise levels that exceed the City's noise standards "received by any land use activity" at adjoining properties. See Figure 1, which also includes updated sound values scaling upwards for as many as 48 children in the play area.

The Krause Study describes an "Alternate Case" that incorporates a sound wall to block noise from the play area, shown in Figure 2. As shown, with the sound wall mitigation except for location H the sound levels on the receiving property would be reduced to 60 dBA or less, even with the correction for the full 48 children. There appears to be an error in the Krause Study, as the noise level at location H *increases* with the sound wall and exceeds the noise limit.



Source: Krause Study, Figure 10

Figure 1 – "Base Case", Sound Children at Play – No Sound Barrier Wall (Typical, L_{20})



Source: Krause Study, Figure 12

Figure 2 "Alternate Case", Sound Children at Play – 8 ft High Barrier (Typical, L_{20})

2 Inaudibility has been Adopted as a Significance Threshold.

The discussion in the Staff Report and at the Commission meeting focused on the so-called inaudibility of the noise generated by the project. In four places, Staff Report cites the Krause Report's conclusion that the project will be inaudible within the therapy offices. In fact, the Krause Report states that the "project noise may be audible at times. The project noise will be **more audible** when a peak in playground activity coincides with a **lull in the traffic**." (emphases mine) And then the Krause Report pivots to make a different claim that the playground activity will be inaudible indoors by comparing the project noise to the **"average" and "maximum" traffic noise**. Audibility refers to whether a sound can be heard. Industry standards for measuring a sound source require the background noise to be at least 10 dB less than the source so that the background noise has no

meaningful numerical effect on the instrumentation sound level. Whether a sound is audible or inaudible depends on the sound level and the character of the sound. The sound of children in the playground is different from traffic noise, and it will contain some speech and song. Our human hearing system will attempt to process and understand those voices, and the threshold for audibility could be even lower[1].

Playground sound that is 10 to 15 dBA less than the background, or residual sound, would approach the threshold for being "inaudible" at all times. The Krause Report identifies a 52 dB "residual sound level" from distant noise sources. As discussed in our prior letter, the average residual sound level can be 48 dBA, lower than that reported in the Krause Report. Thus, to make the claim that the voices from the playground would be "inaudible" requires that the range of maximum sounds from the playground should be no greater than 38 dBA. As shown in Figure 2, with the sound barrier the L20 values from the playground will exceed 38 dBA at all nine modeled receptors by 4 to 23 dBA. Furthermore, the Krause Report identified 77 dBA as an average L01 value, or sound level occurring 1% of the time (30 seconds in a 50 minute session), for a range of 10 to 28 children. These maximum sound events will be **higher** than the values shown in Figure 2 with the sound wall by 10 dBA and comparable to the average traffic noise.

The noise due to the project would be audible (exceeding the 38 dBA threshold for "inaudibility") and significant.

3 Mitigation Measures are Inadequate.

The proposed mitigation recommended in the Krause Report (8' high wooden sound wall) and adopted as a Condition of approval by the Planning Commission would not be sufficient to reduce noise impacts to less than significant. As shown in Figure 2, one modeled receptor, representing at least two offices, will still experience sound levels that exceed the Ordinance. Furthermore, contrary to the claims in the Krause Report, the playground sounds will be audible as they will exceed the background by as much as 23 dBA, and the levels will be similar to the existing average traffic noise. As Conditioned with the sound wall, the playground sounds will be intrusive and disruptive to the therapy sessions occurring in all nearby offices.

Please feel free to contact me with any questions on this information.

Very truly yours,

WILSON IHRIG

Deborah A. Jue, INCE-USA
Principal

wilson ihrig 5315 proposed day care_comments following pcappeal.docx

[1] This is why the Oakland Planning Code reduces the noise limit for sounds with speech or music.

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

DEBORAH JUE

Principal

Since joining Wilson Ihrig in 1990, Ms. Jue has been involved in many projects from environmental assessments and entitlements through design development, construction documents and construction administration support. As an acoustical consultant, she has authored or provided input for many environmental documents and technical studies in accordance with NEPA and California's CEQA regulations, most of them related to surface transportation. Deborah has over 32 years of experience addressing impacts related to rail transit noise and vibration, highway noise, and construction-related noise, hydroacoustics, and vibration. She is keenly interested in finding solutions and providing clear communication to affected stakeholders to help achieve broad support. She also understands the importance of and brings experience effectively collaborating with multi-disciplinary teams to address noise and vibration impacts on sensitive resources including avian and aquatic/marine species in the SF Bay Area. She has a keen interest in finding solutions and providing clear communication to affected stakeholders to help achieve broad support.

As part of her work, Deborah, is a senior technical lead on highway and rail noise models, environmental analyses for all types of projects, and planning for long-term construction noise and vibration, and is also an integral part of the management team for the company.

Education

- M.S. in Mechanical Engineering, University of California, Berkeley, 1998
- B.S. in General Engineering: Acoustics, Stanford University, 1988

Professional Associations (Member)

- American Society of Mechanical Engineers
- Acoustical Society of America
- National Council of Acoustical Consultants
- Institute of Noise Control Engineering
- Women Transportation Seminar (WTS)
- Transportation Research Board, AEP80 Standing Committee Member (2021-2024)

Project Experience

CEQA Peer Reviews, CA
Peer review of noise and vibration analyses prepared per CEQA. These projects have primarily focused on the construction and operation of new facilities included residential in-fill, office and mixed-use projects, and educational buildings.

California Department of Justice Warehouse Noise Analysis, CA
Analyzed typical warehouse scenarios to determine appropriate buffer distances to address potential impacts from heavy truck and warehouse operations per CEQA requirements.

Houston Metro Next, Houston, TX
Evaluation of temporary construction impacts for bus rapid transit project along existing bus corridor near residential and university land use, including temporary shoofly railroad track relocation per NEPA.

Oregon DOT, Rose Quarter Peer Review, Portland, OR
Conducted peer review of the noise analysis prepared by Oregon DOT to address community concerns and provide recommendations.

Tren Urbano, Puerto Rico (1998-1999)
Assisted with noise and vibration projections and mitigation evaluation for the new light rail system at adjacent noise sensitive and residential areas per NEPA.

BART Extensions Program (1990-2005)
Tasks during environmental and engineering phases included measurement and characterization of existing ambient noise and vibration levels; characterization of vibration propagation; prediction of groundborne noise and vibration and airborne noise expected from BART operations; recommendations for mitigation measures, including vibration and noise control design features for elements such as trackwork, trackbed, stations, ventilation structures, yards and shops, and median and highway barriers; and support for Technical Report on noise and vibration; and review of contractor and engineering submittals.

BART San Francisco International Airport Extension
For EIR/EIS and during engineering design, made projections of the groundborne noise and vibration at residences and buildings adjacent to the BART SFO at-grade, tunnel and aerial alignment. During construction: assisted with long-term noise and vibration monitoring.

LA Metro Blue Line (1992-1994), Los Angeles, CA
Characterization of vibration propagation; prediction of ground-borne noise and vibration and airborne noise expected from LRT operations; recommendations for mitigation measures, including vibration and noise control design features for elements such as trackwork and trackbed; preparation of Technical Report on noise and vibration; and support of a Supplemental FEIS document.

LA Metro Crenshaw (2010-2011) and DB 2013-2020, Los Angeles, CA
Noise and vibration impact analysis and mitigation evaluation services for the FEIS/FEIR, Preliminary Engineering Design and Final Design for new 8.5-mile Light Rail Transit corridor from Crenshaw to LAX. Responsible for identification of noise and vibration sensitive buildings, and for evaluation and control of groundborne and wayside noise and vibration.

LA Metro Regional Connector (2010-present, Los Angeles, CA
Responsible for determining mitigation for noise and vibration from rail transit operations, subway station acoustics, construction noise and vibration effects, and noise control for auxiliary facilities in support for the FEIS/FEIR and coordinated field work and analysis through the Preliminary Engineering and the Construction Phases of the project.

Santa Clara VTA Silicon Valley Rapid Transit Extension, Tunnel Extension
Preliminary Engineering SEIR and EIS (2004-2008)
Extension of the BART system into San Jose. Evaluation of emergency ventilation fan noise at surface locations.

Santa Clara VTA BART Silicon Valley Rapid Transit Extension, Phase II (***2020+)***
Tunnel extension through San Jose for the BART system. Services have included support for environmental clearance of the new tunnel depth during Final Design, and evaluation of emergency

ventilation noise at the underground stations, noise from ancillary noise from the yard and stations, and review of station acoustical treatment needs, and design services during construction.

Santa Clara VTA Vasona Junction Extension SEIR (2009-2012)
Evaluated noise and vibration impacts from light rail system extension.

California High Speed Rail Caltrain Corridor EIR/EIS, San Francisco to San Jose
Provided regional environmental/engineering noise and vibration services for this 47-mile HSR corridor that is part of the proposed statewide HSR system, including extensive ambient noise and vibration measurement surveys; numerous site vibration characteristic measurements; environmentally sensitive receptor identification; development of noise and vibration prediction models for HST operations; prediction of wayside noise and vibration levels for HST operations; evaluation of environmental noise and vibration impacts using FRA procedures and criteria, and determining need for and type of noise and vibration mitigation.

Caltrain Peninsula Corridor Electrification EIR/EA, CA (2013-2016)
Provided noise and vibration analysis. Project tasks include documenting the existing noise and vibration ambient conditions, analysis of noise and vibration from project and construction-phase impacts. This project is part of the Caltrain Modernization Program and involves update of the EIR/EA previously completed in 2009.

MARTA On-Call Services, Atlanta, GA (2015-present)
Developed update for system-wide noise and vibration criteria and noise and vibration measurement protocols. Assisted with noise and vibration projections and mitigation evaluation for North Line AA/DEIS, and evaluation of traffic noise impacts at North Springs Station.

SFMTA Better Market Street, San Francisco, CA (2018-2019)
Vibration technical analysis, including internal review of environmental section for CEQA.

WMATA Outer Branch Avenue Segment (1993-1994), DC
Measurement and analysis of ambient noise and vibration, projections of construction noise and operational noise and vibration impacts; recommendations for mitigation; preparation of Technical Reports on noise and vibration and support of the environmental document. Analysis of noise from yard operations, including wheel squeal, in support of FSEIS.

WMATA Glenmont Route and Yard, Inner E Route, Green Line F Route, DC (1991-1992)
Measurement and analysis of ambient noise and vibration, projections of construction noise and operational noise and vibration impacts; recommendations for mitigation; preparation of Technical Reports on noise and vibration and support of the FEIS document.

Irvington Tunnel/Alameda Siphons Alternatives Project, Fremont/Alameda County, CA
The Project will increase the reliability of transmitting Hetch Hetchy and/or SVWTP water from Alameda East Portal to the Bay Division Pipelines by constructing a new 132-inch tunnel along a southern alignment. Work involved conducting an environmental noise and vibration impact assessment for the project per CEQA.

East Bay Municipal Utilities District – Walnut Creek and Lafayette Water Treatment Plant Improvements, CA
Preparation of noise section for EIR. Analyzed the potential airborne noise and vibration impacts at residences and other noise-sensitive uses near the project sites from construction and operation.

East Bay Municipal Utilities District – Quarry, San Leandro CA
Per CEQA, analyzed the potential airborne noise and vibration impacts at residences and other noise-sensitive uses near the project site from construction and operation.

San Francisco Public Utilities Commission – Central Bayside Sewer Interceptor, CA
Per CEQA, analyzed the potential airborne noise, groundborne noise and vibration impacts at residences, medical facilities, and other noise-sensitive uses near the construction sites and from tunneling during construction. The potential airborne and hydroacoustic effects on marine mammals was also analyzed.

San Francisco Public Utilities Commission – Southeast Plant New Headworks Replacement, CA
Per CEQA, analyzed the potential airborne noise and vibration impacts at residences and other noise-sensitive uses near the construction site.

San Francisco Public Utilities Commission - Crystal Springs/Polhemus Bypass Tunnel, San Francisco and San Mateo Counties, CA
Per CEQA, analyzed the potential airborne noise, groundborne noise and vibration impacts at residences near the two access shafts and above the proposed water (drinking water transport) tunnel (8 to 10 ft diameter) from construction activities.

Caltrans D7 and LACMTA State Route 710 North Environmental Study; Pasadena, CA
Screening Analysis for environmental vibration impacts for the various alternative alignments, in accordance with FTA guidelines, and conducting an environmental vibration impact analysis in accordance with CEQA and NEPA for the DEIS/DEIR phase.

Caltrans D4, Central Freeway Reconstruction, San Francisco, CA
Project Manager. Noise impact alternatives analysis of options for Central Freeway Reconstruction/Replacement, including noise survey and computer modeling with Caltrans SOUND32 Noise Prediction Model interfaced to a digitizer. An evaluation and analysis of Caltrans EA/FONSI (Environmental Assessment/Finding of No Significant Impact) was later performed for a proposed new alternative.

Santa Clara VTA, Capitol Corridor, CA
Environmental noise and vibration analysis per CEQA, including future motor vehicle traffic noise levels, assessment of noise impacts to numerous residential buildings, determination of the need for mitigation, and the evaluation of the effectiveness of sound barrier walls.

PHA Transportation Consultants
2711 Stuart Street Berkeley CA 94705
Phone (510) 848-9233

January 25, 2024

Jesse Yang
Taylor and Wiley
500 Capitol Mall, Suite 1150
Sacramento, CA 95814

Dear Jesse Yang,

In response to your request, we have conducted a review of the updated traffic impact study for the proposed daycare center at 5315 College Avenue, Oakland dated 11/20/2023. Our review indicated that the updated traffic impact study is inadequate as it fails to provide a realistic site traffic generation, fails to provide realistic and workable solutions to address traffic operation and circulation during drop-off and pick-up times, and fails to evaluate and discuss site access issues. Below are our comments listed corresponding to the numbers marked on the attached updated traffic study provided by the City of Oakland.

1. The project description describes the size of the facility, zoning code, and county assessor parcel information but omits to provide the number of students, teachers/employees, and hours of operation. Those are critical aspects in evaluating traffic impact.

   As indicated, the facility has a total of 4,699 square feet but only 3,050 square feet is dedicated to children, while the rest is the basement for storage. We believe the basement is a part of the facility and should be considered in the trip generation analysis. In other words, the size of the facility should be 4,699 square feet and not 3,050. Further, the project application submitted by the applicant indicated the daycare center would have 48 students and 10 teachers/employees. The traffic study should use these figures to estimate site traffic generation instead of the size of the facility since students and teachers are the trip makers and as such will provide more realistic trip generation estimates.

2. Table 1, as noted above, the basement is part of the daycare center and should be included in the trip generation analysis as it can be converted and used as classrooms or play areas at any time. As such, the trip generation analysis should be revised to 4,669 square feet (4.66) instead of 3,050 (3.05) square feet which would result in a higher trip generation. Further, as shown above, the applicant's project application indicated the daycare center would have 48 students and up to 10 employees. Assuming 20%

(approx.10 students) of the students would be from the surrounding neighborhoods within walking distance to the daycare center, and that all employees will use alternative transportation such as public transits and bicycles, the remaining 38 students will generate 76 vehicle trips in the morning peak hour (38 drop off trips and then 38 drive off after the drop off). In the afternoon the site will generate another 76 trips (38 trips as parents come in to pick up their children and then 38 trips when parents drive off afterward. This is well above the 36 am and 36 pm trip estimates from the city-provided traffic study

3. It's not appropriate to apply the Oakland Multimodal Trip Generation Adjustment and Mode Split (Tables 2 and 3) in this case since the adjustment factors are based on distance from BART and Amtrak, with which parents are not likely to use to drop off or pick up the kids. Because of that, any trip adjustment/deduction based on these factors should be removed.

