Head Royce School Planned Unit Development Permit (PUD) Project

Draft Environmental Impact Report
Technical Appendices 1A through 7C

SCH #2019029032

November 2021

Lead Agency:
City of Oakland

Prepared by:
Lamphier-Gregory

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Head Royce School Planned Unit Development (PUD) Project Draft EIR

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Notice of Preparation

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Head-Royce School Planned Unit Development Permit (PUD) Project

Lead Agency: City of Oakland
Contact Person: Rebecca Lind, Planner III
Mailing Address: 250 Frank H. Ogawa Plaza, Suite 2114
Phone: (510) 238-3473
City: Oakland, CA
Zip: 94612
County: Alameda

Project Location: County: Alameda
City/Nearest Community: Oakland
Cross Streets: Lincoln Avenue and Alida Street
Zip Code: 94602
Longitude/Latitude (degrees, minutes and seconds): 37 °48 ′32 ″N / 122 °12 ′08 ″W
Total Acres: 22
Assessor's Parcel No.: South Campus: 29-1009-06
Section: ______ Twp.: ______ Range: ______ Base: ______
Within 2 Miles: State Hwy #: SHW-13, I-580
Waterways: Sausal Creek
Airports: ______
Railways: ______
Schools: many

Document Type:

CEQA: ☒ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ______ Other: ______

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other: ______

Local Action Type:

☐ General Plan Update
☐ General Plan Amendment
☐ General Plan Element
☐ Community Plan
☐ Specific Plan
☒ Master Plan
☒ Planned Unit Development
☐ Site Plan
☐ Rezone
☐ Prezone
☒ Use Permit
☐ Land Division (Subdivision, etc.)
☐ Annexation
☐ Redevelopment
☐ Coastal Permit
☐ Other: ______

Development Type:

☐ Residential: Units ______ Acres ______
☐ Office: Sq.ft. ______ Acres ______ Employees ______
☐ Commercial: Sq.ft. ______ Acres ______ Employees ______
☐ Industrial: Sq.ft. ______ Acres ______ Employees ______
☒ Educational: see Project Description, below
☐ Recreational: ______
☐ Water Facilities: Type ______ MGD ______
☐ Transportation: Type ______
☐ Mining: Mineral ______
☐ Power: Type ______ MW ______
☐ Waste Treatment: Type ______ MGD ______
☐ Hazardous Waste: Type ______
☐ Other: ______

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities
☒ Recreation/Parks
☒ Schools/Universities
☐ Septic Systems
☒ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation
☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Growth Inducement
☒ Land Use
☒ Cumulative Effects
☐ Other: ______

Present Land Use/Zoning/General Plan Designation:

Land Use = Institutional / Zoning = RD-1 / General Plan = Institutional

Project Description: *(please use a separate page if necessary)*

Head-Royce School proposes to integrate its existing 14-acre private school Campus with an adjacent 8-acre property to create a unified 22-acre, K-12 private school campus. The project would rehabilitate and reuse four existing buildings (3 locally designated as historic), potentially use 1 building for temporary faculty housing, remove eight existing buildings, and construct a new Performing Arts Center and approximately 2,500 square feet of other ancillary building space, for a net increase of approximately 1,900 square feet. A new Loop Road would provide off-street queuing space and student drop-off/pick-up locations (public and private buses would still drop-off and pick-up on Lincoln Avenue). The project would increase the maximum allowed students enrollment from 906 to 1,250 students, an increase of 344 students.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

____ Air Resources Board	X Office of Historic Preservation
____ Boating & Waterways, Department of	____ Office of Public School Construction
____ California Emergency Management Agency	____ Parks & Recreation, Department of
____ California Highway Patrol	____ Pesticide Regulation, Department of
X Caltrans District #4	____ Public Utilities Commission
____ Caltrans Division of Aeronautics	X Regional WQCB # 2
____ Caltrans Planning	____ Resources Agency
____ Central Valley Flood Protection Board	____ Resources Recycling and Recovery, Department of
____ Coachella Valley Mtns. Conservancy	____ S.F. Bay Conservation & Development Comm.
____ Coastal Commission	____ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____ Colorado River Board	____ San Joaquin River Conservancy
____ Conservation, Department of	____ Santa Monica Mtns. Conservancy
____ Corrections, Department of	____ State Lands Commission
____ Delta Protection Commission	____ SWRCB: Clean Water Grants
____ Education, Department of	X SWRCB: Water Quality
____ Energy Commission	____ SWRCB: Water Rights
____ Fish & Game Region # ____	____ Tahoe Regional Planning Agency
____ Food & Agriculture, Department of	____ Toxic Substances Control, Department of
____ Forestry and Fire Protection, Department of	____ Water Resources, Department of
____ General Services, Department of	
____ Health Services, Department of	____ Other: ____
____ Housing & Community Development	____ Other: ____
X Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date February 1, 2019 Ending Date March 11, 2019

Lead Agency (Complete if applicable):

Consulting Firm: Lamphier-Gregory
Address: 1944 Embarcadero
City/State/Zip: Oakland, CA 94606
Contact: Scott Gregory
Phone: (510) 535-6690

Applicant: Mr. Jerry Mullaney, CFO, Head-Royce School
Address: 4315 Lincoln Avenue
City/State/Zip: Oakland, CA 94602
Phone: (510) 228-1525

Signature of Lead Agency Representative: ____ **Date:** 1/28/19

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

NOTICE OF PREPARATION (NOP)
OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE
HEAD-ROYCE SCHOOL PLANNED UNIT DEVELOPMENT PERMIT (PUD) PROJECT

The City of Oakland's Bureau of Planning is preparing an Environmental Impact Report ("EIR") for the proposed Head-Royce School Planned Unit Development Permit (PUD) Project (the Project) as described below, and is requesting comments on the scope and content of the EIR. A description of the Project and its location, together with a summary of probable environmental effects that will be addressed in the EIR are included herein. The City has **not** prepared an Initial Study, and all CEQA topics will be addressed in the EIR.

The EIR for the proposed Project is being prepared in compliance with the California Environmental Quality Act (CEQA) (California Public Resources Code Sections 21000 et.seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 et.seq.). The City of Oakland is the Lead Agency for the Project and is the public agency with the greatest responsibility for approving the Project. Pursuant to CEQA Guidelines Section 15082(a), upon deciding to prepare an EIR, the City as Lead Agency must issue a Notice of Preparation (NOP) to inform the Governor's office of Planning and Research, trustee and responsible agencies, and the public of that decision.

The purpose of this NOP is to provide information describing the Project and its potential environmental effects to those who may wish to comment regarding the scope and content of information to be included in the EIR. This NOP is being sent to responsible agencies and other interested parties. Responsible agencies are those public agencies, besides the City of Oakland, that may also have a role in considering approving or carrying out the Project. The City encourages responsible agencies and the Office of Planning and Research to provide this information to the City so that the City can ensure the Draft EIR meets the needs of those agencies. When the Draft EIR is published, it will be sent to all responsible agencies and to others who respond to this NOP or who otherwise indicate that they would like to receive a copy. The Draft EIR will also be available for review at the City of Oakland at the address identified below.

SUBMITTING COMMENTS IN RESPONSE TO THIS NOP: Comments that address the scope of the Draft EIR and any questions should be directed in writing to:

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612
Phone: (510) 238-3472
Fax: (510) 238-4730
E-mail: rlind@oaklandnet.com

Written comments on the NOP must be received at the above mailing or e-mail address **by 5:00 p.m. on March 11, 2019**. Please reference **Case Number PLN18532-ER01** in all correspondence. Comments made or submitted at the 6:00 p.m. meeting of the City of Oakland Planning Commission on February

20 and the City of Oakland Landmarks Preservation Advisory Board on March 11 will also be accepted. Comments should focus on potential impacts of the Project on the physical environment. Commenters are encouraged to identify ways that potential adverse effects resulting from the Project may be minimized, and to identify reasonable alternatives and mitigation measures to the proposed Project. Comments and suggestions as to the appropriate scope of analysis in the EIR are invited from all parties, and will be received at the EIR Scoping Meetings to be held before the City Planning Commission and City Landmarks Preservation Advisory Board, as noticed below.

EIR SCOPING MEETINGS:

The **City of Oakland Planning Commission** will conduct a public meeting on the scope of the EIR for the Project on **February 20, 2019 at 6:00 p.m**. in Hearing Room #1, City Hall, 1 Frank H. Ogawa Plaza.

The **City of Oakland Landmarks Preservation Advisory Board** will conduct a public meeting on the scope of the EIR for the Project on **March 11, 2019 at 6:00 p.m**. in Hearing Room #1, City Hall, 1 Frank H. Ogawa Plaza.

PROJECT TITLE: Head-Royce School Planned Unit Development Permit (PUD) Project

PROJECT LOCATION: The Project address is Head-Royce School at 4315 Lincoln Avenue, Oakland (see **Figure 1**). The Project site includes Assessor's Parcel Numbers 29A-1367-4.4 (4315 Lincoln Avenue), 29-100906 (4368 Lincoln Avenue); 29A-1367-1-14 (4465 Lincoln Avenue), and an additional parcel owned by Ability Now Bay Area and used by Head-Royce School at APN 29-1009-10-5 (4500 Lincoln Avenue). Head-Royce School owns two properties on the north side of Lincoln Avenue (North Campus at 4315 and 4465 Lincoln) and one property on the south side of Lincoln Avenue (South Campus at 4368 Lincoln Avenue) and has an agreement with Ability Now Bay Area for non-exclusive use of the playfield at 4500 Lincoln. The Head-Royce School is located generally below the Ascension Greek Orthodox Cathedral and in the Lincoln Highlands/Oakmore neighborhood. The Project primarily involves the South Campus at 4368 Lincoln Avenue, formerly known as the Lincoln Child Center, as shown in **Figure 2** (attached).

PROJECT SPONSOR: Head-Royce School

EXISTING CONDITIONS: The Head-Royce School is an independent co-educational college preparatory school that serves students from kindergarten through high school. The School has been on its current 14-acre site on the north side of Lincoln Avenue (the North Campus, at 4315 and 4465 Lincoln Avenue) since 1964. The North Campus includes 12 buildings housing classrooms and administrative functions, a library, a gym and an auditorium, a café and a swimming pool. Attached to the North Campus on a separate parcel is a multi-purpose sports field, outdoor tennis courts and various other outdoor play areas. A prior PUD permit originally granted in 2006 and as amended in 2016 and 2018 governs use of the North Campus for school activities up to an enrollment of 906 students during the school year and 780 students during the summer. Current enrollment is approximately 881 students, with 100 teaching faculty members and approximately 65 professional and administrative staff. A portion of the property at 4500 Lincoln Avenue (across from the North Campus sports field) is leased by the School and used (pursuant to a 2018 PUD amendment) as a playfield for school athletic practices.

In 2013, Head-Royce School purchased the 8-acre former Lincoln Child Center property (the South Campus, at 4368 Lincoln Avenue), immediately across Lincoln Avenue from the North Campus. The South Campus currently consists of 12 buildings formerly used as classrooms, administrative space, storage and dormitories, occupying approximately 43,860 square feet of building space. Now primarily vacant, certain of these buildings are used for administrative and storage purposes by the School.

PROJECT DESCRIPTION: Head-Royce School wishes to integrate the North Campus with the South Campus to create a unified 22-acre K-12 school. As part of this Project, the School proposes to rehabilitate and reuse four of the existing buildings on the South Campus (Buildings 0, 1, 2 and 9) and to remove eight existing buildings. New construction will include a new 15,900 square-foot 32-foot tall Performing Arts Center building (containing up to 450 seats) for school-related purposes only, and construction of approximately 2,500 square feet of other ancillary building space. The School also seeks to provide interim housing within an existing building on the South Campus (Building 9) for newly hired faculty and staff while they secure permanent housing. With demolition of approximately 16,500 square feet of building space and construction of approximately 18,400 square feet of new space, there would be a net increase of approximately 1,900 square feet of building space on the site. Other proposed physical improvements to the South Campus (see **Figure 3**, attached) include:

- A new internal, one-way Loop Road would ring the internal perimeter of the South Campus. The entrance to this Loop Road would be at the existing curb cut and driveway off Lincoln Avenue at the upper end of the South Campus, and the exit would be at a similar existing curb cut and driveway off Lincoln at the lower end of the South Campus. The new Loop Road would provide approximately 1,000 linear feet of on-Campus (off-street) queuing space, as well as drop-off/pick-up locations. Other than public and private bus loading and unloading, all pick-up and drop-off activity for the School would occur along this Loop Road, rather than as currently occurs along Lincoln Avenue.

- The Lincoln Avenue right-of-way would be reconfigured at the upper Loop Road entrance to accommodate a downhill left-turn pocket and an uphill right-turn pocket into the South Campus, and a new traffic signal would control this intersection. The existing traffic signal that controls pedestrian movement across Lincoln Avenue at the existing Head-Royce guardhouse would be moved to the lower Loop Road exit intersection. The uppermost traffic signal at the existing entrance to the Head-Royce parking lot (Lot F in the North Campus) would be retained.

- The existing 129 parking spaces within the South Campus would be reconfigured to accommodate new construction and the Loop Road, and an additional 25 more parking spaces would be added, for 154 total parking spaces on the South Campus. As enrollment increases (see below) the School would either add stacked parking at the existing Lot F on the North Campus, or reduce parking demand by prohibiting some or all students from driving to school.

- New landscaping within the South Campus would include ADA-accessible paths and trails, secondary pathways with staircases, a central commons space, outdoor wood deck classrooms, and new planting with native, drought-tolerant species.

- The Project proposes two options to provide a pedestrian connection between the North and South Campus. The first option is construction of a pedestrian tunnel under Lincoln Avenue. The tunnel would be 18-feet wide and approximately 12 feet tall, and constructed underneath Lincoln Avenue at about the mid-point of the South Campus frontage on Lincoln. Access to the tunnel would only be through property owned by the school and it would be not being publicly accessible. The second option would be to continue use of an at-grade pedestrian crossing across Lincoln Avenue, controlled by the relocated traffic signal at the southerly exit of the South Campus Loop Road, where it intersects with Lincoln Avenue.

The proposed changes to the North Campus consist of:

- The opening for the proposed pedestrian tunnel;

- Reuse of the existing MEW Auditorium as a gymnasium, its original use; and

- Reuse of existing administrative and classroom space on the North Campus whose current functions are relocated to the South Campus, for classroom or other administrative functions.

As part of the Project, Head Royce School proposes over a period of years to increase the allowed maximum student population from 906 students to 1,250 students during the school year, an increase of 344 students over currently allowed enrollment. As part of this enrollment increase, the School may offer a pre-kindergarten (pre-K) option.

PROBABLE ENVIRONMENTAL EFFECTS: As indicated above, the City of Oakland is preparing an EIR for the Project that will analyze potential physical environmental effects of the Project related to each environmental topic for which the City has established CEQA thresholds. An Initial Study has not been prepared, and all relevant topics will be addressed. Based on any comments received during the NOP review period (including comments received at the Scoping Meetings as noticed above), the anticipated scope of work for the EIR may be amended to address any new issues raised. Based on known site conditions and anticipated potential effects, several technical studies, including but not limited to the following will be conducted:

- A Historic Resource Evaluation (HRE) report will be prepared for the Head-Royce South Campus. The HRE will include physical descriptions of buildings and landscape features based on a field survey, will discuss the Campus's historic context and will evaluate the potential significance of all buildings or site features 45 years or more in age for individual eligibility for the California Register or as historical resources under CEQA. Additionally, the Head-Royce South Campus will be evaluated as a potential historic district inclusive of cultural landscape.

- The Traffic Impact Analysis will assess the impacts of the Project on total vehicles miles travelled (VMT), and will compare VMT generated by the Project to applicable City CEQA thresholds. The School will be providing an updated Head-Royce TDM Plan, and the EIR will review this updated TDM Plan to assess its effectiveness in reducing vehicle trips.

- The proposed pedestrian tunnel under Lincoln Avenue will be assessed for potential geotechnical and structural issues.

- A Cultural Resources Assessment Report will be prepared to meet CEQA reporting standards. The report will include prehistoric and historic context as relevant to potential archaeological sensitivity, a discussion of the results of a records and literature search, and the results of Native American communication and outreach efforts.

- A Biological Resources Report will be prepared. This report will include a description of existing biological conditions, an assessment of potential presences of special-status species and any potentially sensitive/regulated habitats that may occur on the site, potential impacts on existing biological resources, and mitigation measures necessary to mitigate potentially significant impacts.

- The Project would involve removal of certain trees for new construction. Consistency of proposed tree removal with City of Oakland Tree Permit requirements for avoidance and/or replacement planting will be assessed.

- Construction-period air quality impacts resulting from the Project will be assessed using air dispersion modeling and methodologies as recommended by Air District policy guidance.

The Draft EIR will also examine a reasonable range of alternatives to the Project, including the CEQA-mandated No Project Alternative, and other potential alternatives that may be capable of reducing or avoiding potential environmental effects.

	______________________________
Case File Number PLN18532-ER01	Rebecca Lind, Planner III
February 1, 2019	City of Oakland Planning and Building Department

Figure 1
Project Location

Figure 2
Head-Royce School Properties

Source: Head-Royce School Draft Preliminary Development Plan, SOM

Figure 3
Head-Royce School South Campus Master Plan

Source: Head-Royce School Draft Preliminary Development Plan, SOM

Appendix 1B

Responses to Notice of Preparation

Letters, Public Agencies

EBMUD, with attachments
Native American Heritage Commission

Groups

Veneruso & Moncharsh, March 11, 2019 (Final Letter)
Karen Carona, Neighborhood Steering Committee, 3-07-19

Letters, Individuals

Eric Bachman
Roberta Dempster
Alan Fleming
Eric S. Haiman, with attachments
Jodi Lerner
John Prestianni
Michael Solis
Rod Thompson
Thomas White
Frank Zamacona

Emails:

Kimberly Aikawa-Olin, with attachments
Carl Boe
Meg Bowerman
Tom Branca
Mary Lou Carlson
Karen Caronna
Pam Claassen
Donna Egan
Robert Einspruch
Arthur Fogelman
Lori Gieleghem
Suzanne Harris
David Johnson
Sharon Linhares
Anne Purcell, with attached "Questions for EIR"
Bob Regent
Deborah Royal and Hollis Matson
Suzanne Schmutz
Alexis Schroeder
Diana Shiba
Jeff Styer
Kimberley Urbano
Joan White
Karen Wong
Karen Young

EAST BAY
MUNICIPAL UTILITY DISTRICT

February 26, 2019

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: Notice of Preparation of a Draft Environmental Impact Report for the Head-Royce School Planned Unit Development Permit (PUD) Project (Case Number PLN18532-ER01)

Dear Ms. Lind:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Head-Royce School Planned Unit Development Permit Project located in the City of Oakland (City). EBMUD has the following comments.

GENERAL

EBMUD owns and operates water mains within Lincoln Avenue that will be affected by the construction of a pedestrian tunnel under the roadway. These water mains are necessary to provide continuous service to EBMUD customers in the area. If modifications to the streets occur that require water main relocation, the relocation costs would be at the project sponsor's expense. A minimum 20-foot-wide right-of-way is required for installation of new water mains. All costs associated with abandonment and relocation of water mains, relocation of water services, relocation of hydrants, pipeline extensions, and offsite improvements would be at the project sponsor's expense. The engineering, installation, and abandonment of water mains often require substantial lead time, which should be accounted for in the project sponsor's development schedule.

EBMUD owns and operates multiple rights-of-way (R/W) within the proposed development highlighted on the attached EBMUD Distribution Map (1506B480). In the North Campus, R/W 1059, a 15-foot-wide easement and R/W 5176, a 20-foot-wide easement, both provide access to a 16-inch water main for the Piedmont Pressure Zone. EBMUD also owns the 20-foot-wide easement, R/W 3174 within the North Campus. Along the eastern edge of the South Campus, R/W 1057 is a 50-foot-wide easement that also provides access to a 16-inch water main and an eight-inch water main. It is not clear from Figure 3 of the NOP, but the proposed 36-foot by 30-foot maintenance building may be within R/W 1057 and potentially on EBMUD's pipelines. The integrity of these pipelines needs to be maintained at all times. Any proposed construction activity in EBMUD rights-of-way would be subject to the terms and conditions determined by EBMUD including relocation of the water mains and/or rights-of-way at the project sponsor's expense.

WATER SERVICE

EBMUD's Piedmont Pressure Zone, with a service elevation between 325 and 500 feet, and EBMUD's Dingee Pressure Zone, with a service elevation between 500 and 600 feet, will serve the proposed development. The property currently has water service. Separate structures on a single parcel require separate water services. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions for providing water service to the proposed project. Engineering and installation of water services require substantial lead time, which should be provided for in the project sponsor's development schedule.

WASTEWATER SERVICE

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to accommodate the proposed wastewater flows from this project and to treat such flows provided that the wastewater generated by the project meets the requirements of the EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. The East Bay regional wastewater collection system experiences exceptionally high peak flows during storms due to excessive infiltration and inflow (I/I) that enters the system through cracks and misconnections in both public and private sewer lines. EBMUD has historically operated three Wet Weather Facilities (WWFs) to provide primary treatment and disinfection for peak wet weather flows that exceed the treatment capacity of the MWWTP. Due to reinterpretation of applicable law, EBMUD's National Pollutant Discharge Elimination System (NPDES) permit now prohibits discharges from EBMUD's WWFs. Additionally, the seven wastewater collection system agencies that discharge to the EBMUD wastewater interceptor system ("Satellite Agencies") hold NPDES permits that prohibit them from causing or contributing to WWF discharges. These NPDES permits have removed the regulatory coverage the East Bay wastewater agencies once relied upon to manage peak wet weather flows.

A federal consent decree, negotiated among EBMUD, the Satellite Agencies, the Environmental Protection Agency (EPA), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB), requires EBMUD and the Satellite Agencies to eliminate WWF discharges by 2036. To meet this requirement, actions will need to be taken over time to reduce I/I in the system. The consent decree requires EBMUD to continue implementation of its Regional Private Sewer Lateral Ordinance (www.eastbaypsl.com), construct various improvements to its interceptor system, and identify key areas of inflow and rapid infiltration over a 22-year period. Over the same time period, the consent decree requires the Satellite Agencies to perform I/I reduction work including sewer main rehabilitation and elimination of inflow sources. EBMUD and the Satellite Agencies must jointly demonstrate at specified intervals that this work has resulted in a sufficient, pre-determined level of reduction in WWF discharges. If sufficient I/I reductions are not achieved, additional investment into the region's wastewater infrastructure would be required, which may result in significant financial implications for East Bay residents.

To ensure that the proposed project contributes to these legally required I/I reductions, the lead agency should require the project applicant to comply with EBMUD's Regional Private Sewer Lateral Ordinance. Additionally, it would be prudent for the lead agency to require the following mitigation measures for the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent I/I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or Satellite Agency ordinances.

WATER CONSERVATION

The proposed project presents an opportunity to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning Section at (510) 287-1981.

Sincerely,

David J. Rehnstrom

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:CC:dks
sb19_030.doc

Attachment: EBMUD Distribution Map (1506B480)

cc: Head Royce School
4315 Lincoln Avenue
Oakland, California 94602

EAST BAY MUNICIPAL UTILITY DISTRICT

Potable Distribution System

- Regular Pipeline
- Service Lateral
- System Valve
- Check Valve
- Change of Pipe ID
- Rate Control Station
- Regulator
- Water Flow Meter
- Manhole
- Service Connection
- Hydrant
- Water Facility
- Pump Station

Supply System

- Supply Main
- Raw Service Connection

Recycled Distribution System

- Recycled Main
- Service Lateral
- Hydrant
- Service Connection
- Recycled Facility

Wastewater System

- Wastewater Interceptor

Landbase

- EBMUD Right of Way
- Shared Right of Way
- Right of Way Crossing
- EBMUD Property

N

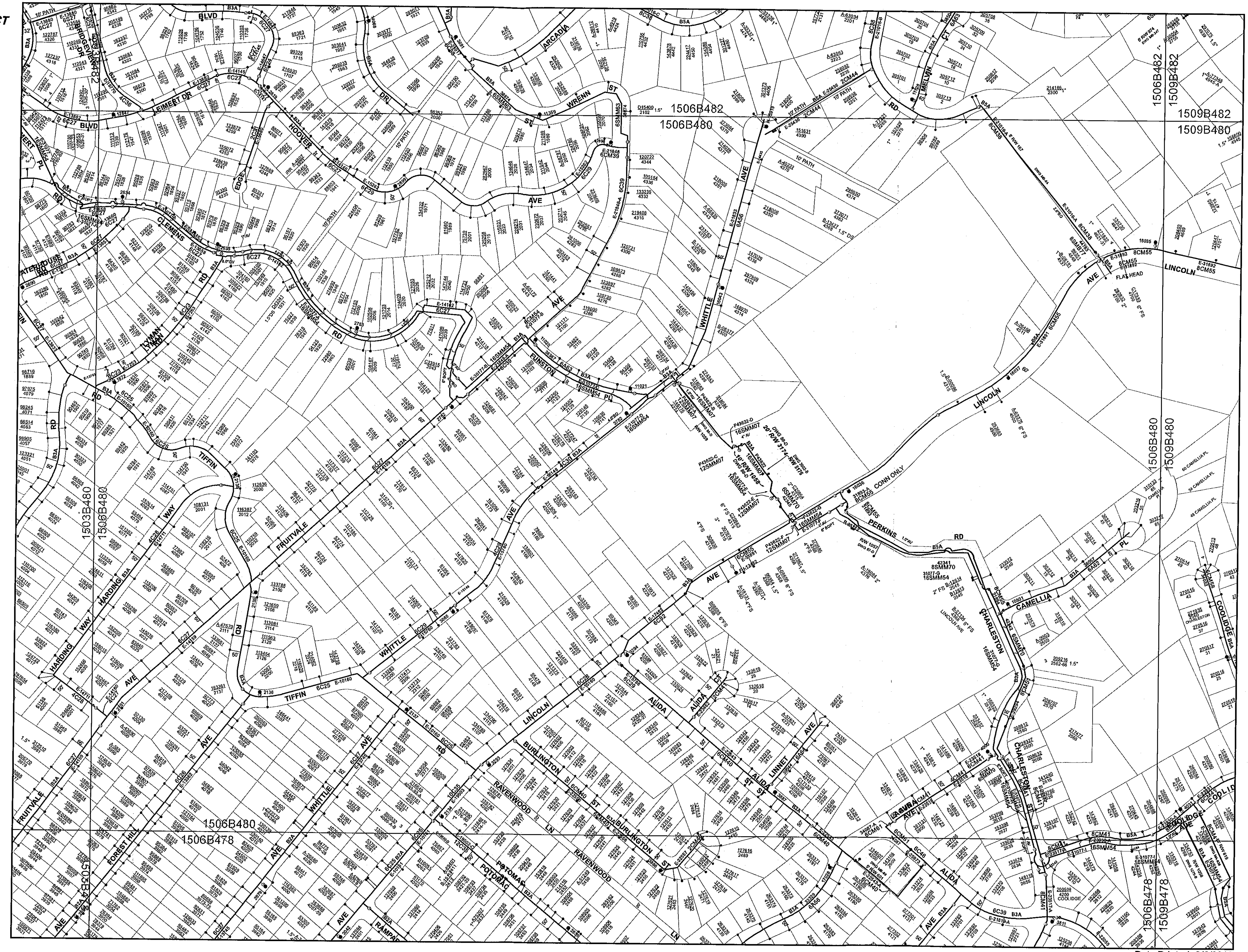
0 125 250 500

Feet

This information is furnished as a public service by East Bay Municipal Utility District. The District makes every effort to produce and publish the most current and accurate information possible. This information must be accepted and used by the recipient with the understanding that the District makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability for the use of this information. Furthermore, the District assumes no liability associated with the use or misuse of such information. Please notify the District if discrepancies are found.

By receipt of requested documents, the DOCUMENT RECIPIENT agrees that he or she, and/or any other authorized representatives of the DOCUMENT RECIPIENT, will provide no copy (nor partial copy) to any other person or agency, will not redistribute any document to any other entity, business or individual, nor use the document for other than the specified purpose. At the point the document is no longer required for use by the DOCUMENT RECIPIENT, the data shall be returned to the District or destroyed.

1506B480



Date Printed: 2/6/2019

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

March 6, 2019

Rebecca Lind
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2114
Oaklnad, CA 94612

RE: SCH# 2019029032 Head-Royce School Planned Unit Development Permit (PUD) Project, Alameda County

Dear Ms. Lind:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
   a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
   b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
   a. If part or all of the APE has been previously surveyed for cultural resources.
   b. If any known cultural resources have already been recorded on or adjacent to the APE.
   c. If the probability is low, moderate, or high that cultural resources are located in the APE.
   d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
   b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:

Gayle.Totton@nahc.ca.gov.

Sincerely,

Nancy Gonzalez
for

Gayle Totton
Associate Governmental Program Analyst

cc: State Clearinghouse

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DONNA M. VENERUSO (d.'09)
LEILA H. MONCHARSH

March 11, 2019

City of Oakland
Community and Economic Development Agency
Planning and Zoning Services Division
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, California 94612
Attention: Rebecca Lind
By Email: rlind@oaklandca.gov

RE: PLN15152-ER-01 - Head-Royce School Expansion Plan

Dear Ms. Lind:

I represent the Neighborhood Steering Committee and am a neighbor of property owned by Head Royce School (HRS). This is in response to the City's scoping session for preparation of an environmental impact report (EIR).

On pages 4-5 of the NOP, the City lists the topics to be covered in the EIR. Several other topics from the CEQA Checklist (Appendix G) should be explored in the EIR:

AESTHETICS

Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed Performing Arts Building (PAB) and amphitheater will require night lighting given their location. The PAB is 15,900 square feet and is located near housing, not Lincoln Avenue. The route to arrive at the theater at night will require substantial lighting for the safety of up to 450 people attending events there. The proposed project also anticipates event use for an amphitheater, which is also not located on a street and would require a great deal of light along paths to and from the parking lots and in the parking lots of the South Campus. The EIR should determine exactly where and how much night lighting will be needed for the project and its impact on the neighbors' nighttime views.

AIR QUALITY

Would the project:

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

The project involves placing a two-lane ring road behind housing. Its use appears to be from 6:00 a.m. to 7:00 p.m. and up to 11:00 p.m. during events. The vehicle exhaust from the ring road will be much greater than the exhaust from cars leaving for work and coming home from work. The source of the exhaust will be coming from in front of and behind housing. Many of the neighbors are sensitive receptors because they are elderly. The EIR should determine the exact hours that the vehicle exhaust will emanate from the ring road and calculate the amount of exposure to particulate matter and the objectionable smells from gas and diesel powered vehicles. It should study the impact on the residents from cars and any trucks that may be using the ring road.

BIOLOGICAL RESOURCES

Would the project:

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The NOP indicates a plan to have the EIR preparer study the impact of the proposed project, including loss of trees, on the existing property. However, it also needs to consider the loss of the tributary running from the creek through the South Campus. It should identify this tributary and study the plans to move or change the flow of the tributary on riparian habitat. The creek ordinance may apply to this tributary and the City should require that it be studied. Also, a creek ordinance permit should be required.

CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

The NOP focuses on archeological resources, but the more relevant question is whether the school's use of any historic resources, including remodeling them, will have an adverse impact on the historic resources. The EIR should do a study to determine which structures on the campus are historic resources, identify exactly what changes the project will make to them, and what their uses will be. Given that they will be open to the public for events, and the like, these historic resources should be evaluated outside, inside, and around the landscaping. There should be a list of "features to preserve" that accompanies the EIR and its mitigations, if any.

GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication42.
ii) Strong seismic ground shaking?
iii) Seismic-related ground failure, including liquefaction?
iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The NOP does not mention Geology and Soils, except in the context of the tunnel, but this topic is crucial given the amount of grading that HRS intends to complete on the South Campus. Please see the March 7, 2019 letter from NSC to the HRS Trustees and

that was forwarded to you. It can be found, with all of its links at:
http://0104.nccdn.net/1_5/161/084/115/Final-Letter-to-Trustees.-March-7--2019.pdf
The letter discusses a prior nearby landslide, the steepness of the hillside, the proposed project pulling the toe out of the hillside, and the like. The EIR preparer should obtain deep bore soil samples and a complete geotech workup of the South Campus. It also should discuss the recent earthquake that centered on Lincoln Avenue and that occurred on or about March 8, 2019. Any modeling that is done should be made available as soon as possible to the City and the public for peer review.

HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The NOP did not mention the above concerns although the EIR preparer did state during the planning commission hearing that the category would be reviewed. Again, I would refer you to the NSC letter of March 7, 2019, which details the hazards related to wildfires. There is no question, but that HRS is located in a high fire risk zone and has no realistic evacuation plan. The EIR should thoroughly review this topic. It should also determine the amount of emergency vehicles and number of personnel available in Oakland to address a multiple area fire, similar to the recent North Bay fires. Is there enough ability, in a very short matter of minutes, to evacuate HRS and the surrounding residences, and institutions, and at the same time service the rest of Oakland should fires erupt in more than one location? General statements like, “we could call on other jurisdictions” will not do, given the short time that it takes for wildfires to build in size and travel.

The hazardous materials would apply to the tunnel, and the hazardous emissions would apply to the exhaust from the ring road. The EIR needs to carefully research these impacts, as well.

HYDROLOGY AND WATER QUALITY

Would the project:

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

See comment below under Land Use and Planning. The EIR needs to identify the source of water running through the South Campus and analyze how it should be addressed.

LAND USE AND PLANNING

Would the project:

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The NOP lists the inconsistency between the project and the City's tree ordinance, but does not include the City's creek ordinance. A culvert or tributary runs through the

South Campus, then into the housing adjacent to it, and then proceeds further down the hillside through more housing. The water appears to be either part of the Peralta Creek or a feeder into it. (See Alameda County Flood Control Map: https://www.acfloodcontrol.org/files/watersheds/maps/pdfs/peralta_creek.pdf) The neighbors living adjacent to this body of water describe it as "gushing" out of the South Campus and proceeding down the hill at a high rate of speed. It is above ground through the housing until it hits Alida when it goes underground.

The proposed project involves major changes to this body of water, including installation of a detention pond (referred to as a "swale") and addresses it as a simple drainage issue, which is unrealistic. The proposed project does not appear to meet the criteria for granting a creek protection permit under §13.16.010 et seq. The handling of the tributary is inconsistent with the purposes of the creek protection ordinance, at least regarding the following purposes:

> C.Reducing pollutants in storm water discharges to the maximum extent practicable;
>
> D.Safeguarding and preserving creeks and riparian corridors in a natural state;
>
> E. Preserving and enhancing creekside vegetation and wildlife;
>
> F. Preventing activities that would contribute significantly to flooding, erosion or sedimentation, or that would destroy riparian areas or would inhibit their restoration;
>
> G. Enhancing recreational and beneficial uses of creeks;
>
> H. Controlling erosion and sedimentation;
>
> I. Protecting drainage facilities; and
>
> J. Protecting the public health and safety, and public and private property.

The EIR needs to address the inconsistencies between the proposed project's handling of the water going through the South Campus and the creek ordinance.

The proposed project is located in the RH-4 zone and the intent of this zone is to create, maintain, and enhance areas for single-family dwellings on lots of six thousand five hundred (6,500) to eight thousand (8,000) square feet and is typically appropriate in already developed areas of the Oakland Hills. (Zoning Code, § 17.13.010.) The project does not "enhance" the area for neighbors, as shown in the many comment letters submitted to the City by residents. The EIR needs to address this inconsistency.

The General Plan description for Hillside Residential states: "Desired Character and Uses: Future development within this classification should remain residential in character." (LUTE, pg. 147.) The description for Institutional includes a warning applicable to institutions, including schools, "These types of operations, however, can have significant local impacts on neighborhoods, and must be planned carefully." (LUTE, pg. 154.) The EIR should discuss the inconsistency between demolishing housing on the property and these General Plan statements. It should also analyze the other impacts complained about in the public comments. This project already has "significant local impacts on neighborhoods."

The proposed project is inconsistent with or outright violates many of the Oakland General Plan policies. For example, it serves a very exclusive population of persons who can afford between $40,000 and $50,000 in disposable income to educate their children. HRS admits that its population of students consists of fewer than 50% Oakland residents. All of the rest are from far outlying areas that in some cases have resulted in HRS apparently using tour buses to transport them. Policy N2.2 requires that institutional services should be "distributed and coordinated to meet the needs of City residents." Policy N2.5 requires that the decision-makers "take into account the institution's overall benefit to the entire Oakland community, as well as its effects upon the immediately surrounding area." HRS is out of reach financially for most Oakland residents and does not address educational needs for the population of disadvantaged children.

Policy N5.1 applies to institutions and requires "Environmental Justice - The City is committed to the identification of issues related to the consequences of development on racial, ethnic, and disadvantaged socio-economic groups." The neighbors have previously demonstrated that HRS does not admit students from predominately Hispanic neighborhoods, as shown from HRS's 2013-2014 school directory and compared with the census tract data for those neighborhoods. They have also shown that it does not invest its own money in its "Heads-Up" program that it designed to show some interest in children from lower income neighborhoods. It is a "country club" and exclusive school for the very wealthy, who reside either in the primarily white, economic-advantaged part of Oakland or in outlying similar areas of other cities. Yet, all of Oakland's taxpayers foot the bill for maintaining the public infrastructure around the school, providing public services to it, and it is the taxpayers who suffer the consequences of its unwieldy growth.

The location is also inconsistent with the General Plan. A 23-acre institutional operation for 1,250 students is not compatible with the surrounding residential uses or with the other religious institutions in the area. (Policy N2.3) None of these uses generate the excessive traffic that HRS brings into the area as a result of being a commuter school. The project does not offer site design, architecture, and operating practices that are "compatible with the area's desired character . . .," which is primarily small residential structures. (Policy N2.7.)

HRS's plan to demolish housing on the South Campus violates Policy N3.1 dictating that housing construction should be "considered a high priority for the City of

Oakland." (Policy N3.1.) Its plans to demolish housing also violates Policy N3.6 which encourages retention of housing units by moving them, not demolishing them. The proposed project violates Policy N5.2 because it sites institutional uses in a way that conflicts with residential uses as described by neighbors in their comments.

All of these, and any other inconsistencies between the General Plan or the Zoning Code and the proposed project should be discussed in the EIR.

NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

In 2018, HRS's acoustics expert took sound readings at the same time that HRS ran grading equipment along the gravel parking lot at the end of the area it now seeks as an easement. The sound equipment to take the readings was located on either side and below the Ability Now property. The combination of taking sound readings and the grading was documented by neighbors at the time. The EIR preparer should use its own acoustics expert to take any sound readings.

The NOP does not mention noise as a topic that will be included in an EIR. It should be included at least for several reasons: 1. The tunnel construction may involve use of explosives; 2. The events located next to housing are not part of the school's normal daytime operation and extend until 11:00 p.m.; 3. The Performing Arts Building is adjacent to housing; 4. The amphitheater will generate noise that given the canyon setting will cover a great many blocks around the school.

PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities . . . in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?

The question of whether the City would need to acquire additional services to evacuate the school and also provide adequate services to the rest of the community needs to be studied. This topic is covered extensively in the March 7, 2019, Letter to Trustees and forwarded to you. The EIR needs to cover what resources would be available to evacuate the area and where those resources would come from.

TRAFFIC/TRANSPORTATION

We anticipate that HRS will exceed the threshold under the new VMT analysis. The EIR should consider adopting the condition of approval utilized by at least Archer School in Southern California which does not allow any student to arrive and leave the school except by bus, bicycle, or walking.

The EIR should also review HRS's plan to widen the main driveway and arrange for buses to go into the properties on both the North and South Campuses. There would no longer be any drop-off or pick-up, or bus loading and unloading occurring on Lincoln Avenue. Employees would arrive and leave by a shuttle service that connects with public transportation in the Dimond District and the Fruitvale Bart station. Moving from the North and South Campuses would occur by a tunnel to avoid the need for more traffic lights and above ground crosswalks. There would be no parking for anyone associated with HRS except onsite and monitors would need to be present at all times HRS is in operation, including events, to make sure that the conditions are complied with.

The EIR preparer needs to obtain verifiable, independent evidence regarding where the students and employees are coming from. Relying on HRS's self-reporting has not proved reliable in the past. There also needs to be a fine system if HRS does not comply with the conditions to avoid constant complaints from neighbors and expenditure of planner time.

ALTERNATIVES

The project description in HRS's application is unintelligible, as described by the NSC in their letter to the HRS trustees. Furthermore, without any expert studies into the hillside stability, it is impossible for the public to request alternatives to the project. For example, if the NSC asked to have the Performing Arts Building relocated to a particular spot, they have no way of knowing if that is even possible without inviting landslides. The NSC requests that it be provided with expert studies as they become available to the EIR preparer and that it be allowed to submit requests for alternatives after having a chance to have their own experts review the studies and make recommendations about alternatives. Otherwise, the public is being denied the opportunity to engage meaningfully in the CEQA planning process.

Thank you for considering my comments.

Very truly yours,

Leila H. Moncharsh, J.D., M.U.P.

Leila H. Moncharsh
Veneruso & Moncharsh

LHM:lm

cc: Robert Merkamp, Planner V, rmerkamp@oaklandnet.com
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March 7, 2019

Re: Head-Royce Development Plan

Dear Mr. Verges and Head-Royce School Trustees:

The Neighborhood Steering Committee ("NSC") engages with the City of Oakland and Head-Royce School ("HRS") to advocate for the neighbors' points of view, including about HRS's ongoing development plans. It advocates for over 300 households located around HRS's properties. (See Headroycensc.org.) In this correspondence, we discuss the following points:

- HRS has not been transparent with the neighborhood regarding its proposed expansion plan, despite its repeated promises to do better in this regard with neighborhood relations
- The current enrollment of 884 students, without the addition of 350 more, is already too high, is overwhelming the public infrastructure surrounding the neighborhood, and is constantly causing nuisance problems for the residents
- The traffic solution in the proposed master plan does nothing to correct the current problem of HRS having no realistic emergency evacuation plan. HRS's problematic traffic management will continue preventing evacuation for residents above and around the school's properties
- The solution proposed in the master plan, i.e., a perimeter road, is very inconvenient for parents dropping off and picking up their children, no doubt resulting in their leaving and picking up their children on Lincoln or in the neighborhood
- The expansion plan causes significant problems for adjacent and nearby neighbors due to its increasing chances of landslides, flooding, disturbances from the circulation road, noise, placement of a massive structure next to housing, and opening access points from the neighborhood into the South Campus
- The development of the South Campus will impact wildlife in the Oakland hills, including bird habitat and native trees; it also would remove much needed residential housing that presently exists on the South Campus

A. Lack of Transparency Regarding the Proposed Master Plan

The NSC thanks Mr. Smith[1] for providing tours of the South Campus. It was helpful to see the location of items in HRS's Preliminary Development Plan, submitted to the City Planning Department in December 2018 ("Plan").

In June 2018, the NSC sent a list of 70 questions to HRS about an earlier version of the Plan and requested HRS's technical studies, supporting the Plan. In your response, HRS declined to provide any answers to the 70 questions or any studies.[2] Instead, HRS referred the NSC to the California Environmental Quality Act ("CEQA") process for answers to its questions and studies that would be done as part of that process. (HRS having no studies to provide was not consistent with the references to such studies in its community slide program and Jayhawk Journal, referenced in Question 1 of the 70 questions submitted to HRS.)

You indicated that HRS would like the NSC to wait until the 45-day public comment period after a draft Environmental Impact Report ("DEIR") is prepared and released to the public before it receives any studies or answers to its questions. The response was evasive and inconsistent with HRS's repeated promises to be transparent with neighbors, especially about the Plan.

Responsible property owners and developers usually commission technical studies early in their planning process to avoid liability from negative impacts such as traffic injuries, flooding, hillside sliding, and the like from poor early stage planning. They share the information with the neighborhood to allay concerns and avoid opposition. Using a landscape architect and a civil engineer instead of a hydrologist and geotechnical engineer is inadequate and invites liability problems in the future. For example, the Plan anticipates treating water running through the South Campus as "drainage" and shows a landscape design to address it. It appears that what HRS is calling "drainage" is, in fact, a tributary of a creek, requiring a different approach. Similarly, moving tons of dirt around on the South Campus, which is on a steep hillside, probably requires retaining walls, not just cement stairs, and a geotechnical expert should have been involved in making that determination to preclude hillside sliding. However, these are just a couple of the many problems we found with the proposed Plan:

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[1] Peter Smith (Secretary) and Scott Verges (Board Chairperson) are Trustees on the Executive Committee of HRS. They and Crystal Land (head of school) identified them as the only two board members who designed the Plan and are knowledgeable about it.

[2] See email transmitting questions to HRS from NSC on the Headroycensc.org website: http://0104.nccdn.net/1_5/26c/364/2dc/NSC-questions-re-HRS-Master-Plan--6-2-18.pdf The questions from NSC that were sent to HRS are here: http://0104.nccdn.net/1_5/26c/364/2dc/NSC-Questions-re-HRS-Master-Plan--5-24-18.pdf The response email from Mr. Verges is here: http://0104.nccdn.net/1_5/26c/364/2dc/HRS-response-to-NSC-Questions-re-Master-Plan--6-4-18.pdf

B. The Current Enrollment Is Already Too High for HRS's Location on Lincoln Avenue

On page 5 of the Plan, HRS states that it is seeking a permit to increase its current enrollment from the 906 students allowed under the current permit to 1,250 students, a nearly 30% increase over the current enrollment of 884.[3] However, the current high enrollment continues to cause significant problems, in part due to the lack of any realistic evacuation plan, negligent fire prevention vegetation management, and lack of safe and efficient traffic management. The Plan does not effectively solve the problems and in some regards increases the type, number, and severity of problems.

1. HRS Has No Realistic Disaster Preparedness Manual for Evacuating Students and Employees in Case of an Emergency. The Plan Will Further Jeopardize the Safety of the School Community and the Neighbors

Lincoln Avenue ("Lincoln") is a steep, winding, two-lane major arterial street running between Highways 13 and 580. HRS is located on Lincoln approximately half way between Highways 13 and 580. Its properties are embedded in residential housing with three institutions above it, the Mormon Temple, The Greek Orthodox Cathedral, and Ability Now. PG&E electrical wires and equipment are located above ground along Lincoln. It is an evacuation route that serves the hills above Highway 13 including parts of Montclair, and the entire area surrounding Lincoln. For example, in the event of a wildfire starting and spreading on the many acres of forested parklands above Lincoln and Highway 13, Lincoln would be the escape route from the hills down to Highway 580.

Currently, HRS's only plan for evacuating its properties is to have students go outside and stand on the North Campus field.[4] As Mr. Smith explained to neighbors who attended a recent tour of the South Campus, HRS believes that the hillsides around the North Campus are a "fire break" such that it is sufficient to have students stand on the field and wait for their parents to come and pick them up in the event of a fire. The school has food and drinks for the students while they wait for their parents. Given the recent wildfires, this scenario is unrealistic.

HRS and the surrounding housing is in an area labeled by CalFire as "Fire Severe Hazard Zone."[5] As the CalFire maps demonstrate, all of the hillside and parks above Highway 13 are also in the high fire risk zone. A wildfire originating in the parklands and

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[3] California Department of Education statistic for HRS, 2017-2018 school year (revised in July 2018).

[4] See NSC website with the emergency plan for 2017-2018: http://www.headroycensc.org/emergency-situations.html

[5] http://egis.fire.ca.gov/FHSZ/ - map showing that HRS on both sides of Lincoln and the surrounding housing are in the high-risk fire zone, according to CalFire. Click on the map several times to expand and see the proposed project area.

coming down Lincoln or originating on Lincoln would not leave time to evacuate 1,250 children and over 200 staff from the location, the neighbors, and those persons at the three institutions above HRS. The scenario in which parents would just drive over to Lincoln and pick up their children does not take account of the real conditions during a wildfire. For example, during the most recent Camp Fire in Paradise, California, where 86 people lost their lives, the descriptions of the escape conditions were horrifying. Day turned into night with fire and smoke all around people attempting to flee:[6]

Many videos on the Internet demonstrated the conditions during the Camp Fire and other recent California fires. The amount of heat and smoke would prevent evacuation by parents coming and picking up their children. The speed of these recent wildfires has been described in the news as covering a football field size of land every second.[7] Parents

[6] https://www.wired.com/story/the-terrifying-science-behind-californias-massive-camp-fire/; https://www.chicoer.com/2018/11/08/camp-fire-raging-into-paradise/

[7] https://www.cnn.com/2018/11/09/us/california-wildfires-superlatives-wcx/index.html

trying to rescue their 1,250 children would most likely interfere with fire apparatus access and evacuation efforts.

The community has been demanding for years that the City improve its fire prevention services. It has not done so.[8] According to Sue Piper, chairperson of the Oakland Firesafe Council, a community organization devoted to preventing another major fire like the Oakland fire in 1991, the City has not found a way to hire and keep five vegetation management inspectors. It needs to fund around $2 million, twice the current budgeted amount, for year-round inspections instead of just completing inspections in the summer. Further, Oakland has no alarm system to notify neighbors or any institution of an oncoming fire.

2. HRS Is Consistently Non-Compliant with City Fire Vegetation Management Regulations and with Its Own Policies. The Plan Will Require Increased Vegetation Management Beyond What HRS Is Practicing

At its current size, HRS appears unable to comply with the city's vegetation management requirements. The Plan's lack of a well-devised evacuation plan and its history of noncompliance with fire regulations will increase fire risks for the school community and the neighbors.

In 2017, the school posted on its website fire department compliance certificates that demonstrate it was not in compliance with the vegetation management requirements until November 2, 2017. It came into compliance only after numerous complaints by neighbors to the fire department and HRS. Its compliance date of November 2, 2018, was only two weeks before the rains started.

In 2018, HRS only posted on its website compliance certificates for three parcels, which do not include its rental properties on Whittle or, very importantly, the new 8-acre South Campus.[9] The certificates also show that the main campus and gatehouse were not brought into compliance with the city's vegetation management requirements until August 13, 2018, even though the inspections usually begin in May, when all property owners are required to have their properties in compliance already. The neighbors again have had to be vigilant and take on the task of nagging the fire department vegetation management unit to chase HRS into compliance, with unsatisfactory results.

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[8] http://www.headroycensc.org/news.html See news articles on the NSC website concerning the problems with the City failing to institute effective fire prevention.

[9] Alameda assessor maps show the following three parcels by parcel numbers: APN 29A-1367-1-9 is the small parcel HRS purchased recently adjacent to its main driveway on the North Campus; APN 29A-1367-5-2 is the HRS gatehouse; and 29A-1367-1-14 is the North Campus, which is HRS's main campus.

Vegetation management is an ongoing responsibility; the fire department has emphasized that it is not a "one and done" procedure by which property owners get their properties into compliance to avoid citations from the fire department in May, and then forget about the risks and need for compliance during the rest of the year. HRS has told community members of the Neighborhood Liaison Committee that the real problem is not their mismanagement, but that after the fire department finds non-compliance, it does not return fast enough to see the corrections the school makes and re-inspect. However, it is not the fire department's job to make sure HRS continues to manage its properties.

The HRS website makes the following representation:

> Head Royce is committed to taking proactive and preventative measures to maintain a high level of fire safety for our entire community.
>
> Our motivation extends beyond simply passing routine fire inspections; we strive to effectively model our core tenet of responsible citizenship.
>
> Scheduled grounds care is provided for our lawns, trees, shrubs, flower beds, sidewalks, roads, and parking lots to mitigate fire risk. This includes cutting and trimming of grass and weeds, fertilizing of grass and shrubbery, and pruning of shrubs and trees.
>
> See our Vegetation Management Schedule here[10].

It appears to the neighbors that HRS does not follow its own vegetation management schedule. For example, the monthly plan has HRS picking up debris as a task that it alleges occurs every month, "Litter/debris pick-up," but HRS does not pick up debris, monthly.

For example, in January 2019, following several rainstorms, a eucalyptus tree fell on the North Campus. HRS cut up the tree, then put the flammable wood behind a tree next to a neighbor's property. The foreground of the photo shows all of the accumulated bark strewn about near the neighbor's property:

[10] See work schedule from HRS website: https://www.headroyce.org/uploaded/Community_Relations/Neighbors/Head_Royce_school_vegetation_scope_of_work.pdf;

Neighbors notice that HRS leaves flammable eucalyptus bark for months on its properties. When the rains are over, this debris will become a fire risk for both HRS and the neighbors.

C. The Plan Aggravates the Traffic Problems on Lincoln Avenue and on Neighborhood Streets Due to HRS's Uses

The Plan for drop-off and pick-up of 1,250 students is unrealistic because it depends on a large percentage of parents waiting an even longer time than now to drop off or pick up their children. We know that when parents have to wait sitting in traffic, longer than they feel is reasonable, they solve the problem by using neighborhood streets for pick up and drop off, and making dangerous, illegal U-turns on Lincoln in front of oncoming traffic or on the narrow neighborhood streets.

On page 22 of the Plan, HRS states that it proposes to install a one-way "ring road" encircling the 8-acre South Campus. The Plan would include moving one traffic light from the gatehouse to the exit of the ring road, leaving Lincoln with a total of two traffic lights related to HRS. However, on page 25 of the Plan, it shows three traffic lights along the length of the HRS property bordering Lincoln. Without knowing where the lights will go, the traffic portion of the Plan is unintelligible.

It is unclear from the Plan whether *all* of the students who arrive and leave HRS by car will do so through this ring road and whether the North Campus will be used at all. It appears that HRS intends to continue using its main driveway on the North Campus for parking, as opposed to its original purpose, which was for two-way traffic and to allow drop-off and pick-up on the North Campus, rather than on Lincoln or along the ring road. The Plan also involves installing right and left turn pockets on Lincoln at the exit from the ring road by removing parallel parking spaces on the street. On page 25, the Plan diagram shows where these turn pockets would be located in relation to the sidewalk. The busses would continue to arrive and leave at the same time as the car traffic and would continue driving a considerable distance away from HRS to "loop" around the neighborhood's narrow streets, and head back up Lincoln to access Highway 13.

The current transportation plan for 884 students already creates a bottleneck on Lincoln and for long periods of the day into the evening due to before and after school daycare, events, deliveries in the wrong location, visitors, parents, and others, and of course drop-off and pick-up. Parking occurs on the south side of Lincoln for all of these users of HRS including high school students and employees, which narrows the available use of lanes and therefore contributes to the bottleneck.

The neighbors' experience with HRS, as a school for 884 students, has been that when the parents are sufficiently tired of waiting for their opportunity to drop-off or pick-up their children, they drive around the neighborhood and drop them off wherever they can find a spot to do so, generally on narrow neighborhood streets. When they get tired of waiting to pick them up, the parents text their children and agree on a different pick-up location than the one provided by HRS, somewhere in the greater neighborhood. They also cut corners to get out of the area more quickly by illegally u-turning on Lincoln and in the neighborhood. The sum effect of drop-off and pick-up on Lincoln is chaos, and a bottleneck that prevents neighbors, business users, and potentially emergency vehicles, from moving through Lincoln at a reasonable speed.

The Plan now creates a new laborious, inconvenient, and aggravating system for parents to drop off and pick up their children. It either adds a third light or moves a traffic light from the gatehouse where it currently is used to allow children to safely cross the street and puts it at the entrance to a ring road that would go around the South Campus. The Plan then proposes that parents pull into a queue at the light to make a left hand turn into the ring road and veer off the ring road to make a loop inside the South Campus to let their children out of the cars. These two inner loop areas are not near the tunnel entrance or a crosswalk. Then, the parents will proceed around the circumference of an 8-acre campus to exit.

Assuming that HRS intends to continue using its current staging system on the Mormon Temple property for pick-up to slow down the number of cars on Lincoln at one time, parents will now have three places to sit and wait for their children. Many of them will arrive to see a sign that informs them they have to wait in the Mormon Temple parking lot as occurs now. Then, most of them will have to go down Lincoln to get onto the ring road, where again they will queue up behind other cars at the light. They will proceed around an entire 8-acre campus, completing an inner loop, to pick up their children from the pick-up locations that are not near the tunnel or the crosswalk. Then to exit, they would need to merge back into the traffic going around the ring road.

The path from the two drop-off and pick-up locations is also unrealistic unless the Plan includes having the upper school and lower school children all stay on the South Campus. If the parents are supposed to use the uphill drop-off or pick-up location, the students, including very young children, will have to traverse through the amphitheater to access the crosswalk or tunnel. During a significant portion of the school year, the weather is inclement, which further incentivizes parents to skip using the ring road, instead preferring to drop off their children as close to the North Campus as possible. Most parents, especially of small children, naturally will drop them directly onto Lincoln as close as possible to their classrooms.

At one point HRS considered widening the main driveway from Lincoln to the North Campus. That driveway was historically how small children, at least, arrived at the school when it had a much lower, and more manageable enrollment. The Plan reflects no intention to provide this already safe method for delivering and picking up children.

D. The Plan Wastes Much Needed Housing Without Any Necessity

The South Campus currently has several buildings that are available for housing; HRS intends to demolish all but one, and as to that structure (building 9), create five apartment housing units, but only allow employees to live there and only temporarily, instead of making it available as a rental property like HRS's other rental properties on Whittle Avenue. One existing house (building 4) is 2,068 square feet[11]. It was initially the director's house, and then later was used for housing emotionally disturbed children. The children were moved to a newer building in the 1990s, and then the house was used for storage. The house could be renovated and used for its original purpose. HRS plans to tear it down.

Other examples include two relatively new buildings. In 1993, Lincoln Child Center (LCC), the former owner of the South Campus, wanted to expand by constructing new buildings. The neighbors expressed concerns about the future of the property as at some point LCC, like all institutions, would leave and the neighborhood would be left with institutional buildings that could not be easily repurposed into the more likely future use of housing. The compromise was to build the structure (building 8) so that in the future, it could be remodeled inside to accommodate housing uses. It is 3,024 square feet. HRS plans to tear down this new building.

In 1998, LCC again wanted to add another institutional building (building 9). Neighbors raised the same concern about the construction of institutional buildings that could not be repurposed for the more likely future use as housing without expensive demolition, which alone could prohibit housing development. They did not accept LCC's

[11] HRS incorrectly describes this building as an "administration building" on page 15 of the Plan. It is a house and was used that way for years.

many protestations that, “we have been here for over 100 years, and we will never sell our property.” The compromise was that LCC’s architect designed two large houses, totaling 6,850 square feet, with a center connecting area, which could be removed to separate the houses in the future.[12] The driveway and parking area were designed to accommodate the two houses. These two houses could easily provide housing for at least several families, not just five housing units for teachers and restricted for temporary use.

HRS’s stated reasons for demolishing these structures that represent a total of 11,942 square feet of housing is that it wants to build its ring road and a 15,900 square foot theater (performing arts building - “PAB”). Mr. Smith explained at a community meeting that the current all-purpose gyms on the North Campus require using automated systems to move seating into place for theater use. This way, HRS will not have to double the purpose of these buildings any longer since the PAB will handle HRS’s needs for a theater and the two gyms can be used exclusively as gyms. The PAB would seat 450 people.

HRS currently has three all-purpose gyms. Building O on the South Campus is a 6,050 square foot building that HRS plans to use for between 55–125 students or guests. HRS has two all-purpose gyms on the North Campus. According to Ms. Land and Mr. Smith, one seats 800 to 1000 people and the other seats 412 people. (The neighboring Greek Orthodox Cathedral has a large gym, which is rarely in use.) Altogether under the Plan, HRS would have the total ability to seat 1,987 people. The Plan also contemplates using the center of the South Campus for an amphitheater as shown on the original plan drawings and page 32 of the Plan (“stone/lawn steps”).

It is not necessary to have four theaters or the capacity for four theaters for a K-12 school, located in the middle of a residential neighborhood. The PAB presents the same planning problem that neighbors have raised in the past. Its protestations to the contrary, as with LCC, at some point, HRS is going to be forced to move because its rate of growth is extremely high for a residential neighborhood. It is also very high for the non-religious private school industry in Oakland and the surrounding cities. Perusing the California State Department of Education Statistics reveals that generally in the Oakland area, private schools are in the 350-550 range, not 884 students, let alone 1,250 students. Repurposing the 15,900 square foot PAB, located next to residences would be very difficult, especially since neighborhood theaters have, for the most part, not survived in Oakland. For example, the city just recently granted a permit to demolish a neighborhood theater in the Laurel district after it sat unused for decades. Oakland’s entertainment

[12] On page 15 of the Plan, HRS correctly states that this building was constructed as a residential facility for children, but left out the information that it was also designed to be reused as two houses. It states that the building would be used for administrative or classroom purposes, but elsewhere its listed use is for five teachers to live in it temporarily.

centers are currently in the Downtown district, and they are dependent on patronage to survive without HRS "bleeding off" customers by pulling them into a residential neighborhood away from restaurants and clubs. (See the Palace Theater,[13] the Fox Theater,[14] as just two examples in Oakland. Many other theaters are located in the region.)

E. The Plan Results in the Destruction of Over 60 Beautiful, Mature Native Trees Through Cutting them Down, Pulling them Out of the Ground to "Move Them," or Killing Them By Grading Near their Roots, Thereby Also Destroying Extant Bird Habitat

The Plan suggests that its vision for the South Campus would be to create a natural environment.[15] However, its proposal for handling the existing trees, especially the mature native trees would most likely destroy them. The Plan reports on page 16 that:

> [t]he site contains approximately 395 trees that include Coast Live Oaks, Redwoods, Eucalyptus, Pines, Cyprus, Pear and Olive trees. The existing trees are of varying health, age and size. Approximately 60% are native.

The Plan then states that it intends to move or cut down a sizeable number of trees:

> The plan proposes to relocate 9 smaller (10-20" dbh) oak trees and 45 small native trees. 33 native trees either dead or in poor condition will be removed and 107 non-native trees including many in poor condition will be removed.

It is highly unlikely that so many trees are in such "poor condition," that they need to be removed. Moreover, HRS's suggestion that mature trees can be pulled out of the ground, moved, and replanted on the site is unrealistic unless HRS has an unlimited budget and can work on the tree moving project for the long period necessary to complete the many steps to preserve the trees. The new locations for the mature trees require considerable space for each one, which is also a factor in determining whether moving them is feasible.[16] Many of the most spectacular trees on the South Campus are mature live oaks, and after they reach 8 feet in height, they generally send out shallow roots that prevent relocation without killing the trees.[17]

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[13] http://www.palacetheateroakland.com/;
[14] https://thefoxoakland.com/
[15]. See Plan, page 30.
[16] http://www.deeproot.com/blog/blog-entries/the-realities-of-large-tree-moving
[17] https://homeguides.sfgate.com/digging-live-oak-tree-64043.html

Furthermore, the Plan includes substantial grading, basically covering much, if not all, of the South Campus:

Area	Cut (CY)	Fill (CY)	Net (CY
Ring road	4,500	1,800	2,700
Interior Site	9,200	4,200	5,000
Total	13,700	6,000	7,700

The amount of grading on a very steep hillside contemplated in the Plan will no doubt destroy the root systems around the trees. The Plan anticipates disturbing 13,700 cubic yards of soil, and regardless of whether it puts about half of it back on the South Campus, the disruption will be extreme for the trees. (Generally, a cubic yard of dirt equals 1.5 tons.)[18] This type of extensive grading is expensive, time-consuming, and highly technical to avoid killing the trees. Arborists do not recommend grading around or near trees.[19]

The trees that the Plan contemplates preserving include Eucalyptus trees, which are present in bountiful amounts on both HRS's North and South Campuses. Many of these trees are incredibly tall, and they all present a fire hazard.[20] They are also dangerous on windy days and shed large, heavy branches and bark.[21] The Plan is "upside down" and should instead preserve the native trees, remove all of the Eucalyptus trees and prevent the latter type of tree from becoming re-established.

F. The Plan Continues HRS'S Very Long History of Poor Relations with the Neighborhood by Creating Negative Impacts on the Adjacent and Nearby Neighbors

It is hard to fathom how trustees could leave the formation of the Plan up to two board members, both experienced land development attorneys, and end up with so many negative impacts on the residents, including many who live blocks away from the school. Besides the problems that negatively impact residents as far away as Montclair due to problems such as causing a bottleneck on a major evacuation route, the Plan negatively impacts closer residents as follows:

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[18] https://www.soildirect.com/calculator/cubic-yard-calculator/; https://www.todayshomeowner.com/cubic-yard-calculator/

[19] https://www.bartlett.com/resources/Preventing-Damage-to-Trees-from-Grade-Changes.pdf; https://hortnews.extension.iastate.edu/1995/7-14-1995/prot.html

[20] https://www.gardeningknowhow.com/ornamental/trees/eucalyptus/eucalyptus-fire-hazards.htm

[21] https://www.gardeningknowhow.com/ornamental/trees/eucalyptus/eucalyptus-in-windy-areas.htm

Pulling the Toe Out of the Hillside: Pulling toes out of hillsides to make level ground is problematic, especially when the hillside is exceptionally steep, as here. Recently, HRS has announced that it intends to purchase an easement from Ability Now that will allow it to create more parking spaces. The Plan involves grading the toe of the steep hillside below Ability Now to remove the toe so that there is a level area for parking. (Plan, page 30.) Like moving trees, the topic of how to grade a hillside to avoid flooding and land sliding is complicated and best avoided.[22] Instead of relying on a qualified geotech engineer and obtaining the necessary study, HRS relied on a landscape architect and general civil engineer, who are not qualified to deal with this complicated issue. (Also, unfortunately, HRS has already been grading the toe of that hillside to make parking spaces, and NSC cannot find any evidence that it ever obtained a grading permit from the city.) This type of casual approach to the hills is not new with HRS.

On the North Campus years ago, HRS pulled the toe out of the hillside by leveling the area to make its main parking lot. It installed a small retaining wall at the base of the hillside adjacent to its new parking lot. At the top of the hillside, there is a barn and housing. Over the years, erosion and significant drainage problems have caused the barn to lose ground, coming closer every few years to the edge of the hillside above that parking lot. In the future, that barn will no longer have sufficient ground to support it, and then next, the house will go down the hill, then the housing above that house will go down the hill, and so forth. Like Ability Now, the property owner did not realize the potential loss of land as a result of HRS's handling of the steep hillside.

Here, the removal of the toe of the hillside below Ability Now's field could well stimulate a landslide. Very near the same location, there was a landslide at the top of Camellia Place with the city forced to deal with the costs of stabilizing it. The only thing predictable with landslides is that they are followed by years of litigation. Certainly, to the extent that a landslide involves the adjacent Camellia Place homeowners, they will look to the city to again fix the hillside and to HRS for the damages, all of which are entirely foreseeable.

Ring Road: The Plan contemplates installing a road that surrounds the South Campus and is adjacent to the housing. (Plan, pages 22-23.) The "ring road" places traffic within 25-100 feet of bedroom windows of 15 homes. Currently, there are three access points from Lincoln into the South Campus. None of them have interfered with the residents' enjoyment of their own homes. The Plan will now force adjacent homeowners to hear the noise and breathe the particulate matter from numerous cars entering and leaving the campus. HRS is in operation from 6:00 a.m. to at least 6:00 p.m., daily on weekdays. On weekends, it often has a steady stream of cars for its events. Many of these events last until late in the evening and disperse around 11:00 p.m. when people return to

[22] https://www.planning.org/pas/reports/report126.htm

their cars laughing and yelling to each other, and waking up the neighbors. The ring road moves that activity closer to the adjacent houses. None of the other institutions on Lincoln use this type of access road. It is hard to conceive of any institution that would construct one that is so problematic for neighbors, and that will invite so much controversy.

Noise: The Plan includes an 11,500 square foot amphitheater in the middle of the South Campus. The "Commons" will act as

> a heart of [the] campus composed of terraces . . . The terraced nature of the Commons connects the upper parking area and drop-off at the east end of the campus with the academic buildings and lower drop-off to the west. The Commons will be used daily for students to congregate and eat lunch. It may also be used intermittently for larger events, such as graduation. (Plan, page 30.)

(So, here we learn that instead of putting the drop-off and pick-up areas close to the tunnel for the safety and convenience of the school children, the concept was to accommodate the amphitheater so it "connects the upper parking area drop-off at the east end" and the drop-off area in the west area.)

The South Campus is located in a canyon that bounces sound off the hillsides. Sound travels into the housing located adjacent to and above the campus. The Plan contemplates that the entire neighborhood, located on the hillsides will become the "audience" for HRS's amphitheater. If there is a loud-speaker involved in its use, the sound will travel much further and be incorporated into housing for many blocks of residences surrounding HRS. The neighbors should not be forced to become the audience for HRS's graduation ceremonies and its "larger events."

Similarly, the Plan has placed two "outdoor classrooms" as close as possible to housing on Laguna and Charleston. (Plan, page 30.) The outdoor classroom on Laguna is so close to the housing that it would be within feet of the houses. There is no acceptable reason why these classrooms were put there and will become a nuisance for the neighbors forced to listen to classes all day. The third outdoor classroom appears to be part of the amphitheater, which raises the question whether the plan is to use the amphitheater to create outdoor noise all of the time, rather than just lunch and large events.

Performing Arts Center: The Plan has placed the Performing Arts Center structure at the end of Linnet, a very narrow street with small, one or two level houses. The structure towers over the housing and its uses would have a deleterious impact on the housing:

An up to 450-seat Performing Arts Center (PAC) will provide the School's theater, dance, and music groups practice, performance and classroom space. The PAC will also be a place for the School to hold assemblies, concerts, meetings and host speakers. This building is anticipated to be up to 32 feet in height and 16,000 square feet in size. A preliminary elevation of this structure is attached as Figure 5.21 and indicates a potential location for rooftop solar panels. (Plan, page 19.)

Assuming that the city will require extensive sound-proofing, there will still be considerable interference with the nearby housing from vehicle traffic, doors opening and closing, people talking and laughing as they come into and leave the structure, and lighting at night. The road access into the building appears inadequate because of a sharp turn that would potentially prevent trucks carrying theater supplies from reaching the back door, which is also adjacent to the housing. Instead, the Plan shows a direct link from Linnet into the back door area. (See Plan, page 19.) This narrow street has a gate at the end, which is kept closed and is only for maintenance and emergencies. That gate will become the access point for the theater supplies, despite HRS's promises that it would not allow that to happen.

Continuation of Buses Looping Through the Neighborhood: A significant issue for years has been HRS's direction of private buses and the AC transit buses it rents to reverse their course on Lincoln by using the narrow residential streets to drive blocks away from the school and then return to Lincoln in a "loop." The NSC website explains with photos and a description of why this method is problematic. [23] The buses are too big to make the turns on the narrow residential streets, they create traffic jams for neighbors trying to get to work, and they generate a lot of noise and exhaust early in the morning and in the afternoons. On two occasions, HRS's buses have damaged property, and in one case, the bus sped off without notifying the property owner. Instead of having the buses arrive in the same direction they will be heading when they leave, the Plan continues this same pattern, even though it is annoying to neighbors, almost all of whom have nothing to do with HRS and do not live anywhere near it.

Lack of Adequate Parking: HRS has never provided sufficient parking for its uses. It now proposes the following:

An estimated 25 new on-site parking spaces will be added to the existing 129 paved parking count for faculty, staff and visitors for a total parking count of 154 spaces on the South Campus. As enrollment increases, the applicant will either add stacked parking in Lot F on the North Campus (for

[23] http://www.headroycensc.org/traffic.html; http://0104.nccdn.net/1_5/258/3c0/20c/Opposition-ot-HRS-Conditional-Use-Permit.pdf

a total of 344 parking spaces campus-wide) or will reduce parking demand by prohibiting some or all students from driving to school. Currently, approximately 90 students (juniors and seniors) have permits to drive to campus and park. (Plan, page 24.)

By now, HRS should have removed student parking, instead of allowing Lincoln to be used for this purpose. A 30% increase in the size of the school requires substantially more available parking than is offered in the Plan. A "watching and waiting" plan, as the school grows, before planning for adequate parking is unrealistic and potentially continues the pattern of inadequate onsite parking.

Conclusion: This correspondence has not discussed HRS's original plans to rent out its South Campus for a regional entertainment center or its original intent to operate a pre-kindergarten program because HRS has stated on the record at a recent Planning Commission hearing that its application does not include either activity.

The Plan is inadequate at least for the reasons stated above.

Sincerely,

Karen Carona

On behalf of NSC

cc: Rebecca Lind
Bill Gilchrist
Oakland City Council
Oakland Mayor
Planning Commission
City Administrator
Landmarks Commission

25 Camellia Place
Oakland, CA 94602
March 10, 2019

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: Case Number PLN18532-ER01

Ms. Lind,

I am writing to express my concerns about the Head-Royce School expansion plan and the significant negative impacts this plan has on the surrounding neighborhood, the environment, safety, and public infrastructure.

- Head Royce has a history of ignoring neighborhood concerns, and failing to comply with its Conditional Use Permits. I filed a complaint with Heather Klein about the construction activity at the Ability Now property when Head Royce had contractors building a wood fence on Saturday, August 25th in violation of the City of Oakland's Condition of Approval for the project, specifically 20.b. That was a minor project in comparison to the current proposed construction plans. Who will ensure that construction activity will be in compliance and that construction contractors will remain on Head Royce property and not spill into the neighborhood?

  I am concerned about not only the disruption to my neighborhood during construction, but about the noise levels after construction is complete. The outdoor amphitheater in the middle of the South Campus will negatively impact the neighborhood with noise during the day. The perimeter road will divert all of the noise currently on Lincoln Avenue into the neighborhood in the mornings and evenings. The Performing Arts Center will bring noise to the neighborhood outside of school hours well into the night.

- The extensive grading and landscaping proposed has the potential to cause environmental damage, drainage issues, and landslides. I am particularly concerned with the vegetation plans which would leave the eucalyptus trees on the property. These pose a significant fire risk not just on the Head Royce property, but for the entire neighborhood.

- My residence is on Camellia Place. This street has no outlet and dead ends at the top of the hill. In the event of a fire or other emergency my only egress route may be blocked by contractor vehicles and equipment during construction or later, by Head Royce parents trying to pick up their children. This neighborhood cannot accommodate the high levels of traffic that may ensue during construction or after construction when the student enrollment increases. Residents can barely get through the streets on garbage pick-up day.

- Head Royce School has impacts on other surrounding neighborhoods in addition to my own. Their proposed traffic flow changes to Lincoln Avenue should be studied extensively. How will the addition of another stop light and left turn arrows impact traffic flow? Will parents actually use the perimeter pick up and drop off if it adds additional time to do so? How will residents get in and out of their neighborhoods if traffic on Lincoln Avenue comes to a standstill? If Head Royce does not construct a tunnel to connect the north and south campuses and instead has students crossing Lincoln Avenue, what traffic delays will result? In the event of an emergency at Head Royce School, how will students, parents, staff, and neighborhood residents be evacuated?

I hope that you will listen to the residents that live here as you consider the request by Head Royce School to expand its campus into our neighborhood. I appreciate your time in considering my concerns.

Sincerely,

Eric Bachman

25 Camellia Place
Oakland, CA 94602
March 10, 2019

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
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Sincerely,

Eric Bachman

11 March 2019

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

rlind@oaklandca.gov

Re: **Case Number PLN18532-ER01**

Dear Ms. Lind:

I write in response to your Notice of Preparation of a Draft Environment Impact Report for the Head-Royce School Planned Unit Development Permit Project, dated February 1, 2019. (NOP)

I have lived on Linnet Avenue, two houses from the Head-Royce School's (HRS) South Campus (the former Lincoln Child Center property) for 27 years. HRS proposes to make changes to the character and use of the South Campus which will have significant environmental impacts on the neighborhood. I ask that the Environment Impact Report (EIR) address the following issues:

Aesthetics

HRS proposes to build a Performing Art Center (PAC) 55 feet from the property line at the top of Linnet Avenue. The new structure will be 15,900 square feet, 32 feet high (2+ stories), for up to 450 seats. HRS proposes to tear down the existing structures which are significantly smaller in size and more in keeping with the sylvan character of the property and the neighborhood.

I ask that the EIR study (1) whether the PAC will substantially degrade the existing visual character or quality of the site and its surroundings and (2) whether it will create a new source of substantial light or glare which will adversely affect day or nighttime views in the area.

What trees will be removed to build this PAC? What type of lighting will a structure of this size and purpose require? Where will the lighting be placed and when will it be used? Will it impact the day and night views of the neighbors?

Will a building of this proposed size and location block or reduce the natural lighting for the neighboring homes? Will it create shadows on the neighboring homes?

Where will the utilities — HVAC, electrical, plumbing — be located? Will they blend in with the existing character of the property or will they create an industrial feel?

Air Quality
HRS proposes to place a two-lane road along the interior perimeter of the South Campus. For the houses at the top of Alida Court and Linnet Avenue, the road will be immediately adjacent to the property line and within a few feet of their homes. The road will be one way with traffic lights at each end to control entry and exit to/from the road and to control traffic on Lincoln Avenue.

I ask that the EIR address what impact this scheme will have on air quality. Will it expose sensitive receptors such as elderly neighbors or those with breathing issues to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people?

How many vehicles will use the ring road each day? What types of vehicles? Cars only? Delivery trucks? Trucks delivering supplies and props and equipment to the PAC? During what hours will the ring road be used? At what speed will vehicles travel the road? How long will it take a vehicle to use the length of the ring road? How long will it take a car to pick up or drop off a passenger? If the passenger is a student, does the age of the student impact how long it will take the student to exit or enter the vehicle? Will vehicles sit idling on the ring road while waiting for the vehicles in front of them to drop off or pick up passengers? Will the traffic lights cause vehicles to back up on the ring road and sit idling or stopping and starting within feet of the houses at the top of Alida Court and Linnet Avenue? Will the traffic lights impede the flow of traffic on Lincoln Avenue, increasing vehicle emissions? How much vehicle exhaust will be created by vehicles driving slowly, stopping and starting, or idling on the ring road?

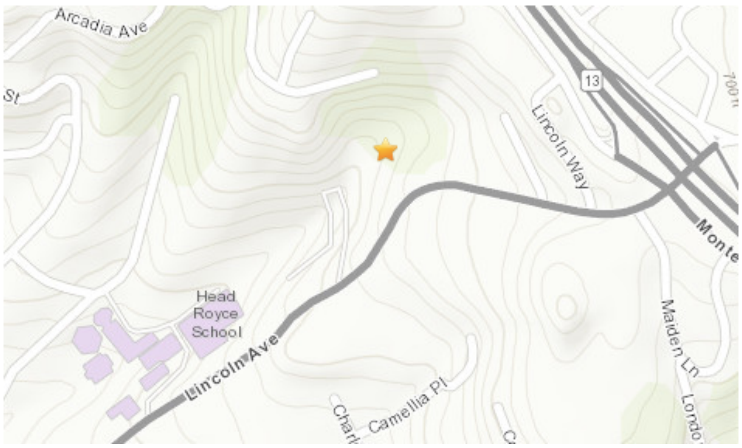
Will demolition of existing structure release hazardous materials such as asbestos, lead and mold into the air? At what levels? For what periods of time? How will those materials be contained so as not to negatively impact the health of neighbors?

During grading and soil removal, how much dust will be released into the air? For how long? At what levels? What measures will be taken to contain the dust?

Biological Resources
The Laguna Branch of the Peralta Creek runs behind the houses on the south side of Linnet Avenue, including my house. I ask that the EIR address whether the creek runs through the South Campus, where it is located, and whether it will be impacted by the new construction of the PAC, the ring road, other new construction, demolition of existing buildings, removal of trees, the use of construction equipment, and grading and drainage work required by the construction.

I ask that the EIR address the impact of the construction/demotion on wildlife and trees. Will any birds, inspects or other animals be impacted by the destruction of their natural habitats? What trees will be removed? Will their removal impact the stability of the soil or the flow of the creek?

Geology and Soils
The neighborhood has experienced three small earthquakes on the Hayward fault so far this year. The earthquakes on January 16 and 17, 2019 were centered near the intersection of Highways 13 and 24. The earthquake on March 8 was centered on the on Lincoln Avenue below Highway 13. <u>It was on the HRS North Campus.</u>



https://earthquake.usgs.gov/earthquakes/eventpage/nc73149761/executive

Given the geography of the South Campus, the proposed construction of a pedestrian tunnel under Lincoln Avenue, the amount of grading and soil removal HRS intends to do, and the removal of trees, the EIR should address what impact the inevitable "big one" on the Hayward Fault will have on the South Campus. Will such activities affect the stability of the soil resulting in landslides or destruction of existing and new structures resulting in injuries or death?

Hydrology and Water Quality
When it rains, water runoff from the South Campus overwhelms the storm drain on the north side of Linnet Avenue creating excess water drainage down the street. I ask that the EIR address whether the new construction of the PAC at the top of Linnet Avenue will create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.

I also ask that the EIR address the impact that the grading work will have on the neighboring houses. Will the grading and soil removal and tree removal create or exacerbate drainage issues resulting in flooding and property damage to surrounding houses and streets? Will the grading impact the flow of the creek creating flooding problems for the neighbors?

Noise
HRS' proposed project includes at least four elements with the potential to increase noise levels in excess of established and applicable local noise standards: (1) the interior ring road; (2) the PAC; (3) the "terraced commons"; and (4) outdoor classrooms.

Vehicles using the ring road will create increased noise levels by driving, idling and stopping and starting within a few feet of neighboring homes.

Use of the PAC — a 2+ story, 16,000 SF building located 55 feet from neighboring houses — will create increased noise levels when it is used for theater, dance, and music groups and for practice, performance, classes, assemblies, concerts and meetings. Head Royce Preliminary Development Plan, submitted December 2018. (HRS Plan, Dec. 2018), p. 19. HRS initially considered renting the PAC to outside groups for general use by the public. Neighbors objected. HRS did not include rental of the PAC in its December 2018 submission to the Planning Commission.

Use of the terraced commons for students to congregate and eat lunch daily and intermittent use for larger events such as graduation will increase ambient noise levels, as will a series of outdoor classrooms designed on raised wooden decks around trees. HRS Plan, Dec. 2018 p. 30.

I ask that the EIR address whether these uses will create a substantial temporary, periodic or permanent increase in ambient noise levels in the neighborhood above levels that exist without the project. How will the noise from the PAC, the terraced commons and the outdoor classrooms be contained? Will sound amplification be used in these areas for these purposes? When, how often and for how long? If HRS changes it position and now decides to rent out the PAC for general public use, by whom will the PAC be used, how often, when, for what purposes?

The EIR should also address the quality and length of the noise created by the demotion and new construction proposed by HRS. Where will the construction laydown area be located? How long will the demolition and construction last. What types of construction equipment will be used. On what days? During what hours?

Where will new utilities be located and what noise levels will they create, when and for how long?

<u>Public Services</u>
How will a major construction project such as HRS proposes impact existing public services such as fire and police protection. Will the plan create the need for new or additional services?

Will the construction of a tunnel linking the campuses close Lincoln Avenue during the construction, requiring re-routing of buses, fire trucks, ambulances, and garbage trucks?

In the event of an emergency such as a fire or an earthquake, will the increased number of students, faculty and staff and the 450 attendees at an event in the PAC require public services such as fire and police protection to be diverted from the neighborhood and elsewhere in Oakland in order to attend to the increased needs of HRS?

Our streets are already full of pot holes. Use of heavy construction equipment for building demolition, new construction, grading, soil removal, delivery of construction supplies will further damage the streets surrounding the South Campus. Who will repair the damage to the public streets — HRS or the City of Oakland?

I ask that the EIR address these issues.

<u>Transportation and Traffic</u>
In addition to the issues already mentioned, I ask that the EIR address the impact of increased enrollment, faculty and staff on the existing traffic woes on Lincoln Avenue. What impact will three traffic lights related to HRS have on the flow of traffic on Lincoln Avenue? At certain times of day related to the drop off and pick up of students, traffic backs up not only on Lincoln Avenue but also on the southbound side of the Highway 13 Joaquin Miller/Lincoln Avenue exit. Even if there were no noise/exhaust issues with the ring road, would a ring road lessen the traffic on Lincoln Avenue? What if the drivers using the ring road become frustrated with the pace of the traffic and the increased time to drop off and pick up students? Will those drivers revert to use of Lincoln Ave? Will they use neighboring side streets to drop off and pick up students?

What if there is a major catastrophe such as a fire or earthquake? How will parents be able to pick up their children without negatively impacting the ability of neighbors to leave the area? Will fire, police and medical vehicles trying to get to the aid of HRS or neighbors be negatively impacted?

HRS has no plans to move the student buses off Lincoln Avenue. So, the present traffic issues related to the buses remain.

Linnet Avenue is a short, narrow street. HRS has repeatedly told the Linnet neighbors it will not use Linnet Avenue to enter or leave the South Campus. What if HRS changes its mind and decides to use Linnet Avenue to deliver and remove supplies, props, and equipment to/from the PAC? Will that use negatively impact the ability of emergency vehicles such as fire trucks and ambulances needed by the residents of Linnet Avenue? Will drivers frustrated by the ring road decide to use Linnet Avenue instead? Will Linnet Avenue be used by construction vehicles?

<u>Alternatives</u>
I ask that the EIR consider these alternatives to HRS' proposals.

- Re-route the ring road to move it away from neighboring homes.
- Place the PAC in another location, possibly in the center of campus or closer to the Ability Now side of the South Campus or closer to Lincoln Avenue.
- Widen both sides of Lincoln Avenue to create dedicated pick up and drop off lanes on both sides of the street.
- Move pick up and drop off traffic to the North Campus.
- Build a pedestrian bridge rather than a tunnel to link the North and South Campuses.
- Build sound walls around the entire South Campus.

Thank you for your consideration of these requests.

Roberta Dempster

Roberta Dempster
4224 Linnet Avenue
Oakland, CA 94602-2514
rndempster@comcast.net

March 7, 2019

Rebecca Lind
City of Oakland Planning
250 Frank H Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: Head Royce EIR comments
Lincoln Ave.

Dear Ms. Lind,

I would like to submit a comment on the possible scope of the EIR for the project at 4315, 4368, 4500 Lincoln Ave.

I am a resident at 4166 Whittle Ave and Head Royce is my immediate neighbor.

My concern is whether the increase in enrollment at the Lincoln address and the new campus will increase the truck traffic on Whittle Ave. Head Royce uses the Whittle Ave rear entrance for their supply trucks.

Head Royce has been very good at limiting vehicular usage of this rear entrance.

Whittle Ave, like most streets in Oakland, is rapidly deteriorating with increasing potholes. The larger supply trucks use this avenue but do not have the ability to avoid the enlarging potholes. After a downhill speed bump, there is an enlarging set of potholes that the trucks and autos cannot avoid. This just makes the problem increasingly worse.

Would the new enrollment increase this truck supply traffic?

Would an increase in truck traffic make the deteriorating street condition worse?

If so, could Head Royce, or the Planning Department, pull any sway with Oakland Public Works to monitor or repair the potholes so the street does not deteriorate to a point where the trucks should not be using it?

Thank you for your consideration of these comments,

alan fleming
4166 whittle ave
oakland, ca 94602
510 336 2599

From the desk of...

Eric S. Haiman, J.D., Ph.D
2600 Charleston St.
Oakland, California 94602
erichaiman@gmail.com

March 11, 2019

RE: Head Royce Planned Unit Development

I am a nearby resident and write as such and as a member of the Oakland community as a whole. This letter is written in response to the City's Notice of Preparation of a Draft EIR and is, therefore, primarily written in order to a provide a few brief comments on the scope of the EIR, as appropriate to this stage of the proposed project.

However, before addressing the issue of the scope of the EIR, I must express my shock and dismay at the scope of the proposed project. Approval of the project in anything remotely resembling the form in which it has been proposed would be a travesty. It would completely transform and dramatically degrade the environment of our immediate neighborhood, including but not limited to residents on Camelia Place, Charleston Street, Laguna Avenue, Alida Street, Linnet "Avenue," (really just a street), and Lincoln Avenue. In addition to the above unacceptable consequences, the proposed project would dramatically increase the safety hazards for residents of our neighborhood, people needing to evacuate a large area of the Oakland hills and the staff and students of Head-Royce itself, especially in the event of an urban wildfire.

Attached hereto are three maps with descriptive names and filenames beginning with Map 1, Map 2, Map 3 and Map 4. These maps show the significance of Lincoln Ave. as an evacuation route in the event of the need for that.

Map 1 is primarily to show the relation of Lincoln Avenue to the two closest arterial escape routes, Park Blvd. and 35^{th} Ave, and Lincoln Avenue's relation to two major, Regional Parks, Joaquin Miller Park and Redwood Regional Park. As <u>Map1</u> alone shows, Lincoln Avenue is the closest evacuation route for all of Joaquin Miller Park, and a good portion of Redwood Regional Park, a fact that must be addressed in any EIR. As a frequent user of these two Regional Parks, I know that if I were anywhere in Joaquin Miller Park, my escape route by vehicle would be down through Lincoln Ave. As for

Redwood Regional Park, anyone accessing the park via Skyline Blvd. would rationally choose Lincoln Ave. as their escape route, as well illustrated by **Map 4.**

Map 3 is Map 1 zoomed in to get a closer view of the location of Head Royce and our neighborhood relative to areas of the Oakland Hills for which Lincoln Avenue is the primary escape route in the event of an evacuation, caused by wildfire, earthquake or more remote event.