4. Public Transit Accessibility may benefit teachers/employees but will not likely reduce or minimize parent drop-off and pick-up traffic as parents will most likely drive their kids to the daycare center.

5. While there are parking spaces available on College Avenue near the site. They are all paid spaces with two-hour maximum limits. Parents may be able to use the paid parking when dropping off or picking up their kids, but teachers/employees will not be able to use them due to the time restriction. Further, parking spaces on the east side of College Avenue are not a good option for parents as they would have to carry or walk with their kids to cross the street facing high vehicle speed despite the crosswalk in front of the site.

6. The drop-off pick-up plan indicates there are two on-street parking spaces in front of the site. Based on our field observation, there is only one and a half space, plus a handicapped space. It's not likely the City would agree to convert them for the daycare center use.

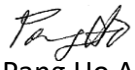
   Converting the paid parking space to a green curb means a loss of city revenues and handicapped parking. Without adequate parking spaces, parent traffic during drop-off and pick-up times would likely block the street and the bike lane due to insufficient parking on the site and in front of the site. Staff assisting parents during drop-off and pick-up time may improve drop-off and pick-up operation but would not reduce parent traffic. Carpool programs may work for other types of businesses but not for a daycare center as kids are needed to be secured in their child seats in their parent's car.

   The updated traffic impact study fails to discuss problems and solutions with site access, particularly for traffic coming from the south direction (Broadway) and east direction (Bryant Avenue) since it would be difficult to turn around on College Avenue.

In conclusion, the updated traffic impact study is inadequate, it underestimated the site traffic generation, failed to address the site access difficulty for parents coming from the east and south directions, and failed to provide realistic solutions to address traffic operation and circulation issues during drop-off and pick-up times.

Please call me if you have any questions regarding our review and comments.

Sincerely,



Pang Ho AICP
Principal

PHA Transportation Consultants
2711 Stuart Street Berkeley CA 94705
Phone (510) 848-9233

December 22, 2023

Jesse Yang
Taylor and Wiley
500 Capitol Mall, Suite 1150
Sacramento, CA 95814

Dear Jesse Yang,

In response to your request, we have conducted a traffic study to review the conditions associated with the proposed daycare center at 5315 College Avenue, Oakland, on a site currently occupied by a small law office that closed in April 2022.

Before conducting our traffic analysis, we obtained and reviewed the traffic report prepared for the proposed daycare center. Our review indicated that the traffic report evaluated only the potential trip generation of the proposed daycare center, but neglected important factors such as the overall environmental setting of the Project site, hours and operational characteristics of the Project, site-generated traffic distribution, access, parent drop-off and pick up, employee parking, and traffic safety. Below is our analysis focusing on key factors that were neglected but are crucial for the proposed daycare center.

Environmental Settings

As proposed, the daycare center would be located on the west side of College Avenue just north of Cliffton Avenue. College Avenue is a two-lane north-south arterial road with one northbound lane and one southbound lane connecting Broadway in the City of Oakland and the University of California Berkeley Campus in Berkeley. Within the city limits of Oakland bike lanes, parking lanes, and pedestrian sidewalks are provided on both sides of the road between Claremont Avenue and Broadway. The center of the road between Alcatraz Avenue and Broadway is stripped with solid double-yellow lines. This means no passing but making left turns into private driveways to access local properties is permitted. College Avenue measures about two miles long between Boadway in Oakland and the UC Berkeley Campus.

The land use along the Oakland side of the road is mostly retail and commercial with a high concentration of restaurants near the proposed Project site. The land use along the Berkeley side is a mixture of retail and residential.

College Avenue currently carries about 7,720 vehicles a day based on a recent traffic survey conducted just south of Bryant Avenue in late November 2023 after the Thanksgiving Holiday. The posted speed limit along College Avenue is 25 mph. However, the Oakland Municipal Code designates a 20 mph speed limit between Alcatraz Avenue and Broadway on College Avenue, while the Berkeley side (between Alcatraz Avenue and the UC Berkeley Campus) has an adopted speed limit of 25 mph citywide. Traffic at the two nearest intersections at Broadway and Manila Avenue is controlled by traffic lights. There are two pedestrian crosswalks in the area; one in front of the proposed Project site and one at Bryant Avenue at College Avenue. Neither of these pedestrian crosswalks has pedestrian push-buttons to alert motorists.

Because of the nature of College Avenue as an arterial road, high commercial and retail use in the area, and the traffic lane configurations, the proposed site is not ideal for a daycare center. Figure 1 shows the location of the proposed Project site and the College Avenue layout.

Figure 1 Project Site Location and the Layout of College and Bryant Avenues (Source: Google Maps)

Site Traffic Generation and Site Access

According to the traffic study obtained from the City of Oakland, the proposed daycare center is expected to generate 36 trips during the morning peak hour and another 36 trips during the afternoon peak hour. Based on the Project information provided in the applicant's application, the proposed daycare center will operate between 8 am and 6 pm Mondays through Fridays and will have 48 students and up to 10 employees. Assuming 20% (approx.10 students) of the students would be from the surrounding neighborhoods within walking distance to the daycare center, and that all employees will use alternative transportation such as public transits and

bicycles, the remaining 38 students will generate 76 vehicle trips in the morning peak hour (38 drop off trips and then 38 drive off after the drop off). In the afternoon the site will generate another 76 trips (38 trips as parents come in to pick up their children and then 38 trips when parents drive off afterward. This is well above the 36 am and 36 pm trip estimates from the city-provided traffic study.

The city-provided traffic study shows no directional site traffic distribution. Based on the layout of the area street system, site-related traffic (parent traffic) is expected to travel to and from the north and south via College Avenue; some will travel to and from the east via Bryant Avenue while some will travel to and from the west via Cliffton Avenue.

Based on our review of the College Avenue layout and configurations, parents accessing the Project site from the north via College Avenue to drop off their children would be able to do so with little problems but will be difficult for them to travel back to the north on College Avenue. They will have to make a U-turn or three-point U-turn on College Avenue in front of the proposed Project site, which is difficult and unsafe as they have to face descending traffic traveling from the Broadway direction in the south. During our field observation, we did not see motorists making U-turns on College Avenue near the Project site. It should be noted that while parents can make a U-turn on College Avenue, California Vehicle Code 22102 states that it is an offense to make a U-turn in a "business district". A business district is an area where at least 50% of the property bordering the street is occupied by businesses and a driver can access them from the road.

According to our speed survey, the majority (85th percentile) of the northbound vehicles descending from the south via Broadway were traveling at 30 mph, while the southbound traffic traveled about 28 mph, both are over the city's 20 mph speed limit for the Oakland section of College Avenue.

To circle back on College Avenue to go north parents could make a quick U-turn near the intersection with Bryant Avenue, or turn into Bryant Avenue and make a three-point U-turn there. However, making a quick U-turn at the College Avenue and Bryant Avenue intersection while possible is not a safe maneuver due to the high-speed traffic coming from Broadway and pedestrian crosswalks there. Bryant Avenue is a residential street that measures about 30 feet wide with parking on both sides and multiple driveways. Making a three-point U-turn also could be challenging. Alternatively, parents could continue to drive south from in front of the Project site, make a right-turn at Clifton Avenue, then a right-turn at Manila Avenue, and finally make a left-turn at College Avenue to travel back north.

Parents coming from the south via Broadway, east via Bryant Avenue, or west via Cliffton Avenue will all have to face similar problems either dropping off or picking up their children. To drop off their children they will either have to make a three-point U-turn on College Avenue to circle back to park their cars in front of the proposed daycare center as there are no left-turn pockets on College Avenue. This maneuver is difficult because of the parking lanes and bike lanes on both sides of College Avenue. Or they will have to park their vehicles on the opposite

side of the proposed daycare center, and then walk across the street to drop off or pick up their children.

There is a pedestrian crosswalk in front of the proposed daycare site, but there are no pedestrian push buttons to stop traffic. Our field observation indicated that not all motorists yield to pedestrians. In all, vehicle access for the Project site is poor, particularly for a daycare center.

Drop-off and Pick-up

Based on the traffic study provided by the City of Oakland, the proposed daycare center would not provide a drop-off and pickup lane within the site. Parent drop-off and pickup would have to be accommodated in front of the site on College Avenue. Our site review indicated that the entire frontage of the Project is about 75 feet long and has one paid marked parking space and one marked handicapped parking space, plus a 35-foot-long frontage that includes a painted red curb and the pedestrian crosswalk next to the Project site (See Figure 2).

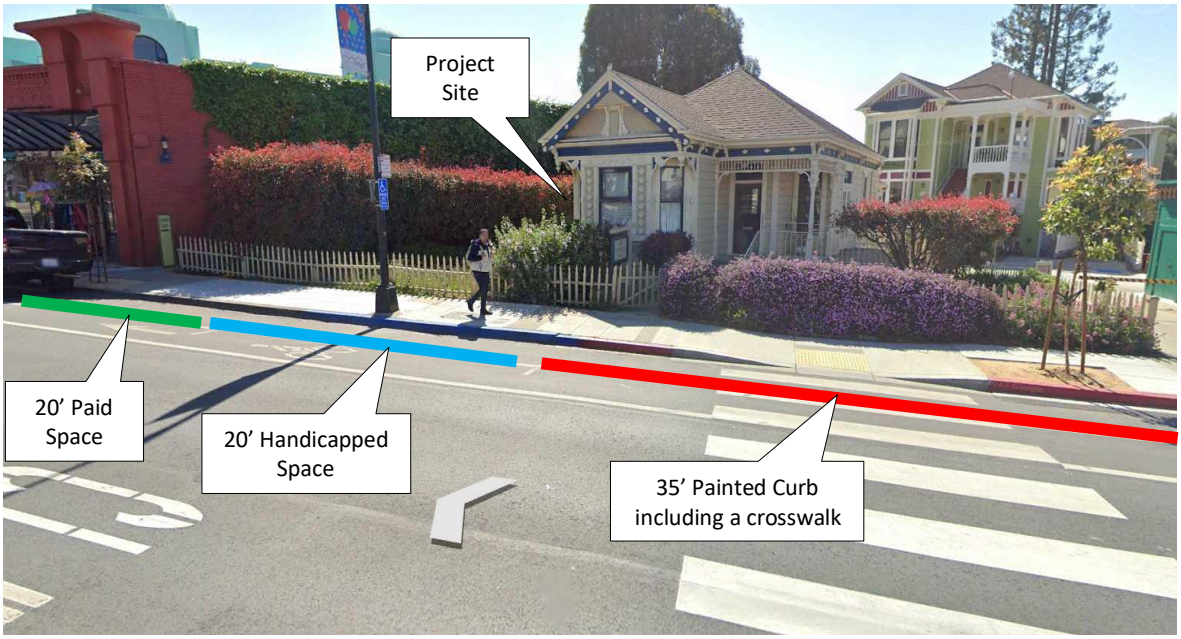


Figure 2 Project Site Frontage (Source: Google Maps)

In reality, the Project site frontage is very short and can accommodate one vehicle. This will not be able to handle the demand during drop-off and pickup times. Since the proposed project is a daycare center, as opposed to an elementary school where kids are older and can get in and out of the vehicle without much help, parents at daycare in this case would have to get out of their vehicles to unstrap and strap their children to get their children out from the child seat to

walk them to and from the facility. This maneuver may take several minutes, causing parents to arrive from behind to park at the handicapped space or double-park on the bike lane blocking the bike lane and creating an unsafe situation.

Currently, ITE (Institute of Transportation Engineers), a national transportation engineering organization that develops national standards, and policies, and promotes professional development and ethics, does not have a standardized methodology to determine school drop-off lane requirements. In general engineering experience and practice, the drop-off/pickup lane length is estimated based on the number of students who need to be dropped off and picked up by vehicles during peak times, usually in the afternoon as picking up students generally would take longer as parents tend to arrive earlier to wait for their kids to come out.

Research and surveys performed at five middle and elementary schools by Hatch Mott Macdonald, a North American Engineering Design Firm indicated that about 1.6 to 2.0 feet of queuing space should be provided for each enrolled student in designing the drop-off lane; research conducted by North Carolina Department of Transportation indicated 1.65 feet per student; and research conducted by The Texas Transportation Institute indicated 1.5 feet per student. The traffic study obtained from the City of Oakland did not have student enrollment information but estimated 36 trips based on the square footage of the facility. Assuming a 38-student enrollment (48 minus 10 students who are from within the neighborhood and without being driven) and a design estimate of 2.0 feet per student, the daycare center would need a 76-foot-long drop-off/pickup lane. For a daycare center, the drop-off/pick-up lane may need to be longer since it takes longer for parents to load and unload their children into and out of the vehicles. The proposed daycare center, with only one 20-feet paid parking space, will not have adequate space for parent drop-off and pick-up. The proposed daycare center will also need approval from the city to use the paid space and handicapped space for drop off/pick up.

Parking Availability in the Vicinity

The proposed daycare center will not provide parking on the site. Because of that, we conducted a parking survey in the area to identify whether or not there are parking spaces available to accommodate the parking needs of the estimated 10 employees.

The parking surveys were conducted over 2 days 7:30, 8:30, and 9:30 in the morning and then 4:00, 5:00, and 6:00 in the afternoon on Tuesdays and Wednesdays on College Avenue, Clifton Avenue, and Bryant Avenue, after the Thanksgiving holiday in November. Parked cars were counted once on top of the above designated hours. The survey areas are within walking distance and the days and hours were designed to capture available parking spaces at times when employees and parents are expected to arrive and leave the school.

The survey results indicated that there were 44 marked parking spaces on both sides of College Avenue between Manila Avenue and Broadway; 28 unmarked spaces on Clifton Avenue, both sides of the street between College Avenue and Manila Avenue; 40 spaces on Bryant Avenue,

both sides of the street between College Avenue and Ada Street. Parking spaces on Clifton Avenue and Bryant Avenue are unmarked and are estimated by first measuring the block length, subtracting driveways and painted curbs, and then dividing by 20 feet, the length of a standard marked parking space. Parking spaces along College Avenue occupied by sidewalk/curb-dining booths were not included in the survey.

The survey results also indicated that there are available parking spaces on College Avenue and to some extent on Clifton Avenue. However, they both have a maximum 2-hour restriction or require permits and as such will not be able to accommodate employee parking, they may, however, accommodate parent parking for short periods when dropping off and picking up their children. There are no parking restrictions or permits required on Bryant Avenue, but Bryant Avenue was mostly fully parked during the survey hours. It will be difficult for employees and parents to find parking there. Figure 3 shows the parking survey zones.