Map 4 is a further zoomed in view, providing a yet closer view of Head Royce, our quiet residential neighborhood and the most relevant area of the Oakland Hills. Map 4 also identifies Skyline Blvd in the Regional Parks discussed above, as a major access road to both Joaquin Miller and Redwood Regional Parks.

<u>Any EIR will be invalid and unsound</u> if it does not conclude that this project causes such excessive consequences for the environment, including our human one as well as the physical aspects that it can only be adequately mitigated with a complete re-design.

The above simply summarizes, from what I currently know, my most immediate objections to the proposed project. I have lived in my current home for almost thirty (30) years, have reviewed the materials produced along with the Notice of Preparation, and have spent 10-20 percent of the last twenty-five (25) years of my legal practice on land use issues, almost all of them in largely residential, middle-class neighborhoods in Santa Clara and San Mateo Counties.[1] While I am not writing this as a lawyer, as I am not representing any other resident, I do understand the law, and in my judgment, the proposed project is a gross violation of Head Royce's duty to act in good faith, and cannot be approved in anything resembling its current form consistent with the purposes of CEQA. Whatever the extent of that duty is in the eyes of the law, the excessive, bad faith nature of the proposed project is sufficient ground for the City of Oakland to reject this project and require the applicant to go back to the drawing board. While I understand that this can at this point only be the product of a prolonged process (or a negotiated resolution?), it is clear to me on its face that the City would not be violating any duty owed to Head Royce, legal or otherwise by rejecting the proposed project, and that the City's obligation to residents and visitors who will be adversely affected is a compelling one. The City has an obligation to balance interests and be fair to all parties, but the overwhelming adverse impact on all concerned outweighs any relevant interest of Head Royce. The only advantage I see to Head Royce is the bottom-line monetary profit of the proposed expansion. If Head Royce has grown to the point that it can easily recruit

[1] 80-90 percent of my practice over that time period has been civil litigation, trials and appeals, the vast majority of which has been centrally concerned with real property law issues.

over a thousand, qualified students, it is time for Head Royce to recognize that it has already, or will soon, outgrow the natural and social limits of reasonable, further expansion of facilities and the accompanying infrastructure on its Lincoln Ave. properties. At what point does the City say NO, your proposed development is beyond excessive, and you need to re-design your project into a smaller and more compact plan, that preserves the existing **"Green Space,"** (see discussion and attached photos referenced below), and adequately mitigates all the other significant, adverse, environmental impacts of the development? With the proposed project it is time for the City to say **NO**.

Turning to some additional, specific areas of concern, I note the following:

The attached photos depict, somewhat inadequately the portion of the subject property on the Southern end of the site of the proposed "South Campus." [2] This is a currently existing, significant **"Green Space",** (with a survey one could quantify the area of the property and describe its boundaries) which provides a very significant buffer between the institutional use of the subject property and the neighborhood and the critical natural habitats of plant and animal life, in the Green Space and the surrounding environment with which it interacts closely, encompassing a large part of our neighborhood. The proposed project would destroy this buffer and habitats, a dramatic, adverse and significant impact that cannot be justified on any relevant grounds, legal or moral.

There is no reason for Head Royce to expand the development of the property beyond areas that are currently developed. One can easily imagine all sorts of ways in which a much more compact development, building some new structures and repurposing existing, newer structures could be designed that would accommodate some reasonable expansion and actually mitigate the existing transportation impacts which are creating a great burden on residents and a safety hazard for all involved.

In terms of the EIR, virtually every category of impact identified by State Guidelines has to be thoroughly studied, including but not limited to Aesthetics, Air Quality, Biological Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water

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[2] The attached photos are numbered 1 to 5. I took these photos on March 3, 2019. Photos 1-3 show portions of the **Green Space** that are visible from the triangular area, covered with red rock on a residential parcel just up Charleston St. from where it intersects Laguna Ave. This triangular area and part of the Green Space are clearly visible from my home. Maps 4 and 5 show the location of the triangular area in relation to the immediate, surrounding part of the neighborhood. The photos alone do not capture the extent of Green Space, which to even identify accurately requires site inspection and professional analysis utilizing a survey to identify the boundaries of the Green Space.

Quality, Land Use and Planning, Population and Housing, Noise, Public Services, Transportation, Utilities and Service Systems, and **Wildfire.**

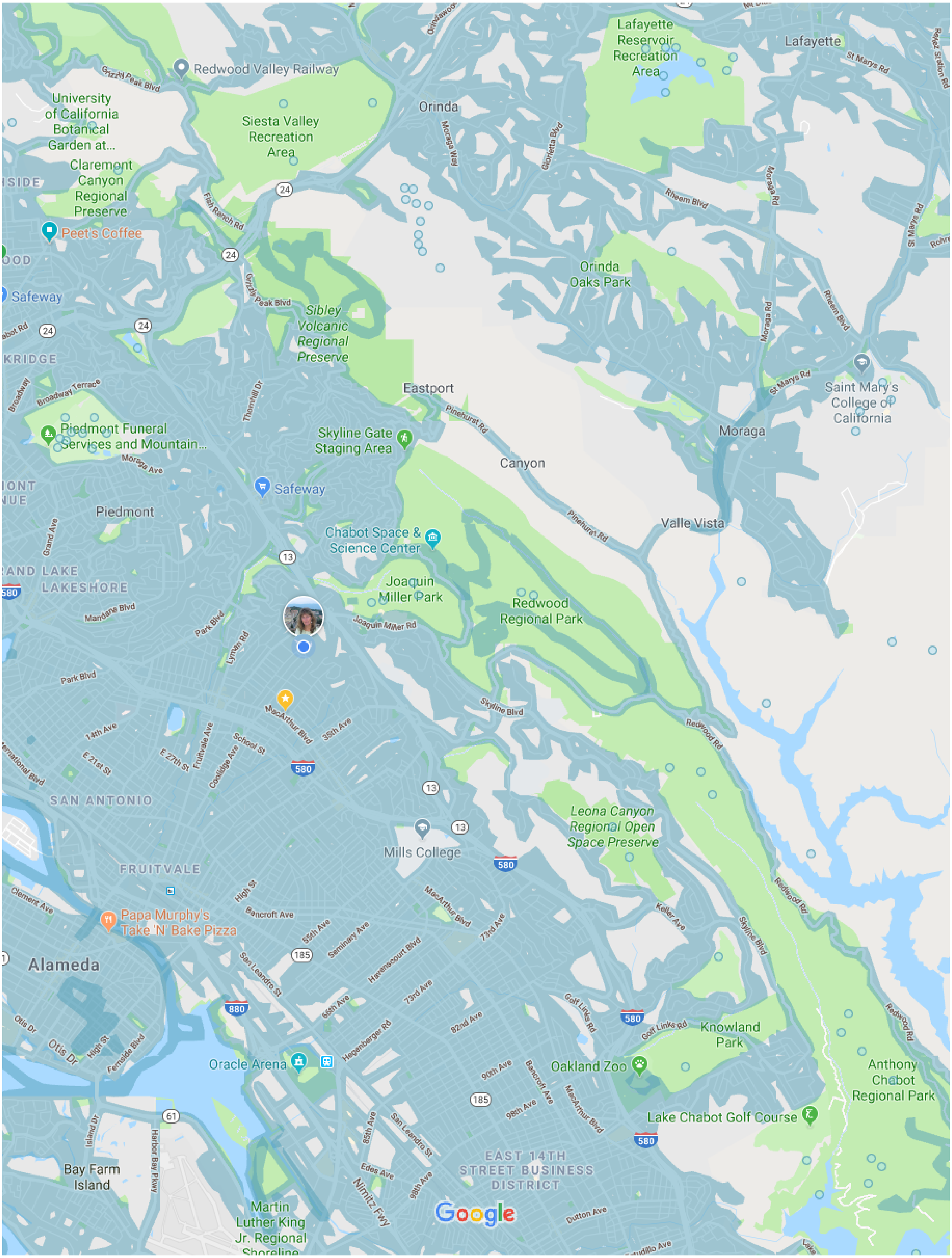
I offer these comments given the stage of the process; however, I cannot emphasize enough how misguided this entire project is. Head Royce has a history of, to put it kindly, being less than forthcoming with information and answers in response to the questions and concerns of neighborhood residents and other members of the Oakland community, and has a record of not acting in accordance with relevant, existing requirements (see letter from NSC dated March 7, 2019). Now, it proposes this gargantuan project which would devastate a neighborhood and pose a major safety risk to a large swath of the neighborhoods throughout the Oakland hills. Lincoln Ave. connects to Highway 13, just below the border of our large Regional Parks. God forbid a wildfire should start and spread into or from Joaquin Miller or Redwood Regional Park; the resulting disaster would be horrendous enough without the additional danger posed by the proposed project. Imagine the fire requires authorities to close access to Highway 13 from Park to 35th such that all the vehicles that otherwise access the 13 from these arteries are trying to descend along these three routes.

Head Royce may have a legal right to proceed in the fashion it is, but is not acting in good faith. Its reckless action reflects no concern whatsoever for its responsibilities to the neighborhood residents, the Oakland community and our visitors and consciously disregards the rights and interests of affected parties. This project is reckless, submitted in bad faith, and benefits nobody but the owners of this private school at an unacceptable cost to our neighborhood and community.

Sincerely

E. S. Haiman

Eric S. Haiman, J.D., Ph.D.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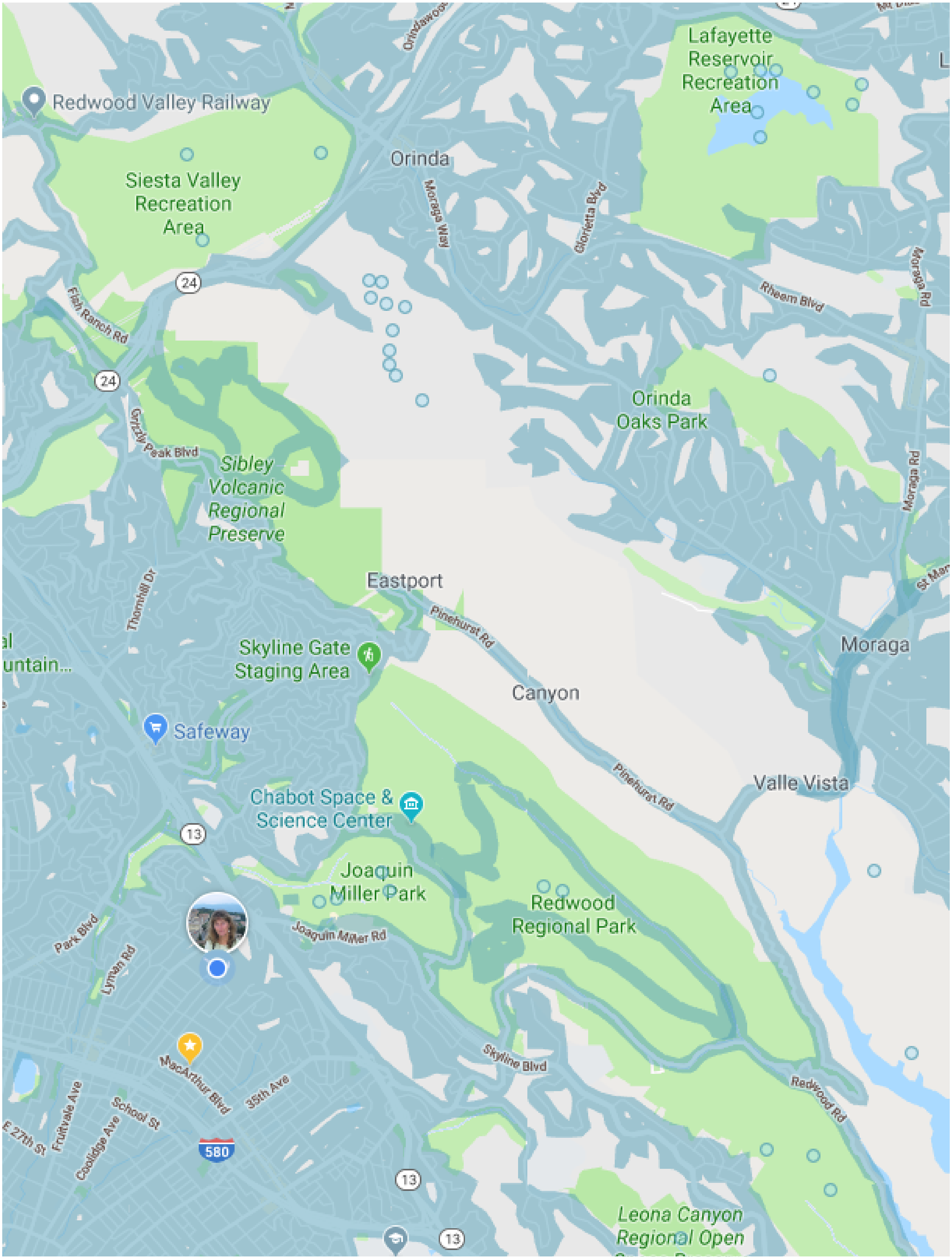
Claremont Canyon Regional Preserve
Peet's Coffee
Safeway
Sibley Volcanic Regional Preserve
Orinda Oaks Park
Eastport
Saint Mary's College of California
Moraga
Piedmont Funeral Services and Mountain...
Skyline Gate Staging Area
Canyon
Safeway
Piedmont
Chabot Space & Science Center
Valle Vista
Joaquin Miller Park
Redwood Regional Park
SAN ANTONIO
Mills College
Leona Canyon Regional Open Space Preserve
FRUITVALE
Papa Murphy's Take 'N' Bake Pizza
Alameda
Knowland Park
Oracle Arena
Oakland Zoo
Anthony Chabot Regional Park
Lake Chabot Golf Course
Bay Farm Island
EAST 14TH STREET BUSINESS DISTRICT
Martin Luther King Jr. Regional Shoreline
Google



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Sibley Volcanic Regional Preserve
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13
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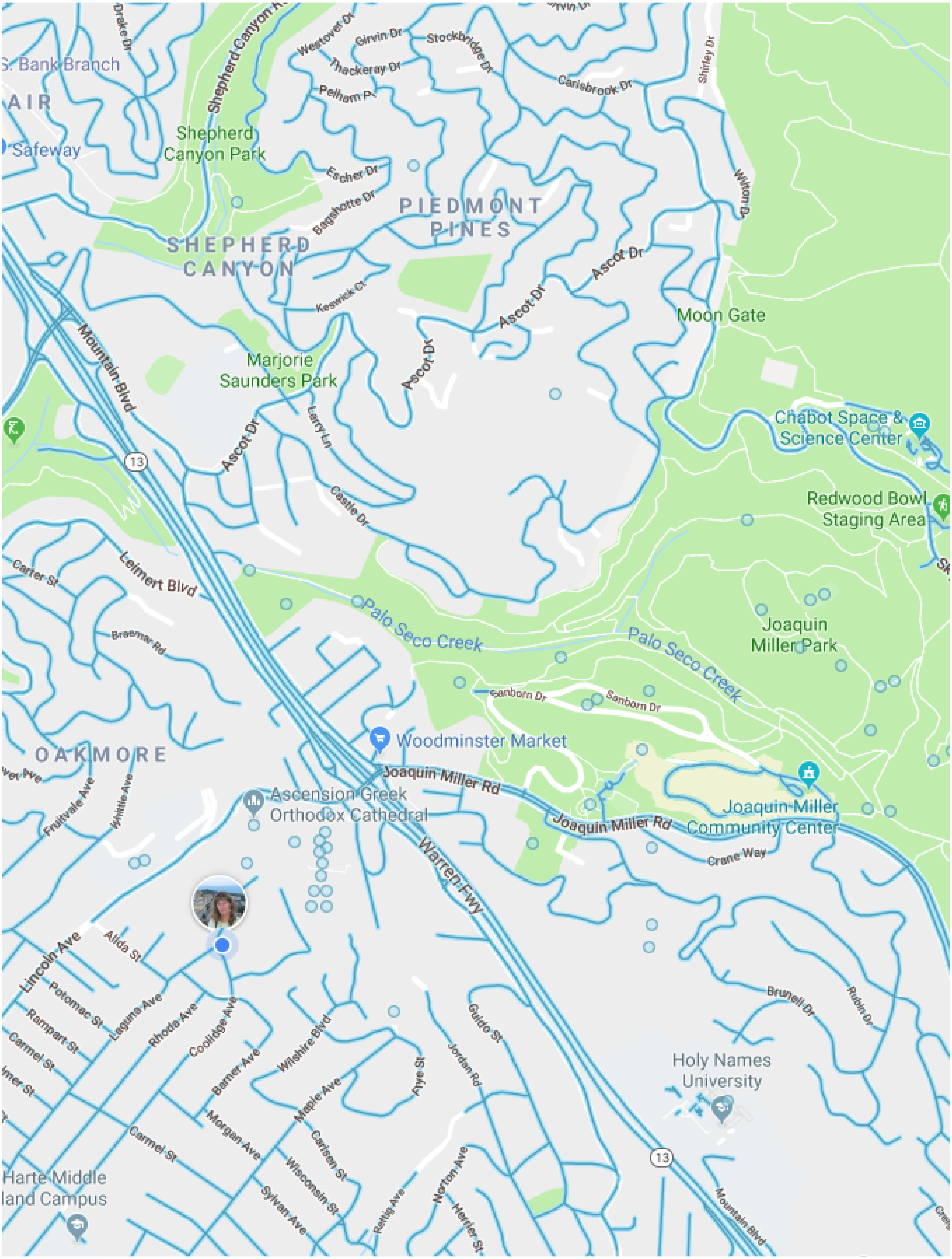
Shepherd Canyon Park
SHEPHERD CANYON
PIEDMONT PINES
Moon Gate
Marjorie Saunders Park
Chabot Space & Science Center
Redwood Bowl Staging Area
Joaquin Miller Park
Palo Seco Creek
Woodminster Market
Ascension Greek Orthodox Cathedral
Joaquin Miller Community Center
OAKMORE
Holy Names University
Safeway
Mountain Blvd
Warren Fwy
Joaquin Miller Rd
Leimert Blvd
Ascot Dr
Sanborn Dr
Lincoln Ave
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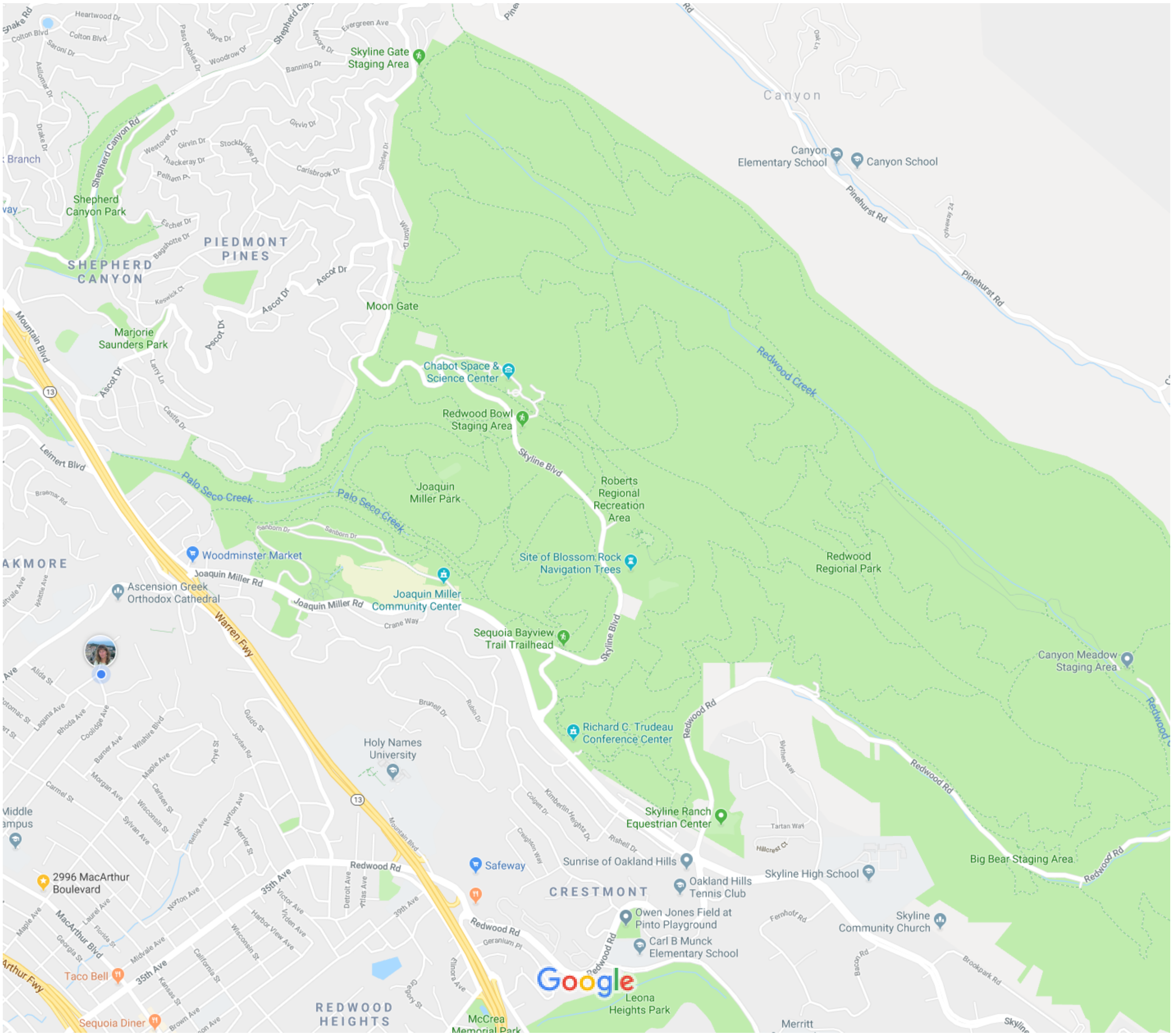

Map data ©2019 Google 1000 ft

March 11, 2019

Rebecca Lind, Planner III **Sent Via Email Only**
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re. **Case Number PLN18532-ER01**

Dear Ms. Lind:

I reside on Camellia Place, which is uphill from Head Royce School's ("HRS") property located at 4500 Lincoln. These are my comments in response to the Notice of Preparation of a Draft Environmental Impact Report for the Head-Royce School Planned Unit Development Permit (PUD) Project.

Traffic Plan

To my knowledge, HRS has not stated the percentage of the motor vehicles that drop off students will be doing so at the South campus. This makes it hard to assess the plan in terms of its impact on traffic. At page two, the Notice states: "Other than public and private bus loading and unloading, all pick-up and drop off activity for the school would occur along the loop road, rather than as currently occurs along Lincoln Avenue." How could it be beneficial for traffic flow for all students to be dropped off on the South Campus**?** Will hundreds of cars be diverted onto the loop road, drive behind neighbors' homes, and back onto Lincoln daily? This will adversely impact neighbors without providing a positive impact on traffic flow on Lincoln.

Some of the students should continue to get dropped off and picked up on the main driveway of the North Campus. This would be better for traffic flow on Lincoln and be less impactful to neighbors living near the South Campus. If all students are dropped off and picked up at the South Campus, traffic will be further delayed as hundreds of students at a time cross Lincoln, unless they are required to use a tunnel or an overcrossing.

A. On-Campus Loop Road

The proposed on-campus loop road runs the perimeter of the property, putting it (and all traffic noise) closest to neighbors. Neighbors should be accommodated and noise levels in the surrounding neighborhood should be reduced by designing the road to be primarily on the interior portion of their property, not the exterior. Is a loop road even necessary for parents to drop off and pick up their kids? Why can't they just drop them off in the parking lot? They could drive down one row of parking spots when they enter campus and drop their kids off at a designated spot. Then parents could drive up another row of parking spots and back onto Lincoln. If a loop road is needed, it should be moved and shortened. It should be located closer to the Lincoln side of the property so as to be less impactful to neighbors. Clearly, it isn't necessary for a loop to go along the entire perimeter of the property. Why not make a loop go just around the first section of the parking lot? Or what about a road that goes around the parking lot and between Bldg. 1 and Bldg. 2? Both of these suggestions are less impactful on the neighbors. HRS should keep more open space near the outside parameters of the property to lessen the noise impact on neighbors.

B. **Proposed Traffic and Parking Lincoln Avenue**

I really don't understand this proposal, as it appears to be a magical trick of creating five lanes out of four without widening. Either they will have to remove parking on Lincoln to do this or they will have to modify traffic flow. Any such modifications should be subject to review by city of Oakland and should involve an analysis of impact on traffic and congestion at peak hours.

Logically, it seems that having parents drive a ring road around the perimeter of the property is not going to have a positive effect on traffic flow. Traffic will get backed up on Lincoln as parents driving downhill wait to turn left onto the South Campus. Parents may feel it is too much of a time sink to drive the entire perimeter of the South Campus. This isn't a well thought out answer to traffic congestion issues. Having traffic flow through the neighborhood is not a viable alternative as streets are too narrow. They already get congested quickly.

C. Parking

HRS needs to provide adequate parking for its own staff and employees. The addition of 25 additional parking spaces on the South Campus is insufficient to meet HRS's current needs. Where is everyone who is going to the Performing Arts Center going to park? I am concerned about people attending functions at the theater parking on neighborhood streets.

Further, if HRS' request for additional enrollment is granted, there will be additional staff hired. This staff will need adequate parking. HRS's plan of waiting and seeing how it goes is too indefinite. HRS should be required to add more parking spaces to its plan to accommodate current and future needs.

D. Easement

The drawings show HRS's PUD making use of an easement located on the Ability Now property that abuts HRS's South Campus. I have not seen a written explanation of how HRS intends to use this easement or what it needs to do to make the easement usable. If HRS must grade land in order to use the easement as it desires, that could lead to future erosion, as was mentioned in the Neighborhood Steering Committee's March 7, 2019 correspondence to Mr. Verges and the Head-Royce School Trustees. That could to litigation and must not be permitted.

Vegetation

The eucalyptus trees are now probably at least six (6) or more stories high. They bend like crazy when it is windy and drop bark. They are a fire and safety hazard. As such, they should be removed. To the extent that they block noise, another "fix" should be put in place.

It is unclear from HRS's proposals what they really plan to do with many of the trees that are located on the property. This makes it hard to comment. To the southwest, I have a view of the Bay Bridge and downtown San Francisco. I am concerned about losing my view. Transplanted trees proposed include the possibility of coastal redwoods. These will surely block neighboring views in ensuing years. I think that HRS should not plant or transplant additional redwoods or other tall growing trees that will adversely impact neighbors' views. Additionally, they should be required to prune trees to ensure that they do not impede neighbors' views.

Access to the Property from the North Campus

I suggest an overcrossing that can be locked when HRS is not in session. This would be safer for students and staff and better for traffic flow than having students cross Lincoln to get to and from the South Campus. The tunnel concept is worrisome because we are on a steep hillside and almost directly on the fault line. Geological reports are needed.

Performing Arts Center

Consideration should be given to putting Performing Arts Building closer to Lincoln so as to be less disruptive to neighbors. Consider putting it where Buildings 6 and 7 are located, which the HRS plan designates as open space. Alternatively it could face Lincoln and be located where the "Commons" are currently planned to be situated.

HRS has stated that it does not intend to have other entities use its new Performing Arts Building. However, I was told that two members of the Planning Commission indicated that Ms. Lind should consider the impact of having other groups use it as well. Having additional groups use the building will cause additional noise. Ours has always been a quiet neighborhood. My neighbors and I enjoy the quiet. Having people attend events at the Performing Arts Building day and night, including weekends, will have a considerable impact on the noise levels in the neighborhood as people go to and from events and linger outside the Performing Arts Building and possibly look for parking in the neighborhood. There would be less impact on the neighborhood if the Performing Arts Center was located closer to Lincoln and if it was used only by HRS.

The Commons

What was first described by HRS as merely a place to eat lunch and hang out between classes is now being called a place to hold graduations and other events. Now I am thinking the HRS may be thinking of treating students to live bands playing amplified music on Fridays and maybe during weekends. Having an outdoor amphitheater that will allow for additional outdoor events will create additional traffic and excessive noise as sound carries up the canyon. This will be detrimental to the neighborhood.

Stormwater Management Approach.

The lack of sufficient information about drainage is concerning. Underground streams and the clay in the soil must be taken into consideration. Is HRS willing to explicitly acknowledge that it will bear liability for any damage to neighbors caused by its "stormwater management approach"?

Access to Lincoln from Charleston

The "Pedestrian Gate" on the South Campus plan that would open access to Charleston should be required to remain closed, except for emergency use. The term “emergency use” should be defined in the permit that issues to HRS.

Increase in Enrollment

HRS’ request to increase enrollment by 344 students so that there are 1250 students on its campuses during the school year should be denied. Increasing enrollment will require additional staff. HRS and the South Campus are located in the “Urban Burn Area” and are almost right on the Hayward Fault. Experts state it is not a question of whether there is a major earthquake on the Hayward Fault, but when there will be one. Earthquakes have been epicentered close by. Further, the Santa Rosa Fire and Camp Fire were game changers. People living in Montclair have had their homeowners insurance nonrenewed because some insurance companies believe the risk of a catastrophic fire is too high. It is not unrealistic to think that a massive conflagration could start in the Oakland hills above Highway 13, jump the freeway and continue down the hill toward the bay, burning everything in its path.

In the event there is an emergency evacuation of the area, access to Lincoln and Park Boulevard will be needed by responders and evacuees. But, it is not unlikely that several hundred vehicles driven by HRS parents would attempt to reach HRS to pick up their children. This will adversely affect first responders’ efforts and evacuees’ efforts to leave the area. HRS already has an extremely high enrollment for a private school. Given its location and evacuation plan, its request for an increased enrollment of 344 students should be denied.

Thank you for your consideration.

Sincerely,

Jodi S. Lerner

March 11, 2019

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: Case Number PLN18532-ER01
Head-Royce NOP / Master Plan for South Campus Expansion

Dear Ms. Lind:

I write to express my concerns about the proposed Master Plan (Plan) submitted by Head-Royce School (HRS) for approval by the City of Oakland Bureau of Planning, in particular for the school's proposed Plan to develop the South Campus, formerly the property of the Lincoln Child Center (LCC).

I am a resident whose property directly abuts the southeast edge of the South Campus. My residence is located at 2575 Charleston Street (94602). I expect the neighborhood, including my property, to be deeply impacted by the proposed Plan, and the expansion and redevelopment by HRS of the South Campus.

I would like the Environmental Impact Report (EIR) currently underway to address the impact as to the following issues proposed in the school's Plan:

1. Permitting **30% increase of student enrollment** from 884 to 1,250 students
2. **Additional stoplights** on Lincoln Avenue and reconfiguration of lanes on Lincoln Avenue to accommodate left turns
3. Construction of an **internal circulation road (loop road)** along the perimeter of the property within feet of neighboring houses, ostensibly to mitigate traffic congestion from parent drop off and pick up
4. Construction of a subterranean **tunnel** under Lincoln Avenue to link the two campuses
5. Addition of 61 on-site **parking spaces** and long-term plans to add more parking
6. **Grading**, soil disturbance and impact to hillside topography
7. Proposed **Performing Arts Center** seating 450 people and measuring 15,900 square foot
8. Building **demolition**, **new construction**, ongoing maintenance and renovation.
9. Loss of **existing housing**, interim housing for faculty and staff
10. **Tree removal,** relocation, **vegetation management,** and loss of wildlife habitat

1. **Permitting increase of student enrollment from 884 to 1250 students.** HRS proposes increasing enrollment of the school by 30%. I would like the EIR to address the impact of

this increase to the Lincoln Heights neighborhood, whether the proposed permitted increase takes effect immediately or as HRS states, over time. It appears this increase will dramatically alter the present conditions of traffic congestion, child/parent safety in the event of a disaster such as wildfire or earthquake (HRS sits atop or in close proximity to the Hayward fault), as well as to residents who also will need to rely on emergency services in such events.

- What will be the impact of increasing already-high enrollment by 30%?
- What will be the impact of increased need for parking for increased staff and student numbers, as well as for public transportation?
- How will students and residents be safely evacuated in the event of fast-moving wildfire or major earthquake?

2. **Additional stoplights on Lincoln Avenue and reconfiguration of lanes on Lincoln Avenue to accommodate left turns.** Placement of additional stoplights and reconfiguration of traffic lanes on Lincoln Avenue should be carefully weighed and considered in the EIR process. The increase of enrollment, the current traffic conditions which cause congestion twice daily at the beginning and end of the school day, and the impact on the local and wider neighborhood need to be evaluated in the EIR.
    - Will the EIR address the failure of the Plan to alleviate the twice-daily traffic congestion caused by cars and buses picking up and dropping off students?
    - Will the EIR analyze how will the requested enrollment expansion <u>not</u> cause additional traffic congestion? The perimeter loop road does not appear to remove that problem (see below).

3. **Construction of an internal circulation road (loop road) along the perimeter of the property, in close proximity to neighboring houses.** The HRS plan proposes construction of a two lane traffic perimeter road (loop road), which it claims drivers who drop off and pick up children will use to ease congestion on Lincoln Avenue. The proposed road will be constructed where no road presently exists, and will be located within 50 feet of neighboring parcels.
    - Will the EIR address the impact of the loop road, how and whether it will actually be used by parents dropping off and picking up children?
    - Will the EIR address the increase in pollution and particulate matter arising from automotive use of the loop road, and whether there are better alternatives, such as locating a drop off and pick up road in the center of the South Campus to serve all the buildings and classrooms there?
    - Will the EIR consider enlarging Lincoln Avenue itself into the South Campus property to avoid the necessity of a new roadway along the perimeter of the South Campus?

4. **Construction of subterranean tunnel under Lincoln Avenue to link the two campuses**. I would like the EIR to address the impact of creating a tunnel under Lincoln

Avenue to connect the two campuses. While this seems like a logical solution, it raises a number of questions around necessity, safety and concern over how it will be accomplished.

- Will the EIR address the merits of a tunnel as opposed to a bridge over Lincoln Avenue?
- Will the EIR address the safety of installing a tunnel atop or in close proximity to the Hayward Fault, in the event of a major earthquake?
- Will dynamite be used to remove soil and rock?
- How will use of Lincoln Avenue, to which there are no convenient alternatives, be impacted by the existence of a tunnel?

5. **Addition of 61 on-site parking spaces and long-term plans to add more parking**. The Plan calls for adding 61 on-site parking spaces and suggests a parking structure will eventually be added to the HRS campus.
   - Will the EIR address the need to clearly define the plans as to additional parking on the HRS property, to discourage staff, students and parents parking in narrow and already crowded neighboring streets?

6. **Grading, soil disturbance and impact to hillside topography.** I would like the EIR to address the impact of the grading, soil disturbance and modification to the hillside topography as it presently exists on the South Campus. I am concerned that the plan will alter drainage, water runoff and will generally weaken the hillside topography to the extent that it will increase erosion, mudslides and damage to surrounding residences and property.
   - What studies will be conducted to determine the impact of grading, demolition, new construction, adding roadways on the hillside topography?
   - How will land surface drainage and subterranean drainage be impacted?
   - Will the planned expansion increase the likelihood of soil erosion and disturbance to hillside topography?
   - Will HRS bear the liability for such potential impacts or will the City?

7. **Proposed Performing Arts Center (PAC) seating 450 people and measuring 15,900 square foot.** The Master Plan envisions a very large performing arts structure where none has traditionally been located on the South Campus. The proposed PAC will be located very close to residences on Alida Street and Linnet Court.
   - Will the EIR address this proposed use and what its ongoing impact will be to the neighborhood?
   - How will the PAC impact the neighborhood with additional traffic, noise, and sound from performances?
   - Will the EIR address alternatives, such as locating the PAC closer to Lincoln Avenue and in a more central location of the South Campus, instead of building it in such close proximity to neighbor's homes?

- Where will parents and other visitors park when they attend events at the PAC?

8. **Building demolition, new construction and ongoing maintenance and renovation.** I would like the EIR to address the impact of demolishing existing structures and erecting new ones.
   - Will the impact of such demolition/construction contribute to loss of topographical integrity, preservation of historic structures, and increase the risk of fire, flooding, loss of natural aspects on the property (trees, wildlife)?
   - Will demolition and new construction increase disturbance to the "quiet enjoyment" of their properties to which residents are entitled and accustomed?
   - How will ongoing maintenance and renovation to facilities on the South Campus impact the environment and the neighborhood?

9. **Loss of existing housing, interim housing for faculty and staff.** The HRS Master Plan calls for demolition of several residential buildings currently standing on the South Campus. These residential buildings are recent construction by the former LCC owners.
   - Will the EIR address the impact of demolishing these structures instead of renovating them to use for HRS school purposes?
   - Will the EIR address the impact of removing residential structures that could be used for residential purposes in light of the ongoing housing shortage currently experienced in Oakland?

10. **Tree removal, vegetation management, and loss of hills wildlife habitat resulting from redevelopment of the South Campus.** The EIR should consider what the impact of redevelopment of the South Campus will be on historic/protected trees, vegetation management, wildlife (birds, mammals and reptiles) that currently are to be found on the South Campus.
    - What will the impact of tree removal and relocation be?
    - How will construction impact the health of the historically protected native trees that grace the property?
    - Will the EIR address the wisdom of <u>not</u> removing eucalyptus trees which are a fire hazard, and which are prone to toppling?
    - How will the addition or relocation of trees affect the views of adjacent hillside neighbors?
    - Will the EIR address issues around vegetation management and HRS non-compliance with City regulations?

Thank you for considering the above comments and questions.

Sincerely,

John Prestianni

M I C H A E L J . S O L I S

February 23, 2019

Ms. Rebecca Lind
Bureau of Planning
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

SUBJECT: COMMENTS ON NOTICE OF PREPARATION OF ADRAFT ENVIRONMENTAL IMPACT REPORT FOR THE HEAD-ROYCE SCHOOL PLANNED UNIT DEVELOPMENT PERMIT PROJECT. PLN18532-ER01

Dear Ms. Lind:

I am grateful for the opportunity to provide comments to the Bureau of Planning on the **NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE HEAD-ROYCE SCHOOL PLANNED UNIT DEVELOPMENT PERMIT PROJECT (PLN18532-ER01).**

The importance of understanding the full impact of projects, such as the proposed Head-Royce School Planned Unit Development Permit Project (the project), was the driving force behind passage the California Environmental Quality Act (CEQA) almost a half-century ago (1970). California's on-going leadership in the area of environmental protection is needed now more than ever. It is with this in mind that I propose the inclusion of the following in the Draft Environmental Impact Report (Draft EIR):

TRAFFIC IMPACT ON THE LARGER GEOGRAPHIC AREA

I am confident that the Draft EIR will discuss the traffic impact of the project on the immediate area; however, it is also necessary that it examine the secondary area(s) that will be impacted with this expansion. Specifically, the exit from State Route 13 at Joaquin Miller/Lincoln, Monterey Boulevard, Joaquin Miller Road, as well as Mountain Boulevard.

Between the hours of 2pm to 4pm, traffic on both State Route 13 and Monterey Boulevard becomes severely impacted, as a direct result of the current facility, causing vehicles to become stopped on State Route 13 prior to the off ramp. It would be assumed that enlarging the student population would increase this life-threatening situation and therefore must be included in the Draft EIR.

With regards to Joaquin Miller Road, Monterey Boulevard, and Mountain Boulevard it will be necessary to examine the effects the proposed increase in enrollment will have on the vehicular traffic of these roads. Currently all three roads are severely impacted during the morning and afternoon commute hours which has a direct impact on air quality. Once again, the report must discuss the impact on traffic and air quality as a result of this project.

3491 ROBINSON DRIVE OAKLAND, CALIFORNIA 94602

AIR QUALITY IMPACT CAUSED BY THE ADDITION OF A 3RD TRAFFIC SIGNAL ON LINCOLN ROAD

There are numerous studies that have concluded that traffic signals have a direct impact on air quality. It will be necessary to address the impact that the traffic signal will have with the overall air quality. It will be also necessary to address the overall impact that all three traffic signals with have, especially due to the fact that the current two traffic signals are not synchronized to only operate during school hours or on-demand for pedestrians. On a regular basis I am stopped at these signals even when no pedestrian or other vehicle traffic is in the area. Furthermore, due to the grade of Lincoln Avenue, it is necessary for drivers to rapidly accelerate to be able to climb the grade from a dead stop. This type of acceleration causes increased air pollutants and the addition of a third signal would be expected to increase this pollution.

IMPACT ON CRITICAL HABITAT AND SPECIES UNDER BOTH THE FEDERAL ENDANGERED SPECIES ACT AS WELL AS THE CALIFORNIA ENDANGERED SPECIES ACT

The United States Department of the Interior Fish and Wildlife Service has determined that the area surrounding Joaquin Miller Park is critical habitat for numerous species. The Draft EIR must examine the possibility of removing critical habitat under both Endangered Species Acts.

ENERGY IMPACT DUE TO INCREASED BUILDINGS/PARKING FACILITIES

CEQA provides guidance on energy impacts. Public Resources Code section 21000(b)(3) provides that an EIR must incorporate a statement regarding "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." Section 15126.4(a)(1)(C) of the Guidelines provides that: "energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant." And Appendix F of the Guidelines provides a list of possible energy impacts and potential conservation measures that are intended to assist the lead agency in preparation of an EIR.

Head-Royce's current policy of not providing space, either for a fee or complimentary, to groups during non-school hours must be discussed in the Draft EIR under the above sections due to the fact that heating and/or cooling building for only a limited use during the day constitutes an inefficient use of energy. Furthermore, the school's current burdensome procedures for the use of outdoor facilities - an application, a $25-dollar deposit, and a utility bill demonstrating your residency - all will they provide lighting for the facility, once again must be discussed as an inefficient use of energy.

CONCLUSION

It is with the utmost importance that Lead Agencies consider all possible impacts when drafting the Environmental Impact Report for two reasons:

1. All interested parties will have a clear and comprehensive understanding of the impact(s) of the proposed project.
2. To ensure public confidence in the project and the process.

I commend your department and the city of Oakland for their on-going commitment to the CEQA process. I look forward to reviewing your Draft EIR and submitting additional comments, if necessary, during the comment period. I wish to thank you for your time and effort on this matter. Should you have further questions or require clarification on any information contained in these comments, please feel free to contact me at (510) 206-5571 or mjsolis75@gmail.com.

Sincerely,

Michael Solis

Rebecca Lind
Planner III
City of Oakland Bureau of Planning
250 Frank H Ogawa Plaza, Suite 2114
Oakland, CA 94612

RE: CASE FILE NUMBER PLN18532-ER01

Dear Ms. Lind:

This letter is an addendum to the letter we provided on February 20, 2019.

We are concerned about the preservation of various buildings on the 4368 Lincoln Ave. portion of the Head Royce South Campus, including "The Mary Crocker Cottage", "The Grace Trevor Cottage", the "Junior Alliance" building and "Bushell Cottage". Those structures are significant both architecturally and in relation to the rich history of the former Lincoln Child Center and surrounding community with important ties to local women's history and charitable organizations. And while the Head Royce plan recognizes the need to spare at least some of those structures from complete demolition, it gives short shrift to their historical significance. For the 3 structures that would not be demolished under the Head Royce plan, the proposal to substantially renovate the interiors and to make some exterior renovations to "meet programmatic needs" are completely lacking in specifics.

For example, preservation of the exterior should specifically:

- Retain the existing façades of the buildings
- Not change the size, shape or style of windows and doors, including wood trim accents
- Retain the existing number and locations of windows and doors
- Not change the existing access to the buildings by removing the retaining wall to make room for buses
- Retain the existing, historical paint colors used on stucco and trim
- Retain the use of red clay tiles for all roofing and gables and not change the size or shape of those tiles
- Landscaping around the buildings should be consistent with what has been there for decades which includes many trees

Additionally, there is some evidence in historical documents that the original interiors of these buildings included architectural features, in harmony with the Spanish colonial revival style of the exterior. The interiors should be professionally evaluated to identify remaining architectural features that should be preserved.

Some additional concerns regarding construction related impacts:

How will the proposed construction of the Pedestrian Tunnel under Lincoln Ave. and extensive grading work impact the nearby historic resources such as the structures built in the late twenties and homes built in the early to mid-forties? For example, would the tunnel construction utilize the "drill and blast" method that requires powerful explosives?

The Plan also includes "phasing" which could mean there would be construction for a period of time, then no construction until Head Royce School finds more money, then construction again, and so forth. Who is going to replace the streets every time there is construction?

Concerns regarding destruction of trees and wildlife:

The Head Royce Plan results in the destruction of over 60 beautiful, predominantly mature native trees by either cutting them down, pulling them out of the ground in an attempt to "move" them, or killing them by grading near their roots, thereby also destroying existing habitat for birds and other wildlife.

It is highly unlikely that so many trees are in such "poor condition" that they need to be removed. Moreover, HRS's suggestion that mature trees can be pulled out of the ground, moved, and replanted on the site is unrealistic unless HRS has an unlimited budget and can work on the tree moving project for the long period necessary to complete the many steps to preserve the trees. The new locations for the mature trees require considerable space for each one, which is also a factor in determining whether moving them is feasible. Many of the most spectacular trees on the South Campus are mature live oaks, and after they reach 8 feet in height, they generally send out shallow roots that prevent relocation without killing the trees.

The Plan suggests that its vision for the South Campus would be to create a natural environment. However, its proposal for handling the existing trees, especially the mature native trees, would most likely destroy them. While at the same time, the Plan proposes to keep several large Eucalyptus trees, the only mature trees that *should* be removed as they present a fire hazard that puts both the historic resources on the site and the surrounding community at risk.

Sincerely,

Rod Thompson Brian Petraska

Rod Thompson& Brian Petraska
4232 Lincoln Ave.

Thomas White
2472 Alida Street
Oakland, CA 94602

Re: Case Number PLN18532-ER01

Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank Ogawa Plaza, Suite 2114
Oakland, CA 94612

Dear Ms. Lind:

My home is at the corner of Alida Street and Linnet Avenue, four houses southwest of the former Lincoln Child Center, now The Head-Royce South Campus. My comments reference the information in the NOP.

The "ring road" that is proposed will needlessly push cars, noise, and pollution into our neighborhood. The proposed addition of a third light signal on Lincoln Avenue, with downhill traffic turning left to access the ring road, will also needlessly cause even more congestion on that street. The school's current use of the Mormon Temple parking lot at Monterey and Lincoln as a staging area for student pick-up and drop-off vehicles is working just fine. Downhill traffic on Lincoln Ave. will turn left at the new signal to enter the South Campus from a proposed third lane on the already-narrow Lincoln Avenue to enter the ring road. This will cause even more congestion on Lincoln.

I've tried to calculate the kinds and amounts of petroleum pollutants that will then be emitted into the surroundings of the South Campus, but without success. I don't know how many vehicles will be traveling the ring road twice each school day. Many hundreds, I project. The inhabitants of the homes immediately adjoining South Campus, and the the residents beyond them, will receive an unprecedented new exposure to the off-gassing pollutants.

I strongly recommend that the Bureau of Planning cause Head-Royce to eliminate the ring road entirely from the project.

Additionally, development of the Lincoln Child Center must respect the habitat at the north of the site. The creek on the north boundary, and the oaks that grow there, have evaded development on the north bank since the area's residential construction boom. Creek life, and the raptors and their prey that inhabit this tranquil space, can't be swept aside. Figure 3 of the NOP does not show the creek. This is an unfortunate omission. The trees and bushes by the creek, as well as others on the South Campus must be preserved. They provide habitat for the raptors that circle the area, and for the prey beneath.

The proposed performing arts center, if built as planned, will stand 55 feet from the end of Linnet Avenue. Its structure is projected to reach a height of around 30 feet It, and the events there, will dominate this little street. It could project significant noise day and night onto this quiet residential setting. It must be redesigned to respect the Linnet Ave. neighborhood every aspect.

The tunnel under Lincoln Avenue is essential for the safety of students and staff as they move

My name is Frank Zamacona. I live at 4200 Laguna Avenue in Oakland. I have two concerns. My first concern is with the noise level created with the projected creation and use of the amphitheater.

The amphitheater, as a feature of the new development presents some challenges especially regarding noise. I would like the planning commission to investigate the acoustic treatment regarding the amphitheater.

The amphitheater itself is designed to amplify sound and depending on size will naturally increase or decrease the noise level. Additional sound support, meaning a microphone and a speaker system would amplify throughout the hillside.

Can the commission do a study on acoustic dampening of the area surrounding the amphitheater and test how the winds that surround this site carry the sound waves into the neighborhood which is a bowl below the proposed amphitheater. The goal is to break up the sound waves before they reach the surrounding neighborhoods. Would you please investigate how to accomplish it.

An example is the Greek Festival that takes place each year. This amplified sound carries through out this valley.

My second concern regarding noise is the perimeter road running alongside existing homes. I don't know where Head Royce is planning to build faculty housing, but I suggest the planning commission look into having the housing built along the south campus property line that abutts the residents homes, creating a continuity of homes and a buffer zone.

Thank you.

between the new and existing campuses. It will be a massive construction project. How much will it cost? What is the timeline for its construction? Is it guaranteed to be built at all? The Bureau should resolve that the tunnel be completed before the South Campus can be occupied by students.

I bring these four points, the timing of the tunnel's construction, the ring road and its access from Lincoln Ave., the aspect of the performing arts center, and the creek habitat, to the Bureau's attention.

With respect,

Thomas White

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An example is the Greek Festival that takes place each year. This amplified sound carries through out this valley.

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Thank you.

From: Kimberly Aikawa-Olin [mailto:kimaolin@yahoo.com]
Sent: Sunday, March 10, 2019 9:57 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head Royce Master Plan: Drainage/soil erosion and other issues downhill from site PLN18532-ER01

Hi Ms. Lind: I live on Linnet Avenue, just below the Head Royce Master Plan's proposed Performing Arts building, and am VERY concerned about the multiple effects that this massive construction plan - including a huge performing arts building, along with the ring road adjacent to out street, and temporary housing units will have on the environment of my property and the neighborhood. PLN18532-ER01

1) Drainage: The foremost problem is drainage: always a problem to contend with on a hill. Being downhill from this huge proposed development is puts me and my home and neighborhood in a perilous position! My friend, Kathy Williams lived on Jordan Road, and had major flood issues on her property due to the change in drainage caused by the building of the Mormon Temple for over 20 years AFTER it was built. I believe her law suits were against the City of Oakland, which did eventually fix the landscape with stream running through her property. I believe she had more than one suit regarding this over time. As you know, whole stretches of streets were wiped out, as well.

So, it is essential that you do not let the drainage problems destroy our neighborhood the way the Mormon Temple wiped out entire streets (part of London Road that connected to what is now the upper part of Maple Avenue, but used to be London Road, and the part of Jordan Road that connected to London (included a bridge). (see middle sections of 1950s and current maps below). Also, I can see the cracked road and cliff side on Kitchener Court, when I take walks near my home.

If you take a walk on upper Kitchener court, you can see the cliffside left behind from the complete wipe out of London Road and part of Jordan Road. Also there are a lot of cracks on Kitchener Court:

Appropriate studies need to be performed by qualified professionals to determine the feasibility of this large development plan. Is it actually feasible to build a large campus on this steep lot? And if so, each and every measure must be made to protect the land/environment/ area to prevent another CATASTROPHE in our neighborhood like the drainage/land shifting caused by the building of the Mormon Temple! THIS COULD LITERALLY DESTROY THE NEIGHBORHOOD!! WIPE IT OFF THE

2) Noise: A huge performing arts structure just at the top of our street is NOT an ideal location for those of us living on Linnet Avenue. We bought and moved here because it is a quiet, nature surrounded area!! This building needs to be moved to a more central location in the school!! I would expect there will be some truck deliveries to the performing arts center, which also brings along big sounds. This is another good reason to move the performing arts center further into the interior of the plot. As far as the ring road goes, it will greatly increase the sounds of autos at the beginning and end of school. If the road is going to be so close to the border of the property, all electric vehicles would be best: noise and pollution wise. In any case, a "wall" of trees surrounding the property would be best to to block the view, noise, and fumes emanating from the campus and it's activity. Page 39's "Areal view of Proposed Campus" shows a row of trees on the perimeter of the downhill side of the campus. Is this part of the actual plan? It needs to be!!

3) Car Fumes:Serious problem for us on Linnet Avenue with increase in traffic with current perimeter road this design includes. It would be best to place any ring road further into the interior of the plot, and for them to build a substantial barrier between the property and residentail areas, with trees and shrubbery to

on both sides of the wall. Also, only allowing electric vehicles on the property would decrease both fumes and noise.

4) Traffic: Big issue with the increased enrollment. Bigger issue with Performing Arts center too close to Linnet: and night traffic is disturbing in an otherwise quiet neighborhood.

5) Lighting: If the performing arts building is built at the top of Linnet Avenue, it can be expected to have strong outdoor lights for evening events. This is unacceptable for our quiet neighborhood.

6) Wildlife: This vast amount of new construction and landscaping cannot help but disturb the current balance of wildlife in this area. It will surely make the local skunk family look for housing somewhere else: although hopefully not on Linnet Avenue. My hope is that the songbirds in the area will cope well, as these are a mighty draw to my love of this place. And that their songs will not be quieter because they move further away from the commotion of construction and a large school, nor that the background noise caused by having this large school and performing arts center and ring road drown them out.

7) Head Royce use of Linnet Avenue? Head Royce has stated they will not be using Linnet Avenue. With the Performing Arts Center so close to Linnet Aveue, the location threatens our street due the proximity of their huge Performing Arts Center. Are they going to allow "outside sources" transporting equipment in and out of the Performing Arts center (not Head Royce per se) ? We already have had pot holes repaired , and another one already has popped up: our street cannot bear more traffic. And we have a large percentage of retired people on our little street, requiring Emergency Transport by ambulance at times. It is already difficult for ambulances and Firetrucks to navigate this steep, crowded little street: any more traffic could result in delayed medical care for the residents, possibly resulting in long lasting disability and de

Thank you in advance for your diligence in investigating this truly environmentally threatening project,

Kimberly Aikawa-Olin and Greg Olin
4218 Linnet Avenue
510-325-5945

From: Carl Boe [mailto:cboe@inequality.us]
Sent: Monday, March 11, 2019 2:00 PM
To: Leila H. Moncharsh <101550@msn.com>; Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head Royce EIR process PLN18532-ER01

March 11, 2019

Ms. Rebecca Lind
Bureau of Planning
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

SUBJECT: COMMENTS ON NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE HEAD-ROYCE SCHOOL PLANNED UNIT DEVELOPMENT PERMIT PROJECT.

PLN18532-ER01

Dear Ms. Lind,

I am a neighbor whose property borders Head Royce School and who will be directly affected by the school's development and increased enrollment plans. Please consider my comments on the scoping phase of the EIR.

1. Loop Road.

My first concern is that there be sufficient geological and hydrological study and mitigation plans as part of the EIR regarding the proposed loop road on the South campus.

Following the winter storms in 2016, the slope in my back yard that adjoins HRS became saturated with water. My neighbor to the West also experienced this phenomenon, with the muddy soil persisting into the summer months. It was as though a spring had appeared out of nowhere.

We have never determined the cause or exact source of the excess flow.

My neighbor has put in a perimeter drain system at the top of the slope and the ground is no longer constantly wet on either property. I mention this episode because it suggests that the hydrology in area proposed for the loop road is unknown and -- apparently -- subject to rapid shifts. There is a lot of underground water flow in drainage from the hills.

I ask that the EIR include in its scope sufficient study to make certain that measures are taken to ensure that ground and ground water remain stable. Any loop road on the southern border of HRS needs to take this into account. I do not think that the water management planning in the HRS design addresses the magnitude of potential water issues and there is nothing specifically proposed to mitigate the effect of a 20" road and its base slashing through the hillside.

2. Alternatives to the proposed Loop Road.

The scope of the EIR should include consideration of alternatives to what is proposed if the alternatives have less impact. The following all would seem to result in less impact on the neighborhood in terms of auto volume, noise, and pollution:

(a) Demand-side modification of parking requirements. One alternative to the increased parking and loop road and dropoff is a plan from HRS to reduce overall demand for automobile traffic. HRS is in a position to create incentives such as tuition discounts for carpooling, bus riding that reduce the number of automobiles visiting the school each day.

Regardless of where students are dropped off, increased enrollment means more cars on Lincoln and alternatives which mitigate the sheer number of cars should be considered.

(b) increased use of queue on Monterey Blvd. HRS has made smart use of otherwise unused parking space owned by the LDS Temple as a waiting area where parents may wait until their child is ready to be picked up on Lincoln Ave in front of the school. This use should be continued and expanded, perhaps with dedicated (electric) shuttle bus service to carry students up and down Lincoln.

(c) A campus loop could be carved out of the north part of HRS campus, using the existing upper Lincoln Ave entrance with the existing traffic light. The loop road in this case would go through the existing parking area, and against the steeply inclined hillside, around the tennis court, exiting via the existing road and out the same driveway. This would require a fair amount of engineering to carve out a road at the base of the existing hillside, but that hill has been on the list for HRS to address for a long time. Stabilizing that very steep hillside could be done part and parcel with establishment of a loop roadbed.

Besides solving HRS violations on stabilizing the north hillside, this route would involve only right hand turns onto Lincoln and no additional traffic signals.

(d) There is a rather sharp gradient that gets cut by the proposed loop road as it comes down into the pear orchard area. Changing the route to one which cuts through the north end of the playing field rather than the south end of the playing field seems possible, and would have the advantage of keeping the road further from adjacent properties.

Extending the playfield into area south of its current footprint to keep its current size is much less impactful than having a road there.

(e) Minimize left hand turns and traffic lights. The proposal to have multiple traffic lights allowing left turns onto Lincoln will certainly make flow on Lincoln worse than it already is. I have never understood why a "grand loop" was not considered, where pickup traffic comes via

580 up Lincoln, makes a right hand turn into south campus, then another right hand turn back onto Lincoln to the exit onto highway 13.

Thank you.

Sincerely,

Carl Boe
4235 Laguna Ave
Oakland, CA 94602

---------- Forwarded message ----------
From: Meg Bowerman <megbowerman@gmail.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc: Karen Caronna <kamaca9@gmail.com>
Bcc:
Date: Fri, 15 Feb 2019 04:21:17 +0000
Subject: Head Royce plans comments from a neighbor on Burlington

I am a neighbor on Burlington Street, off of Lincoln, near Head Royce School. When my husband and I purchased our home in 1979, the population of the HR school was approximately 500 students.

Since 1979, Head Royce has steadily added more students and therefore much more impact on traffic on the narrow Lincoln street and neighboring streets. Countless parents, babysitters, grandparents use Alida, Laguna, Burlington and Whittle Streets as transportation drop off and pick up (despite rules of using the "loop" properly).

Our cul-de-sac has at least two "blind" hills, and when unknowing drivers enter our block they don't really see everything in front of them due to the hills. This has caused many "near misses" and congestion on an already crowded road.

I have been opposed to expansion and have served on the neighborhood committee in the past. ***It is exhausting to keep voicing our disapproval with deaf ears of both the school and the City of Oakland.***

Currently the proposed expansion will only make driving/living on our street unmanageable several hours of each day (7:30-9am and again 2:45-4:00PM).

We were told in 2010: no more expansion. The City agreed.

In addition, I don't have to tell you what has happened in general with Bay Area traffic since 2014. This expansion, compounded by extra cars from Highways 13 and 580 will only make our neighborhood more congested and unsafe during regular hours as well as weekends with a performing arts center.

A tunnel under Lincoln a few feet from the Hayward Fault? You don't have to have a civil engineering degree to know that is asking for trouble for the students and our community.

What will happen in a natural disaster? We are all on the Hayward Fault which is overdue to generate a huge earthquake. I can't imagine hundreds of family members coming to get their children when the quake occurs.

Please don't give in to the wealth of this school. It makes me angry that just down the street, poorly paid Sequoia teachers are in classrooms with half the resources of Head Royce. Scholarships offered at Head Royce are fine, but they still don't make a dent in what the rest of the City of Oakland children and families deserve.
It is time to stop the expansion, once and for all.

"The true measure of any society can be found in how it treats its most vulnerable members." Mahatma Gandhi

"The time is always right to do what is right". Martin Luther King, Jr.

With hope,

Meg Bowerman
2476 Burlington St., Oakland CA 94602
510 684-7139

---------- Forwarded message ----------
From: Tom Branca <tbranca@me.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Thu, 14 Feb 2019 03:41:40 +0000
Subject: Head Royce Expansion Plans
Evening!

As I read thru the plans for Head Royce i could not contain my disbelief. As it is the traffic on Lincoln in the morning goes from Carmel St. all the way to Hwy 13. At times, about 3 times a week, one cannot get out of our street as the cars completely block the intersection. Adding 366 additional students is probably another 300-350 cars onto to an already completely impacted street. How this does anything for our neighborhood completely mystifies me. All i see is added traffic twice a day 5 days a week unless they actually get to add an auditorium then the traffic will be there 6 days a week along with noise and disruption to our neighborhood. This is a nightmare in the making. Also, two lights by that school is already one too many so i can't see where they would put other one which would then certainly back up traffic onto Hwy 13 . Sequoia, our public school, gets one stop sign and they get three traffic lights? A tunnel under Lincoln, are they throwing everything at you to see what sticks? The buses, the car queue, the quick double park to let off students is already a nightmare and very frustrating. As it is they also block the green 12 minute parking area, the mailbox and the disabled parking spot with signs and cones in the morning and afternoon, do they own the curbs? Please come visit and see for yourself! This is a traffic, congestion nightmare and does not in any shape manner or form help or improve our neighborhood. Lastly, I'd really like to know if our opinions really mean anything here or what is it that impacts your decision?

Thanks for your help here!

tom

Tom Branca
Landscape Horticulture
Merritt College
tbranca@me.com
tbranca@peralta.edu

The essence of a Land Ethic.

Grow a garden. Gardening can be kind to us.
Gardening does not speak to us in a foreign language, it speaks to us in its own language, a universal language.
If you kneel down and plant the earth, skillfully, and pay attention to it, that piece of earth will speak to you, it will respond. *Patricia Klindienst.*

For the **deployment of 5G**, the fifth generation of cellular technology, the cellular industry plans to install at least **800,000 new cell antenna sites** in the U.S. There has been considerable hype about this technology in the media, but little coverage about the potential adverse impacts on environmental and public health. About two hundred scientists and doctors have called for a moratorium on the deployment of this technology due to health concerns. In the past year, I have heard from over one hundred groups across the nation opposed to the installation of these "small cell" antennas.

University Health Services has invited me to address these and related issues in a keynote presentation for its "Balancing Technology" series.

Some information on 5G

Scientists and Doctors Demand Moratorium on 5G
5G Wireless Technology: Is 5G Harmful to Our Health?
5G Wireless Technology: Millimeter Wave Health Effects
5G Wireless Technology: Cutting Through the Hype
5G Wireless Technology: Major newspaper editorials oppose "small cell" antenna bills
FCC Open Letter Calls for Moratorium on New Commercial Applications of Radiofrequency Radiation
Cell Tower Health Effects

--
Joel M. Moskowitz, Ph.D., Director
Center for Family and Community Health
School of Public Health
University of California, Berkeley

Electromagnetic Radiation Safety

Website: https://www.saferemr.com
Facebook: https://www.facebook.com/SaferEMR
Twitter: @berkeleyprc

Mary Carlson <marylouisecarlson@gmail.com>
Wed, Feb 20, 2:34 PM
to Lind, Rebecca

This sounds terribly disruptive. Head-Royce already has a very large campus with room for expansion in their main area. An elevated walkway would be a better solution for connecting the two sides of Lincoln Ave. Or, simply having crossing guards at the light.

No public money should be spent on accommodating the expansion of a private school. We are renting out the house where I used to live on Lincoln Ave. below Head-Royce, and the construction would negatively affect our tenants.

Our children attended Skyline High School and had a good experience, but when they graduated from Montera Middle School ten years ago there was clearly “white flight” going on, with most of their white classmates scattering to private or parochial schools (we’re also white). We need to promote increased attendance at our public high schools for the financial health of the Oakland school district and also the integration of our community. I have nothing against Head-Royce, but they should go back to the drawing board, to come up with something that doesn’t impose on their neighbors.

Mary Lou Carlson
2924 Kitchener Ct.
Oakland 94602

---------- Forwarded message ----------
From: karen caronna <kmcaronna@yahoo.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Wed, 20 Feb 2019 23:31:03 +0000
Subject: Case Number PLN18532-ER01- NOP for Head Royce School Development
Rebecca Lind, Planner III
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
Dear Ms. Lind, February 20, 2019

I am writing in reference to Case Number PLN18532-ER01- NOP for Head Royce School Development. I live two blocks downhill from the development site and I have reservations about the plan that I hope will be addressed by the EIR. I am a member of the Neighborhood Steering Committee and I represent my neighbors on Burlington Street and Ravenswood Lane.

-Fire
Anyone who has witnessed the recent wildfires in California, or not so recent Oakland Fire, would be deeply concerned about additional students, "interim teacher residents," activities, and deferred maintenance within the school properties. A fire originating on HRS property will have devastating consequences for the surrounding neighborhoods and adjacent parklands. Is there a plan in this expansion for the school to maintain continuous compliance with their vegetation management responsibilities?

-Fire, disaster and medical emergencies
Due to the congestion on Lincoln Ave twice a day, five days a week, and event weekends, there is concern among the neighbors about the ability of emergency vehicles to navigate Lincoln and to effectively access a person or structure in distress. How will the proposed traffic plan, which may back up cars in left and right hand turn lanes plus the proposed bus zones, impact the flow of traffic on a street of two lanes that is a major corridor between Highway 13 and 580?
Is there an evacuation plan for the safety of their students and staff during an emergency? What will be the impact of a potential 1250 anxious parents converging on Lincoln, not to mention HRS staff attempting to leave the campus during an emergency event, while residents are attempting to evacuate? Burlington Street and Ravenswood are cul de sacs, and egress is often blocked, for as long as 5 minutes, by HRS traffic. During city wide disaster drills, the fire department has consulted with our CORE representatives and warned us about downed wires and road collapse during an event. The neighbors are particularly concerned about effective egress from our streets during an emergency. Will the EIR consider these health and safety issues when adding an additional 350 students, teacher "residents," and supporting staff? Is there a plan for HRS to openly collaborate with neighbors and CORE for a feasible plan for either sheltering in place, moving the students -to the MormonTemple parking lot for pick up for example- or everyone's ability to leave the area?

-Grading, tree removal and water
As I live downhill from the proposed development site, I am deeply concerned about the re-grading of the hillside, disturbance of the existing stream and management of water run off from this development. I have concerns about the de-stabilization of the hillside as a result, and wonder if the plan couldn't come up with a less geologically intrusive plan. The removal of native, and in some cases heritage trees, is counter to preservation of green resources. Will the EIR address the issues inherent in radically disturbing an existing hillside?

-Impact on wildlife
What impact will the development have on bird and other wildlife populations, destruction of habitat and re-routing of water and shifting of watershed?

-Performance center

The proposed 450 seat performance center is of a scale and function that is inappropriate for a residential neighborhood. The potential for noise and congestion disturbing the quiet enjoyment of our homes and gardens is considerable. Is it possible for the plan to consider a less ambitious structure? Is it possible the structure could be placed more to the interior of the property rather than abutting established residential properties? Why can't the "green areas" border the residences and the new structures, parking and road be moved to the center where there would be less immediate impact on the neighbors?

-Pollution
The addition of students, teachers and staff and the traffic it will entail will have an adverse impact on the quality of life in the neighborhood, especially on the neighbors who will have immediate proximity to the "ring road" traffic. Noise and fumes will create an unpleasant atmosphere. Littering, and idling vehicles are already an issue along the HRS portion of Lincoln Avenue during pick up and drop off. Will the EIR consider the physical and aesthetic effects of the "ring road," and is there another possibility for a drop off and pick up zone centrally located in the property, or in the North Campus property, as opposed to the border of the South Campus property?

-The tunnel
Will the EIR address the hazards of a pedestrian tunnel within yards of an active fault? It seems that a pedestrian crosswalk would be more suitable for a seismically active area. Will Lincoln Avenue be closed during the construction of a tunnel inconveniencing the local community who relies on this road for freeway and city wide access? Will the EIR consider the effects should the tunnel collapse during a seismic event, preventing evacuation along upper Lincoln Avenue trapping residents living above the school?

-Concern over decline of property values
Many neighbors are concerned over the possibility of a decline in property values should the HRS Master Plan be fully implemented as proposed. Increases in congestion, noise, pollution, safety issues, vegetation management concerns, stability of a graded hillside all contribute to this concern. The addition of transient "teacher housing" adds additional pressure to a neighborhood where temporary residents detract from the sense of community, stability and longevity.

-Construction
Lincoln Ave is a two lane road of vintage origin. In the past when HRS developed their Northern campus, the traffic from various large trucks traversing Fruitvale Avenue and Whittle Avenue degraded the road bed, and the street remains degraded-HRS promised repairs were never effected. Our neighborhoods already suffer deterioration of the road beds due to Head Royce commuter and bus traffic. The construction process on Lincoln Avenue, along with delays and blocking the road in emergencies, is a matter of concern. Will interim traffic management and restoration of the roads be a part of the proposed plan?

Head Royce school is a commuter school. Approximately 50% of it's students come from communities beyond the Caldecott Tunnel, Berkeley, Piedmont, Alameda and Oakland Hills. An additional 350 students and attendant staff will not enhance our community. Of concern is the possible addition of "pre-school" children, who will not be using public transportation and will certainly be driven, adding to the congestion. As such, HRS commuter parents and students contribute little or no value to local businesses or community activities. The commuter ethos degrades the local roads, ambiance and peace of the adjoining neighborhood. Some commuter drivers have little regard for courtesy, traffic laws, or sensible, safe driving practices while speeding through our neighborhoods, endangering both students and neighbors. Is there any proposed plan for HRS to regulate drivers who do not observe the prescribed HRS traffic plan for pick up and drop off?

HRS continues its institutionalization of our neighborhood by nudging further into our midst. The school owns several campus-adjacent residential properties which contribute minimal taxes. In essence, as a home-owning resident who pays taxes to the county and city, I subsidize a school that does not serve the city at large. I patronize local businesses and participate in the community.

I would like to see a plan developed that has less impact on the immediate neighbors, less impact on the overall neighborhood, and is less ambitious in its scope and more appropriate for a residential neighborhood. Why can't the plan use the existing buildings and their current footprint and "re-purpose" the standing structures in a less grand expansion? Can the plan be developed to service the current student population without adding additional congestion and pressure on the neighborhood? What about moving the tennis courts from the North campus to the south campus, and placing the pick up and drop off on an extended North campus parking lot?

Thank you for your time and consideration.
Regards,

Karen Caronna

---------- Forwarded message ----------
From: PAMELA S CLAASSEN <pamelaclaassen@comcast.net>
To: "pamelaclaassen@comcast.net" <pamelaclaassen@comcast.net>, "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Sun, 3 Mar 2019 02:50:26 +0000
Subject: Head Royce Expansion

Hello, Rebecca ~

Thank you for the opportunity to respond to the expansion plans for Head Royce.

We live at 4229 Laguna Avenue, in the southwest corner of the Lincoln Child Center Property.

I am particularly concerned about the complete disturbance of the quiet in our back yard by having the circle road. It appears that there could be over 1,000 cars per day invading the peace of our back yard.

Based on the drawings that have been provided, I don't believe the location of the proposed road is realistic. The drawings show that the field will be retained and there is not enough space between the field and the property line to have a two lane road. The amount of cut and fill to make an appropriate corner around the proposed Performing Arts building will likely kill the oaks that provide some buffer from the development.

The design has been crafted to have maximum encroachment on all of the adjacent properties. There must be a better way to design drop off spots from cutting into the existing property from Lincoln and maximizing existing roads on the campus.

Also, the way the current plans are drawn, we will have an outdoor classroom within 10-20 feet of our back fence ~ again, a major encroachment into the peaceful enjoyment of our back yard. These activities should be confined to a more central location on campus.

Pam Claassen
510-482-2075

---------- Forwarded message ----------
From: Donna Egan <egandonna@hotmail.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Wed, 6 Mar 2019 19:18:13 +0000
Subject: My comments on Head Royce School plan for expansion and development PLN18532-ER01
Hi Rebecca. We met at the last Planning Commission scoping session. I am on the Executive Committee of the NSC and I represent my street Linnet Avenue and part of Alida.
I am sending you my EIR concerned comments.

EIR questions for HRS expansion project

My questions are focused on Public Service/Public Safety

Lincoln Avenue is a narrow corridor between Hwy. 13 and 580 which has The Mormon Temple, The Greek Orthodox Church, Ability Now, the North campus of HRS and the proposed expansion of the South campus. Further south on Lincoln, Sequoyah Elementary School. And all the houses and apartments surrounding the two HRS campuses. Many of the houses are on narrow streets. Some are dead end streets.

In a major emergency the entire Lincoln corridor would likely face evacuation.

We are on the Hayward fault and overdue for an earthquake.

We are in the Oakland Hills which is a high wildfire area.

With climate change, very heavy rains are more common.

What is the protocol in the event of wildfire, earthquake, flooding, or landslide?

How would HRS handle emergency evacuation in detail?

How many more, staff, teachers, visitors, parents would there be for both campuses totaling 1250 students?

How would the enrollment of 1250 students including pre-k, affect the neighborhoods surrounding the two campuses of over 250 homes evacuate concurrently?

What if an emergency disaster occurs during the construction phase with all the trucks and equipment in use?

How many more, staff, teachers, visitors, parents would there be for both campuses totaling 1250 students?

How many more cars would there be in parking lots, on Lincoln Avenue and on our neighborhood streets? How many buses? How many delivery trucks?

How would fire engines and OFD be impacted because of the extra traffic and parked cars along Lincoln Avenue and neighboring streets?

How would ambulances and emergency vehicles and police vehicles be impacted by extra traffic and parked cars and buses along Lincoln Avenue and neighboring streets?

How would parents be picking up their children? In cars? By foot?

What if there is a performance in the proposed new Performing Arts Center and they are filled to capacity of 450 and an emergency occurred that required immediate evacuation? How would this be implemented?

How would everyone that is at The Mormon Temple, Greek Orthodox Temple, and Ability Now be able to evacuate concurrently with HRS ?

How would this HRS expansion affect Sequoyah Elementary School students, teachers, staff, parents, and visitors in the event of an emergency evacuation?

Thank you,
Donna Egan
4215 Linnet Avenue

From: Robert Einspruch [mailto:robert.einspruch@icloud.com]
Sent: Sunday, March 10, 2019 8:53 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head-Royce Expansion (Case #PLN18532-ER01)

Dear Rebecca,

I am writing to voice my support for Head-Royce's expansion. We are both neighbors of the school as well as parents of students at the school.

I cannot say enough positive things about the Head-Royce community, the quality of the education, the focus on building scholars and citizens, the focus on social justice—these are just a few of the reasons I am proud to be a member of the Head-Royce community.

I understand the concerns about traffic and noise. We live in the Oakmore neighborhood and I don't love fighting traffic to get down Park Boulevard. Lincoln has the triple whammy of the preschool at the Greek church, Head-Royce and Sequoia. Traffic is nothing short of miserable. However, I believe Head-Royce gets unfairly singled out in this respect. Traffic is always better if any of those schools are out of session. The lack of lights at the intersection of Lincoln and Highway 13 is another source of traffic. Cars end up bunched up on Lincoln, but that is not Head-Royce's fault. And many of those cars are commuters trying to access 580.

This year, our girls started walking to school. But there are no sidewalks in the neighborhood and there are several treacherous blind curves. If this were not the case, I think many more students who live close to school would walk.

All that said, the school has a great plan for dealing with traffic by looping cars through the new property and joining the two properties to ensure that everyone can be dropped off or picked up away from Lincoln.

Thank you for your consideration.

Robert Einspruch
1701 Carter Street
Oakland, CA 94602

From: Arthur Fogelman [mailto:ajfinoak@gmail.com]
Sent: Sunday, March 10, 2019 2:22 PM
To: Lind, Rebecca <RLind@oaklandca.gov>
Cc: Arthur Fogelman <ajfinoak@gmail.com>; Steve Rankin <steverankin54@yahoo.com>

Subject: Concern Regarding Head Royce Expansion Case Number PLN18532-ER01

We are contacting you as we have additional strong concerns regarding the proposed Head Royce campus expansion and its impact on the surrounding neighborhood including environmental impact and quality of life. We live on Charleston Street in a home that we own and have concerns regarding campus access that I would like to ensure are sufficiently reviewed.

The proposed new plan contains a pedestrian gate near the corner of the South Campus at Charleston Street and Camellia Place. It should be noted that Charleston Street is NOT a through street nor is Camellia Place.

Will this solely be used for entry and exit in emergencies? In the case of an emergency requiring large numbers of students, faculty and staff to exit where will they all go? This is no through access and Charleston Street is also the only route for residents of Charleston Street and Camellia Place to exit and for emergency vehicles to access this neighborhood as well as the portion of the rear of the campus if they cannot enter the main entrance on Lincoln Avenue.

An additional concern that I have is that if this is able to be utilized as an entry and exit point for all students what safeguards will be put in place so that students will not just use this as an access point and then have their parents drop them off and pick them up in the Charleston Street and Laguna Street neighborhoods and avoid traveling through the proposed campus Loop?

Parents will clearly recognize this as an option to avoid having to wait at the Mormon Temple parking lot staging area and then wait in line at the left turn lane into campus followed by crawling through campus on the lengthy ring road followed by then waiting at another traffic light to exit the campus. Obviously, since Charleston Street and the adjacent Camellia Place are not through streets this would create a SEVERE traffic and safety nightmare for those who live in the neighborhood. Parents are already avoiding the Head Royce “required” traffic queue and picking up and dropping off their children everyday on Alida Street (a residential street perpendicular to Lincoln Avenue) outside of the established queue and in the neighborhood creating traffic and safety congestion for both the students and the local neighborhood. This is only sure to get worse.

If the pedestrian gate is accessible to faculty, staff and students who drive to campus what safeguards will be put in place to prohibit them from parking on these streets adjacent to the South Campus? This quiet residential neighborhood should not become an overflow parking lot for Head Royce.

If this pedestrian gate will be available for only local students to use to enter and exit from the campus how will this be controlled and limited?

We moved to this area of the Lincoln Highlands 20 years ago attracted by the character and quality of life the area offered. Since then Head Royce has been permitted to grow considerably, negatively impacting the area with noise, traffic and congestion every school day plus evening and weekend activities. The addition of another 344 students to the currently 906 allowed (a 34% increase!) plus the additional staff and faculty that will be necessitated cannot be safely sustained by Lincoln Avenue, the only major 2 lane traffic artery for residents, commuters and emergency vehicles.

Thank you for your attention to this inquiry.

Arthur Fogelman
Steve Rankin
2580 Charleston Street
Oakland, CA 94602

From: Lori Gieleghem [mailto:lgieleghem@auhsdschools.org]
Sent: Monday, March 11, 2019 1:33 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head Royce Expansion Plans

Dear Ms. Lind:

I am an Oakland resident of 27 years. My husband and I own a house in the area known as "Lincoln Highlands," and we are deeply concerned about the continuing expansion of Head Royce School ("HRS") and the effects of this expansion on our neighborhood.

You well know about HRS's purchase of the historic property across Lincoln Avenue from its current campus. The schools plan to develop that property is extensive and ambitious. The school wants to increase its enrollment substantially; most of this expansion will be at the expense of wildlife habitats, trees, and drainage. The effect on the flora and fauna will be profound.

The trees on that property, especially oak trees, will be destroyed, despite HRS assurances that it is able to successfully move mature oaks. Reputable arborists will tell you that transplanting mature trees such as oaks and pines is rarely, if ever, successful.

More troubling still is the effect on the wildlife in the area, particularly birds. Both state and federal Fish and Game officers and I collaborated on a project in which peregrine falcons were being targeted by a neighbor. I had no idea those trees sheltered that endangered raptor. In our 27 years on Alida Street, we have watched many varieties of hawks and falcons nest in very trees that HRS plans to destroy or relocate (which is tantamount to destruction).

How is the destruction of wildlife habitats in the best interests of Oakland and its citizens? HRS serves a small fraction of our community, most of whom do not live in Oakland. They can return each evening to their wooded havens in Orinda, Lafayette, Moraga or Danville while we Oakland taxpayers are left with a ravaged neighborhood.

Please consider carefully the deleterious impact HRS's expansion will have on the neighborhood.

Thank you for your attention.

Respectfully,

Lori Leigh Gieleghem
Gregory B. Tiede
2632 Alida Street
Oakland, California

---------- Forwarded message ----------
From: Suzanne <stg916@gmail.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Thu, 7 Mar 2019 02:15:55 +0000
Subject: Neighbor comment re: PLN18532-ER01
Ms. Lind,

I live on Morgan Avenue, and use Lincoln Avenue for access to Highway 13, Joaquin Miller and Redwood parks, and many other things. That road is nearly impassable in the morning and mid-afternoon, and occasionally weekends as well, due to the hubbub at Head Royce School. It's difficult to access my home, using Alida Street, because of the inconsiderate, self-absorbed parents illegally parked, making illegal u-turns, and so on, even with the ineffective "traffic monitors" which the school utilizes.

This MASSIVE expansion plan, which includes adding another 370 students (40% increase), building a 450 seat performing arts center as well as interim housing, not to mention tunneling under Lincoln Avenue is simply astounding! It seems completely out of scale and character for this neighborhood. I'm sure you are well aware that this is a RESIDENTIAL area. Lincoln Avenue is a TWO LANE road, already nearly at capacity. .

Please, please reconsider this application. I cannot begin to imagine the amount of disruption, chaos, noise, dirt, and irritation this will cause neighbors as well as others who depend on Lincoln Avenue for accessing the highway.

Suzanne Harris
2900 Morgan Ave, Apt. B
Oakland, CA 94602

From: David Johnson [mailto:djjohnson82@gmail.com]
Sent: Monday, March 11, 2019 3:18 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: case number PLN18532-ER01

Hello Rebecca,

I'm a home owner and occupant at 2443 Alida St. and I wanted to write you with my concerns about the Head Royce Expansion. I'm in agreement with the Grassroots Community Advocates on the issues and concerns. They are as follows.

Public Safety – Fire and Evacuation: The traffic solution in the proposed development plan does nothing to correct the current problem of HRS having no realistic emergency evacuation plan. HRS's problematic traffic management will continue preventing evacuation for residents above and around the school's properties.

Vulnerabilities to Land and People: The expansion plan causes significant problems for adjacent and nearby neighbors due to its increasing chances of landslides, flooding, disturbances from the circulation perimeter road, noise, placement of a massive structure next to housing, and opening access points from the neighborhood into the South Campus.

Habitat and Native Trees: The development of the South Campus will impact wildlife in the Oakland hills, including bird habitat and native trees; it also would remove much needed residential housing that presently exists on the South Campus.

Lack of Transparency: HRS has not been transparent with the neighborhood regarding its proposed expansion plan, despite its repeated promises to do better in this regard with neighborhood relations.

Enrollment Increase: The current enrollment of 884 students, without the addition of 350 more as referenced in the development plan, is already too high. Enrollment is overwhelming the public infrastructure surrounding the neighborhood and is constantly causing nuisance problems for the residents.

Road Building: The solution proposed in the master plan, i.e., building a perimeter road, is very inconvenient for parents dropping off and picking up their children, no doubt resulting in their leaving and picking up their children on Lincoln or in the neighborhood.

I feel these issues need to be addressed in order to move forward, it is very unfortunate that Head Royce has not been more transparent in their plans to address the communities concerns.

David Johnson
2443 Alida St.
Oakland, CA 94602

From: Sharon Linhares [mailto:4235home@gmail.com]
Sent: Monday, March 11, 2019 2:42 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head-Royce School expansion

Dear Ms. Lind,

In 1986 my husband and I moved to the 4200 block of Fruitvale Avenue in the Oakmore district. At that time we felt little objection to being near a school. We enjoyed exploring the wild property that has become the upper Head-Royce campus. As undeveloped land, we encountered many deer, foxes, raccoons and wild birds. We cherished the pair of great horned owls who perched atop a power pole in the front of our property. Within two years the birds were gone. As the wild land disappeared the birds did also.

Many of the birds of our area need tall trees for their homes. With their habitat destroyed, it is simple to understand what has become of the birds. The south side of Lincoln Avenue has tall trees and vegetation which are homes to a great variety of birds. The proposed expansion of Head-Royce School will eliminate even more of the necessary habitat for the birds who live there. I hope that an environmental impact report will consider the proposed destruction of this land, which eliminates some of the last open land within the city of Oakland.

Thank you for your consideration of these comments.

Sincerely,

Sharon Golden Linhares
4235 Fruitvale Avenue

From: Anne Purcell [mailto:apurcell@sbcglobal.net]
Sent: Sunday, March 10, 2019 3:48 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Concerns for EIR for Head Royce School project

I'm the resident homeowner of 21 Alida Court, one of the residential properties bordering the former Lincoln Child Center property that Head Royce School purchased and for which they're planning the large development project. Attached is a document listing the items I'd like to see addressed in the Environmental Impact Report.

I'd also like to share with you my distress about the behavior of planning commission members in the February 20th meeting. My neighbors told me that after they spent a considerable amount of time sharing their concerns about the impact of Head Royce School's growth on their quality of life and neighborhood safety, several planning commission members went out of their way to voice their support of the idea that Head Royce's proposed theater should be open to the public for rent. Leila Moncharsh has shared with the neighbors that she's impressed with the level of concern you have shown about potential impacts of the school on the neighborhood. I know she's shared with you that we have generally felt little concern from the city in the past. I was shocked that the planning commission members felt comfortable voicing such a biased perspective that was clearly a threat to their Oakland residents and taxpayers.

I think that all of the planning commission members should come and visit the neighborhood during school drop-off before the end of this school year, so they can see with their own eyes what it's like when Head Royce students come to the neighborhood in the morning. They could leave downtown at 8 AM on a reverse commute path; drive up 980 to 24 East, take 13 South to the Joaquin Miller exit, drive down Lincoln Avenue past the school, turn right on Champion to enter 580 West and return to downtown. I think the experience would be enlightening.

The neighbors understand that Head Royce has rights as the property owner, we just expect that the City of Oakland will balance the neighbors rights against Head Royce's rights and make fair decisions that preserve our right to the quiet enjoyment of our properties, access to infrastructure and emergency services. We are full time citizens of Oakland who pay a lot of property taxes, and we certainly deserve that consideration.

Thank you for you time.

Sincerely,
Anne Purcell

From: Bob Regent [mailto:bzregent@gmail.com]
Sent: Monday, March 11, 2019 4:23 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Case Number PLN18532-ER01

Dr Ms. Lind

We are writing about Case Number PLN18532-ER01. My wife I have reviewed the proposed plan and feel we must object to the scope and nature of the project. We have lived here on Camellia Place since 1991 and have enjoyed the quiet nature of the neighborhood. The proposed plan would completely change the character of neighborhood and negatively affect the lives of us and others. The expansion is too large for a site surrounded by residential homes with only a small amount of buffer space. Specifically,

1) The proposed Performing Art Center (PAC) is unnecessary. Head Royce already has facilities that can be used for this purpose, and other institutions like the Greek Orthodox Church has facilities that can be used for this purpose. The proposed PAC will bring additional noise and traffic 7 days a week over extended hours of operation to our backyard.

2) The proposed traffic loop will put hundreds of cars right next to ours and other neighbor's backyards, causing noise and pollution nuisances. With a requested population of 1250 students, arriving and departing each day, the total number of cars traveling this route will be extreme.

3) The proposed outdoor amphitheater would direct additional sound into the neighborhood. We already have problems with noise bouncing off hillsides directly into our homes. Purposely putting another source of noise and focusing it towards residences does not make sense.

4) The cutting down of native trees while leaving the tall eucalyptuses also does not make sense. We live in a high fire danger zone, and the eucalyptuses create addition danger. They have also destroyed the bay views of many homes. The native trees should be protected instead.

5) The proposal also includes a pedestrian gate at the end of Charleston. While pedestrian traffic would not be a problem, I am certain that this would soon become a drop off point, creating more car traffic and congestion at the intersection of Charleston and Camellia, which is a cul-de-sac.

For these reasons we are asking that the proposal from HRS be rejected.

Best Regards,

Bob and Drew Regent
15 Camellia Place

From: Hollis and Deborah [mailto:hollisanddeborah@att.net]
Sent: Saturday, March 9, 2019 1:17 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Case # PLN18532-ER01 Head Royce Development Plan

> Dear Rebecca Lind,

> We are among the 300 households located around HRS properties. We've lived here for 26 years and are alarmed by HRS's plan to expand and increase student enrollment. Following is a list of our concerns:

*heavy traffic on narrow neighborhood streets, dangerous weaving of cars over the midline into oncoming traffic and at risk students and parents opening car doors into traffic and crossing streets during commute hours.

*the long line of stopped cars in the right lane of Hwy 13 at the Joaquin Miller/Lincoln Ave exit during hours of school drop off and pick up.

*the impact of a new 450 seat performing arts center and the related traffic, noise, dust and airborne pollution and night lighting on our neighborhood.

*the lack of an adequate HRS evacuation plan-gathering students and employees onto the athletic field is not an adequate plan.

*access problems for first responders who would be negotiating heavily congested Lincoln Ave in the event of a fire, earthquake or other disaster.

*fire risks due to HRS's lack of compliance with city fire vegetation management regulations.

*potential landslides, flooding and drainage problems that likely result from proposed grading and earth moving.

*disruption and destruction of native trees and the nearby creek which constitute the natural habitat for the wildlife including hawks.

Thank you for seriously addressing our neighborhood concerns.

Sincerely,
Deborah Royal
Hollis Matson

---------- Forwarded message ----------
From: Suzanne Schmutz <sschmutz59@icloud.com>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Wed, 6 Mar 2019 19:36:26 +0000
Subject: PLN18532-ER01 - Head Royce School expansion
I'm a neighbor livng down on Wilbur Street near Lincoln. My main concern will be the obstruction of traffic on Lincoln while all of this construction is going on. Lincoln is a heavily traveled street with drivers often going way above the speed limit, plus it it a direct road to get on Highway 13 to head out to Orinda.

---------- Forwarded message ----------
From: Alexis Schroeder <alexisned@sbcglobal.net>
To: Mary Fahey <mfahey@headroyce.org>
Cc: "cland@headroyce.org" <cland@headroyce.org>, "Lind, Rebecca" <RLind@oaklandca.gov>
Bcc:
Date: Thu, 21 Feb 2019 18:36:13 +0000
Subject: Fwd: Cell phone and cell tower safety presentation (UC Berkeley, Feb 27, 12:10 - 1:30 PM)
Hi Mary,

It is always nice to see familiar faces from the neighborhood around Oakland. Since we heard that there was going to be “communications” component as part of the HRS EIR discussion last night, a few of our neighbors working on the cell antenna issue decided to attend.

I am sending this link for you to please forward to your technology architects as part of the communications planning for the campus application you have before the planning department/commissioners. I just received this email announcement this morning.

Since HRS is a campus environment, I thought it might be helpful to have this information from leading experts in the field as it pertains to cell tower safety and balancing technology.

Regards,
Alexis Schroeder
cc:
Crystal Land, Head Royce School - Head of School
Rebecca Lind, Planning Department Case Planner

Begin forwarded message:

From: Joel MOSKOWITZ <jmm@berkeley.edu>
Date: February 21, 2019 at 10:13:29 AM PST
To: Joel Moskowitz <jmm@berkeley.edu>
Subject: Cell phone and cell tower safety presentation (UC Berkeley, Feb 27, 12:10 - 1:30 PM)

Next Wednesday, I will be giving a presentation on cell phone and cell tower safety on the Berkeley campus. Although this invited lecture is part of a series intended for people who work on campus, there will be limited space for members of the public.

If you would like to register for this presentation, please contact Kim Guess kguess@berkeley.edu.

"Cell Phones, Cell Towers, and Wireless Safety"
Keynote Presentation, "Balancing Technology" Series
University Health Services, UC Berkeley

Tang Education Center, 2222 Bancroft Way, Berkeley
Wednesday, February 27, 12:10 - 1:30 PM

Last November, the **National Toxicology Program** (NTP) published the final reports from a $30 million study on the effects of cell phone radiation. Although this study found "clear evidence of cancer" in male rats, the FDA dismissed the findings. The FDA continues to ensure the public that the FCC's radio frequency exposure limits adopted in 1996 are adequate to protect human health despite many hundreds of studies that found harmful effects with exposures compliant with FCC limits, including a newly-published study by the Ramazzini Institute that replicates the NTP's key finding using much lower exposures than the NTP study.

From: Diana Shiba [mailto:dianashiba121@yahoo.com]
Sent: Sunday, March 10, 2019 8:22 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Case Number PLN18532-ER01

Dear Ms. Lind,

My 96-year old mother, Evelyn Pong, my husband and I reside at 1 Camellia Place. My parents had their home here built in the early 1960's and for many years enjoyed the quiet of the neighborhood. This quiet that we came to know has been impacted by the continued growth of student census of Head Royce School.

With HRS's acquisition of the previous LCC and proposed plans for use of this site, we have great concerns which include increased noise levels at various times during a school day from the drop off/pick up loop/ring, outdoor classrooms and amphitheater, as well as any evening and weekend events that could be held in the Performing Arts Center. Portions of the drop off/pick up loop/ring are extremely close to our home and the noise of idling vehicles will be very disruptive during the morning and afternoon.

The proposed outdoor classrooms are very close to our home and as you can imagine, at my mother's age, she requires rest throughout the day. The additional noise will greatly impact her ability to have this necessary rest and I am concerned that this may have a grave effect on her overall health.

Further, I am concerned with the HRS proposal to increase enrollment as the traffic to and from home will be negatively impacted. On school days, should we need to leave or return home quickly, an increase in enrollment would prevent us from doing so.

I humbly ask you to consider my concerns regarding the proposed HRS expansion and negative impact that this will have on the quiet neighborhood we deserve as homeowners.

Respectfully,

Diana Shiba

From: Jeff Styer [mailto:jeff@bachman-styer.com]
Sent: Sunday, March 10, 2019 2:48 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Case Number PLN18532-ER01

Dear Ms. Lind,

The City of Oakland's Bureau of Planning is in the process of drafting the Environmental Impact Report (EIR) for the proposed Head-Royce School (HRS) expansion development Planning Application No. 00/0741.

Head Royce School is proposing the demolition of multiple buildings and the erection of new buildings including a 16,000 square foot Performing Arts Center, foot traffic tunnels to travel underneath a major street being Lincoln Avenue and additional parking and reconfiguration of traffic flow on Lincoln Avenue. This plan also is adding full perimeter driving lane for pick and drop off of students directly behind residential homes with inclusion of 61 parking spaces for staff and students.

I write in connection with the above planning application. I am a resident of Lincoln Highlands Neighborhood. My partner and I own a home that will be severely impacted by such construction and reconfiguration of traffic congestion, noise and home values decreasing due to the changes submitted to the planning board by Head Royce School.

Head Royce is a school which students eight hundred plus students attend a certain number of hours per day along with activities that cause already a great deal of noise, traffic congestion but also the impact that those cars are creating on our environment sitting on Lincoln not moving. These things impact our quality of life. We are residents here, whom purchased homes here because it was a quiet, safe residential area. I wish to object strongly to the development of these changes in this location, due to the impact it will be on the residents whom live here.

Were you aware that the average resident in our neighborhood must allow an additional nineteen minutes to get down Alida Street to Lincoln and be able to pull into traffic which blocks the Alida Street entirely to either go up Lincoln to Hwy 13 or worse, have to take a left and go down Lincoln which can add on another ten minutes on top of that.

Adding an additional stop light just up the hill from Alida Street will only add to a more dangerous driving condition for those trying to cross between stalled traffic to go down Lincoln and additional time spent trying to merge into traffic to flow up Lincoln during the busiest times of the day going to and from ones work.

Alida Street and Lincoln does not have a stop light for traffic to enter safely, nor is there a three way stop sign or even a "Keep Clear of Intersection" allowing residents to safely come and go from their homes.

Creating a driveway which directs parents, visitors, staff and students to drive behind homes for the purpose of loading and unloading students is not respectful of home owners in this neighborhood. The noise from of slamming car doors will be in flowing into residents homes.

The fact that someone from the planning committee wanted to know if this will be open to the public nearly floored us residents, being this alone will already cause irreversible damage to the community and that members of the committee want to know if more can be added to the is disrespectful.

The City of Oakland giving permission for this development to move forward with a design that fails to take the opportunities available for improving the character and quality of an area and the way it functions and turning it completely inside out would be a disaster. It would destroy the quality of life for the residents of this area.

The fact that Head Royce School is able to bully the neighbors with the help of the City of Oakland is simply sad.

As a resident and a voter, I want my voice heard in opposition of this expansion and redevelopment.

I understand that it is the City of Oakland's Bureau of Planning to investigate this and its impact on the neighborhood that it joins with and do what is in the best interest of the community. I truly hope that you honestly take to heart those of us whom live here and will be impacted by this.

Nothing that I have read, seen or heard helps this community, it is all Head Royce School based and not community based.

I sincerely hope that you listen to the neighbors who live here and how this will impact their lives before reaching your decision.

Sincerely,

Jeffrey Styer
Bachman-Styer
Jeff Styer, MA,BA,MCC,CPC,CPC-H,CPC-P,CEMC,CPMA,CPCO,CPPM,PAC,CGSC,CMM,CMI

From: Kimberley Urbano [mailto:urbano127@yahoo.com]
Sent: Monday, March 11, 2019 4:51 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Head Royce Expansion

March 11, 2019

I live at 4229 Linnet Ave the last house on the left hand side of the street. I have lived here since 1985 and my deceased husband bought the house in the 1970's. I write this to let you know of my deep concern of the expansion that Head Royce has proposed for Lincoln Ave and the development of the South Campus.

The proposed plan of a road on the perimeter of the South Campus is right next to my home. When we were taken on a tour by HRS personal I was shocked to see just how close it will be. The noise of cars, parents and students will sound as if in my living room. The quiet and serene environment I have had all these years will end. The air quality will be great impacted by the traffic and idling cars and of course the construction that will take place. I am so concerned about this as I have COPD, asthma and other serious breathing issues. Certainly I will never be able to open my windows or doors. I know it will affect other neighbors also.

The proposed Arts Theater is also directly above my home. The use of the is building will bring students and other attendees so close to my front and back door to say nothing of the noise that will come from events. This huge structure will loom over my home and all others.

The excavation of the land for the tunnel under Lincoln Ave, the "ring road" for drop off and parking, the Arts building and all the other proposed work up the hill will most certainly cause land erosion, more water and flooding issues. This development will also impact wildlife and native trees that currently exist here and have for many years.

The continued growth of Head Royce over the years has had serious affect on many neighbors below Lincoln Ave and above. We deal with traffic spillover into our streets, backup trying to enter and exit Hiway 13 (I have witnessed many screeching stops on the Hiway from all the parents dropping off and picking up) . They behave as if the street is theirs personally both in driving, parking and stopping. I have now come to expect that many will be rude and unconcerned as to their affect .To try to turn onto Lincoln Ave there is so much congestion of their cars and buses that you cannot see to make a left or right turn onto the narrow street to get to out of our neighborhoods. It used to be that residents and HRS coexisted years ago but that is long past.

I realize that they are a business and we all have to work together. However their business should not have such a huge impact on the peace, health ,safety and of course our property values! The proposed expansion will literally change our lives in a very negative way. New/different ideas should be proposed for the traffic issues and use of the land on South Campus by HRS to more fit in with the many homes and the lay of the land as it is now.

I have only touched on some of the concerning issues but I wanted to express to you directly as a person who lived right on the perimeter of HRS South Campus proposal.

Kimberley Urbano
4229 Linnet Ave, Oakland Ca 94602

---------- Forwarded message ----------
From: Thomas White <tom_joan@sbcglobal.net>
To: "Lind, Rebecca" <RLind@oaklandca.gov>
Cc:
Bcc:
Date: Thu, 7 Mar 2019 00:35:34 +0000
Subject: Case PLN18532-ER01
Dear Rebecca,

I would like to add my voice and concerns to the Head-Royce school development project. I have lived in the neighborhood over 25 years. I believe the proposed project, particularly the perimeter road, is out of scale for the neighborhood and puts an undue burden on the small cut-de-sac's on Alida Ct, Linnet Ave and the surrounding area. Here are some of my concerns:
1. Soil erosion, run off, noise and pollution caused by 1,000+ students in cars circling the perimeter every morning and afternoon, and for special events.
2. Plan to tunnel under Lincoln Ave and the disruption that will cause
3. Adding a third traffic signal on Lincoln Ave and the congestion that will cause
4. Environmental noise, pollution, erosion during construction and after
5. Traffic and delays
6. The impact on the peregrine falcon that call our neighborhood home
7. Road bed conditions

I suggest that HR consider an alternate plan to the perimeter road. HR has come up, after much trial and error, with a workable solution for drop off and pick up from Lincoln Ave, with staging in the parking lot at the corner of Monterey and Lincoln which could be expanded for the new development. Lincoln is the main thoroughfare and is better equipped to handle commercial business and traffic than the surrounding smaller streets.

I have another major concern and that is one of safety for the students, faculty and neighbors in the event of an emergency. We are in the fire suppression district. What is Oaklands plan to insure everyones safety? As sited in articles in the East Bay Times on 11/19/18 and 11/21/18, how systems and evacuation plans failed the residents during the Paradise and Camp fires must be considered.

I hope the planning commission will give equal weight to the neighbors and our concerns and not just think of Head Royce. Head Royce is not a neighborhood school and does not serve our children. Most students come from a far from more affluent neighborhoods which I doubt would welcome the same level of disruption in their own backyards.

Thank you,

Joan White
2472 Alida St.
Oakland, 94602

From: Karen Wong [mailto:kwong55@aol.com]
Sent: Thursday, March 7, 2019 6:14 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: Comments about the Head-Royce Master Plan Expansion application and Environmental Impact Report

Dear Ms. Lind,

This is in regards to Case Number PLN18532-ER01. My husband, Steve and I have lived at 65 Camellia Place, Oakland, CA 94602 since 1988, when his stepfather moved out. We are the original family homeowners and the home was built by his parents in 1965. We have seen the neighborhood change over the years and now with the proposed expansion of Head Royce School and requested increase in enrollment from 884 to 1,250 students, we have to make a statement on what we feel would be a detriment to our quiet and serene neighborhood. Our kids, now 25 and 30, went to private Christian and Skyline High School and never thought of attending Head Royce. However, they did take swimming lessons at Head Royce in the summers while growing up. Both are currently living with us and have full time jobs at two real estate companies. Here are the concerns we have about the proposed expansion of Head Royce and the increased enrollment:

1. Traffic - during school hours, traffic is heavy and Lincoln Avenue is the only way to get to Hwy 13 for our daughter to get to work in Walnut Creek by 8 am. I myself, work at home as an independent consultant and I try to time my errands to avoid the traffic that is caused on Lincoln Avenue and Alida Street when Head Royce School dismisses their students between 3 and 4 pm.

2. Safety - with more students enrolled, there will be more traffic as more parents will be dropping off and picking up their children along Lincoln Avenue. I have seen parents parking on Alida Street and having their children meet them at their cars.

3. Fire Hazard - If there is ever a fire or emergency in this vicinity, the traffic after school is dismissed would be horrendous as safety vehicles would not be able to get through. If there was ever was a wildfire, fire or earthquake in our neighborhood, how would the school and the neighbors be evacuated safely as the safety of the neighbors and children in our neighborhood is of utmost importance.

4. Proposed 15,900 square foot Performing Arts Center with 450 seats for performances would yet again bring more people into our neighborhood and there would be people parking in our neighborhood and Camellia Place is a cul-de-sac.

5. Construction for the performing arts center, underground tunnel to connect the two campuses, proposed interim housing for staff would cause traffic and noise in our neighborhood, possibly blocking one lane on Lincoln Avenue, Alida Street and Charleston Street.

6. Additionally, how would this expansion effect our property values? It is already expensive living in Oakland and having a large private school in our neighborhood would negatively impact our neighborhood as buyers would not want to live in a noisy and congested neighborhood.

For these reasons, we are questioning why your office would consider allowing this expansion in a residential area where it is relatively peaceful and safe.

Sincerely,

Steve and Karen Wong

From: karen young [mailto:youngstearns@earthlink.net]
Sent: Sunday, March 10, 2019 4:52 PM
To: Lind, Rebecca <RLind@oaklandca.gov>

Subject: PLN18532-ER01 - Head-Royce School Planne Unit Development Permit Project

Dear Ms. Lind,

Thank you for your work on PLN18532-ER01 - Head-Royce School Plan Unit Development Permit Project. Below are comments and questions in response to the Notice of Preparation, February 1, 2019 regarding the scope of the Draft EIR.

Environmental Factors

Aesthetics

I would like to see the EIR include in its plans where on the property the school plans to house maintenance and landscaping tools and operational equipment, materials storage, and refuse generated by students, staff and visitors (i.e. dumpsters). Where will these operational facilities be physically placed on the property in relation to neighbors' homes and views looking up toward the hills?

Please have the EIR address where new facilities such as electrical substations, communications equipment (towers, panels, other technical equipment, 4G or 5G cell equipment installation) or other equipment "piggy-backing" on existing public or private infrastructure.

Where will HVAC and electrical equipment be housed for the proposed performing arts center and other buildings?

The acreage upon which the school intends to build has been vacant and therefore a dark oasis in the community allowing night sky visibility. Please study the lighting plan of the development in relation to impact on the community, including nighttime lighting from new and old buildings, landscaped grounds, security lighting, any proposed lighted signage.

Please address in the EIR where the construction lay-down yard will be placed and how it will be maintained and secured. Please include description of fencing, onsite construction trailers or portable buildings.

The EIR or at least the plans should show elevations in relationship to homes and the plans should have measurements of the distances between the homes, proposed roads, buildings, parking areas, fences, etc.

Elevations should show views from above, below and around the campus boundaries. As it is now, seeing the aesthetics of the development from the neighborhood perspective is not possible.

The property to be developed is the last open space in the lower hills area. Though the Lincoln Childcare Center buildings occupy some space most the 8-acre property is green space.

Biological Resources

Please include in the scope of the EIR the numbers, species and current habitat description of birds, animals and insects that will be impacted by destruction of natural habitat.

What materials will be used to encourage native flora and fauna to remain on the property?

How many and which live trees will be removed? What varieties of trees and current landscaping will stay on the property?

Water drainage from natural springs flowing downhill is of great concern. The hill is holding now with undisturbed plants, trees, dirt and rocks, but what happens when those elements are removed or altered?

How much water more water will the City storm drains receive as a result of this development? Downhill from the property now, as far down Lincoln as Sequoia School, the storm drains overflow regularly.

Earthquakes are a concern of course, but even small ones in the future, with the land on the hill changed is something the EIR could address. The entire neighborhood is aware of the cracks in homes and roads from movement in this area. The EIR should address potential landslides because of hillside changes in relation to any degree of movement caused by earthquake. What could a 2.8 quake do to a hillside inadequately retained?

<u>Greenhouse Gas Emissions and Air Quality</u>

I would like the EIR to study the use of power generators. Please address generator use while grading land, operating construction equipment, as well as generator use — intermittent constant, or backup — in the development and after construction.

Emissions from trucks are also an environmental concern. I would like to see the EIR study the number of truck trips for material deliveries, truck trips for removal of soil and debris, transport for heavy equipment including bulldozers and cranes, wood chippers, graders, etc.

<u>Population/Housing</u>

Please include in the EIA reference to any indication that this development would contribute to alleviation of the housing crisis in Oakland. As the plan seems to suggest, any housing built on the property for teachers or other staff, or others, will not be permanent, but just temporary housing for these people and not open to the public.

The EIA scope should include a thorough study of the neighborhood: demographics of the surrounding neighborhoods to determine the characteristics of the population; ages of residents; occupations; retirees v. employed residents; the number of stay home workers; students; length time residents have lived in the neighborhoods.

The EIA should include study to understand the density of the neighborhood by housing type (apartment buildings; duplexes, triplexes, single family, additional dwelling units, airbnb, VRBO)

The EIR should address the age of the homes in the Lincoln Highlands and Dimond neighborhoods. The area was annexed to the city of Oakland in 1909 (source: Oakland Public Library History Room reference materials) and many of the houses are historical in nature and may be eligible as Oakland Landmarks. Many homes are older than the Lincoln Childcare Center buildings. HRS didn’t arrive in the neighborhood and build its first campus until 1964, half a century after residential development began. The EIR should definitely address the historical value of the neighborhood and potential impacts of “institutionalization.”

<u>Hazards and Hazardous Materials</u>

Please include in the EIR study how it will be determined what hazardous materials are present in the land and buildings that are to be demolished and renovated. Please include in the EIR the process for hazardous materials identification, how hazardous materials will be disposed, and how the land and water would be remediated. I am concerned about contaminated soil, asbestos, and mold release.

Please address how “dirty water” will be removed during construction - i.e. water used to clean cement trucks and other equipment, paint clean-up, oil and fluids, etc

With the intense amount of grading on this property, and its uphill location, how will dust be kept under control in all weather conditions?

Public Services

EIR should study how construction and operation will impact connecting AC transit and other bus routes, neighborhood parking availability, fire protection, ambulances, and security.

How will construction and school operations impact routes for waste management trucks, recycling services, street cleaning within the community which is already adding the impact of increased deliveries such as UPS, FedEx, Amazon, US mail, and more.

Where will the South Campus development collect its refuse on the property and what routes will the collection vehicles take to retrieve it? Is it proposed that these vehicles use the planned perimeter road to service the South Campus?

Please address in the EIR what public infrastructure HRS is proposing to use in project development and operation — specific community streets to be transited, residential parking impacts, public utilities to be reconfigured/leveraged to accommodate water, power, communications and safety needs.

Who is responsible for scheduling, managing, repairing and paying for the neighborhood streets impacted by this large-scale construction?

Utilities/Service Systems

The EIR should address the issue of 5G cell antenna installations. As the school is on private property, will it be able to install radio frequency antennas on school property without notification to impacted neighbors? The EIR should also address the noise and power levels emitting from these facilities.

What service system and utility upgrades or new installations will be required to the buildings’ electrical systems?

Please address in the EIR where the project plans call for sewer and storm drain connections into the City’s infrastructure and how much increased volume in water run-off to storm drains will be expected.

Noise

The EIR should address the noise levels generated by engine traffic from the proposed loop road, including noise generated by cars idling during student drop-off and pick-up, maintenance vehicles, and buses. The noise study should include not just the noise of the new development, but the noise the school generates in the community as a result of current operations in relation to increased enrollment. Please consider not only decibel levels but the duration of noise over months of time.

Please have examples in the EIR that compare sound levels generated by schools with enrollments over 1,200 in a variety of Oakland communities — schools, that are public, private, charter and religious.

In relation to homes, especially the homes nearest the proposed arts center, what will be noise levels generated from throughout the campus from the HVAC equipment, electrical power sources, school bells or amplified sound, generators and equipment turned on constantly or intermittently?

What noise will additional light sources generate, such as the “hum” of condensers?

Please study how far sound generated by the school will travel from the front entrance of the school throughout surrounding neighborhoods. The sound travel distance could be significant compared to the current north campus located in the canyon versus the new campus situated on a prominent hillside. Example: each year the Greek Festival generates noise heard several miles downhill from the festival, but that’s just once a year and announced well in advance. The school would generate various levels of noise from a variety of sources v intermittently and year-round.

<u>Transportation/Traffic</u>

What will be the effect of the proposed changes on Lincoln Ave (stoplights, left turnouts, etc) on travel on this vital and already congested east and west corridor between Hwy 13 and I-580? The “road diet” on Redwood Road is already backing up traffic during commute hours.

As drivers try to avoid congested Lincoln Ave currently, please include in the EIR study the impact of increased traffic on surrounding streets within 2.0 mile radius from the school’s entrance.

Please address how the development impacts the safety of bicyclists on Lincoln Ave.

The EIR should study whether the tunnel option as opposed to options such as a fly-over pedestrian bridge on Lincoln should be considered.

What construction methods would be used to build a tunnel? Would residents and commuters from the hills even be able to use Lincoln during construction?

How would this tunnel be secured during and after school hours and summer?

Where would traffic using Lincoln Ave be re-routed during construction?

Does the school plan to keep telling parents to use “the loop” even after the new campus is constructed? The current loop has hundreds of cars directed to drive through the neighborhood on a path that takes them as far away as one mile from entrance of the current North Campus (the corner of Potomac and Laguna). The EIR should consider the “spread” of traffic throughout the neighborhood and not just traffic on Lincoln and on the development property.

What are HRS’s plans for student drop-off and pickup during the two years of construction?

I would like to add, that as a neighbor of 27 years who resides in a home on “ the loop” the continuous growth of the school allowed by the City over the years has deeply impacted the quality of life in this residential zone. I have hope, that with careful study, mitigations to the HRS development plan will provide mutual benefits to the school and the neighbors.

Thank you again for your consideration. Warm regards,

Karen Young
4097 Laguna Ave
Oakland, CA

Appendix 4

Shadow Study- Head-Royce School South Campus

Skidmore, Owings & Merrill, 2020

HEAD-ROYCE SCHOOL

4315 Lincoln Ave, Oakland, CA 94602
Contact: Crystal Land, Head of School
(510) 531-1300
cland@headroyce.org

Architect
Skidmore, Owings & Merrill LLP

Landscape Architect
TLS Landscape Architecture

Civil Engineer
Sherwood Design Engineers

Shadow Analysis

The purpose of this shadow analysis is to evaluate the potential shadow impacts of the proposed South Campus development on nearby existing or historic buildings or resources.

Standard of Significance

Under the California Environmental Quality Act (CEQA), a project would have a significant impact if it would meet any of the following criteria:

1. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code sections 25980-25986)

2. Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors, or cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden or open space

3. Cast shadow on an historic resource, as defined by CEQA Guidelines section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5

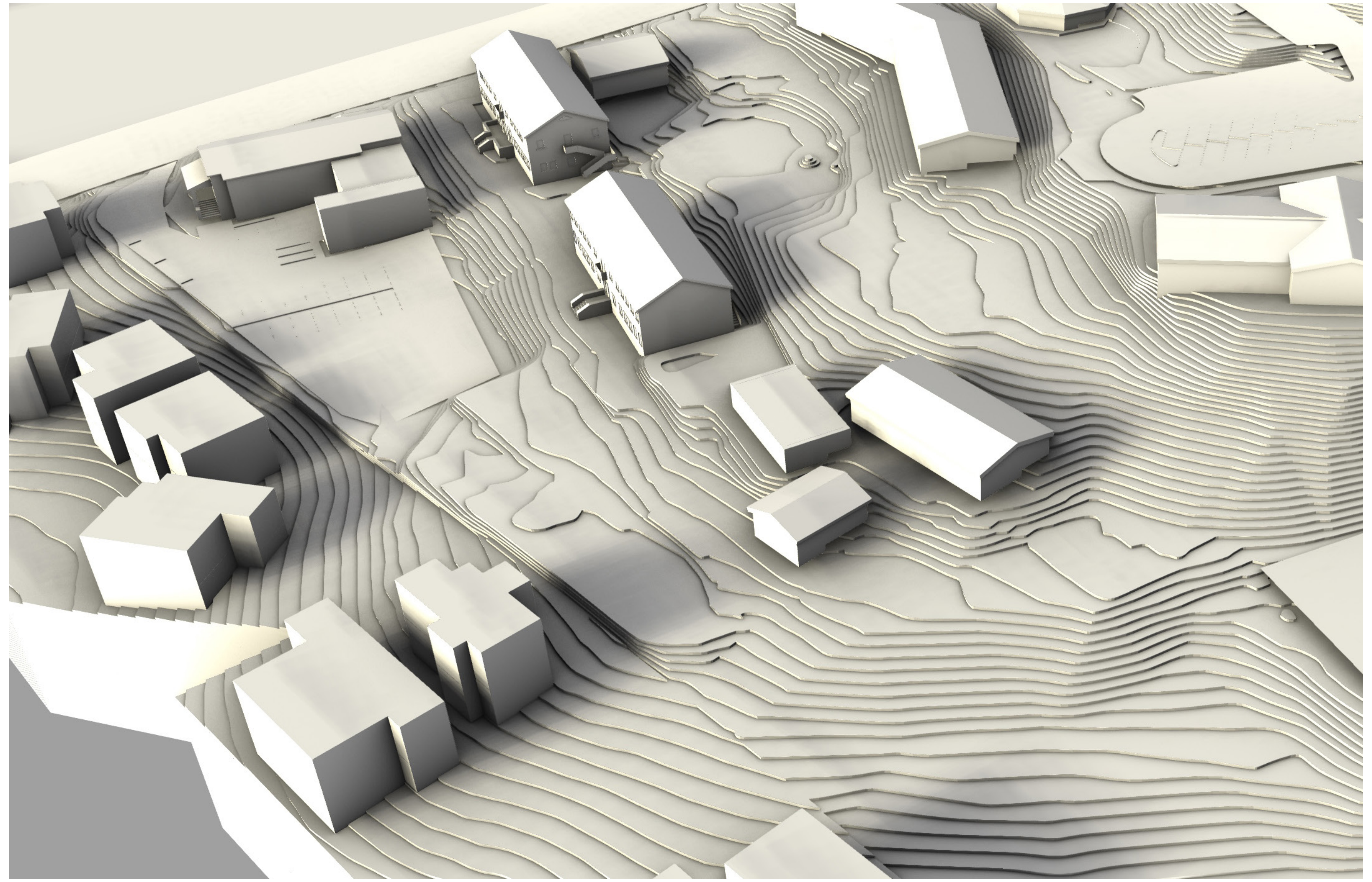

Figure 1.01: Shadow Analysis Geometry - Existing South Campus

Analysis Methodology

The study was conducted in accordance with the City of Oakland's CEQA Threshold Guidance document, which specifies, "Unless directed otherwise by the City, evaluate the following dates/times: 9:00 a.m., 12:00 p.m., and 3:00 p.m. for the Spring Equinox, Summer Solstice, Fall Equinox, and Winter Solstice."

Shade patterns from existing and proposed buildings, hardscapes, walls, and fences were simulated during the specified analysis period to assess if the proposed development would have a significant shadow impact on any existing or historic buildings or resources, solar collectors, public or quasi-public parks or open spaces.

The majority of existing buildings and resources that could be impacted are located far enough to the south of the proposed development that it does not have any impact on them. Even during the winter, when the sun is the lowest in the sky, creating the longest shadows, no existing or historic building or resource, existing solar collector, public or quasi-public park or open space is impacted by shadows from the proposed development.

Therefore, the project would not result in a significant shadow impact.

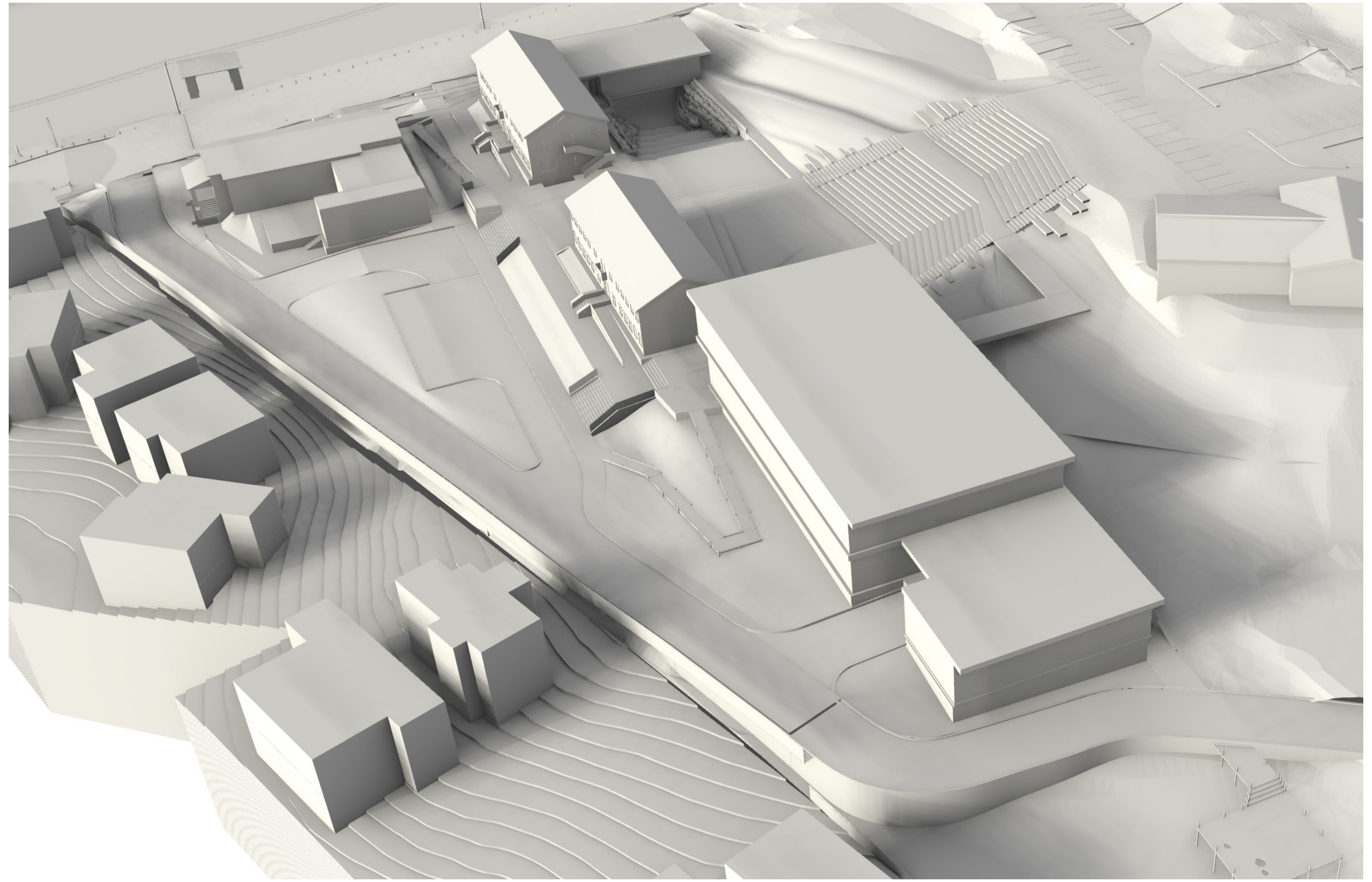

Figure 1.02 : Shadow Analysis Geometry - Proposed South Campus

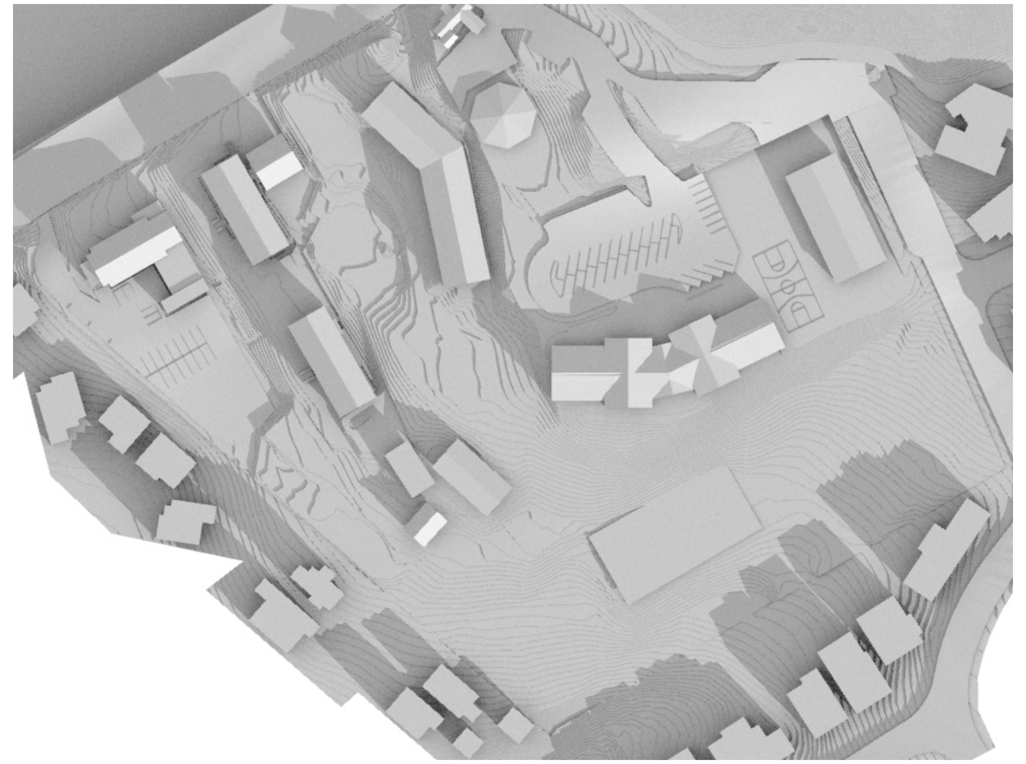

Figure 1.03: Existing Site - 9:00 AM December 21

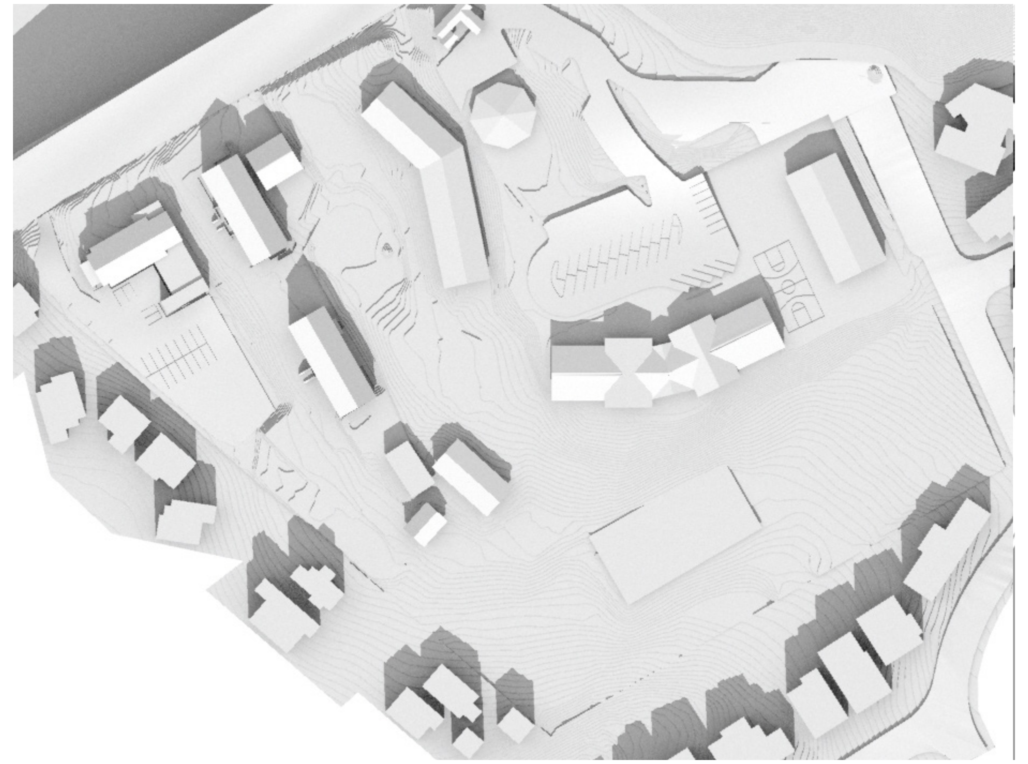

Figure 1.04: Existing Site - 12:00 PM December 21

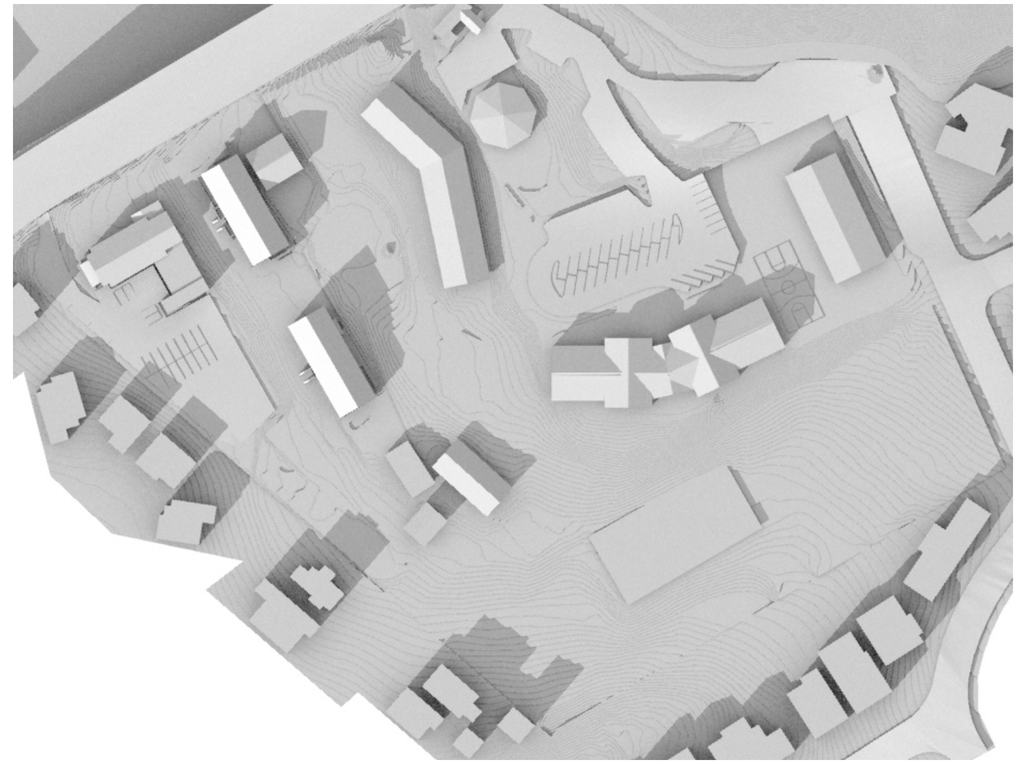

Figure 1.05: Existing Site - 3:00 PM December 21

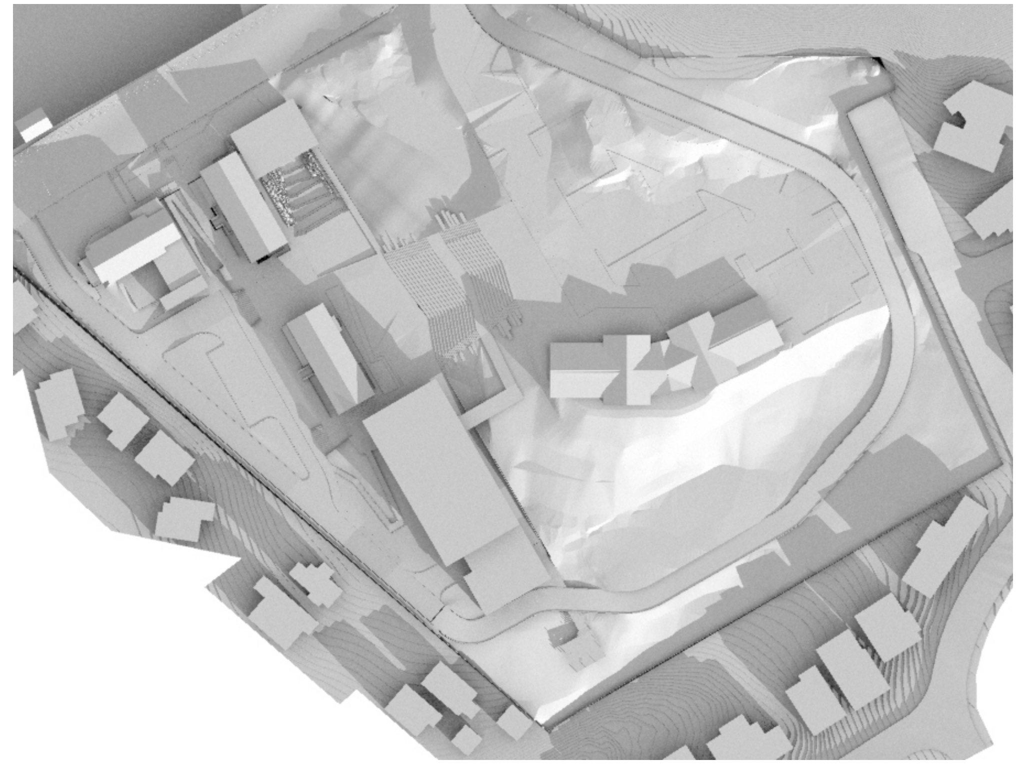

Figure 1.06: Proposed Site - 9:00 AM December 21

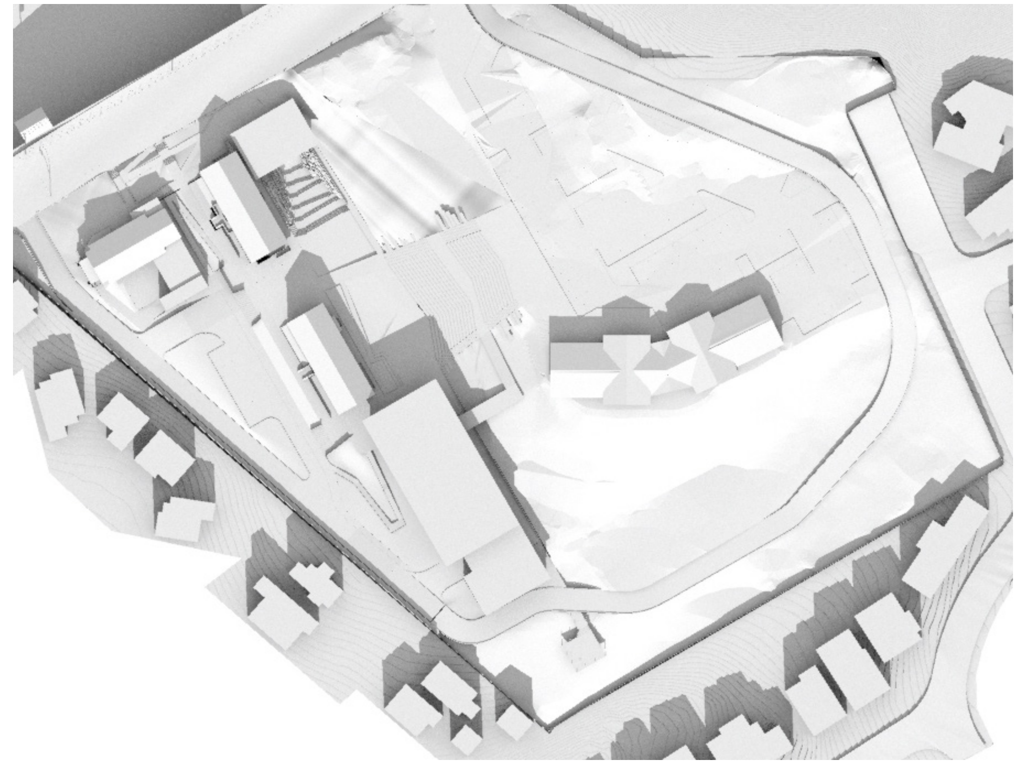

Figure 1.07: Proposed Site - 12:00 PM December 21

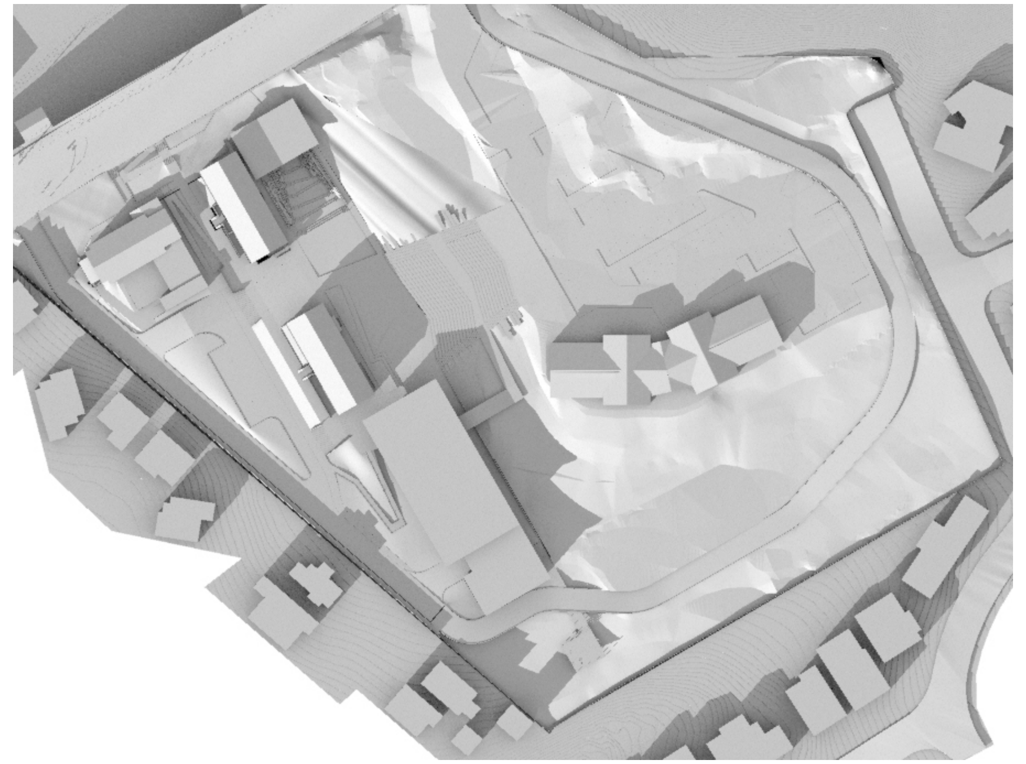

Figure 1.08: Proposed Site - 3:00 PM December 21

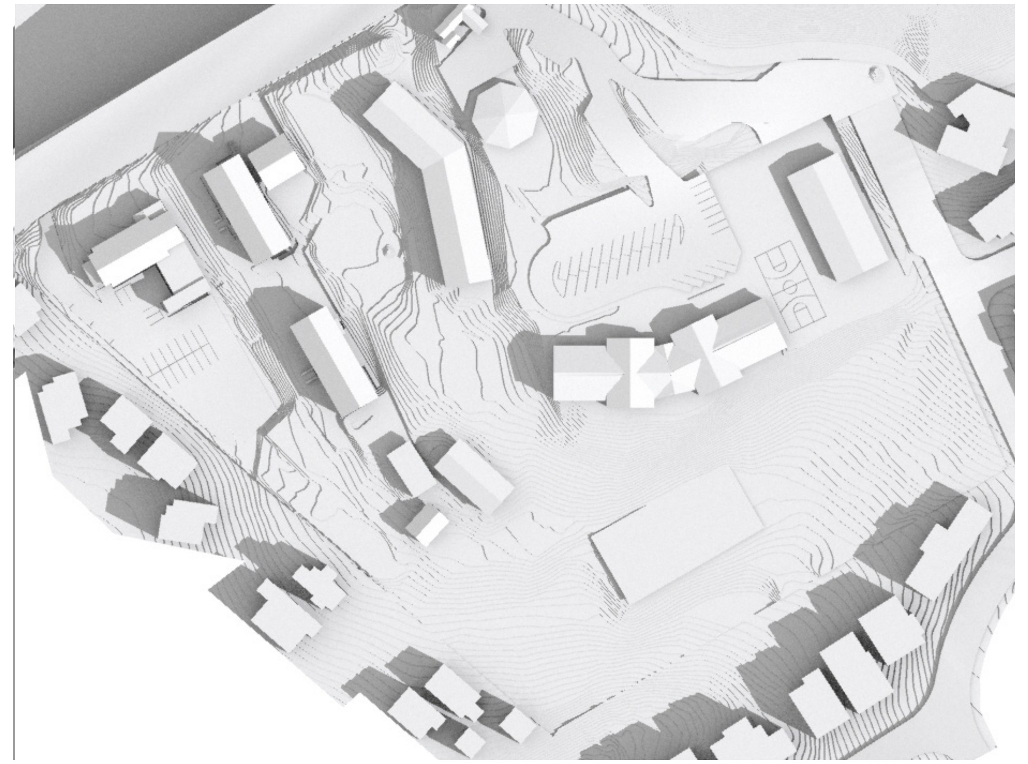

Figure 1.09: Existing Site - 9:00 AM March 21

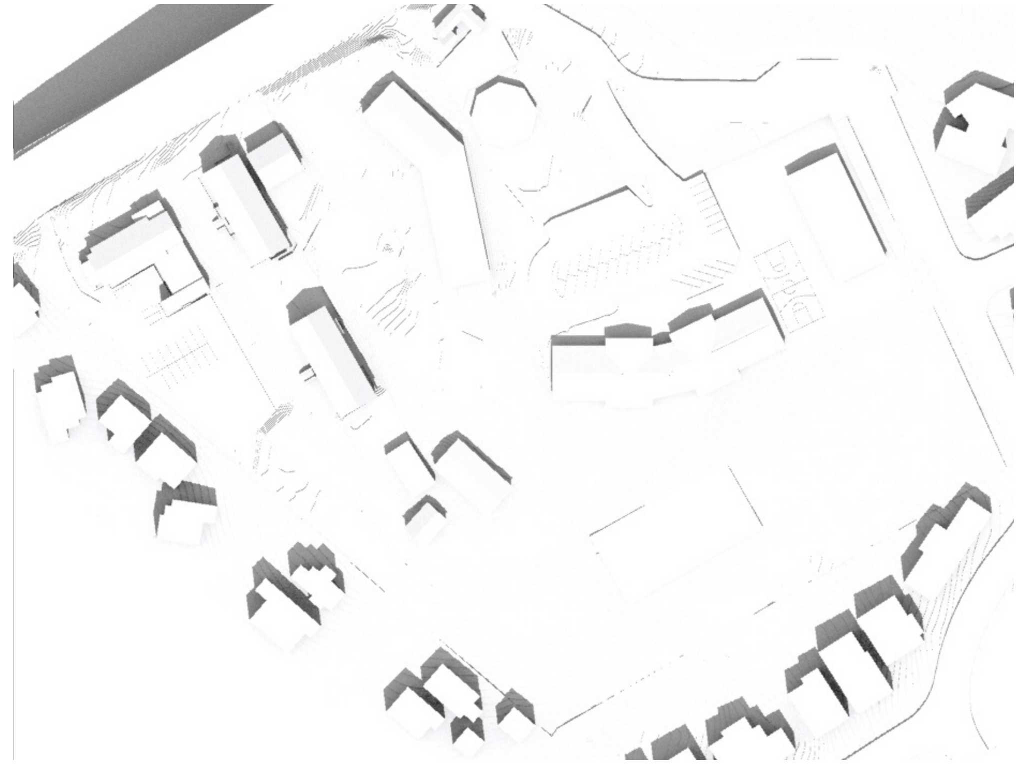

Figure 1.10: Existing Site - 12:00 PM March 21

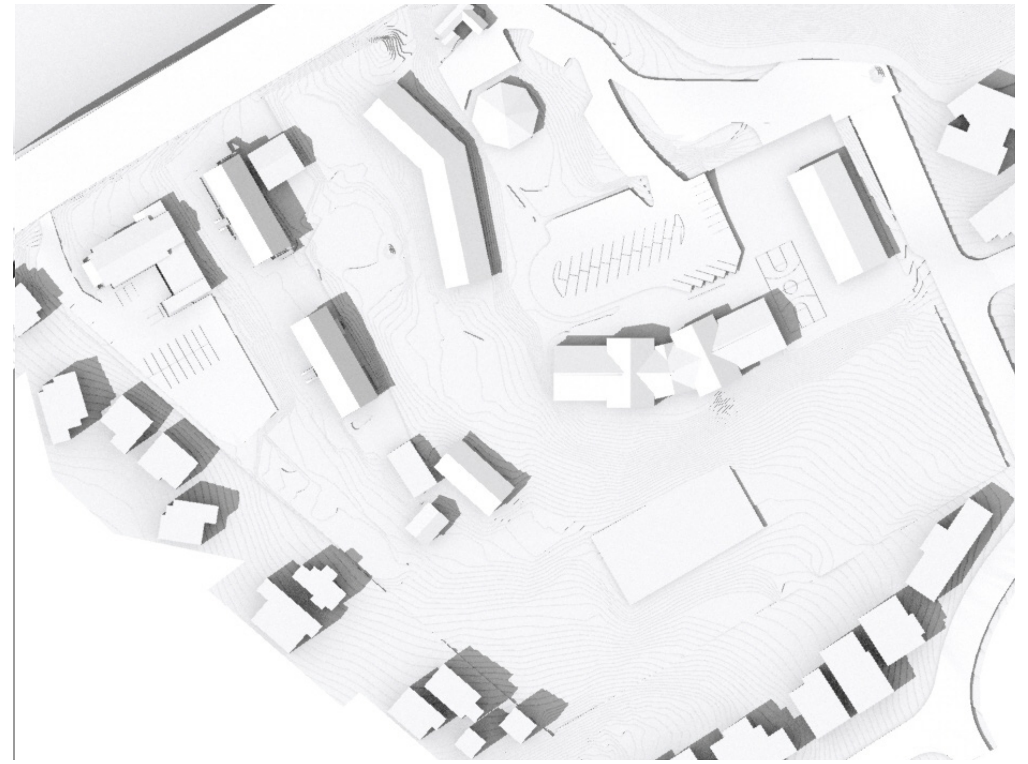

Figure 1.11: Existing Site - 3:00 PM March 21

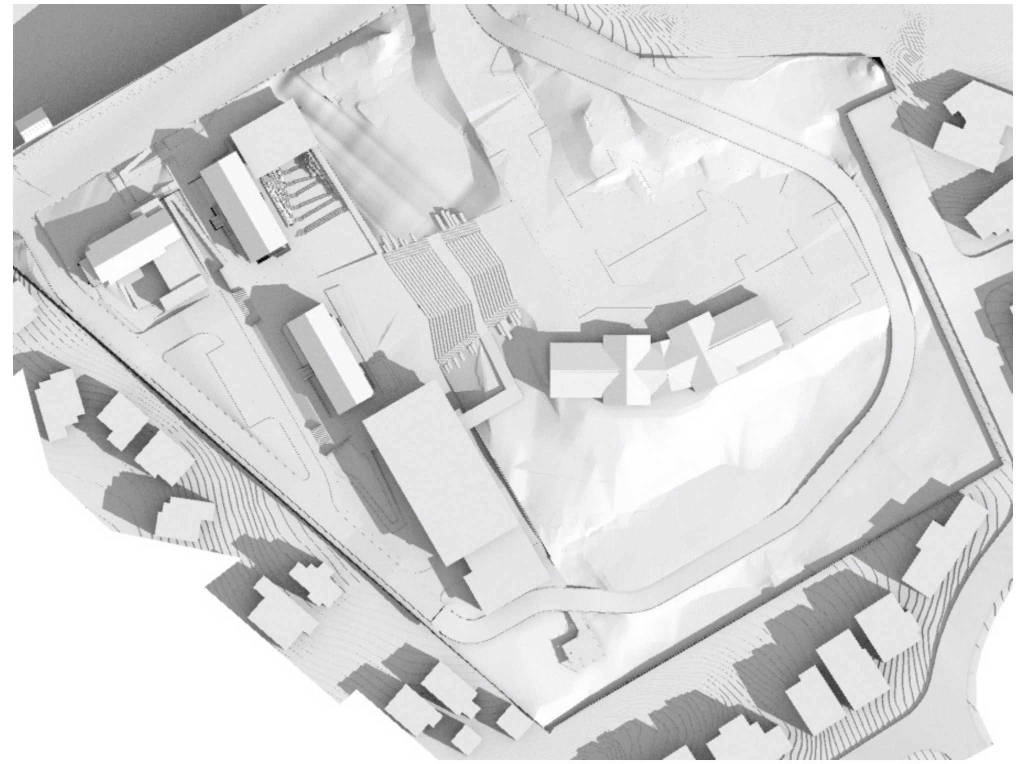

Figure 1.12: Proposed Site - 9:00 AM March 21

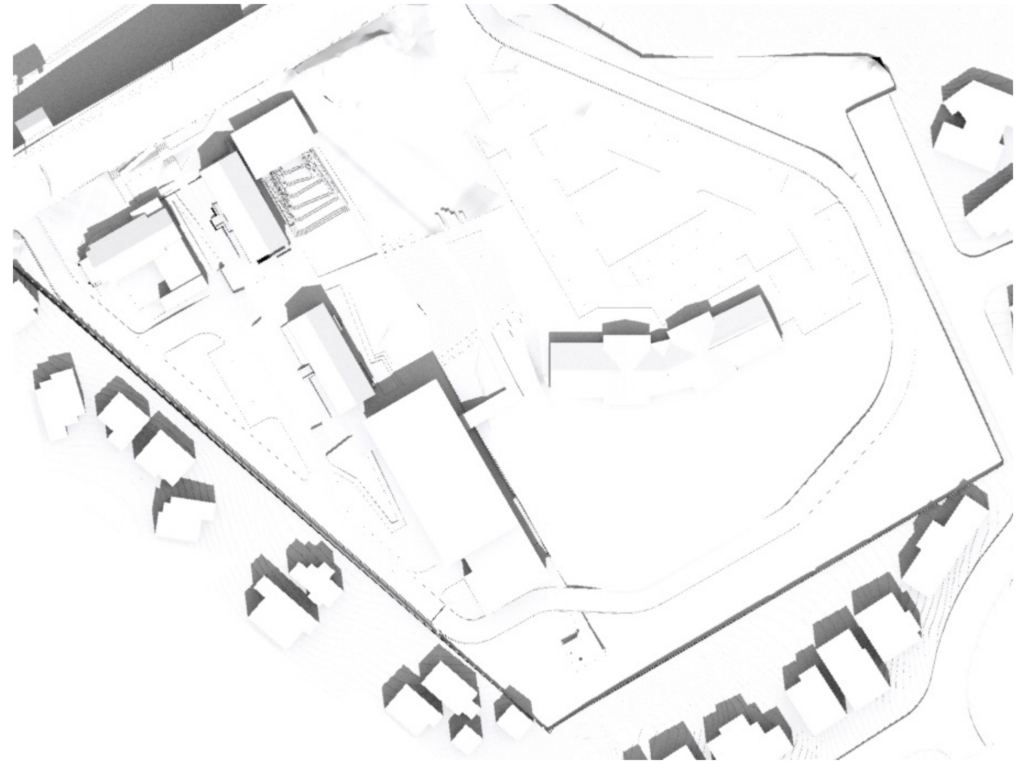

Figure 1.13: Proposed Site - 12:00 PM March 21

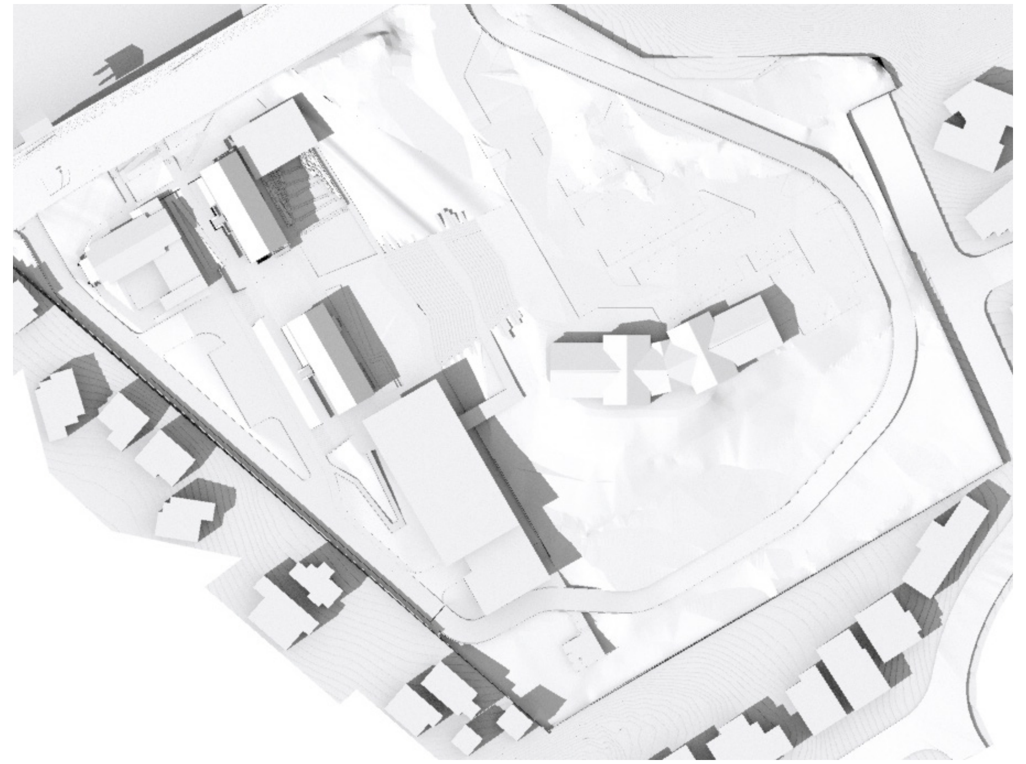

Figure 1.14: Proposed Site - 3:00 PM March 21

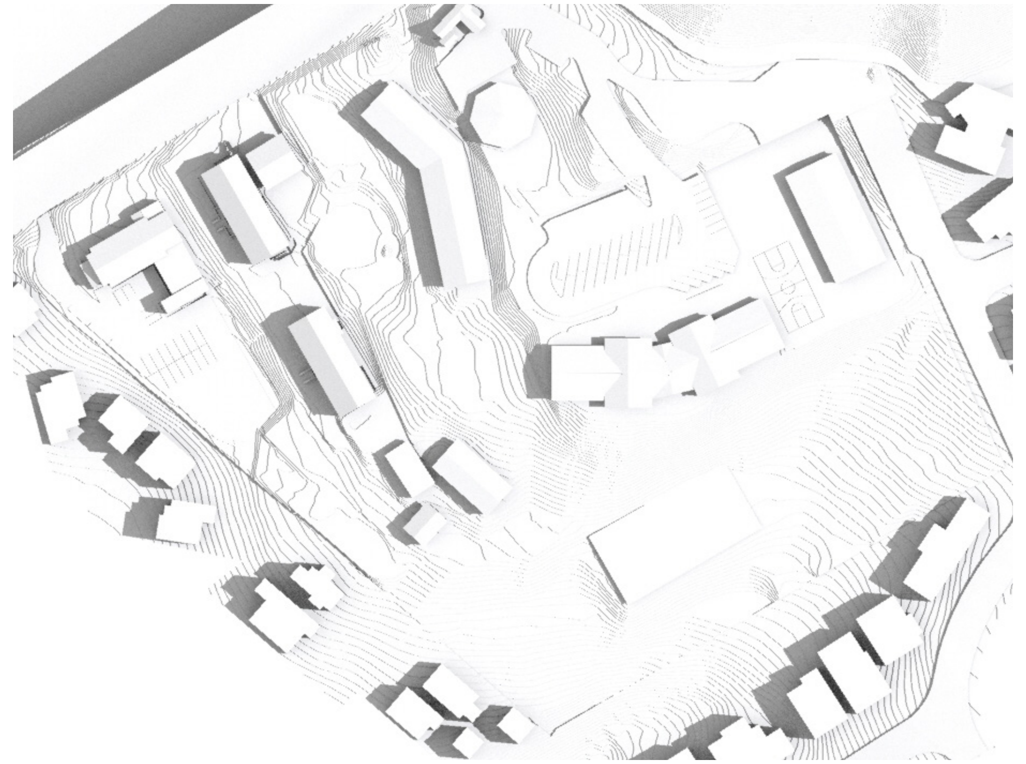
Figure 1.15: Existing Site - 9:00 AM June 21

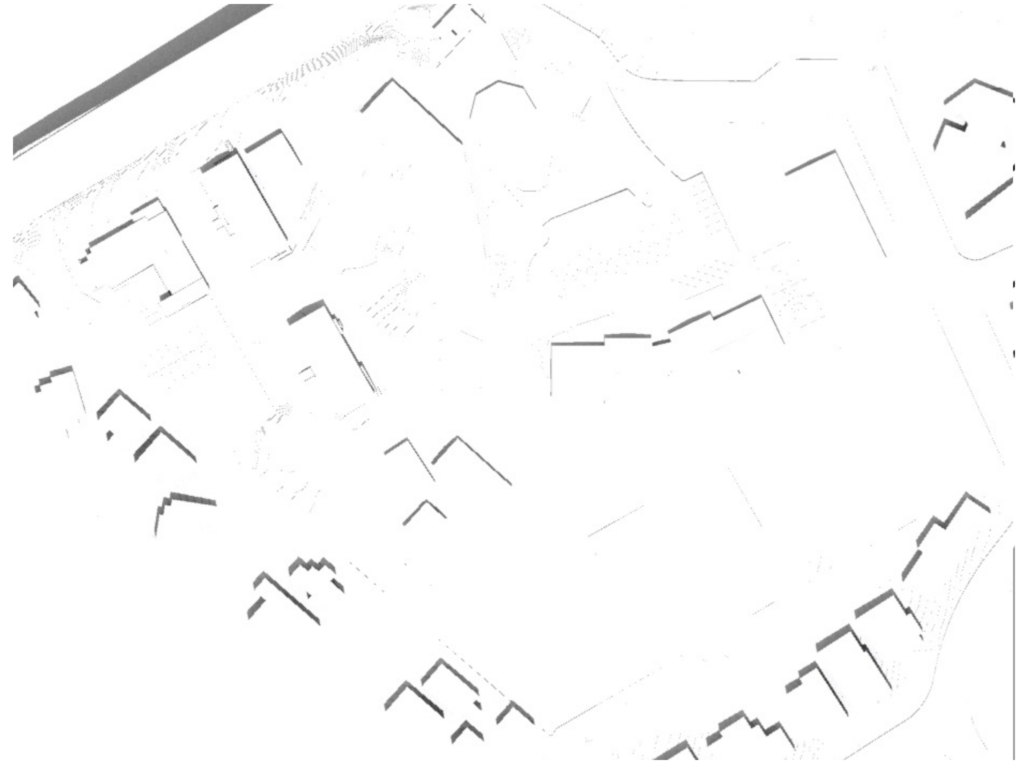
Figure 1.16: Existing Site - 12:00 PM June 21


Figure 1.17: Existing Site - 3:00 PM June 21

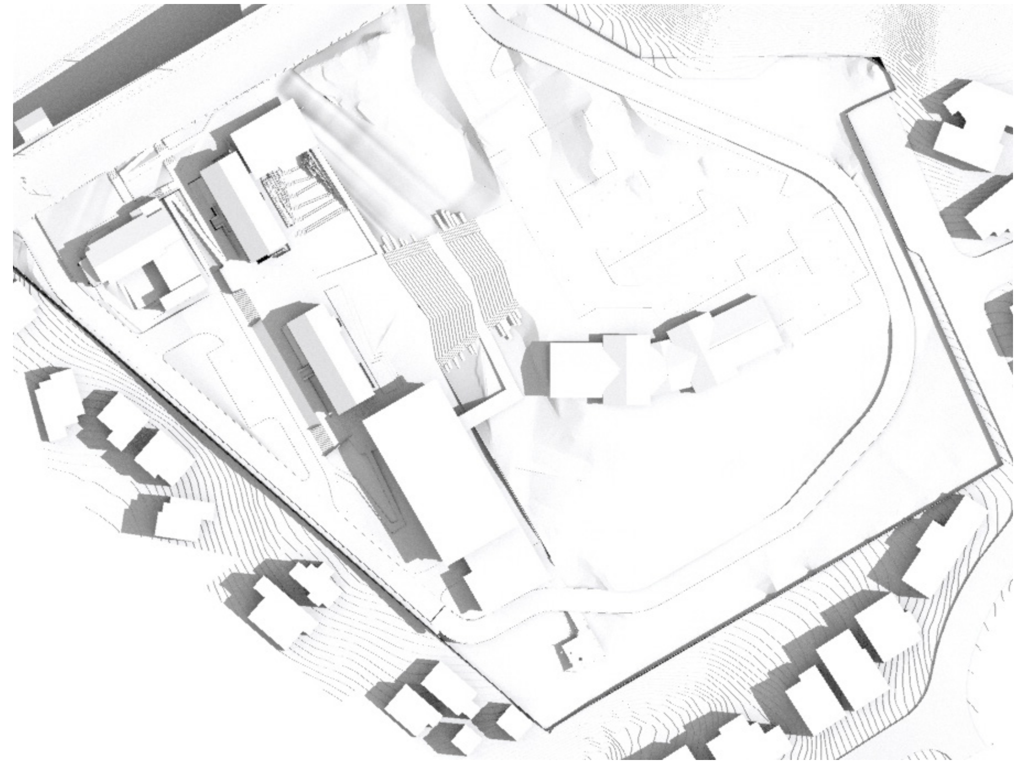
Figure 1.18: Proposed Site - 9:00 AM June 21

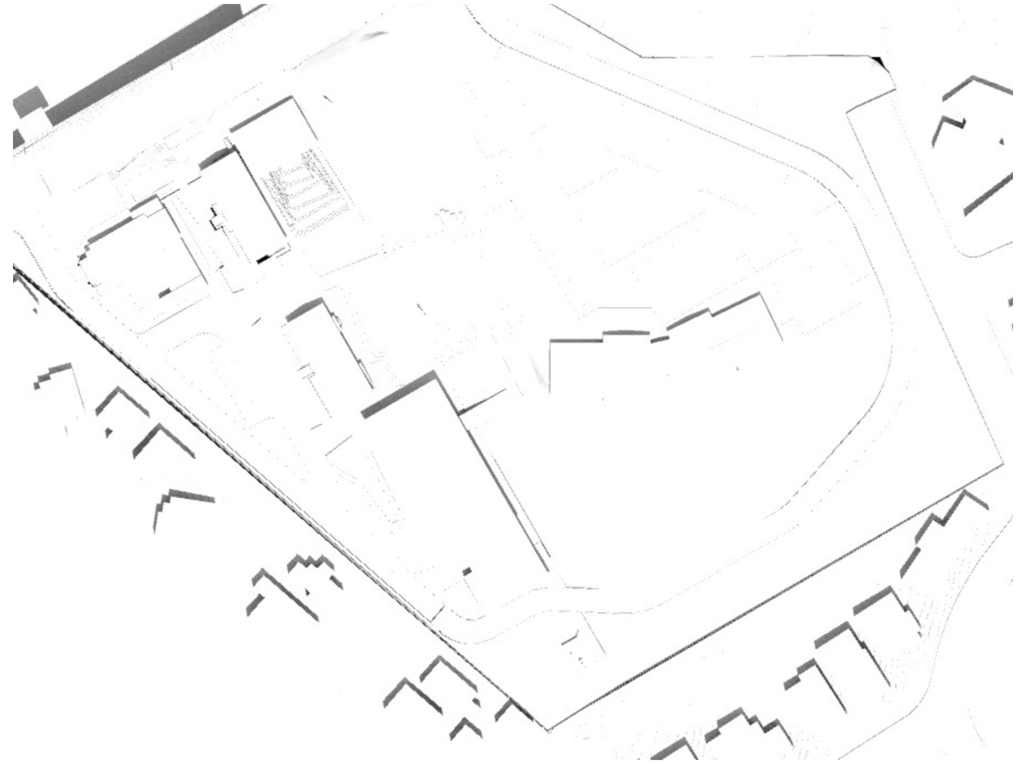
Figure 1.19: Proposed Site - 12:00 PM June 21

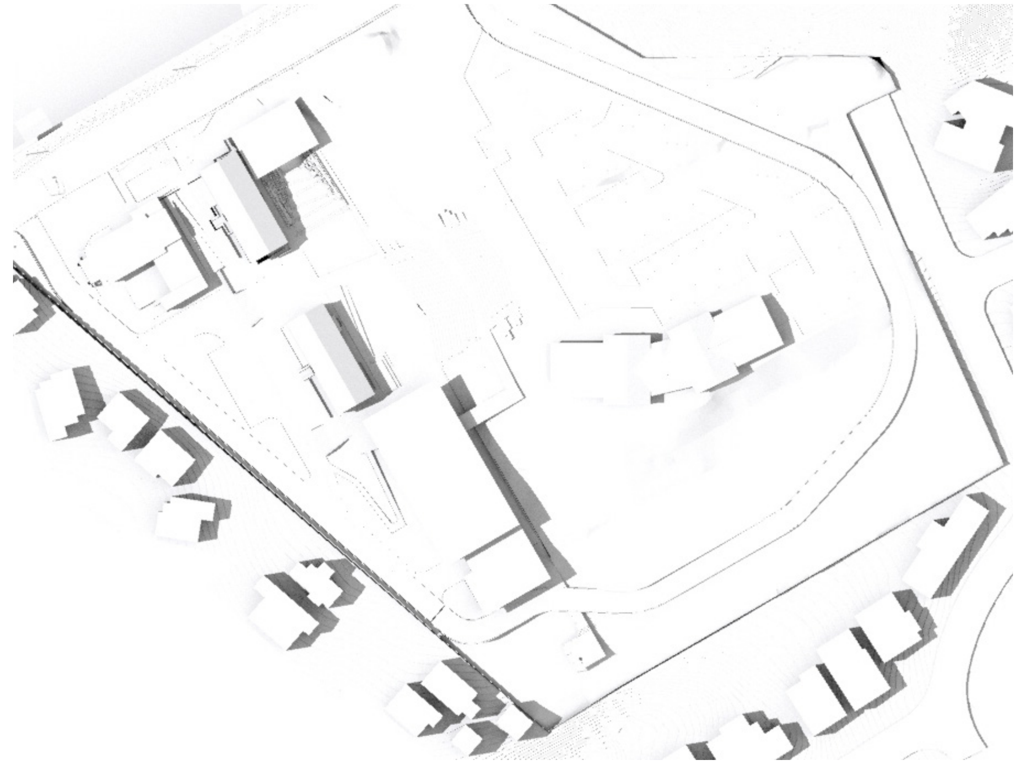
Figure 1.20: Proposed Site - 3:00 PM June 21

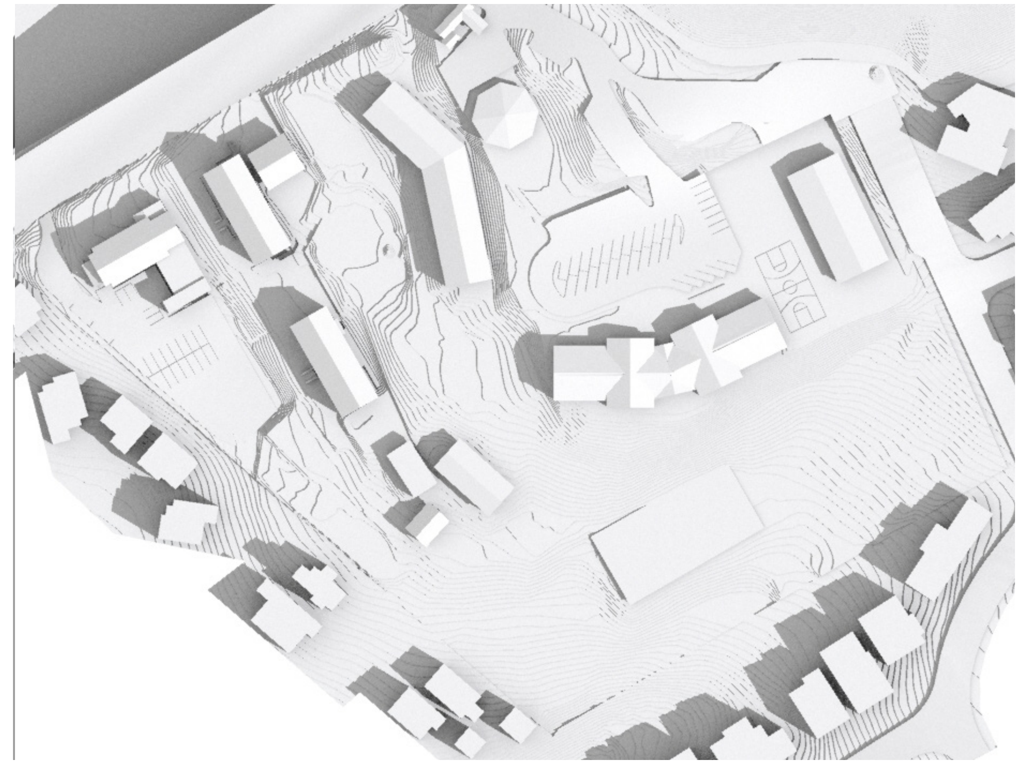
Figure 1.21: Existing Site - 9:00 AM September 21

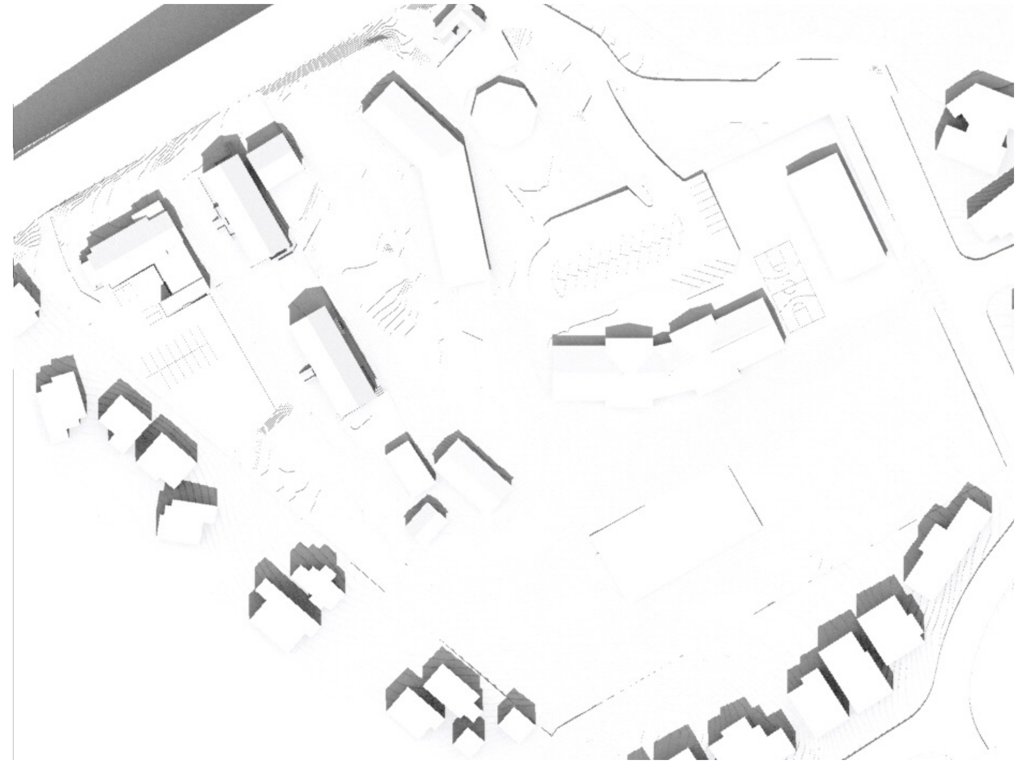
Figure 1.22: Existing Site - 12:00 PM September 21

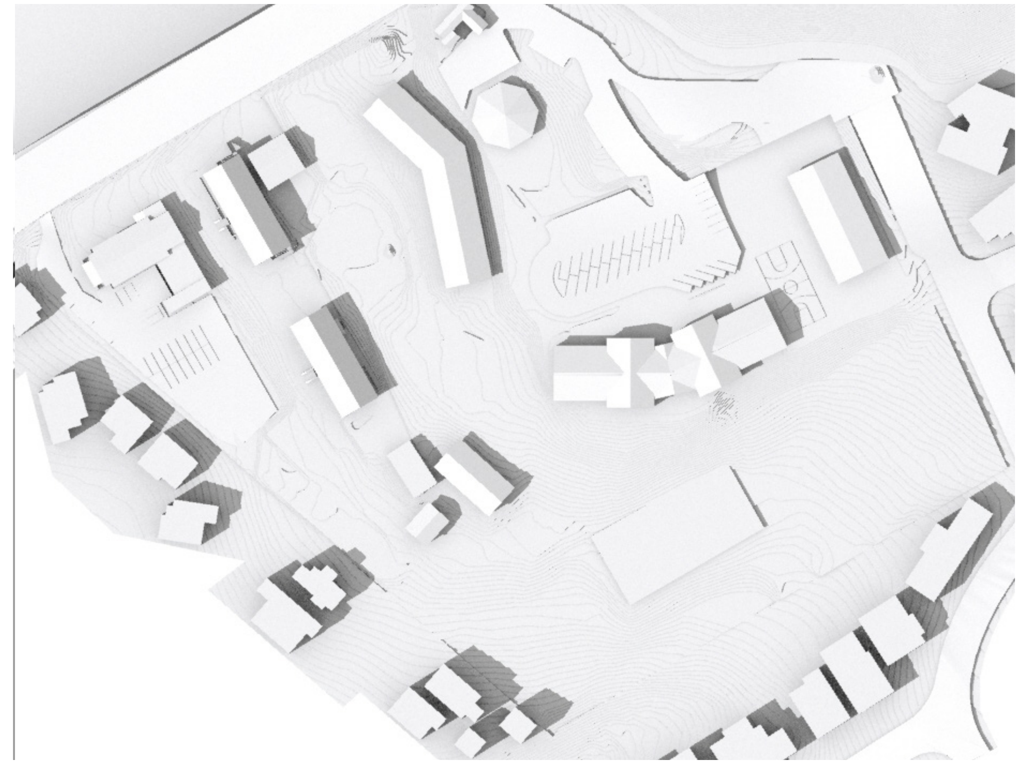
Figure 1.23: Existing Site - 3:00 PM September 21

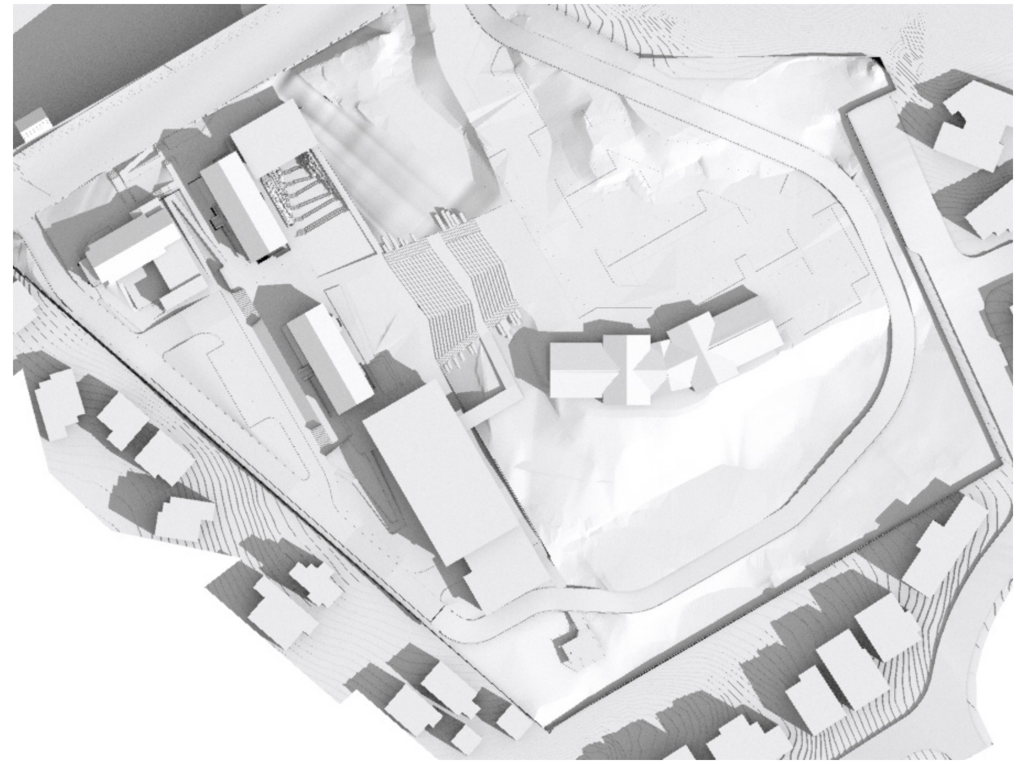
Figure 1.24: Proposed Site - 9:00 AM September 21

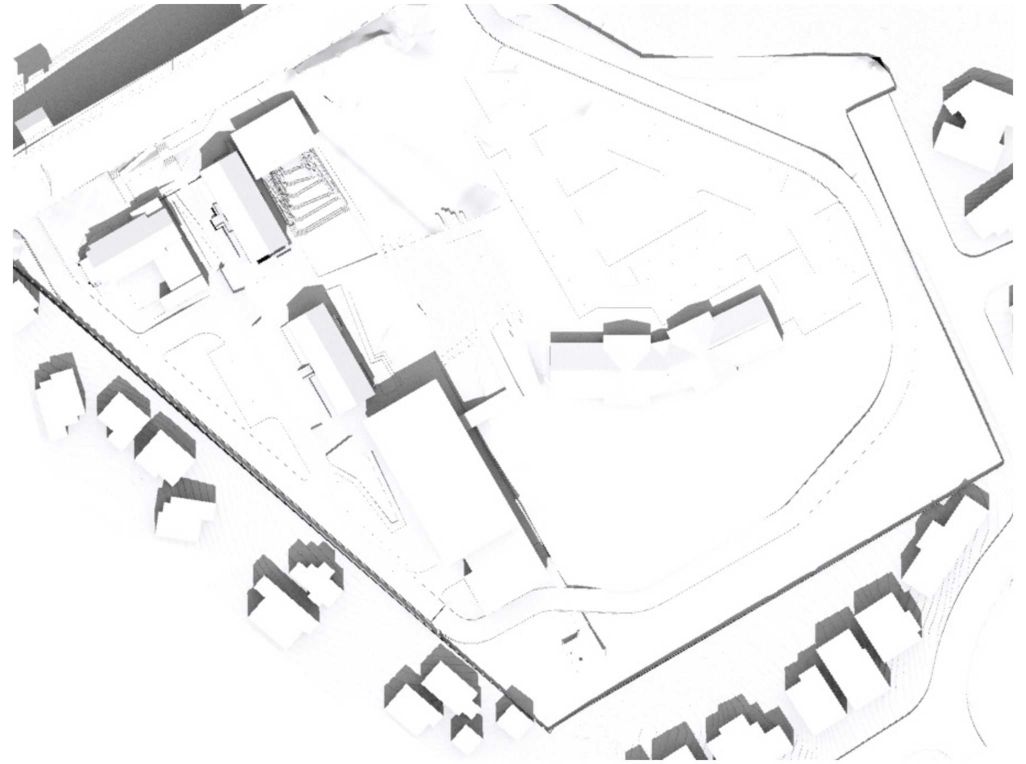
Figure 1.25: Proposed Site - 12:00 PM September 21

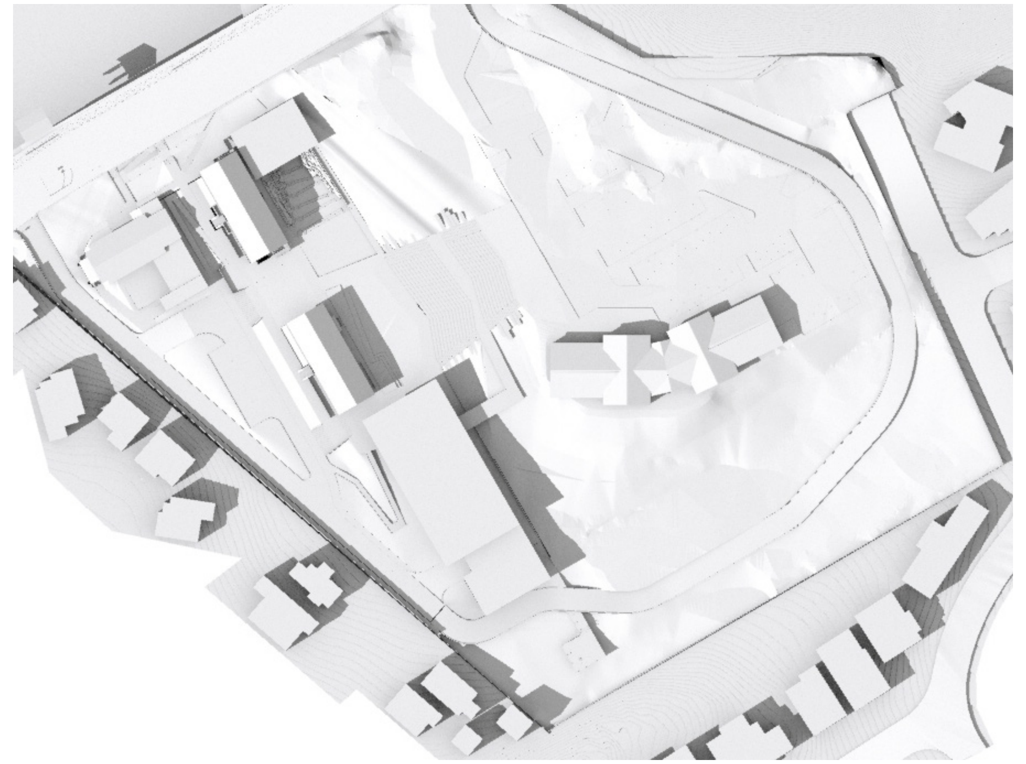
Figure 1.26: Proposed Site - 3:00 PM September 21

Appendix 5

Head-Royce School Expansion-Air Quality and Greenhouse Gas Emissions Assessment

Illingworth & Rodkin, Inc., August 2020

HEAD-ROYCE SCHOOL EXPANSION AIR QUALITY AND GREENHOUSE GAS EMISSIONS ASSESSMENT

Oakland, California

August 6, 2020

Prepared for:

Scott Gregory
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

Prepared by:

Case Divine
James Reyff

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
429 E. Cotati Avenue
Cotati, CA 94931
(707) 794-0400

Project # 19-221

INTRODUCTION

The purpose of this report is to address air quality and greenhouse gas (GHG) impacts associated with the proposed expansion of the Head-Royce School located at located at 4315 Lincoln Avenue in Oakland, California. The air quality impacts would be associated with the demolition of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. Air pollutants and GHG emissions associated with construction and operation of the project were predicted using models. In addition, the potential community risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed sensitive receptors were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

PROJECT DESCRIPTION

The project proposes to integrate the existing Head-Royce School located north of Lincoln Avenue (North Campus) with new facilities located at the site of the former Lincoln Child Center located south of Lincoln Avenue (South Campus) to create a 22-acre K-12 school. The project would connect the two campuses via an underground tunnel below Lincoln Avenue and with at-grade pedestrian crossing across Lincoln Avenue. The project would increase the school population to a maximum enrollment of 1,250 students and 189 faculty and staff, for a total population of 1,439.