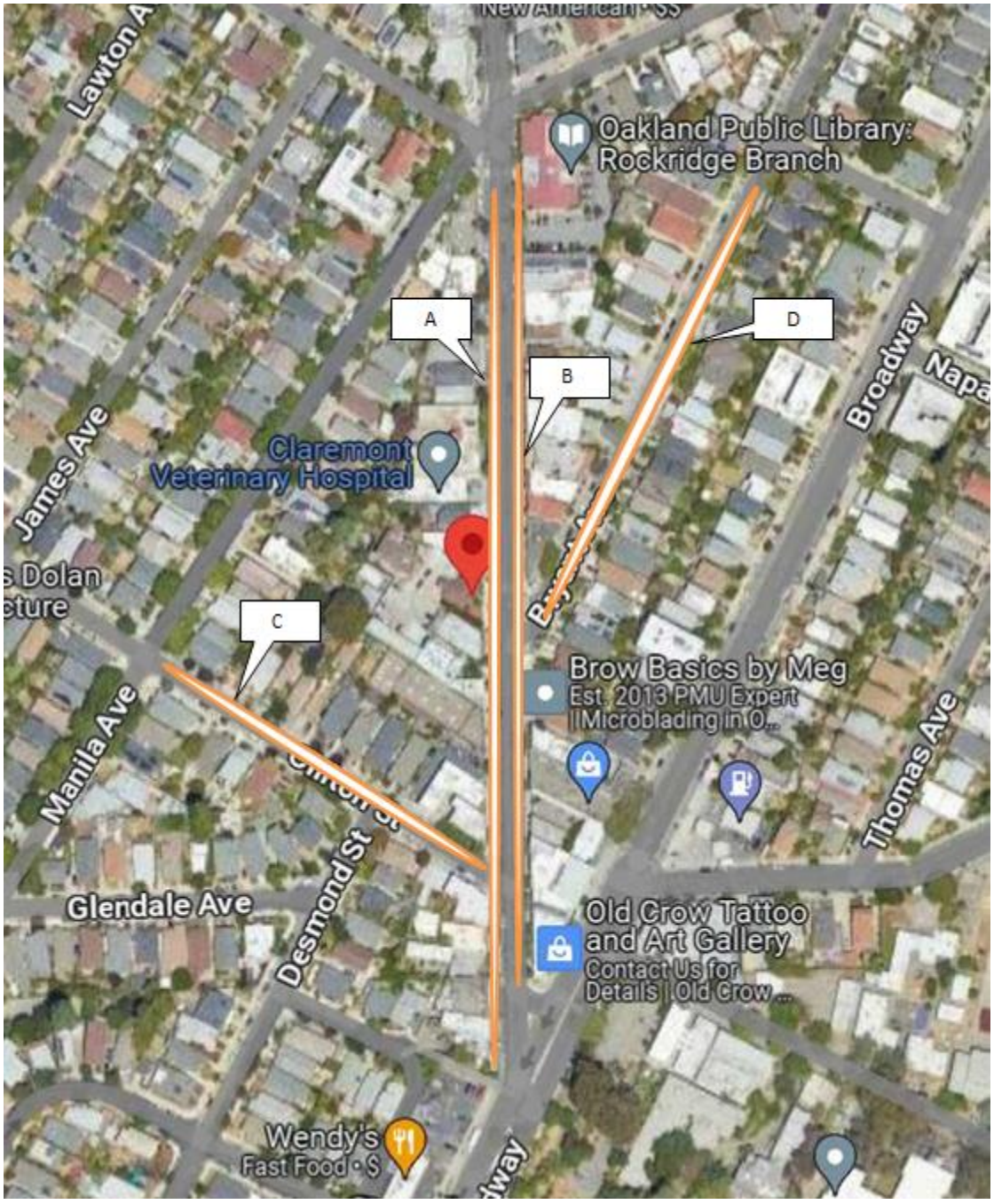


Figure 3 Parking Survey Zones (Source: Google Maps)

Study Area Parking Survey (Day 1- November 28)

Survey Zone	Space	7:30		8:30		9:30		4:00		5:00		6:00	
		Taken	Free	Taken	Free	Taken	Free	Taken	Free	Taken	Free	Taken	Free
Paid Parking (2-hour Limit)													
A: College Ave (Manila-Broadway (West side)	23	4	19	8	15	14	9	21	2	15	8	17	6
B: College Ave (Manila-Broadway East side)	21	5	16	11	10	10	11	23	-2	20	1	22	-1
Total Paid Parking Spaces	**44**	**9**	**35**	**19**	**25**	**24**	**20**	**44**	**0**	**35**	**9**	**39**	**5**
Residential Street Parking													
C: Clifton St. (College Ave-Manila Ave. 2-hour Limit or Permit)	28	12	16	22	6	19	9	27	1	24	4	22	6
D: Bryant Ave. (College Ave.-Ada St. No Restriction)	40	42	-2	48	-8	48	-8	48	-8	46	-6	42	-2
Total Residential Street Free Parking	**68**	**54**	**14**	**70**	**-2**	**67**	**1**	**75**	**-7**	**70**	**-2**	**64**	**4**

Survey Zone Capacity Calculations:

For College Ave., the capacity is defined by the number of marked parking spaces

For Bryant and Clifton Ave., the capacity is estimated by the following formula:

(Block length minus painted curbs, driveways, and space that is too short for a passenger car)/20'(standard parking space length)

Clifton Ave has a 2-hour limit or residential permits. Bryant Ave. has no restrictions and no permit requirement.

Taken: The space is occupied by a car.
Free, the space is available.

Study Area Parking Survey (Day 2- November 29)

Survey Zone	Space	7:30		8:30		9:30		4:00		5:00		6:00	
		Taken	Free	Taken	Free	Taken	Free	Taken	Free	Taken	Free	Taken	Free
Paid Parking (2-hour Limit)													
A: College Ave (Manila-Broadway (West side)	23	5	18	13	10	14	9	25	-2	25	-2	20	3
B: College Ave (Manila-Broadway East side)	21	6	15	10	11	13	8	22	-1	22	-1	23	-2
Total Paid Parking Spaces	**44**	**11**	**33**	**23**	**21**	**27**	**17**	**47**	**-3**	**47**	**-3**	**43**	**1**
Residential Street													
C: Clifton St. (College Ave-Manila Ave. 2-hour Limit/Permit)	28	15	13	20	8	25	3	30	-2	25	3	17	11
D: Bryant Ave. (College Ave.-Ada St. No Restriction)	40	39	1	46	-6	46	-6	48	-8	48	-8	36	4
	68	**54**	**14**	**66**	**2**	**71**	**-3**	**78**	**-10**	**73**	**-5**	**53**	**15**
Total Residential Street Free Parking													

Survey Zone Capacity Calculations:

For College Ave., the capacity is defined by the number of marked parking spaces

For Bryant and Clifton Ave., the capacity is estimated by the following formula:

(Block length minus painted curbs, driveways, and any space too short for a passenger car)/20'(standard parking space length)

Clifton Ave has a 2-hour limit or residential permits. Bryant Ave. has no restrictions and no permit requirement.

Taken: The space is occupied by a car.
Free, the space is available.

Traffic Safety

There were two recently reported traffic collisions on College Avenue at the intersection with Bryant Avenue according to the TIMS, Transportation Injuries Mapping System at the University of California at Berkeley. TIMS compiles traffic collision data obtained from SWITRS, the Statewide Integrated Traffic Records System is a database that serves as a means to collect and process data gathered from a collision scene.

While two traffic collisions do not constitute a collision hotspot, the layout of the intersection and the angle where Bryant Avenue approaches College Avenue makes it difficult for parents turning out to park their vehicles in front of the site. It is also likely that some parents will make a quick U-turn from in front of the daycare site to travel back north on College Avenue after dropping off their children. This maneuver means they will face traffic coming out from Bryant Avenue and the high descending vehicle speed from Broadway. As discussed previously, the vehicle speed recorded on College Avenue just south of the proposed daycare site in the northbound declining section is about 30 mph, well over the designated speed limit of 20 mph. The proposed site may not be a good location for a daycare center.

Conclusion

In summary, College Avenue is an arterial road connecting the cities of Oakland and Berkeley, and providing access to and from the University of California Berkeley Campus. The land use pattern on College Avenue and in particular near the site is all commercial and retail and not compatible with a daycare center. The layout of College Avenue with parking lanes and bike lanes on both sides of the street, difficult site access for vehicles and turnaround, the angle at which Bryant Avenue connects with College Avenue, and the high vehicle speed coming down from Broadway, coupled with the lack of adequate drop-off, pick-up and parking for employees, are reasons why we believe the proposed site is a poor location for a daycare facility

Please feel free to call if you have any questions.

Sincerely,

Pang Ho, AICP
PHA Transportation Consultants

Attachment:
Daily Traffic Volume Count, Vehicle Speed Survey

Attachment

College Avenue Traffic Count Data

Proposed Daycare

5315 College Avenue

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 - 12/3/2023
Site Code:

Time	Monday 11/27/2023			Tuesday 11/28/2023			Wednesday 11/29/2023			Thursday 11/30/2023			Friday 12/1/2023			Saturday 12/2/2023			Sunday 12/3/2023			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	-	-	-	14	22	36	17	21	38	-	-	-	-	-	-	-	-	-	-	-	-	16	22	37
1:00 AM	-	-	-	7	5	12	8	10	18	-	-	-	-	-	-	-	-	-	-	-	-	8	8	15
2:00 AM	-	-	-	7	5	12	7	6	13	-	-	-	-	-	-	-	-	-	-	-	-	7	6	13
3:00 AM	-	-	-	8	2	10	1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	5	4	8
4:00 AM	-	-	-	7	6	13	6	6	12	-	-	-	-	-	-	-	-	-	-	-	-	7	6	13
5:00 AM	-	-	-	25	14	39	34	12	46	-	-	-	-	-	-	-	-	-	-	-	-	30	13	43
6:00 AM	-	-	-	52	37	89	64	42	106	-	-	-	-	-	-	-	-	-	-	-	-	58	40	98
7:00 AM	-	-	-	165	104	269	159	98	257	-	-	-	-	-	-	-	-	-	-	-	-	162	101	263
8:00 AM	-	-	-	290	182	472	**303**	197	500	-	-	-	-	-	-	-	-	-	-	-	-	**297**	190	486
9:00 AM	-	-	-	264	193	457	254	203	457	-	-	-	-	-	-	-	-	-	-	-	-	259	198	457
10:00 AM	0	0	0	281	225	506	299	**206**	**505**	-	-	-	-	-	-	-	-	-	-	-	-	290	**216**	**506**
11:00 AM	**258**	**213**	**471**	**301**	**237**	**538**	208	31	239	-	-	-	-	-	-	-	-	-	-	-	-	255	134	389
12:00 PM	299	245	544	321	256	577	**146**	30	**176**	-	-	-	-	-	-	-	-	-	-	-	-	**234**	143	**377**
1:00 PM	287	266	553	278	244	522	102	**37**	139	-	-	-	-	-	-	-	-	-	-	-	-	190	141	331
2:00 PM	278	234	512	330	275	605	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	165	138	303
3:00 PM	318	330	648	334	325	659	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	168	163	330
4:00 PM	**344**	**331**	**675**	340	**343**	**683**	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	170	**172**	342
5:00 PM	326	277	603	**349**	308	657	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	176	155	330
6:00 PM	260	240	500	256	258	514	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	128	129	257
7:00 PM	160	178	338	185	218	403	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	93	109	202
8:00 PM	111	116	227	152	149	301	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	76	75	151
9:00 PM	60	90	150	78	108	186	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	39	54	93
10:00 PM	39	34	73	46	58	104	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	23	29	52
11:00 PM	15	29	44	22	36	58	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	11	18	29
Total	**2,755**	**2,583**	**5,338**	**4,112**	**3,610**	**7,722**	**1,611**	**905**	**2,516**	-	-	-	-	-	-	-	-	-	-	-	-	**2,862**	**2,258**	**5,119**
Percent	**52%**	**48%**		**53%**	**47%**		**64%**	**36%**		-	-		-	-		-	-		-	-		**56%**	**44%**	
AM Peak	11:00	11:00	11:00	11:00	11:00	11:00	08:00	10:00	10:00	-	-	-	-	-	-	-	-	-	-	-	-	08:00	10:00	10:00
Vol.	258	213	471	301	237	538	303	206	505	-	-	-	-	-	-	-	-	-	-	-	-	297	216	506
PM Peak	16:00	16:00	16:00	17:00	16:00	16:00	12:00	13:00	12:00	-	-	-	-	-	-	-	-	-	-	-	-	12:00	16:00	12:00
Vol.	344	331	675	349	343	683	146	37	176	-	-	-	-	-	-	-	-	-	-	-	-	234	172	377

1. Mid-week average includes data between Tuesday and Thursday.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Vehicle Classification Report Summary

Location: College Ave, S/O Bryant Ave

Count Direction: Northbound / Southbound

Date Range: 11/27/2023 to 11/30/2023

Site Code:

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Northbound	135	7,300	631	5	380	18	0	5	3	2	0	0	0	8,479
	1.6%	86.1%	7.4%	0.1%	4.5%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Southbound	54	5,913	766	2	353	4	0	6	3	0	0	0	0	7,101
	0.8%	83.3%	10.8%	0.0%	5.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	189	13,213	1,397	7	733	22	0	11	6	2	0	0	0	15,580
	1.2%	84.8%	9.0%	0.0%	4.7%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Monday, November 27, 2023
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	4	221	25	0	8	0	0	0	0	0	0	0	0	**258**
12:00 PM	7	266	17	0	9	0	0	0	0	0	0	0	0	**299**
1:00 PM	6	254	21	0	6	0	0	0	0	0	0	0	0	**287**
2:00 PM	7	247	13	0	10	0	0	0	0	1	0	0	0	**278**
3:00 PM	1	279	27	0	11	0	0	0	0	0	0	0	0	**318**
4:00 PM	6	303	24	0	11	0	0	0	0	0	0	0	0	**344**
5:00 PM	8	290	16	0	12	0	0	0	0	0	0	0	0	**326**
6:00 PM	2	238	11	0	9	0	0	0	0	0	0	0	0	**260**
7:00 PM	2	144	6	0	6	2	0	0	0	0	0	0	0	**160**
8:00 PM	3	89	9	0	9	0	0	0	1	0	0	0	0	**111**
9:00 PM	0	52	2	0	6	0	0	0	0	0	0	0	0	**60**
10:00 PM	0	33	1	0	5	0	0	0	0	0	0	0	0	**39**
11:00 PM	0	12	1	0	2	0	0	0	0	0	0	0	0	**15**
Total	**46**	**2,428**	**173**	**0**	**104**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2,755**
	1.7%	**88.1%**	**6.3%**	**0.0%**	**3.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Monday, November 27, 2023
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	0	174	23	0	16	0	0	0	0	0	0	0	0	**213**
12:00 PM	2	196	33	0	13	0	0	1	0	0	0	0	0	**245**
1:00 PM	2	218	26	0	18	0	0	2	0	0	0	0	0	**266**
2:00 PM	1	202	18	1	12	0	0	0	0	0	0	0	0	**234**
3:00 PM	1	287	33	0	9	0	0	0	0	0	0	0	0	**330**
4:00 PM	2	297	28	0	3	0	0	0	1	0	0	0	0	**331**
5:00 PM	1	242	25	0	9	0	0	0	0	0	0	0	0	**277**
6:00 PM	1	213	21	0	5	0	0	0	0	0	0	0	0	**240**
7:00 PM	0	158	13	0	7	0	0	0	0	0	0	0	0	**178**
8:00 PM	1	96	14	0	5	0	0	0	0	0	0	0	0	**116**
9:00 PM	2	76	8	0	4	0	0	0	0	0	0	0	0	**90**
10:00 PM	0	25	6	0	3	0	0	0	0	0	0	0	0	**34**
11:00 PM	1	21	4	0	3	0	0	0	0	0	0	0	0	**29**
Total	**14**	**2,205**	**252**	**1**	**107**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**2,583**
	0.5%	**85.4%**	**9.8%**	**0.0%**	**4.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Tuesday, November 28, 2023
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	9	1	0	3	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	6	0	0	2	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	4	1	0	1	1	0	0	0	0	0	0	0	**7**
5:00 AM	0	15	2	0	6	2	0	0	0	0	0	0	0	**25**
6:00 AM	2	43	3	0	4	0	0	0	0	0	0	0	0	**52**
7:00 AM	5	133	13	0	13	1	0	0	0	0	0	0	0	**165**
8:00 AM	10	247	26	0	7	0	0	0	0	0	0	0	0	**290**
9:00 AM	6	213	31	0	14	0	0	0	0	0	0	0	0	**264**
10:00 AM	5	244	24	0	8	0	0	0	0	0	0	0	0	**281**
11:00 AM	5	258	26	0	11	0	0	0	1	0	0	0	0	**301**
12:00 PM	6	280	21	0	13	0	0	1	0	0	0	0	0	**321**
1:00 PM	6	241	15	0	16	0	0	0	0	0	0	0	0	**278**
2:00 PM	7	280	29	1	11	0	0	1	0	1	0	0	0	**330**
3:00 PM	8	299	18	0	9	0	0	0	0	0	0	0	0	**334**
4:00 PM	6	288	32	1	12	1	0	0	0	0	0	0	0	**340**
5:00 PM	8	306	23	0	9	0	0	3	0	0	0	0	0	**349**
6:00 PM	5	227	13	2	9	0	0	0	0	0	0	0	0	**256**
7:00 PM	1	159	16	0	8	1	0	0	0	0	0	0	0	**185**
8:00 PM	1	133	7	0	11	0	0	0	0	0	0	0	0	**152**
9:00 PM	0	69	3	0	6	0	0	0	0	0	0	0	0	**78**
10:00 PM	0	37	2	0	7	0	0	0	0	0	0	0	0	**46**
11:00 PM	0	16	3	0	3	0	0	0	0	0	0	0	0	**22**
Total	**82**	**3,516**	**312**	**4**	**185**	**6**	**0**	**5**	**1**	**1**	**0**	**0**	**0**	**4,112**
	2.0%	**85.5%**	**7.6%**	**0.1%**	**4.5%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Tuesday, November 28, 2023
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	6	0	2	0	0	0	0	0	0	0	0	**22**
1:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	3	1	0	2	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	8	0	0	6	0	0	0	0	0	0	0	0	**14**
6:00 AM	0	25	5	0	7	0	0	0	0	0	0	0	0	**37**
7:00 AM	0	82	13	0	9	0	0	0	0	0	0	0	0	**104**
8:00 AM	0	149	20	0	12	1	0	0	0	0	0	0	0	**182**
9:00 AM	2	146	34	0	10	0	0	1	0	0	0	0	0	**193**
10:00 AM	1	185	27	0	12	0	0	0	0	0	0	0	0	**225**
11:00 AM	1	185	38	0	12	1	0	0	0	0	0	0	0	**237**
12:00 PM	1	212	27	0	15	0	0	1	0	0	0	0	0	**256**
1:00 PM	1	208	25	0	10	0	0	0	0	0	0	0	0	**244**
2:00 PM	2	234	25	0	13	0	0	0	1	0	0	0	0	**275**
3:00 PM	2	270	43	0	10	0	0	0	0	0	0	0	0	**325**
4:00 PM	4	293	30	0	14	1	0	0	1	0	0	0	0	**343**
5:00 PM	1	274	29	0	4	0	0	0	0	0	0	0	0	**308**
6:00 PM	3	230	18	0	7	0	0	0	0	0	0	0	0	**258**
7:00 PM	1	195	17	0	5	0	0	0	0	0	0	0	0	**218**
8:00 PM	1	129	13	0	6	0	0	0	0	0	0	0	0	**149**
9:00 PM	0	88	14	0	6	0	0	0	0	0	0	0	0	**108**
10:00 PM	0	46	9	0	3	0	0	0	0	0	0	0	0	**58**
11:00 PM	0	28	4	0	4	0	0	0	0	0	0	0	0	**36**
Total	**20**	**3,011**	**400**	**0**	**172**	**3**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**3,610**
	0.6%	**83.4%**	**11.1%**	**0.0%**	**4.8%**	**0.1%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Wednesday, November 29, 2023
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	1	0	3	0	0	0	0	0	0	0	0	**17**
1:00 AM	0	4	1	0	3	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
5:00 AM	1	27	2	0	4	0	0	0	0	0	0	0	0	**34**
6:00 AM	0	45	5	1	9	4	0	0	0	0	0	0	0	**64**
7:00 AM	0	141	9	0	7	2	0	0	0	0	0	0	0	**159**
8:00 AM	1	255	35	0	12	0	0	0	0	0	0	0	0	**303**
9:00 AM	3	211	26	0	12	2	0	0	0	0	0	0	0	**254**
10:00 AM	2	253	28	0	14	2	0	0	0	0	0	0	0	**299**
11:00 AM	0	186	13	0	9	0	0	0	0	0	0	0	0	**208**
12:00 PM	0	126	11	0	9	0	0	0	0	0	0	0	0	**146**
1:00 PM	0	84	12	0	5	0	0	0	1	0	0	0	0	**102**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**7**	**1,356**	**146**	**1**	**90**	**10**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,611**
	0.4%	**84.2%**	**9.1%**	**0.1%**	**5.6%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

DATA SOLUTIONS

Wednesday, November 29, 2023
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	4	0	2	0	0	0	0	0	0	0	0	**21**
1:00 AM	0	4	3	0	3	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	4	0	1	1	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	7	2	0	3	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	31	5	0	6	0	0	0	0	0	0	0	0	**42**
7:00 AM	0	75	11	0	10	1	0	1	0	0	0	0	0	**98**
8:00 AM	1	148	37	0	11	0	0	0	0	0	0	0	0	**197**
9:00 AM	1	154	28	0	20	0	0	0	0	0	0	0	0	**203**
10:00 AM	1	168	22	0	15	0	0	0	0	0	0	0	0	**206**
11:00 AM	5	25	0	0	1	0	0	0	0	0	0	0	0	**31**
12:00 PM	4	26	0	0	0	0	0	0	0	0	0	0	0	**30**
1:00 PM	7	30	0	0	0	0	0	0	0	0	0	0	0	**37**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**20**	**694**	**114**	**1**	**74**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**905**
	2.2%	**76.7%**	**12.6%**	**0.1%**	**8.2%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

DATA SOLUTIONS

Thursday, November 30, 2023
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
	0.0%	**0.0%**	**0.0%**	**0.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

DATA SOLUTIONS

Thursday, November 30, 2023
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
10:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
	0.0%	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	1	0	2	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	14	1	0	3	1	0	0	0	0	0	0	0	**19**
6:00 AM	1	29	3	0	4	1	0	0	0	0	0	0	0	**38**
7:00 AM	2	91	7	0	7	1	0	0	0	0	0	0	0	**108**
8:00 AM	4	167	20	0	6	0	0	0	0	0	0	0	0	**197**
9:00 AM	3	141	19	0	9	1	0	0	0	0	0	0	0	**173**
10:00 AM	2	124	13	0	6	1	0	0	0	0	0	0	0	**146**
11:00 AM	2	166	16	0	7	0	0	0	0	0	0	0	0	**191**
12:00 PM	3	168	12	0	8	0	0	0	0	0	0	0	0	**191**
1:00 PM	3	145	12	0	7	0	0	0	0	0	0	0	0	**167**
2:00 PM	4	132	11	0	5	0	0	0	0	1	0	0	0	**153**
3:00 PM	2	145	11	0	5	0	0	0	0	0	0	0	0	**163**
4:00 PM	4	197	19	0	8	0	0	0	0	0	0	0	0	**228**
5:00 PM	5	199	13	0	7	0	0	1	0	0	0	0	0	**225**
6:00 PM	2	155	8	1	6	0	0	0	0	0	0	0	0	**172**
7:00 PM	1	101	7	0	5	1	0	0	0	0	0	0	0	**115**
8:00 PM	1	74	5	0	7	0	0	0	0	0	0	0	0	**87**
9:00 PM	0	40	2	0	4	0	0	0	0	0	0	0	0	**46**
10:00 PM	0	23	1	0	4	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	9	1	0	2	0	0	0	0	0	0	0	0	**12**
Total	**39**	**2,138**	**185**	**1**	**116**	**6**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**2,487**
	1.6%	**86.0%**	**7.4%**	**0.0%**	**4.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	5	1	0	3	0	0	0	0	0	0	0	0	**9**
6:00 AM	0	19	3	0	4	0	0	0	0	0	0	0	0	**26**
7:00 AM	0	52	8	0	6	0	0	0	0	0	0	0	0	**66**
8:00 AM	0	99	19	0	8	0	0	0	0	0	0	0	0	**126**
9:00 AM	1	100	21	0	10	0	0	0	0	0	0	0	0	**132**
10:00 AM	1	89	12	0	7	0	0	0	0	0	0	0	0	**109**
11:00 AM	2	96	15	0	7	0	0	0	0	0	0	0	0	**120**
12:00 PM	2	109	15	0	7	0	0	1	0	0	0	0	0	**134**
1:00 PM	3	114	13	0	7	0	0	1	0	0	0	0	0	**138**
2:00 PM	1	109	11	0	6	0	0	0	0	0	0	0	0	**127**
3:00 PM	1	139	19	0	5	0	0	0	0	0	0	0	0	**164**
4:00 PM	2	197	19	0	6	0	0	0	1	0	0	0	0	**225**
5:00 PM	1	172	18	0	4	0	0	0	0	0	0	0	0	**195**
6:00 PM	1	148	13	0	4	0	0	0	0	0	0	0	0	**166**
7:00 PM	0	118	10	0	4	0	0	0	0	0	0	0	0	**132**
8:00 PM	1	75	9	0	4	0	0	0	0	0	0	0	0	**89**
9:00 PM	1	55	7	0	3	0	0	0	0	0	0	0	0	**66**
10:00 PM	0	24	5	0	2	0	0	0	0	0	0	0	0	**31**
11:00 PM	0	16	3	0	2	0	0	0	0	0	0	0	0	**21**
Total	**17**	**1,753**	**226**	**0**	**104**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**2,103**
	0.8%	**83.4%**	**10.7%**	**0.0%**	**4.9%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

DATA SOLUTIONS

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	1	0	2	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	14	1	0	3	1	0	0	0	0	0	0	0	**19**
6:00 AM	1	29	3	0	4	1	0	0	0	0	0	0	0	**38**
7:00 AM	2	91	7	0	7	1	0	0	0	0	0	0	0	**108**
8:00 AM	4	167	20	0	6	0	0	0	0	0	0	0	0	**197**
9:00 AM	3	141	19	0	9	1	0	0	0	0	0	0	0	**173**
10:00 AM	2	166	17	0	7	1	0	0	0	0	0	0	0	**193**
11:00 AM	2	148	13	0	7	0	0	0	0	0	0	0	0	**170**
12:00 PM	2	135	11	0	7	0	0	0	0	0	0	0	0	**155**
1:00 PM	2	108	9	0	7	0	0	0	0	0	0	0	0	**126**
2:00 PM	2	93	10	0	4	0	0	0	0	0	0	0	0	**109**
3:00 PM	3	109	7	0	3	0	0	0	0	0	0	0	0	**122**
4:00 PM	3	144	16	1	6	1	0	0	0	0	0	0	0	**171**
5:00 PM	4	154	12	0	5	0	0	2	0	0	0	0	0	**177**
6:00 PM	3	114	7	1	5	0	0	0	0	0	0	0	0	**130**
7:00 PM	1	80	8	0	4	1	0	0	0	0	0	0	0	**94**
8:00 PM	1	67	4	0	6	0	0	0	0	0	0	0	0	**78**
9:00 PM	0	35	2	0	3	0	0	0	0	0	0	0	0	**40**
10:00 PM	0	19	1	0	4	0	0	0	0	0	0	0	0	**24**
11:00 PM	0	8	2	0	2	0	0	0	0	0	0	0	0	**12**
Total	**35**	**1,840**	**173**	**2**	**105**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2,164**
	1.6%	**85.0%**	**8.0%**	**0.1%**	**4.9%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

DATA SOLUTIONS

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	5	1	0	3	0	0	0	0	0	0	0	0	**9**
6:00 AM	0	19	3	0	4	0	0	0	0	0	0	0	0	**26**
7:00 AM	0	52	8	0	6	0	0	0	0	0	0	0	0	**66**
8:00 AM	0	99	19	0	8	0	0	0	0	0	0	0	0	**126**
9:00 AM	1	100	21	0	10	0	0	0	0	0	0	0	0	**132**
10:00 AM	1	118	16	0	9	0	0	0	0	0	0	0	0	**144**
11:00 AM	2	70	13	0	4	0	0	0	0	0	0	0	0	**89**
12:00 PM	2	79	9	0	5	0	0	0	0	0	0	0	0	**95**
1:00 PM	3	79	8	0	3	0	0	0	0	0	0	0	0	**93**
2:00 PM	1	78	8	0	4	0	0	0	0	0	0	0	0	**91**
3:00 PM	1	98	16	0	4	0	0	0	0	0	0	0	0	**119**
4:00 PM	2	147	15	0	7	1	0	0	1	0	0	0	0	**173**
5:00 PM	1	137	15	0	2	0	0	0	0	0	0	0	0	**155**
6:00 PM	2	115	9	0	4	0	0	0	0	0	0	0	0	**130**
7:00 PM	1	98	9	0	3	0	0	0	0	0	0	0	0	**111**
8:00 PM	1	65	7	0	3	0	0	0	0	0	0	0	0	**76**
9:00 PM	0	44	7	0	3	0	0	0	0	0	0	0	0	**54**
10:00 PM	0	23	5	0	2	0	0	0	0	0	0	0	0	**30**
11:00 PM	0	14	2	0	2	0	0	0	0	0	0	0	0	**18**
Total	**18**	**1,457**	**196**	**0**	**91**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,764**
	1.0%	**82.6%**	**11.1%**	**0.0%**	**5.2%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Vehicle Speed Report Summary

Location: College Ave, S/O Bryant Ave

Direction: Northbound / Southbound

Date Range: 11/27/2023 to 11/30/2023

Site Code:

Direction	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Northbound	57	435	1,640	3,210	2,381	641	82	14	2	2	5	1	0	0	2	4	3	8,479
	0.7%	5.1%	19.3%	37.9%	28.1%	7.6%	1.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Southbound	141	220	930	2,269	2,289	979	222	42	7	0	1	0	0	0	1	0	0	7,101
	2.0%	3.1%	13.1%	32.0%	32.2%	13.8%	3.1%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	198	655	2,570	5,479	4,670	1,620	304	56	9	2	6	1	0	0	3	4	3	15,580
	1.3%	4.2%	16.5%	35.2%	30.0%	10.4%	2.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	23.4	mph	Mean (Average) Speed	23.3	mph
85th Percentile	28.4	mph	10 mph Pace	18.7 - 28.7	mph
95th Percentile	31.5	mph	Percent in Pace	68.5	%
Southbound			**Southbound**		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	24.8	mph
85th Percentile	30.6	mph	10 mph Pace	20.1 - 30.1	mph
95th Percentile	34.2	mph	Percent in Pace	64.2	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Monday, November 27, 2023
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	1	18	54	112	59	10	3	0	0	0	0	0	0	0	1	0	0	**258**
12:00 PM	2	17	61	112	94	10	3	0	0	0	0	0	0	0	0	0	0	**299**
1:00 PM	3	16	53	125	73	16	1	0	0	0	0	0	0	0	0	0	0	**287**
2:00 PM	3	7	50	117	67	26	4	0	0	1	0	0	0	0	0	3	0	**278**
3:00 PM	1	14	69	132	87	11	3	0	0	0	0	0	0	0	0	1	0	**318**
4:00 PM	2	36	116	112	66	9	1	1	0	0	0	0	0	0	1	0	0	**344**
5:00 PM	2	14	56	143	81	23	1	2	0	0	4	0	0	0	0	0	0	**326**
6:00 PM	2	5	43	103	86	19	2	0	0	0	0	0	0	0	0	0	0	**260**
7:00 PM	5	6	21	64	49	14	1	0	0	0	0	0	0	0	0	0	0	**160**
8:00 PM	2	2	13	27	48	17	2	0	0	0	0	0	0	0	0	0	0	**111**
9:00 PM	0	1	2	14	32	10	1	0	0	0	0	0	0	0	0	0	0	**60**
10:00 PM	1	1	3	2	18	11	3	0	0	0	0	0	0	0	0	0	0	**39**
11:00 PM	0	0	0	1	7	7	0	0	0	0	0	0	0	0	0	0	0	**15**
Total	**24**	**137**	**541**	**1,064**	**767**	**183**	**25**	**3**	**0**	**1**	**4**	**0**	**0**	**0**	**2**	**4**	**0**	**2,755**
	0.9%	**5.0%**	**19.6%**	**38.6%**	**27.8%**	**6.6%**	**0.9%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.2	mph	Mean (Average) Speed	23.3	mph
85th Percentile	28.3	mph	10 mph Pace	18.5 - 28.5	mph
95th Percentile	31.3	mph	Percent in Pace	69.0	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Monday, November 27, 2023
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	1	7	24	77	74	24	5	1	0	0	0	0	0	0	0	0	0	**213**
12:00 PM	1	2	19	100	87	34	2	0	0	0	0	0	0	0	0	0	0	**245**
1:00 PM	1	0	12	122	88	36	7	0	0	0	0	0	0	0	0	0	0	**266**
2:00 PM	0	15	19	88	89	18	3	2	0	0	0	0	0	0	0	0	0	**234**
3:00 PM	4	15	70	117	81	41	1	1	0	0	0	0	0	0	0	0	0	**330**
4:00 PM	0	18	87	113	92	18	2	0	1	0	0	0	0	0	0	0	0	**331**
5:00 PM	1	7	29	94	109	28	9	0	0	0	0	0	0	0	0	0	0	**277**
6:00 PM	2	2	12	75	102	42	4	1	0	0	0	0	0	0	0	0	0	**240**
7:00 PM	4	6	20	59	60	23	6	0	0	0	0	0	0	0	0	0	0	**178**
8:00 PM	0	0	4	13	45	43	9	2	0	0	0	0	0	0	0	0	0	**116**
9:00 PM	4	2	3	15	35	24	6	1	0	0	0	0	0	0	0	0	0	**90**
10:00 PM	0	2	0	3	9	15	3	2	0	0	0	0	0	0	0	0	0	**34**
11:00 PM	0	0	0	4	9	10	2	4	0	0	0	0	0	0	0	0	0	**29**
Total	**18**	**76**	**299**	**880**	**880**	**356**	**59**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,583**
	0.7%	**2.9%**	**11.6%**	**34.1%**	**34.1%**	**13.8%**	**2.3%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.1	mph	Mean (Average) Speed	25.1	mph
85th Percentile	30.4	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	33.6	mph	Percent in Pace	68.18	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Tuesday, November 28, 2023
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	1	1	4	4	1	2	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	0	0	1	1	2	1	2	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	1	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	0	1	5	0	1	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	0	2	3	9	9	2	0	0	0	0	0	0	0	0	0	0	**25**
6:00 AM	0	0	4	4	22	16	5	1	0	0	0	0	0	0	0	0	0	**52**
7:00 AM	0	2	14	41	73	29	2	1	2	0	0	0	0	0	0	0	1	**165**
8:00 AM	0	2	26	101	122	29	7	2	0	1	0	0	0	0	0	0	0	**290**
9:00 AM	0	6	35	126	76	20	1	0	0	0	0	0	0	0	0	0	0	**264**
10:00 AM	0	9	52	97	105	17	0	1	0	0	0	0	0	0	0	0	0	**281**
11:00 AM	1	22	75	126	69	8	0	0	0	0	0	0	0	0	0	0	0	**301**
12:00 PM	3	35	97	109	67	10	0	0	0	0	0	0	0	0	0	0	0	**321**
1:00 PM	2	15	58	118	64	20	1	0	0	0	0	0	0	0	0	0	0	**278**
2:00 PM	2	14	75	158	65	15	1	0	0	0	0	0	0	0	0	0	0	**330**
3:00 PM	3	18	79	142	69	19	3	0	0	0	1	0	0	0	0	0	0	**334**
4:00 PM	5	26	100	141	55	11	1	0	0	0	0	1	0	0	0	0	0	**340**
5:00 PM	4	31	127	138	41	7	1	0	0	0	0	0	0	0	0	0	0	**349**
6:00 PM	3	23	64	98	53	14	0	1	0	0	0	0	0	0	0	0	0	**256**
7:00 PM	2	15	33	54	68	12	1	0	0	0	0	0	0	0	0	0	0	**185**
8:00 PM	0	12	25	51	48	13	3	0	0	0	0	0	0	0	0	0	0	**152**
9:00 PM	0	1	6	33	21	14	3	0	0	0	0	0	0	0	0	0	0	**78**
10:00 PM	0	0	2	5	22	16	1	0	0	0	0	0	0	0	0	0	0	**46**
11:00 PM	0	0	1	4	8	8	1	0	0	0	0	0	0	0	0	0	0	**22**
Total	**25**	**233**	**876**	**1,556**	**1,070**	**299**	**37**	**10**	**2**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**4,112**
	0.6%	**5.7%**	**21.3%**	**37.8%**	**26.0%**	**7.3%**	**0.9%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.0	mph
85th Percentile	28.1	mph	10 mph Pace	18.6 - 28.6	mph
95th Percentile	31.3	mph	Percent in Pace	67.5	%

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Tuesday, November 28, 2023
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	8	8	4	1	0	0	0	0	0	0	1	0	0	**22**
1:00 AM	0	0	0	0	2	2	0	0	1	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	2	1	0	2	1	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	0	2	2	2	5	2	1	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	0	0	2	3	7	12	12	1	0	0	0	0	0	0	0	0	0	**37**
7:00 AM	0	0	3	18	45	22	14	2	0	0	0	0	0	0	0	0	0	**104**
8:00 AM	0	1	14	41	65	46	13	2	0	0	0	0	0	0	0	0	0	**182**
9:00 AM	0	3	15	59	73	36	5	2	0	0	0	0	0	0	0	0	0	**193**
10:00 AM	0	8	39	52	87	34	4	1	0	0	0	0	0	0	0	0	0	**225**
11:00 AM	2	13	49	72	64	31	4	1	1	0	0	0	0	0	0	0	0	**237**
12:00 PM	4	21	57	93	59	15	6	1	0	0	0	0	0	0	0	0	0	**256**
1:00 PM	2	4	29	87	86	33	2	1	0	0	0	0	0	0	0	0	0	**244**
2:00 PM	2	10	55	92	77	31	8	0	0	0	0	0	0	0	0	0	0	**275**
3:00 PM	2	13	47	156	86	19	2	0	0	0	0	0	0	0	0	0	0	**325**
4:00 PM	4	20	84	136	86	11	1	0	1	0	0	0	0	0	0	0	0	**343**
5:00 PM	2	12	67	123	84	19	1	0	0	0	0	0	0	0	0	0	0	**308**
6:00 PM	2	12	36	99	80	25	3	1	0	0	0	0	0	0	0	0	0	**258**
7:00 PM	2	8	33	76	70	25	4	0	0	0	0	0	0	0	0	0	0	**218**
8:00 PM	3	3	15	36	59	28	4	1	0	0	0	0	0	0	0	0	0	**149**
9:00 PM	0	1	3	24	41	23	13	1	1	0	1	0	0	0	0	0	0	**108**
10:00 PM	0	0	0	6	18	21	12	1	0	0	0	0	0	0	0	0	0	**58**
11:00 PM	0	0	3	7	11	11	3	0	1	0	0	0	0	0	0	0	0	**36**
Total	**25**	**130**	**553**	**1,186**	**1,113**	**458**	**119**	**19**	**5**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**3,610**
	0.7%	**3.6%**	**15.3%**	**32.9%**	**30.8%**	**12.7%**	**3.3%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.6	mph	Mean (Average) Speed	24.7	mph
85th Percentile	30.4	mph	10 mph Pace	19.6 - 29.6	mph
95th Percentile	34.3	mph	Percent in Pace	63.99	%

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Wednesday, November 29, 2023
Northbound

Time	Speed Range (mph)																Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	3	9	2	1	0	0	0	0	0	0	0	0	0	0	**17**
1:00 AM	0	0	0	2	3	2	0	1	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	1	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	1	0	7	11	11	4	0	0	0	0	0	0	0	0	0	0	**34**
6:00 AM	0	2	3	10	33	11	5	0	0	0	0	0	0	0	0	0	0	**64**
7:00 AM	1	3	11	40	71	32	1	0	0	0	0	0	0	0	0	0	0	**159**
8:00 AM	4	15	33	111	110	27	3	0	0	0	0	0	0	0	0	0	0	**303**
9:00 AM	1	16	34	105	81	15	2	0	0	0	0	0	0	0	0	0	0	**254**
10:00 AM	2	18	74	123	67	14	1	0	0	0	0	0	0	0	0	0	0	**299**
11:00 AM	0	5	27	75	77	23	1	0	0	0	0	0	0	0	0	0	0	**208**
12:00 PM	0	4	24	73	40	4	1	0	0	0	0	0	0	0	0	0	0	**146**
1:00 PM	0	0	14	38	34	15	1	0	0	0	0	0	0	0	0	0	0	**102**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	**2**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**8**	**65**	**223**	**590**	**544**	**159**	**20**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,611**
	0.5%	**4.0%**	**13.8%**	**36.6%**	**33.8%**	**9.9%**	**1.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.6	mph	Mean (Average) Speed	24.2	mph
85th Percentile	29.0	mph	10 mph Pace	19.0 - 29.0	mph
95th Percentile	31.9	mph	Percent in Pace	71.1	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Wednesday, November 29, 2023
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	5	10	4	0	1	0	0	0	0	0	0	0	0	0	**21**
1:00 AM	0	0	0	1	4	3	2	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	2	2	1	0	0	1	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	0	1	2	0	1	0	1	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	0	0	0	5	5	2	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	0	0	1	9	24	7	1	0	0	0	0	0	0	0	0	0	**42**
7:00 AM	0	1	1	22	43	21	7	3	0	0	0	0	0	0	0	0	0	**98**
8:00 AM	1	3	15	46	78	42	10	2	0	0	0	0	0	0	0	0	0	**197**
9:00 AM	2	4	17	55	80	37	7	1	0	0	0	0	0	0	0	0	0	**203**
10:00 AM	3	5	34	68	62	27	7	0	0	0	0	0	0	0	0	0	0	**206**
11:00 AM	21	1	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**31**
12:00 PM	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**30**
1:00 PM	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**37**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**95**	**14**	**78**	**203**	**296**	**165**	**44**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**905**
	10.5%	**1.5%**	**8.6%**	**22.4%**	**32.7%**	**18.2%**	**4.9%**	**1.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.2	mph	Mean (Average) Speed	24.3	mph
85th Percentile	32.1	mph	10 mph Pace	21.7 - 31.7	mph
95th Percentile	35.6	mph	Percent in Pace	57.02	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Thursday, November 30, 2023
Northbound

Time	Speed Range (mph)																Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**100.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	0.0	mph	Mean (Average) Speed	89.5	mph
85th Percentile	0.0	mph	10 mph Pace	79.6 - 89.6	mph
95th Percentile	0.0	mph	Percent in Pace	100.0	%

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Thursday, November 30, 2023
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
10:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
	100.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	0.0	mph	Mean (Average) Speed	0.8	mph
85th Percentile	0.0	mph	10 mph Pace	.0 - 10.0	mph
95th Percentile	0.0	mph	Percent in Pace	100	%

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	4	2	1	1	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	1	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	1	3	7	7	2	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	0	1	2	5	18	9	3	0	0	0	0	0	0	0	0	0	0	**38**
7:00 AM	0	2	8	27	48	20	1	0	1	0	0	0	0	0	0	0	0	**107**
8:00 AM	1	6	20	71	77	19	3	1	0	0	0	0	0	0	0	0	0	**198**
9:00 AM	0	7	23	77	52	12	1	0	0	0	0	0	0	0	0	0	0	**172**
10:00 AM	1	7	32	55	43	8	0	0	0	0	0	0	0	0	0	0	0	**146**
11:00 AM	1	11	39	78	51	10	1	0	0	0	0	0	0	0	0	0	0	**191**
12:00 PM	1	14	46	74	50	6	1	0	0	0	0	0	0	0	0	0	0	**192**
1:00 PM	1	8	31	70	43	13	1	0	0	0	0	0	0	0	0	0	0	**167**
2:00 PM	1	5	31	69	33	10	1	0	0	0	0	0	0	0	0	1	0	**151**
3:00 PM	1	8	37	69	39	8	2	0	0	0	0	0	0	0	0	0	0	**164**
4:00 PM	2	21	72	84	40	7	1	0	0	0	0	0	0	0	0	0	0	**227**
5:00 PM	2	15	61	94	41	10	1	1	0	0	1	0	0	0	0	0	0	**226**
6:00 PM	2	9	36	67	46	11	1	0	0	0	0	0	0	0	0	0	0	**172**
7:00 PM	2	7	18	39	39	9	1	0	0	0	0	0	0	0	0	0	0	**115**
8:00 PM	1	5	13	26	32	10	2	0	0	0	0	0	0	0	0	0	0	**89**
9:00 PM	0	1	3	16	18	8	1	0	0	0	0	0	0	0	0	0	0	**47**
10:00 PM	0	0	2	2	13	9	1	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	0	0	0	2	5	5	0	0	0	0	0	0	0	0	0	0	0	**12**
Total	**16**	**128**	**476**	**932**	**705**	**197**	**25**	**4**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**2,486**
	0.6%	**5.1%**	**19.1%**	**37.5%**	**28.4%**	**7.9%**	**1.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	23.4	mph	Mean (Average) Speed	23.3	mph
85th Percentile	28.4	mph	10 mph Pace	18.7 - 28.7	mph
95th Percentile	31.5	mph	Percent in Pace	68.5	%

Location: College Ave, S/O Bryant Ave
Date Range: 11/27/2023 to 11/30/2023
Site Code:

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	6	4	1	1	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	1	1	2	3	1	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	0	1	1	5	12	6	1	0	0	0	0	0	0	0	0	0	**26**
7:00 AM	0	0	1	13	29	14	7	2	0	0	0	0	0	0	0	0	0	**66**
8:00 AM	0	1	10	29	48	29	8	1	0	0	0	0	0	0	0	0	0	**126**
9:00 AM	1	2	11	38	51	24	4	1	0	0	0	0	0	0	0	0	0	**132**
10:00 AM	1	3	18	30	37	15	3	0	0	0	0	0	0	0	0	0	0	**107**
11:00 AM	6	5	20	38	35	14	2	1	0	0	0	0	0	0	0	0	0	**121**
12:00 PM	9	6	19	48	37	12	2	0	0	0	0	0	0	0	0	0	0	**133**
1:00 PM	10	1	10	52	44	17	2	0	0	0	0	0	0	0	0	0	0	**136**
2:00 PM	1	6	19	45	42	12	3	1	0	0	0	0	0	0	0	0	0	**129**
3:00 PM	2	7	29	68	42	15	1	0	0	0	0	0	0	0	0	0	0	**164**
4:00 PM	1	13	57	83	59	10	1	0	1	0	0	0	0	0	0	0	0	**225**
5:00 PM	1	6	32	72	64	16	3	0	0	0	0	0	0	0	0	0	0	**194**
6:00 PM	1	5	16	58	61	22	2	1	0	0	0	0	0	0	0	0	0	**166**
7:00 PM	2	5	18	45	43	16	3	0	0	0	0	0	0	0	0	0	0	**132**
8:00 PM	1	1	6	16	35	24	4	1	0	0	0	0	0	0	0	0	0	**88**
9:00 PM	1	1	2	13	25	16	6	1	0	0	0	0	0	0	0	0	0	**65**
10:00 PM	0	1	0	3	9	12	5	1	0	0	0	0	0	0	0	0	0	**31**
11:00 PM	0	0	1	4	7	7	2	1	0	0	0	0	0	0	0	0	0	**22**
Total	**37**	**63**	**272**	**662**	**686**	**297**	**68**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,100**
	1.8%	**3.0%**	**13.0%**	**31.5%**	**32.7%**	**14.1%**	**3.2%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	24.8	mph
85th Percentile	30.6	mph	10 mph Pace	20.1 - 30.1	mph
95th Percentile	34.2	mph	Percent in Pace	64.2	%

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

PHA TRANSPORTATION CONSULTANTS

Statement of Qualification

PHA

Transportation Consultants
2711 Stuart Street Berkeley, CA 94705
(510) 848-933
Web: pangho.com
Email:pang@pangho.com

Firm Description

PHA is a transportation/traffic consulting firm providing planning and engineering services to clients in both public and private sectors. Pang Ho is the principal of the firm and has a graduate degree in Transportation Planning and Engineering from the University of Kansas. Before forming PHA Transportation Consultants, Pang Ho had worked for three municipalities and two civil engineering consulting firms and has more than 25 years of experience in both public and private sectors. Pang Ho is assisted by several associates, most have more than 20 years of professional experience. All associates are either registered civil and/or traffic engineers. Pang Ho founded the firm in September of 1992.