No construction or changes in land use are proposed for the North Campus. On the South Campus, the project proposes to demolish eight of the twelve existing buildings totaling approximately 16,500 square feet (sf). The three existing buildings to remain, which are identified as historic resources, would be rehabilitated and re-purposed for classroom and administrative use totaling 27,350-sf. Three additional buildings would be constructed on the South Campus to include a Performing Arts Center, a pavilion, and a maintenance building totaling 18,900-sf. On-street drop-off and pick-up of the Head-Royce School would be moved from Lincoln Avenue and Alida Loop to an internal one-way circulation loop driveway along the perimeter of the South Campus. The project would also include emergency generators, the size of which at this time is unknown, for elevators at the pedestrian tunnel entrance and at the performing arts center.

SETTING

The project site is located in Alameda County, which is within the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone (O_3), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high O_3 levels. Controlling the emissions of these precursor pollutants is the focus of the

[1] Bay Area Quality Management District, 2017. *California Environmental Quality Act Air Quality Guidelines*. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Bay Area's attempts to reduce O_3 levels. The highest O_3 levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High O_3 levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Regulatory Agencies

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[2]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[3] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions.

[2] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.
[3] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[4] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

BAAQMD Rules and Regulations

Combustion equipment associated with the proposed project, which would include emergency generators for elevators at pedestrian tunnel entrance and at the performing arts center, would establish new sources of particulate matter and gaseous emissions. Emissions would primarily result from the testing of the emergency backup generators, operation of the boilers for space and

[4] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

water heating and some minor emissions from cooling towers. The project would also generate emissions from vehicles traveling to and from the project.

Certain emission sources would be subject to BAAQMD Regulations and Rules. The District's rules and regulations that may apply to the project include:

- Regulation 2 – Permits
  - Rule 2-1: General Requirements
  - Rule 2-2: New Source Review
- Regulation 6 – Particulate Matter and Visible Emissions
- Regulation 9 – Inorganic Gaseous Pollutants
  - Rule 9-1: Sulfur Dioxide
  - Rule 9-7: Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, And Process Heaters
  - Rule 9-8: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines

Permits

Rule 2-1-301 requires that any person installing, modifying, or replacing any equipment, the use of which may reduce or control the emission of air contaminants, shall first obtain an Authority to Construct (ATC).

Rule 2-1-302 requires that written authorization from the BAAQMD in the form of a Permit to Operate (PTO) be secured before any such equipment is used or operated.

Rule 2-1 lists sources that are exempt from permitting. At the proposed facility, the diesel fuel storage tanks are expected to be exempt from permitting.

New Source Review

Rule 2-2, New Source Review (NSR), applies to all new and modified sources or facilities that are subject to the requirements of Rule 2-1-301. The purpose of the rule is to provide for review of such sources and to provide mechanisms by which no net increase in emissions will result.

Rule 2-2-301 requires that an applicant for an ATC or PTO apply Best Available Control Technology (BACT) to any new or modified source that results in an increase in emissions and has emissions of precursor organic compounds, non-precursor organic compounds, NOx, SO_2, PM_{10}, or CO of 10.0 pounds or more per highest day. Based on the estimated emissions from the proposed project, BACT will be required for NOx emissions from the diesel-fueled generator engines.

BACT for Diesel Generator Engines

Since the generators will be used exclusively for emergency use during involuntary loss of power, the BACT 2 levels listed for IC compression engines in the BAAQMD BACT Guidelines would apply. The BACT 2 NOx emission factor limit is 6.9 grams per horsepower hour (g/hp-hr). The project's proposed engines will have emissions lower than the BACT 2 level and, as such, will comply with the BACT requirements.

Offsets

Rule 2-2-302 require that offsets be provided for a new or modified source that emits more than 10 tons per year of NOx or precursor organic compounds. It is not expected that emissions of any pollutant will exceed the offset thresholds. Thus, is not expected that offsets for the proposed project would be required.

Prohibitory Rules

Regulation 6 pertains to particulate matter and visible emissions. Although the engines will be fueled with diesel, they will be modern, low emission engines. Thus, the engines are expected to comply with Regulation 6.

Rule 9-1 applies to sulfur dioxide. The engines will use ultra-low sulfur diesel fuel (less than 15 ppm sulfur) and will not be a significant source of sulfur dioxide emissions and are expected to comply with the requirements of Rule 9-1.

Rule 9-7 limits the emissions of NOx CO from industrial, institutional and commercial boilers, steam generators and process heaters. This regulation typically applies to boilers with a heat rating of 2 million British Thermal Units (BTU) per hour

Rule 9-8 prescribes NOx and CO emission limits for stationary internal combustion engines. Since the proposed engines will be used with emergency standby generators, Regulation 9-8-110 exempts the engines from the requirements of this Rule, except for the recordkeeping requirements (9-8-530) and limitations on hours of operation for reliability-related operation (maintenance and testing). The engines will not operate more than 50 hours per year, which will satisfy the requirements of 9-8-111.

Stationary Diesel Airborne Toxic Control Measure

The BAAQMD administers the state's Airborne Toxic Control Measure (ACTM) for Stationary Diesel engines (section 93115, title 17 CA Code of Regulations). The project's stationary sources will be new stationary emergency standby diesel engines larger than 50 hp. Since the engines will have an uncontrolled PM emission factor of less than 0.15 g/hp-hour and operate no more than 50 hours per year, the engines will comply with the requirements of the ACTM.

City of Oakland Standard Conditions of Approval

On November 3, 2008, the Oakland City Council formally adopted the Standard Conditions of Approval (SCA). These Conditions are uniformly applied development standards that mitigate environmental effects. Individual projects are required to adopt these Conditions and are not mitigation. If the Standard Conditions of Approval do not mitigate an environmental effect, then feasible mitigation measures may be considered by the City to reduce the impact to a less-than-significant level.

The following air quality conditions apply to this project.

Dust Controls – Construction Related

Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project:

a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) Limit vehicle speeds on unpaved roads to 15 miles per hour.
e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per house (mph).
f) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel

Enhanced control will not be needed because the project does involve extensive site preparation nor extensive soil transport

Criteria Air Pollutant Controls - Construction Related

Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:

a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off- Road Diesel Regulations").
c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.

d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.

e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.

f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.

Enhanced control will not be needed since the average daily emissions from construction activities will not exceed the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10.

Diesel Particulate Matter Controls-Construction Related

a. Diesel Particulate Matter Reduction Measures

Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose **one** of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.

-or-

ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the

Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

Exposure to Air Pollution (Toxic Air Contaminants)

a. *Health Risk Reduction Measures*

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose **one** of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

\- or -

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
- Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
- Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
- Sensitive receptors shall be located on the upper floors of buildings, if feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted,

including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).

- Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
- Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
  - Installing electrical hook-ups for diesel trucks at loading docks.
  - Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
  - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
  - Prohibiting trucks from idling for more than two minutes.
  - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

b. *Maintenance of Health Risk Reduction Measures*
<u>Requirement:</u> The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

<u>Stationary Sources of Air Pollution (Toxic Air Contaminants)</u>

<u>Requirement:</u> The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose <u>**one**</u> of the following methods:

a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

\- or -

b. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:
   i. Installation of non-diesel fueled generators, if feasible, or;
   ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

Asbestos in Structures

Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. The State has identified the following people who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors are the adjacent single-family residences to the southwest and southeast of the project site. There are more residences with sensitive receptors at farther distances. In addition, there is the KSS Immersion Preschool (2-6 years old), Head-Royce School North Campus (K-12 grades) and Growing Light Montessori Preschool (2-6 years old) near the project site. This project would introduce new sensitive receptors (i.e. students) to the area.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 CEQA Air Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the CEQA Air Quality Guidelines in 2017 to include the latest significance thresholds, which were used in this analysis and are summarized in Table 1.

Table 1. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m³	>0.8 µg/m³	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020)*		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold. The adjusted thresholds are explained in more detail in the GHG discussion.			

AIR QUALITY IMPACTS

Impact AIR-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Emissions Modeling

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. Traffic generated by construction (i.e. off-site construction activities), which included worker trips, vendor deliveries and material hauling trip were computed separately using the CARB EMission FACtors 2017 model (EMFAC2017).[5] The model output from CalEEMod along with construction inputs are included as *Attachment 2*. EMFAC2017 calculations and outputs are included as *Attachment 3.*

Construction Period Emissions

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2. The project was divided into two modeling scenarios; the South Campus portion where the majority of construction for the school expansion, loop road, and parking lot would occur and the Pedestrian Tunnel portion. The construction and operation of both scenarios would occur at the same time.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Acreage
South Campus			
Elementary School	46,250	Square Feet	2.7
Other Asphalt Surfaces*	1.0	Acre	1.0
Parking Lot *	1.3	Acre	1.3
Pedestrian Tunnel			
Other Asphalt Surfaces*	0.1	Acre	0.1

* Based on Google Earth estimates.

[5] See CARB's EMFAC2017 Web Database at https://www.arb.ca.gov/emfac/2017/

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The applicant provided the land use and hauling data for both South Campus and Pedestrian Tunnel portions. The applicant also provided information on how the Pedestrian Tunnel would be constructed using the jacked box method.[6] With that provided information, the two South Campus and Pedestrian Tunnel construction build-out scenarios, including equipment list and schedules, were then based on CalEEMod default information for projects of those types and sizes.

The project applicant estimated that the project construction schedule's earliest possible start date would be April 2021. The CalEEMod default schedule then estimated that the project would be built out over a period of approximately 14 months, or 300 construction workdays, for the South Campus and 5 months / 110 workdays for the Pedestrian Tunnel. The construction equipment worksheet included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase.

Construction Traffic Emissions

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC 2014 motor vehicle emission factor model. This model has been superseded by the EMFAC2017 model; however, CalEEMod has not been updated to include EMFAC2017. Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily rate by the number of days in that phase. Haul trips for building demolition were estimated from the provided demolition square footage. Haul trips for pavement demolition were estimated from the provided demolition acres by assuming each truck could carry 10 tons per load. The number of concrete and asphalt total round haul trips were estimated from the provided and estimated square footage for the project and paved areas and converted to total one-way trips, assuming two trips per delivery.

EMFAC2017 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trucks, including cement trucks, are comprised

[6] McMillen Jacobs Associates, *Head-Royce School Pedestrian Undercrossing Conceptual Design and Constructability Evaluation*, April 23, 2019.

of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips and 20 miles for hauling (demolition material export and soil import/export). Since CalEEMod does not address cement or asphalt trucks, these were treated as vendor travel distances (7.3 miles). Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. Alameda County on road emissions for 2021 and 2022 were used in these calculations. Table 3 provides the traffic inputs that were combined with the EMFAC2017 emission database to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2017 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Daily Worker Rate[1]	Daily Vendor Rate[1]	Total Haul Rate	
Vehicle mix[1]	70.5% LDA 6.9% LDT1 22.6% LDT2	34.4% MHDT 65.6% HHDT	100% HDDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Cement/Asphalt)	Truck Idle Time = 5 minutes
South Campus				
Demolition	300	-	220	16,500-sf of building demolition and 1.5-acres of pavement hauling. CalEEMod worker trips.
Site Preparation	90	-	-	CalEEMod Default
Grading	120	-	713	Total Grading = 5 acres Export = 5,700-cy
Trenching	40	-	-	CalEEMod Default
Building Construction	8,060	3,120	168	18,900-sf new building concrete. CalEEMod worker and vendor trips
Architectural Coating	1,416	-	-	CalEEMod Default
Paving	270	-	202	91,000-sf new asphalt. CalEEMod worker trips
Pedestrian Tunnel				
Site Preparation	5	-	-	CalEEMod Default
Grading	20	-	162	Total Grading = 0.1 acres Export = 1,300-cy
Trenching	10	-	-	CalEEMod Default
Tunnel Construction	200	100	61	6,900-sf new tunnel concrete. CalEEMod worker and vendor trips
Paving	50	-	-	CalEEMod worker trips

Notes: [1] Based on 2021-2022 EMFAC2017 light-duty vehicle fleet mix for Alameda County.
Square feet = sf, Cubic yards = cy

Summary of Computed Construction Period Emissions

Average daily emissions were computed by dividing the total construction emissions by the number of construction workdays. The estimated default construction schedule assumes that the South Campus portion would be built out over a period of approximately 14 months beginning in April 2021, or an estimated 300 construction workdays, assuming 5 construction days per week.

The construction of the Pedestrian Tunnel portion would occur at the same time as the South Campus, beginning in April 2021. Therefore, the Pedestrian Tunnel construction pollutant concentrations were combined with the South Campus portion concentrations, and the total was averaged out over the estimated 300 construction workdays. Table 4 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 4, predicted project emissions would not exceed the BAAQMD significance thresholds.

Table 4. Uncontrolled Project Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Annual Total Construction Emissions (tons)	0.54	2.68	0.14	0.13
Average Daily Emissions (pounds/day)[1]	3.63	17.87	0.93	0.84
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

[1]Assumes 300 workdays.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The project would be required to implement the BAAQMD best management practices to reduce these emissions per the SCAs.

Operational Period Emissions

The CalEEMod model was used to compute operational air emissions from the project. These emissions would be generated primarily from traffic generated from future students/parents, employees, and vendors. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod computed emissions from operation of the proposed project assuming full build-out.

Land Uses

The school expansion project land uses for students uses were used to calculate operational period emissions from the project. The land uses entered into CalEEMod include the following: 356 students entered as “Elementary School”.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. This analysis assumed that the project would be fully built out and operating in the year 2022.

EMFAC2017 Adjustments

The vehicle emission factors and fleet mix used in CalEEMod are based on EMission FACtors from 2014 (EMFAC2014), which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2016.3.2, new emission factors have been produced by CARB. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. It includes the latest data on California's car and truck fleets and travel activity. Additionally, CARB has recently released EMFAC off-model adjustment factors to account for the Safer Affordable Efficient (SAFE) Vehicle Rule Part one.[7,8] The SAFE vehicle Rule Part One revoked California's authority to set its own GHG emission standards and set zero emission vehicle mandates in California. As a result of this ruling, mobile criteria pollutant and GHG emissions would increase. Therefore, the CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2017, which were adjusted with the CARB EMFAC off-model adjustment factors. On-road emission rates for Alameda County, calendar year 2022 were used. More details about the updates in emissions calculation methodologies and data are available in More details about the updates in emissions calculation methodologies and data are available in the EMFAC2017 Technical Support Document.[9]

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific trip generation rates were calculated from the data provided by the traffic consultant and input into the model.[10] The school expansion project would generate 600 daily trips. The daily trip generation was calculated using the size of the project (i.e. number of school expansion students) and the adjusted total automobile trips. The adjusted daily trip rate would be 1.69 daily weekday trips. The Saturday and Sunday trip rates for school land uses are 0. The default trip lengths and trip types specified by CalEEMod were used.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. CalEEMod has a default emission factor of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. PG&E published in 2019 emissions rates for 2010 through 2017, which showed the emission rate for delivered electricity had been reduced to 210 pounds CO2 per megawatt of electricity delivered in the year 2017.[11] This intensity factor was used in CalEEMod.

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[7] California Air Resource Board, 2019. *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. November. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf

[8] California Air Resource Board, 2020. *EMFAC Off-Model Adjustment Factors for Carbon Dioxide ($CO_2$0 Emissions to Accounts for the SAFE Vehicles Rule Part One and the Final SAFE Rule*. June. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf?utm_medium=email&utm_source=govdelivery

[9] See CARB 2018: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac

[10] Fehr & Peers, 2020. *Head-Royce School Expansion – Preliminary Transportation Assessment*. April.

[11] PG&E, 2019. *Corporate Responsibility and Sustainability Report*. Web: http://www.pgecorp.com/corp_responsibility/reports/2019/assets/PGE_CRSR_2019.pdf

Project Generator

The project would include two emergency generators that would be powered by diesel engines. The size of the generators were not known at the time of this study, so an estimated generator size of 150 kilowatts (kW) with a 201 horsepower (HP) engine for both generators was used. The emergency generators would be located at the elevators at pedestrian tunnel entrance and at the performing arts center. These generators would be tested periodically and power the elevators in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. The engine would be required to meet CARB and EPA emission standards and consume commercially available California low-sulfur diesel fuel. The generator emissions were modeled using CalEEMod.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use was changed to 100% aerobic conditions to represent wastewater treatment plant conditions.

Existing Land Uses

The existing land uses on the project site include the Lincoln Child Center. These uses produce low operational and traffic emissions which would not considerably offset emissions from the proposed project. Therefore, the emissions from the existing uses were not considered, nor used to offset proposed project conditions.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimating assuming 365 days of operation. Table 5 shows average daily construction emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

Table 5. Project Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2022 Annual Project Operational Emissions (*tons/year*)	0.33 tons	0.47 tons	0.36 tons	0.10 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	*No*	*No*	*No*	*No*
2022 Daily Project Operational Emissions (*pounds/day*)[1]	1.82 lbs.	2.59 lbs.	1.98 lbs.	0.57 lbs.
BAAQMD Thresholds (pounds/day)	*54* lbs.	*54* lbs.	*82* lbs.	*54* lbs.
Exceed Threshold?	*No*	*No*	*No*	*No*

Notes: [1] Assumes 365-day operation.

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e. on-site construction and truck hauling emissions) and operation (i.e. emergency diesel generators and mobile sources).

Project construction activity would generate temporary dust and equipment exhaust that would affect nearby sensitive receptors. The project would include the installation of emergency generators powered by diesel engines and generate traffic that would have TACs and air pollutants emissions. There are no mobile or stationary sources of existing TACs and localized air pollutants in the vicinity of the project. Therefore, project impacts to existing sensitive receptors were addressed for temporary construction activities and project operation. The impact of the existing sources of TAC was not assessed in terms of the cumulative risk since there are not cumulative sources.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project is the combination of construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generators, and increased traffic generated by the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was assumed with the sensitive receptors being exposed to project construction and operation during this timeframe.

The project increased cancer risk is computed by summing the project construction and operation contribution. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration, and HI values are not additive but based on an annual maximum risk for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the modeling of TAC and $PM_{2.5}$ emissions, dispersion modeling and cancer risk computations.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This include all adjacent existing residences to the north, south, and east of the project site, as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e. infants, children, and adults) with almost continuous exposure to project emissions. Community risks were also computed for nearby children attending the KSS Immersion Preschool, the Head-Royce School North Campus approximately, and the Growing Light Montessori Preschool.

Community Risks from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Although it was concluded in the previous sections (see Table 4) that construction exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations, construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[12] This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

<u>Construction Emissions</u>

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages of 0999 tons (200 pounds) for the South Campus portion and 0.0270 tons (54 pounds) for the Pedestrian Tunnel portion. The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0403 tons (81 pounds) for the South Campus portion and 0.0005 tons (1 pounds) for the Pedestrian Tunnel portion .

<u>Dispersion Modeling</u>

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences, schools) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[13] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions. The AERMOD modeling utilized four area sources to represent the on-site construction emissions, two for exhaust DPM emissions and two for fugitive $PM_{2.5}$ dust emissions. The construction area sources for the Pedestrian Tunnel portion are located where emissions from the jacked box construction method would occur according to the provided pedestrian undercrossing construction evaluation.[14]

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[12] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[13] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[14] McMillen Jacobs Associates, *Head-Royce School Pedestrian Undercrossing Conceptual Design and Constructability Evaluation*, April 23, 2019

To represent the construction equipment exhaust emissions, an emission release height of 20 feet (6 meters) was used for the area sources.[15] The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7:00 a.m. to 4:00 p.m. when the majority of construction activity would occur. Due to terrain elevation differences in the project area, terrain was included in the AERMOD modeling.

The modeling used a 5-year meteorological data set (2013-2017) from the Oakland International Airport prepared for use with the AERMOD model by BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2021-2022 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights on the first and second floors of nearby residences. [16] A receptor height of 3.3 feet (1.0 meter) and 13 feet (4 meters) was used for modeling impacts to children on the first and second floors at the nearby schools.

Summary of Construction Community Risk Impacts

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant and adult exposures were assumed to occur at all residences during the entire construction period. Students at the KSS Immersion Preschool and at the Growing Light Montessori Preschool were assumed to be between the ages of 2 and 6 years old, while students at the Head-Royce School North Campus were assumed to be between the ages of 5 and 18 years old. The child (ages 2 through 16 years old) cancer risk parameters were used to calculate the increased cancer risk for the students.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation refence exposure level of 5 $\mu g/m^3$. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

Figure 1 shows the locations of the maximum-modeled DPM and $PM_{2.5}$ concentrations from construction activities. The maximum concentrations for both TACs occurred on at a single-family residence southeast of the project site along Charleston Street. The maximum increased cancer risk at the location of the maximally exposed individual (MEI) was calculated using the annual

[15] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm
[16] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

modeled DPM concentration and using BAAQMD recommended methods for calculation health risks. The increased cancer risk would exceed the BAAQMD single-source thresholds for community risks. The annual $PM_{2.5}$ concentration and HI value, uncontrolled or with SCAs, would not exceed the BAAQMD single-source thresholds. Table 6 lists the community risks from construction at the MEI without any SCAs (uncontrolled emissions) and with the SCA that assumes all the diesel-powered construction equipment engines are rated Tier 4. With all Tier 4 rated equipment, the construction-related risks and hazards do not exceed the BAAQMD single-source thresholds.

Table 6. Construction Risk Impacts at the Off-site Residential MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction	Uncontrolled	**29.3 (infant)**	0.26	0.03
	w/ SCA	2.4 (infant)	0.04	<0.01
	BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Uncontrolled	***Yes***	*No*	*No*
	w/ SCA	*No*	*No*	*No*

Figure 1. Project Construction Sites, Locations of Off-Site Sensitive Receptors, and Maximum TAC Impacts

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with construction activities at the nearby schools. The maximum increased cancer risks were adjusted using child exposure parameters. The uncontrolled cancer risk, $PM_{2.5}$ concentration, and HI at the nearby schools do not exceed their respective BAAQMD single-source significance thresholds, as shown in Table 7.

Community Risks from Project Operation – Traffic and Generators

Operation of the project would have long-term emissions from mobile sources (i.e. traffic) and stationary sources (i.e. generators). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors.

Project Traffic

An analysis was conducted of the impacts of TACs and $PM_{2.5}$ from the increase in the project's traffic due to the new South Campus Loop Road, Upper School Drop-off area, and Lower/Middle School Drop-off area. The clockwise Loop Road along the perimeter of the South Campus has project traffic entering on Lincoln Avenue on the northeast side of the South Campus, passing the Upper School Drop-off on the east side of South Campus and then the Lower/Middle School Drop-off on the west side of South Campus, and then exiting on the northwest side of the project site on Lincoln Avenue. TAC and $PM_{2.5}$ concentrations were modeled from total project traffic as both the North and South Campuses will be using the roadway and drop-off areas. Figure 2 shows the modeling roadway and drop-off area segments.

Traffic Emissions Modeling

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ roadway emissions in the project area using the California Department of Transportation EMFAC2017 (CT-EMFAC2017) emission factor model, based on the increased project-related traffic volumes contained in the traffic report. The project traffic volumes were based on the predicted project buildout trip generation included in the project's traffic analysis. The project traffic on the Loop Road was estimated to be the total 2,250 daily trips. The project traffic to use the Upper School Drop-off was estimated to be 1,184 daily trips based on the percentage of upper school drop-offs, on-site parking, buses, and other (deliveries/visitors) trips. The project traffic to use the Lower/Middle School Drop-off was estimated to be 1,066 daily trips based on the percentage of lower/middle school drop-offs. The modeling reflects that DPM emissions are projected to decrease in the future as provided in the CT-EMFAC2017 emissions data.

The CT-EMFAC2017 model was used to develop vehicle emission factors using an estimated mix of cars and trucks. The project roads were assumed to carry primarily cars and some trucks and buses. A vehicle mix including 2 percent trucks was estimated. Traffic volumes were assumed to increase one percent per year. Average hourly traffic distributions for the project roadways were estimated based on the hours of operation of the school of the Loop Road and the pick-up/drop-off hours of the Drop-Off areas, which were then applied to the average daily traffic volumes to obtain estimated hourly traffic volumes and emissions for the project roadway sections. Average travel speeds of 15 mph were assumed for the Loop Road and 5 mph were assumed for the Drop-off areas.

Organic TACs that are used for assessing cancer risks from vehicle emissions are those TACs that are emitted from gasoline combustion, based on emissions of total organic gases (TOG). The TOG emissions from gasoline-powered vehicles were computed using the CT-EMFAC2017 model. These TOG emissions were then used in modeling the TACs associated with motor vehicle exhaust emissions and evaporative emissions. TOG emissions from exhaust and for running evaporative loses from gasoline vehicles were calculated using CT-EMFAC2017 default model values for Alameda County along with the traffic volumes, speeds, and vehicle mixes.

$PM_{2.5}$ emissions for vehicles traveling on project area roads were calculated using the same basic approach that was used for assessing TAC emissions. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. The CT-EMFAC2017 model allows for the calculation of all types of $PM_{2.5}$ emissions from all vehicles and was used to calculate the $PM_{2.5}$ emissions.

Project operation was assumed to begin in 2022 or thereafter. To calculate the increased cancer risk from project traffic trips, the community risks were adjusted for exposure duration to account for the MEI being exposed to construction for the first year of the 30-year period. The exposure duration from roadway traffic was adjusted for 29 years of exposure (2022-2050). In order to estimate TAC and $PM_{2.5}$ emissions over the exposure period for calculating increased cancer risks to exiting residents from traffic on the Project Area Roads, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2022. Year 2022 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated (29 years) from the project roadway traffic, since, as discussed above, overall vehicle emissions, and in particular diesel truck emissions will decrease in the future.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the U.S. EPA AERMOD dispersion model, which is recommended by the BAAQMD for this type of analysis. The Loop Road, Upper School Drop-off, and Lower/Middle School Drop-off roads within the project site was evaluated with the model. Emissions from vehicle traffic were modeled in AERMOD using a series of volume sources along a line (line volume sources), with line segments used to represent travel lane on the Loop Road, Upper School Drop-off area, and Lower/Middle School Drop-off area. The modeling used a five-year data set (2013-2017) of hourly meteorological data from the Oakland Airport prepared by the BAAQMD for use with the AERMOD model. Other inputs to the model included road geometry and elevations, hourly traffic emissions, and receptor locations and heights.

Computed Risks and Hazards from Project Traffic

Maximum increased lifetime cancer risks and annual $PM_{2.5}$ concentrations for the receptors were then computed using modeled TAC and $PM_{2.5}$ concentrations and BAAQMD methods and exposure parameters described in *Attachment 1*. The modeled DPM and $PM_{2.5}$ concentrations at the same MEI identified in the construction dispersion modeling (see Figure 2) were used to calculate the community risks. In addition, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with project traffic at the nearby schools. The MEI and nearby school results are listed in Table 7. The emissions and health risk calculations for the proposed project traffic are included in *Attachment 4*.

Operational Emergency Generator Modeling

Operation of a diesel generator would be a source of TAC emissions. As stated above, the project was assumed to include two 150-kW emergency diesel generators with an approximately 201 HP engine. Figure 2 shows the locations of the modeled generator.

This diesel engine would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since it will be equipped with an engine larger than 50 hp. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics (TBACT) and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact.

Dispersion Modeling

To obtain an estimate of potential cancer risks and $PM_{2.5}$ impacts from operation of the emergency generators, the U.S. EPA AERMOD dispersion model was used to calculate the maximum annual DPM concentration at off-site sensitive receptor locations (nearby residences). The same receptors, breathing heights, and meteorological data used in the construction dispersion modeling were used for the generator dispersion model. Stack parameters (stack height, exhaust flow rate, and exhaust gas temperature) for modeling the generators were based on BAAQMD default parameters for emergency generators.[17] Annual average DPM and $PM_{2.5}$ concentrations were modeled assuming that generator testing could occur at any time of the day.

Computed Risks and Hazards from Project Generators

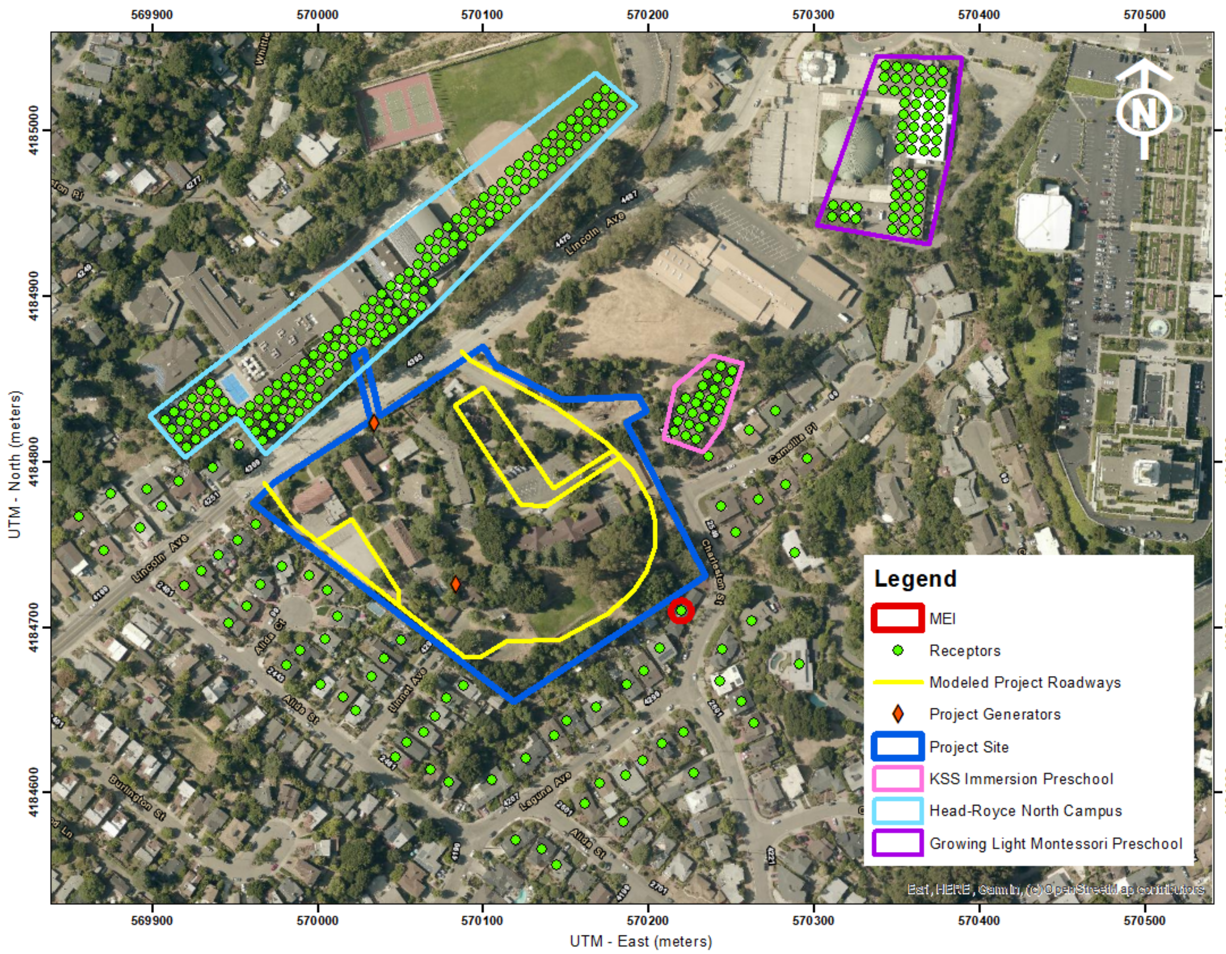
Increased cancer risks from use of the generators were calculated using the modeled maximum annual DPM concentrations and BAAQMD recommended risk assessment methods and parameters described in *Attachment 1*. These methods evaluate cancer risk due to DPM exposure and incorporate age sensitivity factors methods for infant (third trimester to two years of age) and

[17] The San Francisco Community Risk Reduction Plan: Technical Support Document, BAAQMD, San Francisco Dept. of Public Health, and San Francisco Planning Dept., December 2012

children (two years of age to 16 years). The $PM_{2.5}$ concentration and non-cancerous (i.e. Hazard Index) health risk impacts were also calculated.

The modeled DPM and $PM_{2.5}$ concentrations at the construction MEI were used to calculate the risks and hazards. An exposure duration of 29 years was used to calculate the increased cancer risk that the generators would contribute. In addition, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations associated with the project generators at the nearby schools. The MEI and nearby school results are provided in Table 7. The emissions and health risk calculations for the proposed generators are included in *Attachment 4*.

Figure 2. Location of Modeled Project Roadways and Generator, Locations of Off-Site Sensitive Receptors and Maximum TAC Impacts



Summary of Project-Related Community Risks at MEI

The risk impacts from the project is the combination of construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generators, and traffic from the project on new roadways. The project impact is computed by adding the project construction and operation cancer risks over a 30-year period. Unlike the increased cancer risk which is additive of construction and operational impacts, the annual $PM_{2.5}$ concentration and HI risks are based on an annual maximum risk for the entirety of the project. The modeled DPM and fugitive $PM_{2.5}$ concentrations at the project MEI are used to calculate the risks and hazards from the project. The project MEI is identified as the sensitive receptor that is most impacted by both the project's construction and operation.

For this project, the sensitive receptor identified in Figure 1 as the construction MEI is also the project MEI. At this location, the MEI would be exposed to one year of construction cancer risks and 29 years of operational (i.e. emergency backup generators and project traffic) cancer risks. As seen in Table 7, without the SCAs, the maximum cancer risks from construction and operation activities would exceed the BAAQMD single-source significance thresholds. The $PM_{2.5}$ concentration and HI from construction and operation activities would not exceed the BAAQMD single-source significance threshold. However, with the SCA (assuming that all equipment engines are Tier 4), the increased cancer risk value would no longer exceed the BAAQMD single-source significance threshold.

The uncontrolled $PM_{2.5}$ concentration at the most impacted nearby school receptor by the project (KSS Immersion School) would exceed its BAAQMD single-source significance thresholds; however with the SCA (assuming that all equipment engines are Tier 4), the $PM_{2.5}$ concentration would no longer exceed its threshold..

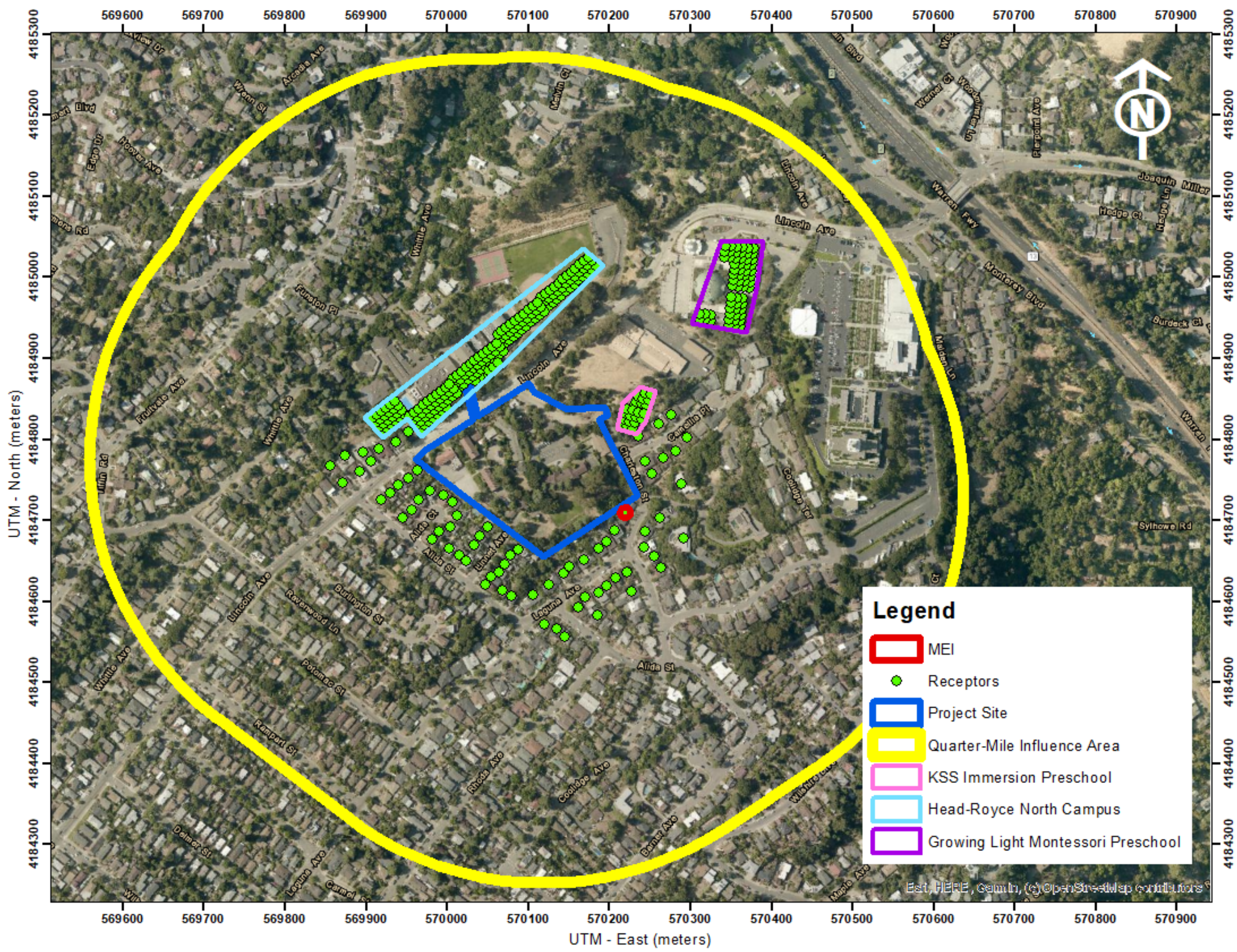
Table 7. Construction and Operation Risk Impacts at the Off-site Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Residential Sensitive Receptor				
Project Construction (Years 0-1)	Uncontrolled	**29.3 (infant)**	0.26	0.03
	w/SCA	2.4 (infant)	0.04	<0.01
Project Traffic (Years 1-30)		0.9	0.14	<0.01
Project Generators (Years 1-30)		4.2	0.01	<0.01
Uncontrolled Total/Maximum Project (Years 0-30)		**34.4**	0.26	0.03
w SCA Total/Maximum Project (Years 0-30)		7.5	0.14	<0.01
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Uncontrolled	***Yes***	*No*	*No*
	w/SCA	*No*	*No*	*No*
Most Impact Nearby School – KSS Immersion Preschool Student Receptor[1]				
Project Construction (Years 0-1)	Uncontrolled	8.4 (child)	0.17	0.02
	w/SCA	0.7 (child)	0.02	<0.01
Project Traffic (Years 1-4)		0.5	0.13	<0.01
Project Generators (Years 1-4)		0.7	0.01	<0.01
Uncontrolled Total/Maximum Project (Years 0-4)		9.6	**0.31**	<0.04
w SCA Total/Maximum Project (Years 0-30)		7.5	0.16	<0.03
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Uncontrolled	*No*	***Yes***	*No*
	w/SCA	*No*	*No*	*No*
Notes: [1]Listed for informational purposes				

Cumulative Community Risks from All TAC Sources at the MEI

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within one quarter mile of a project site (i.e. influence area). These sources include freeways or highways, busy surface streets that have an average daily traffic (ADT) volume that exceeds 10,000 vehicle, and stationary sources identified by BAAQMD. A review of the project area found that traffic on all nearby local roadways would have an ADT of less than 10,000 daily vehicles. In addition, no stationary sources were identified within the one quarter mile influence area on BAAQMD's *Permitted Stationary Sources 2018* GIS website.[18] Therefore, there are no nearby TAC sources with the potential to affect the MEI or project site. Figure 3 shows the project site, MEI, and the one quarter mile influence area.

Figure 3. Project Site, MEI, and One-Quarter Mile Influence Area (No Nearby TAC Sources)



[18] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

Summary of Cumulative Risks at the MEI

Table 8 reports both the project and cumulative community risk impacts. The project's community risk caused by project construction and operation activities would exceed the cancer risk single-source thresholds. The combined annual increased cancer risk, maximum $PM_{2.5}$ concentration, and hazard risk values would not exceed the cumulative threshold. Therefore, the project would not contribute to a cumulative risk impact. The project would be required to implement construction equipment Tier 4 engine requirements to reduce the impacts per the SCAs.

Table 8. Cumulative Community Risk Impacts from All TAC Sources at the MEI

Source	Maximum Cancer Risk (per million)	$PM_{2.5}$ concentration ($\mu g/m^3$)	Hazard Index
Project Impacts			
Uncontrolled Total/Maximum Project (Years 0-30)	**34.4**	0.26	0.03
w SCA Total/Maximum Project (Years 0-30)	7.5	0.14	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold? Uncontrolled w/SCA	***Yes*** *No*	*No* *No*	*No* *No*
Cumulative Sources			
No Cumulative Sources			
Combined Sources Uncontrolled w/SCA	34.4 7.5	0.26 0.14	0.03 <0.01
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold? Uncontrolled w/SCA	*No* *No*	*No* *No*	*No* *No*

Operational Community Health Risk Impacts – New Project Students

In addition to evaluating health impact from the project upon the environment, health risk impacts to new students were considered by considering sources of TAC or $PM_{2.5}$ emissions within a quarter mile of the project site.[19] Within the one-quarter mile influence area, there are no roadways with over 10,000 ADT and no stationary source were identified. There were no sources listed on BAAQMD's *Permitted Stationary Sources 2018* GIS website. A public records request was made to BAAMQD to confirm the non-presence of any stationary sources within the one-quarter mile influence area. BAAQMD confirmed that there were no stationary sources within one-quarter mile from the school project site.[20] Since there are no substantial sources of TACs or air pollutant emissions nearby, a health risk assessment for new students was not necessary to conclude a less than significant impact.

[19] We note that to the extent this analysis considers *existing* air quality issues in relation to the impact on *future residents* of the Project, it does so for informational purposes only pursuant to the judicial decisions in *CBIA v. BAAQMD* (2015) 62 Cal.4th 369, 386 and *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473, which confirm that the impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts.

[20] Correspondence with Eric Chan, BAAQMD, July 14, 2020

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan.*[21] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive

[21] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[22] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic

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[22] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[23]

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[24] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[25] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[26] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

City of Oakland 2030 Equitable Climate Action Plan

The City of Oaklands's 2030 Equitable Climate Action Plan (ECAP) establishes actions that the City and will take by 2030 to equitably reduce Oakland's climate emissions and adapt to a changing climate, including initiatives to reduce GHG emissions. In July 2020, the City adopted the 2030 ECAP with guidelines of reaching a target GHG reduction of 56% below baseline 2005 GHG emissions levels by 2030.[27] This goal is consistent with the statewide GHG reduction goal set forth in AB 32. However, the City's 2030 ECAP does not have a specific metric ton GHG threshold for project-level construction or operation. Therefore, the City's SCA GHG thresholds are used.

City of Oakland Standard Conditions of Approval - GHG

As stated above, the City of Oakland has SCAs that are required for all development projects in Oakland. The GHG conditions are only applied if the project would result in a net increase in GHG emissions which would produce total GHG emissions of more than 1,100 metric tons of CO_2e annually and more than 4.6 metric tons of CO_2e per service population annually and/or the proposed stationary source would produce more than 10,000 MT of CO_2e annually.

[23] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[24] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018*. April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf
[25] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf
[26] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf accessed Nov. 26, 2019.
[27] City of Oakland, City of Oakland *2030 Equitable Climate Action Plan*, July 2020, https://cao-94612.s3.amazonaws.com/documents/Oakland-ECAP-07-24.pdf

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. An analysis of project-level GHG emissions was conducted using the BAAQMD CEQA Air Quality Guidelines. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming the school expansion of the project. The project land use types and size and other project-specific information were input to the model, as described previously for computing operational criteria air pollutant emissions. No proposed sustainability measures were included in the modeling.

Service Population Emissions

The project service population efficiency rate is based on the number of school expansion students. According for provided project information, there would be 356 new students due to the school expansion.

Construction GHG Emissions

GHG emissions associated with mitigated construction were computed to be 454 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the school expansion site under the proposed project. The effects from project-specific sustainability measures were not included in this analysis.

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. As shown in Table 9, annual emissions from the proposed project are predicted to be 450 MT of CO_2e in 2022 and 381 MT of CO_2e in 2030. The service population emissions predicted to be 1.3 in 2022 and 1.1 in 2030. Neither emissions exceed the metric ton threshold or the service population threshold. In addition, the project's generators would only produce 8 MT of CO_2e, which does not exceed the SCA's threshold. Therefore, the project would not be in exceedance for GHG emissions.

Table 9. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2022	Proposed Project in 2030
Area	<0.1	<0.1
Energy Consumption	39	39
Mobile	376	307
Solid Waste Generation	33	33
Water Usage	2	2
Total (MT CO_{2e}/year)	450	381
BAAQMD Significance Threshold	***1,100 MT of CO_2e***	
Service Population Emissions (MT CO_{2e}/year/service population)	1.3	1.1
BAAQMD Significance Threshold	***4.6***	
Exceed Both Thresholds?	*No*	*No*
Stationary Source (Diesel Generators)	8	8
SCA Threshold	***10,000 MT per year***	
Exceed?	*No*	*No*

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute increased cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant. The operational output for 2030 project uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2017 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction and operation. The AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes information showing there were no cumulative sources to analyze in the community risk assessment.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[28] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[29] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[30] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[28] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.
[29] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[30] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^{*} \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	Exposure Type →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day)$^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*

* For worker exposures (adult) the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: **Head-Royce School EIR - South Campus**

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size		Dwelling Units	**5 total project**	**acres disturbed**
		s.f. residential		
		s.f. retail		
		s.f. office/commercial		
	18,900	**s.f. other, specify:**	**new school buildings**	
		s.f. parking garage		spaces
	27,350 sf	**Renovate & Rehab**	**historic rehab for school use**	
		s.f. parking lot		**spaces**
Construction Hours	**7 am**	**to**	**4 pm**	

Pile Driving? Y/N? **N - no pile driving anticipated - maybe have to use drilled piers?**

no pile driving anticipated - maybe have to use drilled piers?

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? ___Yes_

IF YES (if BOTH separate values) --> **emergency generators for elevators - 1 at pedestrian tunnel entrance and one in Performing Arts Center**

Kilowatts/Horsepower: _____??____

Fuel Type: ____________

Location in project (Plans Desired if Available) : **see above**

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	HP hrs	Comments
	Demolition	**Start Date:**	**4/1/2021**	**Total phase:**	**20**				**Overall Import/Export Volumes**
		End Date:	**4/28/2021**						
1	Concrete/Industrial Saws	81	0.73	8	20	8	160	9,461	**Demolition Volume**
3	Excavators	158	0.38	8	20	8	480	28,819	Square footage of buildings to be demolished - **16,500 sf**
2	Rubber-Tired Dozers	247	0.4	8	20	8	320	31,616	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			0	0		_?_ square feet *or*
									_?_ Hauling volume (tons)
									Any pavement demolished and hauled? _?_ tons - **Assume 1.5 acrs of pavement demo and off-haul**
	Site Preparation	**Start Date:**	**4/29/2021**	**Total phase:**	**5**				
		End Date:	**5/5/2021**						
	Graders	187	0.41			0	0	-	
3	Rubber Tired Dozers	247	0.4	8	5	8	120	11,856	
4	Tractors/Loaders/Backhoes	97	0.37	8	5	8	160	5,742	
	Grading / Excavation	**Start Date:**	**5/6/2021**	**Total phase:**	**8**				
		End Date:	**5/17/2021**						**Soil Hauling Volume**
1	Excavators	158	0.38	8	8	8	64	3,843	Export volume = _?_ cubic yards?
1	Graders	187	0.41	8	8	8	64	4,907	Import volume = _?_ cubic yards?
1	Rubber Tired Dozers	247	0.4	8	8	8	64	6,323	**221,000 sf (5 acres) total grading**
	Concrete/Industrial Saws	81	0.73			0	0	-	**5,700 CY off-haul, site grading**
3	Tractors/Loaders/Backhoes	97	0.37	8	8	8	192	6,891	
	Other Equipment?								
	Trenching/Foundation	**Start Date:**	**5/6/2021**	**Total phase:**	**8**				
		End Date:	**5/17/2021**						
1	Tractor/Loader/Backhoe	97	0.37	8	8	8	64	2,297	
1	Excavators	158	0.38	8	8	8	64	3,843	
	Other Equipment?								
	Building - Exterior	**Start Date:**	**5/18/2021**	**Total phase:**	**130**				**Cement Trucks? _Estimated 84_ Total Round-Trips**
		End Date:	**11/15/2021**						
1	Cranes	231	0.29	7	130	7	910	60,961	Electric? (Y/N)___ Otherwise assumed diesel
3	Forklifts	89	0.2	8	130	8	3120	55,536	Liquid Propane (LPG)? (Y/N) ___Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	130	8	1040	64,646	Or temporary line power? (Y/N) ___ **Y - electricy available**
3	Tractors/Loaders/Backhoes	97	0.37	7	130	7	2730	97,980	
1	Welders	46	0.45	8	130	8	1040	21,528	
	Other Equipment?								
	Building - Interior/Architectural Coating	**Start Date:**	**11/16/2021**	**Total phase:**	**118**				
		End Date:	**4/28/2022**						
1	Air Compressors	78	0.48	6	118	6	708	26,508	
	Aerial Lift	62	0.31			0	0	-	
	Other Equipment?								
	Paving	**Start Date:**	**4/29/2022**	**Total phase:**	**18**				
		Start Date:	**5/24/2022**						
	Cement and Mortar Mixers	9	0.56			0	0	-	
2	Pavers	130	0.42	8	18	8	288	15,725	Asphalt? ___ cubic yards or ____ round trips? **Assume 91,000 sf of of new asphalt paving for parking and internal roadways - some will be new and some will be overlay**
2	Paving Equipment	132	0.36	8	18	8	288	13,686	
2	Rollers	80	0.38	8	18	8	288	8,755	
	Tractors/Loaders/Backhoes	97	0.37			0	0	-	
	Other Equipment?								

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Air Quality/Noise Construction Information Data Request

Project Name: **Head-Royce School EIR - Pedestrian Tunnel**

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	____ Dwelling Units	**0.1 acres**	**total project** acres disturbed
	____ s.f. residential		
	____ s.f. retail		
	____ s.f. office/commercial		
	____ **s.f. other, specify:**		
	____ s.f. parking garage	____	spaces
	____ **Renovate & Rehab**	____	
	____ **s.f. parking lot**	____	**spaces**
Construction Hours	7 am to		4 pm

Pile Driving? Y/N? **N - no pile driving anticipated - maybe have to use drilled piers?**

no pile driving anticipated - maybe have to use drilled piers?

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? ___Yes_

IF YES (if BOTH separate values) --> **emergency generators for elevators - 1 at pedestrian tunnel entrance and one in Performing Arts Center**

Kilowatts/Horsepower: _____??____

Fuel Type: ____________

Location in project (Plans Desired if Available) : **see above**

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	HP hrs	Comments
	Demolition	**Start Date:**		**Total phase:**					**Overall Import/Export Volumes**
		End Date:							
	Concrete/Industrial Saws	81	0.73			#DIV/0!	0	-	**Demolition Volume**
	Excavators	158	0.38			#DIV/0!	0	-	Square footage of buildings to be demolished -
	Rubber-Tired Dozers	247	0.4			#DIV/0!	0	-	(*or* total tons to be hauled)
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0		_?_ square feet *or*
									_?_ Hauling volume (tons)
									Any pavement demolished and hauled? _?_ tons -
	Site Preparation	**Start Date:**	**4/1/2021**	**Total phase:**	**1**				
		End Date:	**4/1/2021**						
1	Graders	187	0.41	8	1	8	8	613	
1	Rubber Tired Dozers	247	0.4	8	1	8	8	790	
	Tractors/Loaders/Backhoes	97	0.37			0	0	-	
	Grading / Excavation	**Start Date:**	**4/2/2021**	**Total phase:**	**2**				
		End Date:	**4/5/2021**						**Soil Hauling Volume**
	Excavators	158	0.38			0	0	-	Export volume = _?_ cubic yards?
	Graders	187	0.41			0	0	-	Import volume = _?_ cubic yards?
1	Rubber Tired Dozers	247	0.4	1	2	1	2	198	**0.1 acres total grading**
1	Concrete/Industrial Saws	81	0.73	8	2	8	16	946	**1,300 CY off-haul from tunnel excavation**
2	Tractors/Loaders/Backhoes	97	0.37	6	2	6	24	861	
	Other Equipment?								
	Trenching/Foundation	**Start Date:**	**4/2/2021**	**Total phase:**	**2**				
		End Date:	**4/5/2021**						
1	Tractor/Loader/Backhoe	97	0.37	8	8	32	64	2,297	
1	Excavators	158	0.38	8	8	32	64	3,843	
	Other Equipment?								
	Tunnel Construction	**Start Date:**	**4/6/2021**	**Total phase:**	**100**				**Cement Trucks? _?_ Total Round-Trips**
		End Date:	**8/23/2021**						
	Cranes	231	0.29			0	0	-	Electric? (Y/N)___ Otherwise assumed diesel
	Forklifts	89	0.2			0	0	-	Liquid Propane (LPG)? (Y/N) ___ Otherwise Assumed diesel
1	Generator Sets	84	0.74	8	100	8	800	49,728	Or temporary line power? (Y/N) ___
1	Rubber Tired Loaders	203	0.36	8	100	8	800	58,464	
2	Excavators	158	0.38	8	100	8	1600	96,064	
	Other Equipment?								
Building - Interior/Architectural Coating		**Start Date:**		**Total phase:**					
		End Date:							
	Air Compressors	78	0.48			#DIV/0!	0	-	
	Aerial Lift	62	0.31			#DIV/0!	0	-	
	Other Equipment?								
	Paving	**Start Date:**	**8/24/2021**	**Total phase:**	**5**				
		Start Date:	**8/30/2021**						
4	Cement and Mortar Mixers	9	0.56	6	5	6	120	605	
1	Pavers	130	0.42	7	5	7	35	1,911	Asphalt? ___ cubic yards or ____ round trips?
1	Paving Equipment	132	0.36	7	5	7	35	1,663	
	Rollers	80	0.38			0	0	-	
1	Tractors/Loaders/Backhoes	97	0.37	7	5	7	35	1,256	
	Other Equipment?								

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Table 4: Project Buildout Automobile Trip Generation

Travel Mode	AM Peak Hour (8:00 AM to 9:00 AM)			Afternoon Peak Hour (3:15 PM to 4:15 PM)			Daily Trips
	In	Out	Total	In	Out	Total	
School Population							
Drop offs/Pick-ups	343	343	685	135	135	270	1,540
On-Site Parking	283		283		130	130	580
Private Buses	5	5	10	5	5	10	20
Subtotal	631	348	979	140	270	410	2,140
Others (deliveries, visitors, etc)[1]	32	17	49	7	14	21	110
Total	**663**	**365**	**1,028**	**147**	**284**	**431**	**2,250**

Notes:
1. Assumed to be five percent of the project trips
Source: Fehr & Peers, 2020.

Table 5: Project Trip Generation

Automobile Trips	Morning Peak Hour (8:00 AM to 9:00 AM)			Afternoon Peak Hour (3:15 PM to 4:15 PM)			Daily
	In	Out	Total	In	Out	Total	
Existing[1]	495	263	758	107	216	323	1,650
Buildout[2]	663	365	1,028	147	284	431	2,250
School Expansion Project	**168**	**102**	**270**	**40**	**68**	**108**	**600**

Notes:
1. See Table 3 for details
2. See Table 4 for details
Source: Fehr & Peers, 2020.

Non-Automobile Trip Generation

Consistent with the City of Oakland TIRG, **Table 6** presents the person trip generation estimates for the various travel modes based on the existing mode shares and operating conditions described above.

Head-Royce School, South Campus, Oakland - Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	46.25	1000sqft	2.70	46,250.00	0
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Parking Lot	1.30	Acre	1.30	56,628.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 CO2 rate = 210

Land Use - Provided building sf, acreage estimate from Google Earth site plan overlays

Construction Phase - Provided April 2021 start date, Default construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Default construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Trenching added

Trips and VMT - 0 trips EMFAC2017, 1.5-acres pavement demo = 145 one-way trips + 75 = 220 demo trips, 91,000-sf new asphalt paving = 202 one-way asphlat trips, Assume 168 one-way concrete trips based on proj descrip sf & 1 ft thickness

Demolition - existing building demp = 16,500sf

Grading - 5 acres total grading, grading = 5,700cy export

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	18.00	118.00
tblConstructionPhase	NumDays	230.00	130.00
tblGrading	AcresOfGrading	4.00	5.00
tblGrading	MaterialExported	0.00	5,700.00
tblLandUse	LotAcreage	1.06	2.70
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblTripsAndVMT	HaulingTripNumber	75.00	0.00
tblTripsAndVMT	HaulingTripNumber	713.00	0.00
tblTripsAndVMT	VendorTripNumber	24.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	62.00	0.00
tblTripsAndVMT	WorkerTripNumber	12.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2021	0.2550	1.6898	1.4624	2.4400e-003	0.0804	0.0900	0.1704	0.0396	0.0844	0.1240	0.0000	210.5929	210.5929	0.0532	0.0000	211.9231
2022	0.2081	0.1593	0.2074	3.3000e-004	0.0000	8.5400e-003	8.5400e-003	0.0000	8.1300e-003	8.1300e-003	0.0000	28.7485	28.7485	6.5300e-003	0.0000	28.9117
Maximum	**0.2550**	**1.6898**	**1.4624**	**2.4400e-003**	**0.0804**	**0.0900**	**0.1704**	**0.0396**	**0.0844**	**0.1240**	**0.0000**	**210.5929**	**210.5929**	**0.0532**	**0.0000**	**211.9231**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1213	0.9491	1.5981	2.4400e-003	0.0362	6.5900e-003	0.0427	8.9200e-003	6.5900e-003	0.0155	0.0000	210.5927	210.5927	0.0532	0.0000	211.9228
2022	0.1949	0.1349	0.2326	3.3000e-004	0.0000	5.0000e-004	5.0000e-004	0.0000	5.0000e-004	5.0000e-004	0.0000	28.7484	28.7484	6.5300e-003	0.0000	28.9116
Maximum	**0.1949**	**0.9491**	**1.5981**	**2.4400e-003**	**0.0362**	**6.5900e-003**	**0.0427**	**8.9200e-003**	**6.5900e-003**	**0.0155**	**0.0000**	**210.5927**	**210.5927**	**0.0532**	**0.0000**	**211.9228**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**31.72**	**41.38**	**-9.64**	**0.00**	**55.00**	**92.81**	**75.83**	**77.49**	**92.33**	**87.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**4-1-2021**	**6-30-2021**	0.8958	0.4161
2	**7-1-2021**	**9-30-2021**	0.6352	0.3761
3	**10-1-2021**	**12-31-2021**	0.4193	0.2793
4	**1-1-2022**	**3-31-2022**	0.1946	0.1786
5	**4-1-2022**	**6-30-2022**	0.1772	0.1550
		Highest	0.8958	0.4161

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2021	4/28/2021	5	20	
2	Site Preparation	Site Preparation	4/29/2021	5/5/2021	5	5	
3	Grading	Grading	5/6/2021	5/17/2021	5	8	
4	Trenching	Trenching	5/6/2021	5/17/2021	5	8	
5	Building Construction	Building Construction	5/18/2021	11/15/2021	5	130	
6	Architectural Coating	Architectural Coating	11/16/2021	4/28/2022	5	118	
7	Paving	Paving	4/29/2022	5/24/2022	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 2.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 69,375; Non-Residential Outdoor: 23,125; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.1200e-003	0.0000	8.1200e-003	1.2300e-003	0.0000	1.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**8.1200e-003**	**0.0155**	**0.0236**	**1.2300e-003**	**0.0144**	**0.0156**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					3.6500e-003	0.0000	3.6500e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8400e-003	0.1356	0.2467	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**5.8400e-003**	**0.1356**	**0.2467**	**3.9000e-004**	**3.6500e-003**	**6.2000e-004**	**4.2700e-003**	**2.8000e-004**	**6.2000e-004**	**9.0000e-004**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1012	0.0529	1.0000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**9.7200e-003**	**0.1012**	**0.0529**	**1.0000e-004**	**0.0452**	**5.1100e-003**	**0.0503**	**0.0248**	**4.7000e-003**	**0.0295**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0203	0.0000	0.0203	5.5900e-003	0.0000	5.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7400e-003	0.0304	0.0574	1.0000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3589	8.3589	2.7000e-003	0.0000	8.4265
Total	**1.7400e-003**	**0.0304**	**0.0574**	**1.0000e-004**	**0.0203**	**1.6000e-004**	**0.0205**	**5.5900e-003**	**1.6000e-004**	**5.7500e-003**	**0.0000**	**8.3589**	**8.3589**	**2.7000e-003**	**0.0000**	**8.4265**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0271	0.0000	0.0271	0.0136	0.0000	0.0136	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.0990	0.0634	1.2000e-004		4.6400e-003	4.6400e-003		4.2700e-003	4.2700e-003	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**9.1600e-003**	**0.0990**	**0.0634**	**1.2000e-004**	**0.0271**	**4.6400e-003**	**0.0317**	**0.0136**	**4.2700e-003**	**0.0179**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	3.0500e-003	0.0000	3.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0800e-003	0.0413	0.0760	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.4215	10.4215	3.3700e-003	0.0000	10.5057
Total	**2.0800e-003**	**0.0413**	**0.0760**	**1.2000e-004**	**0.0122**	**1.9000e-004**	**0.0124**	**3.0500e-003**	**1.9000e-004**	**3.2400e-003**	**0.0000**	**10.4215**	**10.4215**	**3.3700e-003**	**0.0000**	**10.5057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	0.0162	0.0221	3.0000e-005		8.6000e-004	8.6000e-004		8.0000e-004	8.0000e-004	0.0000	2.9070	2.9070	9.4000e-004	0.0000	2.9305
Total	**1.6700e-003**	**0.0162**	**0.0221**	**3.0000e-005**		**8.6000e-004**	**8.6000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**2.9070**	**2.9070**	**9.4000e-004**	**0.0000**	**2.9305**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3000e-004	0.0145	0.0250	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.9070	2.9070	9.4000e-004	0.0000	2.9305
Total	**5.3000e-004**	**0.0145**	**0.0250**	**3.0000e-005**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**2.9070**	**2.9070**	**9.4000e-004**	**0.0000**	**2.9305**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1236	1.1331	1.0774	1.7500e-003		0.0623	0.0623		0.0586	0.0586	0.0000	150.5642	150.5642	0.0363	0.0000	151.4723

Total	**0.1236**	**1.1331**	**1.0774**	**1.7500e-003**		**0.0623**	**0.0623**		**0.0586**	**0.0586**	**0.0000**	**150.5642**	**150.5642**	**0.0363**	**0.0000**	**151.4723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0347	0.7093	1.1618	1.7500e-003		5.5000e-003	5.5000e-003		5.5000e-003	5.5000e-003	0.0000	150.5641	150.5641	0.0363	0.0000	151.4722
Total	**0.0347**	**0.7093**	**1.1618**	**1.7500e-003**		**5.5000e-003**	**5.5000e-003**		**5.5000e-003**	**5.5000e-003**	**0.0000**	**150.5641**	**150.5641**	**0.0363**	**0.0000**	**151.4722**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7200e-003	0.0260	0.0309	5.0000e-005		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	4.3405	4.3405	3.0000e-004	0.0000	4.3480
Total	**0.0792**	**0.0260**	**0.0309**	**5.0000e-005**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**4.3405**	**4.3405**	**3.0000e-004**	**0.0000**	**4.3480**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.3000e-004	0.0180	0.0312	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.3405	4.3405	3.0000e-004	0.0000	4.3480
Total	**0.0764**	**0.0180**	**0.0312**	**5.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.3405**	**4.3405**	**3.0000e-004**	**0.0000**	**4.3480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5900e-003	0.0592	0.0762	1.2000e-004		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	10.7237	10.7237	7.0000e-004	0.0000	10.7411
Total	**0.1951**	**0.0592**	**0.0762**	**1.2000e-004**		**3.4300e-003**	**3.4300e-003**		**3.4300e-003**	**3.4300e-003**	**0.0000**	**10.7237**	**10.7237**	**7.0000e-004**	**0.0000**	**10.7411**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2900e-003	0.0445	0.0770	1.2000e-004		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	10.7237	10.7237	7.0000e-004	0.0000	10.7411
Total	**0.1888**	**0.0445**	**0.0770**	**1.2000e-004**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**10.7237**	**10.7237**	**7.0000e-004**	**0.0000**	**10.7411**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr									MT/yr					
Off-Road	9.9300e-003	0.1001	0.1312	2.1000e-004		5.1100e-003	5.1100e-003		4.7000e-003	4.7000e-003	0.0000	18.0248	18.0248	5.8300e-003	0.0000	18.1705
Paving	3.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0129**	**0.1001**	**0.1312**	**2.1000e-004**		**5.1100e-003**	**5.1100e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**18.0248**	**18.0248**	**5.8300e-003**	**0.0000**	**18.1705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0100e-003	0.0904	0.1557	2.1000e-004		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	18.0248	18.0248	5.8300e-003	0.0000	18.1705
Paving	3.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**6.0200e-003**	**0.0904**	**0.1557**	**2.1000e-004**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**18.0248**	**18.0248**	**5.8300e-003**	**0.0000**	**18.1705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Head-Royce School, Pedestrian Tunnel, Oakland - Construction
Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.10	Acre	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization Urban

Wind Speed (m/s) 2.2

Precipitation Freq (Days) 63

Climate Zone 5

Operational Year 2022

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 210

CH4 Intensity (lb/MWhr) 0.029

N2O Intensity (lb/MWhr) 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 CO2 rate = 210

Land Use - acreage estimate from Google Earth site plan overlays

Construction Phase - Default construction schedule, No Demo or Arch Interior, Trenching added

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Default construction equip & hours

Off-road Equipment - Trenching added

Off-road Equipment - No Cranes or forklifts, excavator, generator, and rubber tired loader added

Trips and VMT - 0 trips EMFAC2017, estimated 6,900-sf (3,450-sf * 2-ft thick) tunnel conrete = 61 one-way concrete trips

Demolition -

Grading - 0.1-acres total grading, grading = 1,300cy export

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblGrading	AcresOfGrading	0.00	0.10
tblGrading	MaterialExported	0.00	1,300.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblTripsAndVMT	HaulingTripNumber	163.00	0.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	2.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0614	0.5988	0.6242	1.2100e-003	1.1400e-003	0.0269	0.0281	4.6000e-004	0.0255	0.0259	0.0000	105.6330	105.6330	0.0263	0.0000	106.2892
Maximum	**0.0614**	**0.5988**	**0.6242**	**1.2100e-003**	**1.1400e-003**	**0.0269**	**0.0281**	**4.6000e-004**	**0.0255**	**0.0259**	**0.0000**	**105.6330**	**105.6330**	**0.0263**	**0.0000**	**106.2892**

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2021	0.0185	0.4478	0.7966	1.2100e-003	5.1000e-004	1.8800e-003	2.3900e-003	1.0000e-004	1.8800e-003	1.9800e-003	0.0000	105.6328	105.6328	0.0263	0.0000	106.2890
Maximum	**0.0185**	**0.4478**	**0.7966**	**1.2100e-003**	**5.1000e-004**	**1.8800e-003**	**2.3900e-003**	**1.0000e-004**	**1.8800e-003**	**1.9800e-003**	**0.0000**	**105.6328**	**105.6328**	**0.0263**	**0.0000**	**106.2890**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**69.81**	**25.22**	**-27.61**	**0.00**	**55.26**	**93.02**	**91.49**	**78.26**	**92.62**	**92.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2021**	**6-30-2021**	0.4047	0.2871
2	**7-1-2021**	**9-30-2021**	0.2597	0.1824
		Highest	0.4047	0.2871

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2021	4/1/2021	5	1	
2	Grading	Grading	4/2/2021	4/5/2021	5	2	
3	Trenching	Trenching	4/2/2021	4/5/2021	5	2	
4	Tunnel Construction	Building Construction	4/6/2021	8/23/2021	5	100	
5	Paving	Paving	8/24/2021	8/30/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.1

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Tunnel Construction	Cranes	0	0.00	231	0.29
Tunnel Construction	Excavators	2	8.00	158	0.38
Tunnel Construction	Forklifts	0	0.00	89	0.20
Tunnel Construction	Generator Sets	1	8.00	84	0.74
Tunnel Construction	Rubber Tired Loaders	1	8.00	203	0.36
Tunnel Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Tunnel Construction	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**3.2000e-004**	**3.9100e-003**	**2.0100e-003**	**0.0000**	**2.7000e-004**	**1.5000e-004**	**4.2000e-004**	**3.0000e-005**	**1.4000e-004**	**1.7000e-004**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-005	1.5500e-003	2.9300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**9.0000e-005**	**1.5500e-003**	**2.9300e-003**	**0.0000**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**1.0000e-005**	**1.0000e-005**	**2.0000e-005**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Grading - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					8.8000e-004	0.0000	8.8000e-004	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	7.2500e-003	7.5700e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.9000e-004	3.9000e-004	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	**8.0000e-004**	**7.2500e-003**	**7.5700e-003**	**1.0000e-005**	**8.8000e-004**	**4.1000e-004**	**1.2900e-003**	**4.3000e-004**	**3.9000e-004**	**8.2000e-004**	**0.0000**	**1.0409**	**1.0409**	**1.9000e-004**	**0.0000**	**1.0458**

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					4.0000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4000e-004	4.5400e-003	7.9400e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.0409	1.0409	1.9000e-004	0.0000	1.0458
Total	**2.4000e-004**	**4.5400e-003**	**7.9400e-003**	**1.0000e-005**	**4.0000e-004**	**2.0000e-005**	**4.2000e-004**	**1.0000e-004**	**2.0000e-005**	**1.2000e-004**	**0.0000**	**1.0409**	**1.0409**	**1.9000e-004**	**0.0000**	**1.0458**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Trenching - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	4.2000e-004	4.0500e-003	5.5300e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.0000e-004	2.0000e-004	0.0000	0.7267	0.7267	2.4000e-004	0.0000	0.7326

Total	**4.2000e-004**	**4.0500e-003**	**5.5300e-003**	**1.0000e-005**		**2.2000e-004**	**2.2000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.7267**	**0.7267**	**2.4000e-004**	**0.0000**	**0.7326**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3000e-004	3.6300e-003	6.2600e-003	1.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.7267	0.7267	2.4000e-004	0.0000	0.7326
Total	**1.3000e-004**	**3.6300e-003**	**6.2600e-003**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.7267**	**0.7267**	**2.4000e-004**	**0.0000**	**0.7326**

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Tunnel Construction - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0579	0.5668	0.5914	1.1600e-003		0.0253	0.0253		0.0239	0.0239	0.0000	101.0896	101.0896	0.0250	0.0000	101.7145
Total	**0.0579**	**0.5668**	**0.5914**	**1.1600e-003**		**0.0253**	**0.0253**		**0.0239**	**0.0239**	**0.0000**	**101.0896**	**101.0896**	**0.0250**	**0.0000**	**101.7145**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0175	0.4281	0.7622	1.1600e-003		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	101.0895	101.0895	0.0250	0.0000	101.7144
Total	**0.0175**	**0.4281**	**0.7622**	**1.1600e-003**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**101.0895**	**101.0895**	**0.0250**	**0.0000**	**101.7144**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8000e-003	0.0168	0.0177	3.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9300e-003**	**0.0168**	**0.0177**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.1000e-004	0.0100	0.0173	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.3481	2.3481	6.8000e-004	0.0000	2.3652
Paving	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4000e-004**	**0.0100**	**0.0173**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.3481**	**2.3481**	**6.8000e-004**	**0.0000**	**2.3652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Head-Royce School, Oakland - Operation
Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	356.00	Student	5.10	29,762.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 CO2 rate = 210

Land Use - School expansion student enrollment

Construction Phase - Operational run no construction

Off-road Equipment - Op run

Trips and VMT - op run

Grading -

Vehicle Trips - school = 1.69

Vehicle Emission Factors - EMFAC2017

Water And Wastewater - WWTP 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - two 150-kw genergators with 201-hp engines

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblFleetMix	HHD	0.05	0.04
tblFleetMix	LDA	0.56	0.56
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.2020e-003	5.1449e-003
tblFleetMix	MCY	5.5240e-003	5.5228e-003
tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	7.2100e-004	6.7259e-004
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	2.1840e-003	1.3488e-003
tblFleetMix	SBUS	3.2600e-004	3.2113e-004
tblFleetMix	UBUS	2.5610e-003	1.8230e-003
tblLandUse	LotAcreage	0.68	5.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.86	0.02
tblVehicleEF	HHD	0.04	0.03

tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.57	6.25
tblVehicleEF	HHD	0.87	0.46
tblVehicleEF	HHD	2.04	4.7170e-003
tblVehicleEF	HHD	4,967.46	1,147.77
tblVehicleEF	HHD	1,608.42	1,465.86
tblVehicleEF	HHD	6.35	0.05
tblVehicleEF	HHD	20.78	6.00
tblVehicleEF	HHD	3.57	3.38
tblVehicleEF	HHD	20.10	2.01
tblVehicleEF	HHD	0.02	3.0840e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	2.9500e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.9210e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	2.8850e-003	9.7000e-005
tblVehicleEF	HHD	0.66	0.45
tblVehicleEF	HHD	3.3000e-005	1.0000e-006
tblVehicleEF	HHD	0.13	0.08
tblVehicleEF	HHD	2.2900e-004	5.8900e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	9.7000e-005	1.0000e-006

tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	2.8850e-003	9.7000e-005
tblVehicleEF	HHD	0.76	0.52
tblVehicleEF	HHD	3.3000e-005	1.0000e-006
tblVehicleEF	HHD	0.19	0.12
tblVehicleEF	HHD	2.2900e-004	5.8900e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	LDA	4.3240e-003	2.4280e-003
tblVehicleEF	LDA	6.5290e-003	0.06
tblVehicleEF	LDA	0.57	0.61
tblVehicleEF	LDA	1.39	2.31
tblVehicleEF	LDA	255.47	255.31
tblVehicleEF	LDA	58.35	53.97
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.20
tblVehicleEF	LDA	1.7910e-003	1.5200e-003
tblVehicleEF	LDA	2.2700e-003	1.8320e-003
tblVehicleEF	LDA	1.6520e-003	1.4020e-003
tblVehicleEF	LDA	2.0870e-003	1.6850e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.6370e-003
tblVehicleEF	LDA	0.04	0.23
tblVehicleEF	LDA	0.09	0.25
tblVehicleEF	LDA	2.5580e-003	9.0000e-005
tblVehicleEF	LDA	6.0700e-004	0.00
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.03	0.04

tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.23
tblVehicleEF	LDA	0.10	0.28
tblVehicleEF	LDT1	9.1870e-003	4.9480e-003
tblVehicleEF	LDT1	0.01	0.08
tblVehicleEF	LDT1	1.11	1.04
tblVehicleEF	LDT1	3.00	2.54
tblVehicleEF	LDT1	311.65	304.08
tblVehicleEF	LDT1	71.11	65.08
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.17	0.27
tblVehicleEF	LDT1	2.3980e-003	1.9610e-003
tblVehicleEF	LDT1	3.2210e-003	2.4900e-003
tblVehicleEF	LDT1	2.2090e-003	1.8050e-003
tblVehicleEF	LDT1	2.9620e-003	2.2890e-003
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.16	0.70
tblVehicleEF	LDT1	0.20	0.38
tblVehicleEF	LDT1	3.1290e-003	2.4410e-003
tblVehicleEF	LDT1	7.6400e-004	0.00
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.70
tblVehicleEF	LDT1	0.22	0.42
tblVehicleEF	LDT2	5.5110e-003	3.5880e-003

tblVehicleEF	LDT2	7.7820e-003	0.07
tblVehicleEF	LDT2	0.70	0.81
tblVehicleEF	LDT2	1.67	2.96
tblVehicleEF	LDT2	352.34	329.02
tblVehicleEF	LDT2	80.36	70.88
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.13	0.31
tblVehicleEF	LDT2	1.7140e-003	1.4900e-003
tblVehicleEF	LDT2	2.2830e-003	1.8160e-003
tblVehicleEF	LDT2	1.5770e-003	1.3720e-003
tblVehicleEF	LDT2	2.0990e-003	1.6700e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.10	0.35
tblVehicleEF	LDT2	3.5280e-003	0.01
tblVehicleEF	LDT2	8.3200e-004	7.1000e-005
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.6730e-003	5.5500e-003
tblVehicleEF	LHD1	0.02	9.7790e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.19
tblVehicleEF	LHD1	1.16	0.88

tblVehicleEF	LHD1	2.80	1.16
tblVehicleEF	LHD1	9.01	9.01
tblVehicleEF	LHD1	702.72	821.38
tblVehicleEF	LHD1	33.47	12.50
tblVehicleEF	LHD1	0.07	0.06
tblVehicleEF	LHD1	1.37	0.85
tblVehicleEF	LHD1	1.08	0.36
tblVehicleEF	LHD1	8.7100e-004	7.7500e-004
tblVehicleEF	LHD1	9.9820e-003	9.6360e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	9.8800e-004	2.7300e-004
tblVehicleEF	LHD1	8.3300e-004	7.4100e-004
tblVehicleEF	LHD1	2.4960e-003	2.4090e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	9.0800e-004	2.5100e-004
tblVehicleEF	LHD1	2.4100e-003	1.9500e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.3680e-003	1.1020e-003
tblVehicleEF	LHD1	0.13	0.10
tblVehicleEF	LHD1	0.31	0.58
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.0000e-005	8.8000e-005
tblVehicleEF	LHD1	6.9060e-003	8.0290e-003
tblVehicleEF	LHD1	3.8700e-004	1.2400e-004
tblVehicleEF	LHD1	2.4100e-003	1.9500e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.3680e-003	1.1020e-003
tblVehicleEF	LHD1	0.16	0.12

tblVehicleEF	LHD1	0.31	0.58
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.8350e-003	3.8550e-003
tblVehicleEF	LHD2	8.8620e-003	7.6780e-003
tblVehicleEF	LHD2	8.5590e-003	0.01
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.62	0.67
tblVehicleEF	LHD2	1.36	0.77
tblVehicleEF	LHD2	13.87	13.67
tblVehicleEF	LHD2	722.15	813.85
tblVehicleEF	LHD2	26.48	9.48
tblVehicleEF	LHD2	0.10	0.09
tblVehicleEF	LHD2	0.91	0.97
tblVehicleEF	LHD2	0.55	0.24
tblVehicleEF	LHD2	1.2220e-003	1.2690e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	4.4200e-004	1.5300e-004
tblVehicleEF	LHD2	1.1690e-003	1.2140e-003
tblVehicleEF	LHD2	2.6660e-003	2.6310e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0700e-004	1.4100e-004
tblVehicleEF	LHD2	8.8700e-004	1.1660e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	5.2600e-004	6.6400e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.3600e-004	1.3100e-004

tblVehicleEF	LHD2	7.0320e-003	7.8830e-003
tblVehicleEF	LHD2	2.9000e-004	9.4000e-005
tblVehicleEF	LHD2	8.8700e-004	1.1660e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.2600e-004	6.6400e-004
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	0.08	0.35
tblVehicleEF	LHD2	0.13	0.06
tblVehicleEF	MCY	0.46	0.35
tblVehicleEF	MCY	0.17	0.26
tblVehicleEF	MCY	20.42	20.54
tblVehicleEF	MCY	10.22	9.07
tblVehicleEF	MCY	174.21	215.58
tblVehicleEF	MCY	46.30	62.20
tblVehicleEF	MCY	1.17	1.17
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.1040e-003	2.0420e-003
tblVehicleEF	MCY	4.2280e-003	3.3520e-003
tblVehicleEF	MCY	1.9700e-003	1.9110e-003
tblVehicleEF	MCY	3.9930e-003	3.1620e-003
tblVehicleEF	MCY	0.81	1.62
tblVehicleEF	MCY	0.76	0.74
tblVehicleEF	MCY	0.51	1.01
tblVehicleEF	MCY	2.36	2.36
tblVehicleEF	MCY	0.62	2.28
tblVehicleEF	MCY	2.28	2.01
tblVehicleEF	MCY	2.1450e-003	2.1330e-003
tblVehicleEF	MCY	6.9700e-004	6.1600e-004
tblVehicleEF	MCY	0.81	1.62

tblVehicleEF	MCY	0.76	0.74
tblVehicleEF	MCY	0.51	1.01
tblVehicleEF	MCY	2.90	2.91
tblVehicleEF	MCY	0.62	2.28
tblVehicleEF	MCY	2.48	2.18
tblVehicleEF	MDV	0.01	4.4190e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.14	0.91
tblVehicleEF	MDV	3.20	3.45
tblVehicleEF	MDV	472.54	396.32
tblVehicleEF	MDV	105.77	85.19
tblVehicleEF	MDV	0.15	0.09
tblVehicleEF	MDV	0.28	0.38
tblVehicleEF	MDV	1.9190e-003	1.6500e-003
tblVehicleEF	MDV	2.5710e-003	2.0670e-003
tblVehicleEF	MDV	1.7690e-003	1.5210e-003
tblVehicleEF	MDV	2.3650e-003	1.9010e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.49
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.7320e-003	3.9180e-003
tblVehicleEF	MDV	1.1140e-003	8.4300e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.18	0.15
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.10	0.49

tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	2.65	1.34
tblVehicleEF	MH	6.49	2.29
tblVehicleEF	MH	1,219.82	1,563.71
tblVehicleEF	MH	60.04	19.58
tblVehicleEF	MH	1.40	1.33
tblVehicleEF	MH	0.91	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.2500e-003	2.9700e-004
tblVehicleEF	MH	3.2100e-003	3.2550e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.1490e-003	2.7300e-004
tblVehicleEF	MH	0.83	0.68
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.32	0.26
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.02	1.57
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	7.1300e-004	1.9400e-004
tblVehicleEF	MH	0.83	0.68
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.32	0.26
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.02	1.57
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	2.7670e-003

tblVehicleEF	MHD	4.7870e-003	4.7820e-003
tblVehicleEF	MHD	0.05	7.3840e-003
tblVehicleEF	MHD	0.32	0.35
tblVehicleEF	MHD	0.37	0.41
tblVehicleEF	MHD	5.15	0.89
tblVehicleEF	MHD	169.15	76.17
tblVehicleEF	MHD	1,195.75	1,096.17
tblVehicleEF	MHD	47.05	7.18
tblVehicleEF	MHD	0.67	0.56
tblVehicleEF	MHD	1.53	1.98
tblVehicleEF	MHD	12.89	1.49
tblVehicleEF	MHD	8.5400e-004	1.1190e-003
tblVehicleEF	MHD	6.2670e-003	0.03
tblVehicleEF	MHD	7.0400e-004	8.3000e-005
tblVehicleEF	MHD	8.1700e-004	1.0710e-003
tblVehicleEF	MHD	5.9920e-003	0.03
tblVehicleEF	MHD	6.4700e-004	7.7000e-005
tblVehicleEF	MHD	7.3800e-004	2.9600e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2200e-004	1.7000e-004
tblVehicleEF	MHD	0.06	0.08
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.31	0.04
tblVehicleEF	MHD	1.6230e-003	7.2200e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.6100e-004	7.1000e-005
tblVehicleEF	MHD	7.3800e-004	2.9600e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.02

tblVehicleEF	MHD	4.2200e-004	1.7000e-004
tblVehicleEF	MHD	0.07	0.10
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.34	0.04
tblVehicleEF	OBUS	0.01	8.6420e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.56
tblVehicleEF	OBUS	0.67	1.04
tblVehicleEF	OBUS	6.12	2.60
tblVehicleEF	OBUS	118.83	85.85
tblVehicleEF	OBUS	1,308.17	1,506.41
tblVehicleEF	OBUS	66.40	20.17
tblVehicleEF	OBUS	0.55	0.41
tblVehicleEF	OBUS	1.75	1.65
tblVehicleEF	OBUS	3.17	0.71
tblVehicleEF	OBUS	1.2300e-004	7.6700e-004
tblVehicleEF	OBUS	7.5980e-003	0.02
tblVehicleEF	OBUS	8.4400e-004	1.9400e-004
tblVehicleEF	OBUS	1.1700e-004	7.3400e-004
tblVehicleEF	OBUS	7.2500e-003	0.02
tblVehicleEF	OBUS	7.7600e-004	1.7900e-004
tblVehicleEF	OBUS	1.2440e-003	1.4680e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	5.7600e-004	6.8600e-004
tblVehicleEF	OBUS	0.08	0.09
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	1.1450e-003	8.1700e-004

tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.7100e-004	2.0000e-004
tblVehicleEF	OBUS	1.2440e-003	1.4680e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	5.7600e-004	6.8600e-004
tblVehicleEF	OBUS	0.09	0.12
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.41	0.13
tblVehicleEF	SBUS	0.85	0.06
tblVehicleEF	SBUS	0.02	4.5520e-003
tblVehicleEF	SBUS	0.07	5.3550e-003
tblVehicleEF	SBUS	10.51	2.55
tblVehicleEF	SBUS	1.14	0.36
tblVehicleEF	SBUS	11.65	0.78
tblVehicleEF	SBUS	991.70	341.69
tblVehicleEF	SBUS	945.94	1,012.09
tblVehicleEF	SBUS	71.34	4.47
tblVehicleEF	SBUS	6.91	2.98
tblVehicleEF	SBUS	3.04	3.81
tblVehicleEF	SBUS	9.53	1.08
tblVehicleEF	SBUS	6.9470e-003	3.1880e-003
tblVehicleEF	SBUS	9.8480e-003	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	1.2510e-003	6.1000e-005
tblVehicleEF	SBUS	6.6460e-003	3.0500e-003
tblVehicleEF	SBUS	2.4620e-003	2.6740e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	1.1500e-003	5.6000e-005
tblVehicleEF	SBUS	2.9420e-003	2.8700e-004

tblVehicleEF	SBUS	0.03	2.8600e-003
tblVehicleEF	SBUS	1.26	0.28
tblVehicleEF	SBUS	1.3640e-003	1.3600e-004
tblVehicleEF	SBUS	0.10	0.06
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.57	0.03
tblVehicleEF	SBUS	9.8290e-003	3.2550e-003
tblVehicleEF	SBUS	9.1960e-003	9.6830e-003
tblVehicleEF	SBUS	9.1400e-004	4.4000e-005
tblVehicleEF	SBUS	2.9420e-003	2.8700e-004
tblVehicleEF	SBUS	0.03	2.8600e-003
tblVehicleEF	SBUS	1.83	0.40
tblVehicleEF	SBUS	1.3640e-003	1.3600e-004
tblVehicleEF	SBUS	0.13	0.07
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.62	0.03
tblVehicleEF	UBUS	0.27	0.97
tblVehicleEF	UBUS	0.04	1.1260e-003
tblVehicleEF	UBUS	6.68	6.84
tblVehicleEF	UBUS	7.29	0.07
tblVehicleEF	UBUS	2,230.21	1,683.41
tblVehicleEF	UBUS	70.66	0.87
tblVehicleEF	UBUS	16.16	1.43
tblVehicleEF	UBUS	16.95	9.4870e-003
tblVehicleEF	UBUS	0.68	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.34	5.9990e-003
tblVehicleEF	UBUS	8.2300e-004	5.0000e-006
tblVehicleEF	UBUS	0.29	0.03
tblVehicleEF	UBUS	3.0000e-003	7.8870e-003

tblVehicleEF	UBUS	0.32	5.7390e-003
tblVehicleEF	UBUS	7.5700e-004	5.0000e-006
tblVehicleEF	UBUS	2.2400e-003	5.1000e-005
tblVehicleEF	UBUS	0.05	7.6700e-004
tblVehicleEF	UBUS	1.0900e-003	3.4000e-005
tblVehicleEF	UBUS	0.83	0.01
tblVehicleEF	UBUS	0.01	4.7340e-003
tblVehicleEF	UBUS	0.54	4.9110e-003
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	8.3800e-004	9.0000e-006
tblVehicleEF	UBUS	2.2400e-003	5.1000e-005
tblVehicleEF	UBUS	0.05	7.6700e-004
tblVehicleEF	UBUS	1.0900e-003	3.4000e-005
tblVehicleEF	UBUS	1.17	0.99
tblVehicleEF	UBUS	0.01	4.7340e-003
tblVehicleEF	UBUS	0.59	5.3770e-003
tblVehicleTrips	WD_TR	1.29	1.69
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Area	0.1321	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003
Energy	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	38.7462	38.7462	2.2400e-003	8.4000e-004	39.0522
Mobile	0.1815	0.4033	1.3238	3.8300e-003	0.3528	4.5700e-003	0.3574	0.0946	4.3100e-003	0.0989	0.0000	375.5437	375.5437	0.0173	0.0000	375.9750
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	13.1883	0.0000	13.1883	0.7794	0.0000	32.6735
Water						0.0000	0.0000		0.0000	0.0000	0.3053	1.1847	1.4900	1.2100e-003	7.0000e-004	1.7284
Total	**0.3327**	**0.4734**	**1.3893**	**4.0500e-003**	**0.3528**	**8.8400e-003**	**0.3616**	**0.0946**	**8.5800e-003**	**0.1032**	**13.4937**	**423.1349**	**436.6286**	**0.8012**	**1.5400e-003**	**457.1167**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1321	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003
Energy	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	38.7462	38.7462	2.2400e-003	8.4000e-004	39.0522
Mobile	0.1815	0.4033	1.3238	3.8300e-003	0.3528	4.5700e-003	0.3574	0.0946	4.3100e-003	0.0989	0.0000	375.5437	375.5437	0.0173	0.0000	375.9750
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	13.1883	0.0000	13.1883	0.7794	0.0000	32.6735
Water						0.0000	0.0000		0.0000	0.0000	0.3053	1.1847	1.4900	1.2100e-003	7.0000e-004	1.7284
Total	**0.3327**	**0.4734**	**1.3893**	**4.0500e-003**	**0.3528**	**8.8400e-003**	**0.3616**	**0.0946**	**8.5800e-003**	**0.1032**	**13.4937**	**423.1349**	**436.6286**	**0.8012**	**1.5400e-003**	**457.1167**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Mitigated	0.1815	0.4033	1.3238	3.8300e-003	0.3528	4.5700e-003	0.3574	0.0946	4.3100e-003	0.0989	0.0000	375.5437	375.5437	0.0173	0.0000	375.9750
Unmitigated	0.1815	0.4033	1.3238	3.8300e-003	0.3528	4.5700e-003	0.3574	0.0946	4.3100e-003	0.0989	0.0000	375.5437	375.5437	0.0173	0.0000	375.9750