PHA is located in Berkeley and has conducted many traffic impact studies along with mitigation (traffic signal design, geometric modification, traffic signal system timing coordination, and other TSM projects and programs) for various land development projects in the San Francisco Bay Area, including cities of Alameda, Berkeley, Hayward, Hercules, Danville, San Ramon, Brentwood, Pittsburg, Milpitas, and San Jose. Over the years, the firm has helped many local communities and developers identify potential development traffic impacts and engineered practical mitigation measures. The firm's other projects include various types of traffic studies, circulation studies, parking studies, traffic signal design, traffic signals interconnect, system timing coordination, traffic operation analyses, grant applications, traffic data collection, and peer review.

PHA Transportation Consultants is currently an on-call transportation/traffic consultant for the Cities of Richmond, Antioch, and San Ramon. About 80 percent of our clients are public agencies such as local municipalities and regional agencies, while the remaining 30 percent are EIR consultants, architects, civil engineering firms, and land developers.

PHA has a crew of traffic surveyors for performing all traffic data collection and surveys in-house without having to subcontract out or use personnel from temporary employment agencies.

References

- Lynne Filson, Assistant City Engineer, City of Antioch, (925) 785-7741
- Steven Tam, Senior Civil Engineer, City of Richmond, (510) 307-8112
- Augustine Chou, Traffic Engineer, City of Burlingame, (650) 558-7236
- Martin Engelmann, CCTA, Deputy Director of Planning (925) 256-4729
- Mike Talley, Senior Civil Engineer, San Ramon Public Works (925) 973-2654
- Reh-Lin Chen, Senior Transportation Engineer, San Leandro (510) 577-3438
- Douglas Herring, Douglas Herring & Associates (510) 237-2233
- Beth Kelly, Burleson Consulting (916) 984-4651 Ext. 14

Our Services Include:

- Traffic impact studies
- Parking studies
- Circulation studies
- Citywide traffic monitoring/modeling
- Development feasibility studies
- Congestion management program (CMP) monitoring
- Traffic signal design
- Freeway operations analysis
- Intersection capacity/levels of service analyses
- Traffic signal timing plan development
- Traffic signal design and timing coordination.
- Traffic data collection
- Grant applications
- Staff services

The PHA Transportation Consultants staff is highly qualified in the field of transportation planning and engineering with expertise in sophisticated traffic analysis models, software packages, and the latest traffic counting devices and equipment. PHA is committed to providing our clients with the best service possible, combining professional integrity with efficient and responsive work. PHA is a minority business enterprise (DBE) certified by Caltrans.

Partial Client List

Public Sector

- City of Richmond
- City of Berkeley
- City of Burlingame
- City of Hercules
- Contra Costa Transportation Authority (CCTA)
- Marin Transportation Authority (TAM)
- City of San Mateo
- City of San Ramon
- City of San Leandro
- City of Pittsburg
- City of Brentwood
- Town of Danville
- City of San Jose
- City/County of San Francisco
- City of Cupertino
- City of Hayward
- City of Alameda

Private Sector

- BKF Engineers and Planners
- TY Lin International
- RBF Engineers
- RJA Civil Engineers
- DK Associate Civil Engineers
- Michael Kent and Associates
- Doug Herring Associates
- Lyon Homes
- Seeno Homes
- Chevron USA
- Carlson, Barbee, and Gibson Associates
- Coastland Consultants
- Carl's Jr. of America
- Wendy's Restaurant
- LRS Associates
- Wagstaff and Associates
- Dennis Kobza& Associates
- Berg and Berg Developers
- Homestead Village Inc. Santa Fe
- Donaldson Associates
- Burleson Consulting

Area of Expertise

PHA Transportation Consultants provides services in the following areas:

Traffic Impact and Parking Studies

PHA Transportation Consultants has conducted many traffic impact studies throughout the Bay Area for a variety of land development projects. We have extensive knowledge and experience in preparing traffic impact studies and believe that traffic studies should go beyond calculating intersection LOS and evaluating traffic conditions for required study scenarios. Good traffic studies focus also on internal circulation, parking lot layout, driveway operations in terms of safe sight distance, spacing, stacking for vehicle queues that could present problems, and the overall site access scheme and how it fits in with the existing circulation system. We are currently on-call traffic consultants with San Mateo, Hercules, and San Ramon. Our work includes citywide circulation studies, usually conducted annually, traffic data collection, parking surveys, grant applications, peer review, and other special projects as needed. Please call Mr. Erwin Blancaflor with Hercules (510) 799-8242, and Rich Davidson (510) 307-8091.

Traffic Signal Design

PHA Transportation Consultants has completed many traffic signal design projects. Most of our projects include signing, striping, and cost estimates. Our recent design projects include those in Hercules, Richmond, Pittsburg, Oakland, San Jose, San Ramon, and Vacaville. Please contact Erwin Blancaflor, with Hercules (510) 799-8242, and Rich Davidson with Richmond (510) 307-8091.

Evaluate Transportation Facilities Performance and Conduct Operations Analysis

PHA Transportation Consultants has been conducting citywide circulation studies for San Ramon, Danville, Hercules, and Cupertino, on an annual or bi-annual basis. Our work involves collecting traffic data and evaluating street capacity. Evaluate intersection LOS performance, and identify potential mitigation strategies. PHA has recently completed a Transportation System Monitoring Report (Congestion Monitoring Report) for Marin Transportation Authority (TAM), which is the designated Congestion Management Agency for Marin County. PHA is currently preparing a similar report for the Contra Costa Transportation Authority (CCTA).

PHA Transportation Consultants has developed many mitigation measures through geometric design and Transportation System Management (TSM) strategies for Bay Area cities over the years. Please contact Erwin Blancaflor, with Hercules (510) 799-8242, Rich Davidson with Richmond(510) 307-8091, and Phil Agostini with San Ramon (925)

973-2657.

PHA Statement of Qualification

Signal Timing Evaluation and Optimization

PHA Transportation Consultants has conducted many traffic signal timing/optimization projects for individual intersections and/or as a system along a corridor. We have expertise in most HCM-based software such as HCS, Traffix, and Synchro, which are the most popular software in the South Bay, and other corridor evaluation software such as Passer, Transyt 7F, and Synchro. PHA Transportation Consultants has secured several TFCA grants for San Ramon, Danville, Hercules, and San Mateo in the past to provide system development/interconnect and corridor signal timing coordination and optimization. During this 2001 funding year, PHA Transportation Consultants has secured two TFCA grants (the 60% portion through the Air District) for Hercules and Richmond and is expected to provide design and engineering service for system interconnect/timing plan development for Hercules and Richmond shortly. Please call Mr. Erwin Blancaflor with Hercules (510) 799-8242, Phil Agostini with San Ramon (925) 973-2657 and Rich Davidson (510) 307-8091.

Staff Services (Peer reviewed site plan, traffic studies, parking studies, prepared grant applications, perform traffic data collection and analysis)

PHA Transportation Consultants has prepared many grant applications (TFCA, RTSOP, and ISTEA) for several cities and was successful in securing grants with significant amounts for several cities including Hercules, Richmond, San Mateo, Pittsburg, Danville, and San Ramon.

PHA Transportation Consultants has a crew of 12 traffic survey personnel and has been providing annual citywide traffic count, radar speed survey, and all types of traffic data collection services to cities of San Ramon, Hercules, Richmond, Alameda, Danville, San Jose, San Mateo, Contra Costa Transportation Authority (CCTA) and Marin County Transportation Authority (TAM). Please call Mr. Erwin Blancaflor with Hercules (510) 799-8242, Phil Agostini with San Ramon (925) 973-2657 and Rich Davidson (510) 307-8091. Art Brook with Marin Transportation Authority (415) 499-6752, and Martin Englemann with Contra Costa Transportation Authority (925) 256-4729

Representative Projects

Figure 3-3

Overview of Existing PPMT Facilities

Honda Port of Entry Traffic Study – Richmond 2008

PHA recently completed a traffic study as part of an EIR to evaluate the potential impact of the importation of Japanese-made Honda vehicles to Richmond for distribution in the United States. Part of the vehicles will be shipped to dealerships in Northern California via auto carrier trucks while some will be distributed throughout the county by trains. Honda proposed to import 150,000 new vehicles to Richmond annually via its Point Potrero Marine Terminal (PPMT). The report is now complete and the EIR document is under review.

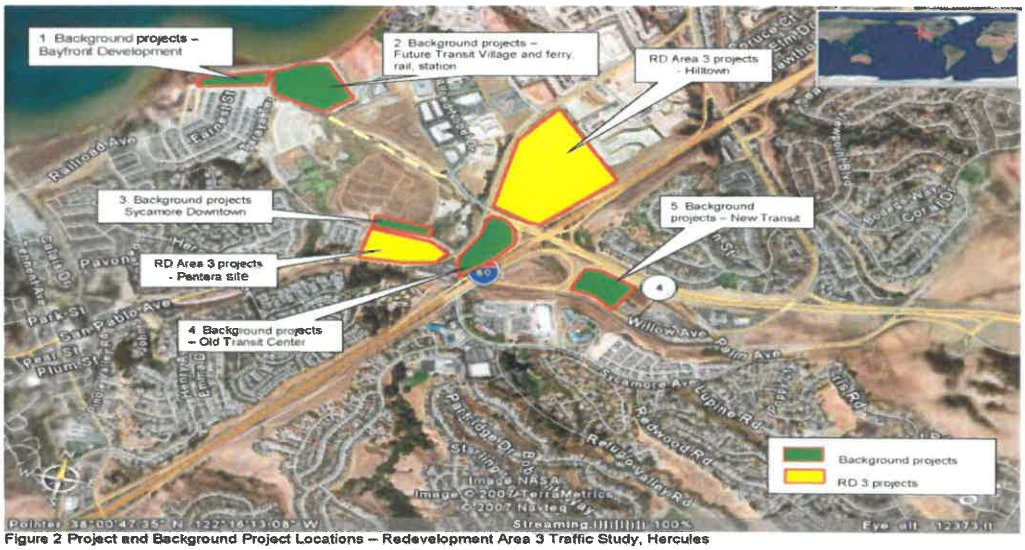


Figure 2 Project and Background Project Locations – Redevelopment Area 3 Traffic Study, Hercules

Hercules RDA 3 Traffic Study – Hercules 2008

PHA recently completed a traffic study as part of an EIR document for the City of Hercules to evaluate the potential impact of two proposed redevelopment projects. The two projects combined included more than 700 homes, a supermarket, a hotel, a multi-story office building, and other retail shops. The report is complete and the EIR document is in circulation and under review.

Refugio Valley Road/Pheasant Drive Traffic Signal Design and Interconnect-Hercules

PHA designed two traffic signals at Refugio Valley Road at Pheasant Drive and the Hercules Middle and High School. Interconnect 11 traffic signals along the San Pablo Avenue-Sycamore Drive-Refugio Valley Road corridor, and coordinated signal timing operation for the corridor. The project was funded by a grant from the San Francisco Bay Area Air Quality Management District.

Refugio Valley Road/Hercules Middle/High School Traffic Study - Hercules
PHA designed two traffic signals at Refugio Valley Road at Pheasant Drive and the Hercules Middle and High School entrance, interconnected 11 traffic signals along the San Pablo Avenue-Sycamore Drive-Refugio Valley Road corridor, and provided coordinated timing operation. The project was funded by a grant from the San Francisco Bay Area Air Quality Management District.

Ford Assembly Building Reuse - Richmond

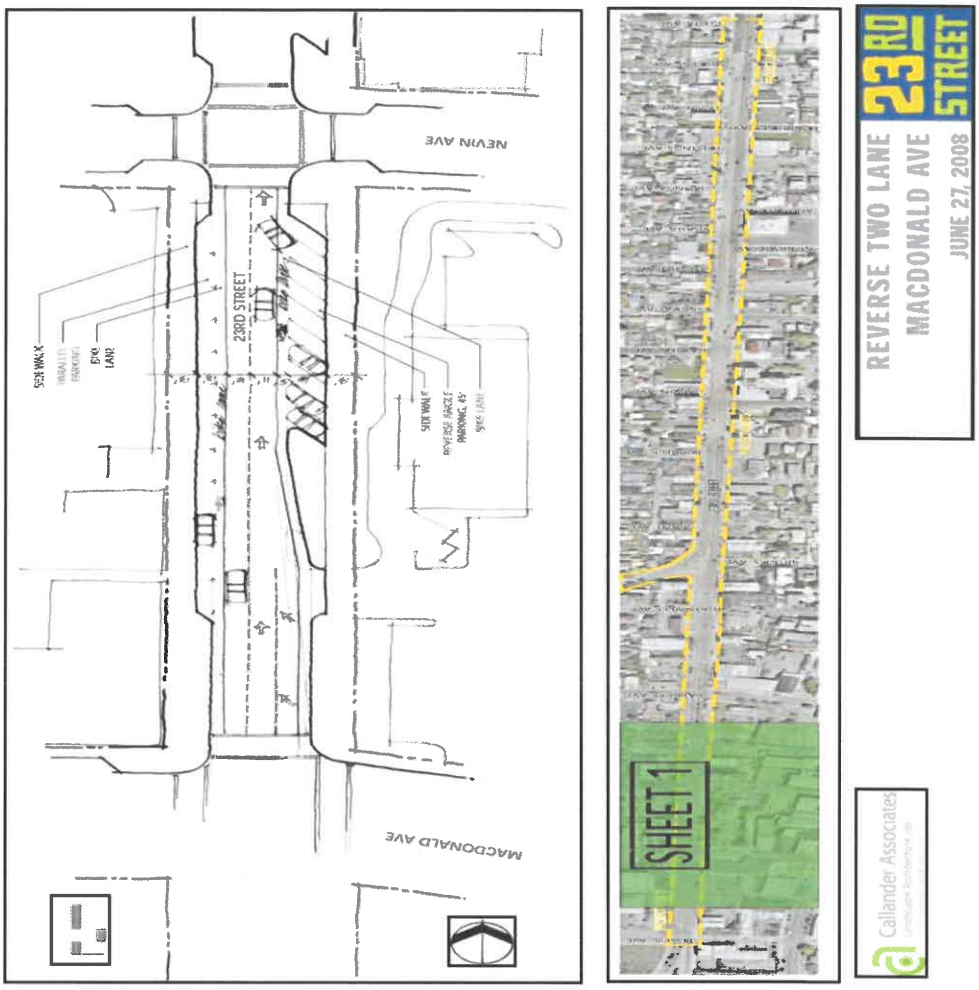
PHA conducted a traffic impact study as part of an EIR document to evaluate the potential impact of the Ford Assembly Building Reuse Project. The building was once used for assembling Jeeps for the US Military during the Second World War and was later used as the University of California's book depository. The building was damaged during the Loma Prieta Quake in 1989. The current proposal includes offices, R&D, restaurants, museums, and live-work units. The project consists of more than a million square feet of space.

Highlands Ranch - Pittsburg
PHA prepared a traffic study for this Seeno Home Subdivision on Buchanan Road.
The project consists of more than 600 single-family homes along with a school and a fire station. PHA recommended adding left-turn lanes and right-turn lanes to accommodate site traffic and also designed traffic signals at the project entrances.

I-680/Bollinger Canyon Road On-off-ramp Traffic Signal - San Ramon
PHA conducted a traffic operation study to evaluate the potential impact of adding a left-turn lane to provide access to the Caltrans' park and ride lot near the interchange. PHA also completed a signal modification design plan for the intersection approved by Caltrans.

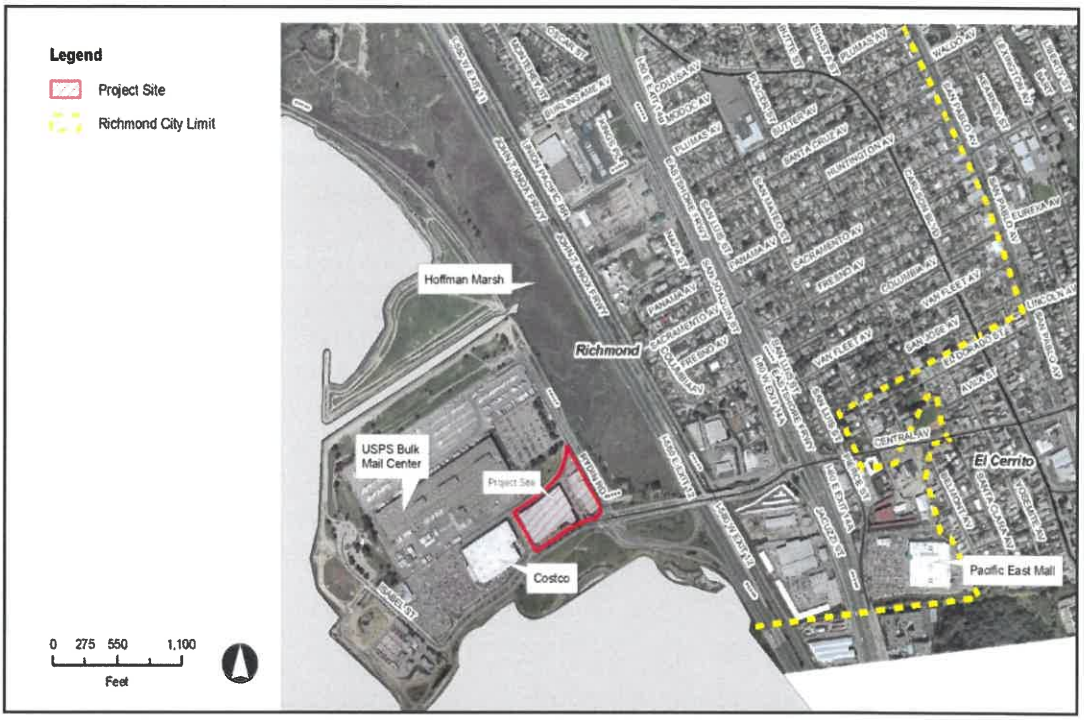
MacArthur Boulevard Parking and Access Study - San Leandro

PHA recently conducted a parking traffic operation study to evaluate the parking and access along the McArthur Boulevard Business Corridor and to recommend strategies to improve left-turn access and parking supply.



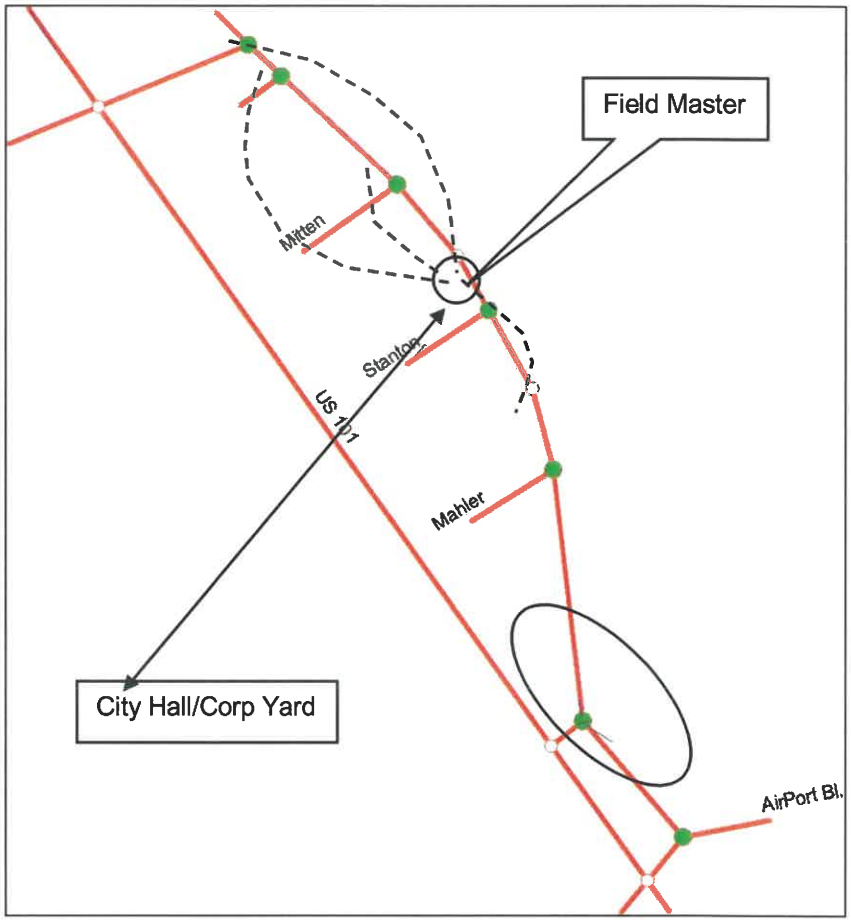
23rd Street Streetscape Project - Richmond

PHA worked with Callander Associates Landscape Architects and BKF Engineers to develop plans and alternatives for the 23 Street between The City of San Pablo and Macdonald Avenue in downtown Richmond. The purpose of the project is to narrow the street to reduce through traffic and to provide a better environment for pedestrians and local businesses. The corridor now is two-lane in each direction plus a pair of one-way couplet near Macdonald Avenue. PHA's role with the project is to evaluate design alternatives and assist the architect to provide a circulation plan that accommodates the needs of the local businesses.



Kohl's Department Store-Richmond

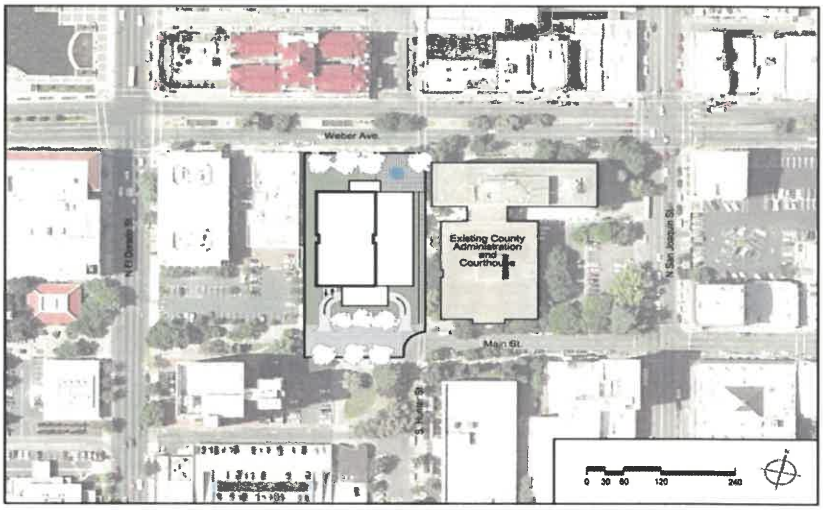
PHA recently completed a traffic study for a proposed Kohl's Department Store for the City of Richmond. The store consists of approximately 100,000 square feet of retail space on Central Avenue near I-580 freeway. The development plan also included a financial Institution on the same site. The study evaluated nearby intersections, the Central Avenue corridor, and I-580 and I-80 freeways. PHA recommended a mitigation package that consists of installing two traffic signals at the I-580 freeway ramps and relocating an existing traffic signal on Central/ Pierce Street further east to improve circulation in the area.

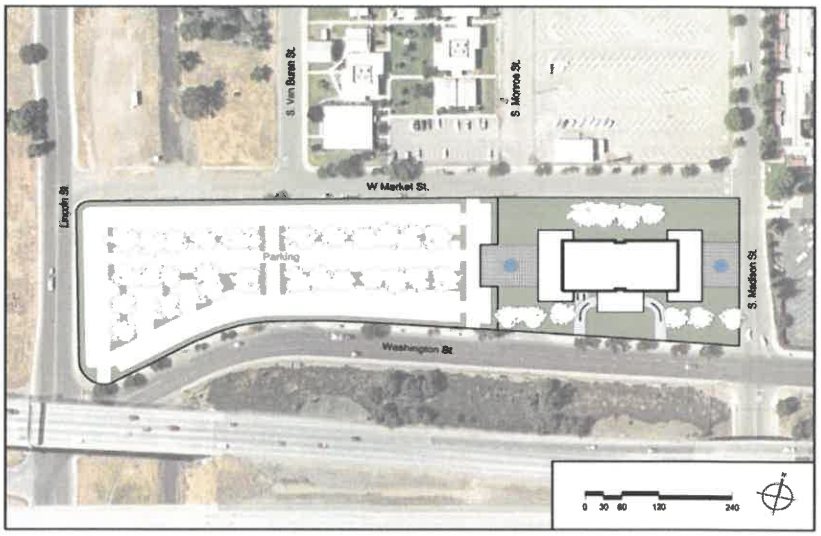


Bayshore Highway wireless interconnect - Burlingame-Millbrae
Option A (preferred)

Bayshore Highway Traffic Signal Interconnect

PHA is currently working with the City of Burlingame to interconnect traffic signals along the Bayshore highway. The project will interconnect five traffic signals using wireless technology. The project includes two traffic signals in the City of Millbrae and three in the City of Burlingame.





San Joaquin County Courthouse-Stockton

PHA recently completed a traffic study as part of an EIR to evaluate the potential impact of the proposed county courthouse in downtown Stockton. The study evaluates up to five potential sites in the downtown area. PHA is working with Tetra Tech EMI for the project.

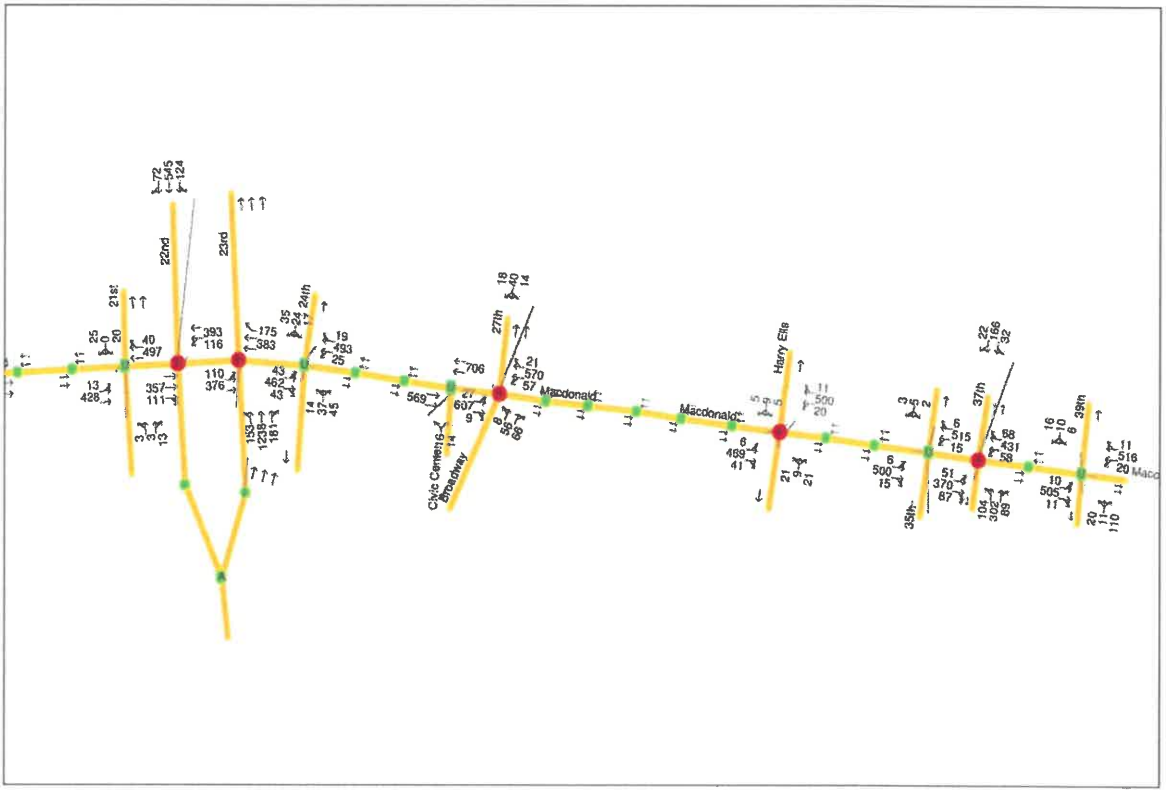
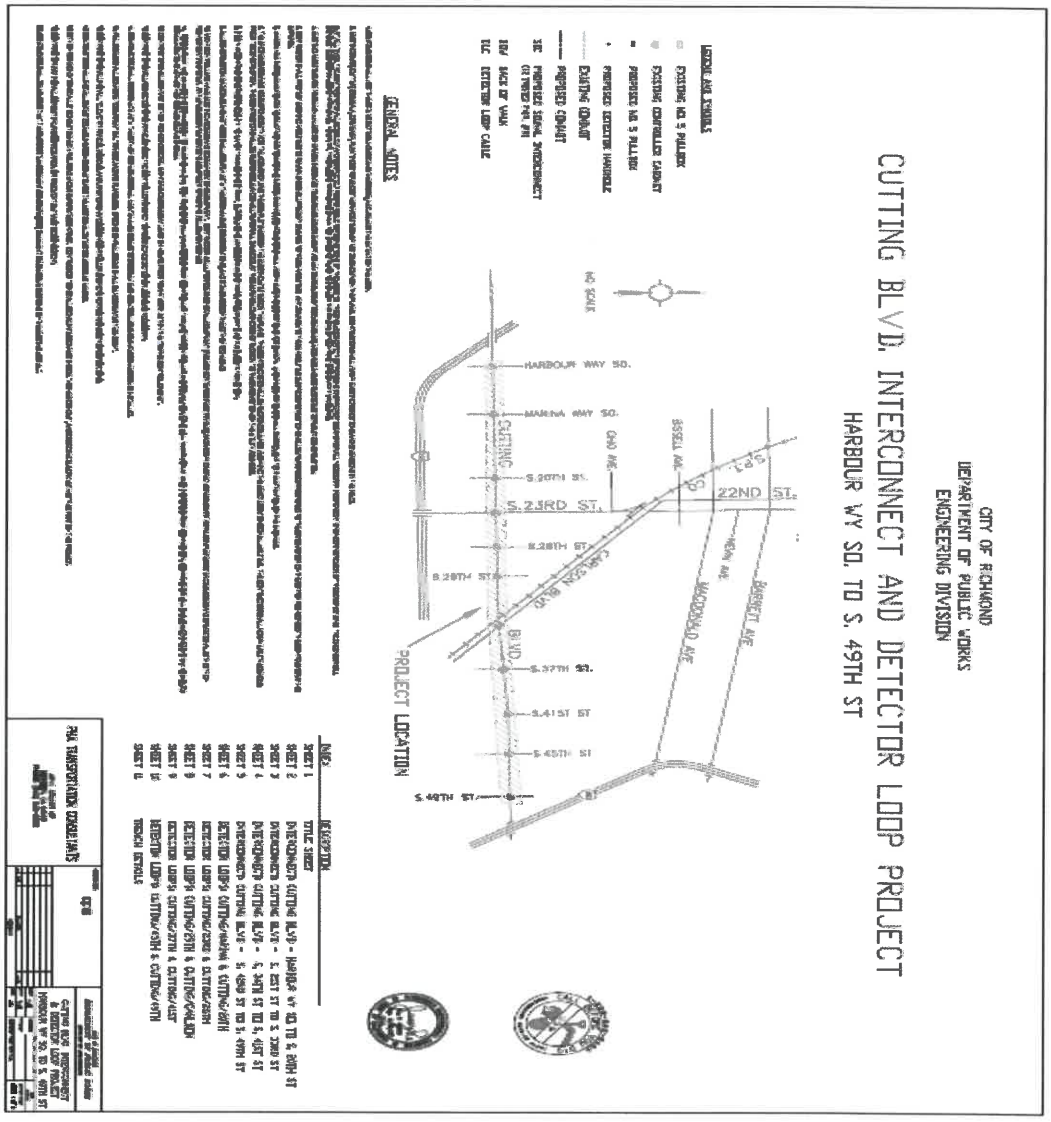