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	601.64	0.00	0.00	947,557	947,557
Total	601.64	0.00	0.00	947,557	947,557

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.558813	0.054291	0.177346	0.106351	0.021242	0.005145	0.023139	0.043985	0.001349	0.001823	0.005523	0.000321	0.000673

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5876	12.5876	1.7400e-003	3.6000e-004	12.7382
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5876	12.5876	1.7400e-003	3.6000e-004	12.7382
NaturalGas Mitigated	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
NaturalGas Unmitigated	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	490193	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
Total		**2.6400e-003**	**0.0240**	**0.0202**	**1.4000e-004**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**26.1586**	**26.1586**	**5.0000e-004**	**4.8000e-004**	**26.3140**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	490193	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
Total		**2.6400e-003**	**0.0240**	**0.0202**	**1.4000e-004**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**26.1586**	**26.1586**	**5.0000e-004**	**4.8000e-004**	**26.3140**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	132147	12.5876	1.7400e-003	3.6000e-004	12.7382
Total		**12.5876**	**1.7400e-003**	**3.6000e-004**	**12.7382**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Elementary School	132147	12.5876	1.7400e-003	3.6000e-004	12.7382
Total		**12.5876**	**1.7400e-003**	**3.6000e-004**	**12.7382**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1321	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003
Unmitigated	0.1321	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.1162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003
Total	**0.1321**	**3.0000e-005**	**3.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3600e-003**	**6.3600e-003**	**2.0000e-005**	**0.0000**	**6.7800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7800e-003
Total	**0.1321**	**3.0000e-005**	**3.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3600e-003**	**6.3600e-003**	**2.0000e-005**	**0.0000**	**6.7800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.4900	1.2100e-003	7.0000e-004	1.7284
Unmitigated	1.4900	1.2100e-003	7.0000e-004	1.7284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.863029 / 2.21922	1.4900	1.2100e-003	7.0000e-004	1.7284
Total		**1.4900**	**1.2100e-003**	**7.0000e-004**	**1.7284**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.863029 / 2.21922	1.4900	1.2100e-003	7.0000e-004	1.7284
Total		**1.4900**	**1.2100e-003**	**7.0000e-004**	**1.7284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.1883	0.7794	0.0000	32.6735
Unmitigated	13.1883	0.7794	0.0000	32.6735

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	64.97	13.1883	0.7794	0.0000	32.6735
Total		**13.1883**	**0.7794**	**0.0000**	**32.6735**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Elementary School	64.97	13.1883	0.7794	0.0000	32.6735
Total		**13.1883**	**0.7794**	**0.0000**	**32.6735**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	201	0.73	Diesel
Emergency Generator	1	0	50	201	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (175 - 300 HP)	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809

Total	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809

11.0 Vegetation

Head-Royce School, Oakland - Operation - 2030
Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	356.00	Student	5.10	29,762.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2017 CO2 rate = 210

Land Use - School expansion student enrollment

Construction Phase - Operational run no construction

Off-road Equipment - Op run

Trips and VMT - op run

Grading -

Vehicle Trips - school = 1.69

Vehicle Emission Factors - EMFAC2017

Water And Wastewater - WWTP 100% aerobic

Stationary Sources - Emergency Generators and Fire Pumps - two 150-kw genergators with 201-hp engines

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblFleetMix	HHD	0.05	0.05
tblFleetMix	LDA	0.57	0.56
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.19	0.17
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.0680e-003	5.3920e-003
tblFleetMix	MCY	5.3050e-003	5.0820e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MH	6.4400e-004	6.7400e-004
tblFleetMix	MHD	0.03	0.03
tblFleetMix	OBUS	2.2800e-003	1.2650e-003
tblFleetMix	SBUS	3.8900e-004	3.9400e-004
tblFleetMix	UBUS	1.7700e-003	1.7060e-003
tblLandUse	LotAcreage	0.68	5.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	201.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleEF	HHD	0.57	0.02
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.52	6.48
tblVehicleEF	HHD	0.77	0.35
tblVehicleEF	HHD	1.90	3.5420e-003
tblVehicleEF	HHD	4,379.42	949.28
tblVehicleEF	HHD	1,493.58	1,197.92
tblVehicleEF	HHD	5.82	0.03
tblVehicleEF	HHD	12.87	5.27
tblVehicleEF	HHD	1.70	2.46
tblVehicleEF	HHD	20.10	2.28
tblVehicleEF	HHD	3.1410e-003	2.0490e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.6620e-003	0.02
tblVehicleEF	HHD	5.9000e-005	0.00
tblVehicleEF	HHD	3.0050e-003	1.9610e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9090e-003	8.9370e-003
tblVehicleEF	HHD	5.4170e-003	0.02
tblVehicleEF	HHD	5.4000e-005	0.00
tblVehicleEF	HHD	4.5000e-005	1.0000e-006
tblVehicleEF	HHD	2.3450e-003	4.4000e-005
tblVehicleEF	HHD	0.40	0.44
tblVehicleEF	HHD	3.2000e-005	1.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	1.9900e-004	2.2800e-004

tblVehicleEF	HHD	0.03	1.0000e-006
tblVehicleEF	HHD	0.04	8.8790e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	4.5000e-005	1.0000e-006
tblVehicleEF	HHD	2.3450e-003	4.4000e-005
tblVehicleEF	HHD	0.46	0.50
tblVehicleEF	HHD	3.2000e-005	1.0000e-006
tblVehicleEF	HHD	0.14	0.06
tblVehicleEF	HHD	1.9900e-004	2.2800e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	LDA	2.1420e-003	1.0270e-003
tblVehicleEF	LDA	2.5020e-003	0.03
tblVehicleEF	LDA	0.35	0.41
tblVehicleEF	LDA	0.71	1.78
tblVehicleEF	LDA	189.10	203.43
tblVehicleEF	LDA	43.30	42.88
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.03	0.13
tblVehicleEF	LDA	1.2250e-003	9.7200e-004
tblVehicleEF	LDA	1.8580e-003	1.3010e-003
tblVehicleEF	LDA	1.1270e-003	8.9400e-004
tblVehicleEF	LDA	1.7090e-003	1.1960e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	5.3700e-003	3.5300e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.03	0.13
tblVehicleEF	LDA	1.8920e-003	9.1000e-005

tblVehicleEF	LDA	4.4400e-004	0.00
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	7.8110e-003	5.1260e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.04	0.14
tblVehicleEF	LDT1	3.7920e-003	1.7080e-003
tblVehicleEF	LDT1	5.5140e-003	0.04
tblVehicleEF	LDT1	0.53	0.53
tblVehicleEF	LDT1	1.30	1.92
tblVehicleEF	LDT1	238.79	245.70
tblVehicleEF	LDT1	55.36	52.29
tblVehicleEF	LDT1	0.05	0.03
tblVehicleEF	LDT1	0.07	0.16
tblVehicleEF	LDT1	1.5040e-003	1.1120e-003
tblVehicleEF	LDT1	2.2700e-003	1.5090e-003
tblVehicleEF	LDT1	1.3830e-003	1.0220e-003
tblVehicleEF	LDT1	2.0870e-003	1.3870e-003
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	9.3940e-003	6.6250e-003
tblVehicleEF	LDT1	0.09	0.41
tblVehicleEF	LDT1	0.07	0.17
tblVehicleEF	LDT1	2.3920e-003	2.4790e-003
tblVehicleEF	LDT1	5.7500e-004	0.00
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.04	0.05

tblVehicleEF	LDT1	0.01	9.6660e-003
tblVehicleEF	LDT1	0.09	0.41
tblVehicleEF	LDT1	0.08	0.19
tblVehicleEF	LDT2	3.0080e-003	1.6910e-003
tblVehicleEF	LDT2	3.3940e-003	0.04
tblVehicleEF	LDT2	0.47	0.53
tblVehicleEF	LDT2	0.93	2.35
tblVehicleEF	LDT2	269.69	252.42
tblVehicleEF	LDT2	61.64	54.22
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	0.05	0.17
tblVehicleEF	LDT2	1.3500e-003	1.0550e-003
tblVehicleEF	LDT2	2.0350e-003	1.3520e-003
tblVehicleEF	LDT2	1.2410e-003	9.7200e-004
tblVehicleEF	LDT2	1.8710e-003	1.2430e-003
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	7.4710e-003	6.3140e-003
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	2.7000e-003	8.9900e-003
tblVehicleEF	LDT2	6.3100e-004	5.3000e-005
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.03	0.05
tblVehicleEF	LDT2	0.01	9.1720e-003
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.05	0.21
tblVehicleEF	LHD1	4.1630e-003	4.3240e-003

tblVehicleEF	LHD1	9.3560e-003	5.3990e-003
tblVehicleEF	LHD1	0.01	9.6080e-003
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.66	0.49
tblVehicleEF	LHD1	1.76	0.92
tblVehicleEF	LHD1	8.96	8.29
tblVehicleEF	LHD1	647.89	706.99
tblVehicleEF	LHD1	27.75	10.40
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.65	0.32
tblVehicleEF	LHD1	0.74	0.24
tblVehicleEF	LHD1	8.0000e-004	8.9000e-004
tblVehicleEF	LHD1	0.01	9.8660e-003
tblVehicleEF	LHD1	0.01	7.1850e-003
tblVehicleEF	LHD1	6.7100e-004	2.1400e-004
tblVehicleEF	LHD1	7.6600e-004	8.5200e-004
tblVehicleEF	LHD1	2.5930e-003	2.4660e-003
tblVehicleEF	LHD1	0.01	6.8290e-003
tblVehicleEF	LHD1	6.1700e-004	1.9700e-004
tblVehicleEF	LHD1	1.7780e-003	1.3420e-003
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	1.0910e-003	8.2300e-004
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.26	0.48
tblVehicleEF	LHD1	0.16	0.05
tblVehicleEF	LHD1	8.9000e-005	8.0000e-005
tblVehicleEF	LHD1	6.3340e-003	6.8970e-003
tblVehicleEF	LHD1	3.1000e-004	1.0300e-004
tblVehicleEF	LHD1	1.7780e-003	1.3420e-003

tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0910e-003	8.2300e-004
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.26	0.48
tblVehicleEF	LHD1	0.18	0.05
tblVehicleEF	LHD2	2.6730e-003	2.8240e-003
tblVehicleEF	LHD2	5.4470e-003	5.3520e-003
tblVehicleEF	LHD2	3.6230e-003	5.7130e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.46	0.49
tblVehicleEF	LHD2	0.93	0.53
tblVehicleEF	LHD2	13.58	12.83
tblVehicleEF	LHD2	679.50	694.84
tblVehicleEF	LHD2	22.65	7.19
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.25	0.39
tblVehicleEF	LHD2	0.29	0.15
tblVehicleEF	LHD2	1.0370e-003	1.4270e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.5620e-003	0.01
tblVehicleEF	LHD2	3.7200e-004	1.1100e-004
tblVehicleEF	LHD2	9.9200e-004	1.3650e-003
tblVehicleEF	LHD2	2.7010e-003	2.6900e-003
tblVehicleEF	LHD2	9.1250e-003	0.01
tblVehicleEF	LHD2	3.4200e-004	1.0200e-004
tblVehicleEF	LHD2	5.2000e-004	6.9000e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.4700e-004	4.5200e-004

tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	0.04	0.18
tblVehicleEF	LHD2	0.05	0.03
tblVehicleEF	LHD2	1.3200e-004	1.2300e-004
tblVehicleEF	LHD2	6.6040e-003	6.7110e-003
tblVehicleEF	LHD2	2.4200e-004	7.1000e-005
tblVehicleEF	LHD2	5.2000e-004	6.9000e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.4700e-004	4.5200e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.04	0.18
tblVehicleEF	LHD2	0.05	0.03
tblVehicleEF	MCY	0.48	0.33
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	18.46	18.54
tblVehicleEF	MCY	10.42	9.29
tblVehicleEF	MCY	176.75	214.70
tblVehicleEF	MCY	43.32	59.83
tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.2480e-003	2.2270e-003
tblVehicleEF	MCY	3.3450e-003	2.8710e-003
tblVehicleEF	MCY	2.0970e-003	2.0780e-003
tblVehicleEF	MCY	3.1320e-003	2.6870e-003
tblVehicleEF	MCY	0.77	1.56
tblVehicleEF	MCY	0.63	0.64
tblVehicleEF	MCY	0.46	0.93
tblVehicleEF	MCY	2.23	2.24
tblVehicleEF	MCY	0.42	1.55

tblVehicleEF	MCY	2.16	1.92
tblVehicleEF	MCY	2.1360e-003	2.1250e-003
tblVehicleEF	MCY	6.6700e-004	5.9200e-004
tblVehicleEF	MCY	0.77	1.56
tblVehicleEF	MCY	0.63	0.64
tblVehicleEF	MCY	0.46	0.93
tblVehicleEF	MCY	2.80	2.80
tblVehicleEF	MCY	0.42	1.55
tblVehicleEF	MCY	2.35	2.09
tblVehicleEF	MDV	5.2260e-003	1.7410e-003
tblVehicleEF	MDV	7.9730e-003	0.05
tblVehicleEF	MDV	0.66	0.53
tblVehicleEF	MDV	1.63	2.39
tblVehicleEF	MDV	367.64	303.00
tblVehicleEF	MDV	83.23	64.04
tblVehicleEF	MDV	0.07	0.03
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MDV	1.4360e-003	1.0530e-003
tblVehicleEF	MDV	2.1120e-003	1.3640e-003
tblVehicleEF	MDV	1.3220e-003	9.7100e-004
tblVehicleEF	MDV	1.9420e-003	1.2540e-003
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.01	6.6960e-003
tblVehicleEF	MDV	0.08	0.36
tblVehicleEF	MDV	0.11	0.21
tblVehicleEF	MDV	3.6770e-003	2.9940e-003
tblVehicleEF	MDV	8.6000e-004	6.3400e-004
tblVehicleEF	MDV	0.05	0.05

tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.05	0.06
tblVehicleEF	MDV	0.02	9.7020e-003
tblVehicleEF	MDV	0.08	0.36
tblVehicleEF	MDV	0.12	0.23
tblVehicleEF	MH	8.7050e-003	4.9010e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.48	0.30
tblVehicleEF	MH	3.83	1.66
tblVehicleEF	MH	1,185.53	1,350.88
tblVehicleEF	MH	57.19	15.77
tblVehicleEF	MH	0.84	1.00
tblVehicleEF	MH	0.65	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	8.8600e-004	2.1600e-004
tblVehicleEF	MH	3.2180e-003	3.2890e-003
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	8.1400e-004	1.9800e-004
tblVehicleEF	MH	0.42	0.30
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.13
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	0.01	0.51
tblVehicleEF	MH	0.23	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3800e-004	1.5600e-004
tblVehicleEF	MH	0.42	0.30
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	0.18	0.13

tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.01	0.51
tblVehicleEF	MH	0.25	0.08
tblVehicleEF	MHD	0.02	2.4700e-003
tblVehicleEF	MHD	2.4560e-003	8.1200e-004
tblVehicleEF	MHD	0.03	5.3120e-003
tblVehicleEF	MHD	0.26	0.35
tblVehicleEF	MHD	0.24	0.14
tblVehicleEF	MHD	2.64	0.55
tblVehicleEF	MHD	175.25	66.88
tblVehicleEF	MHD	1,161.70	945.85
tblVehicleEF	MHD	39.54	5.37
tblVehicleEF	MHD	0.47	0.36
tblVehicleEF	MHD	1.07	1.46
tblVehicleEF	MHD	13.71	1.88
tblVehicleEF	MHD	6.3000e-005	1.5100e-004
tblVehicleEF	MHD	3.0350e-003	7.0730e-003
tblVehicleEF	MHD	5.2900e-004	6.6000e-005
tblVehicleEF	MHD	6.0000e-005	1.4500e-004
tblVehicleEF	MHD	2.9000e-003	6.7630e-003
tblVehicleEF	MHD	4.8600e-004	6.0000e-005
tblVehicleEF	MHD	4.3600e-004	1.7800e-004
tblVehicleEF	MHD	0.02	9.6900e-003
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	2.8800e-004	1.1700e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	9.0850e-003	0.05
tblVehicleEF	MHD	0.16	0.03
tblVehicleEF	MHD	1.6800e-003	6.3400e-004
tblVehicleEF	MHD	0.01	8.9900e-003

tblVehicleEF	MHD	4.4200e-004	5.3000e-005
tblVehicleEF	MHD	4.3600e-004	1.7800e-004
tblVehicleEF	MHD	0.02	9.6900e-003
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	2.8800e-004	1.1700e-004
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	9.0850e-003	0.05
tblVehicleEF	MHD	0.18	0.03
tblVehicleEF	OBUS	0.01	8.0170e-003
tblVehicleEF	OBUS	4.4730e-003	3.1490e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.66
tblVehicleEF	OBUS	0.33	0.36
tblVehicleEF	OBUS	4.35	1.99
tblVehicleEF	OBUS	123.81	94.12
tblVehicleEF	OBUS	1,272.55	1,255.93
tblVehicleEF	OBUS	64.00	16.27
tblVehicleEF	OBUS	0.28	0.41
tblVehicleEF	OBUS	0.86	1.27
tblVehicleEF	OBUS	3.09	0.95
tblVehicleEF	OBUS	2.5000e-005	1.3800e-004
tblVehicleEF	OBUS	2.8370e-003	7.6450e-003
tblVehicleEF	OBUS	9.3800e-004	1.8200e-004
tblVehicleEF	OBUS	2.4000e-005	1.3200e-004
tblVehicleEF	OBUS	2.6920e-003	7.2960e-003
tblVehicleEF	OBUS	8.6200e-004	1.6700e-004
tblVehicleEF	OBUS	1.1090e-003	1.3280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	5.4600e-004	6.5800e-004

tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.03	0.27
tblVehicleEF	OBUS	0.27	0.10
tblVehicleEF	OBUS	1.1930e-003	8.9400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.1600e-004	1.6100e-004
tblVehicleEF	OBUS	1.1090e-003	1.3280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	5.4600e-004	6.5800e-004
tblVehicleEF	OBUS	0.05	0.03
tblVehicleEF	OBUS	0.03	0.27
tblVehicleEF	OBUS	0.30	0.11
tblVehicleEF	SBUS	0.82	0.11
tblVehicleEF	SBUS	6.8690e-003	3.2140e-003
tblVehicleEF	SBUS	0.05	9.1510e-003
tblVehicleEF	SBUS	11.66	4.28
tblVehicleEF	SBUS	0.40	0.27
tblVehicleEF	SBUS	9.35	1.29
tblVehicleEF	SBUS	875.82	341.38
tblVehicleEF	SBUS	873.53	889.24
tblVehicleEF	SBUS	81.41	7.46
tblVehicleEF	SBUS	2.93	2.07
tblVehicleEF	SBUS	1.13	1.94
tblVehicleEF	SBUS	7.38	1.37
tblVehicleEF	SBUS	1.4430e-003	1.4560e-003
tblVehicleEF	SBUS	9.5020e-003	0.01
tblVehicleEF	SBUS	5.9650e-003	0.01
tblVehicleEF	SBUS	1.5710e-003	1.2200e-004
tblVehicleEF	SBUS	1.3810e-003	1.3930e-003

tblVehicleEF	SBUS	2.3760e-003	2.5180e-003
tblVehicleEF	SBUS	5.6740e-003	0.01
tblVehicleEF	SBUS	1.4450e-003	1.1200e-004
tblVehicleEF	SBUS	3.7460e-003	8.0100e-004
tblVehicleEF	SBUS	0.04	7.7910e-003
tblVehicleEF	SBUS	1.39	0.49
tblVehicleEF	SBUS	1.9100e-003	4.0000e-004
tblVehicleEF	SBUS	0.05	0.04
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.48	0.05
tblVehicleEF	SBUS	8.7720e-003	3.2700e-003
tblVehicleEF	SBUS	8.5150e-003	8.5640e-003
tblVehicleEF	SBUS	9.7500e-004	7.4000e-005
tblVehicleEF	SBUS	3.7460e-003	8.0100e-004
tblVehicleEF	SBUS	0.04	7.7910e-003
tblVehicleEF	SBUS	2.02	0.71
tblVehicleEF	SBUS	1.9100e-003	4.0000e-004
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.53	0.06
tblVehicleEF	UBUS	0.25	1.80
tblVehicleEF	UBUS	0.05	8.9400e-004
tblVehicleEF	UBUS	3.65	13.55
tblVehicleEF	UBUS	8.48	0.07
tblVehicleEF	UBUS	1,982.40	1,613.54
tblVehicleEF	UBUS	113.86	0.73
tblVehicleEF	UBUS	6.49	0.68
tblVehicleEF	UBUS	14.09	7.2140e-003
tblVehicleEF	UBUS	0.57	0.07
tblVehicleEF	UBUS	0.01	0.03

tblVehicleEF	UBUS	0.13	4.9890e-003
tblVehicleEF	UBUS	1.2930e-003	9.0000e-006
tblVehicleEF	UBUS	0.24	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9020e-003
tblVehicleEF	UBUS	0.13	4.7730e-003
tblVehicleEF	UBUS	1.1890e-003	8.0000e-006
tblVehicleEF	UBUS	2.7480e-003	3.5000e-005
tblVehicleEF	UBUS	0.05	4.8100e-004
tblVehicleEF	UBUS	1.5870e-003	2.2000e-005
tblVehicleEF	UBUS	0.34	0.03
tblVehicleEF	UBUS	0.01	2.8430e-003
tblVehicleEF	UBUS	0.70	3.8200e-003
tblVehicleEF	UBUS	0.02	9.9860e-003
tblVehicleEF	UBUS	1.2930e-003	7.0000e-006
tblVehicleEF	UBUS	2.7480e-003	3.5000e-005
tblVehicleEF	UBUS	0.05	4.8100e-004
tblVehicleEF	UBUS	1.5870e-003	2.2000e-005
tblVehicleEF	UBUS	0.62	1.83
tblVehicleEF	UBUS	0.01	2.8430e-003
tblVehicleEF	UBUS	0.77	4.1820e-003
tblVehicleTrips	WD_TR	1.29	1.69
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1321	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003
Energy	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	38.7462	38.7462	2.2400e-003	8.4000e-004	39.0522
Mobile	0.1162	0.3025	0.9530	3.2500e-003	0.3533	2.8400e-003	0.3561	0.0948	2.6700e-003	0.0974	0.0000	306.8757	306.8757	0.0125	0.0000	307.1880
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	13.1883	0.0000	13.1883	0.7794	0.0000	32.6735
Water						0.0000	0.0000		0.0000	0.0000	0.3053	1.1847	1.4900	1.2100e-003	7.0000e-004	1.7284
Total	**0.2674**	**0.3726**	**1.0184**	**3.4700e-003**	**0.3533**	**7.1100e-003**	**0.3604**	**0.0948**	**6.9400e-003**	**0.1017**	**13.4937**	**354.4669**	**367.9606**	**0.7964**	**1.5400e-003**	**388.3297**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1321	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003
Energy	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	38.7462	38.7462	2.2400e-003	8.4000e-004	39.0522
Mobile	0.1162	0.3025	0.9530	3.2500e-003	0.3533	2.8400e-003	0.3561	0.0948	2.6700e-003	0.0974	0.0000	306.8757	306.8757	0.0125	0.0000	307.1880
Stationary	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Waste						0.0000	0.0000		0.0000	0.0000	13.1883	0.0000	13.1883	0.7794	0.0000	32.6735
Water						0.0000	0.0000		0.0000	0.0000	0.3053	1.1847	1.4900	1.2100e-003	7.0000e-004	1.7284

Total	0.2674	0.3726	1.0184	3.4700e-003	0.3533	7.1100e-003	0.3604	0.0948	6.9400e-003	0.1017	13.4937	354.4669	367.9606	0.7964	1.5400e-003	388.3297

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1162	0.3025	0.9530	3.2500e-003	0.3533	2.8400e-003	0.3561	0.0948	2.6700e-003	0.0974	0.0000	306.8757	306.8757	0.0125	0.0000	307.1880
Unmitigated	0.1162	0.3025	0.9530	3.2500e-003	0.3533	2.8400e-003	0.3561	0.0948	2.6700e-003	0.0974	0.0000	306.8757	306.8757	0.0125	0.0000	307.1880

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	601.64	0.00	0.00	947,557	947,557
Total	601.64	0.00	0.00	947,557	947,557

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.560977	0.054361	0.170105	0.106021	0.020569	0.005392	0.025302	0.048152	0.001265	0.001706	0.005082	0.000394	0.000674

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5876	12.5876	1.7400e-003	3.6000e-004	12.7382
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5876	12.5876	1.7400e-003	3.6000e-004	12.7382
NaturalGas Mitigated	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
NaturalGas Unmitigated	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

Elementary School	490193	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
Total		**2.6400e-003**	**0.0240**	**0.0202**	**1.4000e-004**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**26.1586**	**26.1586**	**5.0000e-004**	**4.8000e-004**	**26.3140**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	490193	2.6400e-003	0.0240	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.1586	26.1586	5.0000e-004	4.8000e-004	26.3140
Total		**2.6400e-003**	**0.0240**	**0.0202**	**1.4000e-004**		**1.8300e-003**	**1.8300e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**26.1586**	**26.1586**	**5.0000e-004**	**4.8000e-004**	**26.3140**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	132147	12.5876	1.7400e-003	3.6000e-004	12.7382
Total		**12.5876**	**1.7400e-003**	**3.6000e-004**	**12.7382**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	132147	12.5876	1.7400e-003	3.6000e-004	12.7382
Total		**12.5876**	**1.7400e-003**	**3.6000e-004**	**12.7382**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1321	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003
Unmitigated	0.1321	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003
Total	**0.1321**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3600e-003**	**6.3600e-003**	**2.0000e-005**	**0.0000**	**6.7700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.3600e-003	6.3600e-003	2.0000e-005	0.0000	6.7700e-003
Total	**0.1321**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.3600e-003**	**6.3600e-003**	**2.0000e-005**	**0.0000**	**6.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.4900	1.2100e-003	7.0000e-004	1.7284
Unmitigated	1.4900	1.2100e-003	7.0000e-004	1.7284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.863029 / 2.21922	1.4900	1.2100e-003	7.0000e-004	1.7284
Total		**1.4900**	**1.2100e-003**	**7.0000e-004**	**1.7284**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.863029 / 2.21922	1.4900	1.2100e-003	7.0000e-004	1.7284
Total		**1.4900**	**1.2100e-003**	**7.0000e-004**	**1.7284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.1883	0.7794	0.0000	32.6735
Unmitigated	13.1883	0.7794	0.0000	32.6735

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	64.97	13.1883	0.7794	0.0000	32.6735
Total		**13.1883**	**0.7794**	**0.0000**	**32.6735**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	64.97	13.1883	0.7794	0.0000	32.6735
Total		**13.1883**	**0.7794**	**0.0000**	**32.6735**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	201	0.73	Diesel
Emergency Generator	1	0	50	201	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (175 - 300 HP)	0.0165	0.0461	0.0421	8.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	7.6540	7.6540	1.0700e-003	0.0000	7.6809
Total	**0.0165**	**0.0461**	**0.0421**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**7.6540**	**7.6540**	**1.0700e-003**	**0.0000**	**7.6809**

11.0 Vegetation

Attachment 3: EMFAC2017 Calculations

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	15	0	300	0	220	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	3240	0	4400
Site Preparation	18	0	90	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	972	0	0
Grading	15	0	120	0	713	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	1296	0	14260
Trenching	5	0	40	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	432	0	0
Building Construction	62	24	8060	3120	168	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	87048	22776	1226.4
Architectural Coating	12	0	1416	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	15292.8	0	0
Paving	15	0	270	0	202	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	2916	0	1474.6

Number of Days Per Year				
2021	4/1/21	12/31/21	275	
2022	1/1/22	5/24/22	144	
			419	**300** ***Total Workdays***

Phase	Start Date	End Date	Days/ Week	Work-days
Demolition	4/1/2021	4/28/2021	5	20
Site Preparation	4/29/2021	5/5/2021	5	5
Grading	5/6/2021	5/17/2021	5	8
Trenching	5/6/2021	5/17/2021	5	8
Building Construction	5/18/2021	11/15/2021	5	130
Architectural Coating	11/16/2021	4/28/2022	5	118
Paving	4/29/2022	5/24/2022	5	18

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	0	0	0	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	0	0	0
Site Preparation	5	0	5	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	54	0	0
Grading	10	0	20	0	162	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	216	0	3240
Trenching	5	0	10	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	108	0	0
Tunnel Construction	2	1	200	100	61	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	2160	730	445.3
Architectural Coating	0	0	0	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	0	0	0
Paving	18	0	90	0	0	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	972	0	0

Number of Days Per Year					
2021	4/1/21	8/30/21	152		
2022					
			152	**110**	***Total Workdays***

Phase	**Start Date**	**End Date**	**Days/ Week**	**Work-days**
Demolition			5	0
Site Preparation	4/1/2021	4/1/2021	5	1
Grading	4/2/2021	4/5/2021	5	2
Trenching	4/2/2021	4/5/2021	5	2
Tunnel Construction	4/6/2021	8/23/2021	5	100
Architectural Coating			5	0
Paving	8/24/2021	8/30/2021	5	5

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Summary of Construction Traffic Emissions (EMFAC2017) - S Campus

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Tons						*Metric Tons*
Criteria Pollutants											
2021	0.0131	0.1453	0.1144	0.0007	0.0336	0.0090	0.0426	0.0051	0.0047	0.0097	65.2977
2022	0.0056	0.0664	0.0546	0.0003	0.0176	0.0043	0.0219	0.0026	0.0020	0.0047	33.3129
Toxic Air Contaminants (1 Mile Trip Length)											
2021	0.0082	0.0344	0.0420	0.0001	0.0032	0.0009	0.0041	0.0005	0.0005	0.0010	8.9747
2022	0.0040	0.0172	0.0215	0.0000	0.0017	0.0004	0.0021	0.0003	0.0002	0.0005	4.6237

Summary of Construction Traffic Emissions (EMFAC2017) - Pedestrian Tunnel

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2
					Tons						*Metric Tons*
Criteria Pollutants											
2021	0.0012	0.0216	0.0087	0.0001	0.0026	0.0010	0.0036	0.0004	0.0005	0.0009	7.8901
Toxic Air Contaminants (1 Mile Trip Length)											
2021	0.0005	0.0040	0.0033	0.0000	0.0002	0.0001	0.0003	0.0000	0.0000	0.0001	0.9143

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles					
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust
2020	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005
2022	1.0004	1.0003	1.0004	1.0018	1.0014
2023	1.0007	1.0006	1.0007	1.0032	1.0027
2024	1.0012	1.0010	1.0011	1.0051	1.0044
2025	1.0018	1.0016	1.0016	1.0074	1.0065
2026	1.0023	1.0022	1.0020	1.0091	1.0083
2027	1.0028	1.0028	1.0024	1.0105	1.0102
2028	1.0034	1.0035	1.0028	1.0117	1.0120
2029	1.0040	1.0042	1.0032	1.0129	1.0138
2030	1.0047	1.0051	1.0037	1.0142	1.0156
2031	1.0054	1.0061	1.0042	1.0155	1.0173
2032	1.0061	1.0072	1.0047	1.0169	1.0189
2033	1.0068	1.0083	1.0052	1.0182	1.0204
2034	1.0075	1.0095	1.0058	1.0196	1.0218
2035	1.0081	1.0108	1.0063	1.0210	1.0232
2036	1.0088	1.0121	1.0069	1.0223	1.0244
2037	1.0094	1.0134	1.0074	1.0236	1.0255
2038	1.0099	1.0148	1.0079	1.0248	1.0265
2039	1.0104	1.0161	1.0085	1.0259	1.0274
2040	1.0109	1.0174	1.0090	1.0270	1.0281
2041	1.0113	1.0186	1.0095	1.0279	1.0288
2042	1.0116	1.0198	1.0099	1.0286	1.0294
2043	1.0119	1.0207	1.0103	1.0293	1.0299
2044	1.0122	1.0216	1.0106	1.0299	1.0303
2045	1.0124	1.0225	1.0109	1.0303	1.0306
2046	1.0125	1.0233	1.0111	1.0308	1.0309
2047	1.0127	1.0240	1.0113	1.0311	1.0311
2048	1.0128	1.0246	1.0115	1.0314	1.0313
2049	1.0128	1.0252	1.0116	1.0316	1.0315
2050	1.0129	1.0257	1.0117	1.0318	1.0316
Enter Year: 2021	**1.0002**	**1.0001**	**1.0002**	**1.0009**	**1.0005**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

CalEEMod EMFAC2017 Emission Factors Input

Year 2022

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.00555	0.003855	0.002767	0.023945699	0.008642	0	0	0.061054	0
A	CH4_RUNEX	0.002428	0.004948	0.003588	0.004419	0.009779	0.007678	0.004782	0.031819694	0.010393	0.96698	0.34547	0.004552	0.012266
A	CH4_STREX	0.055009	0.075948	0.073875	0.089494	0.016652	0.010837	0.007384	2.24411E-07	0.023311	0.001126	0.261656	0.005355	0.024426
A	CO_IDLEX	0	0	0	0	0.189882	0.150907	0.345704	6.253002137	0.559624	0	0	2.551433	0
A	CO_RUNEX	0.612949	1.036967	0.811859	0.910763	0.884794	0.674357	0.407002	0.464710664	1.037904	6.842652	20.54202	0.359166	1.335593
A	CO_STREX	2.314885	2.538474	2.963547	3.45323	1.159155	0.765682	0.8856	0.004716566	2.602813	0.074685	9.069297	0.781452	2.292853
A	CO2_NBIO_IDLEX	0	0	0	0	9.007589	13.66535	76.16732	1147.773329	85.84628	0	0	341.6936	0
A	CO2_NBIO_RUNEX	255.3051	304.0761	329.0151	396.3232	821.3783	813.8548	1096.173	1465.862585	1506.405	1683.409	215.5819	1012.092	1563.714
A	CO2_NBIO_STREX	53.96803	65.07648	70.88344	85.19376	12.4985	9.480991	7.179589	0.05135875	20.17122	0.871906	62.20006	4.471708	19.58149
A	NOX_IDLEX	0	0	0	0	0.058371	0.092461	0.555002	6.001491966	0.413427	0	0	2.975161	0
A	NOX_RUNEX	0.040425	0.091707	0.074349	0.093839	0.846246	0.969089	1.98189	3.375256433	1.652769	1.432803	1.171073	3.811646	1.329202
A	NOX_STREX	0.200901	0.272375	0.307846	0.379801	0.356897	0.236399	1.487777	2.008047495	0.713138	0.009487	0.273703	1.079352	0.252787
A	PM10_IDLEX	0	0	0	0	0.000775	0.001269	0.001119	0.003083645	0.000767	0	0	0.003188	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061209734	0.13034	0.074343	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009636	0.010525	0.012	0.035682671	0.012	0.031548	0.004	0.010696	0.013019
A	PM10_RUNEX	0.00152	0.001961	0.00149	0.00165	0.010998	0.015371	0.032915	0.034680521	0.021018	0.005999	0.002042	0.022837	0.023243
A	PM10_STREX	0.001832	0.00249	0.001816	0.002067	0.000273	0.000153	8.34E-05	3.92395E-07	0.000194	5.48E-06	0.003352	6.06E-05	0.000297
A	PM25_IDLEX	0	0	0	0	0.000741	0.001214	0.001071	0.002950248	0.000734	0	0	0.00305	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026232743	0.05586	0.031861	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002409	0.002631	0.003	0.008920668	0.003	0.007887	0.001	0.002674	0.003255
A	PM25_RUNEX	0.001402	0.001805	0.001372	0.001521	0.010472	0.014677	0.031486	0.033180243	0.02009	0.005739	0.001911	0.021832	0.022188
A	PM25_STREX	0.001685	0.002289	0.00167	0.001901	0.000251	0.000141	7.67E-05	3.60792E-07	0.000179	5.04E-06	0.003162	5.57E-05	0.000273
A	ROG_DIURN	0.041131	0.089584	0.058587	0.068801	0.00195	0.001166	0.000296	1.92777E-06	0.001468	5.15E-05	1.615198	0.000287	0.677131
A	ROG_HTSK	0.107409	0.193548	0.131265	0.150686	0.081025	0.050779	0.015646	9.7258E-05	0.023022	0.000767	0.742754	0.00286	0.064095
A	ROG_IDLEX	0	0	0	0	0.022601	0.017973	0.016803	0.451454182	0.053616	0	0	0.277842	0
A	ROG_RESTL	0.040131	0.079394	0.061147	0.072556	0.001102	0.000664	0.00017	1.2619E-06	0.000686	3.39E-05	1.006282	0.000136	0.258616
A	ROG_RUNEX	0.009637	0.021555	0.014549	0.018799	0.098638	0.110256	0.081689	0.081154715	0.090876	0.013942	2.362179	0.061881	0.075015
A	ROG_RUNLS	0.226445	0.704807	0.450445	0.486021	0.578064	0.346764	0.090523	0.000589067	0.262866	0.004734	2.284558	0.018963	1.573594
A	ROG_STREX	0.252365	0.381256	0.347505	0.451046	0.083856	0.054214	0.039824	1.17362E-06	0.12135	0.004911	2.007727	0.029702	0.103351
A	SO2_IDLEX	0	0	0	0	8.75E-05	0.000131	0.000722	0.010752484	0.000817	0	0	0.003255	0
A	SO2_RUNEX	8.97E-05	0.002441	0.010423	0.003918	0.008029	0.007883	0.010423	0.013602258	0.014621	0.013274	0.002133	0.009683	0.01536
A	SO2_STREX	0	0	7.1E-05	0.000843	0.000124	9.38E-05	7.1E-05	5.08237E-07	0.0002	8.63E-06	0.000616	4.43E-05	0.000194
A	TOG_DIURN	0.041131	0.089584	0.058587	0.068801	0.00195	0.001166	0.000296	1.92777E-06	0.001468	5.15E-05	1.615198	0.000287	0.677131
A	TOG_HTSK	0.107409	0.193548	0.131265	0.150686	0.081025	0.050779	0.015646	9.7258E-05	0.023022	0.000767	0.742754	0.00286	0.064095
A	TOG_IDLEX	0	0	0	0	0.032015	0.024651	0.022094	0.516939692	0.069997	0	0	0.398558	0
A	TOG_RESTL	0.040131	0.079394	0.061147	0.072556	0.001102	0.000664	0.00017	1.2619E-06	0.000686	3.39E-05	1.006282	0.000136	0.258616
A	TOG_RUNEX	0.013995	0.031417	0.021186	0.027288	0.122864	0.130215	0.095	0.120635995	0.115805	0.987019	2.908465	0.073688	0.100947
A	TOG_RUNLS	0.226445	0.704807	0.450445	0.486021	0.578064	0.346764	0.090523	0.000589067	0.262866	0.004734	2.284558	0.018963	1.573594
A	TOG_STREX	0.276307	0.417425	0.380474	0.493832	0.091812	0.059358	0.043602	1.28497E-06	0.132863	0.005377	2.184458	0.03252	0.113157

CalEEMod EMFAC2017 Fleet Mix Input

Year 2022

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.558813	0.054291	0.177346	0.106351	0.021242	0.005145	0.023139	0.043985	0.001349	0.001823	0.005523	0.000321	0.000673

CalEEMod EMFAC2017 Emission Factors Input

Year 2030

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004324	0.002824	0.00247	0.023396629	0.008017	0	0	0.110736	0
A	CH4_RUNEX	0.001027	0.001708	0.001691	0.001741	0.005399	0.005352	0.000812	0.029826524	0.003149	1.795282	0.33397	0.003214	0.004901
A	CH4_STREX	0.030538	0.038141	0.043362	0.04596	0.009608	0.005713	0.005312	1.92114E-07	0.018698	0.000894	0.251707	0.009151	0.019865
A	CO_IDLEX	0	0	0	0	0.179353	0.137776	0.349403	6.484826592	0.661092	0	0	4.280357	0
A	CO_RUNEX	0.407544	0.527327	0.533019	0.528283	0.489738	0.487663	0.137604	0.348873083	0.35513	13.55236	18.54269	0.265206	0.299173
A	CO_STREX	1.779709	1.915978	2.345996	2.394732	0.920274	0.534185	0.549552	0.003542079	1.99314	0.072863	9.288609	1.290045	1.662009
A	CO2_NBIO_IDLEX	0	0	0	0	8.286422	12.83032	66.88139	949.2762301	94.11594	0	0	341.3771	0
A	CO2_NBIO_RUNEX	203.4292	245.7008	252.4206	303.0034	706.9931	694.8441	945.8532	1197.919724	1255.927	1613.538	214.7024	889.2402	1350.877
A	CO2_NBIO_STREX	42.88147	52.29242	54.21796	64.04233	10.39567	7.192965	5.368499	0.032167888	16.27054	0.727265	59.83217	7.462195	15.77116
A	NOX_IDLEX	0	0	0	0	0.045735	0.070485	0.358984	5.270629417	0.409945	0	0	2.073495	0
A	NOX_RUNEX	0.020157	0.033738	0.032708	0.034121	0.321958	0.387852	1.464166	2.46244868	1.265071	0.684876	1.153924	1.944809	1.002388
A	NOX_STREX	0.13215	0.161281	0.174552	0.187837	0.241486	0.150252	1.875837	2.283797485	0.954469	0.007214	0.272678	1.3698	0.239985
A	PM10_IDLEX	0	0	0	0	0.00089	0.001427	0.000151	0.002049445	0.000138	0	0	0.001456	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.06131938	0.13034	0.074176	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009866	0.01076	0.012	0.035748526	0.012	0.031607	0.004	0.010074	0.013157
A	PM10_RUNEX	0.000972	0.001112	0.001055	0.001053	0.007185	0.013485	0.007073	0.024080067	0.007645	0.004989	0.002227	0.013103	0.014599
A	PM10_STREX	0.001301	0.001509	0.001352	0.001364	0.000214	0.000111	6.56E-05	2.496E-07	0.000182	9.14E-06	0.002871	0.000122	0.000216
A	PM25_IDLEX	0	0	0	0	0.000852	0.001365	0.000145	0.001960787	0.000132	0	0	0.001393	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026279734	0.05586	0.03179	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002466	0.00269	0.003	0.008937131	0.003	0.007902	0.001	0.002518	0.003289
A	PM25_RUNEX	0.000894	0.001022	0.000972	0.000971	0.006829	0.012877	0.006763	0.023038359	0.007296	0.004773	0.002078	0.012509	0.01393
A	PM25_STREX	0.001196	0.001387	0.001243	0.001254	0.000197	0.000102	6.03E-05	2.29498E-07	0.000167	8.4E-06	0.002687	0.000112	0.000198
A	ROG_DIURN	0.024505	0.046877	0.045289	0.053293	0.001342	0.00069	0.000178	8.8987E-07	0.001328	3.52E-05	1.560998	0.000801	0.298033
A	ROG_HTSK	0.068073	0.105171	0.092197	0.102405	0.058803	0.029286	0.00969	4.43399E-05	0.022031	0.000481	0.637848	0.007791	0.027026
A	ROG_IDLEX	0	0	0	0	0.01787	0.014379	0.013754	0.436208985	0.054035	0	0	0.490124	0
A	ROG_RESTL	0.025256	0.046094	0.049697	0.058428	0.000823	0.000452	0.000117	6.24747E-07	0.000658	2.23E-05	0.933217	0.0004	0.132704
A	ROG_RUNEX	0.00353	0.006625	0.006314	0.006696	0.073252	0.09609	0.011127	0.023071507	0.020632	0.025769	2.239465	0.036942	0.036952
A	ROG_RUNLS	0.179259	0.405065	0.349315	0.356736	0.483561	0.175556	0.05087	0.000227669	0.269781	0.002843	1.553222	0.054177	0.509813
A	ROG_STREX	0.12702	0.170034	0.189777	0.210407	0.046527	0.027097	0.026297	1.00252E-06	0.09594	0.00382	1.916254	0.050723	0.075125
A	SO2_IDLEX	0	0	0	0	8.03E-05	0.000123	0.000634	0.008878884	0.000894	0	0	0.00327	0
A	SO2_RUNEX	9.09E-05	0.002479	0.00899	0.002994	0.006897	0.006711	0.00899	0.01107371	0.012133	0.009986	0.002125	0.008564	0.013252
A	SO2_STREX	0	0	5.31E-05	0.000634	0.000103	7.12E-05	5.31E-05	3.18327E-07	0.000161	7.2E-06	0.000592	7.38E-05	0.000156
A	TOG_DIURN	0.024505	0.046877	0.045289	0.053293	0.001342	0.00069	0.000178	8.8987E-07	0.001328	3.52E-05	1.560998	0.000801	0.298033
A	TOG_HTSK	0.068073	0.105171	0.092197	0.102405	0.058803	0.029286	0.00969	4.43399E-05	0.022031	0.000481	0.637848	0.007791	0.027026
A	TOG_IDLEX	0	0	0	0	0.024936	0.019194	0.018273	0.499742869	0.06949	0	0	0.709124	0
A	TOG_RESTL	0.025256	0.046094	0.049697	0.058428	0.000823	0.000452	0.000117	6.24747E-07	0.000658	2.23E-05	0.933217	0.0004	0.132704
A	TOG_RUNEX	0.005126	0.009666	0.009172	0.009702	0.086823	0.110734	0.013167	0.055189848	0.027522	1.832353	2.801451	0.04482	0.046019
A	TOG_RUNLS	0.179259	0.405065	0.349315	0.356736	0.483561	0.175556	0.05087	0.000227669	0.269781	0.002843	1.553222	0.054177	0.509813
A	TOG_STREX	0.139071	0.186166	0.207782	0.230369	0.050941	0.029667	0.028792	1.09764E-06	0.105042	0.004182	2.086656	0.055536	0.082253

CalEEMod EMFAC2017 Fleet Mix Input

Year **2030**

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.560977	0.054361	0.170105	0.106021	0.020569	0.005392	0.025302	0.048152	0.001265	0.001706	0.005082	0.000394	0.000674

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Alameda
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_REST	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_RESTI	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Alameda	2021	HHDT	Aggregate	Aggregate	Gasoline	9.245674	1022.322	184.9875	3.481314	0	0.262258	0.000626	0	0.000359	0.005	0.02646	0.000681	0	0.000391	0.02	0.06174	2182.363	0	46.73001	0.088351	0	0.000194	0.139969	0	0.008209	0.422649	0	0.001013	0.093644	0.586534	0.024156	0.037395	0.616729	0	0.00111	0.093644	0.586534	0.024156	0.037395	35.63189	0	3.980893	0.021596	0	0.000462
Alameda	2021	HHDT	Aggregate	Aggregate	Diesel	14388.37	1874628	157730.2	3.940132	66.39193	1.848364	0.056452	0.090822	0	0.00892	0.026224	0.059004	0.094929	0	0.035679	0.061189	1489.777	12441.16	0	0.006024	0.235693	0	0.234172	1.955577	0	0.129688	5.074407	0	0	0	0	0	0.147639	5.776826	0	0	0	0	0	0.501026	65.26408	0	0.014075	0.117538	0
Alameda	2021	HHDT	Aggregate	Aggregate	Natural Ga	380.1489	15489.07	1482.581	1.263182	19.89788	0	0.004465	0.022854	0	0.009	0.02646	0.004667	0.023887	0	0.036	0.06174	3128.945	3958.333	0	3.371501	1.219786	0	0.637856	0.806932	0	0.123097	0.0355	0	0	0	0	0	3.526232	1.265473	0	0	0	0	0	10.88299	21.66562	0	0	0	0
Alameda	2021	LDA	Aggregate	Aggregate	Gasoline	643846.3	23456819	3010602	0.047127	0	0.224251	0.001419	0	0.00183	0.002	0.01575	0.001543	0	0.00199	0.008	0.03675	270.7509	0	57.71532	0.002905	0	0.062188	0.005018	0	0.028556	0.011591	0	0.290414	0.119683	0.246102	0.209404	0.217333	0.016904	0	0.317965	0.119683	0.246102	0.209404	0.217333	0.693193	0	2.478666	0.002679	0	0.000571
Alameda	2021	LDA	Aggregate	Aggregate	Diesel	7140.126	264939.3	33233.8	0.113991	0	0	0.010117	0	0	0.002	0.01575	0.010575	0	0	0.008	0.03675	216.593	0	0	0.000909	0	0	0.034045	0	0	0.019581	0	0	0	0	0	0	0.022291	0	0	0	0	0	0	0.25599	0	0	0.002048	0	0
Alameda	2021	LDA	Aggregate	Aggregate	Electricity	17125.1	649064.6	84207.95	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2021	LDT1	Aggregate	Aggregate	Gasoline	66399	2359125	304135.2	0.106817	0	0.296974	0.001905	0	0.00247	0.002	0.01575	0.002072	0	0.002686	0.008	0.03675	314.1232	0	67.2804	0.005778	0	0.083878	0.008208	0	0.031586	0.025406	0	0.427661	0.210919	0.766547	0.392514	0.450308	0.037042	0	0.468232	0.210919	0.766547	0.392514	0.450308	1.172104	0	2.646624	0.003109	0	0.000666
Alameda	2021	LDT1	Aggregate	Aggregate	Diesel	46.09621	741.565	149.5479	1.203378	0	0	0.171857	0	0	0.002	0.01575	0.179628	0	0	0.008	0.03675	423.8716	0	0	0.010063	0	0	0.066627	0	0	0.21664	0	0	0	0	0	0	0.24663	0	0	0	0	0	0	1.244688	0	0	0.004007	0	0
Alameda	2021	LDT1	Aggregate	Aggregate	Electricity	321.7501	12861.12	1605.904	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2021	LDT2	Aggregate	Aggregate	Gasoline	212628.3	7710663	988229.3	0.085751	0	0.340973	0.001404	0	0.001753	0.002	0.01575	0.001527	0	0.001906	0.008	0.03675	343.2474	0	74.34634	0.004051	0	0.080284	0.00707	0	0.036305	0.016513	0	0.381832	0.138609	0.468688	0.292836	0.283896	0.024085	0	0.418057	0.138609	0.468688	0.292836	0.283896	0.890638	0	3.103874	0.003397	0	0.000736
Alameda	2021	LDT2	Aggregate	Aggregate	Diesel	1221.379	52545.3	5987.178	0.049421	0	0	0.005428	0	0	0.002	0.01575	0.005673	0	0	0.008	0.03675	290.6699	0	0	0.000751	0	0	0.045689	0	0	0.016179	0	0	0	0	0	0	0.018419	0	0	0	0	0	0	0.13753	0	0	0.002748	0	0
Alameda	2021	LDT2	Aggregate	Aggregate	Electricity	1502.599	49387.55	7579.032	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2021	LHDT1	Aggregate	Aggregate	Gasoline	15865.62	562596.9	236374	0.267369	0.039797	0.56049	0.002155	0	0.000395	0.002	0.03276	0.002344	0	0.00043	0.008	0.07644	1021.26	122.3398	19.21539	0.012631	0.125046	0.026872	0.016018	0.003188	0.043235	0.062243	0.455751	0.135692	0.127375	0.910385	0.025552	0.045811	0.090824	0.665031	0.148565	0.127375	0.910385	0.025552	0.045811	1.136056	3.747452	1.812739	0.010106	0.001211	0.00019
Alameda	2021	LHDT1	Aggregate	Aggregate	Diesel	9438.928	371117.4	118729.8	1.972463	2.181936	0	0.024647	0.027252	0	0.003	0.03276	0.025761	0.028484	0	0.012	0.07644	554.8606	135.2969	0	0.007734	0.005098	0	0.087216	0.021267	0	0.166498	0.10976	0	0	0	0	0	0.189547	0.124954	0	0	0	0	0	0.710571	0.909745	0	0.005245	0.001279	0
Alameda	2021	LHDT2	Aggregate	Aggregate	Gasoline	2411.064	84654.66	35921.26	0.271836	0.039773	0.554272	0.001985	0	0.000337	0.002	0.03822	0.002159	0	0.000366	0.008	0.08918	1169.882	141.0395	21.86547	0.010148	0.125789	0.026131	0.017012	0.003135	0.042225	0.04675	0.455724	0.131298	0.120416	0.842005	0.02319	0.041605	0.068218	0.664991	0.143754	0.120416	0.842005	0.02319	0.041605	0.853542	3.752699	1.806549	0.011577	0.001396	0.000216
Alameda	2021	LHDT2	Aggregate	Aggregate	Diesel	3486.927	137555.7	43861.15	1.594586	2.15765	0	0.023355	0.027209	0	0.003	0.03822	0.024411	0.028439	0	0.012	0.08918	621.4323	216.0229	0	0.007242	0.005098	0	0.09768	0.033956	0	0.155912	0.10976	0	0	0	0	0	0.177496	0.124954	0	0	0	0	0	0.660936	0.909745	0	0.005875	0.002042	0
Alameda	2021	MCY	Aggregate	Aggregate	Gasoline	29044.71	225392.9	58089.42	1.174932	0	0.273434	0.001878	0	0.003261	0.001	0.00504	0.002004	0	0.003453	0.004	0.01176	215.7768	0	62.55906	0.348085	0	0.263285	0.067289	0	0.01542	2.390978	0	2.022377	0.758054	2.375005	1.015093	1.621247	2.932998	0	2.200103	0.758054	2.375005	1.015093	1.621247	21.00411	0	9.041339	0.002135	0	0.000619
Alameda	2021	MDV	Aggregate	Aggregate	Gasoline	130301.2	4523861	598871.3	0.113848	0	0.432107	0.001531	0	0.002074	0.002	0.01575	0.001665	0	0.002254	0.008	0.03675	413.4208	0	90.78955	0.005391	0	0.100508	0.008687	0	0.040152	0.024054	0	0.513859	0.162803	0.519775	0.352967	0.338772	0.034194	0	0.562555	0.162803	0.519775	0.352967	0.338772	1.073458	0	3.756972	0.004091	0	0.000898
Alameda	2021	MDV	Aggregate	Aggregate	Diesel	2697.743	113530.8	13150.05	0.047847	0	0	0.004921	0	0	0.002	0.01575	0.005143	0	0	0.008	0.03675	378.3717	0	0	0.000568	0	0	0.059475	0	0	0.01222	0	0	0	0	0	0	0.013912	0	0	0	0	0	0	0.205589	0	0	0.003577	0	0
Alameda	2021	MDV	Aggregate	Aggregate	Electricity	564.54	19409.87	2887.037	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2021	MH	Aggregate	Aggregate	Gasoline	2306.198	22007.17	230.7121	0.463642	0	0.332679	0.001716	0	0.000382	0.003	0.05586	0.001866	0	0.000416	0.012	0.13034	1778.813	0	26.37085	0.017282	0	0.033063	0.027484	0	0.034189	0.077615	0	0.142628	0.092394	2.282033	0.036986	0.098362	0.113255	0	0.15616	0.092394	2.282033	0.036986	0.098362	2.044209	0	3.169352	0.017603	0	0.000261
Alameda	2021	MH	Aggregate	Aggregate	Diesel	708.4044	7263.473	70.84044	4.249624	0	0	0.090234	0	0	0.004	0.05586	0.094314	0	0	0.016	0.13034	1027.491	0	0	0.005028	0	0	0.161507	0	0	0.108259	0	0	0	0	0	0	0.123245	0	0	0	0	0	0	0.385678	0	0	0.009713	0	0
Alameda	2021	MHDT	Aggregate	Aggregate	Gasoline	1608.989	86820.78	32192.65	0.577455	0.088364	0.385994	0.001227	0	0.000438	0.003	0.05586	0.001334	0	0.000476	0.012	0.13034	1774.888	544.414	40.17365	0.017956	0.261414	0.042037	0.027493	0.007344	0.029274	0.088549	1.010908	0.229883	0.090294	0.5302	0.019542	0.03484	0.129211	1.475115	0.251693	0.090294	0.5302	0.019542	0.03484	2.054761	15.09545	5.145314	0.017564	0.005387	0.000398
Alameda	2021	MHDT	Aggregate	Aggregate	Diesel	14124.74	906519.8	143441.2	2.89436	8.073621	1.483957	0.069497	0.022622	0	0.003	0.05586	0.07264	0.023645	0	0.012	0.13034	1065.377	899.7902	0	0.008088	0.005316	0	0.167462	0.141434	0	0.174124	0.114448	0	0	0	0	0	0.198226	0.130291	0	0	0	0	0	0.501116	2.577504	0	0.010065	0.008501	0
Alameda	2021	OBUS	Aggregate	Aggregate	Gasoline	592.6762	30222.58	11858.27	0.599082	0.064983	0.329608	0.000925	0	0.000235	0.003	0.05586	0.001006	0	0.000256	0.012	0.13034	1806.576	383.3188	27.18207	0.017871	0.19855	0.031652	0.028745	0.005472	0.025933	0.086411	0.745102	0.165119	0.029919	0.339006	0.01771	0.038232	0.12609	1.087252	0.180784	0.029919	0.339006	0.01771	0.038232	1.942819	5.767597	3.549061	0.017878	0.003793	0.000269
Alameda	2021	OBUS	Aggregate	Aggregate	Diesel	396.9961	29590.52	3870.884	3.766642	21.99786	1.547911	0.087607	0.084752	0	0.003	0.05586	0.091568	0.088584	0	0.012	0.13034	1276.156	2910.153	0	0.010774	0.059769	0	0.200594	0.457435	0	0.23196	1.286806	0	0	0	0	0	0.264069	1.46493	0	0	0	0	0	0.689166	13.84869	0	0.012056	0.027494	0
Alameda	2021	SBUS	Aggregate	Aggregate	Gasoline	79.47544	4047.704	317.9018	0.259624	0.92653	0.514219	0.001246	0	0.000562	0.002	0.3192	0.001356	0	0.000612	0.008	0.7448	840.7675	2516.613	47.18654	0.007258	2.492964	0.056776	0.017609	0.093851	0.051647	0.034324	10.64152	0.315158	0.029744	0.195349	0.005555	0.011752	0.050085	15.52808	0.345059	0.029744	0.195349	0.005555	0.011752	0.71049	82.24088	8.313234	0.00832	0.024904	0.000467
Alameda	2021	SBUS	Aggregate	Aggregate	Diesel	294.5183	9475.476	3398.701	5.686831	38.50073	1.101289	0.032342	0.041128	0	0.003	0.3192	0.033804	0.042988	0	0.012	0.7448	1107.62	3615.036	0	0.003613	0.012801	0	0.174102	0.568233	0	0.077788	0.275592	0	0	0	0	0	0.088555	0.31374	0	0	0	0	0	0.225696	7.125233	0	0.010464	0.034153	0
Alameda	2021	UBUS	Aggregate	Aggregate	Gasoline	8.849771	522.9744	35.39908	0.263189	0	0.722108	0.001322	0	0.000397	0.002651	0.049706	0.001438	0	0.000432	0.010605	0.115982	1884.462	0	68.65806	0.005536	0	0.084857	0.021995	0	0.063715	0.018323	0	0.36871	0.048518	0.288709	0.008641	0.0134	0.026737	0	0.403691	0.048518	0.288709	0.008641	0.0134	0.326365	0	5.910382	0.018648	0	0.000679
Alameda	2021	UBUS	Aggregate	Aggregate	Diesel	577.2036	68223.72	2308.814	1.616413	0	0	0.006249	0	0	0.007961	0.031549	0.006532	0	0	0.031845	0.073614	1641.223	0	0	0.118547	0	0	0.257977	0	0	0.001701	0	0	0	0	0	0	0.120994	0	0	0	0	0	0	0.195266	0	0	0.015515	0	0
Alameda	2021	UBUS	Aggregate	Aggregate	Natural Ga	110.9377	11688.85	443.7509	0.461781	0	0	0.00302	0	0	0.007688	0.032884	0.003156	0	0	0.030754	0.07673	1919.967	0	0	5.949724	0	0	0.391398	0	0	0.085026	0	0	0	0	0	0	6.072148	0	0	0	0	0	0	45.83132	0	0	0	0	0

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Alameda
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_REST	ROG_DIUR	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_RESTL	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Alameda	2022	HHDT	Aggregate	Aggregate	Gasoline	8.941515	987.2284	178.9018	3.348986	0	0.216392	0.000653	0	0.000329	0.005	0.02646	0.00071	0	0.000358	0.02	0.06174	2140.185	0	46.85962	0.084822	0	0.000205	0.137375	0	0.006869	0.400667	0	0.001071	0.088738	0.537463	0.023036	0.035192	0.584652	0	0.001172	0.088738	0.537463	0.023036	0.035192	34.02235	0	4.303386	0.021179	0	0.000464
Alameda	2022	HHDT	Aggregate	Aggregate	Diesel	14783.07	1924288	161484.3	3.39429	65.73321	2.029512	0.033443	0.032017	0	0.008922	0.026231	0.034956	0.033465	0	0.035688	0.061205	1451.61	12566.84	0	0.003749	0.23149	0	0.228173	1.975332	0	0.080721	4.983907	0	0	0	0	0	0.091895	5.673798	0	0	0	0	0	0.358494	68.45379	0	0.013714	0.118725	0
Alameda	2022	HHDT	Aggregate	Aggregate	Natural Ga	401.6658	16371.4	1566.496	1.139671	19.62483	0	0.004214	0.020563	0	0.009	0.02646	0.004405	0.021493	0	0.036	0.06174	3100.389	3919.05	0	3.328006	1.211259	0	0.632035	0.798924	0	0.112814	0.033009	0	0	0	0	0	3.470834	1.254071	0	0	0	0	0	10.92575	21.70469	0	0	0	0
Alameda	2022	LDA	Aggregate	Aggregate	Gasoline	655562.9	23671850	3067758	0.041014	0	0.209131	0.001357	0	0.001754	0.002	0.01575	0.001476	0	0.001908	0.008	0.03675	263.6152	0	56.20136	0.002521	0	0.057285	0.004598	0	0.027483	0.009838	0	0.262704	0.111673	0.235745	0.195395	0.199969	0.01435	0	0.287626	0.111673	0.235745	0.195395	0.199969	0.63507	0	2.40731	0.002609	0	0.000556
Alameda	2022	LDA	Aggregate	Aggregate	Diesel	7449.572	272435	34681.3	0.095144	0	0	0.008782	0	0	0.002	0.01575	0.009179	0	0	0.008	0.03675	211.3928	0	0	0.00081	0	0	0.033228	0	0	0.017445	0	0	0	0	0	0	0.01986	0	0	0	0	0	0	0.241474	0	0	0.001998	0	0
Alameda	2022	LDA	Aggregate	Aggregate	Electricity	18845.45	723655.3	92270.33	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2022	LDT1	Aggregate	Aggregate	Gasoline	67404.58	2377619	309278.2	0.092078	0	0.274333	0.00177	0	0.002307	0.002	0.01575	0.001925	0	0.002509	0.008	0.03675	306.3829	0	65.57057	0.004985	0	0.076525	0.007348	0	0.030294	0.02166	0	0.383997	0.194924	0.709945	0.366918	0.413949	0.031589	0	0.420426	0.194924	0.709945	0.366918	0.413949	1.043447	0	2.554171	0.003032	0	0.000649
Alameda	2022	LDT1	Aggregate	Aggregate	Diesel	42.40174	683.455	136.9951	1.125574	0	0	0.160894	0	0	0.002	0.01575	0.168169	0	0	0.008	0.03675	418.6313	0	0	0.009445	0	0	0.065803	0	0	0.203341	0	0	0	0	0	0	0.23149	0	0	0	0	0	0	1.169046	0	0	0.003958	0	0
Alameda	2022	LDT1	Aggregate	Aggregate	Electricity	441.5406	18294.72	2211.187	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2022	LDT2	Aggregate	Aggregate	Gasoline	214905	7709520	998671.2	0.075136	0	0.312762	0.001353	0	0.001698	0.002	0.01575	0.001471	0	0.001846	0.008	0.03675	332.0345	0	72.04411	0.003638	0	0.075085	0.00642	0	0.034464	0.014652	0	0.353054	0.133326	0.457684	0.288683	0.2765	0.021373	0	0.386549	0.133326	0.457684	0.288683	0.2765	0.822247	0	3.007862	0.003286	0	0.000713
Alameda	2022	LDT2	Aggregate	Aggregate	Diesel	1342.824	56264.23	6557.806	0.045436	0	0	0.005174	0	0	0.002	0.01575	0.005408	0	0	0.008	0.03675	282.9641	0	0	0.000735	0	0	0.044478	0	0	0.015827	0	0	0	0	0	0	0.018018	0	0	0	0	0	0	0.137752	0	0	0.002675	0	0
Alameda	2022	LDT2	Aggregate	Aggregate	Electricity	1945.894	62876.38	9794.744	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2022	LHDT1	Aggregate	Aggregate	Gasoline	15745.15	554242.4	234579.2	0.242183	0.038895	0.544696	0.002128	0	0.000383	0.002	0.03276	0.002314	0	0.000416	0.008	0.07644	1011.413	121.5208	19.0752	0.011383	0.123021	0.025415	0.014635	0.003162	0.042363	0.055757	0.445508	0.127981	0.123661	0.88224	0.025047	0.044332	0.08136	0.650084	0.140123	0.123661	0.88224	0.025047	0.044332	1.023333	3.750554	1.769102	0.010009	0.001203	0.000189
Alameda	2022	LHDT1	Aggregate	Aggregate	Diesel	9813.012	383467.2	123435.4	1.719325	2.067179	0	0.022532	0.027044	0	0.003	0.03276	0.02355	0.028267	0	0.012	0.07644	546.7123	133.6475	0	0.00746	0.005098	0	0.085936	0.021008	0	0.160616	0.10976	0	0	0	0	0	0.182851	0.124954	0	0	0	0	0	0.684557	0.909745	0	0.005168	0.001263	0
Alameda	2022	LHDT2	Aggregate	Aggregate	Gasoline	2407.031	83770.08	35861.18	0.243443	0.038851	0.540998	0.001947	0	0.000322	0.002	0.03822	0.002117	0	0.00035	0.008	0.08918	1158.615	140.0905	21.69724	0.008776	0.123665	0.024801	0.015468	0.003107	0.041533	0.039685	0.445297	0.124069	0.116207	0.793569	0.022634	0.039769	0.057909	0.649776	0.13584	0.116207	0.793569	0.022634	0.039769	0.728419	3.756817	1.752263	0.011465	0.001386	0.000215
Alameda	2022	LHDT2	Aggregate	Aggregate	Diesel	3673.427	143342.2	46207.09	1.393161	2.040212	0	0.022116	0.027123	0	0.003	0.03822	0.023116	0.02835	0	0.012	0.08918	612.3745	213.5035	0	0.007037	0.005098	0	0.096257	0.03356	0	0.151499	0.10976	0	0	0	0	0	0.172471	0.124954	0	0	0	0	0	0.642763	0.909745	0	0.005789	0.002018	0
Alameda	2022	MCY	Aggregate	Aggregate	Gasoline	29570.35	226867	59140.69	1.171073	0	0.273703	0.001911	0	0.003162	0.001	0.00504	0.002042	0	0.003352	0.004	0.01176	215.5819	0	62.20006	0.34547	0	0.261656	0.06712	0	0.015439	2.362179	0	2.007727	0.742754	2.284558	1.006282	1.615198	2.908465	0	2.184458	0.742754	2.284558	1.006282	1.615198	20.54202	0	9.069297	0.002133	0	0.000616
Alameda	2022	MDV	Aggregate	Aggregate	Gasoline	131728.8	4543407	606035.2	0.095818	0	0.391476	0.001451	0	0.00196	0.002	0.01575	0.001578	0	0.002131	0.008	0.03675	399.7146	0	87.84752	0.004552	0	0.092282	0.007686	0	0.037811	0.019118	0	0.46491	0.155296	0.50101	0.344071	0.326191	0.027844	0	0.509011	0.155296	0.50101	0.344071	0.326191	0.934455	0	3.555819	0.003956	0	0.000869
Alameda	2022	MDV	Aggregate	Aggregate	Diesel	2947.784	121177.4	14326.41	0.041499	0	0	0.004427	0	0	0.002	0.01575	0.004628	0	0	0.008	0.03675	367.6938	0	0	0.000523	0	0	0.057796	0	0	0.011251	0	0	0	0	0	0	0.012809	0	0	0	0	0	0	0.19954	0	0	0.003476	0	0
Alameda	2022	MDV	Aggregate	Aggregate	Electricity	891.5759	30124.06	4551.41	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
Alameda	2022	MH	Aggregate	Aggregate	Gasoline	2284.866	22127.24	228.578	0.4023	0	0.334687	0.001622	0	0.000362	0.003	0.05586	0.001765	0	0.000394	0.012	0.13034	1751.697	0	25.92563	0.014805	0	0.03234	0.024891	0	0.03517	0.065035	0	0.136836	0.084861	2.083417	0.034254	0.089687	0.094898	0	0.149818	0.084861	2.083417	0.034254	0.089687	1.666817	0	3.035707	0.017334	0	0.000257
Alameda	2022	MH	Aggregate	Aggregate	Diesel	740.5627	7563.352	74.05627	4.040934	0	0	0.082355	0	0	0.004	0.05586	0.086078	0	0	0.016	0.13034	1013.755	0	0	0.004841	0	0	0.159348	0	0	0.104215	0	0	0	0	0	0	0.118642	0	0	0	0	0	0	0.36657	0	0	0.009584	0	0
Alameda	2022	MHDT	Aggregate	Aggregate	Gasoline	1624.237	87728.64	32497.74	0.48158	0.08854	0.376653	0.00121	0	0.00042	0.003	0.05586	0.001316	0	0.000457	0.012	0.13034	1748.909	538.9732	39.33678	0.01488	0.264813	0.040459	0.023786	0.007557	0.029446	0.072715	1.013529	0.218194	0.085722	0.495973	0.018612	0.032436	0.106105	1.478939	0.238895	0.085722	0.495973	0.018612	0.032436	1.673983	15.12588	4.852177	0.017307	0.005334	0.000389
Alameda	2022	MHDT	Aggregate	Aggregate	Diesel	14395.6	933709.8	145556.5	2.122854	6.854641	1.735852	0.034331	0.013247	0	0.003	0.05586	0.035883	0.013846	0	0.012	0.13034	1034.844	881.2756	0	0.003833	0.004342	0	0.162663	0.138524	0	0.082532	0.093473	0	0	0	0	0	0.093956	0.106412	0	0	0	0	0	0.287961	2.569256	0	0.009777	0.008326	0
Alameda	2022	OBUS	Aggregate	Aggregate	Gasoline	583.6695	28951.23	11678.06	0.548147	0.064997	0.326706	0.000955	0	0.000238	0.003	0.05586	0.001039	0	0.000259	0.012	0.13034	1786.027	380.7547	26.90268	0.01637	0.198788	0.03109	0.026658	0.00551	0.025892	0.079178	0.745312	0.161846	0.030705	0.350589	0.018305	0.039172	0.115536	1.087557	0.177202	0.030705	0.350589	0.018305	0.039172	1.761414	5.768861	3.471414	0.017674	0.003768	0.000266
Alameda	2022	OBUS	Aggregate	Aggregate	Diesel	401.2977	30587.37	3897.156	2.698305	15.95143	1.871104	0.0382	0.028495	0	0.003	0.05586	0.039928	0.029783	0	0.012	0.13034	1241.741	2778.085	0	0.004735	0.046305	0	0.195184	0.436676	0	0.101948	0.996944	0	0	0	0	0	0.11606	1.134944	0	0	0	0	0	0.353096	13.32964	0	0.011731	0.026246	0
Alameda	2022	SBUS	Aggregate	Aggregate	Gasoline	91.69735	4619.754	366.7894	0.241149	0.92653	0.509732	0.00128	0	0.000578	0.002	0.3192	0.001392	0	0.000629	0.008	0.7448	829.3142	2485.053	46.39218	0.006588	2.492375	0.055552	0.016802	0.094428	0.051433	0.031001	10.64152	0.30815	0.029674	0.196737	0.005637	0.011902	0.045237	15.52808	0.337386	0.029674	0.196737	0.005637	0.011902	0.63574	82.24088	8.107255	0.008207	0.024592	0.000459
Alameda	2022	SBUS	Aggregate	Aggregate	Diesel	297.9675	9556.096	3438.504	5.53775	37.71015	1.140114	0.031768	0.03895	0	0.003	0.3192	0.033204	0.040711	0	0.012	0.7448	1100.454	3598.955	0	0.003568	0.0127	0	0.172976	0.565706	0	0.07681	0.273417	0	0	0	0	0	0.087442	0.311265	0	0	0	0	0	0.225461	7.274888	0	0.010397	0.034001	0
Alameda	2022	UBUS	Aggregate	Aggregate	Gasoline	8.853795	523.2122	35.41518	0.281429	0	0.747181	0.001322	0	0.000397	0.002651	0.049706	0.001438	0	0.000432	0.010605	0.115982	1884.367	0	68.67019	0.00545	0	0.088656	0.022986	0	0.064624	0.0181	0	0.386756	0.060443	0.372876	0.010666	0.016223	0.026411	0	0.423449	0.060443	0.372876	0.010666	0.016223	0.340252	0	5.882088	0.018647	0	0.00068
Alameda	2022	UBUS	Aggregate	Aggregate	Diesel	576.8548	68206.34	2307.419	1.608919	0	0	0.006242	0	0	0.007964	0.031534	0.006524	0	0	0.031858	0.073578	1641.502	0	0	0.118223	0	0	0.258021	0	0	0.001696	0	0	0	0	0	0	0.120663	0	0	0	0	0	0	0.194806	0	0	0.015518	0	0
Alameda	2022	UBUS	Aggregate	Aggregate	Natural Ga	111.6049	11743.06	446.4196	0.46118	0	0	0.003016	0	0	0.007671	0.032969	0.003153	0	0	0.030685	0.076927	1917.863	0	0	5.939595	0	0	0.390969	0	0	0.084882	0	0	0	0	0	0	6.061811	0	0	0	0	0	0	45.74457	0	0	0	0	0

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: Alameda
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM
Alameda	2030	HHDT	Aggregate	Aggregate	Gasoline	7.508268	897.1236	150.2254	2.951856	0	0.043386	0.000965	0	0.000297	0.005	0.02646
Alameda	2030	HHDT	Aggregate	Aggregate	Diesel	17692.09	2287753	192303.5	2.479483	57.39693	2.309583	0.023231	0.021229	0	0.008938	0.026278
Alameda	2030	HHDT	Aggregate	Aggregate	Natural Ga	518.9434	21157.73	2023.879	0.599841	18.39851	0	0.003174	0.01106	0	0.009	0.02646
Alameda	2030	LDA	Aggregate	Aggregate	Gasoline	749847.8	25193385	3506364	0.021182	0	0.139814	0.000917	0	0.001271	0.002	0.01575
Alameda	2030	LDA	Aggregate	Aggregate	Diesel	9011.337	308397.7	42428.72	0.020246	0	0	0.00206	0	0	0.002	0.01575
Alameda	2030	LDA	Aggregate	Aggregate	Electricity	37093.25	1407645	178375.4	0	0	0	0	0	0	0.002	0.01575
Alameda	2030	LDT1	Aggregate	Aggregate	Gasoline	76651.66	2536055	353221.7	0.034515	0	0.164477	0.001035	0	0.001421	0.002	0.01575
Alameda	2030	LDT1	Aggregate	Aggregate	Diesel	9.869442	332.4497	45.58553	0.099473	0	0	0.007686	0	0	0.002	0.01575
Alameda	2030	LDT1	Aggregate	Aggregate	Electricity	1759.966	71255.31	8646.989	0	0	0	0	0	0	0.002	0.01575
Alameda	2030	LDT2	Aggregate	Aggregate	Gasoline	236276.9	7897774	1094615	0.033346	0	0.180547	0.000952	0	0.001291	0.002	0.01575
Alameda	2030	LDT2	Aggregate	Aggregate	Diesel	2112.233	75679.04	10064.32	0.030133	0	0	0.003931	0	0	0.002	0.01575
Alameda	2030	LDT2	Aggregate	Aggregate	Electricity	6705.439	186298.2	32851.46	0	0	0	0	0	0	0.002	0.01575
Alameda	2030	LHDT1	Aggregate	Aggregate	Gasoline	15568.51	526419.8	231947.5	0.106302	0.031374	0.407331	0.002071	0	0.000332	0.002	0.03276
Alameda	2030	LHDT1	Aggregate	Aggregate	Diesel	12663.68	460234.1	159293.2	0.568626	1.374409	0	0.012272	0.02632	0	0.003	0.03276
Alameda	2030	LHDT2	Aggregate	Aggregate	Gasoline	2417.303	80206.67	36014.22	0.102165	0.031627	0.415702	0.001905	0	0.000283	0.002	0.03822
Alameda	2030	LHDT2	Aggregate	Aggregate	Diesel	5058.227	178435.4	63626.13	0.516269	1.37334	0	0.017809	0.026898	0	0.003	0.03822
Alameda	2030	MCY	Aggregate	Aggregate	Gasoline	33483.53	238681.7	66967.06	1.153924	0	0.272678	0.002078	0	0.002687	0.001	0.00504
Alameda	2030	MDV	Aggregate	Aggregate	Gasoline	146200.3	4795455	674959	0.035477	0	0.199148	0.000952	0	0.001336	0.002	0.01575
Alameda	2030	MDV	Aggregate	Aggregate	Diesel	4597.207	162725.2	21856.93	0.015891	0	0	0.001868	0	0	0.002	0.01575
Alameda	2030	MDV	Aggregate	Aggregate	Electricity	4486.449	127512	22150.71	0	0	0	0	0	0	0.002	0.01575
Alameda	2030	MH	Aggregate	Aggregate	Gasoline	2262.622	22982.83	226.3527	0.157475	0	0.343505	0.001292	0	0.000284	0.003	0.05586
Alameda	2030	MH	Aggregate	Aggregate	Diesel	976.3865	9348.927	97.63865	3.079469	0	0	0.044999	0	0	0.004	0.05586
Alameda	2030	MHDT	Aggregate	Aggregate	Gasoline	1830.669	96213.64	36628.02	0.14979	0.089323	0.335325	0.001246	0	0.000379	0.003	0.05586
Alameda	2030	MHDT	Aggregate	Aggregate	Diesel	19289	1117504	193581.9	1.57733	4.27592	2.167321	0.007238	0.001726	0	0.003	0.05586
Alameda	2030	OBUS	Aggregate	Aggregate	Gasoline	526.6392	23054.76	10537	0.261189	0.065148	0.318362	0.001164	0	0.000251	0.003	0.05586
Alameda	2030	OBUS	Aggregate	Aggregate	Diesel	549.47	37628.07	5298.918	1.88015	11.75232	2.21938	0.011054	0.003808	0	0.003	0.05586
Alameda	2030	SBUS	Aggregate	Aggregate	Gasoline	193.3513	9094.987	773.4053	0.164241	0.92653	0.48511	0.001395	0	0.000633	0.002	0.3192
Alameda	2030	SBUS	Aggregate	Aggregate	Diesel	311.3577	9791.731	3593.024	3.598678	28.50299	1.560231	0.022832	0.01954	0	0.003	0.3192
Alameda	2030	UBUS	Aggregate	Aggregate	Gasoline	8.885989	525.1147	35.54396	0.215637	0	0.577958	0.002127	0	0.000673	0.002651	0.049706
Alameda	2030	UBUS	Aggregate	Aggregate	Diesel	500.7107	57922.01	2002.843	0.775769	0	0	0.005484	0	0	0.007936	0.031674
Alameda	2030	UBUS	Aggregate	Aggregate	Natural Ga	202.3167	23403.91	809.2667	0.470455	0	0	0.003072	0	0	0.007936	0.031674

Vehicle Cat	Fuel	PM10_RUN	PM10_IDL	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_REST	ROG_DIUR
HHDT	Gasoline	0.00105	0	0.000323	0.02	0.06174	1753.669	0	41.64365	0.069955	0	0.000249	0.129455	0	0.001545	0.309064	0	0.001298	0.057401	0.294734	0.016182	0.023049
HHDT	Diesel	0.024281	0.022189	0	0.035752	0.061315	1182.71	10330.75	0	0.001047	0.222683	0	0.185906	1.62385	0	0.022547	4.794308	0	0	0	0	0
HHDT	Natural Ga	0.003317	0.01156	0	0.036	0.06174	2818.939	3546.555	0	3.139984	1.176216	0	0.574659	0.722989	0	0.067638	0.022266	0	0	0	0	0
LDA	Gasoline	0.000997	0	0.001382	0.008	0.03675	215.16	0	45.58182	0.001093	0	0.032462	0.003159	0	0.021155	0.003672	0	0.134521	0.071744	0.18958	0.124701	0.120471
LDA	Diesel	0.002153	0	0	0.008	0.03675	173.6512	0	0	0.000321	0	0	0.027296	0	0	0.006921	0	0	0	0	0	0
LDA	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405
LDT1	Gasoline	0.001126	0	0.001546	0.008	0.03675	252.5932	0	53.57931	0.001756	0	0.039079	0.003943	0	0.022758	0.006784	0	0.173577	0.107093	0.412927	0.216436	0.21988
LDT1	Diesel	0.008034	0	0	0.008	0.03675	330.0994	0	0	0.000931	0	0	0.051887	0	0	0.020038	0	0	0	0	0	0
LDT1	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405
LDT2	Gasoline	0.001036	0	0.001405	0.008	0.03675	258.5686	0	56.34365	0.001741	0	0.045062	0.003794	0	0.024225	0.006364	0	0.196491	0.095178	0.361168	0.237931	0.216525
LDT2	Diesel	0.004109	0	0	0.008	0.03675	232.1934	0	0	0.000658	0	0	0.036498	0	0	0.014158	0	0	0	0	0	0
LDT2	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405
LHDT1	Gasoline	0.002253	0	0.000361	0.008	0.07644	904.8503	111.4801	17.53504	0.004673	0.104512	0.016206	0.00732	0.002859	0.034968	0.02004	0.359789	0.07848	0.099187	0.815653	0.020687	0.033712
LHDT1	Diesel	0.012826	0.02751	0	0.012	0.07644	480.6823	118.9549	0	0.006229	0.005098	0	0.075557	0.018698	0	0.134117	0.10976	0	0	0	0	0
LHDT2	Gasoline	0.002072	0	0.000308	0.008	0.08918	1038.505	128.6125	19.90074	0.003494	0.10572	0.015806	0.007696	0.002828	0.035052	0.013486	0.363023	0.074968	0.081024	0.485709	0.018619	0.028426
LHDT2	Diesel	0.018615	0.028115	0	0.012	0.08918	540.3683	191.2769	0	0.006188	0.005098	0	0.084938	0.030066	0	0.133221	0.10976	0	0	0	0	0
MCY	Gasoline	0.002227	0	0.002871	0.004	0.01176	214.7024	0	59.83217	0.33397	0	0.251707	0.066346	0	0.015455	2.239465	0	1.916254	0.637848	1.553222	0.933217	1.560998
MDV	Gasoline	0.001035	0	0.001453	0.008	0.03675	311.1481	0	68.21792	0.001836	0	0.048956	0.003947	0	0.024989	0.006847	0	0.223299	0.108368	0.378067	0.285747	0.260306
MDV	Diesel	0.001953	0	0	0.008	0.03675	300.4163	0	0	0.000311	0	0	0.047221	0	0	0.006705	0	0	0	0	0	0
MDV	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.004021	0.014405
MH	Gasoline	0.001405	0	0.000308	0.012	0.13034	1531.522	0	22.57415	0.005285	0	0.028434	0.014575	0	0.039554	0.017329	0	0.107531	0.038684	0.729724	0.019002	0.042676
MH	Diesel	0.047034	0	0	0.016	0.13034	906.7892	0	0	0.003957	0	0	0.142535	0	0	0.085191	0	0	0	0	0	0
MHDT	Gasoline	0.001355	0	0.000412	0.012	0.13034	1533.851	486.355	33.74143	0.004642	0.277922	0.033388	0.010978	0.008395	0.030338	0.019657	1.025146	0.165281	0.060904	0.31972	0.014733	0.022343
MHDT	Diesel	0.007565	0.001804	0	0.012	0.13034	895.2284	752.0558	0	0.000483	0.003106	0	0.140717	0.118213	0	0.010393	0.066861	0	0	0	0	0
OBUS	Gasoline	0.001266	0	0.000273	0.012	0.13034	1572.295	351.886	24.45279	0.007304	0.200312	0.028101	0.015166	0.005711	0.026168	0.033104	0.747588	0.144187	0.03311	0.40545	0.019773	0.03992
OBUS	Diesel	0.011553	0.00398	0	0.012	0.13034	1062.088	2375.189	0	0.000603	0.039053	0	0.166945	0.373347	0	0.01299	0.840796	0	0	0	0	0
SBUS	Gasoline	0.001517	0	0.000689	0.008	0.7448	755.3343	2280.257	42.12946	0.003942	2.480901	0.051662	0.013345	0.097563	0.049419	0.017898	10.64152	0.286369	0.043984	0.305867	0.009038	0.018085
SBUS	Diesel	0.023865	0.020424	0	0.012	0.7448	1013.618	3371.391	0	0.002537	0.012313	0	0.159327	0.529936	0	0.054631	0.265095	0	0	0	0	0
UBUS	Gasoline	0.002313	0	0.000732	0.010605	0.115982	1598.357	0	58.26583	0.005138	0	0.071644	0.018689	0	0.055572	0.016879	0	0.306035	0.038556	0.227747	0.00714	0.011288
UBUS	Diesel	0.005732	0	0	0.031743	0.073906	1477.613	0	0	0.0739	0	0	0.23226	0	0	0.001066	0	0	0	0	0	0
UBUS	Natural Ga	0.003211	0	0	0.031743	0.073906	1950.276	0	0	6.095672	0	0	0.397577	0	0	0.087105	0	0	0	0	0	0

Vehicle Cat	Fuel	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_RESTL	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
HHDT	Gasoline	0.450986	0	0.001421	0.057401	0.294734	0.016182	0.023049	29.15857	0	4.585477	0.017354	0	0.000412
HHDT	Diesel	0.025668	5.457955	0	0	0	0	0	0.237998	70.63895	0	0.011174	0.0976	0
HHDT	Natural Ga	3.230532	1.206636	0	0	0	0	0	11.11608	21.97352	0	0	0	0
LDA	Gasoline	0.005358	0	0.147284	0.071744	0.18958	0.124701	0.120471	0.426557	0	1.862723	0.002129	0	0.000451
LDA	Diesel	0.007879	0	0	0	0	0	0	0.168383	0	0	0.001642	0	0
LDA	Electricity	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
LDT1	Gasoline	0.009899	0	0.190045	0.107093	0.412927	0.216436	0.21988	0.533858	0	1.932974	0.0025	0	0.00053
LDT1	Diesel	0.022811	0	0	0	0	0	0	0.195881	0	0	0.003121	0	0
LDT1	Electricity	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
LDT2	Gasoline	0.009287	0	0.215133	0.095178	0.361168	0.237931	0.216525	0.540877	0	2.400525	0.002559	0	0.000558
LDT2	Diesel	0.016118	0	0	0	0	0	0	0.142295	0	0	0.002195	0	0
LDT2	Electricity	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
LHDT1	Gasoline	0.029242	0.525003	0.085925	0.099187	0.815653	0.020687	0.033712	0.402649	3.767177	1.552286	0.008954	0.001103	0.000174
LHDT1	Diesel	0.152684	0.124954	0	0	0	0	0	0.589351	0.909745	0	0.004544	0.001125	0
LHDT2	Gasoline	0.019679	0.529722	0.082081	0.081024	0.485709	0.018619	0.028426	0.264556	3.775441	1.477927	0.010277	0.001273	0.000197
LHDT2	Diesel	0.151663	0.124954	0	0	0	0	0	0.587949	0.909745	0	0.005108	0.001808	0
MCY	Gasoline	2.801451	0	2.086656	0.637848	1.553222	0.933217	1.560998	18.54269	0	9.288609	0.002125	0	0.000592
MDV	Gasoline	0.009992	0	0.244485	0.108368	0.378067	0.285747	0.260306	0.545836	0	2.511687	0.003079	0	0.000675
MDV	Diesel	0.007633	0	0	0	0	0	0	0.171371	0	0	0.00284	0	0
MDV	Electricity	0	0	0	0.004888	0	0.004021	0.014405	0	0	0	0	0	0
MH	Gasoline	0.025287	0	0.117733	0.038684	0.729724	0.019002	0.042676	0.309249	0	2.378928	0.015156	0	0.000223
MH	Diesel	0.096984	0	0	0	0	0	0	0.274404	0	0	0.008572	0	0
MHDT	Gasoline	0.028683	1.495891	0.180962	0.060904	0.31972	0.014733	0.022343	0.404595	15.2609	3.453976	0.015179	0.004813	0.000334
MHDT	Diesel	0.011832	0.076116	0	0	0	0	0	0.114617	2.721675	0	0.008458	0.007105	0
OBUS	Gasoline	0.048306	1.090878	0.157867	0.03311	0.40545	0.019773	0.03992	0.698991	5.782509	2.995464	0.015559	0.003482	0.000242
OBUS	Diesel	0.014788	0.957182	0	0	0	0	0	0.144447	13.51067	0	0.010034	0.02244	0
SBUS	Gasoline	0.026116	15.52808	0.313538	0.043984	0.305867	0.009038	0.018085	0.343943	82.24088	7.283233	0.007475	0.022565	0.000417
SBUS	Diesel	0.062194	0.30179	0	0	0	0	0	0.192072	8.955923	0	0.009576	0.031851	0
UBUS	Gasoline	0.02463	0	0.335069	0.038556	0.227747	0.00714	0.011288	0.297719	0	5.83751	0.015817	0	0.000577
UBUS	Diesel	0.075432	0	0	0	0	0	0	0.124935	0	0	0.013969	0	0
UBUS	Natural Ga	6.221092	0	0	0	0	0	0	47.08111	0	0	0	0	0

Attachment 4: Health Risk Calculations for Construction and Operation

Construction Calculations

Head-Royce School Expansion - South Campus, Oakland, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0909	CON_DPM	181.8	0.05536	6.97E-03	32054.14	2.18E-07
2022	Construction	0.0090	CON_DPM	17.9	0.00546	6.88E-04	32054.14	2.15E-08
Total		***0.0999***		***199.8***	***0.0608***	***0.0077***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Head-Royce School Expansion - South Campus, Oakland, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	CON_FUG	0.0401	80.2	0.02440	3.07E-03	32,054.1	9.59E-08
2022	Construction	CON_FUG	0.0003	0.5	0.00015	1.92E-05	32,054.1	6.00E-10
Total			***0.0403***	***80.7***	***0.0246***	***0.0031***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0075	CON_DPM	15.0	0.00457	5.76E-04	32054.14	1.80E-08
2022	Construction	0.0009	CON_DPM	1.9	0.00057	7.14E-05	32054.14	2.23E-09
Total		***0.0084***		***16.9***	***0.0051***	***0.0006***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	CON_FUG	0.0094	18.8	0.00572	7.21E-04	32,054.1	2.25E-08
2022	Construction	CON_FUG	0.0003	0.5	0.00015	1.92E-05	32,054.1	6.00E-10
Total			***0.0096***	***19.3***	***0.0059***	***0.0007***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Head-Royce School Expansion - Pedestrian Tunnel, Oakland, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0270	CON_DPM	54.0	0.01642	2.07E-03	177.4527	1.17E-05
Total		***0.0270***		***54.0***	***0.0164***	***0.0021***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Head-Royce School Expansion - Pedestrian Tunnel, Oakland, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	CON_FUG	0.0005	1.0	0.00030	3.78E-05	177.5	2.13E-07
Total			***0.0005***	***1.0***	***0.0003***	***0.0000***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0020	CON_DPM	3.9	0.00119	1.50E-04	177.4527	8.46E-07
Total		***0.0020***		***3.9***	***0.0012***	***0.0002***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	CON_FUG	0.0001	0.3	0.00008	1.01E-05	177.5	5.71E-08
Total			***0.0001***	***0.3***	***0.0001***	***0.0000***		

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Head-Royce School Expansion, Oakland, CA - Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations Exhaust PM10/DPM (μg/m^3)	Maximum Concentrations Fugitive PM2.5 (μg/m^3)	Cancer Risk (per million) Infant/Child	Hazard Index (-)	Maximum Annual PM2.5 Concentration (μg/m^3)
2021	0.1520	0.1062	27.03	0.03	0.26
2022	0.0138	0.0007	2.27	0.00	0.01
Total	-	-	**29.3**	-	-
Maximum	0.1520	0.1062	**-**	**0.03**	**0.26**

Maximum Impacts at MEI Location - With Mitigation

Emissions Year	Maximum Concentrations Exhaust PM10/DPM (μg/m^3)	Maximum Concentrations Fugitive PM2.5 (μg/m^3)	Cancer Risk (per million) Infant/Child	Hazard Index (-)	Maximum Annual PM2.5 Concentration (μg/m^3)
2021	0.0124	0.0249	2.21	0.00	0.04
2022	0.0014	0.0007	0.23	0.00	0.00
Total	-	-	**2.4**	-	-
Maximum	0.0124	0.0249	**-**	**0.00**	**0.04**

- Tier 4 Interim Engine Mitigation

Head-Royce School Expansion, Oakland, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			**Adult**
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			**Infant/Child**	**Adult - Exposure Information**			**Adult**			
	Exposure				**Age**	**Cancer**	**Modeled**		**Age**	**Cancer**	**Maximum**		
Exposure	**Duration**		**DPM Conc (ug/m3)**		**Sensitivity**	**Risk**	**DPM Conc (ug/m3)**		**Sensitivity**	**Risk**	**Hazard**	**Fugitive**	**Total**
Year	**(years)**	**Age**	**Year**	**Annual**	**Factor**	**(per million)**	**Year**	**Annual**	**Factor**	**(per million)**	**Index**	**PM2.5**	**PM2.5**
0	0.25	-0.25 - 0*	2021	0.1520	10	2.07	2021	0.1520	-	-			
1	1	0 - 1	2021	0.1520	10	24.96	2021	0.1520	1	0.44	0.030	0.1062	0.2581
2	1	1 - 2	2022	0.0138	10	2.27	2022	0.0138	1	0.04	0.003	0.0007	0.0145
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**29.3**				**0.48**			

* Third trimester of pregnancy

1710 Moorpark Ave, San Jose, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum		
	Exposure				Age	Cancer	Modeled		Age	Cancer			
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2021	0.0124	10	0.17	2021	0.0124	-	-			
1	1	0 - 1	2021	0.0124	10	2.04	2021	0.0124	1	0.04	0.002	0.0249	0.0373
2	1	1 - 2	2022	0.0014	10	0.23	2022	0.0014	1	0.00	0.000	0.0007	0.0021
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**2.4**				**0.04**			

* Third trimester of pregnancy

Head-Royce School Expansion, Oakland, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at KSS Immersion Preschool (2 - 6 years old) - 1.0 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/8 hrs) x (7 days/7 days) = 3
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	**School Child**	**Adult**
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	350	250
AT =	70	70	70
SAF =	3.00	3.00	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Child - Exposure Information			**Child**		**Maximum**	
Exposure Year	**Exposure Duration (years)**	**Age**	**DPM Conc (ug/m3) Year**	**Annual**	**Age* Sensitivity Factor**	**Cancer Risk (per million)**	**Hazard Index**	**Fugitive PM2.5**	**Total PM2.5**
1	1	2 - 3	2021	0.1104	3	7.8	0.022	0.0558	0.1662
2	1	3 - 4	2022	0.0091	3	0.6	0.002	0.0004	0.0095
Total Increased Cancer Risk						**8.4**			

* Children assumed to be 2 - 6 years of age

Head-Royce School Expansion, Oakland, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at KSS Immersion Preschool (2 - 6 years old) - 4.0 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/8 hrs) x (7 days/7 days) = 3
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	**School Child**	**Adult**
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	350	250
AT =	70	70	70
SAF =	3.00	3.00	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	**Exposure Duration (years)**	**Age**	**Child - Exposure Information: DPM Conc (ug/m3) Year**	**Annual**	**Age* Sensitivity Factor**	**Child Cancer Risk (per million)**	**Hazard Index**	**Maximum Fugitive PM2.5**	**Total PM2.5**
1	1	2 - 3	2021	0.1050	3	7.4	0.021	0.0434	0.1484
2	1	3 - 4	2022	0.0088	3	0.6	0.002	0.0000	0.0088
Total Increased Cancer Risk						**8.0**			

* Children assumed to be 2 - 6 years of age

Head-Royce School Expansion, Oakland, CA - Construction Impacts - With Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at KSS Immersion Preschool (2 - 6 years old) - 1.0 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/8 hrs) x (7 days/7 days) = 3
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	**School Child**	**Adult**
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	350	250
AT =	70	70	70
SAF =	3.00	3.00	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	**Exposure Duration (years)**	**Age**	**Child - Exposure Information** DPM Conc (ug/m3) Year	Annual	**Age* Sensitivity Factor**	**Child Cancer Risk (per million)**
1	1	2 - 3	2021	0.0089	3	0.6
2	1	3 - 4	2022	0.0010	3	0.1
Total Increased Cancer Risk						**0.7**

* Children assumed to be 2 - 6 years of age

Hazard Index	**Maximum** Fugitive PM2.5	**Total PM2.5**
0.002	0.0131	0.0220
0.000	0.0004	0.0013

Head-Royce School Expansion, Oakland, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Head-Royce North Campus (5 - 18 years old) - 1.0 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/8 hrs) x (7 days/7 days) = 3
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	School Child	Adult
Age -->	0 - <2	2 - <16	16 - 30
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	350	250
AT =	70	70	70
SAF =	3.00	3.00	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	5 - 6	2021	0.0814	3	5.7
2	1	6 - 7	2022	0.0035	3	0.2
Total Increased Cancer Risk						**6.0**

* Children assumed to be 5 - 18 years of age

Maximum: Hazard Index	Fugitive PM2.5	Total PM2.5
0.016	0.0217	0.1032
0.001	0.0001	0.0036

Head-Royce School Expansion, Oakland, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Head-Royce North Campus (5 - 18 years old) - 4.0 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
SAF = Student Adjustment Factor (unitless)
= (24 hrs/8 hrs) x (7 days/7 days) = 3
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	School Child	Adult
Age -->	0 - <2	2 - <16	16 - 30
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	350	250
AT =	70	70	70
SAF =	3.00	3.00	1.00

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	5 - 6	2021	0.0807	3	5.7
2	1	6 - 7	2022	0.0037	3	0.3
Total Increased Cancer Risk						5.9

* Children assumed to be 5 - 18 years of age

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.016	0.0219	0.1025
0.001	0.0001	0.0038

Project Roadway Emissions and Health Risk Calculations

File Name: Head Royce - Alameda (SF) - 2022 - Annual.EF
CT-EMFAC2017
Version: 1.0.2.27401
Run Date: 7/17/2020 13:00
Area: Alameda (SF)
Analysis Year: 2022
Season: Annual

==

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.006	0.452	0.548
Truck 2	0.014	0.959	0.03
Non-Truck	0.98	0.014	0.965

==

Road Type:	Local Urban	
Silt Loading Factor:	CARB	0.32 g/m2
Precipitation Correction:	CARB	P = 61 days N = 365 days

==

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph
PM2.5	0.009992	0.006535	0.004439	0.003173	0.002416	0.001952
TOG	0.218437	0.142894	0.096422	0.068557	0.051911	0.041404
Diesel PM	0.001211	0.000999	0.000755	0.000588	0.000504	0.000462

Fleet Average Fuel Consumption (gallons/veh-mile)

Fuel Type	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph
Gasoline	0.078632	0.063623	0.052051	0.043392	0.037068	0.032935
Diesel	0.00585	0.004902	0.003882	0.003323	0.002911	0.00258

==

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.500354

==

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.00208

==

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016317

==

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.115216

===========================END====================================

Head-Royce School - Offsite Residential
Project Operation - Loop Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_LOOP	Loop Road	Clockwise	1	483.2	0.30	9.7	31.7	3.4	15	2,250
									Total	2,250

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	15			
Emissions per Vehicle (g/VMT)	0.00076			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_LOOP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	14.04%	316	1.99E-05	17	14.04%	316	1.99E-05
2	0.00%	0	0.00E+00	10	2.63%	59	3.73E-06	18	14.04%	316	1.99E-05
3	0.00%	0	0.00E+00	11	2.63%	59	3.73E-06	19	2.63%	59	3.73E-06
4	0.00%	0	0.00E+00	12	2.63%	59	3.73E-06	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	59	3.73E-06	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	59	3.73E-06	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	316	1.99E-05	23	0.00%	0	0.00E+00
8	14.04%	316	1.99E-05	16	14.04%	316	1.99E-05	24	0.00%	0	0.00E+00
								Total		2,250	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	14.04%	0	0.00E+00	17	14.04%	0	0.00E+00
2	0.00%	0	0.00E+00	10	2.63%	0	0.00E+00	18	14.04%	0	0.00E+00
3	0.00%	0	0.00E+00	11	2.63%	0	0.00E+00	19	2.63%	0	0.00E+00
4	0.00%	0	0.00E+00	12	2.63%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	0	0.00E+00	23	0.00%	0	0.00E+00
8	14.04%	0	0.00E+00	16	14.04%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Loop Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_LOOP	Loop Road	Clockwise	1	483.2	0.30	9.7	32	1.3	15	2,250
									Total	2,250

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	15			
Emissions per Vehicle (g/VMT)	0.004439			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_LOOP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	14.04%	316	1.17E-04	17	14.04%	316	1.17E-04
2	0.00%	0	0.00E+00	10	2.63%	59	2.19E-05	18	14.04%	316	1.17E-04
3	0.00%	0	0.00E+00	11	2.63%	59	2.19E-05	19	2.63%	59	2.19E-05
4	0.00%	0	0.00E+00	12	2.63%	59	2.19E-05	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	59	2.19E-05	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	59	2.19E-05	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	316	1.17E-04	23	0.00%	0	0.00E+00
8	14.04%	316	1.17E-04	16	14.04%	316	1.17E-04	24	0.00%	0	0.00E+00
								Total		2,250	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	14.04%	0	0.00E+00	17	14.04%	0	0.00E+00
2	0.00%	0	0.00E+00	10	2.63%	0	0.00E+00	18	14.04%	0	0.00E+00
3	0.00%	0	0.00E+00	11	2.63%	0	0.00E+00	19	2.63%	0	0.00E+00
4	0.00%	0	0.00E+00	12	2.63%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	0	0.00E+00	23	0.00%	0	0.00E+00
8	14.04%	0	0.00E+00	16	14.04%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Loop Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_LOOP	Loop Road	Clockwise	1	483.2	0.30	9.7	32	1.3	15	2,250
									Total	2,250

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	15			
Emissions per Vehicle (g/VMT)	0.09642			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_LOOP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	14.04%	316	2.54E-03	17	14.04%	316	2.54E-03
2	0.00%	0	0.00E+00	10	2.63%	59	4.76E-04	18	14.04%	316	2.54E-03
3	0.00%	0	0.00E+00	11	2.63%	59	4.76E-04	19	2.63%	59	4.76E-04
4	0.00%	0	0.00E+00	12	2.63%	59	4.76E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	59	4.76E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	59	4.76E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	316	2.54E-03	23	0.00%	0	0.00E+00
8	14.04%	316	2.54E-03	16	14.04%	316	2.54E-03	24	0.00%	0	0.00E+00
								Total		2,250	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	14.04%	0	0.00E+00	17	14.04%	0	0.00E+00
2	0.00%	0	0.00E+00	10	2.63%	0	0.00E+00	18	14.04%	0	0.00E+00
3	0.00%	0	0.00E+00	11	2.63%	0	0.00E+00	19	2.63%	0	0.00E+00
4	0.00%	0	0.00E+00	12	2.63%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	0	0.00E+00	23	0.00%	0	0.00E+00
8	14.04%	0	0.00E+00	16	14.04%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Loop Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_LOOP	Loop Road	Clockwise	1	483.2	0.30	9.7	32	1.3	15	2,250
									Total	2,250

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	15			
Emissions per Vehicle per Hour (g/hour)	1.50035			
Emissions per Vehicle per Mile (g/VMT)	0.10002			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_LOOP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	14.04%	316	2.63E-03	17	14.04%	316	2.63E-03
2	0.00%	0	0.00E+00	10	2.63%	59	4.94E-04	18	14.04%	316	2.63E-03
3	0.00%	0	0.00E+00	11	2.63%	59	4.94E-04	19	2.63%	59	4.94E-04
4	0.00%	0	0.00E+00	12	2.63%	59	4.94E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	59	4.94E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	59	4.94E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	316	2.63E-03	23	0.00%	0	0.00E+00
8	14.04%	316	2.63E-03	16	14.04%	316	2.63E-03	24	0.00%	0	0.00E+00
								Total		2,250	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	14.04%	0	0.00E+00	17	14.04%	0	0.00E+00
2	0.00%	0	0.00E+00	10	2.63%	0	0.00E+00	18	14.04%	0	0.00E+00
3	0.00%	0	0.00E+00	11	2.63%	0	0.00E+00	19	2.63%	0	0.00E+00
4	0.00%	0	0.00E+00	12	2.63%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	0	0.00E+00	23	0.00%	0	0.00E+00
8	14.04%	0	0.00E+00	16	14.04%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Loop Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_LOOP	Loop Road	Clockwise	1	483.2	0.30	9.7	32	1.3	15	2,250
									Total	2,250

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	15			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00208			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01632			
Road Dust - Emissions per Vehicle (g/VMT)	0.11522			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.13361			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_LOOP

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	14.04%	316	3.52E-03	17	14.04%	316	3.52E-03
2	0.00%	0	0.00E+00	10	2.63%	59	6.59E-04	18	14.04%	316	3.52E-03
3	0.00%	0	0.00E+00	11	2.63%	59	6.59E-04	19	2.63%	59	6.59E-04
4	0.00%	0	0.00E+00	12	2.63%	59	6.59E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	59	6.59E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	59	6.59E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	316	3.52E-03	23	0.00%	0	0.00E+00
8	14.04%	316	3.52E-03	16	14.04%	316	3.52E-03	24	0.00%	0	0.00E+00
								Total		2,250	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	14.04%	0	0.00E+00	17	14.04%	0	0.00E+00
2	0.00%	0	0.00E+00	10	2.63%	0	0.00E+00	18	14.04%	0	0.00E+00
3	0.00%	0	0.00E+00	11	2.63%	0	0.00E+00	19	2.63%	0	0.00E+00
4	0.00%	0	0.00E+00	12	2.63%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	2.63%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	2.63%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	14.04%	0	0.00E+00	23	0.00%	0	0.00E+00
8	14.04%	0	0.00E+00	16	14.04%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Upper School Dropoff/Pickup
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_UPPER	Upper School Dropoff/Pickup	Counter-Clockwise	1	278.9	0.17	9.7	31.7	3.4	5	1,184
									Total	1,184

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.00121			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_UPPER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	11.67%	138	8.05E-06	17	11.67%	138	8.05E-06
2	0.00%	0	0.00E+00	10	5.00%	59	3.45E-06	18	11.67%	138	8.05E-06
3	0.00%	0	0.00E+00	11	5.00%	59	3.45E-06	19	5.00%	59	3.45E-06
4	0.00%	0	0.00E+00	12	5.00%	59	3.45E-06	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	59	3.45E-06	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	59	3.45E-06	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	138	8.05E-06	23	0.00%	0	0.00E+00
8	11.67%	138	8.05E-06	16	11.67%	138	8.05E-06	24	0.00%	0	0.00E+00
								Total		1,184	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	11.67%	0	0.00E+00	17	11.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	5.00%	0	0.00E+00	18	11.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	5.00%	0	0.00E+00	19	5.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	5.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	11.67%	0	0.00E+00	16	11.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Upper School Dropoff/Pickup
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_UPPER	Upper School Dropoff/Pickup	Counter-Clockwise	1	278.9	0.17	9.7	32	1.3	5	1,184
									Total	1,184

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.009992			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_UPPER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	11.67%	138	6.64E-05	17	11.67%	138	6.64E-05
2	0.00%	0	0.00E+00	10	5.00%	59	2.85E-05	18	11.67%	138	6.64E-05
3	0.00%	0	0.00E+00	11	5.00%	59	2.85E-05	19	5.00%	59	2.85E-05
4	0.00%	0	0.00E+00	12	5.00%	59	2.85E-05	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	59	2.85E-05	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	59	2.85E-05	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	138	6.64E-05	23	0.00%	0	0.00E+00
8	11.67%	138	6.64E-05	16	11.67%	138	6.64E-05	24	0.00%	0	0.00E+00
								Total		1,184	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	11.67%	0	0.00E+00	17	11.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	5.00%	0	0.00E+00	18	11.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	5.00%	0	0.00E+00	19	5.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	5.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	11.67%	0	0.00E+00	16	11.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Upper School Dropoff/Pickup
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_UPPER	Upper School Dropoff/Pickup	Counter-Clockwise	1	278.9	0.17	9.7	32	1.3	5	1,184
									Total	1,184

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.21844			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_UPPER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	11.67%	138	1.45E-03	17	11.67%	138	1.45E-03
2	0.00%	0	0.00E+00	10	5.00%	59	6.22E-04	18	11.67%	138	1.45E-03
3	0.00%	0	0.00E+00	11	5.00%	59	6.22E-04	19	5.00%	59	6.22E-04
4	0.00%	0	0.00E+00	12	5.00%	59	6.22E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	59	6.22E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	59	6.22E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	138	1.45E-03	23	0.00%	0	0.00E+00
8	11.67%	138	1.45E-03	16	11.67%	138	1.45E-03	24	0.00%	0	0.00E+00
								Total		1,184	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	11.67%	0	0.00E+00	17	11.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	5.00%	0	0.00E+00	18	11.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	5.00%	0	0.00E+00	19	5.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	5.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	11.67%	0	0.00E+00	16	11.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Upper School Dropoff/Pickup
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_UPPER	Upper School Dropoff/Pickup	Counter-Clockwise	1	278.9	0.17	9.7	32	1.3	5	1,184
									Total	1,184

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle per Hour (g/hour)	1.50035			
Emissions per Vehicle per Mile (g/VMT)	0.30007			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_UPPER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	11.67%	138	2.00E-03	17	11.67%	138	2.00E-03
2	0.00%	0	0.00E+00	10	5.00%	59	8.55E-04	18	11.67%	138	2.00E-03
3	0.00%	0	0.00E+00	11	5.00%	59	8.55E-04	19	5.00%	59	8.55E-04
4	0.00%	0	0.00E+00	12	5.00%	59	8.55E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	59	8.55E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	59	8.55E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	138	2.00E-03	23	0.00%	0	0.00E+00
8	11.67%	138	2.00E-03	16	11.67%	138	2.00E-03	24	0.00%	0	0.00E+00
								Total		1,184	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	11.67%	0	0.00E+00	17	11.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	5.00%	0	0.00E+00	18	11.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	5.00%	0	0.00E+00	19	5.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	5.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	11.67%	0	0.00E+00	16	11.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Upper School Dropoff/Pickup
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_UPPER	Upper School Dropoff/Pickup	Counter-Clockwise	1	278.9	0.17	9.7	32	1.3	5	1,184
									Total	1,184

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00208			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01632			
Road Dust - Emissions per Vehicle (g/VMT)	0.11522			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.13361			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_UPPER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	11.67%	138	8.89E-04	17	11.67%	138	8.89E-04
2	0.00%	0	0.00E+00	10	5.00%	59	3.81E-04	18	11.67%	138	8.89E-04
3	0.00%	0	0.00E+00	11	5.00%	59	3.81E-04	19	5.00%	59	3.81E-04
4	0.00%	0	0.00E+00	12	5.00%	59	3.81E-04	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	59	3.81E-04	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	59	3.81E-04	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	138	8.89E-04	23	0.00%	0	0.00E+00
8	11.67%	138	8.89E-04	16	11.67%	138	8.89E-04	24	0.00%	0	0.00E+00
								Total		1,184	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	11.67%	0	0.00E+00	17	11.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	5.00%	0	0.00E+00	18	11.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	5.00%	0	0.00E+00	19	5.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	5.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	5.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	5.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	11.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	11.67%	0	0.00E+00	16	11.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Lower/Middle School Dropoff/Pickup
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions 9.6576
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
DPM_LOWER	Lower/Middle School Dropoff/Pickup	Counter-Clockwise	1	84.2	0.05	9.7	31.7	3.4	5	1,066
									Total	1,066

Emission Factors

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.00121			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_LOWER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	16.67%	178	3.13E-06	17	16.67%	178	3.13E-06
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	178	3.13E-06
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	178	3.13E-06	23	0.00%	0	0.00E+00
8	16.67%	178	3.13E-06	16	16.67%	178	3.13E-06	24	0.00%	0	0.00E+00
								Total		1,066	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	16.67%	0	0.00E+00	17	16.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	16.67%	0	0.00E+00	16	16.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Lower/Middle School Dropoff/Pickup
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
PM2.5_LOWER	Lower/Middle School Dropoff/Pickup	Counter-Clockwise	1	84.2	0.05	9.7	32	1.3	5	1,066
									Total	1,066

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.009992			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM2.5_LOWER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	16.67%	178	2.58E-05	17	16.67%	178	2.58E-05
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	178	2.58E-05
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	178	2.58E-05	23	0.00%	0	0.00E+00
8	16.67%	178	2.58E-05	16	16.67%	178	2.58E-05	24	0.00%	0	0.00E+00
								Total		1,066	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM2.5_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	16.67%	0	0.00E+00	17	16.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	16.67%	0	0.00E+00	16	16.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Lower/Middle School Dropoff/Pickup
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEXH_LOWER	Lower/Middle School Dropoff/Pickup	Counter-Clockwise	1	84.2	0.05	9.7	32	1.3	5	1,066
									Total	1,066

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle (g/VMT)	0.21844			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_LOWER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	16.67%	178	5.64E-04	17	16.67%	178	5.64E-04
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	178	5.64E-04
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	178	5.64E-04	23	0.00%	0	0.00E+00
8	16.67%	178	5.64E-04	16	16.67%	178	5.64E-04	24	0.00%	0	0.00E+00
								Total		1,066	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	16.67%	0	0.00E+00	17	16.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	16.67%	0	0.00E+00	16	16.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Lower/Middle School Dropoff/Pickup
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
TEVAP_LOWER	Lower/Middle School Dropoff/Pickup	Counter-Clockwise	1	84.2	0.05	9.7	32	1.3	5	1,066
									Total	1,066

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Emissions per Vehicle per Hour (g/hour)	1.50035			
Emissions per Vehicle per Mile (g/VMT)	0.30007			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_LOWER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	16.67%	178	7.75E-04	17	16.67%	178	7.75E-04
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	178	7.75E-04
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	178	7.75E-04	23	0.00%	0	0.00E+00
8	16.67%	178	7.75E-04	16	16.67%	178	7.75E-04	24	0.00%	0	0.00E+00
								Total		1,066	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	16.67%	0	0.00E+00	17	16.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	16.67%	0	0.00E+00	16	16.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School - Offsite Residential
Project Operation - Lower/Middle School Dropoff/Pickup
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day
FUG_LOWER	Lower/Middle School Dropoff/Pickup	Counter-Clockwise	1	84.2	0.05	9.7	32	1.3	5	1,066
									Total	1,066

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	5			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00208			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01632			
Road Dust - Emissions per Vehicle (g/VMT)	0.11522			
otal Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.13361			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_LOWER

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	0.00%	0	0.00E+00	9	16.67%	178	3.45E-04	17	16.67%	178	3.45E-04
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	178	3.45E-04
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	178	3.45E-04	23	0.00%	0	0.00E+00
8	16.67%	178	3.45E-04	16	16.67%	178	3.45E-04	24	0.00%	0	0.00E+00
								Total		1,066	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_WB_WSC

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	0.00%	0	0.00E+00	9	16.67%	0	0.00E+00	17	16.67%	0	0.00E+00
2	0.00%	0	0.00E+00	10	0.00%	0	0.00E+00	18	16.67%	0	0.00E+00
3	0.00%	0	0.00E+00	11	0.00%	0	0.00E+00	19	0.00%	0	0.00E+00
4	0.00%	0	0.00E+00	12	0.00%	0	0.00E+00	20	0.00%	0	0.00E+00
5	0.00%	0	0.00E+00	13	0.00%	0	0.00E+00	21	0.00%	0	0.00E+00
6	0.00%	0	0.00E+00	14	0.00%	0	0.00E+00	22	0.00%	0	0.00E+00
7	0.00%	0	0.00E+00	15	16.67%	0	0.00E+00	23	0.00%	0	0.00E+00
8	16.67%	0	0.00E+00	16	16.67%	0	0.00E+00	24	0.00%	0	0.00E+00
								Total		0	

Head-Royce School Expansion, Oakland, CA - Project Traffic TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction MEI Receptor

Emission Year	2022
Receptor Information	
Number of Receptors	1 at construction MEI location
Receptor Height	1.5 meters
Receptor Distances	Construction MEI location
Meteorological Conditions	
BAAQMD San Jose Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Winf Direction	Variable

Loop Road
Construction MEI - Maximum Concentrations

Meteorological	2022 Concentration (µg/m3)*					
Data Years	DPM	Exhaust TOG	Evaporative TOG	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0007	0.08985	0.09282	0.12849	0.12436	0.00413

Upper School Dropoff/Pickup
Construction MEI - Maximum Concentrations

Meteorological	2022 Concentration (µg/m3)*					
Data Years	DPM	Exhaust TOG	Evaporative TOG	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.0001	0.01887	0.02594	0.01238	0.01152	0.00086

Lower/Middle School Dropoff/Pickup
Construction MEI - Maximum Concentrations

Meteorological	2022 Concentration (µg/m3)*					
Data Years	DPM	Exhaust TOG	Evaporative TOG	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.00003	0.00515	0.00707	0.00338	0.00315	0.00023

Combined Project Traffic Concentrations
Construction MEI - Maximum Concentrations

Meteorological	2022 Concentration (µg/m3)*					
Data Years	DPM	Exhaust TOG	Evaporative TOG	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.00083	0.11387	0.12583	0.14425	0.13903	0.00522

Head-Royce School Expansion, Oakland, CA
Maximum DPM Cancer Risk Calculations From - Project Traffic Emissions
Impacts at MEI - 1.5m MEI Receptor Heights

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2021-2022	10	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.000
1	1	0 - 1	2021-2022	10	0.0000	0.0000	0.0000	0.000	0.000	0.0000	0.000
2	1	1 - 2	2022	10	0.0008	0.1139	0.1258	0.136	0.107	0.0070	0.250
3	1	2 - 3	2023	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
4	1	3 - 4	2024	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
5	1	4 - 5	2025	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
6	1	5 - 6	2026	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
7	1	6 - 7	2027	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
8	1	7 - 8	2028	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
9	1	8 - 9	2029	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
10	1	9 - 10	2030	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
11	1	10 - 11	2031	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
12	1	11 - 12	2032	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
13	1	12 - 13	2033	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
14	1	13 - 14	2034	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
15	1	14 - 15	2035	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
16	1	15 - 16	2036	3	0.0008	0.1139	0.1258	0.021	0.017	0.0011	0.039
17	1	16-17	2037	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
18	1	17-18	2038	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
19	1	18-19	2039	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
20	1	19-20	2040	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
21	1	20-21	2041	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
22	1	21-22	2042	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
23	1	22-23	2043	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
24	1	23-24	2044	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
25	1	24-25	2045	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
26	1	25-26	2046	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
27	1	26-27	2047	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
28	1	27-28	2048	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
29	1	28-29	2049	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
30	1	29-30	2050	1	0.0008	0.1139	0.1258	0.002	0.002	0.0001	0.004
Total Increased Cancer Risk								0.47	0.368	0.024	**0.9**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.0002	0.14	0.14

Head-Royce School Expansion, Oakland, CA
Maximum DPM Cancer Risk Calculations From - Project Traffic Emissions
Impacts at KSS Immersion Preschool - 1m Receptor Height

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)$^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors (mg/kg-day)$^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	3.00	3.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)						
Exposure Year	**Exposure Duration (years)**	**Age**	**Year**	**Age Sensitivity Factor**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**DPM**	**Exhaust TOG**	**Evaporative TOG**	**TOTAL**	**Hazard Index**	**Maximum Fugitive PM2.5**	**Total PM2.5**
1	1	2 - 3	2022	3	0.0008	0.1270	0.1538	0.065	0.056	0.0040	0.125	0.0002	0.12	0.13
2	1	3 - 4	2023	3	0.0008	0.1270	0.1538	0.065	0.056	0.0040	0.125			
3	1	4 - 5	2024	3	0.0008	0.1270	0.1538	0.065	0.056	0.0040	0.125			
4	1	5 - 6	2025	3	0.0008	0.1270	0.1538	0.065	0.056	0.0040	0.125			
Total Increased Cancer Risk								0.26	0.225	0.016	**0.5**			

* Third trimester of pregnancy

Project Generator Emissions and Health Risk Calculations

Head-Royce School Expansion, Oakland, CA

Standby Emergency Generator Impacts

Off-site Sensitive Receptors

Receptor height = 1.5 meters residential, 1 meter school

DPM Emission Rates		
	DPM Emissions per Generator	
	Max Daily	Annual
Source Type	(lb/day)	(lb/year)
2, 150-kW 201- hp Generator	0.013	4.86
CalEEMod DPM Emissions	0.00243	tons/year

Modeling Information				
Model	AERMOD			
Source	Diesel Generator Engine			
Source Type	Point			
Meteorological Data	2013-2017 Oakland Airport Meterological Data			
Point Source Stack Parameters				
Generator Engine Size (hp)	201			
Stack Height (ft)	12.00	near ground level release		
Stack Diameter (ft)**	0.60			
Exhaust Gas Flowrate (CFM)*	2527.73			
Stack Exit Velocity (ft/sec)**	149.00			
Exhaust Temperature (˚F)**	872.00			
Emissions Rate (lb/hr)	0.000555	Total	0.000277	Each Gen

* AERMOD default

**BAAQMD default generator parameters

Head-Royce School Expansion, Oakland, CA - Cancer Risks from Project Operation
Project Emergency Generator
Impacts at Off-Site Receptors-1.5 meter MEI Receptor Heights
Impact at Project MEI (29-year Exposure)

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child				
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2021-2022	0.0000	10	0.00				
1	1	0 - 1	2021-2022	0.0000	10	0.00				
2	1	1 - 2	2022	0.0074	10	1.21		0.0015	0.0074	0.0147
3	1	2 - 3	2023	0.0074	3	0.19		0.0015	0.0074	0.0147
4	1	3 - 4	2024	0.0074	3	0.19		0.0015	0.0074	0.0147
5	1	4 - 5	2025	0.0074	3	0.19		0.0015	0.0074	0.0147
6	1	5 - 6	2026	0.0074	3	0.19		0.0015	0.0074	0.0147
7	1	6 - 7	2027	0.0074	3	0.19		0.0015	0.0074	0.0147
8	1	7 - 8	2028	0.0074	3	0.19		0.0015	0.0074	0.0147
9	1	8 - 9	2029	0.0074	3	0.19		0.0015	0.0074	0.0147
10	1	9 - 10	2030	0.0074	3	0.19		0.0015	0.0074	0.0147
11	1	10 - 11	2031	0.0074	3	0.19		0.0015	0.0074	0.0147
12	1	11 - 12	2032	0.0074	3	0.19		0.0015	0.0074	0.0147
13	1	12 - 13	2033	0.0074	3	0.19		0.0015	0.0074	0.0147
14	1	13 - 14	2034	0.0074	3	0.19		0.0015	0.0074	0.0147
15	1	14 - 15	2035	0.0074	3	0.19		0.0015	0.0074	0.0147
16	1	15 - 16	2036	0.0074	3	0.19		0.0015	0.0074	0.0147
17	1	16-17	2037	0.0074	1	0.02		0.0015	0.0074	0.0147
18	1	17-18	2038	0.0074	1	0.02		0.0015	0.0074	0.0147
19	1	18-19	2039	0.0074	1	0.02		0.0015	0.0074	0.0147
20	1	19-20	2040	0.0074	1	0.02		0.0015	0.0074	0.0147
21	1	20-21	2041	0.0074	1	0.02		0.0015	0.0074	0.0147
22	1	21-22	2042	0.0074	1	0.02		0.0015	0.0074	0.0147
23	1	22-23	2043	0.0074	1	0.02		0.0015	0.0074	0.0147
24	1	23-24	2044	0.0074	1	0.02		0.0015	0.0074	0.0147
25	1	24-25	2045	0.0074	1	0.02		0.0015	0.0074	0.0147
26	1	25-26	2046	0.0074	1	0.02		0.0015	0.0074	0.0147
27	1	26-27	2047	0.0074	1	0.02		0.0015	0.0074	0.0147
28	1	27-28	2048	0.0074	1	0.02		0.0015	0.0074	0.0147
29	1	28-29	2049	0.0074	1	0.02		0.0015	0.0074	0.0147
30	1	29-30	2050	0.0074	1	0.02		0.0015	0.0074	0.0147
Total Increased Cancer Risk						**4.2**	Max	**0.001**	**0.01**	**0.01**

* Third trimester of pregnancy

Head-Royce School Expansion, Oakland, CA -Construction & Operational Impacts-Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction and Operation
KSS Immersion Preschool - 1 meters - Child Exposure

Student Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)

Inhalation Dose = C_{air} x SAF x 8-Hr BR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
SAF = Student Adjustment Factor (unitless)
= (24 hrs/11 hrs) x (7 days/5 days) = 3.05
8-Hr BR = Eight-hour breathing rate (L/kg body weight-per 8 hrs)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant	**School Child**	**Adult**
Age -->	**0 - <2**	**2 - <16**	**16 - 30**
Parameter			
ASF =	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00
8-Hr BR* =	1200	520	240
A =	1	1	1
EF =	350	180	250
AT =	70	70	70
SAF =	1.00	3.05	3.05

* 95th percentile 8-hr breathing rates for moderate intensity activities

Construction and Operation Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Child - Exposure Information: DPM Conc (ug/m3) Year	Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)		Hazard Index	Fugitive PM2.5	Total PM2.5
1	1	2 - 3	2022	0.0049	3	0.2		0.0010	0.0049	0.0098
2	1	3 - 4	2023	0.0049	3	0.2		0.0010	0.0049	0.0098
3	1	4 - 5	2024	0.0049	3	0.2		0.0010	0.0049	0.0098
4	1	5 - 6	2025	0.0049	3	0.2		0.0010	0.0049	0.0098
Total Increased Cancer Risk						**0.7**	**Max**	**0.001**	**0.005**	**0.010**

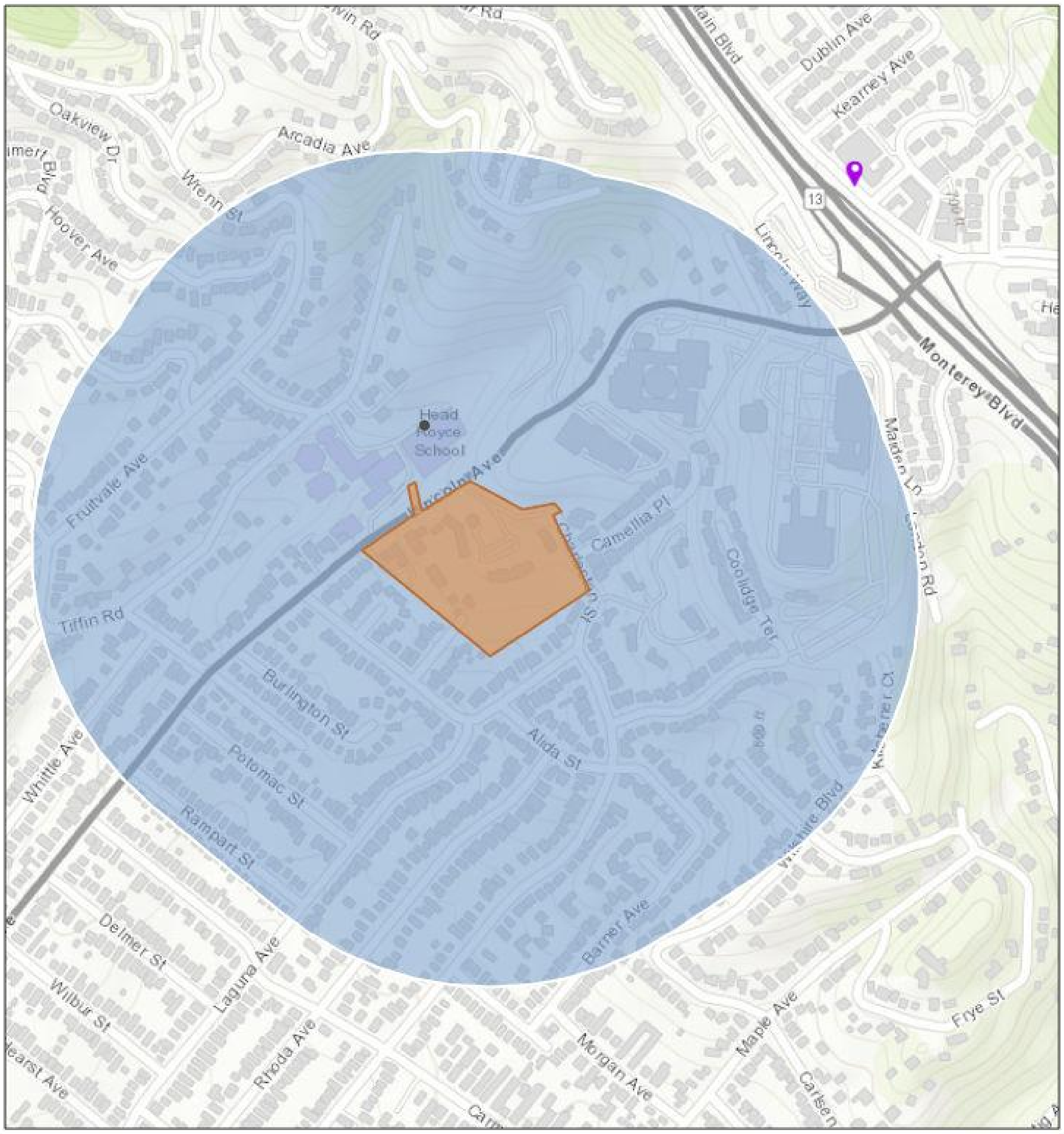
Attachment 5: Cumulative Community Risk Information

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 9,067,660.76 ft²

Jun 16 2020 12:03:39 Pacific Daylight Time



Permitted Facilities 2018

California Air Basins

1:8,520

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Summary

Name	Count	Area(ft^2)	Length(ft)
Permitted Facilities 2018	0	N/A	N/A

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

Casey Divine

From: Eric Chan <echan@baaqmd.gov>
Sent: Tuesday, July 14, 2020 5:47 PM
To: Casey Divine
Cc: Public Records; Engineering Records Custodian; Kevin Oei
Subject: RE: Purblic Record Request No. 2020-06-0111

Categories: Data

Dear Mrs. Divine,

I am writing in response to your records request for the District to identify sources of hazardous air emissions located within one-quarter mile of your requested site at 4315 Lincoln Ave in Oakland.

The Bay Area Air Quality Management District staff has not identified facilities within the prescribed one-quarter mile of the site. The actual distance can vary slightly from the information provided and may perhaps merit additional measurement to be verify the actual distance. The search radius is usually increased to ½ mile to provide information on sources that may be located near the edge of the search radius.

There are none found within ¼ miles from the school. There is 1 within ¼ and ½ miles from the school. This facility emitted as least one hazardous air pollutant and are listed in the below table.

Please be advised, however, that this statement applies only to the emission of hazardous air pollutants. A facility that does not emit, but does store, hazardous materials on site is not required to report the fact of such storage to this agency. We do not normally have any knowledge of the existence of such facilities.

Accordingly, if you become aware of the existence of any facility within ¼ mile of the proposed site which stores, but does not emit, hazardous materials you should contact that facility directly.

Please feel free to call me at (415) 749-4685 for more information concerning the emissions from these facilities or Barry Young at (415) 749-4721, if you wish to discuss the District's Risk Policies further.

Facilities with permitted sources emitting toxic emissions within 0.5 miles of 4315 Lincoln Ave in Oakland.

Distance	Facility Number	Facility Name	Street Address	City
0.35	13497	Pacific Bell	2810 Mountain Blvd	Oakland

From: Public Records <PublicRecords@baaqmd.gov>
Sent: Tuesday, June 16, 2020 1:11 PM
To: Engineering Records Custodian <eng-recordscustodian@baaqmd.gov>
Subject: FW: Purblic Record Request No. 2020-06-0111

Best regards,

Rochele Henderson
Public Records Coordinator

415-516-1916

From: Casey Divine <CDivine@illingworthrodkin.com>
Sent: Tuesday, June 16, 2020 1:02 PM
To: Public Records <PublicRecords@baaqmd.gov>
Subject: RE: Purblic Record Request No. 2020-06-0111

Hi Rochele,

Thank you for getting back to me about the Head Royce School Expansion project. I need the cancer risk, Hazard risk, and PM2.5 risk of sources near the proposed school and or the emission data files for the sources to calculate the risk. Per your request, the address of the project is 4315 Lincoln Ave in Oakland. The UTM coordinates for the center of the project site are approximately 570119.06 m E, 4184763.73 m N.

I've attached a Google Earth Map, which contains the project location and ¼ mile influence area. I've also attached the project site plan and the Stationary Source Screening Report. I could not identify any stationary sources within ¼ mile of the project site on the 2018 Stationary Source GIS Map, but wanted to make sure there were none since this is a proposed school facility expansion.

Please let me know if there's anything else I can provide. Thank you.

Mrs. Casey Divine
Illingworth & Rodkin, Inc.
429 E. Cotati Ave
Cotati, CA 94931
Phone: (707) 794-0400 x103
Fax: (707) 794-0405

From: Public Records <PublicRecords@baaqmd.gov>
Sent: Tuesday, June 16, 2020 12:16 PM
To: Casey Divine <CDivine@illingworthrodkin.com>
Subject: Purblic Record Request No. 2020-06-0111

Dear Casey Divine,

You have asked for a radius search. We will require the following information to fulfill your request.

A. UTM coordinates (for fastest turnaround -admittedly the hardest to get.),
B. Proposed address (approx.),
C. Map or proposed area,
D. Plot plan (if available),
E. Parcel map.

Maps help significantly. (even an internet map from Google - BIG help)

There may be a charge. You will be notified prior to work of the charges. Your request may up to 30 days to fulfill

Kind regards,

Rochele Henderson

Public Records Coordinator
415-516-1916

Appendix 6A

Head-Royce School South Campus Redevelopment – Biological Resources Report

H.T. Harvey & Associates, January 2020

H. T. HARVEY & ASSOCIATES

Ecological Consultants

50 years of field notes, exploration, and excellence

Head-Royce School
South Campus Redevelopment Project
Biological Resources Report

Project #4378-01

Prepared for:

Nathaniel Taylor
Lamphier-Gregory
1944 Embarcadero
Oakaland, CA 94606

Prepared by:

H. T. Harvey & Associates

January 27, 2020

983 University Avenue, Building D • Los Gatos, CA 95032 • Ph: 408.458.3200 • F: 408.458.3210

List of Abbreviated Terms

BMPs	best management practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of Oakland
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EFH	Essential Fish Habitat
FESA	Federal Endangered Species Act
FMP	Fisheries Management Plan
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
Porter-Cologne	Porter-Cologne Water Quality Control Act
RWQCB	Regional Water Quality Control Board
School	Head-Royce School
SWMP	Stormwater Water Management Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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Figures

Tables

Appendices

List of Preparers

Steve Rottenborn, Ph.D., Principal/Senior Wildlife Ecologist

Robin Carle, M.S., Project Manager/Associate Wildlife Ecologist

Mark Bibbo, M.S., Senior Plant and Wetland Ecologist

Jane Lien, M.S., Wildlife Ecologist

Jillian Pastick, B.S., Plant and Wetland Ecologist

Section 1. Introduction

This report describes the biological resources present within and adjacent to the Head Royce School (School) South Campus Redevelopment project site, as well as the potential impacts of the proposed project on biological resources and measures necessary to mitigate those impacts under the California Environmental Quality Act (CEQA). This report was prepared to facilitate CEQA review of the project by the City of Oakland (City) based on the project description provided to H. T. Harvey & Associates by Lamphier-Gregory in November 2019.

1.1 Project Location

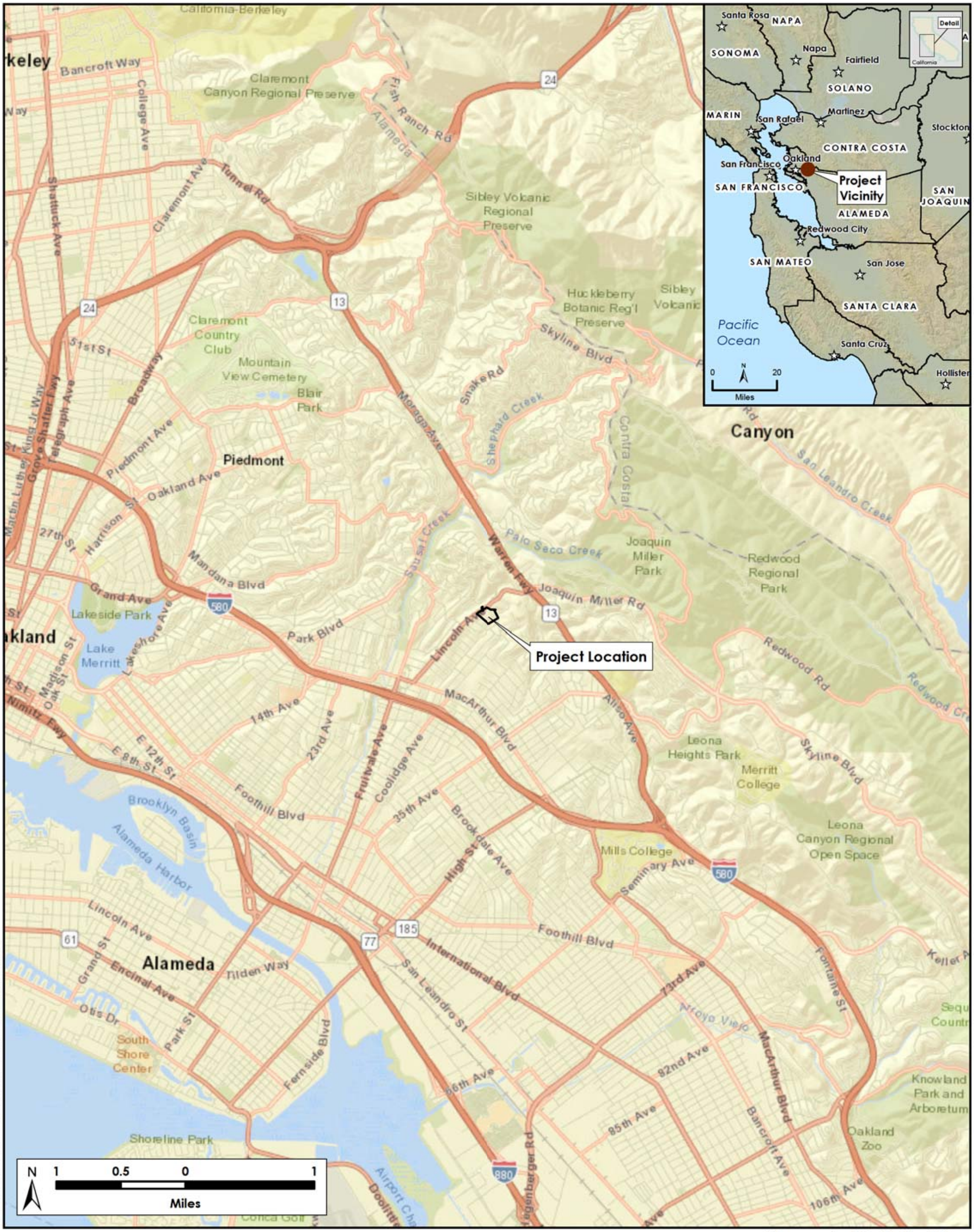
The 8.0-acre project site consists of a <0.1-acre portion of the existing School campus northeast of Lincoln Avenue and the 7.9-acre former Lincoln Child Center campus at 4315 Lincoln Avenue in Oakland, California (Figure 1). The existing School campus, located northeast of Lincoln Avenue, is referred to as the *North Campus*, and the former Lincoln Child Center campus, located southwest of Lincoln Avenue, is referred to as the *South Campus* (Figure 2). The portion of the project site located on the North Campus is located on a tree-lined slope and is bounded by Lincoln Avenue to the southeast, a North Campus building to the northwest, and the tree-lined slope to the southwest and northeast (Figure 2). The portion of the site located on the South Campus is bounded by Lincoln Avenue to the northwest; residential development to the southwest; an unnamed stormwater channel to the south; and Charleston Street, residential development, and a playing field to the northeast (Figure 2). Surrounding areas consist of dense urban development in Oakland. The project site is located on the *Oakland East, California*, and U.S. Geological Survey (USGS) quadrangle.

1.2 Existing Site Conditions

1.2.1 Existing Buildings

There are 12 existing buildings on the South Campus, totaling approximately 48,000 square feet of building space. Generally, the existing buildings are in fair condition on the exterior, but in poorer condition in the interior. Many of these buildings have been altered on both the interior and exterior since they were originally constructed. Each of these buildings is further described below.

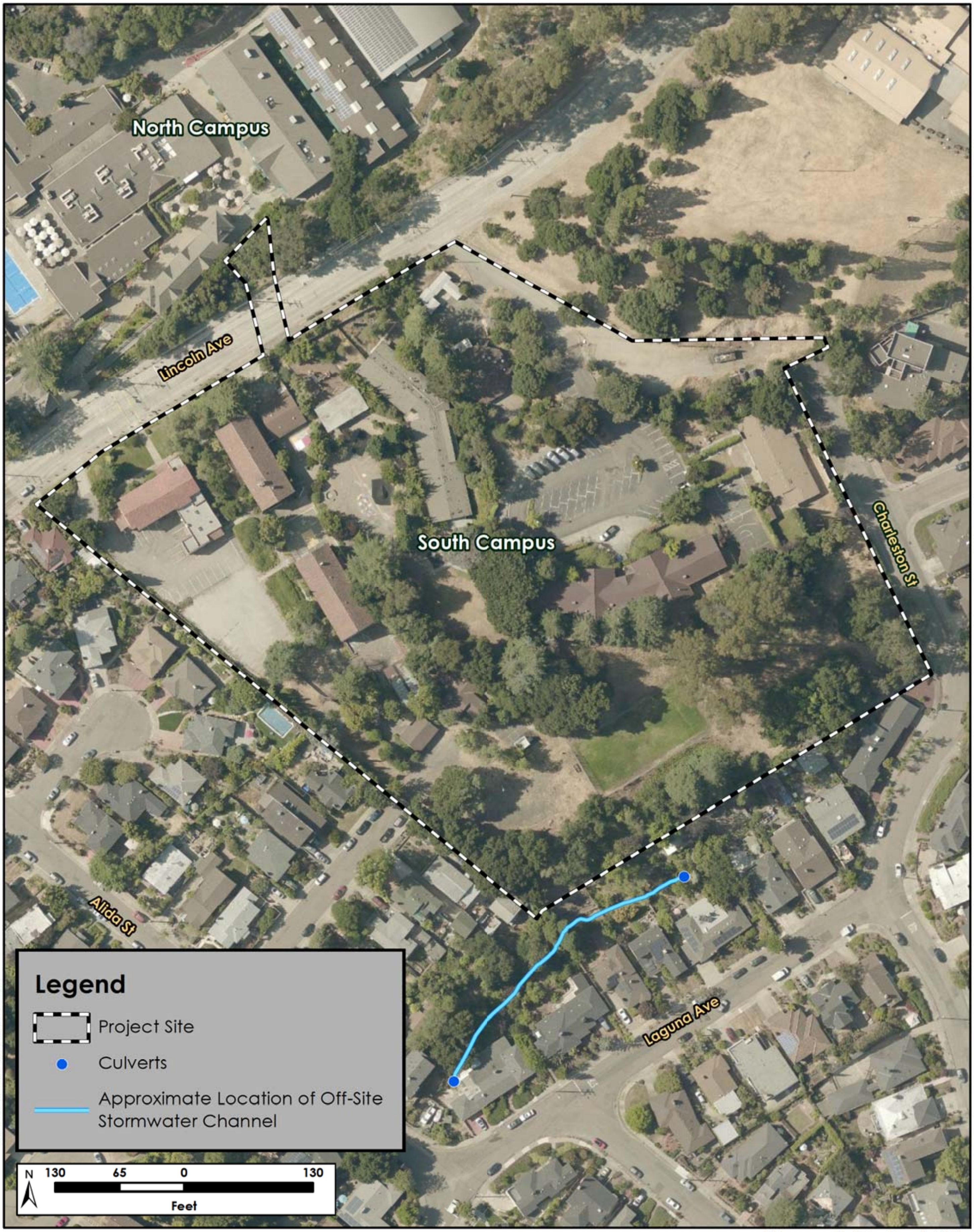
- Building 0 (the Junior Alliance Hall) is a wood frame building designed in the Spanish Colonial Revival style. It was designed by W.G. Corlett and constructed in 1935 for the Lincoln Child Center as an auditorium and gymnasium with administrative offices. Building 0 has an L-shaped plan, one story in height, with 4,500 square feet of building space and a 1,650 square-foot partial basement. The north/south elevation is double-height for use as an auditorium, topped by a gable roof clad with red clay tile. The east/west elevation is shorter and has a flat roof surrounded by a low parapet with red clay tile coping. The entire building is clad with stucco and has primarily steel-sash windows and flush wood doors.



N:\Projects4300\4378-01\Reports\BRR\Fig 1 Vicinity Map.mxd mlagarde

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 1. Vicinity Map
Head-Royce School South Campus Redevelopment Project
Biological Resources Report (4378-01)
January 2020



N:\Projects4300\4378-01\Reports\BRR\Fig 2 Project Site.mxd

H. T. HARVEY & ASSOCIATES

Ecological Consultants

Figure 2. Project Site

Head-Royce School South Campus Redevelopment Project

Biological Resources Report (4378-01)

January 2020

- Building 1 (the Mary A. Crocker Cottage) is a wood frame building also designed in the Spanish Colonial Revival style. This building was designed by Reed & Corlett and constructed in 1929 as a dormitory for children. It is rectangular in plan, two stories in height, with 6,450 square feet of building space and a 700 square-foot partial basement. Building 1 is topped by a gable roof of red clay tile, and the entire building is clad with stucco. Most of the windows are aluminum sash, and doors are flush wood.
- Building 2 (the Grace L. Trevor Cottage) is a wood frame building designed in the Spanish Colonial Revival style, and almost identical to Building 1. This building was also designed by Reed & Corlett and constructed in 1929 as a dormitory for children. It is rectangular in plan, two stories in height, with 6,500 square feet of building space and a 700 square-foot partial basement. Building 2 is topped by a gable roof of red clay tile, and the entire building is clad with stucco and has primarily aluminum sash windows and flush wood doors.
- Building 3 is a 1,420 square-foot portable classroom building built in 1990.
- Building 4 (the Linnet/Ethel Moore Cottage) is a small, 2,068 square-foot administrative building. This building has a post and pier foundation, a stucco exterior, and a composition shingle roof. It was built in the late 1960s.
- Building 5 (the maintenance building) is a small, 1,225 square-foot wood frame building with a slab foundation. A driveway leads from Lincoln Avenue to this garage-like building. The building has a small storage mezzanine, a stucco exterior, and a tar and gravel roof. This structure has two roll-up garage doors and a laundry sink. It was built in the late 1960s.
- Building 6 (the Bushell Cottage) is a one-story, 5,769 square-foot wood frame building used by Lincoln as living quarters, and consists mostly of bedrooms. This building has a composition shingle roof, stucco exterior walls and a slab foundation. The interior has a fiberglass ceiling, plywood walls and tile floor. It was built in the late 1950s.
- Building 7 (aka Bushell Kitchen and Dining Hall) is an irregularly shaped, one-story, 1,475 square-foot wood frame cafeteria building, attached to Building 6 by an enclosed corridor. It has a slab foundation, composition shingle roof, and wood exterior. The interior has a tile floor, fiberglass composition ceiling and wood walls. This building has a fireplace and an attached large outdoor BBQ. It was also built along with Building 6 in the late 1950s.
- Building 8 (the Charleston House or Holmgren) is a 3,024 square-foot, one-story wood frame building. It was built as a residence hall for 10 children and was used as an elementary school for many years. The structure has a slab foundation, stucco exterior and a composition shingle roof. Its date of construction is unknown.
- Building 9 (the Champlin House) is a 6,850 square-foot, one-story wood frame building. It was built in 1999 as a residence hall. The structure has a slab foundation, stucco exterior and a composition shingle roof.
- Building 10 (the garage) is an 825 square-foot detached, one-story, wood frame garage building. It was built in the late 1960s.

- Building 11 is a 700 square-foot storage shed with an unknown date of construction.

Buildings 0, 1 and 2 are described in Oakland's historic building rating system as Potentially Designated Historic Properties with a rating of C3, meaning they are of "secondary importance" and not located in an historic district.

1.2.2 Existing Vehicle Access

The South Campus is accessed by vehicles from three points along Lincoln Avenue:

- a driveway at the upper east corner of the site for access to the upper parking lot,
- a curb-cut at mid-block for access to a shallow loading dock and service yard, and
- a driveway at the lower west corner for access to the lower parking lot.

An additional emergency access to the site is available through Linnet Drive, but no through traffic is allowed at this emergency access point.

1.2.3 Existing Landscape and Planting

The project site contains approximately 344 trees that include coast live oaks (*Quercus agrifolia*), coast redwoods (*Sequoia sempervirens*), eucalyptus (*Eucalyptus* spp.), and holly oaks (*Quercus ilex*). The existing trees are of varying health, age and size. Approximately 150 (44%) are native (Davey Resource Group 2019).

A small grass play field measuring approximately 68 feet by 138 feet exists on the lower (southerly) portion of the South Campus property line. Formal landscape improvements exist along the Lincoln Avenue frontage setback adjacent to Building 0 and Building 1 with trees, low shrubs, and other greenery at the front edge of the lot, and small areas of lawn in front of the buildings. An asphalt playground area is located between Buildings 1 and 2, and a larger playground area paved with asphalt and surrounded by trees and other vegetation lies on the east side of these buildings.

1.2.4 Existing Traffic Circulation

Most vehicle access to the North and South Campus is via Lincoln Avenue. Traffic on Lincoln Avenue is managed by two existing City traffic signals. One traffic signal is located at the entrance to the North Campus' east parking lot (adjacent to the athletic fields), and the second traffic signal manages the pedestrian crossing located near the Head-Royce Gatehouse. The School is served by three Alameda-Contra Costa Transit bus lines and five buses operated by a private company.

Currently, students are dropped off and picked up along Lincoln Avenue, and enter the North Campus on foot through the School's Gatehouse. Student drop-offs occur on both sides of Lincoln Avenue, but pick-ups (except for buses) are required to take place on the north side of Lincoln Avenue. A crossing guard assists pedestrians across Lincoln Avenue at a signalized crosswalk. Drop-off and pick-up periods occur primarily during the School's morning peak period (8:00–8:30 a.m.) and afternoon peak period (3:15–3:45 p.m.). Westbound (downhill) drivers desiring to turn around on Lincoln Avenue after drop-off are directed to use the "Loop," which consists of a left-turn on Alida Street, a right-turn on Laguna Avenue, a right-turn on Potomac Street, and then another right-turn on Lincoln Avenue.

Service vehicles and a limited number of staff with parking passes may access the North Campus from Whittle Avenue (a neighborhood street that parallels Lincoln Avenue), but use of this access is restricted as defined in the School's current (2016) planned unit development permit.

1.2.5 Existing Parking

The School currently has 154 off-street parking spaces on the North Campus, and 129 off-street parking spaces on the South Campus.

1.3 Project Objectives

The project proposes to integrate the existing North Campus and South Campus to create a unified, 22-acre K–12 school, and connect these two campuses via an underground tunnel below Lincoln Avenue and/or with an at-grade pedestrian crossing across Lincoln Avenue. The project applicant envisions several integrated project objectives as listed below:

1. Expand the School's educational facilities to the South Campus by rehabilitating three existing buildings (Buildings 0, 1 and 2) that are identified under current City records as historic resources; utilizing one additional existing building (Building 9) for school-related or potentially short-term employee housing; building new facilities that address current and future educational needs; and improving vehicular and pedestrian circulation, parking and grounds.
2. Use of existing outdoor space for outdoor classrooms.
3. Construct a new Performance Arts Center for student curriculum relating to theater, music, dance and culture.
4. Gradually increase permitted enrollment by 344 students over currently allowed enrollment to a maximum student population of 1,250 students (at an anticipated enrollment increase rate of approximately 1–2% per year for a 20-year period).
5. Remove on-street drop of and pick up from Lincoln Avenue and remove parent use of Alida Loop by developing an internal, one-way circulation loop driveway on the South Campus. The driveway will provide off-street drop-off and pick-up space, eliminate pick up and drop off activities (other than for buses) from Lincoln Avenue, and create a new vehicle circulation pattern that reduces turn-around traffic in adjacent neighborhoods.
6. Integrate the North and South Campus for pedestrians with an underground pedestrian tunnel below Lincoln Avenue, to reduce at-grade crossings.

7. Reconfigure and increase the number of off-street parking spaces on the South Campus to provide 344 total on-site parking spaces on the Head-Royce Campus at Master Plan build-out, to minimize neighborhood parking and disruption.
8. Use new buildings placed on the South Campus to create a central commons for student interactions and to provide for noise attenuation.
9. Achieve LEED Gold standards on the renovation of existing buildings and on the new construction of the Performing Arts Center and Link Pavilion.
10. Improve drainage through better stormwater management.
11. Allow neighbor access to outdoor facilities including a network of trails and pathways on new South Campus through key card access.

1.4 Proposed Physical Improvements

1.4.1 Demolition of Existing Buildings

The project proposes to remove eight of the 12 existing buildings on the South Campus. Of these eight buildings to be demolished, four were originally constructed in the 1950s and 1960s and are not thought to have historic significance, including Building 4 (the Ethel Moore Cottage), Building 5 (a maintenance shed), and Buildings 6 and 7 (the Bushell Cottage and Dining Hall). Two of these buildings to be demolished were constructed in the 1990. This includes Building 3 (a portable classroom) and Building 8 (Holmgren House – thought to be constructed in 1995). The two remaining buildings to be demolished are accessory structures Building 10 (a 1960s-era garage) and a shed of unknown construction date.

Demolition of these buildings (a total of approximately 16,500 square feet of building space) is proposed in order to accommodate construction of new buildings and the new loop road, and to clear space for needed parking and Campus open space.

1.4.2 Reuse and Renovation of Existing Structures

Three of the existing buildings on the South Campus are to be rehabilitated and reused for on-going School purposes. These buildings will not be accessible to the general public. These three buildings are the 1929 to 1935-era buildings designed and constructed by W.G. Corlett and Reed & Corlett. They include Building 0 (the Junior Alliance Hall, originally constructed as an auditorium and gymnasium with administrative offices), Building 1 (the Mary A. Crocker Cottage originally constructed as a dormitory for children), and Building 2 (the Grace L. Trevor Cottage, also originally constructed as a dormitory for children).

- Building 0 is to be used for collaborative meeting space for small groups, as well as larger assembly space for between 55 to 125 people. Office space for administrative use will also be provided. A small kitchen may be included for catering and food service.
- Buildings 1 and 2 would be used for classroom and administrative functions.

- Rehabilitation efforts would chiefly involve interior upgrades and renovations, but may also involve installing new, relatively minor exterior features and modifying others (such as new doors, windows or external stairways) to meet modern life-safety requirements and/or the School's programmatic needs and design preferences.

The project also proposes renovation and reuse of Building 9 (built in 1999 and originally used as a dormitory). Building 9 would be retained, rehabilitated and re-purposed for classroom and administrative use with no significant changes to the exterior. As an option, the School may seek to convert the interior of Building 9 into up to five apartment units. These apartment units would provide temporary housing for newly hired faculty or staff while they seek permanent residences in the area. Anticipated stays in such units would range from one to two years. Such temporary housing is considered an accessory use pursuant to Oakland Planning Code (Section 17.10.010 (C)(1). Short-term housing for faculty and/or staff would be accessory to the School's institutional purpose because the limited and short-term residential occupancy would support the School's institutional mission to recruit employees.

1.4.3 New Buildings

The project proposes three new buildings to be constructed on the South Campus (see Figure 3-8). These three buildings include:

Performing Arts Center

The Performing Arts Center would provide the School's theater, dance, and music groups with practice, performance, and classroom space, and will be a place for the School to hold assemblies, concerts, meetings and host speakers. The building is designed to accommodate up to 450 seats for the audience, and anticipated to be up to 32 feet in height and 16,000 square feet in size. The Performing Arts Center would be located near the westerly edge of the South Campus (opposite the terminus of Linnet Avenue in the adjacent residential neighborhood), at the current locations of Buildings 3, 4 and 10. It would be taller than the existing buildings to be demolished due to the unique height requirements of the theater space, and set back form the property boundary by 55 feet.

As an optional additional element, the School may seek a Conditional Use Permit to allow community use of the Performing Arts Center for non-school-sponsored events such as graduation ceremonies for small schools or programs, recitals, neighborhood gatherings and functions of non-profits. The Performing Art Center is anticipated to be programmed most of the time for school functions such as class plays, concerts, assemblies and parent meetings, so community use would be limited and may (under this option) occur mostly on weekends. For purposes of this environmental analysis, this option for use of the Performing Arts Center for community use is limited to a maximum of 20 events per year. The size of such events is limited to the seating available (450 seats). Parking would be made available in the School's off-street parking spaces. Events would be required to be over by 10 p.m. on Saturdays and 8 p.m. on Sundays. Community groups would be required to hire the School's security and parking attendants or provide their own. Private parties such as weddings, quinceaneras, bar/bat mitzvahs, etc., would not be allowed.

Link Pavilion

The Link Pavilion will be a 1,500 square-foot, 16-foot tall, a one-story structure that will be a multi-use meeting room and gallery space. It would be located near the center of the South Campus (east-to-west) and near the Lincoln Avenue right-of-way, and would provide an elevator access from the Pavilion to the pedestrian tunnel entrance, below (see further discussion, below).

Maintenance Building

The third new building on the South Campus would be an approximately 2,000 square-foot, 14-foot tall building to be used for storage and maintenance purposes. The maintenance building would be located on the easterly (uphill) side of the new loop road, near the terminus of Charleston Court.

Net Change in Building Space

With demolition of existing buildings as proposed, retention and renovation of Buildings 0, 1, 2 and 9, and construction of the new Performing Arts Center, Link Pavilion and Maintenance Building, there would be a total of approximately 45,750 square feet of building space on the South Campus at buildout. This represents approximately 1,900 square feet of net new building space on the Campus as compared to existing conditions.

1.4.4 Vehicular Access and Circulation

Vehicular access to the South Campus will be from Lincoln Avenue only - no vehicular access to the site will be allowed from Charleston Street or Linnet Avenue (except for emergency access). A new internal, one-way Loop Road would ring the internal perimeter of the South Campus. The entrance to this Loop Road would be at or near the existing curb cut and driveway off Lincoln Avenue at the easterly (upper) end of the South Campus, and the exit would be at a similar existing curb cut and driveway off Lincoln Avenue at the westerly (lower) end of the South Campus. The new Loop Road would be approximately 1,450 linear feet in length, providing on-Campus, off-street queuing space for vehicles. Two distinct drop-off and pick-up points (one for the Upper School, and one for the Lower and Middle Schools) would provide a required alternative to the current drop-off and pick-up location along Lincoln Avenue. Other than for public and private bus loading and unloading (which would continue at Lincoln Avenue), all vehicle picking-up and dropping-off activity at the School would occur along this Loop Road, rather than as currently occurs along Lincoln Avenue. The loading zones for Alameda-Contra Costa Transit and private buses would be maintained on Lincoln Avenue, as the width of the Loop Road is too narrow to accommodate these vehicles, but the Loop Road is sized to accommodate emergency vehicles.

Access to the new Loop Road in the South Campus will be controlled at signalized intersections. The project proposes to reconfigure the existing Lincoln Avenue right-of-way to accommodate a downhill left-turn pocket and an uphill right-turn pocket into the one-way, signalized entrance to the Loop Road at the uphill access point. Parallel parking spaces along the south side of Lincoln Avenue (in front of the South Campus) will be removed to accommodate this modification. A new signalized intersection on Lincoln Avenue is proposed at the egress point of the Loop Road at the westerly (downhill) corner of the South Campus. This traffic signal will include a crosswalk sequence for pedestrians crossing Lincoln Avenue, replacing the current traffic signal that controls the existing pedestrian crosswalk at the Head-Royce Gatehouse. The furthest uphill existing traffic signal that is located at the entrance to the Head-Royce athletic field parking lot and the Ability Now Bay Area parcel will be retained and upgraded to coordinate with the two downhill traffic signals.

The new internal Loop Road would replace and eliminate the circuitous turn-around routes identified in the School's Transportation Policy Guide and TDM program. The current Transportation Policy Guide and Transportation Demand Management program requests parents to follow a specific route called "the Loop" through public streets in the adjacent, downhill neighborhood to change direction on Lincoln Avenue, and to use the Mormon Temple parking lot near Highway 13 as a staging area for afternoon pick-up.

1.4.5 Parking

The project would add 25 new on-site parking spaces, and will retain and redesign the existing 129 paved parking spaces that currently exist, for a net of 154 total parking spaces on the South Campus. This parking will be for use by faculty, staff and visitors.

1.4.6 Pedestrian Circulation

Pedestrian pathways would be constructed throughout the South Campus, connecting existing and proposed new buildings and associated open spaces.

Lincoln Avenue Crossing

The project proposes two options for providing a pedestrian connection between the North and South Campus:

- The first option is to construct a pedestrian tunnel under Lincoln Avenue to connect the North and South Campuses. The pedestrian tunnel is expected to be an 18-foot-wide, approximately 12-foot tall tunnel constructed under the Lincoln Avenue right-of-way at the approximate mid-point of the South Campus along Lincoln Avenue, aligning with the Upper Level courtyard in the North Campus. The tunnel would provide students, faculty and staff with direct access to the North Campus from parking and drop-off/pick-up locations in the South Campus and allow for passage between the campuses during the school day. Access to the tunnel would be restricted to School use only, and would only be accessible from the School's private property and not accessible to the public. Preliminary designs for the tunnel show an invert elevation increasing at an approximately 4.8% slope from south to north, terminating approximately 15 feet below existing grade in the South Campus, with a minimum anticipated cover below Lincoln Avenue of approximately 7 feet. Additionally, a secondary at-grade pedestrian crossing across Lincoln Avenue would be provided at the new traffic signal controlling South Campus vehicular egress.
- The second option is to use only the at-grade crossing of Lincoln Avenue for all pedestrian connections between the North and South Campuses. The tunnel would not be constructed under this option.

1.4.7 Proposed Landscape

The landscape design for the project proposes a central Commons, multiple outdoor wood deck classrooms, a "walking labyrinth", outdoor farming in raised planters, and a series of Americans with Disabilities Act-accessible paths that provide access to buildings within the South Campus, plus secondary paths with stairs. The Commons would be the central gathering place within the South Campus, composed of terraces integrated with perennial planting and a stepped water feature connecting to rain gardens, and would be used daily for students to congregate and eat lunch. It may also be used intermittently for larger events such as graduation. Irrigated lawn area will be consolidated to only the Commons and areas immediately surrounding buildings. Existing shrubs will be removed and any groundcover or bare ground will be replaced with drought-tolerant perennials and grasses. Native plantings will be used wherever feasible. Like the North Campus, the outdoor spaces of the South Campus will be available to neighbors through key-card access.

The existing play field at the base of the South Campus would be re-graded and repositioned to continue to be used for recreational purposes including athletic practices and informal play.

1.4.8 Tree Inventory

The project site has approximately 344 existing trees of varying health, age, and size, of which approximately 64% are classified as protected trees as per the City, including coast live oaks and redwoods. The project's proposed plan for these existing trees is as follows:

- Protect in place approximately 175 native trees including 22 large and 4 very large oak trees
- Relocate 20 native trees, including 9 smaller oak trees
- Remove 30 native trees (some of which are either dead or in poor condition) and remove 107 non-native trees (including many in poor condition) This also includes eventual removal of the five large eucalyptus trees on the southeast corner of the site.

A tree replacement plan will be prepared in accordance with the City tree removal policies.

1.4.9 Grading and Earthwork

Grading activities will be executed to accommodate new building pads, loop road, access driveways, parking lot, plazas and walkways. Preliminary earthwork calculations were completed using proposed road grading and building plans (not including tunneling operations). The resulting cut and fill values indicate that an estimated 8,000 cubic yards of excess soil will need to be off-hauled. Earthwork calculations and grading will be refined during subsequent design phases with the goal of better balancing cut and fill across the project site.

Buildings 0, 1, 2, and 9 (the buildings proposed to be retained) will have minimal grading around their perimeters. The proposed new Performing Arts Center is set in elevation to allow pedestrian access between that building and existing Building 2. The annex portion of the Performing Arts Building steps down from the main structure to respond to the natural topography of the site. The extent of road grading is driven by Fire

Department requirements, the protection of existing trees, and the intent to minimize retaining walls. Grading and earthwork shall be performed in conformance with the project geotechnical report and specifications (future). The contractor shall take care to avoid disturbing native soil beyond what is required to complete the designed improvements.

1.4.10 Utilities

The project will require new electrical, gas, communication, sewer, water, fire and irrigation utility systems.

- Water connections for domestic and fire would be supplied from an existing East Bay Municipal Utility District trunk line located within Lincoln Avenue or along the west side of the property. The service lateral may require a special connection.
- Wastewater would be collected and conveyed into a City Sewer line in Lincoln Avenue at the westerly corner of the site, and potentially to one of the adjoining roads to the west. A small portion of the grey water flow may be diverted and treated for reuse as irrigation and toilet flushing.
- New utility meters would be required for energy, water supply and on-site reclaimed water use. Water used for fire suppression and irrigation services will come from the EBMUS trunk line, and may require separate piping, valves and backflow devices.
- Electrical, gas and communication services will be routed from various points of connections along the property edge, with all required valves, switches and equipment.

1.4.11 Stormwater Management

With removal of existing buildings and surface parking areas, and construction of new roads and buildings, the project will result in a net decrease in impervious surface and a similar proportional decrease in stormwater runoff from the site, requiring preparation of a Stormwater Management Plan that is designed to provide for appropriate water quality treatment and management of stormwater flow volumes.

A comprehensive Stormwater Water Management Plan (SWMP) has been prepared for the project. The elements selected to achieve this SWMP will be integrated into site landscaping building design. The SWMP site-based systems include surface management strategies that promote infiltration and attenuation of runoff. The SWMP will be required to comply with the City's C.3 Stormwater Technical Guidance Handbook, which requires implementation of various Low Impact Development treatment measures as well as hydromodification mitigation. Stormwater will be treated and managed on-site to the maximum extent practicable, meeting local stormwater mitigation requirements. Drainage will be day-lighted wherever possible in a non-piped stormwater management approach. It will recreate a visual, habitat, and experiential connection from the top of the site to the bottom. Stormwater will be managed to mimic natural patterns of flow within a watershed, avoid pipes and armored conveyance, encourage infiltration of stormwater, and utilize ecological analogs to create a diversity of vegetation types and landscape functions. A capture for reuse system would include above ground cisterns and below ground tanks or storage systems within the building footprints. Rainwater from the Performing Arts

Center and Link Pavilion Building may be captured and stored for reuse, including potential integration with a grey water treatment system. In addition to reducing storm water runoff from the grounds, rainwater would become a water supply for landscaping as well as toilet flushing. Stormwater that is not used by the project will be infiltrated on the project site or drain off the site to existing piping in Lincoln Avenue to the north and an existing drainage way to the south. The project's goal is to achieve net zero increase in run-off.

1.4.12 Sustainable Building Design

The project intends to pursue LEED Gold certification for the renovation of existing Buildings 0, 1 and 2, and to meet LEED Gold certification or equivalent for new construction of the Performing Arts Center and Link Pavilion. Strategies to meet these goals may include natural daylighting, use of renewable energy, thermal energy storage and rainwater harvesting.

1.5 Proposed Enrollment, Faculty, and Staff

The project proposes to increase permitted enrollment to up to 1,250 students, representing an increase of 344 students over the currently allowed enrollment of 906 students. Enrollment increases are proposed to be no more than 20 additional students each year, up to the maximum permitted enrollment, over an approximate 17 to 20-year period. To support increased enrollment, the School projects an increase of 17 additional faculty and staff, to 189 total employees.

1.6 Project Phasing and Construction Schedule

1.6.1 Phasing

Subject to meeting fundraising goals, the majority of the physical improvements contemplated pursuant to the project would be constructed in a single Phase 1. These improvements are anticipated to include:

- Demolition of South Campus Buildings 3, 4, 5, 6, 7, 8, 10, and 11
- Site grading and tree removal
- Renovation and rehabilitation of South Campus Buildings 0, 1, 2 and 9
- Construction of the internal Loop Road, the underground pedestrian tunnel
- Construction of three new South Campus buildings (the Link Pavilion, Performing Arts Center and maintenance building)
- Landscape improvements including outdoor classroom areas and the Commons greenspace

1.6.2 Construction Period

It is anticipated that the construction of the project will take approximately 18–24 months. Demolition will require approximately two months, site preparation and tunneling will require approximately four months, and construction of the Link Pavilion and Performing Arts Center will require approximately 12 months.

With the exception of the tunnel opening, all North Campus re-programming efforts would occur subsequent to construction of preceding improvements in the South Campus.

To the extent that existing buildings to be demolished are constructed of concrete, the project proposes to crush the existing building materials and re-use the recycled materials as part of needed fill for building pads and open space areas. An earthwork analysis will be conducted in the future, and efforts will be made to balance cut and fill across the project site.

Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed the project description and plans provided by Lamphier-Gregory through November 2019; aerial images (Google Inc. 2020), a USGS topographic map; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (2020); and other relevant reports, scientific literature, and technical databases. In addition, we perused records of birds reported in nearby areas on eBird (Cornell Lab of Ornithology 2020) and on the East-Bay-Birding – Sightings List Serve (2020). For the purposes of this report, the "project vicinity" is defined as the area within a 5-mile radius surrounding the project site.

In addition, for plants, we reviewed all species on current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists occurring in the project region, which is defined as the *Oakland East, California* USGS 7.5-minute quadrangle and surrounding eight quadrangles (*Oakland West, Richmond, Briones Valley, Walnut Creek, Las Trampas Ridge, Hayward, San Leandro, and Hunters Point*). We also considered the CNPS plant list for Alameda County, as the CNPS does not maintain quadrangle-level records for CRPR 4 species. In addition, we queried the CNDDB (2020) for natural communities of special concern that occur within the project region.

2.2 Site Visit

A reconnaissance-level field survey of the project site was conducted by H. T. Harvey & Associates associate wildlife ecologist Robin Carle, M.S., and plant ecologist Jill Pastick, M.S., on November 11, 2019. The purpose of this survey was to provide an impact assessment specific to the proposed redevelopment of the project site as described above. Specifically, surveys were conducted to (1) assess existing biotic habitats and plant and animal communities on the project site, (2) assess the project site for its potential to support special-status species and their habitats, and (3) identify potential jurisdictional habitats, such as waters of the U.S./state and riparian habitat. J. Pastick also conducted a focused survey of the unnamed stormwater channel located adjacent to the South Campus to characterize the habitat along this channel and assess whether special-status plant and wildlife species can potentially occur there. R. Carle conducted a focused survey for bats and signs of bat presence (e.g., guano and urine staining) in trees and buildings on the site as well as a focused survey for nests of San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) on the project site.