Figure 6 Existing PM Peak Hour Volumes and LOS
Macdonald Avenue - Richmond

PHA Transportation Consultants
12/23/2008

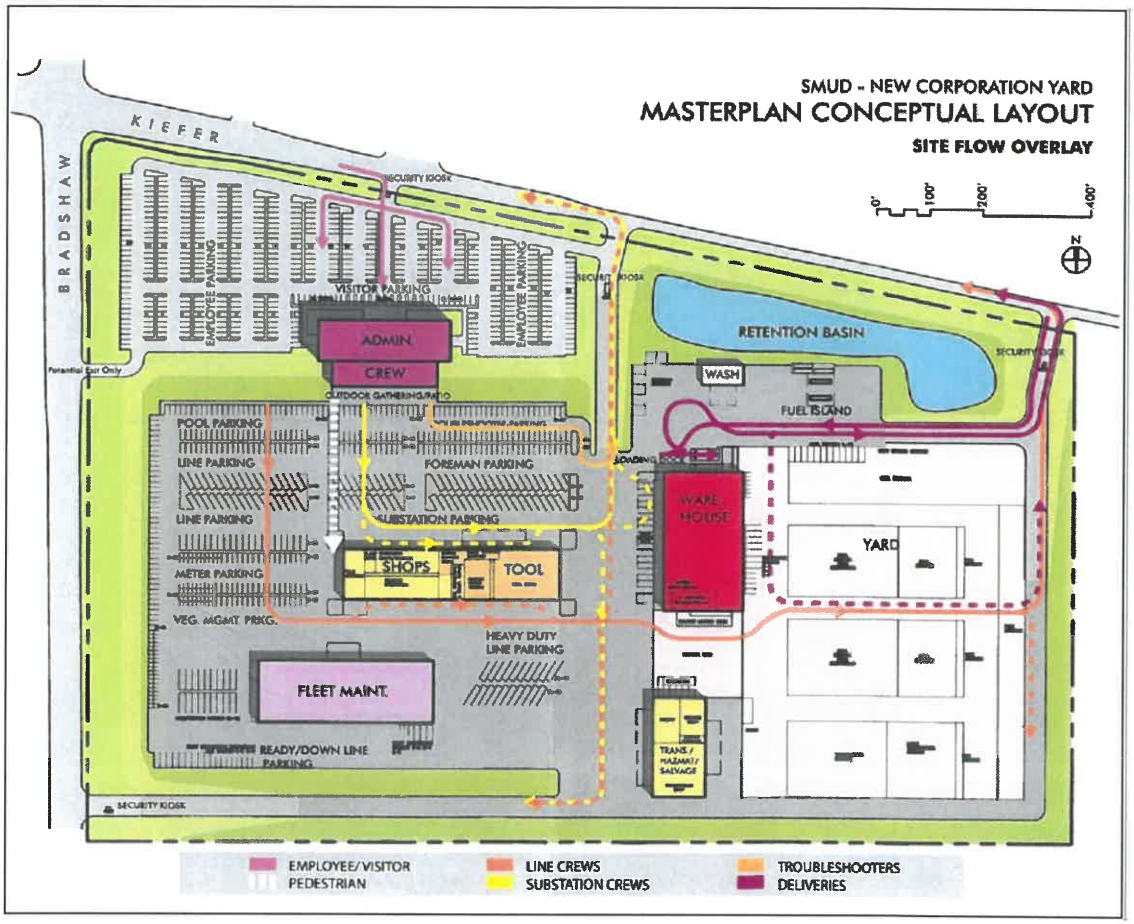
Macdonald Avenue Streetscape Project-Richmond

PHA-assisted WRT Landscape Architects and BKF Engineers in preparing plans for a streetscape project. The project area includes about 20 city blocks along Macdonald. PHA will evaluate various design alternatives for the corridor and prepare signal modification plans for at least four of the traffic signals.



Cutting Boulevard Traffic Signal Interconnect and timing Coordination-Richmond

PHA designed a traffic signal interconnect system for the City of Richmond in 2010 and prepared timing coordination plans for the corridor. The project was funded by The Bay Area Air Quality Management District. PHA also is helping with city staff on various traffic signal timing and operation issues along the corridor as part of the monitoring contract.



SMUD Corporation Yard Relocation - Sacramento

Working as a sub-consultant to Burleson consultant in Sacramento, PHA has recently completed a traffic study for Sacramento Municipal Utility District (SMUD). The study evaluated the potential traffic impact associated with the relocation of its corporation yard and from the City of Sacramento to a new location in the County near Rancho Cordova. The study evaluated traffic operation along major arterial street corridors including I-50 and developed a mitigation package to minimize project impact, which includes installing traffic signals and adding turning lanes, and acceleration/deceleration lanes. The study also recommended changes to the site design to enhance internal circulation and access.

PHA Recently completed a traffic study for EBMUD (East Bay Municipal Utility District) to evaluate the potential traffic impact of relocating and upgrading its pumping plant in Lafayette. For the project, PHA evaluated traffic operation for various construction stages and lane closures and recommended a series of mitigation to satisfy The City of Lafayette and CEQA requirements.

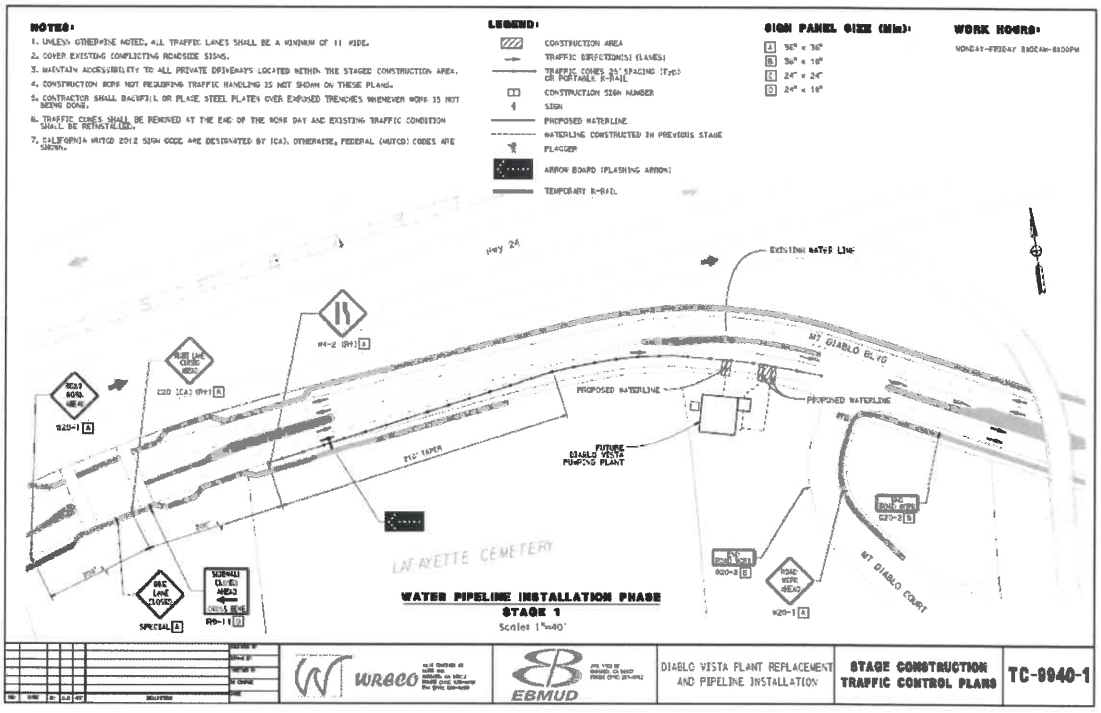


Figure 4 Stage 1 Water Pipeline Installation (Source: WRECO) - Diablo Vista Pumping Plant Replacement Traffic Study - PHA Transportation Consultants

Please follow the links below to view a traffic operations simulation for various scenarios:

Existing AM Peak Hour http://youtu.be/gUWRrqSo1-g
Existing AM Peak Hour-Stage 1 http://youtu.be/7v8aeG_ly_A
Existing AM Peak Hour-Stage 2 http://youtu.be/EESCSYevAN0
Existing AM Peak Hour-Stage 3 http://youtu.be/dzJBvltSejU
Existing AM Peak Hour-Stage 4 http://youtu.be/_GiNNBKtiFA

Existing PM Peak Hour http://youtu.be/w2K9Z-O0DqU
Existing PM Peak Hour-Stage 1 http://youtu.be/3kiMSwA9q8g
Existing PM Peak Hour-Stage 2 http://youtu.be/lUsH--YvWHw
Existing PM Peak Hour-Stage 3 http://youtu.be/FwCS2nDEpVg
Existing PM Peak Hour-Stage 4 http://youtu.be/1A8LZ5SqG5o

Professional Staff

Pang Ho, AICP, Principal

Over 20 years of experience in transportation planning, demand forecasting, thoroughfare planning, traffic operations analysis, parking analysis, capacity analysis, and signal timing analysis/timing plan development, project management, and business development. Hands-on experience in capacity analysis methodologies such as Highway Capacity Manual Method (HCM) Circular 212, and other recognized volume-to-capacity ratio methods. Extensive use of computer software programs in transportation planning and engineering

EDUCATION

M.U.P.	Transportation Planning - University of Kansas 1982
B.A.	Economics and Political Science – Texas A&M University 1979
B.S.	Business Administration - Hong Kong Baptist College 1977

AFFILIATIONS

Institute of Transportation Engineers (ITE) - Associate Member
American Institute of Planner (APA) - Member
American Institute of Certified Planner (AICP) Member

PROFESSIONALHISTORY

1992-present	**PHA Transportation Consultants**, Berkeley, CA. Principal
1990-1992	TJKM Transportation Consultants, Pleasanton, CA. Senior Transportation Engineer/Project Manager
1988-1990	H.W. Moore Associates, Boston MA. Transportation Engineer/Project Manager
1986-1988	City of Fort Worth, Fort Worth, TX. Associate Transportation Planner
1985-1986	City of Waco, TX. Planner, Advanced Planning
1982-1984	City of Wichita Falls, Wichita Falls, Community Development Department Transportation Planner TX.
1980-1982	University of Kansas Transportation Research Center Research Assistant

AREA OF EXPERTISE

Traffic Impact/Circulation Studies/Parking Studies/Traffic Operation Studies
Neighborhood Traffic Studies
Traffic Calming
Traffic Signal timing Plans
Capacity (LOS) Analysis

PHA Statement of Qualification

Paul Hom, C. E. T.E. - Associates

Has more than six years of professional experience in various aspects civil and traffic engineering.

EDUCATION

M.S.C.E. Civil Engineering (transportation design and planning)) - Brigham Young University Provo, UT 1999

B.S.C.E. Civil Engineering (water resource) - Brigham Young University Provo, UT 1996

Affiliation
Institute of Transportation Engineers (ITE) - Associate Member
American Society of Civil Engineer (ASCE)
Professional Engineer in Civil Engineering, California
Professional Engineer in Civil Engineering, California, Certificate No. 63574
Professional Engineer in Traffic Engineering, California, Certificate No. 2444

PROFESSIONAL HISTORY

2001 – present, Associate Engineer, City of Modesto, CA
2001 – Present, PHA Transportation Consultants, Berkeley, CA
2000 – 2001 Assistant Traffic Engineer, City of Oakland, CA
2000 – 2000 Transportation Engineer, California Department of Transportation

AREA OF EXPERTISE

Traffic Signal Design
Traffic Signal Systems
Highway Operations
Signal System interconnect
Traffic LOS Analysis
Traffic studies
Grant Application
GIS Applications in Transportation

PHA Statement of Qualification

Charles E. DeLeuw Jr. T.E. - Associates

Has more than 40 years of professional experience in traffic engineering, transportation planning, and development site plan review. Mr. Deleuw is working with PHA on a part-time basis.

EDUCATION

B.S. GeologyUniversity of Arizona 1957
Northwestern Traffic Institute
BrownUniversity

AFFILIATION Institute of Transportation Engineers (Life Member)
Professional Engineer in Traffic Engineering, California
Certificate No. 541

PROFESSIONAL HISTORY

2005-Present Traffic Engineering Consultant (Part-time)
2000-2005 Traffic Engineer (Part-time)
1985-1999 Traffic Engineer City of Berkeley
1979-1985 Principal. DKS Associates Oakland
1965-1979 Senior Traffic Engineer
1960-1965 Traffic Engineer DeLeuw Cather & Co. San Francisco
1957-1960 Assistant Soils Engineer DeLeuw Cather Co. Chicago

AREA OF EXPERTISE

Traffic Operations
Traffic Calming
Bicycle & Pedestrian Planning and Studies
Traffic Accident Analysis
Development Site Plan Review