Before site surveys were conducted, maps and images of the project site were obtained from several sources and reviewed. These sources included the USGS, National Wetlands Inventory (2020), Nationwide Environmental Title Research (2020), and aerial images (Google Inc. 2020). Plant species observed during the field survey were identified using Baldwin et al. (2012).

Section 3. Regulatory Setting

3.1 Federal Regulations

3.1.1 Clean Water Act

The Clean Water Act (CWA) functions to maintain and restore the physical, chemical, and biological integrity of waters of the U.S., which include, but are not limited to, tributaries to traditionally navigable waters currently or historically used for interstate or foreign commerce, and adjacent wetlands. Historically, in non-tidal waters, U.S. Army Corps of Engineers (USACE) jurisdiction extends to the ordinary high water mark, which is defined in Title 33, Code of Federal Regulations, Part 328.3. If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the ordinary high water mark to the outer edges of the wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may be subject to USACE jurisdiction. In tidal waters, USACE jurisdiction extends to the landward extent of vegetation associated with salt or brackish water or the high tide line. The high tide line is defined in 33 Code of Federal Regulations Part 328.3 as "the line of intersection of the land with the water's surface at the maximum height reached by a rising tide." If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the ordinary high water mark or high tide line to the outer edges of the wetlands.

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Project Applicability: The reconnaissance-level field survey in November of 2019 determined that no habitats that would be considered waters of the U.S./state are located on the project site. The unnamed stormwater channel located outside and downslope of the project site has the potential to be considered waters of the U.S. based on hydrologic connectivity to other waters downstream through the stormwater system. However, no project activities are proposed within the bed and banks of the stormwater channel. Therefore, a permit from the USACE would not be required for the project.

3.1.2 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or *take*, which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." *Take* can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as *take* even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project.

Project Applicability: No federally listed or candidate plant or animal species occur on the project site.

3.1.3 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from NMFS, establish Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

Project Applicability: No streams to provide EFH for fish species are present on the project site. The unnamed stormwater channel located south of the site conveys water only during rain events and has only a short segment that flows above-ground; hence, this channel does not provide suitable habitat for FMP-managed fish species. Further, this channel drains into Peralta Creek, much of which is also located underground in the site vicinity, and native fish species (including FMP-managed species) have not been detected during previous surveys along Peralta Creek (Leidy et al 2005). Thus, no EFH is present within or adjacent to the project site.

3.1.4 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests; and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

Project Applicability: All native bird species that occur on the project site are protected under the MBTA.

3.2 State Regulations

3.2.1 Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the State. Their authority comes from the CWA and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. Moreover, the San Francisco Bay Region RWQCB's Assistant Executive Director, has stated that, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. In these new guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs to impact. Pursuant to the CWA, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification permit from the RWQCB. This certification ensures that the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

Project Applicability: No waters of the state or riparian habitats regulated by the RWQCB are present on the project site. The stormwater channel located outside of and downslope of the project site would likely be claimed as jurisdictional waters of the state by the RWQCB, but no riparian habitat is present along this stormwater channel. No impacts to riparian habitat or waters of the state will result from activities under the project. Therefore, a Section 401 permit or Waste Discharge Requirement from the RWQCB would not be required.

3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in take of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of take under the California Fish and Game Code. The CDFW, however, has interpreted take to include the "killing of a member of a species which is the proximate result of habitat modification."

Project Applicability: No state listed or candidate plant or animal species occur on the project site.

3.2.3 California Environmental Quality Act

CEQA is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. CEQA requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA are known as the State CEQA Guidelines.

Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists". Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

The CNPS, a non-governmental conservation organization, has developed CRPRs for plant species of concern in California in the Inventory of Rare and Endangered Plants (CNPS 2020). The CRPRs include lichens, vascular, and non-vascular plants, and are defined as follows:

- CRPR 1A Plants considered extinct.
- CRPR 1B Plants rare, threatened, or endangered in California and elsewhere.
- CRPR 2A Plants considered extinct in California but more common elsewhere.

- CRPR 2B Plants rare, threatened, or endangered in California but more common elsewhere.
- CRPR 3 Plants about which more information is needed - review list.
- CRPR 4 Plants of limited distribution-watch list.

The CRPRs are further described by the following threat code extensions:

- .1—seriously endangered in California;
- .2—fairly endangered in California;
- .3—not very endangered in California.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing as CRPR 1B or 2 are, in general, considered to meet CEQA's Section 15380 criteria, and adverse effects on these species may be considered significant. Impacts on plants that are listed by the CNPS as CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those of CRPR 1B or 2, impacts on them are less frequently considered significant.

Compliance with CEQA Guidelines Section 15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of "special concern" are tracked in Rarefind (CNDDB 2020). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas S rankings reflect the condition of a habitat within California. If an alliance is marked as a G1–G3, all the associations within it would also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program's currently accepted list of vegetation alliances and associations (CDFW 2020).

Project Applicability: All potential impacts on biological resources will be considered during CEQA review of the project in the context of this Biological Resources Report. Project impacts are discussed in Section 6 below.

3.2.4 California Fish and Game Code

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A *stream* is defined in Title 14, California Code of Regulations Section 1.72, as "a body of water that follows at least periodically or intermittently through a bed or channel having banks and that supports fish and other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Using this definition, CDFW extends its jurisdiction to encompass riparian habitats that function as a part of a watercourse. California Fish and Game Code Section 2786 defines *riparian habitat* as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, CDFW would claim jurisdiction over a stream's bed and bank. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code Section 1603, CDFW regulates any project proposed by any person that will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds." California Fish and Game Code Section 1602 requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake. If CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Certain sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered take by the CDFW. Raptors (e.g., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Bats and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered take by the CDFW.

Project Applicability: No riparian habitat occurs along the banks of the unnamed stormwater channel adjacent to the project site or on the project site itself. Therefore, a CDFW LSAA would not be required for the project. Most native bird, mammal, and other wildlife species that occur in the study area and in the immediate vicinity are protected by the California Fish and Game Code.

3.3 Local Regulations

3.3.1 City of Oakland Municipal Code: Protected Tree Ordinance

The City promotes the health, safety, and welfare of the city by regulating the planting and maintenance of trees in the city. The City list three chapters in its municipal code under Title 12, Streets, Sidewalks, and Public Spaces pertaining to the tree ordinance. A general street tree ordinance (Chapter 12.32), municipal policies on "protected trees" (Chapter 12.36), and policies regarding "hazardous trees" (Chapter 12.40).

3.3.1.1 Street Trees

It is not permitted for any person to destroy, deface, or mutilate any tree or shrub along, or within, any public street without first obtaining a permit from the Director of Parks and Recreation for the City. A street tree is considered any tree or shrub in or along any public street or public grounds.

3.3.1.2 Protected Trees

The City provides tree protection for "protected trees" under Municipal Code Chapter 12.36. The Protected Tree Ordinance requires that a permit be applied for and approved before tree related work including removal, pruning, and planting occurs. A protected tree is defined as:

- Any coast live oak 4 inches or larger in diameter, measured at 4.5 feet above the ground, on any property.
- Any other species of tree except eucalyptus (*Eucalyptus* spp.) and Monterey pine (*Pinus radiata*) that is 9 inches in diameter or larger measured at 4.5 feet above the ground, on any property.
- Monterey pines when more than five Monterey pine trees per acre are proposed to be removed.

Permit requirements for development-related tree removals are found in Municipal Code Section 12.36.070.

3.3.1.3 Hazardous Trees

If a City tree is considered hazardous and presents an immediate threat to safety or property, the tree removal permit application and fee may be waived by contacting the City of Oakland Public Works office. The City's hazardous tree ordinance (Chapter 12.40) discusses the process for removing hazardous trees on private property.

<u>Project Applicability:</u> The project intends to remove approximately 137 trees, including a number of ordinance-sized trees, on the project site. The project will obtain a tree removal permit through the City's planning and building department and comply with the City's tree replacement guidelines and policies for any trees that need to be removed.

3.3.2 City of Oakland Creek Protection, Storm Water Management, and Discharge Control Ordinance

The City promotes the health, safety, and welfare of the city by regulating development and construction projects that take place in or near creeks. The City provides creek protection under Municipal Code Chapter 13.16, which details permit requirements for work on creekside properties in order to limit impacts on the creek both during and following construction. The ordinance defines a creek as "a watercourse that is a naturally occurring swale or depression, or engineered channel that carries fresh or estuarine water either seasonally or year round" (Chapter 13.16). More specifically, in order for the City to identify a feature as a creek, it must be hydrologically connected as part of a contiguous waterway; have a channel, bed, and bank; and occupy a specific topographic position (e.g., a 'U' or 'V' shape at the low point of a macro-topographic feature).

The type of permit required by the City depends on the type of creekside work being performed. A Category 1 creek protection permit is issued for interior construction and alterations (e.g., remodeling). A Category 2 permit is for exterior work other than earthwork located more than 100 feet from the centerline or the creek. A Category 3 permit is issued for either (1) exterior work other than earthwork located between 20 feet from the top of bank and 100 feet from the centerline of the creek, or (2) exterior work that includes earthwork involving more than three cubic yards of material and is more than 20 feet from the top of bank. A Category 4 permit is for projects with exterior work conducted within 20 feet of the top of bank.

Project Applicability: No features considered a creek by the City are located on the project site. The stormwater channel located south of the project site would likely be considered a "creek" under this ordinance based on the presence of a daylighted (i.e., not culverted underground) channel with a bed and bank adjacent to the site, the fact that it is hydrologically connected via a culvert to other waters downstream, and because it conveys seasonal flows. According to project plans, development or construction activities are proposed approximately 46 feet from the top of bank of the stormwater channel. As a result, a Category 3 permit from the City would be required.

Section 4. Environmental Setting

4.1 General Project Area Description

The 8.0-acre project site is located in Oakland in Alameda County, California. Based on the 30-year climate normals from 1980 through 2010, the project site receives approximately 24 inches of annual precipitation and has a mean temperature range of 49.7°– 65.3°F (PRISM Climate Group 2020). Elevations on the project site range from approximately 390 feet to 463 feet above sea level. The site is underlain by two soil units: Xerorthents-Millsholm complex, 30–50% slopes and Urban Land-Tierra complex, 5–15% slopes (National Resources Conservation Service 2020). The Xerorthents-Millsholm complexes are found on hill backslopes, and are composed of somewhat deep, well-drained soils formed from weathered sandstone and shale (National Resources Conservation Service 2020). Urban Land-Tierra complexes are very deep, moderately well-drained soils found on the foot slopes of fan terraces and are formed in alluvium from mixed rock sources (National Resources Conservation Service 2020).

4.2 Biotic Habitats

Reconnaissance-level surveys identified one habitat type/land use on the project site: developed/landscaped (8.0 acres); this habitat is described in detail below. Plant species observed during the reconnaissance-level survey are listed in Appendix A.

4.2.1 Developed/Landscaped

Photo 1. Developed/landscaped habitat on the project site.

Vegetation. The entirety of the project site consists of developed and landscaped habitat in the form of hardscape, landscaping, and unpaved game fields. Hardscape on the project site includes sidewalks, buildings, gravel and asphalt parking lots, and playground game courts. There are a total of 12 buildings located throughout the project site, most of which are connected via sidewalks lined with a high diversity of landscaped trees and shrubs. The dominant tree species on the site include coast live oak, holly oak, blackwood acacia (*Acacia melanoxylon*), and coast redwood. The site of the proposed tunnel located on the North Campus northwest of Lincoln Avenue is primarily landscaped, and is situated on a steep slope containing ornamental shrubs and planted coast live oaks.

There are three paved playground game courts on the South Campus which appear to be unused and support the growth of ruderal, non-native species, including Italian thistle (*Carduus pycnocephalus*), foxtail barley (*Hordeum murinum*), and stinkwort (*Dittrichia graveolens*). These paved areas are surrounded by landscaped vegetation and buildings. Un-used sports fields located in the southeast portion of the project site are colonized by ruderal species such as wild oat (*Avena fatua*), foxtail barley, and Bermuda grass (*Cynodon dactylon*), and this vegetation appears to be periodically mowed, likely for fire prevention or weed control. Adjacent to these sports fields, and bordering the fence line of the property, are sections of landscaping which have not been maintained. These patches of landscaping include planted trees and ornamental vegetation such as coast redwood, sweetgum (*Liquidambar styrociflua*), and coast live oak, as well as English ivy (*Hedera helix*) and Italian thistle in the understory. Unlike the hardscaped areas in the northern portion of the site, these fields and landscaped areas are moderately sloped to the southeast, towards the adjacent neighborhoods and the stormwater channel described below.

Wildlife. Wildlife species that are associated with the developed/landscaped habitat on the project site are adapted to high levels of human disturbance, and include introduced species such as the Virginia opossum (*Didelphis virginianus*), Norway rat (*Rattus norvegicus*), black rat (*Rattus rattus*), and house mouse (*Mus musculus*) as well as common native species such as the western fence lizard (*Sceloporus occidentalis*) and raccoon (*Procyon lotor*). A variety of native birds will nest and forage in trees and vegetation on the site including the California scrub-jay (*Aphelocoma californica*), chestnut-backed chickadee (*Poecile rufescens*), oak titmouse (*Baeolophus inornatus*), California towhee (*Melozone crissalis*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), and lesser goldfinch (*Spinus psaltria*). The eaves and corners of buildings on the project site may be attractive to certain nesting and/or roosting bird species that make use of structures, including the black phoebe (*Sayornis nigricans*), house finch (*Haemorhous mexicanus*), and mourning dove (*Zenaida macroura*). Large trees on the site such as eucalyptus and coast redwoods provide potential nesting sites for raptors, especially red-tailed hawks (*Buteo jamaicensis*), although no raptor nests were observed on the site during the survey. Cooper's hawks (*Accipiter cooperi*) may also nest in trees on the site. Nonnative eastern gray squirrels (*Sciurus carolinensis*) were common on the site, and these and other mammal species provide prey for raptors that may nest in the vicinity. Buildings on the site, especially those that are unoccupied for long periods of time, provide ostensibly suitable roosting habitat for common species of bats, such as the California myotis (*Myotis californicus*) and Mexican free-tailed bat (*Tadarida brasiliensis*). However, no signs of bats were observed on the interiors and/or exteriors of any buildings on the site during the November 2019 focused survey, and thus bats do not appear to be roosting on the site currently.

4.3 Adjacent Habitat Areas

4.3.1 Stormwater Channel

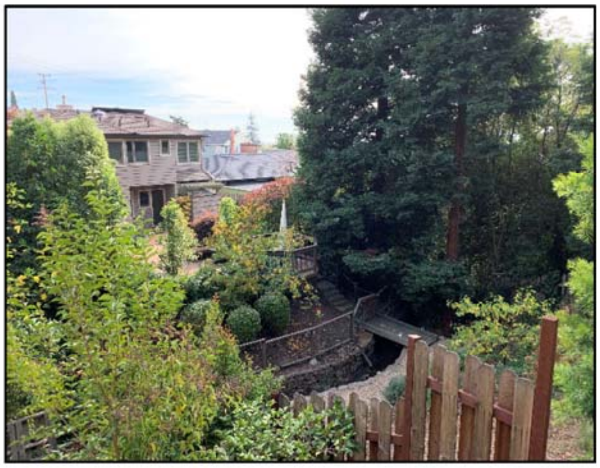


Photo 2. Stormwater channel located outside of/ downslope of the southeastern border of the project site.

Vegetation. A stormwater channel is located outside of/downslope from the southern boundary of the project site (Photo 2). The channel emerges from a culvert behind a residence along Laguna Avenue and travels southwest through the backyards of several residences before re-entering a culvert to travel beneath Alida Street. The channel's vertical walls are lined with concrete and stone, and the bed is approximately 4 feet wide. The stormwater channel is situated in a topographically low position relative to the adjacent slopes and at the time of the survey in November 2019, a small amount of standing water was present in portions of the channel. This channel likely conveys flows seasonally, primarily following winter storm events. The channel is connected to the underground stormwater system via the downstream culvert near Alida Street, and it flows downstream to Peralta Creek. Vegetation along the channel consists of landscaping in the backyards of the residences. No wetland vegetation was observed in the channel and no native stands of riparian vegetation are present along the banks.

Wildlife. The stormwater channel provides habitat that is of extremely limited value to wildlife species due to the heavily urbanized surrounding context, long history of human disturbance, vertical channel banks that make access difficult for terrestrial wildlife, lack of riparian vegetation to provide cover and foraging opportunities, and because it supports only seasonal flows. Wildlife species that can access the channel (e.g., birds) likely drink opportunistically from water in the channel during periods with low rainfall. The channel is unlikely to support native fish or other aquatic species due to the extremely low quality of the habitat present, lack of year-round flows, lack of vegetation in the channel bed, and the fact that the majority of the channel is located underground.

Section 5. Special-Status Species and Sensitive Habitats

CEQA requires assessment of the effects of a project on species that are protected by state, federal, or local governments as "threatened, rare, or endangered"; such species are typically described as "special-status species". For the purpose of the environmental review of the project, special-status species have been defined as described below. Impacts on these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3 above.

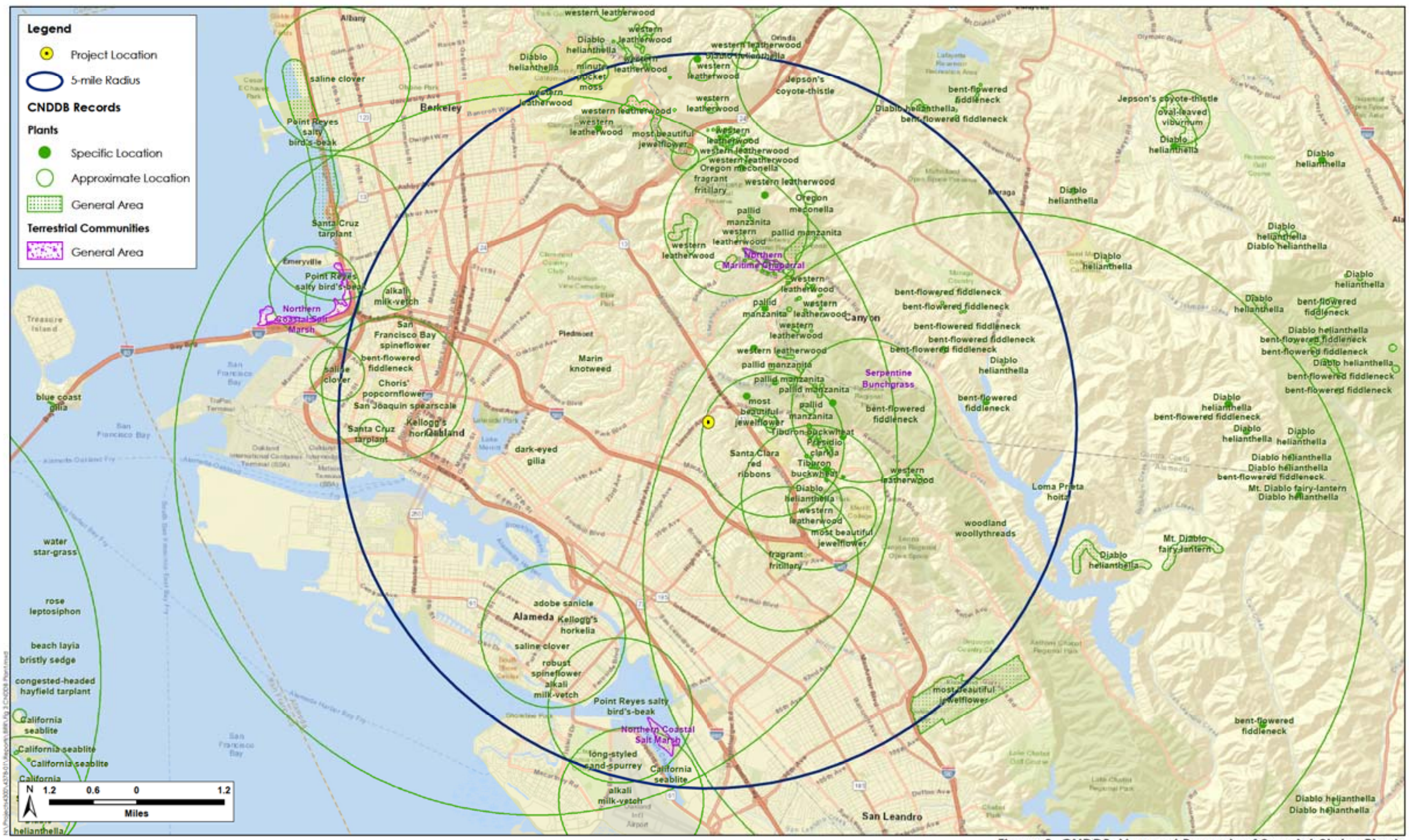
For purposes of this analysis, "special-status" plants are considered plant species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as CRPR 1A, 1B, 2, 3, or 4.

For purposes of this analysis, "special-status" animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515).

Information concerning threatened, endangered, and other special-status species that potentially occur on the project site was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 3 depicts CNDDB records of special-status plant species in the general vicinity of the project site and Figure 4 depicts CNDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.



H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 3. CNDDB-Mapped Records of Special-Status Plants
Head-Royce School South Campus Redevelopment Project
Biological Resources Report (4378-01)
January 2020

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 4. CNDDB-Mapped Records of Special-Status Animals
Head-Royce School South Campus Redevelopment Project
Biological Resources Report (4378-01)
January 2020

5.1 Special-Status Plant Species

The CNPS (2020) and CNDDB (2020) identify 84 special-status plant species as potentially occurring in at least one of the nine USGS quadrangles containing or surrounding the project site for CRPR 1 or 2 species, or in Alameda County for CRPR 3 and 4 species. All of these species were determined to be absent from the project site for at least one of the following reasons: (1) lack of suitable habitat types; (2) absence of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range within the project site; and/or (4) the species is considered extirpated from the site vicinity. Due to the current and historic land use of the project site, as well as the surrounding developed land use, no suitable habitat is present on the project site and we can rule out potential for any special-status plant species to occur.

5.2 Special-Status Animal Species

The legal status and likelihood of occurrence on the project site of special-status animals known to occur, or potentially occurring, in the surrounding region are presented in Table 1, and Figure 4 depicts the CNDDB-mapped locations of special-status animals in the project vicinity. None of the special-status species listed in Table 1 are expected to occur on the project site because it lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development or otherwise unsuitable habitat.

The following special-status animals that are present in less urbanized settings in Alameda County, or in specialized habitats in Alameda County, are absent from the project site due to a lack of suitable habitat, restricted range, and/or isolation of the site from populations by urbanization: the crotch bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), western pond turtle (*Actinemys marmorata*), burrowing owl (*Athene cunicularia*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), and American badger (*Taxidea taxus*). In addition, a focused survey of the project site for nests of San Francisco dusky-footed woodrats determined that the species is absent from the site, and a focused survey for roosting bats determined that bats are not currently roosting on the site.

No aquatic habitats to support special-status fish species are present on the project site. The site is located immediately adjacent to a stormwater channel that connects downstream to Peralta Creek; however, the quality of habitat in this channel is extremely low, and native fish species (including special-status fish) have not been detected during previous surveys along Peralta Creek (Leidy et al 2005). Thus, special-status fish species including the Central California Coast coho salmon (*Oncorhynchus kisutch*), Central California Coast steelhead (*Oncorhynchus mykiss*), river lamprey (*Lampetra ayresi*), Central Valley fall-run Chinook salmon (*Oncorhynchus tshawytscha*), and Pacific lamprey (*Entospherus tridentatus*) are absent from the project site and adjacent areas.

Several special-status animal species occur in the surrounding region as nonbreeding transients, foragers, or migrants, but they do not breed in or very close to the project site and/or suitable nesting/breeding habitat is absent from the site. These species are the bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), white-tailed kite (*Elanus leucurus*), American peregrine falcon (*Falco peregrinus anatum*), yellow warbler (*Setophaga petechia*), western red bat (*Lasiurus blossevillii*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). The majority of these species are not expected to make any use of the site (even for foraging) due to a lack of suitable habitat and the surrounding urbanized context; however, the yellow warbler may forage on the site occasionally during migration, and the western red bat may roost in trees on the site year-round and forage on the site. Suitable roosting habitat for pallid bats is present in buildings on the site; however, no pallid bat roosts were observed during a focused survey of the buildings in November 2019.

Table 1. Special-status Animal Species, Their Status, and Potential Occurrence on the Project Site

Name	*Status	Habitat	Potential for Occurrence on the Project Site
Federal or State Endangered, Threatened, or Candidate Species			
California tiger salamander (*Ambystoma californiense*)	FT, ST	Vernal or temporary pools in annual grasslands or open woodlands. Adults live terrestrially in small mammal burrows.	**Absent.** Suitable breeding habitat is absent from the project site and the adjacent stormwater channel, and the species is not known to occur in the surrounding vicinity (CNDDB 2020). Determined to be absent.
California red-legged frog (*Rana draytonii*)	FT, CSSC	Streams, freshwater pools, and ponds with emergent or overhanging vegetation.	**Absent.** No suitable breeding, foraging, or dispersal habitat is present on the project site or in the adjacent stormwater channel, and the species is not known to occur in the surrounding vicinity (CNDDB 2020). Determined to be absent.
Foothill yellow-legged frog (*Rana boylii*)	ST	Partially shaded shallow streams and riffles with a rocky substrate. Occurs in a variety of habitats in coast ranges.	**Absent.** No suitable breeding, dispersal, or foraging habitat for this species is present on the site or in the adjacent stormwater channel, there are no recent records of the species in the surrounding vicinity (CNDDB 2020). Determined to be absent.
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT, ST	Primarily associated with scrub and chaparral, but may also occur in grasslands, especially those with rock outcrops.	**Absent.** No suitable habitat for the Alameda whipsnake occurs on the project site. Designated critical habitat is present approximately 1.7 miles northeast of the project site but does not overlap (USFWS 2006). Determined to be absent.
Bald eagle (*Haliaeetus leucocephalus*)	SE, SP	Occurs mainly along seacoasts, rivers, and lakes; nests in tall trees or in cliffs, occasionally on electrical towers. Feeds mostly on fish.	**Absent.** No suitable nesting or foraging habitat for bald eagles is present on the project site. Individuals that nest at inland reservoirs in the surrounding region may fly over the site on occasion, but they are not expected to use the site itself. Determined to be absent.
Crotch bumble bee (*Bombus crotchii*)	SC	Occurs in open grassland and scrub habitats. Like most other species of bumble bees, nests primarily underground (Williams et al. 2014). Generalist foragers that visit a variety of floral resources.	**Absent.** Historically occurred throughout the southern two-thirds of California, including the site vicinity, and its current range overlaps the project site (Xerces Society 2018). However, there are no known recent records of the species from the project site or surrounding vicinity (Xerces Society 2018, CNDDB 2020), and it is not expected to occur currently due to these recent range contractions.

Name	*Status	Habitat	Potential for Occurrence on the Project Site
Western bumble bee (*Bombus occidentalis occidentalis*)	SC	Occurs in meadows and grasslands with abundant floral resources. Nests are primarily underground.	**Absent.** While historically found throughout much of central and northern California, the western bumble bee is now confined to high elevation sites and a small number of records on the northern California coast (Xerces Society 2018). It is not expected to occur in the study area due to these recent range contractions.
California Species of Special Concern			
Western pond turtle (*Actinemys marmorata*)	CSSC	Permanent or nearly permanent water in a variety of habitats.	**Absent.** No suitable aquatic habitat is present on the project site or in the adjacent stormwater channel, and the species is not known to occur in the site vicinity (CNDDB 2020). Determined to be absent.
Burrowing owl (*Athene cunicularia*)	CSSC	Nests and roosts in open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	**Absent.** No burrows of California ground squirrels (*Spermophilus beecheyi*) to provide nesting and roosting habitat for this species were observed on the site during the November 2019 survey, and the species is not known to occur in inland areas in the site vicinity (CNDDB 2020, Cornell Lab of Ornithology 2020). Determined to be absent.
San Francisco common yellowthroat (*Geothlypis trichas sinuosa*)	CSSC	Occupies wooded riparian areas, and nests in herbaceous vegetation, usually in wetlands or moist floodplains.	**Absent.** No suitable nesting or foraging habitat for is present on the project site or along the adjacent stormwater channel, and the species is not known to nest along inland streams in the Oakland area. Determined to be absent.
Yellow warbler (*Setophaga petechia*)	CSSC (nesting)	Nests in riparian woodlands.	**Absent as Breeder.** No suitable riparian habitat is present on or adjacent to the project site to provide suitable nesting habitat for this species. Nonbreeding individuals will forage in trees and vegetation on the site during migration and winter.
Western red bat (*Lasiurus blossevillii*)	CSSC	Roosts in foliage in forest or woodlands, especially in or near riparian habitat.	**Absent as Breeder.** Western red bats occur in the project vicinity in low numbers as migrants and winter residents, but this species does not breed in the region. Individual western red bats may roost in the foliage of trees virtually anywhere on the project site, but are expected to roost primarily in riparian areas elsewhere in the region. Occasional individuals may forage over the project site year-round.

Name	*Status	Habitat	Potential for Occurrence on the Project Site
Pallid bat (*Antrozous pallidus*)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	**Absent.** No bats or signs of bat presence were detected in buildings on the project site during the November 2019 focused survey. Determined to be absent.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSSC	Roosts in caves and mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats.	**Absent.** No suitable cavernous roosting habitat is present on the project site. Determined to be absent.
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	**Absent.** No nests of this species were detected on or adjacent to the site during the November 2019 survey. Determined to be absent.
American badger (*Taxidea taxus*)	CSSC	Burrows in grasslands and occasionally in infrequently disked agricultural areas.	**Absent.** No suitable habitat is present on the project site. Determined to be absent.
State Fully Protected Species			
American peregrine falcon (*Falco peregrinus anatum*)	SP	Forages in many habitats; nests on cliffs and tall bridges and buildings.	**Absent.** No suitable nesting habitat is present on or adjacent to the project site. The species is not known or expected to forage on the site due to the highly urbanized surrounding context. Determined to be absent.
Golden eagle (*Aquila chrysaetos*)	SP	Breeds on cliffs or in large trees (rarely on electrical towers); forages in open areas.	**Absent.** No suitable nesting habitat for golden eagles is present within the study area. The species is not known or expected to forage on the site due to a lack of suitable habitat and the highly urbanized surrounding context. Determined to be absent.
White-tailed kite (*Elanus leucurus*)	SP	Nests in tall shrubs and trees; forages in grasslands, marshes, and ruderal habitats.	**Absent.** Suitable nesting and foraging habitat is not present on the project site. The species is not known or expected to forage on the site due to the highly urbanized surrounding context. Determined to be absent.

Key to Abbreviations:

Status: Federally Threatened (FT); State Endangered (SE); State Threatened (ST); State Candidate (SC); State Fully Protected (SP); California Species of Special Concern (CSSC).

5.3 Sensitive Natural Communities, Vegetation Alliances, and Habitats

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. CDFW determines the level of rarity and imperilment of vegetation types, and tracks sensitive communities in its Rarefind database (CNDDB 2020). Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings are a reflection of the condition of a habitat within California. Natural communities are defined using NatureServe's standard heritage program methodology as follows (Faber-Langendoen et al. 2012):

G1/S1: Critically imperiled.

G2/S2: Imperiled.

G3/S3: Vulnerable.

G4/S4: Apparently secure.

G5/S4: Secure.

In addition to tracking sensitive natural communities, CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009). If an alliance is marked G1-G3, all of the vegetation associations within it will also be of high priority (CDFW 2020). CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP) currently accepted list of vegetation alliances and associations (CDFW 2020).

Impacts on CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, must be considered and evaluated under CEQA (Title 14, Division 6, Chapter 3, Appendix G of the California Code of Regulations). Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS.

Sensitive Natural Communities. A query of sensitive habitats in Rarefind (CNDDB 2020) identified four sensitive habitats as occurring within the nine USGS quadrangles containing or surrounding project site: northern coastal salt marsh (Rank G3/S3), northern maritime chaparral (Rank G1/S1), serpentine bunchgrass (Rank G2/S2), and valley needlegrass grassland (Rank G3/S3). Northern coastal salt marsh, is characterized by Holland (1986) as occurring along sheltered inland margins of bays, often co-dominated by pickleweed (*Salicornia* spp.), California cordgrass (*Spartina foliosa*), and sometimes saltgrass (*Distichlis spicata*). None of these species and no salt marsh habitats were observed on the project site. Northern maritime chaparral is characterized by dense shrub cover with species of manzanita (*Arctostaphylos* spp.) and chamise (*Adenostoma fasciculatum*), which does not occur on the project site. Serpentine bunchgrass occurs only on serpentine soils, which are not present on the project site. Valley needlegrass and other perennial native bunchgrasses were not observed on the project site, and no grasslands are present on the project site to support this community.

Sensitive Vegetation Alliances. No sensitive vegetation alliances exist on the project site.

Sensitive Habitats (Waters of the U.S./State). There are no aquatic habitats on the project site that would be considered waters of the U.S./state. The stormwater channel located adjacent to the project site has potential to be considered a waters of the U.S. and waters of the state by virtue of its hydrologic connectivity.

Riparian. No riparian habitat occurs on the project site, and there is no riparian habitat associated with the adjacent stormwater channel that would be considered jurisdictional by the CDFW and the RWQCB.

Section 6. Impacts and Mitigation Measures

The State CEQA Guidelines provide direction for evaluating the impacts of projects on biological resources and determining which impacts will be significant. CEQA defines a "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under State CEQA Guidelines Section 15065, a project's impacts on biological resources are deemed significant if the project would:

A. "substantially reduce the habitat of a fish or wildlife species"

B. "cause a fish or wildlife population to drop below self-sustaining levels"

C. "threaten to eliminate a plant or animal community"

D. "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the Section 15065 criteria that trigger mandatory findings of significance, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

A. "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

B. "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"

C. "have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act"

D. "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"

E. "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance"

F. "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan"

Potential impacts on existing biological resources were evaluated by comparing the quantity and quality of habitats present on the project site under baseline conditions to the anticipated conditions after implementation of the proposed project. Direct and indirect impacts on special-status species and sensitive natural communities were assessed based on the potential for the species, their habitat, or the natural community in question to be disturbed or enhanced following implementation of the proposed project.

6.1 Impacts on Special-Status Species: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant)

6.1.1 Impacts on Developed/Landscaped Habitat and Associated Common Plant and Wildlife Species

The proposed project will redevelop 8.0 acres of developed/landscaped habitat on the project site. Permanent impacts would occur as a result of building demolition; the construction of new buildings, pathways, and parking areas; and the removal of trees and other landscaped vegetation. The developed/landscaped habitat on the site is abundant and widespread regionally, and is not particularly sensitive or valuable (from the perspective of providing important plant or wildlife habitat). Therefore, impacts on these habitats would not be considered significant under CEQA.

As discussed previously, the project site currently supports a number of common wildlife species, although due to its largely developed nature, the site provides relatively low-quality habitat for most species and thus supports relatively small numbers of individuals of any one species. The common wildlife species that occur on the site are regionally abundant, are present in widely available habitats in the region, and will continue to be present on the site following construction. Additionally, the project would impact only a small proportion of their regional populations, and the number of individuals likely to be displaced by habitat disturbance and loss would be quite small with respect to the amount of suitable habitat available in the area. Also, landscaping proposed by the project would provide resources useful to some common wildlife species. Thus, impacts on most common species and their habitats resulting from the implementation of the project would not meet the threshold of having a substantial adverse effect, and would not be considered significant under CEQA.

The plant species observed on the project site during the reconnaissance-level survey (Appendix A) are not regulated under state or federal laws and are not listed as rare by the CNPS. All native plant species found or with any potential to occur on the site are regionally abundant and common in California. Therefore, implementation of the project would not have a substantial adverse effect on common plant species, and impacts on such species would not be considered significant under CEQA.

6.1.2 Impacts on Special-Status Plant Species (No Impact)

As described above, no special-status plant species are considered to have potential to occur on or adjacent to the project site. As a result, the proposed project will have no impact on special-status plant species.

6.1.3 Impacts on the Yellow Warbler and Western Red Bat (Less than Significant)

The yellow warbler and western red bat potentially occur on the project site as nonbreeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers on or near the project site. At most, a few individuals of each of these species could occasionally roost or forage on the project site. Proposed project activities would not result in the injury or mortality of individuals of any of these species, as they are mobile enough to avoid construction equipment. Because these species do not breed on the site, project activities will not affect breeding habitat or vulnerable young of these species. Therefore, the project is not expected to result in the injury or mortality of individuals of these species. At most, the project may result in the disturbance of a few foraging individuals and loss of a relatively limited extent of foraging habitat.

6.1.4 Impacts on Nesting Birds (Less than Significant)

Construction disturbance during the bird nesting season (February 1 through August 31, for most species) could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. Due to the absence of native or sensitive habitats from the project site, the habitat on the site supports only regionally common, urban-adapted breeding birds, and the numbers that occur on the site (i.e., one to several pairs of each species) represent only a very small proportion of these species' regional populations. In addition, many of these birds are expected to continue to nest and forage on the project site following project construction. Although the project will remove the majority of existing landscape vegetation and trees, it includes planting new trees, shrubs, and forbs as part of the landscape design, and this new vegetation will provide some food and structural resources for the common, urban-adapted resident and migrant birds that use the site. Therefore, project impacts on nesting and foraging birds that occur on the site would not rise to the CEQA standard of having a substantial adverse effect, and these impacts are not considered a significant impact under CEQA. However, all native migratory birds, including raptors, are protected under the California Fish and Game Code[1]. Recommended measures to comply with these laws are provided under Section 7 *Compliance with Additional Laws and Regulations*, below.

6.2 Impacts on Sensitive Communities: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS (No Impact)

6.2.1 Impacts on Riparian Habitat, or Other Sensitive Natural Communities (No Impact)

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe's standard heritage program methodology (CDFW 2020), as described above in Section 4.3. Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally

[1] Per a December 22, 2017 memorandum issued by the U.S. Department of the Interior, the MBTA's prohibition on taking migratory birds and their active nests applies only to direct, purposeful actions, and does not include take incidental to other activities, presumably including tree removal. Nevertheless, all native birds and their nests, eggs, or young are protected by the California Fish and Game Code.

subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS. Project impacts on sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, were considered and evaluated. No riparian habitat or other sensitive natural communities are located on or adjacent to the project site, and thus, there will be no impacts to riparian habitat or other sensitive natural communities as a result of the project. Indirect impacts to aquatic habitat due to water quality are discussed below under Section 6.3.

6.3 Impacts on Wetlands: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Less than Significant)

No wetlands and other waters of the U.S./state are present on the project site, and the project avoids all direct impacts on state or federally protected wetlands and aquatic habitats. However, wetlands and other waters of the U.S./state are present adjacent to the project site in the stormwater channel, and indirect impacts on water quality in the channel could potentially occur as a result of project activities located upslope of the channel if runoff from the project site increases in intensity or frequency.

Construction projects in California causing land disturbances that are equal to 1 acre or greater must comply with state requirements to control the discharge of stormwater pollutants under the National Pollutant Discharge Elimination System *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Water Board Order No. 2009-0009-DWQ). Prior to the start of construction/demolition, a Notice of Intent must be filed with the State Water Board describing the project. A Storm Water Pollution Prevention Plan must be developed and maintained during the project and it must include the use of best management practices (BMPs) to protect water quality until the site is stabilized. Standard permit conditions under the Construction General Permit require that the applicant utilize various measures including: on-site sediment control BMPs, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors.

In many Bay Area counties, including Alameda County, projects must also comply with the *California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit* (Water Board Order No. R2-2015-0049). This permit requires that all projects implement BMPs and incorporate Low Impact Development practices into the design to prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from a site after construction has been completed. In order to meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

In addition, the SWMP that has been prepared for the project would reduce the amount of stormwater run-off post-construction as described in Section 1.4.11 above. The removal of existing buildings and surface parking areas would result in a net decrease in impervious surface on the site, further reducing stormwater runoff from.

With the implementation of measures to protect water quality, indirect impacts to wetlands in the off-site stormwater channel would be less than significant under CEQA.

6.4 Impacts on Wildlife Movement: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

For many species, the landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors are segments of land that provide a link between these different habitats while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife: first, as habitat patches become smaller they are unable to support as many individuals (patch size); and second, the area between habitat patches may be unsuitable for wildlife species to traverse (connectivity).

The project site is entirely developed, and is situated within a dense matrix of urban development. The stormwater channel located adjacent to the site does not provide an important movement pathway for aquatic or terrestrial wildlife species, as the channel is surrounded by extremely steep vertical walls and the majority of its length is located underground. As a result, the proposed redevelopment of the project site would not result in the fragmentation of natural habitats, and any common, urban-adapted wildlife species that currently move through the project site would continue to be able to do so following project construction. Thus, the project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors in the site vicinity.

6.5 Impacts due to Conflicts with Local Policies: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant with Mitigation)

6.5.1 Impacts Due to the Removal of Ordinance-Sized Trees (Less than Significant)

The proposed project will remove approximately 137 trees, including a number of protected trees. Because this type of tree removal conflicts with the City's Municipal Code, it would be considered a significant impact under CEQA (Criterion I). In accordance with the provisions of the City's tree preservation ordinance (Section 12.36.070 of the Oakland Municipal Code and section 302(c) of the Oakland building Code), the project will comply with standard City tree removal permit conditions and prepare a tree replacement plan in accordance with the City tree removal policies. The project's arborist report includes tree protection measures to comply with the City's requirements (Davey Resource Group 2019).

The project will comply with the City's tree preservation ordinance, including obtaining a tree removal permit, and it will comply with conditions of the project's tree removal permit. Such compliance will reduce any potential impacts due to conflicts with the City's tree preservation ordinance to less than significant levels under CEQA.

6.5.2 Compliance with the City of Oakland Creek Protection Ordinance (Less than Significant)

The City's creek protection ordinance (Municipal Code Chapter 13.16) details permit requirements for development and construction projects within or near creeks to avoid or limit negative impacts to the creek both during and following construction. The stormwater channel located south of the project site likely meets the definition of a "creek" under the City's ordinance based on the presence of a daylighted (i.e. not culverted underground) channel with a bed and bank adjacent to the site, the fact that it is hydrologically connected via a culvert to other waters downstream, and because it conveys seasonal flows.

While direct impacts to the stormwater channel will be avoided, project-related construction will occur as close as 46 feet (the distance from the project site to the closest portion of the channel) from the stormwater channel. Per the requirements of the City's creek protection ordinance, the project will obtain a necessary Category 3 permit for this work and submit to the City a creek protection plan detailing how the project will protect the creek during and following construction. Standard conditions of the permit include the stormwater protection measures described in Section 6.3 above and additional water quality protection measures prescribed by the City.

Compliance with the City's creek protection ordinance and the project's Category 3 permit, as well as implementation of the creek protection plan, will reduce any potential impacts due to conflicts with the City's creek protection ordinance to less than significant levels under CEQA.

6.6 Impact due to Conflicts with an Adopted Habitat Conservation Plan: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (Less Than Significant)

The project site is not located within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such plans.

6.7 Cumulative Impacts

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. Future development activities in the City will result in impacts on the same habitat types and species that will be affected by the proposed project. The proposed project, in combination with other projects in the area and other activities that impact the species that are affected by this project, could contribute to cumulative effects on special-status species. Other projects in the area include office/retail/commercial development, mixed use, and residential projects that could adversely affect these species.

The cumulative impact on biological resources resulting from the project in combination with other projects in the larger region would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit of impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; and compensatory mitigation and proactive conservation measures associated with each project. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

However, many projects in the region that impact resources similar to those impacted by the project will be subject to CEQA requirements. It is expected that such projects will mitigate their impacts on sensitive habitats and special-status species through the incorporation of mitigation measures and compliance with permit conditions.

Regardless of the magnitude and significance of cumulative impacts that result from other projects, the Head-Royce School South Campus Redevelopment project is not expected to have a substantial effect on biological resources, and would implement the mitigation measure described above to reduce impacts under CEQA to less than significant levels. Thus, provided that this project successfully incorporates the mitigation measure described in this biological resources report, the project will not have a cumulatively considerable contribution to cumulative effects on biological resources.

Section 7. Compliance with Additional Laws and Regulations for Nesting Birds

Several species of common native birds protected by the MBTA and California Fish and Game Code may nest in trees and shrubs on the site or immediately adjacent to the site. It is also possible that protected native birds could nest on the buildings on the site. The removal of vegetation or demolition of buildings supporting active nests may cause the direct loss of eggs or young, while construction-related activities located near an active nest may cause adults to abandon their eggs or young. This type of impact would not be significant under CEQA, in our opinion, because of the local and regional abundances of the species that could potentially nest on the site and the very low magnitude of the potential impact of development on these species (i.e., the project is expected to impact only a few pairs of these species, which is not a substantial impact on their regional populations). However, the following measures should be implemented to ensure that project activities do not violate the MBTA and California Fish and Game Code:

Measure 1. Avoidance of the Nesting Season. To the extent feasible, commencement of demolition and construction activities should be scheduled to avoid the nesting season. If demolition and construction activities are scheduled to take place outside the nesting season, all potential demolition/construction impacts on nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting season for most birds in Alameda County extends from February 1 through August 31.

Measure 2. Pre-Activity/Pre-Disturbance Surveys. If it is not possible to schedule demolition and construction activities between September 1 and January 31, then pre-activity surveys for nesting birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. We recommend that these surveys be conducted no more than seven days prior to the initiation of demolition or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, and buildings) in and immediately adjacent to the impact areas for nests.

Measure 3. Non-Disturbance Buffers. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.

Measure 4. Inhibition of Nesting. If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project may be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation, and minimize the potential delay of the project due to the presence of active nests in these substrates.

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Appendix A. Plants Observed

Family	Scientific Name	Common Name
Anacardiaceae	*Pistacia chinensis*	Chinese Pistache
	Schinus molle	Peruvian Pepper Tree
Araliaceae	*Hedera canariensis*	Canary Islands Ivy
	Hedera helix	English Ivy
Asphodelaceae	*Phormium tenax*	New Zealand Flax
Asteraceae	*Carduus pycnocephalus*	Italian Thistle
	Dittrichia graveolens	Stinkwort
	Erigeron bonariensis	Flax-leaved Horseweed
	Helminthotheca echioides	Bristly Ox-tongue
	Jacobaea maritima	Silver Ragwort
	Pseudognaphalium luteoalbum	Jersey Cudweed
	Sonchus asper	Spiny Snowthistle
	Tanacetum parthenium	Feverfew
Bignoniaceae	*Campsis radicans*	Trumpet Creeper
Brassicaceae	*Brassica nigra*	Black Mustard
	Raphanus sativus	Wild Radish
Caprifoliaceae	*Lonicera* sp.	Honeysuckle sp.
Cucurbitaceae	*Cucurbita* sp.	Gourd sp.
Cupressaceae	*Sequoia sempervirens*	Redwood
Equisetaceae	*Equisetum arvense*	Common Horsetail
Fabaceae	*Acacia* melanoxylon	Blackwood Acacia
Fagaceae	*Quercus agrifolia*	Coast Live Oak
Hamamelidaceae	*Liquidambar styraciflua*	Sweetgum
Lamiaceae	*Lavendula dentata*	French Lavender
Malvaceae	*Malva* sp.	Malva sp.
Myrsinaceae	*Lysimachia arvensis*	Scarlet Pimpernel
Myrtaceae	*Eucalyptus globulus*	Blue Gum
	Melaleuca citrina	Crimson Bottlebrush
Oleaceae	*Fraxinus* sp.	Ash sp.
	Olea europaea	Olive
Onagraceae	*Epilobium brachycarpum*	Willow Herb
Phytolaccaceae	*Phytolacca americana*	American Pokeweed
Pinaceae	*Cedrus deodar*	Deodar Cedar

	Pinus radiata	Monterey Pine
	Pinus sp.	Pine sp.
Plantaginaceae	*Plantago* sp.	Plantain
Poaceae	*Avena fatua*	Wild Oat
	Bromus arvensis	Soft Brome
	Bromus diandrus	Ripgut Brome
	Cortaderia selloana	Pampas Grass
	Cynodon dactylon	Bermuda Grass
	Hordeum murinum	Foxtail Barley
	Phyllostachys sp.	Bamboo
Polygonaceae	*Polygonum aviculare*	Prostrate Knotweed
Rosaceae	*Pyracantha coccinea*	Firethorn
	Rosa sp.	Rose sp.
	Rubus armeniacus	Himalayan Blackberry
Rutaceae	*Citrus limon*	Lemon Tree
Salicaceae	*Salix lasiolepis*	Arroyo Willow
Simaroubaceae	*Ailanthus altissima*	Tree of Heaven
Ulmaceae	*Ulmus parvifolia*	Chinese Elm

Appendix 6B

Head Royce School Detailed Peer Review - Arborist Report

H.T. Harvey & Associates, August 24, 2020

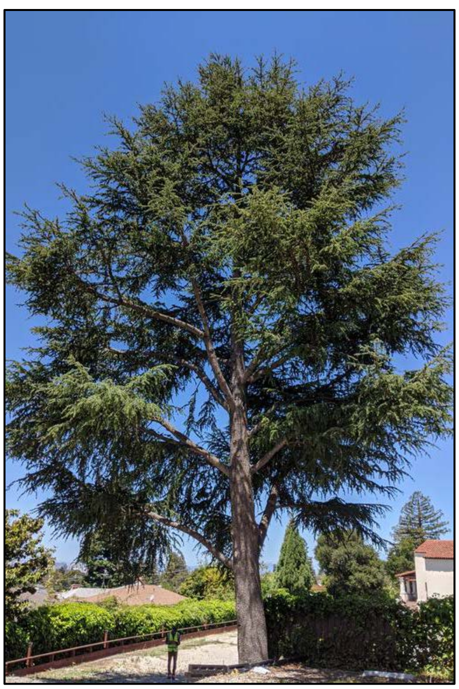
H. T. HARVEY & ASSOCIATES
Ecological Consultants
50 years of field notes, exploration, and excellence

Head Royce School
Detailed Peer Review
Arborist Report

Project #4378-01

Prepared for:

Nathaniel Taylor
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606



Prepared by:

Ryan Hegstad
ISA-Certified Arborist WE-12542A

H. T. Harvey & Associates

August 24, 2020

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List of Preparers

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Section 1. Introduction

H. T. Harvey & Associates has prepared this detailed arborist report for the Head Royce School (School) South Campus Redevelopment Project. The 8.0-acre project site consists of a <0.1-acre portion of the existing School campus northeast of Lincoln Avenue and the 7.9-acre former Lincoln Child Center campus at 4315 Lincoln Avenue in Oakland, California (Figure 1). This report describes the current tree conditions at the School and provides applicable City of Oakland Municipal codes and ordinances; an inventory of all trees on the site (with a diameter at breast height [DBH] greater than 4 inches, or that were included in a previous arborist report for the site authored by Davey Resource Group [DRG]; a figure showing the location of each tree in the inventory; a table showing each tree's species, native status, DBH, Structural Critical Root Zone [SCRZ], Critical Root Zone [CRZ], health and structural scores, health and structural condition rating, protected status per the City of Oakland's Municipal Code (code), priority of preservation, updated removal/preservation/transplant recommendations; and an updated tree disposition plan. This arborist report is sufficient to submit for reporting and permitting pursuant to the code.

N:\Projects4300\4378-01\Reports\Arborist Report\Fig 1 Vicinity Map.mxd agibson

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 1. Vicinity Map
Head-Royce School Detailed Peer Review Arborist Report (4378-01)
August 2020

Section 2. Applicable Codes and Ordinances

2.1 Protected Tree Status

A tree with protected status is defined under items 1, 2, and 3 in the City of Oakland Municipal Code, Section 12.36.020 as:

1. *On any property, Quercus agrifolia (California or Coast Live Oak) measuring four inches dbh or larger, and any other tree measuring nine inches dbh or larger except Eucalyptus and Pinus radiata (Monterey Pine);*
2. *Pinus radiata (Monterey Pine) trees shall be protected only on city property and in development-related situations where more than five Monterey Pine trees per acre are proposed to be removed. Although Monterey Pine trees are not protected in non-development-related situations, nor in development-related situations involving five or fewer trees per acre, public posting of such trees and written notice of proposed tree removal to the Office of Parks and Recreation is required per Section 12.36.070A and Section 12.36.080A.*
3. *Except as noted above, Eucalyptus and Monterey Pine trees are not protected by this chapter.*

2.2 Requirements Regarding Protected Trees

Requirements regarding protected trees are described in the City of Oakland Municipal Code, Sections 12.36.040 and 12.36.070:

12.36.040. Permit Required.
A. A protected tree may not be removed without a tree removal permit.

12.36.070. Procedure–Development-related tree removals.
All applicants for tree removal permits shall provide two copies of a survey and site plan as specified by Section 12.36.080 of the Oakland Municipal Code and Section 302(c) of the Oakland Building Code. All such surveys and site plans shall indicate the location, species, and dbh of all protected trees located within thirty (30) feet of proposed development activity on the subject property, regardless of whether or not the protected trees in question are included on any tree removal permit application; those protected tree(s) which are proposed for removal shall also be clearly identified.
The applicant shall also be required to certify in writing that the applicant has read, understood, and shall comply with the terms and provisions of this title, including any conditions of permit approval made pursuant thereto.

2.3 Tree Replacement for Removed Protected Trees

Requirements regarding tree replacement for the removal of protected trees are described in the City of Oakland Municipal Code, Section 12.36.060:

Replacement plantings shall be required in order to prevent excessive loss of shade, erosion control, groundwater replenishment, visual screening and wildlife habitat in accordance with the following criteria:

1. *No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.*
2. *Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye) or Umbellularia californica (California Bay Laurel).*
3. *Replacement trees shall be of twenty-four (24) inch box size, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.*
4. *Minimum planting areas must be available on site as follows:*
   a. *For Sequoia sempervirens, three hundred fifteen square feet per tree;*
   b. *For all other species listed in subsection (B)(2) of this section, seven hundred (700) square feet per tree.*
5. *In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the city may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.*

Plantings shall be installed prior to the issuance of a certificate of occupancy, subject to seasonal constraints, and shall be maintained by the applicant until established. The Tree Reviewer may require a landscape plan showing the replacement planting and the method of irrigation. Any replacement planting which fails to become established within one year of planting shall be replanted at the applicant's expense.

Section 3. Methods

This report is based on a tree inventory and assessment completed on June 3, 4, 5, and 10, 2020 by H. T. Harvey & Associates restoration ecologist Vicki Chang and arborist Ryan Hegstad. Ryan is an International Society of Arboriculture (ISA) Certified Arborist (WE-12542A). All trees with a DBH greater than 4 inches, or smaller trees that were included in the arborist report by DRG, were included in the report. Tasks conducted during the tree inventory and assessment consisted of the following:

- Mapping and confirming the locations of all trees on the site;
- tagging each tree with an identifying number;
- identifying each tree to species (scientific name and common name);
- assessing the native status of each tree to Oakland, California
- measuring tree trunk diameter (DBH) to the nearest whole inch;
- determining the protected status of each tree;
- assessing the SCRZ and CRZ for each tree and updating these measurements, as needed;
- evaluating tree health and structural conditions;
- taking representative photos of the inventoried trees;
- updating the priority for preservation rating of each tree;
- updating the recommendations for tree removal, preservation, and/or transplanting; and
- updating the tree disposition plan

DBH was measured using a diameter tape at 4.5 feet above the ground. The protected status of each tree was evaluated based on the City's definition provided in Section 2 (above). The location of each tree was recorded using a Trimble Geo 7X GPS. The SCRZ was calculated using a commonly accepted method by Dr. Kim Coder in *Construction Damage Assessments: Trees and Sites* (Coder 1996). The CRZ was obtained by multiplying the DBH by 1.5. Tree assessments were made using ground-level visual observations. The health and structural conditions of each tree were given a score from 0–5 based on the criteria shown in Table 1. Tree condition ratings were based on the combined health and structural ratings as follows:

- ***Poor*** if the summed scores were equal to or between 1 and 4
- ***Fair*** if the summed scores were equal to or between 5 and 7
- ***Good*** if the summed scores were equal to or between 8 and 10

Table 1. Tree Health and Structural Condition Evaluation Criteria

Condition Score	Tree Health	Tree Structure
5	A healthy, vigorous tree with a well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. No apparent pest problems or symptoms of disease. Exceptional life expectancy for the species.	Root plate undisturbed and clear of any obstructions. Root flare has normal development. Trunk is sound and solid. No visible trunk defects or cavities. Balanced and even branch spacing, structure, and attachments.
4	Tree with slight decline in health. May have twig dieback in few parts of the tree. May have less than normal growth rate and minor deficiency in leaf development. Few pest problems or symptoms of disease. Typical life expectancy for the species.	Root plate appears normal with only superficial damage, if any. Possible signs of root dysfunction in and around trunk flare. May have minor trunk defects from previous injury with good closure. Less than 10% of bark missing. Good branch spacing, structure, and attachments.
3	Tree with moderate health. Crown decline and dieback up to 25% of the canopy. Stunted shoot length on new growth. Leafs may be small and somewhat chlorotic. May have signs of pest problems and/or disease. Some decay may be present in main stem and branches. Below average life expectancy.	Root plate may have previous damage or disturbance and dysfunctional roots may be visible around main stem. Evidence of trunk damage or cavities with decay or defects may be present. Less than 25% of bark sections may be missing on trunk. Co-dominant stems may be present. Moderate branch spacing, structure, and attachments that may indicate poor pruning or damage.
2	Tree in decline. May have epicormic growth. Crown may have up to 50% dieback that may affect larger branches. May have little or no new growth on young stems. Leaf size may be small and color may indicate stress. Pest and/or disease problems may be severe. Decay may be present in main stem and branches. May be overmature. Life expectancy is low.	Root plate disturbance and defects may indicate major damage and/or girdling roots around the trunk flare. More than 25% of bark section missing. May have multiple dominant stems and/or included bark. May have poor branch spacing, structure, and attachments, and dead or broken branches. Canopy may have signs of severe damage or topping. May have extensive decay or be hollow.
1	Tree in severe decline. May have epicormic growth. Crown may have severe dieback affecting the majority of the tree. May have little or no new growth on young stems. Leaf size may be small and color may indicate severe stress. Pest and/or disease problems may be severe. Decay may be present in main stem and branches. May be overmature. Life expectancy is extremely low.	Root plate may have major structural problems that present an unacceptable risk. Tree structure may be irregular, unbalanced, and/or have multiple dominant stems. May have irregular and poor branch spacing, structure, and attachments. Dead or broken main branches may be present.
0	Dead	Dead

Preservation priority was assigned ranging from 1–4 (1 = highest priority, 4 = lowest priority, see Table 2). Recommendations for tree removal, preservation, and/or transplanting were made based on the health and structural conditions of the trees and the project's grading plan.

Table 2. Preservation Priority Ratings

Priority	Priority Description
1	Tree should be preserved at all reasonable cost
2	Tree typically worth retaining throughout construction
3	Tree typically not worth retaining
4	Tree should be removed under most circumstances

An advanced assessment to quantify interior wood structure, root condition, and upper canopy condition was not performed as part of this assessment. Therefore, tasks performed did not include an excavation of the root zones of the trees, drilling for decay detection, collecting soil samples for laboratory testing, sending animal or vegetative material for laboratory testing, climbing the trees for an aerial inspection, a tree risk assessment, or a valuation (see Appendix A: Assumptions and Limiting Conditions and Appendix B: Certification of Performance). These tasks are not typically included in a standard arborist report.

Section 4. Results and Discussion

4.1 Summary of Findings

Four hundred and eighty (480) trees and stumps of 55 species[1] were inventoried and assessed (Table 3) (Figure 2). Three hundred and twenty-one (321) trees were classified as protected during the assessment (Table 3) (Appendix C). The most common species was coast live oak (*Quercus agrifolia*) with 156 trees (Table 3). The majority of trees were in fair condition and many trees were in good condition (Table 3) (see Section 4.3 below). A description of each tree, including scientific name, common name, native status, DBH, protected status, SCRZ, CRZ, health score, structure score, condition rating, priority for preservation, updated removal/ preservation/transplant recommendation, and notes are presented in Appendix C.

4.2 Tree Condition

Of the 480 trees and stumps inventoried on the site, one hundred and eighty-two (182) trees (38%) were in good condition, 263 trees (55%) trees were in fair condition, 19 trees (4%) were in poor condition, and 16 trees and stumps (2%) were dead (Table 3). Many trees in fair condition exhibited moderate canopy dieback and codominant stems. Many trees in poor condition exhibited substantial canopy dieback and poor structure, such as included (ingrown) bark or codominant stems, or were leaning heavily. Notes on each tree's condition can be found in Appendix C.

4.3 Photo Documentation

A representative selection of photographs of inventoried trees is provided in Appendix D.

[1] The total count of 480 trees and 55 species inventoried includes six stumps, which were included in the inventory because they were included in DRG's December 2019 Arborist report. The total number of trees inventoried was 474.

Table 3. Tree Quantity and Condition Summary

Scientific Name	Common Name	Total Trees[1]	Protected Trees	Tree Condition			
				Dead	Poor	Fair	Good
Acacia melanoxylon	Blackwood acacia	20	15	1	2	10	7
Acer negundo	Box elder	1	0	0	0	1	0
Arbutus unedo	Strawberry tree	9	4	1	0	8	0
Betula pendula	European white birch	1	0	0	0	1	0
Brahea sp.	Brahea palm	2	1	0	0	1	1
Callistemon viminalis	Weeping bottlebrush	1	1	0	0	1	0
Calocedrus decurrens	Incense cedar	10	10	0	0	10	0
Cedrus deodara	Deodar cedar	5	3	0	0	1	4
Cinnamomum camphora	Camphor	1	1	0	0	1	0
Citrus × limon	Lemon tree	1	0	0	0	1	0
Cotinus coggygria	Smoke tree	1	1	0	0	1	0
Cotoneaster franchetii	Franchet's cotoneaster	1	1	0	0	0	1
Crataegus monogyna	Common hawthorn	2	2	0	0	2	0
Cupressus arizonica	Arizona cypress	9	6	0	0	8	1
Cupressus nootkatensis	Alaskan yellow cedar	1	0	0	0	0	1
Cupressus sempervirens	Italian cypress	17	1	0	0	2	15
Dodonaea viscosa	Florida hopbush	1	0	0	0	0	1
Eucalyptus gunnii	Cider gum	2	0	0	0	2	0
Eucalyptus polyanthemos	Silver dollar gum	1	0	0	0	1	0
Ficus sp.	Fig	1	0	0	0	0	1
Fraxinus angustifolia	Narrow-leaved ash	2	0	0	0	1	1
Juglans nigra	Black walnut	5	3	1	0	4	0
Lagerstroemia indica	Crape myrtle	3	0	0	0	2	1
Leptospermum scoparium	New Zealand teatree	2	1	0	1	1	0

Scientific Name	Common Name	Total Trees[1]	Protected Trees	Tree Condition			
				Dead	Poor	Fair	Good
Ligustrum lucidum	Glossy privet	2	1	0	0	2	0
Liquidambar styraciflua	Sweetgum	12	8	0	0	3	9
Lophostemon confertus	Brisbane box	2	2	0	0	0	2
Magnolia ×soulangiana	Saucer magnolia	2	0	0	0	0	2
Malus sp.	Crabapple	3	2	0	2	1	0
Malus silvestris	Common crabapple	6	0	0	0	0	6
Maytenus boaria	Mayten tree	1	1	0	0	1	0
Olea europaea	Olive	12	11	0	0	10	2
Pinus brutia	Turkish pine	2	2	0	0	2	0
Pinus pinea	Italian stone pine	6	6	0	0	6	0
Pinus radiate	Monterey pine	6	0	0	0	3	3
Pittosporum sp.	Pittosporum	4	2	0	1	2	1
Pittosporum tobira	Japanese pittosporum	1	1	0	0	1	0
Pittosporum undulatum	Victorian box	2	2	0	1	1	0
Platanus × hispanica	London planetree	1	1	0	0	0	1
Podocarpus gracilior	Fern pine	1	1	0	0	1	0
Populus fremontii	Fremont cottonwood	4	3	1	0	3	0
Prunus cerasifera	Cherry plum	6	4	0	2	3	1
Prunus dulcis	Sweet almond	2	2	0	1	1	0
Prunus serrulata	Japanese flowering cherry	1	1	0	0	1	0
Prunus sp.	Plum tree variety	3	1	0	0	3	
Pseudotsuga menziesii	Douglas fir	1	0	1	0	0	0
Pyracantha sp.	Firethorn	1	1	0	0	1	0
Pyrus calleryana	Callery pear	4	0	0	1	3	
Pyrus kawakamii	Evergreen pear	4	3	0	0	3	1

Scientific Name	Common Name	Total Trees[1]	Protected Trees	Tree Condition			
				Dead	**Poor**	**Fair**	**Good**
Quercus agrifolia	Coast live oak	156	155	1	6	97	52
Quercus ilex	Holly oak	90	28	0	1	42	47
Quercus lobata	Valley oak	1	1	0	0	1	
Quercus suber	Cork oak	1	1	0	0	0	1
Schinus molle	Peruvian pepper tree	3	2	0	1	2	
Sequoia sempervirens	Coast redwood	38	28	7	0	11	20
Stump		3	0	3	0	0	0
All Tree Species		480	321	16	19	263	182

[1] Six (6) stumps are included in the totals because they are included in DRG's December 2019 Arborist Report. Two of these stumps were identified as coast redwoods (and are included in the count of total existing coast redwood trees), and three of these stumps are unidentified and included as a separate row.

N:\Projects4300\4378-01\Reports\Arborist Report\Fig 2a Location of Existing Trees.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 2a. Locations of Existing Trees
Head-Royce School Detailed Peer Review Arborist Report (4378-01)
August 2020

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 2b. Locations of Existing Trees

Head-Royce School Detailed Peer Review Arborist Report (4378-01)

August 2020

Section 5. Tree Disposition Recommendations

H. T. Harvey & Associates provides recommendations for tree removal, preservation, and/or transplanting based on the tree inventory and tree condition ratings provided herein, as well as a map of the limits of grading provided by Lamphier-Gregory in October 2019. We recommend that the majority of coast live oaks to be impacted by construction be transplanted where feasible, due to their protected status, that other trees for which more than 25% of the CRZ and/or any of the SCRZ would be impacted be removed, and that nonnative trees with poor condition ratings or a low preservation priority be removed.

Of the 321 protected trees on the site, we recommend that 121 trees (38%) be removed, 169 trees (52%) be preserved, and 31 trees (10%) be considered transplant candidates (Table 4, Appendix E). All trees recommended for transplant are natives, and consist of 29 coast live oaks, one valley oak, and one coast redwood. Native protected trees that are removed (not including transplanted trees) are required to be replaced per the City's Code, Section 12.36.060 (see Section 2.3). Of the 121 protected trees recommended for removal, 35 are natives and would require replacement; these are one box elder (*Acer negundo*), 27 coast live oaks, and seven coast redwoods (*Sequoia sempervirens*). The removal/preservation/transplant status and location of each tree on the site is provided in the Updated Tree Disposition Plan in Appendix E.

Table 4. Recommended Tree Disposition

Scientific Name	Common Name	Total Existing Trees[1]	Total Existing Protected Trees	Recommended Disposition		
				Remove	Preserve	Transplant
Acacia melanoxylon	Blackwood acacia	20	15	12	3	0
Acer negundo	Box elder	1	1	1	0	0
Arbutus unedo	Strawberry tree	9	4	2	2	0
Betula pendula	European white birch	1	0	0	0	0
Brahea sp.	Brahea palm	2	1	1	0	0
Callistemon viminalis	Weeping bottlebrush	1	1	0	1	0
Calocedrus decurrens	Incense cedar	10	10	0	10	0
Cedrus deodara	Deodar cedar	5	3	2	1	0
Cinnamomum camphora	Camphor	1	1	1	0	0
Citrus × limon	Lemon tree	1	0	0	0	0
Cotinus coggygria	Smoke tree	1	1	1	0	0
Cotoneaster franchetii	Franchet's cotoneaster	1	1	0	1	0
Crataegus monogyna	Common hawthorn	2	2	2	0	0
Cupressus arizonica	Arizona cypress	9	6	5	1	0
Cupressus nootkatensis	Alaskan yellow cedar	1	0	0	0	0
Cupressus sempervirens	Italian cypress	17	1	1	0	0
Dodonaea viscosa	Florida hopbush	1	0	0	0	0
Eucalyptus gunnii	Cider gum	2	0	0	0	0
Eucalyptus polyanthemos	Silver dollar gum	1	0	0	0	0
Ficus sp.	Fig	1	0	0	0	0
Fraxinus angustifolia	Narrow-leaved ash	2	0	0	0	0
Juglans nigra	Black walnut	5	3	3	0	0
Lagerstroemia indica	Crape myrtle	3	0	0	0	0
Leptospermum scoparium	New Zealand teatree	2	1	1	0	0

Scientific Name	Common Name	Total Existing Trees[1]	Total Existing Protected Trees	Recommended Disposition		
				Remove	Preserve	Transplant
Ligustrum lucidum	Glossy privet	2	1	1	0	0
Liquidambar styraciflua	Sweetgum	12	8	7	1	0
Lophostemon confertus	Brisbane box	2	2	0	2	0
Magnolia × soulangiana	Saucer magnolia	2	0	0	0	0
Malus sp.	Crabapple	3	2	2	0	0
Malus sylvestris	Common crabapple	6	0	0	0	0
Maytenus boaria	Mayten tree	1	1	1	0	0
Olea europaea	Olive	12	11	6	5	0
Pinus brutia	Turkish pine	2	2	2	0	0
Pinus pinea	Italian stone pine	6	6	6	0	0
Pinus radiata	Monterey pine	6	0	0	0	0
Pittosporum sp.	Pittosporum	4	2	1	1	0
Pittosporum tobira	Japanese pittosporum	1	1	1	0	0
Pittosporum undulatum	Victorian box	2	2	1	1	0
Platanus × hispanica	London plane tree	1	1	1	0	0
Podocarpus gracilior	Fern pine	1	1	1	0	0
Populus fremontii	Fremont cottonwood	4	3	0	3	0
Prunus cerasifera	Cherry plum	6	4	2	2	0
Prunus dulcis	Sweet almond	2	2	1	1	0
Prunus serrulata	Japanese flowering cherry	1	1	1	0	0
Prunus sp.	Plum tree variety	3	1	1	0	0
Pseudotsuga menziesii	Douglas fir	1	0	0	0	0
Pyracantha sp.	Firethorn	1	1	0	1	0
Pyrus calleryana	Callery pear	4	0	0	0	0

Scientific Name	Common Name	Total Existing Trees[1]	Total Existing Protected Trees	Recommended Disposition		
				Remove	Preserve	Transplant
Pyrus kawakamii	Evergreen pear	4	3	2	1	0
Quercus agrifolia	Coast live oak	156	155	27	99	29
Quercus ilex	Holly oak	90	28	17	11	0
Quercus lobata	Valley oak	1	1	0	0	1
Quercus suber	Cork oak	1	1		1	0
Schinus molle	Peruvian pepper tree	3	2	1	1	0
Sequoia sempervirens	Coast redwood	38	28	7	20	1
Unidentified Stump		3	0	0	0	0
Total		**480**	**321**	**121**	**169**	**31**

[1]Six (6) stumps are included in the totals because they are included in DRG's December 2019 Arborist Report. Two of these stumps were identified as coast redwoods and one was identified as a blackwood acacia (*Acacia melanoxylon*); these stumps are included in the count of total existing inventoried trees of those species. Three stumps were unidentified and are included as a separate row.

Section 6. References

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Appendix A. Assumptions and Limiting Conditions

The following are the assumptions and limiting conditions of this tree survey and arborist report. These assumptions and limitations are typical of tree surveys and arborist reports of existing conditions.

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. Property lines were not clearly surveyed or marked in the field by the owner. The consultant attempted to provide as accurate of boundary for the inventory as possible using the limited data available.
3. Care has been taken to obtain all information from reliable sources. All data have been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
7. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed written or verbal consent of the consultant particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in her qualifications.
8. This report and values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
10. Unless expressed otherwise: a) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

Appendix B. Certification of Performance

I, Ryan Hegstad, certify that:

The trees were personally inspected and the property referred to in this report and have stated my findings accurately. The extent of the evaluation is stated in the attached report and the terms of the assignment.

I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.

The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.

My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.

No one provided significant professional assistance to me, except as indicated within the report.

Compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

Ryan Hegstad

Ryan Hegstad
ISA-Certified Arborist WE-12542A

Appendix C. Tree Assessment

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
3964	*Pinus brutia*	Turkish pine	Nonnative	45	1	Protected	11	68	3	3	Fair	2	Remove	some browning foliage, 2 dominant stems
3965	*Quercus agrifolia*	Coast live oak	Native	20	3	Protected	9	30	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems,
3966	*Quercus agrifolia*	Coast live oak	Native	6, 5, 5	1	Protected	8	24	4	3	Fair	2	Transplant Candidate	codominant stems
3967	*Quercus agrifolia*	Coast live oak	Native	10	1	Protected	6	15	3	4	Fair	2	Remove	spare foliage
3968	*Quercus agrifolia*	Coast live oak	Native	7	1	Protected	4	11	4	5	Good	1	Transplant Candidate	full canopy straight trunk
3969	*Quercus agrifolia*	Coast live oak	Native	6	1	Protected	4	9	5	3	Good	2	Transplant Candidate	full canopy, codominant stems
3970	*Prunus dulcis*	Sweet almond	Nonnative	10	1	Protected	6	15	2	2	Poor	4	Remove	75% canopy dieback, leaning, growing into acacia
3971	*Acacia melanoxylon*	Blackwood acacia	Nonnative	5	4	Not Protected	3	8	4	4	Good	1	Not Protected	full canopy, straight trunk
3972	*Quercus agrifolia*	Coast live oak	Native	12	1	Protected	7	18	4	4	Good	1	Remove	full canopy
3973	*Pyrus calleryana*	Callery pear	Nonnative	7	1	Not Protected	4	11	3	4	Fair	2	Not Protected	20% canopy dieback, codominant stems
3974	*Quercus agrifolia*	Coast live oak	Native	4, 4, 4, 3	1	Protected	8	23	4	3	Fair	2	Preserve	Multiple codominant stems from base
3975	*Quercus agrifolia*	Coast live oak	Native	12, 11	1	Protected	9	35	4	3	Fair	2	Preserve	full canopy, codominant trunks
3976	*Cupressus nootkatensis*	Alaskan yellow cedar	Nonnative	3	3	Not Protected	2	5	3	5	Good	2	Not Protected	10% canopy dieback, straight trunk
3977	*Cotoneaster franchetii*	Franchet's cotoneaster	Nonnative	4, 3, 3	2	Protected	6	15	4	4	Good	1	Preserve	shrub, in flower
3978	*Cupressus arizonica*	Arizona cypress	Nonnative	5, 3	1	Not Protected	5	12	4	2	Fair	3	Not Protected	trunk structure poor - grows down then up, multi-stemmed
3979	*Quercus agrifolia*	Coast live oak	Native	16, 13, 9, 6	5	Protected	11	66	4	2	Fair	3	Remove	full canopy, codominant trunks, crossing trunks
3980	*Ficus* sp.	Fig	Nonnative	1	1	Not Protected	1	2	4	4	Good	1	Not Protected	young tree
3981	*Quercus agrifolia*	Coast live oak	Native	14	1	Protected	7	21	4	3	Fair	2	Remove	full canopy, codominant stems
3982	*Quercus agrifolia*	Coast live oak	Native	15	1	Protected	8	23	4	4	Good	1	Preserve	full canopy, many ants, in flower, large primary branches
3983	*Sequoia sempervirens*	Coast redwood	Native	16	1	Protected	8	24	3	4	Fair	2	Preserve	foliage browning
3984	*Quercus agrifolia*	Coast live oak	Native	7	1	Protected	4	11	2	3	Fair	3	Preserve	50% canopy dieback, oozing wound
3985	*Quercus ilex*	Holly oak	Nonnative	4	1	Not Protected	3	6	4	3	Fair	2	Not Protected	codominant stems, close to building

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
3986	*Quercus ilex*	Holly oak	Nonnative	5	1	Not Protected	3	8	5	3	Good	2	Not Protected	codominant stems, in flower
3987	*Quercus agrifolia*	Coast live oak	Native	5	4	Protected	3	8	3	3	Fair	2	Preserve	50% canopy dieback, shrub form
3988	*Quercus agrifolia*	Coast live oak	Native	6	1	Protected	4	9	4	4	Good	1	Preserve	full canopy, short
3989	*Quercus agrifolia*	Coast live oak	Native	11	1	Protected	6	17	4	3	Fair	2	Preserve	full canopy, codominant stems, browning leaves
3990	*Olea europaea*	Olive	Nonnative	22	1	Protected	9	33	3	3	Fair	2	Preserve	25% canopy dieback, yellowing foliage, codominant stems, growing into power lines
3991	*Olea europaea*	Olive	Nonnative	11	1	Protected	6	17	3	3	Fair	2	Preserve	25% canopy dieback, leaning, multiple codominant stems
3992	*Quercus agrifolia*	Coast live oak	Native	6	1	Protected	4	9	4	4	Good	1	Preserve	full canopy
3993	*Quercus agrifolia*	Coast live oak	Native	5	1	Protected	3	8	4	3	Fair	2	Preserve	full canopy, codominant stems
3994	*Cedrus deodara*	Deodar cedar	Nonnative	34	1	Protected	10	51	4	4	Good	1	Preserve	one large dominant lower branch, good branching structure
3995	*Quercus agrifolia*	Coast live oak	Native	6	5	Protected	4	9	4	4	Good	1	Preserve	full canopy, previously pruned/limbed up, tree form
3996	*Olea europaea*	Olive	Nonnative	24	1	Protected	10	36	3	3	Fair	2	Preserve	few dead browning/yellowing leaves, codominant stems
3997	*Quercus ilex*	Holly oak	Nonnative	4	1	Not Protected	3	6	2	3	Fair	3	Not Protected	epicormic branching, shaded out by building and aloe plant
3998	*Brahea* sp.	Brahea palm	Nonnative	12	1	Protected	7	18	4	4	Good	1	Remove	flowering, some hanging dead leaves
3999	*Quercus agrifolia*	Coast live oak	Native	7	1	Protected	4	11	3	5	Good	2	Preserve	20% canopy dieback, thinning canopy
4000	*Quercus agrifolia*	Coast live oak	Native	8	1	Protected	5	12	2	4	Fair	3	Preserve	30% canopy dieback
5601	*Quercus agrifolia*	Coast live oak	Native	8	3	Protected	5	12	3	3	Fair	2	Preserve	30% canopy dieback, codominant stems
5602	*Quercus ilex*	Holly oak	Nonnative	9, 8, 8, 8	1	Protected	10	50	4	3	Fair	2	Preserve	10% canopy dieback, 4 codominant trunks, leaning
5603	*Quercus agrifolia*	Coast live oak	Native	17, 17	1	Protected	10	51	4	3	Fair	2	Preserve	full canopy, 2 codominant trunks, included bark, some browning leaves
5604	*Juglans nigra*	Black walnut	Nonnative	20	3	Protected	9	30	3	4	Fair	2	Remove	25% canopy dieback, epicormic branching, broken branch
5605	*Malus* sp.	Crabapple	Nonnative	13	1	Protected	7	20	2	1	Poor	4	Remove	majority of tree dead, small part alive and in fruit
5606	*Quercus agrifolia*	Coast live oak	Native	44	1	Protected	11	66	4	3	Fair	2	Preserve	15% canopy dieback, codominant trunks, included bark,
5607	*Quercus agrifolia*	Coast live oak	Native	9	1	Protected	5	14	4	4	Good	1	Preserve	15% canopy dieback
5608	*Arbutus unedo*	Strawberry tree	Nonnative	14, 2	1	Protected	8	24	4	3	Fair	2	Preserve	10% canopy dieback, in fruit, in flower

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
5609	*Arbutus unedo*	Strawberry tree	Nonnative	6, 4	1	Protected	6	15	4	3	Fair	2	Preserve	5% canopy dieback, in flower, codominant stems
5610	*Pinus radiata*	Monterey pine	Nonnative	29	3	Not Protected	10	44	3	4	Fair	2	Not Protected	10% canopy dieback, in cone, some browning
5611	*Pinus radiata*	Monterey pine	Nonnative	18	1	Not Protected	8	27	2	3	Fair	3	Not Protected	15% canopy dieback, leaning slightly, dead lower branches, in cone
5612	*Pinus radiata*	Monterey pine	Nonnative	34	1	Not Protected	10	51	3	4	Fair	2	Not Protected	30% canopy dieback, in cone, some browning leaves, while not protected
5613	*Quercus agrifolia*	Coast live oak	Native	19, 18, 12	2	Protected	12	74	4	4	Good	1	Preserve	outer canopy full, inner canopy is outshaded, 3 dominant trunks, included bark,
5614	*Quercus agrifolia*	Coast live oak	Native	36	2	Protected	10	54	3	4	Fair	2	Preserve	15% canopy dieback, some epicormic branching, inner canopy dieback
5615	*Pinus radiata*	Monterey pine	Nonnative	31	2	Not Protected	10	47	4	4	Good	1	Not Protected	5% canopy dieback, leaning slightly, in cone, while not protected
5616	*Arbutus unedo*	Strawberry tree	Nonnative	4	1	Not Protected	3	6	4	3	Fair	2	Not Protected	full canopy, leaning, in flower in fruit
5617	*Schinus molle*	Peruvian pepper tree	Nonnative	15, 15, 14	3	Protected	11	66	4	3	Fair	2	Remove	5% canopy dieback, 2 dominant trunks
5618	*Malus* sp.	Crabapple	Nonnative	6, 6	1	Protected	7	18	3	2	Fair	3	Remove	15% canopy dieback, codominant stems, requires pruning
5619	*Malus* sp.	Crabapple	Nonnative	8	1	Not Protected	5	12	2	1	Poor	4	Not Protected	out shaded on 1 side, main trunk broken-off, 2 branches remaining, in fruit
5620	*Acacia melanoxylon*	Blackwood acacia	Nonnative	5	1	Not Protected	3	8	4	4	Good	1	Not Protected	straight trunk
5621	*Quercus agrifolia*	Coast live oak	Native	16, 12	1	Protected	10	42	2	3	Fair	3	Preserve	40% canopy dieback, codominant stems included bark
5622	*Quercus agrifolia*	Coast live oak	Native	19	1	Protected	9	29	2	3	Fair	3	Preserve	50% canopy dieback, codominant trunks
5623	*Sequoia sempervirens*	Coast redwood	Native	13	1	Protected	7	20	4	5	Good	1	Remove	New growth, full canopy , SCRZ and CRZ would be impacted
5624	*Prunus cerasifera*	Cherry plum	Nonnative	9, 5, 4, 4, 4	2	Protected	10	39	4	4	Good	1	Remove	full canopy, shrubby
5625	*Pittosporum* sp.	Pittosporum	Nonnative	5, 4, 4	1	Protected	7	20	4	3	Fair	2	Preserve	in fruit, 3 codominant trunks, crossing trunks
5626	*Quercus agrifolia*	Coast live oak	Native	7	1	Protected	4	11	3	4	Fair	2	Transplant Candidate	full canopy, many browning leaves, growing under Peruvian pepper tree, CRZ will be impacted by construction
5627	*Prunus cerasifera*	Cherry plum	Nonnative	10	1	Protected	6	15	4	2	Fair	3	Preserve	20% canopy dieback, crossing branches

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
5628	*Cupressus sempervirens*	Italian cypress	Nonnative	8	1	Not Protected	5	12	4	5	Good	1	Not Protected	full canopy, some browning leaves
5629	*Cupressus sempervirens*	Italian cypress	Nonnative	6	1	Not Protected	4	9	4	4	Good	1	Not Protected	missing some lower branches, shaded by coast redwood
5630	*Sequoia sempervirens*	Coast redwood	Native	13	1	Protected	7	20	4	5	Good	1	Preserve	40% canopy dieback, some yellowing foliage
5631	*Cupressus sempervirens*	Italian cypress	Nonnative	7	1	Not Protected	4	11	3	4	Fair	2	Not Protected	full canopy, lower branches missing, shaded by redwoods
5632	*Cupressus sempervirens*	Italian cypress	Nonnative	5	1	Not Protected	3	8	4	4	Good	1	Not Protected	lower branches out-shaded by redwood
5633	*Cupressus sempervirens*	Italian cypress	Nonnative	6	1	Not Protected	4	9	4	4	Good	1	Not Protected	bottom shaded by redwoods, full canopy
5634	*Cupressus sempervirens*	Italian cypress	Nonnative	7	1	Not Protected	4	11	4	4	Good	1	Not Protected	in cone, shaded by redwoods
5635	*Sequoia sempervirens*	Coast redwood	Native	16	1	Protected	8	24	3	4	Fair	2	Preserve	full canopy, 50% browning leaves, missing some branches
5636	*Quercus agrifolia*	Coast live oak	Native	15	1	Protected	8	23	4	4	Good	1	Preserve	full canopy, large main branches
5637	*Quercus ilex*	Holly oak	Nonnative	9	1	Protected	5	14	3	4	Fair	2	Preserve	35% canopy dieback, motion sensor lighting attached, in flower
5638	*Quercus ilex*	Holly oak	Nonnative	6	1	Not Protected	4	9	4	5	Good	1	Not Protected	full canopy, in flower, few browning leaves
5639	*Quercus agrifolia*	Coast live oak	Native	8	5	Protected	5	12	2	3	Fair	3	Preserve	50% canopy dieback, leaning
5640	*Quercus ilex*	Holly oak	Nonnative	5	1	Not Protected	3	8	4	5	Good	1	Not Protected	full canopy, in flower
5641	*Quercus ilex*	Holly oak	Nonnative	8	2	Not Protected	5	12	4	4	Good	1	Not Protected	few yellowing leaves, large main branches
7001	*Quercus agrifolia*	Coast live oak	Native	9	2	Protected	5	14	4	3	Fair	2	Preserve	codominant stems, ants, browning leaves
7002	*Pittosporum undulatum*	Victorian box	Nonnative	13, 7	1	Protected	9	30	3	2	Fair	3	Preserve	30% canopy dieback, in seed, previously identified as *Myoporum* sp.
7003	*Quercus ilex*	Holly oak	Nonnative	2, 2	1	Not Protected	3	6	3	3	Fair	2	Not Protected	leaning, yellowing foliage, codominant stems
7004	*Lagerstroemia indica*	Crape myrtle	Nonnative	4	3	Not Protected	3	6	4	3	Fair	2	Not Protected	Full canopy, codominant stems, healthy foliage
7005	*Quercus ilex*	Holly oak	Nonnative	3	1	Not Protected	2	5	2	3	Fair	3	Not Protected	65% canopy dieback
7006	*Quercus agrifolia*	Coast live oak	Native	13	2	Protected	7	20	4	4	Good	1	Preserve	10% canopy dieback, large primary branches
7007	*Quercus agrifolia*	Coast live oak	Native	10	1	Protected	6	15	4	3	Fair	2	Preserve	25% canopy dieback, codominant stems
7008	*Quercus ilex*	Holly oak	Nonnative	5	1	Not Protected	3	8	3	3	Fair	2	Not Protected	in flower, leaning slightly
7009	*Lagerstroemia indica*	Crape myrtle	Nonnative	6	1	Not Protected	4	9	4	3	Fair	2	Not Protected	10% canopy dieback, crossing branches

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7010	*Quercus agrifolia*	Coast live oak	Native	5	3	Protected	3	8	3	3	Fair	2	Remove	leaning, browning leaves
7011	*Quercus agrifolia*	Coast live oak	Native	8, 6	2	Protected	7	21	3	3	Fair	2	Preserve	30% canopy dieback, codominant stems
7012	*Quercus ilex*	Holly oak	Nonnative	0	1	Not Protected	0	0	5	3	Good	2	Not Protected	codominant stems, in flower, new growth
7013	*Podocarpus gracilior*	Fern pine	Nonnative	23	1	Protected	9	35	4	3	Fair	2	Remove	30% canopy dieback, codominant stems
7014	*Quercus agrifolia*	Coast live oak	Native	5	1	Protected	3	8	4	4	Good	1	Transplant Candidate	full canopy, has been topped in the past
7015	*Acacia melanoxylon*	Blackwood acacia	Nonnative	10	2	Protected	6	15	4	3	Fair	2	Remove	full canopy, codominant stems
7016	*Quercus agrifolia*	Coast live oak	Native	13	1	Protected	7	20	4	4	Good	1	Transplant Candidate	10% canopy dieback, codominant stems
7017	*Quercus ilex*	Holly oak	Nonnative	6	4	Not Protected	4	9	4	4	Good	1	Not Protected	leaning slightly
7018	*Quercus ilex*	Holly oak	Nonnative	5	1	Not Protected	3	8	4	4	Good	1	Not Protected	full canopy, codominant stems
7019	*Quercus agrifolia*	Coast live oak	Native	13	2	Protected	7	20	4	2	Fair	3	Remove	full canopy, leaning, multiple codominant stems
7020	*Pittosporum undulatum*	Victorian box	Nonnative	4, 3, 3, 3	2	Protected	7	20	2	2	Poor	4	Remove	65% canopy dieback, multiple codominant stems
7021	*Cupressus sempervirens*	Italian cypress	Nonnative	8	2	Not Protected	5	12	4	5	Good	1	Not Protected	some browning leaves
7022	*Quercus agrifolia*	Coast live oak	Native	11	2	Protected	6	17	4	3	Fair	2	Remove	full canopy, codominant stems
7023	*Quercus agrifolia*	Coast live oak	Native	11	2	Protected	6	17	4	4	Good	1	Remove	full canopy
7024	*Juglans nigra*	Black walnut	Nonnative	14, 12	3	Not Protected	10	39	0	0	Dead	4	Not Protected	dead
7025	*Quercus agrifolia*	Coast live oak	Native	11	1	Protected	6	17	4	3	Fair	2	Remove	10% canopy dieback, codominant stems
7026	*Cedrus deodara*	Deodar cedar	Nonnative	28	3	Protected	10	42	4	4	Good	1	Remove	cones present, new growth, below retention wall
7027	*Sequoia sempervirens*	Coast redwood	Native	33	3	Protected	10	50	4	3	Fair	2	Remove	full canopy, growing into standing platform
7028	*Quercus agrifolia*	Coast live oak	Native	9	1	Protected	5	14	4	3	Fair	2	Transplant Candidate	10% canopy dieback, codominant stems
7029	*Liquidambar styraciflua*	Sweetgum	Nonnative	13	1	Protected	7	20	5	4	Good	1	Remove	full canopy, in seed
7030	*Cinnamomum camphora*	Camphor	Nonnative	13, 11, 9, 8, 8	3	Protected	12	74	3	4	Fair	2	Remove	20% canopy dieback, multiple codominant stems, lion-tailed, full canopy, some red leaves
7031	*Quercus ilex*	Holly oak	Nonnative	9	2	Protected	5	14	4	4	Good	1	Remove	recently pruned,
7032	*Quercus agrifolia*	Coast live oak	Native	11	1	Protected	6	17	4	3	Fair	2	Transplant Candidate	20% canopy dieback, codominant stems, recently pruned
7033	*Quercus agrifolia*	Coast live oak	Native	7	3	Protected	4	11	4	4	Good	1	Transplant Candidate	5% canopy dieback

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7034	*Liquidambar styraciflua*	Sweetgum	Nonnative	9	1	Protected	5	14	3	5	Good	2	Remove	full canopy, epicormic branching
7035	*Pinus pinea*	Italian stone pine	Nonnative	31	1	Protected	10	47	4	2	Fair	3	Remove	dense branching, leaning heavily, main trunk removed
7036	*Olea europaea*	Olive	Nonnative	14, 12, 10	1	Protected	10	54	4	3	Fair	2	Remove	15% canopy dieback, codominant stems
7037	*Quercus agrifolia*	Coast live oak	Native	14	1	Protected	7	21	4	2	Fair	3	Transplant Candidate	full canopy, growing through fence, codominant stems, crossing branch
7038	*Liquidambar styraciflua*	Sweetgum	Nonnative	16	1	Protected	8	24	4	4	Good	1	Remove	full canopy epicormic branching
7039	*Pittosporum* sp.	Pittosporum	Nonnative	13, 11, 10	4	Protected	10	51	2	2	Poor	4	Remove	50% canopy dieback, codominant stems, crossing trunks
7040	*Liquidambar styraciflua*	Sweetgum	Nonnative	6	3	Not Protected	4	9	4	2	Fair	3	Not Protected	leaning heavily, out-shaded by tree #7038
7041	*Brahea* sp.	Brahea palm	Nonnative	5	2	Not Protected	3	8	4	3	Fair	2	Not Protected	tall, hanging thatch, leaning
7042	*Quercus agrifolia*	Coast live oak	Native	10	1	Protected	6	15	4	4	Good	1	Transplant Candidate	full canopy
7043	*Olea europaea*	Olive	Nonnative	19	1	Protected	9	29	3	4	Fair	2	Remove	20% canopy dieback, codominant stems, small cavity
7044	Stump	Stump		0	2	Not Protected	0	0	0	0	Dead	Remove	NA	stump
7045	*Acer negundo*	Box elder	Native	10	1	Protected	6	15	3	4	Fair	2	Remove	20% canopy dieback
7046	Stump	Stump		0	1	Not Protected	0	0	0	0	Dead	Remove	NA	stump
7047	*Sequoia sempervirens*	Coast redwood	Native	14	2	Protected	7	21	4	4	Good	1	Remove	full canopy
7048	*Sequoia sempervirens*	Coast redwood	Native	16	2	Protected	8	24	4	4	Good	1	Remove	full canopy
7049	*Ligustrum lucidum*	Glossy privet	Nonnative	7, 4, 3	1	Protected	7	21	4	3	Fair	2	Remove	codominant stems
7050	Stump	Stump		0	2	Not Protected	0	0	0	0	Dead	Remove	NA	stump
7051	*Quercus agrifolia*	Coast live oak	Native	12	2	Protected	7	18	3	4	Fair	2	Remove	some browning leaves, leaning slightly
7052	*Cupressus sempervirens*	Italian cypress	Nonnative	11	2	Protected	6	17	3	4	Fair	2	Remove	multiple codominant stems, lower foliage dead
7053	*Quercus agrifolia*	Coast live oak	Native	11, 5	2	Protected	8	24	4	2	Fair	3	Transplant Candidate	20% canopy dieback, leaning heavily, codominant stems
7054	*Pseudotsuga menziesii*	Douglas fir	Nonnative	13	2	Not Protected	7	20	0	0	Dead	4	Not Protected	dead, no needles, persistent cones
7055	*Acacia melanoxylon*	Blackwood acacia	Nonnative	14, 12	1	Protected	10	39	4	3	Fair	2	Remove	15% canopy dieback, codominant stems
7056	*Prunus cerasifera*	Cherry plum	Nonnative	9, 8	2	Protected	8	26	1	2	Poor	4	Remove	1 trunk dead, 1 trunk 50% canopy dieback, codominant stems

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7057	*Quercus agrifolia*	Coast live oak	Native	20	1	Protected	9	30	3	3	Fair	2	Transplant Candidate	35% canopy dieback, codominant stems
7058	*Quercus agrifolia*	Coast live oak	Native	16, 16, 16	1	Protected	12	72	4	4	Good	1	Remove	5% canopy dieback, 3 codominant stems
7059	*Quercus agrifolia*	Coast live oak	Native	8	1	Protected	5	12	1	2	Poor	4	Remove	80 canopy dieback, leaning heavily
7060	*Sequoia sempervirens*	Coast redwood	Native	31	3	Not Protected	10	47	0	0	Dead	4	Not Protected	dead
7061	*Quercus agrifolia*	Coast live oak	Native	8	2	Protected	5	12	2	1	Poor	4	Remove	70% canopy dieback, epicormic branching, leaning heavily
7062	*Quercus agrifolia*	Coast live oak	Native	8, 5	3	Protected	7	20	3	2	Fair	3	Preserve	65% canopy dieback, codominant stems
7063	*Quercus agrifolia*	Coast live oak	Native	12	1	Protected	7	18	2	2	Poor	4	Remove	80% canopy dieback, shaded-out, leaning heavily
7064	*Sequoia sempervirens*	Coast redwood	Native	33	1	Not Protected	10	50	0	0	Dead	4	Not Protected	dead
7065	*Quercus agrifolia*	Coast live oak	Native	6	1	Protected	4	9	2	2	Poor	4	Remove	50% canopy dieback, leaning heavily, epicormic branching
7066	*Quercus agrifolia*	Coast live oak	Native	6	1	Protected	4	9	1	2	Poor	4	Remove	90% canopy dieback, leaning, out-shaded, remove due to poor health and condition
7067	*Quercus agrifolia*	Coast live oak	Native	10	1	Protected	6	15	3	2	Fair	3	Preserve	40% canopy dieback, out-shaded, leaning
7068	*Quercus agrifolia*	Coast live oak	Native	16	1	Protected	8	24	3	2	Fair	3	Preserve	50% canopy dieback, leaning heavily
7069	*Quercus agrifolia*	Coast live oak	Native	13	1	Protected	7	20	4	2	Fair	3	Preserve	20% canopy dieback, leaning, trunk close to 7068
7070	*Sequoia sempervirens*	Coast redwood	Native	31	1	Protected	10	47	3	4	Fair	2	Preserve	lower branches dead
7071	*Sequoia sempervirens*	Coast redwood	Native	24, 15, 11	1	Protected	12	75	4	4	Good	1	Preserve	10% canopy dieback, some browning leaves, codominant stems
7072	*Sequoia sempervirens*	Coast redwood	Native	21	1	Protected	9	32	2	4	Fair	3	Preserve	dead top of tree, cones present
7073	*Quercus agrifolia*	Coast live oak	Native	19, 15	3	Protected	10	51	4	4	Good	1	Preserve	full canopy, codominant stems, leaning
7074	*Quercus agrifolia*	Coast live oak	Native	17	2	Protected	8	26	4	4	Good	1	Preserve	full canopy, codominant stems
7075	*Quercus agrifolia*	Coast live oak	Native	12	1	Protected	7	18	1	4	Fair	1	Preserve	80% canopy dieback
7076	*Quercus agrifolia*	Coast live oak	Native	30		Protected	10	45	3	2	Fair	3	Preserve	large crack through trunk, 25% of bark missing
7077	*Quercus agrifolia*	Coast live oak	Native	29		Protected	10	44	4	3	Fair	2	Preserve	lower branches shaded out, full canopy, multiple codominant stems

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7078	*Quercus agrifolia*	Coast live oak	Native	16, 15		Protected	10	47	4	3	Fair	2	Preserve	full canopy, codominant stem
7079	*Sequoia sempervirens*	Coast redwood	Native	30		Protected	10	45	4	4	Good	1	Preserve	full canopy, cones present
7080	*Sequoia sempervirens*	Coast redwood	Native	32		Protected	10	48	4	4	Good	1	Preserve	full canopy, cones present
7081	*Sequoia sempervirens*	Coast redwood	Native	14		Protected	7	21	4	4	Good	1	Preserve	full canopy, cones present
7082	*Sequoia sempervirens*	Coast redwood	Native	28, 23, 23		Protected	14	111	3	4	Fair	2	Preserve	3 large trunks, brown buds, cones present
7083	*Sequoia sempervirens*	Coast redwood	Native	49		Protected	12	74	4	4	Good	1	Preserve	5% canopy dieback
7084	*Quercus ilex*	Holly oak	Nonnative	6, 5		Protected	6	17	4	3	Fair	2	Preserve	full canopy, codominant stems in flower
7085	*Pinus pinea*	Italian stone pine	Nonnative	39		Protected	11	59	3	2	Fair	3	Remove	3 main codominant stems, leaning /bending
7086	*Pinus pinea*	Italian stone pine	Nonnative	23, 21		Protected	11	66	3	3	Fair	2	Remove	2 codominant stems, lower branches dead
7087	*Pinus pinea*	Italian stone pine	Nonnative	24		Protected	10	36	3	3	Fair	2	Remove	codominant stems, lower branch dead
7088	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	4	4	Good	1	Preserve	full canopy, on steep hillside
7089	*Quercus agrifolia*	Coast live oak	Native	16		Protected	8	24	4	3	Fair	2	Remove	full canopy, leaning slightly
7090	*Quercus ilex*	Holly oak	Nonnative	15		Protected	8	23	3	2	Fair	3	Remove	codominant stems, 1 main stem dead, epicormic branching
7091	*Quercus agrifolia*	Coast live oak	Native	17		Protected	8	26	3	3	Fair	2	Remove	20% canopy dieback, half tree healthy (sunny side)
7092	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	full canopy, leaning slightly, in flower
7093	*Olea europaea*	Olive	Nonnative	19		Protected	9	29	4	4	Good	1	Remove	full canopy, multiple codominant stems
7094	*Prunus cerasifera*	Cherry plum	Nonnative	6		Not Protected	4	9	2	2	Poor	4	Not Protected	20% canopy dieback, leaning, browning leaves
7095	*Quercus agrifolia*	Coast live oak	Native	23		Protected	9	35	4	4	Good	1	Remove	full canopy, some browning leaves, 2 codominant stems
7096	*Acacia melanoxylon*	Blackwood acacia	Nonnative	24		Protected	10	36	4	4	Good	1	Remove	full canopy, few broken branches
7097	*Quercus agrifolia*	Coast live oak	Native	13		Protected	7	20	3	3	Fair	2	Remove	15% canopy dieback, codominant stems
7098	*Cedrus deodara*	Deodar cedar	Nonnative	26		Protected	10	39	3	2	Fair	3	Remove	many broken and hanging branches
7099	*Cupressus arizonica*	Arizona cypress	Nonnative	5		Not Protected	3	8	3	2	Fair	3	Not Protected	upper canopy healthy, branches lacking leaves, odd branching structure

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7100	*Cupressus arizonica*	Arizona cypress	Nonnative	7		Not Protected	4	11	3	2	Fair	3	Not Protected	healthy upper canopy, few lower leaves, codominant stems, odd branching structure
7201	*Cupressus arizonica*	Arizona cypress	Nonnative	10		Protected	6	15	4	2	Fair	3	Remove	10% canopy dieback, codominant stems, some cones
7202	*Leptospermum scoparium*	New Zealand teatree	Nonnative	4, 3		Not Protected	4	11	2	2	Poor	4	Not Protected	75% canopy dieback, multi-stemmed, in flower
7203	*Arbutus unedo*	Strawberry tree	Nonnative	7		Not Protected	4	11	3	3	Fair	2	Not Protected	35% canopy dieback, codominant stems, branching all on one side
7204	*Arbutus unedo*	Strawberry tree	Nonnative	8		Not Protected	5	12	3	3	Fair	2	Not Protected	25% canopy dieback, codominant stems, in flower, leaning slightly
7205	*Ligustrum lucidum*	Glossy privet	Nonnative	5		Not Protected	3	8	3	2	Fair	3	Not Protected	25% canopy dieback, codominant stems, pruned, in flower
7206	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	3	Fair	2	Not Protected	15% canopy dieback, codominant stems, flowers present, lower branches pruned
7207	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	3	3	Fair	2	Not Protected	25% canopy dieback, codominant stems, pruned up
7208	*Sequoia sempervirens*	Coast redwood	Native	17		Protected	8	26	5	5	Good	1	Remove	full canopy, straight trunk
7209	*Sequoia sempervirens*	Coast redwood	Native	7		Not Protected	4	11	4	4	Good	1	Not Protected	5% canopy dieback , straight trunk, some epicormic branching
7210	*Sequoia sempervirens*	Coast redwood	Native	17		Protected	8	26	5	5	Good	1	Remove	full canopy, straight trunk
7211	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	3	3	Fair	2	Transplant Candidate	25% canopy dieback, leaning moderately, codominant stems
7212	*Quercus agrifolia*	Coast live oak	Native	7		Protected	4	11	4	3	Fair	2	Transplant Candidate	25% canopy dieback, leaning slightly
7213	*Arbutus unedo*	Strawberry tree	Nonnative	6, 4, 4, 3, 2		Protected	9	29	4	3	Fair	2	Remove	10% canopy dieback, in fruit, yellowing foliage, leaning slightly, some epicormic branching, SRZ would be impacted by construction
7214	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	3	4	Fair	2	Not Protected	35% canopy dieback, yellowing foliage,
7215	*Sequoia sempervirens*	Coast redwood	Native	24		Protected	10	36	4	5	Good	1	Preserve	10% canopy dieback, straight trunk
7216	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	3	3	Fair	2	Preserve	25% canopy dieback, dying leaves, codominant stems, epicormic branching
7217	*Sequoia sempervirens*	Coast redwood	Native	18		Protected	8	27	5	5	Good	1	Preserve	full canopy, straight trunk
7218	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	3	3	Fair	2	Preserve	30% canopy dieback, leaning heavily, shaded out

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7219	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	3	4	Fair	2	Not Protected	30% canopy dieback, codominant stems, epicormic branching
7220	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	10% canopy dieback, codominant stems, some browning leaves
7221	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	3	4	Fair	2	Not Protected	30% canopy dieback, yellowing foliage, flowers present
7222	*Cupressus arizonica*	Arizona cypress	Nonnative	20		Protected	9	30	4	3	Fair	2	Remove	20% canopy dieback, leaning heavily, codominant stems, fruits
7223	*Quercus agrifolia*	Coast live oak	Native	5, 5		Protected	6	15	3	3	Fair	2	Transplant Candidate	40% canopy dieback, browning leaves, shaded out, codominant stems, leaning slightly
7224	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	25% canopy dieback, leaning slightly
7226	*Pyrus calleryana*	Callery pear	Nonnative	5		Not Protected	3	8	3	3	Fair	2	Not Protected	40% canopy dieback, codominant stems, epicormic branching
7227	*Quercus agrifolia*	Coast live oak	Native	6, 5		Protected	6	17	4	3	Fair	2	Remove	20% canopy dieback, codominant stems, some browning leaves
7228	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	4	4	Good	1	Transplant Candidate	15% canopy dieback, codominant stems
7229	*Cupressus arizonica*	Arizona cypress	Nonnative	18		Protected	8	27	4	4	Good	1	Remove	10% canopy dieback, leaning slightly, codominant stems
7230	*Eucalyptus gunnii*	Cider gum	Nonnative	28		Not Protected	10	42	3	4	Fair	2	Not Protected	30% canopy dieback, codominant stems, dead ends of branches
7231	*Pinus pinea*	Italian stone pine	Nonnative	27, 26, 21		Protected	14	111	3	3	Fair	2	Remove	35% canopy dieback, codominant stems, dead branches
7232	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	3	4	Fair	2	Transplant Candidate	35% canopy dieback, dead ends of branches
7233	*Quercus ilex*	Holly oak	Nonnative	5, 4		Protected	5	14	4	3	Fair	2	Remove	some browning leaves, codominant stems, leaning slightly
7234	*Eucalyptus gunnii*	Cider gum	Nonnative	7		Not Protected	4	11	3	4	Fair	2	Not Protected	30% canopy dieback, leaning
7235	*Acacia melanoxylon*	Blackwood acacia	Nonnative	10		Protected	6	15	1	3	Poor	4	Remove	95% canopy dieback, codominant stems
7236	*Sequoia sempervirens*	Coast Redwood	Native	0		Not Protected	0	0	0	0	Dead	Remove	NA	stump
7237	*Sequoia sempervirens*	Coast Redwood	Native	0		Not Protected	0	0	0	0	Dead	Remove	NA	stump
7238	*Fraxinus angustifolia*	Narrow-leaved ash	Nonnative	7		Not Protected	4	11	4	3	Fair	2	Not Protected	codominant stems, some bark missing, 5% canopy dieback
7239	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	3	3	Fair	2	Transplant Candidate	35% canopy dieback, some dead branches, supported with rope, leaning slightly
7240	*Quercus lobata*	Valley oak	Native	16		Protected	8	24	3	3	Fair	2	Transplant Candidate	30% canopy dieback, dead branches

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7241	*Lophostemon confertus*	Brisbane box	Nonnative	10		Protected	6	15	4	4	Good	1	Preserve	codominant stems, some yellowing foliage
7242	*Malus sylvestris*	Common crabapple	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	oozing sap, codominant stems, in fruit
7243	*Malus sylvestris*	Common crabapple	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	in fruit, codominant stems
7244	*Malus sylvestris*	Common crabapple	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	5% canopy dieback, some dead foliage, pruned
7245	*Malus sylvestris*	Common crabapple	Nonnative	7		Not Protected	4	11	5	3	Good	2	Not Protected	full canopy, in fruit, crossing branches, codominant stems
7246	*Malus sylvestris*	Common crabapple	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	in fruit, some dead ends of branches
7247	*Malus sylvestris*	Common crabapple	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	5% canopy dieback, some dead ends of branches
7248	*Lophostemon confertus*	Brisbane box	Nonnative	10		Protected	6	15	4	4	Good	1	Preserve	5% canopy dieback, codominant stems, yellowing foliage
7249	*Cotinus coggygria*	Smoke tree	Nonnative	4, 4, 4		Protected	7	18	3	3	Fair	2	Remove	35% canopy dieback, dead branches, in flower
7250	*Quercus agrifolia*	Coast live oak	Native	4, 4		Protected	5	12	3	4	Fair	2	Transplant Candidate	20% canopy dieback, codominant stems, browning leaves
7251	*Pyrus kawakamii*	Evergreen pear	Nonnative	5		Not Protected	3	8	3	4	Fair	2	Not Protected	25% canopy dieback, in fruit, dead branches
7252	*Pyrus kawakamii*	Evergreen pear	Nonnative	12		Protected	7	18	4	4	Good	1	Remove	5% canopy dieback, dead end branches, codominant stems
7253	*Pyrus kawakamii*	Evergreen pear	Nonnative	11		Protected	6	17	3	3	Fair	2	Remove	30% canopy dieback, pruned, dead ends of branches
7254	*Sequoia sempervirens*	Coast redwood	Native	17		Protected	8	26	4	5	Good	1	Remove	straight trunk, some browning leaves
7255	*Prunus serrulata*	Japanese flowering cherry	Nonnative	11		Protected	8	24	4	3	Fair	2	Remove	leaning, crossing branches
7256	*Prunus cerasifera*	Cherry plum	Nonnative	3		Not Protected	2	5	3	3	Fair	2	Not Protected	35% canopy dieback, fruiting, dead branches, crossing trunks
7257	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	3	4	Fair	2	Transplant Candidate	30% canopy dieback, recently pruned, lower branches bare
7258	*Leptospermum scoparium*	New Zealand teatree	Nonnative	7, 5, 4, 3		Protected	9	29	2	3	Fair	3	Remove	40% canopy dieback, tied cutting into bark
7259	*Arbutus unedo*	Strawberry tree	Nonnative	4		Not Protected	3	6	3	3	Fair	2	Not Protected	staked, leaning, pruned
7260	*Sequoia sempervirens*	Coast redwood	Native	4		Not Protected	3	6	0	1	Dead	4	Not Protected	dead
7261	*Acacia melanoxylon*	Blackwood acacia	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	full canopy, browning leaves, pruned
7262	*Fraxinus angustifolia*	Narrow-leaved ash	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	15% canopy dieback, codominant stems

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7263	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	3	4	Fair	2	Not Protected	20% canopy dieback, in flower, dead branches
7264	*Pinus brutia*	Turkish pine	Nonnative	28		Protected	10	42	4	3	Fair	2	Remove	15% canopy dieback, dead large branches, codominant stems, cones present
7265	*Quercus ilex*	Holly oak	Nonnative	6, 6		Protected	7	18	4	4	Good	1	Remove	5% canopy dieback, codominant stems, dead branch ends
7266	*Quercus ilex*	Holly oak	Nonnative	14, 7		Protected	9	32	1	3	Poor	4	Remove	90% canopy dieback, dying
7267	*Pyrus kawakamii*	Evergreen pear	Nonnative	8, 4		Protected	7	18	3	3	Fair	2	Preserve	35% canopy dieback, codominant stems, dead branch tips
7268	*Quercus agrifolia*	Coast live oak	Native	16, 14		Protected	10	45	4	4	Good	1	Transplant Candidate	10% canopy dieback, some dead ends of branches, codominant stems
7269	*Crataegus monogyna*	Common hawthorn	Nonnative	5, 5		Protected	6	15	2	3	Fair	3	Remove	75% canopy dieback, codominant stems
7270	*Acacia melanoxylon*	Blackwood acacia	Nonnative	11, 6, 4		Protected	9	32	4	4	Good	1	Remove	5% canopy dieback, some dead branches
7271	*Acacia melanoxylon*	Blackwood acacia	Nonnative	10		Protected	6	15	3	4	Fair	2	Remove	30% canopy dieback, leaning slightly
7272	*Acacia melanoxylon*	Blackwood acacia	Nonnative	8, 5, 3		Protected	8	24	3	4	Fair	2	Remove	35% canopy dieback, dead branches
7273	*Acacia melanoxylon*	Blackwood acacia	Nonnative	9, 8, 6		Protected	9	35	2	3	Fair	3	Remove	35% canopy dieback, one dead trunk, many dead branches, leaning slightly
7274	*Acacia melanoxylon*	Blackwood acacia	Nonnative	12		Protected	7	18	3	4	Fair	2	Remove	25% canopy dieback dead branches, straight trunk
7275	*Acacia melanoxylon*	Blackwood acacia	Nonnative	10		Protected	6	15	3	4	Fair	2	Remove	25% canopy dieback, leaning slightly
7276	*Acacia melanoxylon*	Blackwood acacia	Nonnative	18, 10, 10		Protected	11	57	3	2	Fair	3	Remove	30% canopy dieback, crossing branches, leaning
7277	*Acacia melanoxylon*	Blackwood acacia	Nonnative	5, 4		Protected	5	14	1	3	Poor	4	Remove	95% canopy dieback, codominant stems, bark missing
7278	*Acacia melanoxylon*	Blackwood acacia	Nonnative	0		Not Protected	0	0	0	0	Dead	Remove		stump
7279	*Quercus ilex*	Holly oak	Nonnative	9		Protected	5	14	4	3	Fair	2	Remove	15% canopy dieback, codominant stems, flowers present, epicormic branching, leaning
7280	*Prunus* sp.	Plum tree variety	Nonnative	5, 4, 4		Protected	7	20	4	3	Fair	2	Remove	15% canopy dieback, fruiting, codominant stems, dead branches/leaves
7281	*Prunus* sp.	Plum tree variety	Nonnative	5		Not Protected	3	8	3	3	Fair	2	Not Protected	leaning, pruned, dead branches, fruiting
7282	*Prunus* sp.	Plum tree variety	Nonnative	2, 2		Not Protected	3	6	4	3	Fair	2	Not Protected	full canopy, some epicormic branching

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7283	*Crataegus monogyna*	Common hawthorn	Nonnative	11		Protected	6	17	3	3	Fair	2	Remove	15% canopy dieback, flowering, English ivy growing on trunk, ants, some dead branches
7285	*Cupressus arizonica*	Arizona cypress	Nonnative	11		Protected	6	17	4	3	Fair	2	Remove	15% canopy dieback, leaning heavily
7286	*Quercus agrifolia*	Coast live oak	Native	7		Protected	4	11	4	4	Good	1	Transplant Candidate	codominant, dead ends of branches, small leaves
7287	*Sequoia sempervirens*	Coast redwood	Native	6		Not Protected	4	9	5	4	Good	1	Not Protected	pruned, epicormic branching, full canopy
7288	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	4	4	Good	1	Transplant Candidate	20% canopy dieback, codominant stems, some dead branches
7289	*Liquidambar styraciflua*	Sweetgum	Nonnative	7		Not Protected	4	11	4	4	Good	1	Not Protected	10% canopy dieback, in fruit, dead lower branches, pruned
7290	*Pinus pinea*	Italian stone pine	Nonnative	11		Protected	6	17	3	3	Fair	2	Remove	40% canopy dieback, cones present
7291	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	3	4	Fair	2	Not Protected	30% canopy dieback codominant stems
7292	*Liquidambar styraciflua*	Sweetgum	Nonnative	5		Not Protected	3	8	4	5	Good	1	Not Protected	5% canopy dieback, some dead branches, pruning cuts
7293	*Olea europaea*	Olive	Nonnative	4, 4, 3, 3		Protected	7	21	4	3	Fair	2	Remove	15% canopy dieback, ants, codominant stems, pruning cuts, epicormic branching
7294	*Olea europaea*	Olive	Nonnative	5, 3, 3		Protected	6	17	3	4	Fair	2	Remove	30% canopy dieback, ants, codominant stems
7295	*Quercus ilex*	Holly oak	Nonnative	5, 4		Protected	5	14	5	4	Good	1	Remove	full canopy, crossing branches
7296	*Cedrus deodara*	Deodar cedar	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	epicormic branching, pruned, broken branch ends
7297	*Cedrus deodara*	Deodar cedar	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	pruning cuts, some epicormic branching
7298	*Platanus ×hispanica*	London planetree	Nonnative	9		Protected	5	14	4	4	Good	1	Remove	20% canopy dieback, codominant stems, fruiting
7299	*Pittosporum* sp.	Pittosporum	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	20% canopy dieback, ants, fruiting, yellowing foliage
7300	*Lagerstroemia indica*	Crape myrtle	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	5% canopy dieback, straight trunk
7301	*Pittosporum* sp.	Pittosporum	Nonnative	8		Not Protected	5	12	3	4	Fair	2	Not Protected	40% canopy dieback, codominant stems
7302	*Cupressus arizonica*	Arizona cypress	Nonnative	10		Protected	6	15	4	3	Fair	2	Remove	15% canopy dieback, codominant stems, crossing branches
7303	*Quercus ilex*	Holly oak	Nonnative	5, 4		Protected	5	14	2	3	Fair	3	Remove	75% canopy dieback, codominant stems, pruned branches
7304	*Liquidambar styraciflua*	Sweetgum	Nonnative	13		Protected	7	20	4	4	Good	1	Remove	20% canopy dieback ivy growing on trunk

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7305	*Liquidambar styraciflua*	Sweetgum	Nonnative	11		Protected	6	17	3	4	Fair	2	Remove	30% canopy dieback, ivy growing on trunk
7306	*Quercus ilex*	Holly oak	Nonnative	8, 7		Protected	8	23	4	3	Fair	2	Remove	20% canopy dieback, leaning heavily
7307	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	3	4	Fair	2	Not Protected	35% canopy dieback, codominant stems, ivy present
7308	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	3	4	Fair	2	Not Protected	25% canopy dieback, dead leaves, codominant stems
7309	*Quercus ilex*	Holly oak	Nonnative	5, 5		Protected	6	15	4	3	Fair	2	Remove	10% canopy dieback, pruning cuts, flowers present
7310	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	3	3	Fair	2	Not Protected	40% canopy dieback, leaning
7311	*Quercus ilex*	Holly oak	Nonnative	10		Protected	6	15	4	4	Good	1	Remove	15% canopy dieback, codominant stems, ivy
7312	*Quercus agrifolia*	Coast live oak	Native	9, 8		Protected	8	26	4	4	Good	1	Remove	15% canopy dieback, codominant stems
7313	*Quercus agrifolia*	Coast live oak	Native	6, 5		Protected	6	17	3	3	Fair	2	Remove	30% canopy dieback, leaning, some bark missing
7314	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	3	4	Fair	2	Not Protected	30% canopy dieback, ivy present
7315	*Quercus agrifolia*	Coast live oak	Native	13, 13		Protected	10	39	4	4	Good	1	Remove	15% canopy dieback, leaning slightly
7316	*Quercus agrifolia*	Coast live oak	Native	11, 10		Protected	9	32	3	4	Fair	2	Remove	30% canopy dieback, leaning
7317	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	3	Fair	2	Not Protected	20% canopy dieback, branches all one side
7318	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	3	3	Fair	2	Not Protected	45% canopy dieback, branches on one side
7319	*Betula pendula*	European white birch	Nonnative	4		Not Protected	3	6	3	4	Fair	2	Not Protected	20% canopy dieback, leaning slightly, epicormic branching
7320	*Olea europaea*	Olive	Nonnative	7, 6		Protected	7	20	4	3	Fair	2	Remove	25% canopy dieback, yellowing foliage
7321	*Quercus ilex*	Holly oak	Nonnative	9		Protected	5	14	4	4	Good	1	Remove	30% canopy dieback, codominant stems
7322	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	25% canopy dieback
7323	*Quercus agrifolia*	Coast live oak	Native	8, 5		Protected	7	20	4	4	Good	1	Transplant Candidate	10% canopy dieback, codominant stems, leaves browning
7324	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	4	4	Good	1	Transplant Candidate	full canopy, pruning cuts, some yellowing foliage
7325	*Quercus agrifolia*	Coast live oak	Native	9, 8		Protected	8	26	4	3	Fair	2	Preserve	full canopy, codominant stems
7326	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	leaning slightly, in flower
7327	*Quercus ilex*	Holly oak	Nonnative	8		Not Protected	5	12	4	3	Fair	2	Not Protected	full canopy, some browning leaves, in flower, ants
7328	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	3	Fair	2	Not Protected	full canopy, large main branches, codominant stems

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7329	*Quercus agrifolia*	Coast live oak	Native	18		Protected	8	27	3	2	Fair	3	Preserve	60% canopy dieback, codominant stems, included bark
7330	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	10% canopy dieback, straight trunk, soil erosion around base
7331	*Quercus agrifolia*	Coast live oak	Native	22		Protected	9	33	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems, included bark
7332	*Quercus agrifolia*	Coast live oak	Native	0		Protected	5	14	3	3	Fair	2	Preserve	30% canopy dieback, leaning slightly, codominant stems
7333	*Sequoia sempervirens*	Coast redwood	Native	22		Protected	9	33	3	4	Fair	2	Preserve	15% canopy dieback, short branches
7334	*Quercus agrifolia*	Coast live oak	Native	4, 4, 3		Protected	6	17	3	3	Fair	2	Preserve	20% canopy dieback, 3 codominant stems
7335	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	3	Fair	2	Not Protected	full canopy, shrubby, some browning leaves
7336	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	3	Fair	2	Not Protected	full canopy, some browning leaves
7337	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	5	3	Good	2	Not Protected	full canopy, 3 codominant stems, in flower
7338	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	3	Fair	2	Not Protected	10% canopy dieback, new growth, codominant stems
7339	*Sequoia sempervirens*	Coast redwood	Native	18		Not Protected	8	27	0	0	Dead	4	Not Protected	dead, no leaves
7340	*Quercus ilex*	Holly oak	Nonnative	13		Protected	7	20	5	4	Good	1	Remove	5% canopy dieback, in flower, codominant stems
7341	*Quercus ilex*	Holly oak	Nonnative	14		Protected	7	21	4	4	Good	1	Remove	15% canopy dieback, codominant stems, browning leaves
7342	*Juglans nigra*	Black walnut	Nonnative	5, 4, 4		Protected	7	20	3	3	Fair	2	Remove	20% canopy dieback, main trunk remove/a stump
7343	*Quercus ilex*	Holly oak	Nonnative	17		Protected	8	26	5	3	Good	2	Preserve	full canopy, multiple codominant stems, large main branches
7344	*Quercus agrifolia*	Coast live oak	Native	14, 13		Protected	10	41	2	3	Fair	3	Preserve	65% canopy dieback, codominant stems, included bark
7345	*Quercus ilex*	Holly oak	Nonnative	5, 5		Protected	6	15	4	4	Good	1	Remove	full canopy, codominant stems from ground, in flower
7346	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	5% canopy dieback, codominant stems in flower
7347	*Quercus ilex*	Holly oak	Nonnative	6, 4, 3		Protected	7	20	4	4	Good	1	Remove	full canopy, codominant stems, in flower
7348	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	2	Fair	2	Not Protected	20% canopy dieback, leaning heavily, in flower
7349	*Sequoia sempervirens*	Coast redwood	Native	14		Not Protected	7	21	0	0	Dead	4	Not Protected	dead
7350	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	5	Good	1	Not Protected	5% canopy dieback, in flower
7351	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	10% canopy dieback, in flower

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7352	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	5	5	Good	1	Not Protected	full canopy, in fruit
7353	*Quercus ilex*	Holly oak	Nonnative	11		Protected	6	17	2	3	Fair	3	Remove	80% canopy dieback, in flower, overgrown with ivy, few leaves,
7354	*Quercus ilex*	Holly oak	Nonnative	12		Protected	7	18	4	4	Good	1	Preserve	5% canopy dieback
7355	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	5% canopy dieback, growing against fence
7356	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	3	3	Fair	2	Preserve	30% canopy dieback, growing through fence
7357	*Quercus agrifolia*	Coast live oak	Native	20		Protected	9	30	3	3	Fair	2	Preserve	10% canopy dieback, in flower, black wound, potential rot
7358	*Quercus agrifolia*	Coast live oak	Native	13, 13, 13, 12		Protected	12	77	4	3	Fair	2	Preserve	15% canopy dieback, multiple codominant trunks
7359	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	2	4	Fair	3	Transplant Candidate	25% canopy dieback, crossing branches
7360	*Pyrus calleryana*	Callery pear	Nonnative	0		Not Protected	0	0	2	2	Poor	4	Not Protected	60% canopy dieback, overgrown with ivy, codominant stems included bark
7361	*Maytenus boaria*	Mayten tree	Nonnative	11		Protected	6	17	3	3	Fair	2	Remove	20% canopy dieback, leaning heavily, yellowing foliage
7362	*Magnolia ×soulangiana*	Saucer magnolia	Nonnative	2, 2, 2, 2		Not Protected	5	12	4	4	Good	1	Not Protected	full canopy, shrub
7363	*Magnolia ×soulangiana*	Saucer magnolia	Nonnative	3		Not Protected	2	5	4	4	Good	1	Not Protected	full canopy, shrub
7364	*Cupressus sempervirens*	Italian cypress	Nonnative	7		Not Protected	4	11	4	5	Good	1	Not Protected	some browning leaves, growing in group
7365	*Cupressus sempervirens*	Italian cypress	Nonnative	8		Not Protected	5	12	4	5	Good	1	Not Protected	some browning leaves, in fruit
7366	*Cupressus sempervirens*	Italian cypress	Nonnative	7		Not Protected	4	11	4	5	Good	1	Not Protected	growing in group, in cone, some browning leaves
7367	*Cupressus sempervirens*	Italian cypress	Nonnative	7		Not Protected	4	11	3	5	Good	2	Not Protected	20% browning leaves, in cone
7368	*Cupressus sempervirens*	Italian cypress	Nonnative	8		Not Protected	5	12	4	5	Good	1	Not Protected	growing in group, some dead leaves, in cone
7369	*Cupressus sempervirens*	Italian cypress	Nonnative	6		Not Protected	4	9	4	5	Good	1	Not Protected	growing in group, some browning leaves, in cone
7370	*Cupressus sempervirens*	Italian cypress	Nonnative	7		Not Protected	4	11	4	5	Good	1	Not Protected	growing in group, in cone,
7371	*Cupressus sempervirens*	Italian cypress	Nonnative	7		Not Protected	4	11	4	5	Good	1	Not Protected	growing in group, in cone,
7372	*Cupressus sempervirens*	Italian cypress	Nonnative	6		Not Protected	4	9	4	5	Good	1	Not Protected	growing in group, some browning leaves, in cone
7373	*Olea europaea*	Olive	Nonnative	2, 2, 1, 1		Not Protected	4	9	4	4	Good	1	Not Protected	10% canopy dieback, pruned to shrub, in fruit

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7374	*Dodonaea viscosa*	Florida hopbush	Nonnative	2, 1		Not Protected	2	5	4	4	Good	1	Not Protected	pruned to shrub, in fruit
7375	*Sequoia sempervirens*	Coast redwood	Native	32		Protected	10	48	2	4	Fair	3	Preserve	60% canopy dieback, dead branches,
7376	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	full canopy, in flower, multiple codominant stems
7377	*Quercus agrifolia*	Coast live oak	Native	9		Protected	5	14	4	4	Good	1	Preserve	full canopy, some browning leaves
7378	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	4	4	Good	1	Preserve	full canopy, leaning slightly
7379	*Prunus dulcis*	Sweet almond	Nonnative	9, 8, 6		Protected	9	35	2	3	Fair	3	Preserve	70% canopy dieback, crossing branches, formerly identified as *Prunus amygdalus*
7380	*Pinus radiata*	Monterey pine	Nonnative	36		Not Protected	10	54	4	4	Good	1	Not Protected	full canopy
7381	*Sequoia sempervirens*	Coast redwood	Native	32		Protected	10	48	4	5	Good	1	Preserve	full canopy
7382	*Sequoia sempervirens*	Coast redwood	Native	22		Protected	9	33	4	5	Good	1	Preserve	full canopy
7383	*Sequoia sempervirens*	Coast redwood	Native	27		Protected	10	41	4	5	Good	1	Preserve	full canopy
7384	*Quercus agrifolia*	Coast live oak	Native	6		Protected	4	9	4	4	Good	1	Preserve	5% canopy dieback
7385	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	in flower full canopy
7386	*Pinus radiata*	Monterey pine	Nonnative	8		Not Protected	5	12	4	4	Good	1	Not Protected	full canopy, cones present, while not protected
7387	*Liquidambar styraciflua*	Sweetgum	Nonnative	11		Protected	6	17	3	3	Fair	2	Remove	dead branches, 25% canopy dieback
7388	*Liquidambar styraciflua*	Sweetgum	Nonnative	11		Protected	6	17	4	4	Good	1	Remove	full canopy
7389	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	5	Good	1	Not Protected	full canopy, some browning leaves
7390	*Sequoia sempervirens*	Coast redwood	Native	12		Protected	7	18	2	4	Fair	3	Transplant Candidate	50% canopy dieback
7391	*Quercus agrifolia*	Coast live oak	Native	9, 8		Protected	8	26	3	3	Fair	2	Preserve	20% canopy dieback, codominant stems, leaning slightly, included bark
7392	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	full canopy, in flower, growing near coast live oak
7393	*Quercus agrifolia*	Coast live oak	Native	11		Protected	6	17	4	4	Good	1	Preserve	15% canopy dieback
7394	*Quercus agrifolia*	Coast live oak	Native	11		Protected	6	17	3	4	Fair	2	Preserve	25% canopy dieback
7395	*Quercus agrifolia*	Coast live oak	Native	15, 11, 10		Protected	10	54	3	3	Fair	2	Preserve	15% canopy dieback, codominant stems
7396	*Quercus ilex*	Holly oak	Nonnative	9		Protected	5	14	4	3	Fair	2	Preserve	codominant stems, in flower
7397	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	5	Good	1	Not Protected	full canopy, in flower
7398	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	5% canopy dieback, in flower
7399	*Quercus ilex*	Holly oak	Nonnative	5		Not Protected	3	8	4	4	Good	1	Not Protected	full canopy, in group

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7400	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	1	3	Poor	4	Preserve	80% canopy dieback
7401	*Pyrus calleryana*	Callery pear	Nonnative	5		Not Protected	3	8	2	3	Fair	3	Not Protected	75% canopy dieback, in fruit, main leader dead
7402	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	3	4	Fair	2	Not Protected	50% canopy dieback
7403	*Quercus agrifolia*	Coast live oak	Native	12		Protected	7	18	3	3	Fair	2	Preserve	30% canopy dieback, leaning heavily,
7404	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	2	3	Fair	3	Not Protected	65% canopy dieback, shaded out
7405	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	4	5	Good	1	Not Protected	15% canopy dieback
7406	*Quercus agrifolia*	Coast live oak	Native	11		Protected	6	17	3	5	Good	2	Preserve	50% canopy dieback
7407	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	4	4	Good	1	Not Protected	full canopy growing near coast live oak
7408	*Quercus agrifolia*	Coast live oak	Native	16, 12		Protected	10	42	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems
7409	*Schinus molle*	Peruvian pepper tree	Nonnative	5, 5		Protected	6	15	2	2	Poor	4	Preserve	40% canopy dieback, epicormic branching, leaning heavily
7410	*Quercus agrifolia*	Coast live oak	Native	8, 8		Protected	8	24	4	3	Fair	2	Preserve	15% canopy dieback
7411	*Quercus agrifolia*	Coast live oak	Native	14, 13, 11, 10, 9		Protected	13	86	3	3	Fair	2	Preserve	25% canopy dieback, codominant stems, included bark
7412	*Quercus agrifolia*	Coast live oak	Native	16, 15, 5		Protected	10	54	3	3	Fair	2	Preserve	20% canopy dieback, codominant stems
7413	*Quercus agrifolia*	Coast live oak	Native	8, 7		Protected	8	23	4	4	Good	1	Preserve	15% canopy dieback, codominant stems
7414	*Quercus ilex*	Holly oak	Nonnative	8		Not Protected	5	12	4	4	Good	1	Not Protected	10% canopy dieback, codominant stems
7415	*Quercus agrifolia*	Coast live oak	Native	20		Protected	9	30	5	4	Good	1	Preserve	full canopy, in fruit leaning slightly
7416	*Quercus ilex*	Holly oak	Nonnative	5, 4, 3		Protected	7	18	5	3	Good	2	Preserve	full canopy, multiple codominant stems, in flower
7417	*Quercus agrifolia*	Coast live oak	Native	13		Protected	7	20	4	3	Fair	2	Preserve	5% canopy dieback, leaning
7418	*Quercus agrifolia*	Coast live oak	Native	5, 5		Protected	6	15	4	4	Good	1	Preserve	codominant stems, in fruit
7419	*Quercus agrifolia*	Coast live oak	Native	7, 6, 5		Protected	8	27	4	3	Fair	2	Preserve	10% canopy dieback, multiple codominant stems
7420	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	full canopy
7421	*Quercus ilex*	Holly oak	Nonnative	4		Not Protected	3	6	4	4	Good	1	Not Protected	full canopy
7422	*Quercus agrifolia*	Coast live oak	Native	8		Protected	5	12	4	4	Good	1	Preserve	full canopy, leaning slightly
7423	*Quercus ilex*	Holly oak	Nonnative	6, 6, 5, 2, 2		Protected	9	32	4	3	Fair	2	Preserve	full canopy, multiple codominant trunks, crossing trunks
7424	*Quercus ilex*	Holly oak	Nonnative	9, 8		Protected	8	26	4	3	Fair	2	Preserve	15% canopy dieback, 2 codominant stems
7425	*Calocedrus decurrens*	Incense cedar	Nonnative	27		Protected	10	41	3	3	Fair	2	Preserve	leaves missing on 1/3 of tree, some yellowing foliage,

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7426	*Cupressus arizonica*	Arizona cypress	Nonnative	12		Protected	7	18	4	3	Fair	2	Preserve	full canopy, large main branches, topped previously
7427	*Calocedrus decurrens*	Incense cedar	Nonnative	15		Protected	8	23	3	3	Fair	2	Preserve	branches and leaves missing on 50%, some yellowing foliage
7428	*Calocedrus decurrens*	Incense cedar	Nonnative	24		Protected	10	36	3	3	Fair	2	Preserve	20% canopy dieback,
7429	*Calocedrus decurrens*	Incense cedar	Nonnative	17		Protected	8	26	3	3	Fair	2	Preserve	leaves and branches missing from 45%
7430	*Calocedrus decurrens*	Incense cedar	Nonnative	26		Protected	10	39	4	3	Fair	2	Preserve	full canopy, one large lower branch
7431	*Calocedrus decurrens*	Incense cedar	Nonnative	23		Protected	9	35	3	3	Fair	2	Preserve	30% canopy dieback, 1 large main branch growing parallel to trunk
7432	*Calocedrus decurrens*	Incense cedar	Nonnative	19		Protected	9	29	3	4	Fair	2	Preserve	25% canopy dieback, heathy higher in canopy
7433	*Quercus agrifolia*	Coast live oak	Native	16		Protected	8	24	5	4	Good	1	Preserve	full canopy, codominant stems
7434	*Quercus ilex*	Holly oak	Nonnative	8		Not Protected	5	12	3	3	Fair	2	Not Protected	40% canopy dieback, shaded out
7435	*Quercus agrifolia*	Coast live oak	Native	21		Protected	9	32	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems
7436	*Pyracantha* sp.	Firethorn	Nonnative	9, 5		Protected	7	21	4	3	Fair	2	Preserve	10% canopy dieback, tall shrub
7437	*Quercus agrifolia*	Coast live oak	Native	8		Protected	5	12	3	3	Fair	2	Preserve	45% canopy dieback, codominant stems
7438	*Quercus agrifolia*	Coast live oak	Native	13, 12, 9		Protected	10	51	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems, included bark
7439	*Quercus ilex*	Holly oak	Nonnative	6		Not Protected	4	9	4	4	Good	1	Not Protected	full canopy
7440	*Acacia melanoxylon*	Blackwood acacia	Nonnative	13		Protected	7	20	3	4	Fair	2	Preserve	35% canopy dieback,
7441	*Calocedrus decurrens*	Incense cedar	Nonnative	20		Protected	9	30	3	3	Fair	2	Preserve	branches missing from 40%, heathy higher, some yellowing foliage
7442	*Quercus agrifolia*	Coast live oak	Native	17		Protected	8	26	5	4	Good	1	Preserve	full canopy, codominant stems
7443	*Quercus ilex*	Holly oak	Nonnative	10		Protected	6	15	2	3	Fair	3	Preserve	epicormic branching, codominant stems
7444	*Acacia melanoxylon*	Blackwood acacia	Nonnative	15		Protected	8	23	4	4	Good	1	Preserve	5% canopy dieback codominant stems
7445	*Acacia melanoxylon*	Blackwood acacia	Nonnative	15		Protected	8	23	4	3	Fair	2	Preserve	full canopy, leaning
7446	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	4	4	Good	1	Not Protected	full canopy, in flower
7447	*Quercus agrifolia*	Coast live oak	Native	18		Protected	8	27	3	4	Fair	2	Preserve	20% canopy dieback
7448	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	4	4	Good	1	Not Protected	15% canopy dieback, in flower
7449	*Quercus agrifolia*	Coast live oak	Native	9		Protected	5	14	4	4	Good	1	Preserve	full canopy, leaning slightly
7450	*Calocedrus decurrens*	Incense cedar	Nonnative	25, 9		Protected	10	51	3	2	Fair	3	Preserve	4 codominant stems, some yellowing foliage
7451	*Calocedrus decurrens*	Incense cedar	Nonnative	30		Protected	10	45	4	3	Fair	2	Preserve	10% canopy dieback, 2 codominant trunks included bark

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7452	*Schinus molle*	Peruvian pepper tree	Nonnative	6, 2		Not Protected	5	12	3	3	Fair	2	Not Protected	40% canopy dieback, multiple codominant stems
7453	*Quercus agrifolia*	Coast live oak	Native	7, 5		Protected	7	18	4	3	Fair	2	Preserve	full canopy, multiple codominant stems
7454	*Quercus ilex*	Holly oak	Nonnative	5, 5		Protected	6	15	5	3	Good	2	Preserve	full canopy, 2 codominant trunks, in flower
7455	*Quercus agrifolia*	Coast live oak	Native	15, 11		Protected	10	39	4	3	Fair	2	Preserve	10% canopy dieback, codominant stems, in fruit
7456	*Quercus agrifolia*	Coast live oak	Native	10		Protected	6	15	3	4	Fair	2	Preserve	40% canopy dieback
7457	*Quercus agrifolia*	Coast live oak	Native	8		Protected	5	12	3	3	Fair	2	Preserve	25% canopy dieback, 2 codominant stems
7458	*Quercus agrifolia*	Coast live oak	Native	16, 10		Protected	10	39	3	3	Fair	2	Preserve	25% canopy dieback, multiple codominant stems
7459	*Pittosporum tobira*	Japanese pittosporum	Nonnative	13		Protected	7	20	4	3	Fair	2	Remove	30% canopy dieback, multiple codominant stems
7460	*Quercus agrifolia*	Coast live oak	Native	7		Protected	4	11	4	4	Good	1	Transplant Candidate	full canopy
7461	*Quercus agrifolia*	Coast live oak	Native	17		Protected	8	26	4	4	Good	1	Preserve	full canopy, 2 codominant trunks
7462	*Quercus agrifolia*	Coast live oak	Native	21, 14		Protected	10	53	4	3	Fair	2	Preserve	10% canopy dieback 2 main trunks, leaning
7463	*Quercus agrifolia*	Coast live oak	Native	15, 11, 11		Protected	12	71	4	2	Fair	3	Preserve	15% canopy dieback, 4 trunks, leaning
7464	*Quercus agrifolia*	Coast live oak	Native	7		Protected	4	11	3	2	Fair	3	Preserve	30% canopy dieback, leaning heavily
7465	*Quercus agrifolia*	Coast live oak	Native	23		Protected	9	35	4	5	Good	1	Preserve	full canopy, some browning leaves
7466	*Olea europaea*	Olive	Nonnative	16		Protected	8	24	3	3	Fair	2	Preserve	15% canopy dieback, leaning heavily
7467	*Quercus agrifolia*	Coast live oak	Native	21		Protected	9	32	5	3	Good	2	Preserve	full canopy, leaning heavily, in flower
7468	*Quercus agrifolia*	Coast live oak	Native	20		Protected	9	30	4	3	Fair	2	Preserve	5% canopy dieback leaning,
7469	*Juglans nigra*	Black walnut	Nonnative	5		Not Protected	3	8	3	3	Fair	2	Not Protected	out shaded, loss of apical dominance
7470	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	4	4	Good	1	Transplant Candidate	full canopy, growing under larger oak
7471	*Quercus agrifolia*	Coast live oak	Native	8		Not Protected	5	12	0	0	Dead	4	Not Protected	dead
7472	*Quercus agrifolia*	Coast live oak	Native	10		Protected	6	15	4	3	Fair	2	Preserve	full canopy, leaning
7473	*Quercus agrifolia*	Coast live oak	Native	13		Protected	7	20	4	3	Fair	2	Remove	full canopy, leaning heavily
7474	*Arbutus unedo*	Strawberry tree	Nonnative	7, 7, 6		Protected	9	30	4	3	Fair	2	Remove	multiple codominant stems, some browning leaves
7475	*Quercus agrifolia*	Coast live oak	Native	7, 5		Protected	7	18	3	3	Fair	2	Remove	35% canopy dieback, codominant stems

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7476	*Citrus ×limon*	Lemon tree	Nonnative	2, 2, 1, 1, 1		Not Protected	4	11	3	3	Fair	2	Not Protected	10% canopy dieback, shrubby, yellowing foliage, fruiting
7477	*Callistemon viminalis*	Weeping bottlebrush	Nonnative	6, 6, 4, 4, 3		Protected	9	35	4	3	Fair	2	Preserve	in flower, tangled trunks
7478	*Prunus cerasifera*	Cherry plum	Nonnative	12		Protected	7	18	4	3	Fair	2	Preserve	in fruit, 3 main trunks, full canopy
7479	*Acacia melanoxylon*	Blackwood acacia	Nonnative	7		Not Protected	4	11	4	4	Good	1	Not Protected	in fruit, full canopy, previously identified as Australia willow (*Geijera parviflora*)
7480	*Olea europaea*	Olive	Nonnative	7, 5, 5, 2, 2		Protected	9	32	3	2	Fair	3	Preserve	20% canopy dieback, in flower, leaning
7481	*Quercus ilex*	Holly oak	Nonnative	7		Not Protected	4	11	3	4	Fair	2	Not Protected	10% canopy dieback
7482	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	4	4	Good	1	Preserve	full canopy, crossing branch
7483	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	4	4	Good	1	Preserve	10% canopy dieback
7484	*Quercus agrifolia*	Coast live oak	Native	26		Protected	10	39	4	3	Fair	2	Preserve	full canopy, multiple codominant trunks, included bark
7485	*Liquidambar styraciflua*	Sweetgum	Nonnative	0		Not Protected	0	0	5	4	Good	1	Not Protected	full canopy, in fruit
7486	*Liquidambar styraciflua*	Sweetgum	Nonnative	21		Protected	9	32	5	4	Good	1	Preserve	full canopy, large main branch, included bark
7487	*Sequoia sempervirens*	Coast redwood	Native	48		Protected	12	72	4	4	Good	1	Preserve	full canopy, new growth, great structure
7488	*Sequoia sempervirens*	Coast redwood	Native	41		Protected	11	62	3	4	Fair	2	Preserve	epicormic branching, new growth
7489	*Quercus agrifolia*	Coast live oak	Native	5		Protected	3	8	4	3	Fair	2	Preserve	10% canopy dieback, leaning
7490	*Populus fremontii*	Fremont cottonwood	Native	8, 7, 6, 6, 5		Protected	10	48	2	3	Fair	3	Preserve	half dead, living half okay, multiple codominant trunks
7491	*Quercus agrifolia*	Coast live oak	Native	4		Protected	3	6	4	3	Fair	2	Preserve	full canopy, leaning slightly
7492	*Sequoia sempervirens*	Coast redwood	Native	6		Not Protected	4	9	3	2	Fair	3	Not Protected	full canopy, previously topped
7493	*Populus fremontii*	Fremont cottonwood	Native	20		Protected	9	30	3	3	Fair	2	Preserve	full canopy, many codominant stems, epicormic branching
7494	*Populus fremontii*	Fremont cottonwood	Native	11		Not Protected	6	17	0	0	Dead	4	Not Protected	dead
7495	*Populus fremontii*	Fremont cottonwood	Native	19		Protected	9	29	4	3	Fair	2	Preserve	full canopy, multiple codominant stems
7496	*Quercus agrifolia*	Coast live oak	Native	4, 3		Protected	4	11	4	3	Fair	2	Preserve	full canopy, codominant trunks, included bark, some browning leaves
7497	*Quercus agrifolia*	Coast live oak	Native	14		Protected	7	21	4	4	Good	1	Preserve	partially growing into other tree canopies
7498	*Quercus agrifolia*	Coast live oak	Native	17		Protected	8	26	4	4	Good	1	Preserve	full canopy, some browning leaves,

Tree Tag	Scientific Name	Common Name	Native Status	DBH	Number of Stems	Protected Status	SCRZ (radius in ft)	CRZ (radius in ft)	Health Score	Structure Score	Condition Rating	Preservation Priority (1-4)	HTH Recommended Disposition	Notes
7499	*Quercus agrifolia*	Coast live oak	Native	18, 13, 13		Protected	11	66	3	2	Fair	3	Preserve	3 codominant trunks, included bark, trunks growing into each other, low canopy dead
7500	*Juglans nigra*	Black walnut	Nonnative	20		Protected	9	30	3	3	Fair	2	Remove	15% canopy dieback, codominant stems
NA	*Eucalyptus polyanthemos*	Silver dollar gum	Nonnative	12, 12, 11		Not Protected	10	53	4	3	Fair	4	Not Protected	full canopy, ivy on trunk, multiple codominant stems, new growth, not tagged due to location on other property
NA	*Arbutus unedo*	Strawberry tree	Nonnative	0		Not Protected	0	0	0	0	Dead	2	Not Protected	tree was removed
NA	*Quercus agrifolia*	Coast live oak	Native	10		Protected	6	15	4	4	Good	1	Preserve	
NA	*Quercus suber*	Cork oak	Nonnative	18		Protected	8	27	4	4	Good	1	Preserve	

Appendix D. Photo Documentation

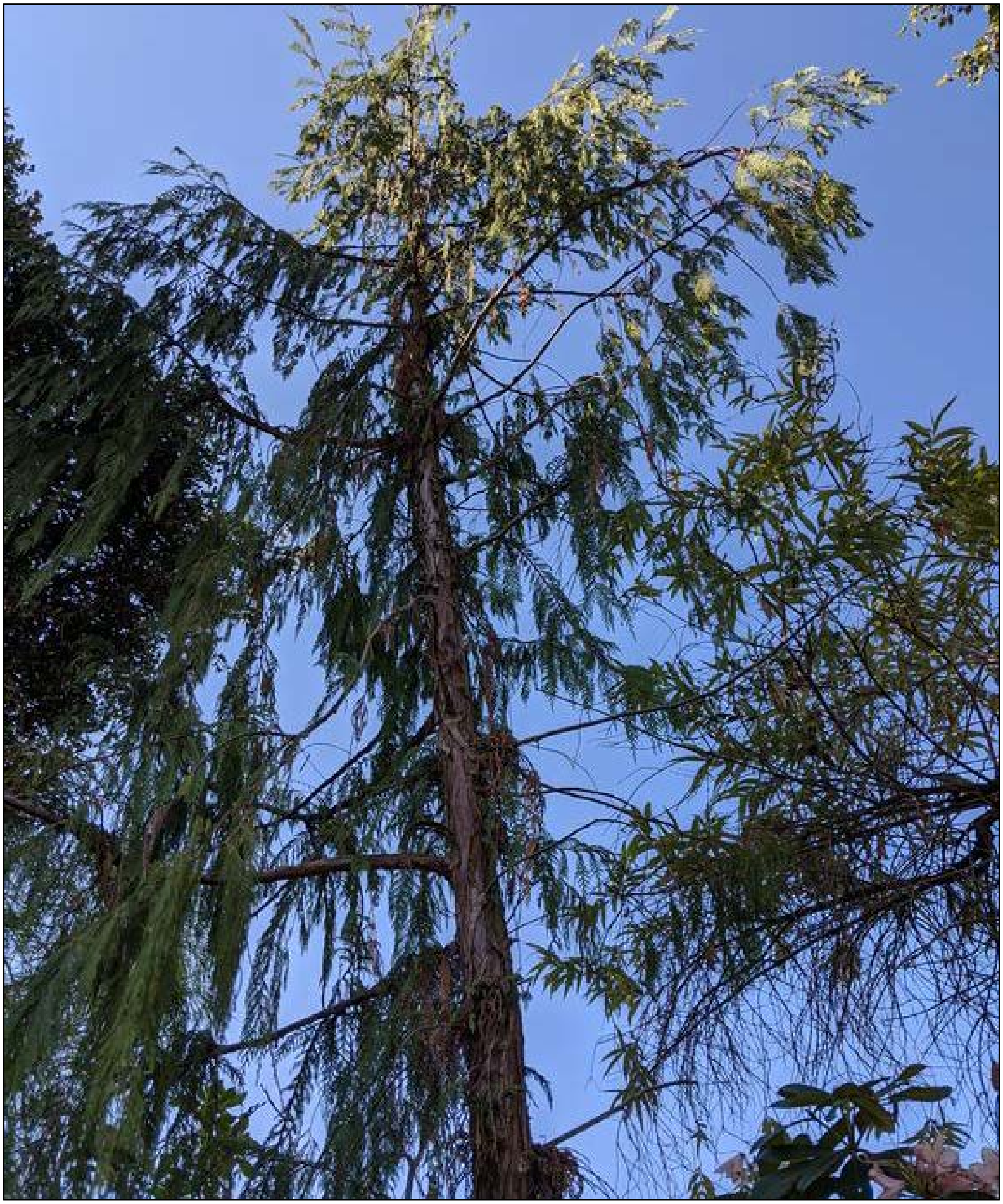


Photo 1. Tree #3976. Alaskan yellow cedar (*Cupressus nootkatensis*)
This tree is not protected and was in good condition (June 3, 2020).

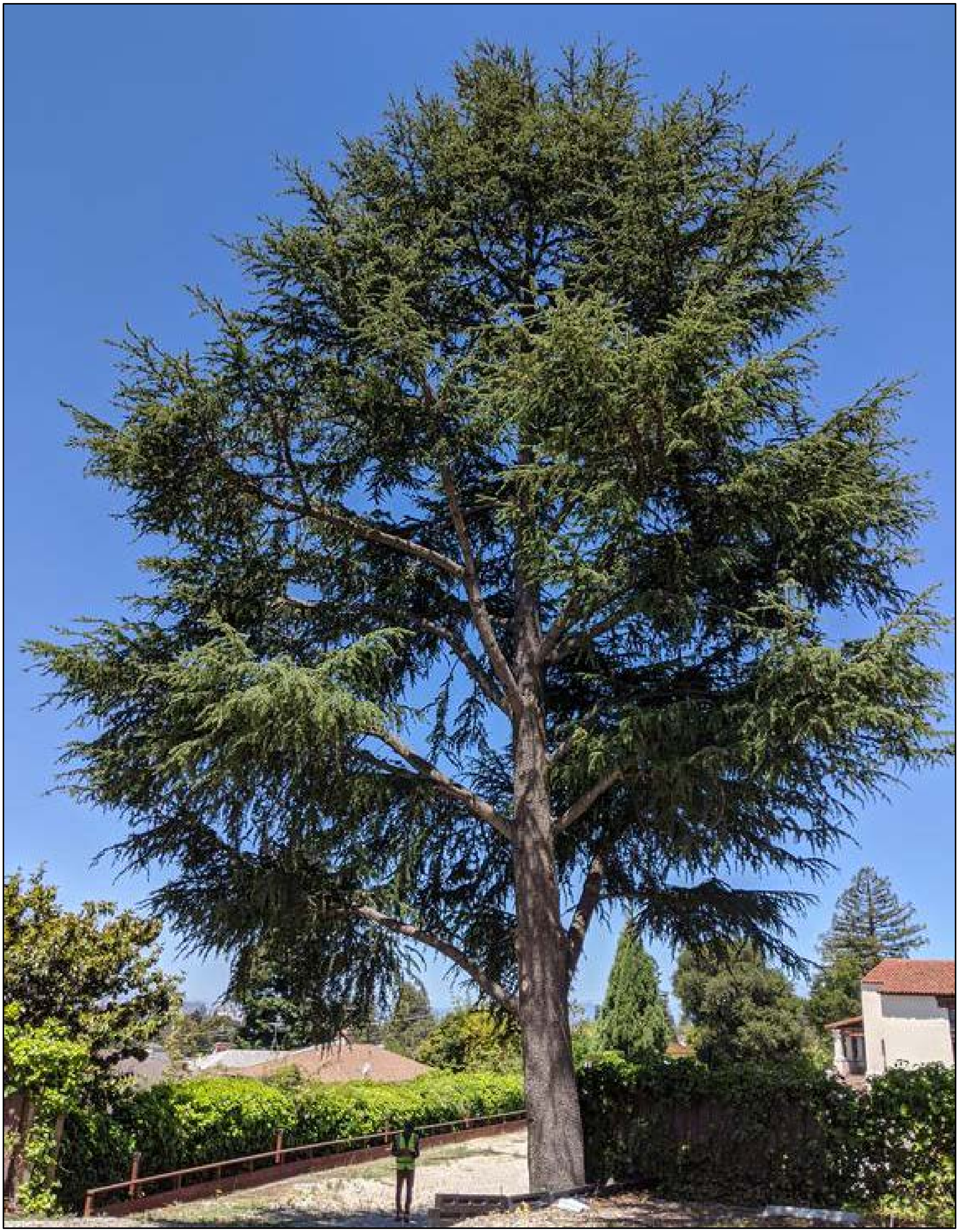


Photo 2. Tree #7026. Deodar cedar (*Cedrus deodara*)
This tree is protected and was in good condition (June 3, 2020).

Photo 3. Tree #7009. Crape myrtle (*Lagerstroemia indica*)
This tree is not protected and was in fair condition (June 3, 2020).

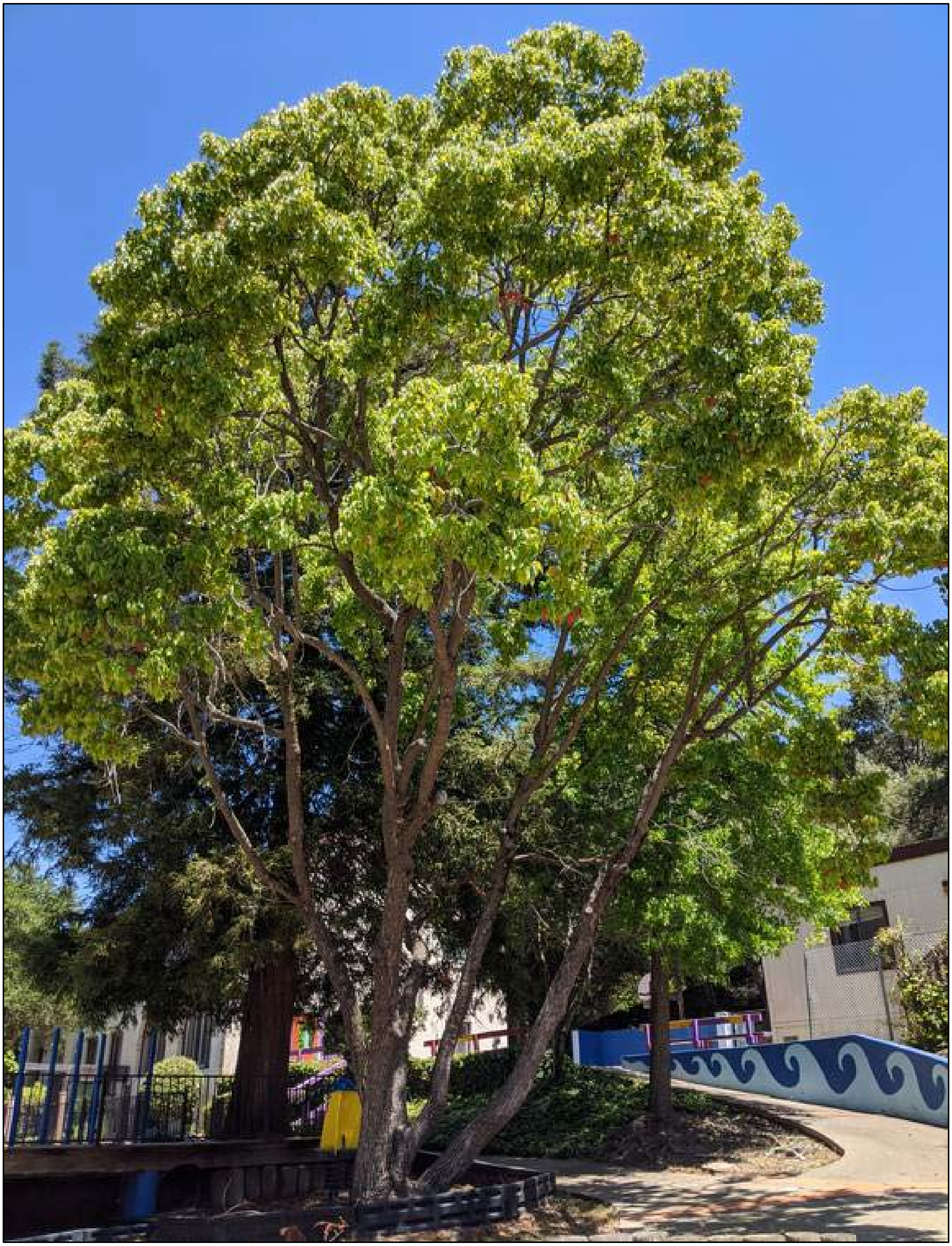


Photo 4. Tree #7030. Camphor (*Cinnamomum camphora*)
This tree is not protected and was in fair condition (June 3, 2020).

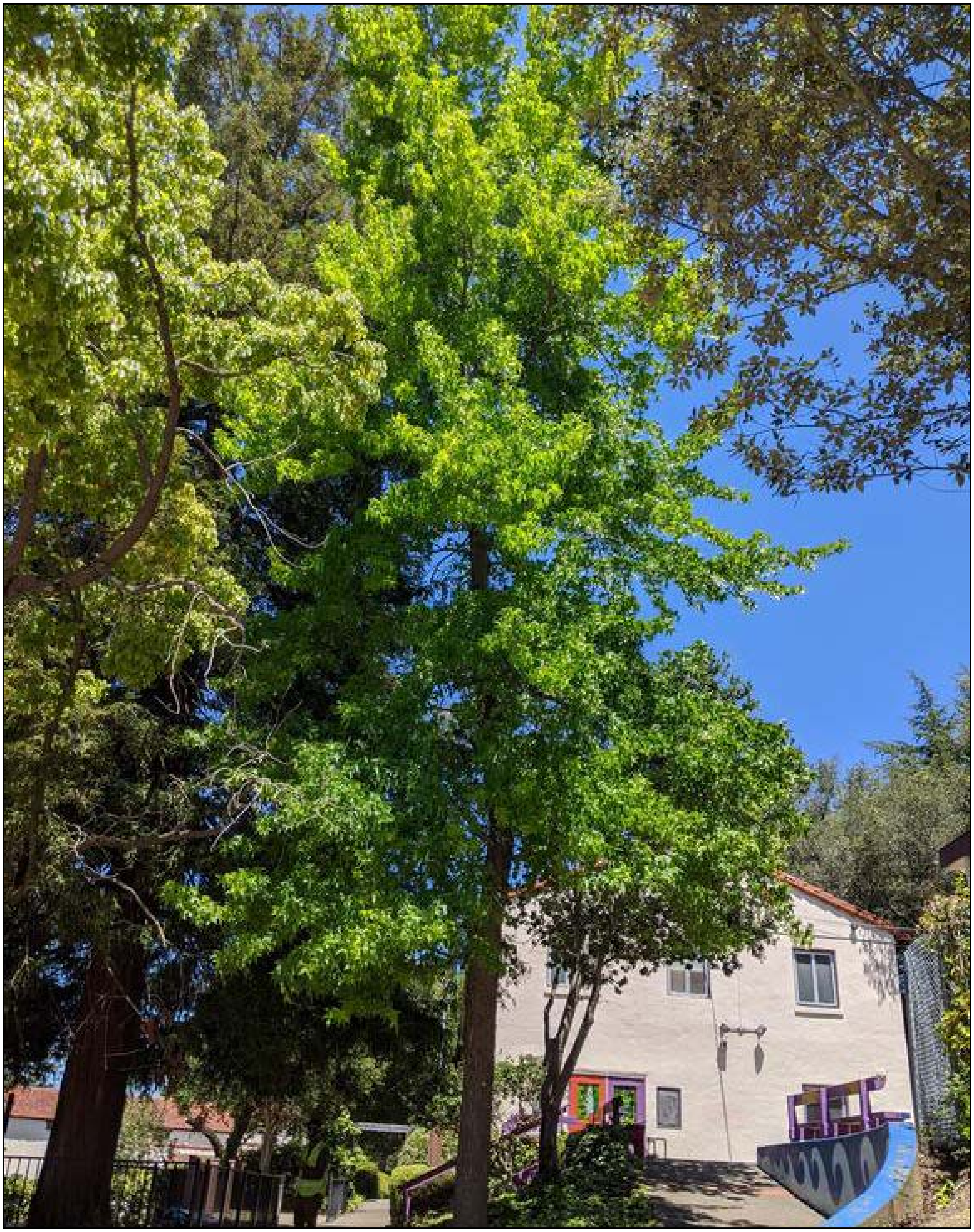


Photo 5. **Tree #7029. Sweetgum (*Liquidambar styraciflua*)**
This tree is protected and was in good condition (June 3, 2020).

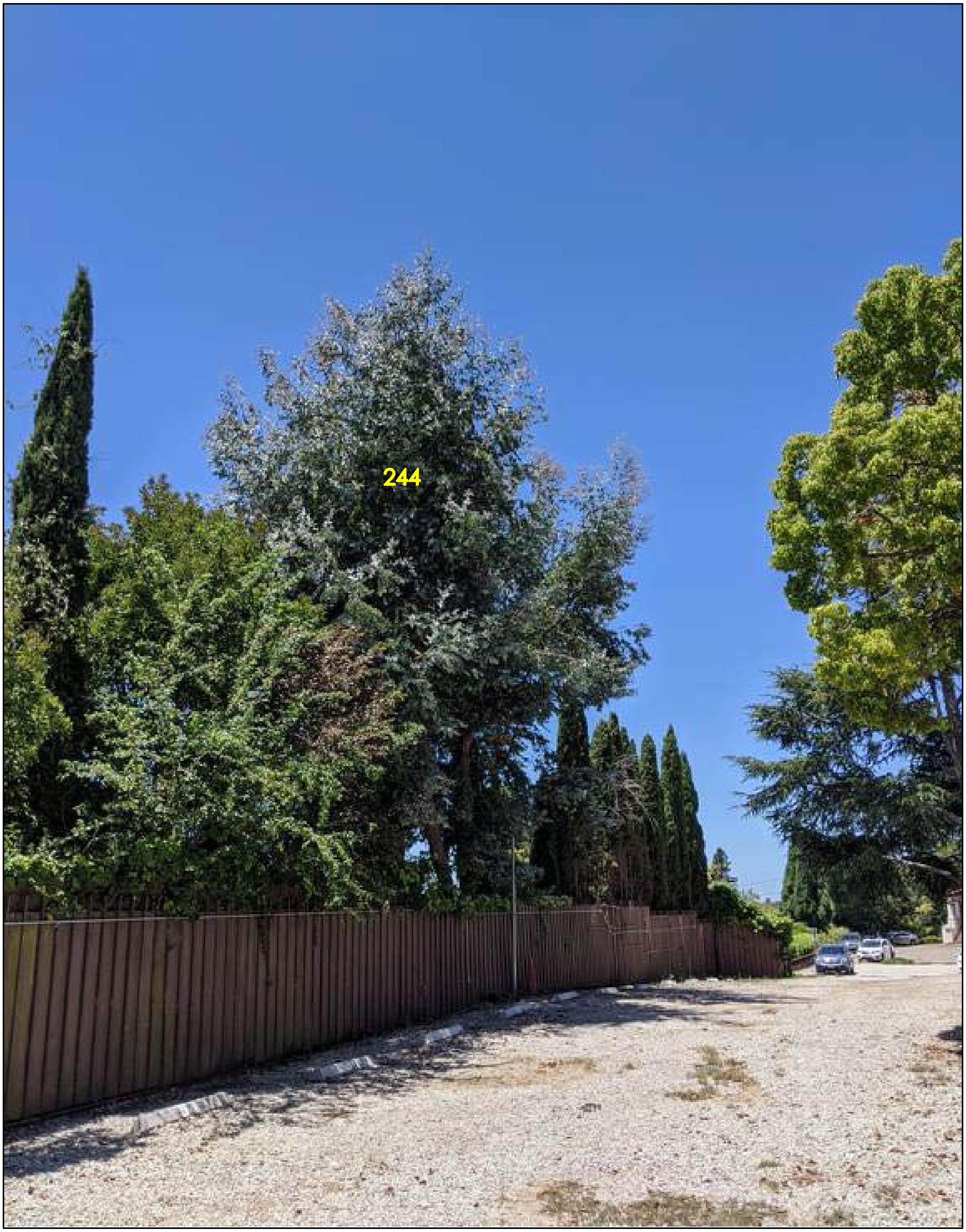


Photo 6. Davey Tree #244. Silver Dollar Gum (*Eucalyptus polyanthemos)*
This tree is not protected and was in fair condition (June 3, 2020).

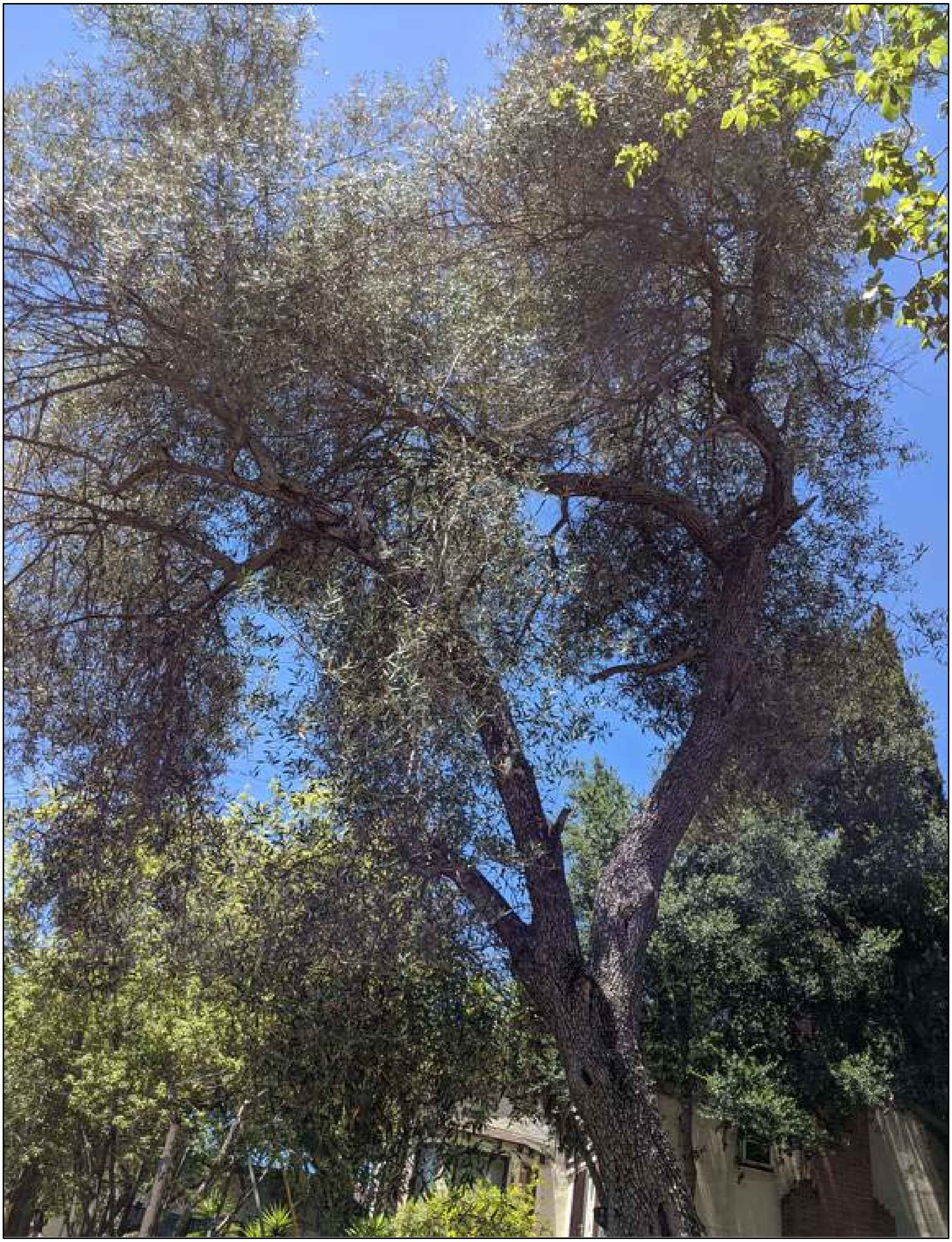


Photo 7. Tree #7043. Olive (*Olea europaea*)
This tree is protected and was in fair condition (June 3, 2020).

Photo 8. Tree #7344. Coast Live Oak (*Quercus agrifolia*)
This tree is protected and was in fair condition (June 5, 2020).

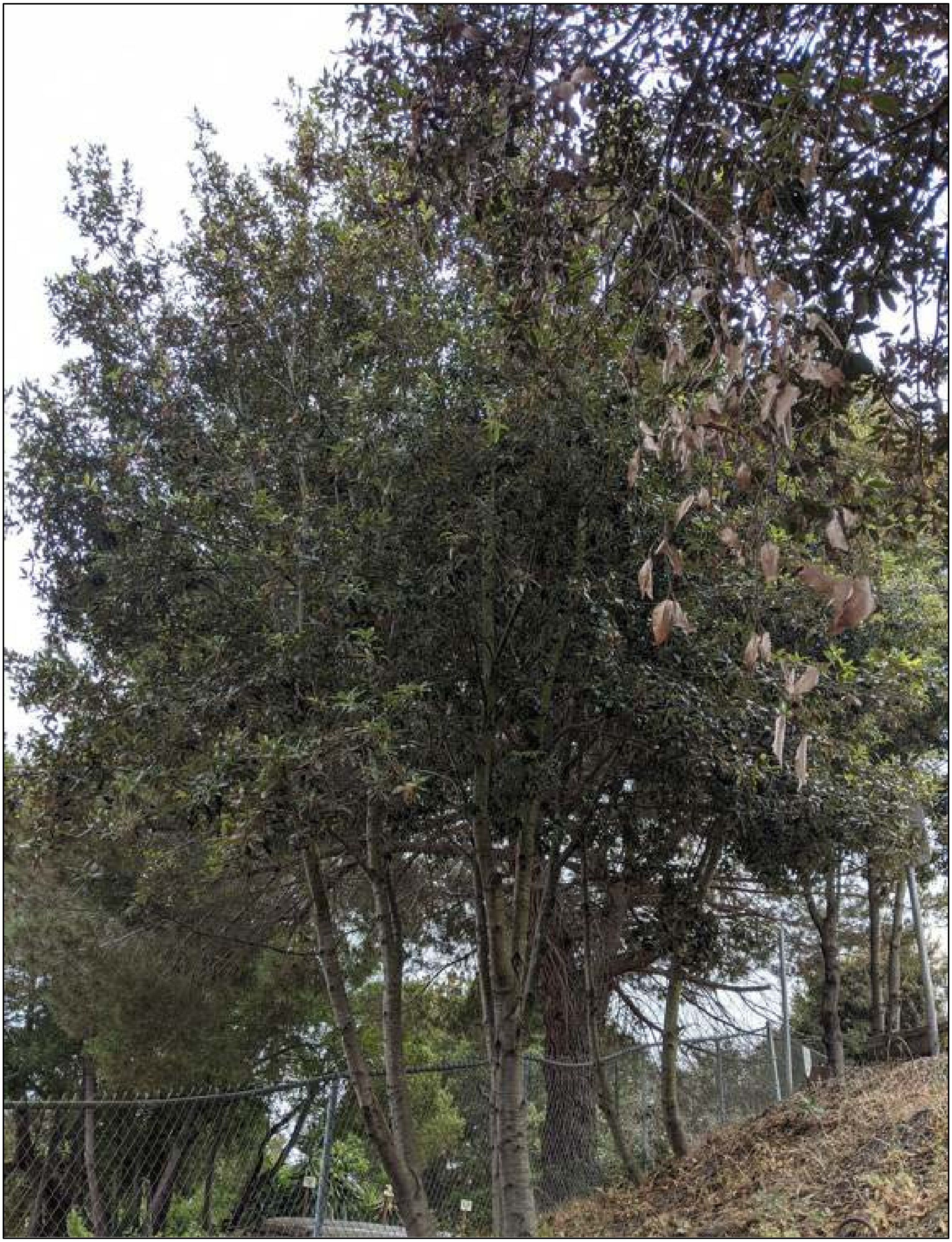


Photo 9. Tree #7347. Holly oak (*Quercus ilex*)
This tree is protected and was in good condition (June 5, 2020).

Photo 10. Tree #7360. Callery pear (*Pyrus calleryana*)
This tree is not protected and was in poor condition (June 5, 2020).

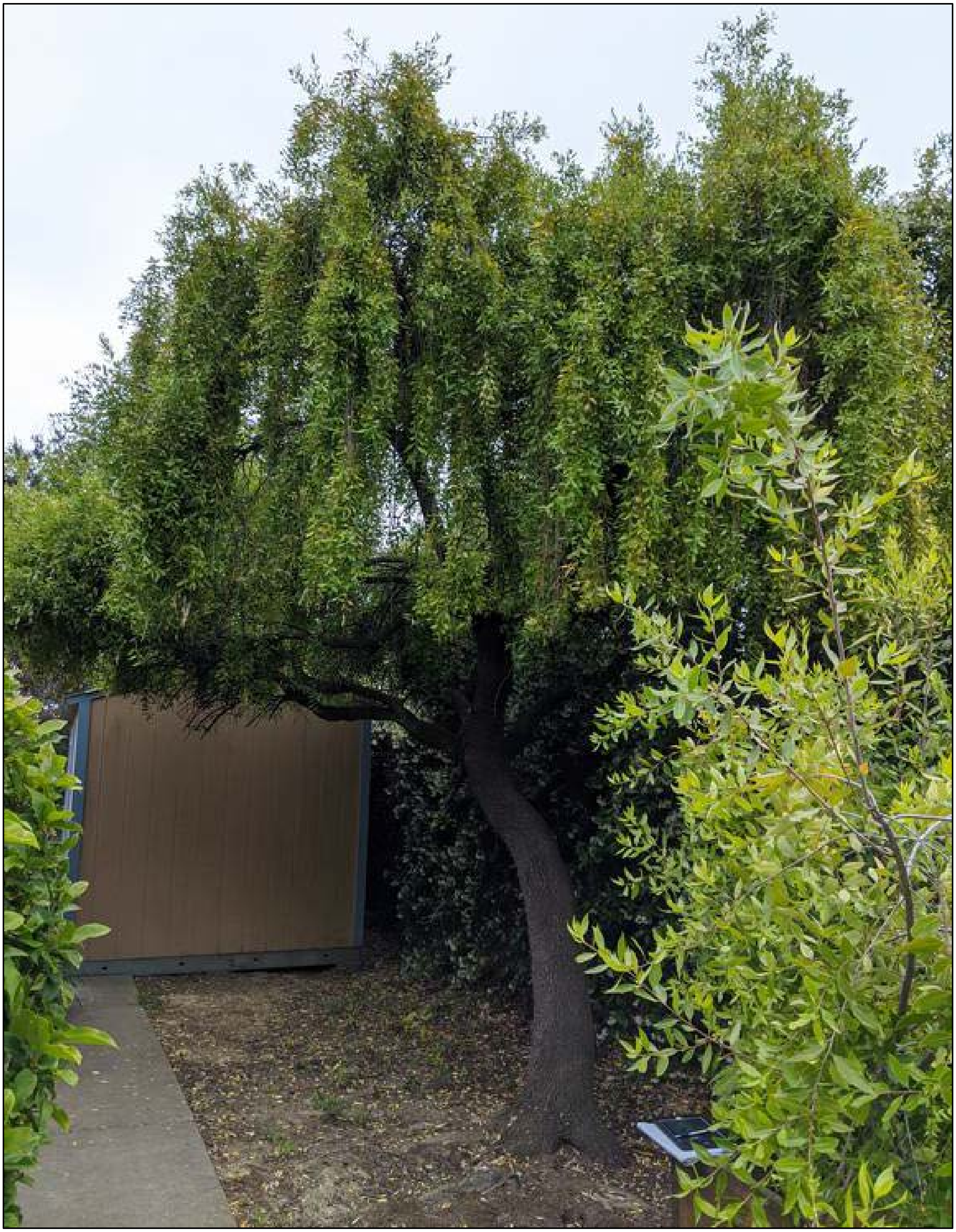


Photo 11. Tree #7361. Mayten tree (*Maytenus boaria*)
This tree is protected and was in fair condition (June 5, 2020).

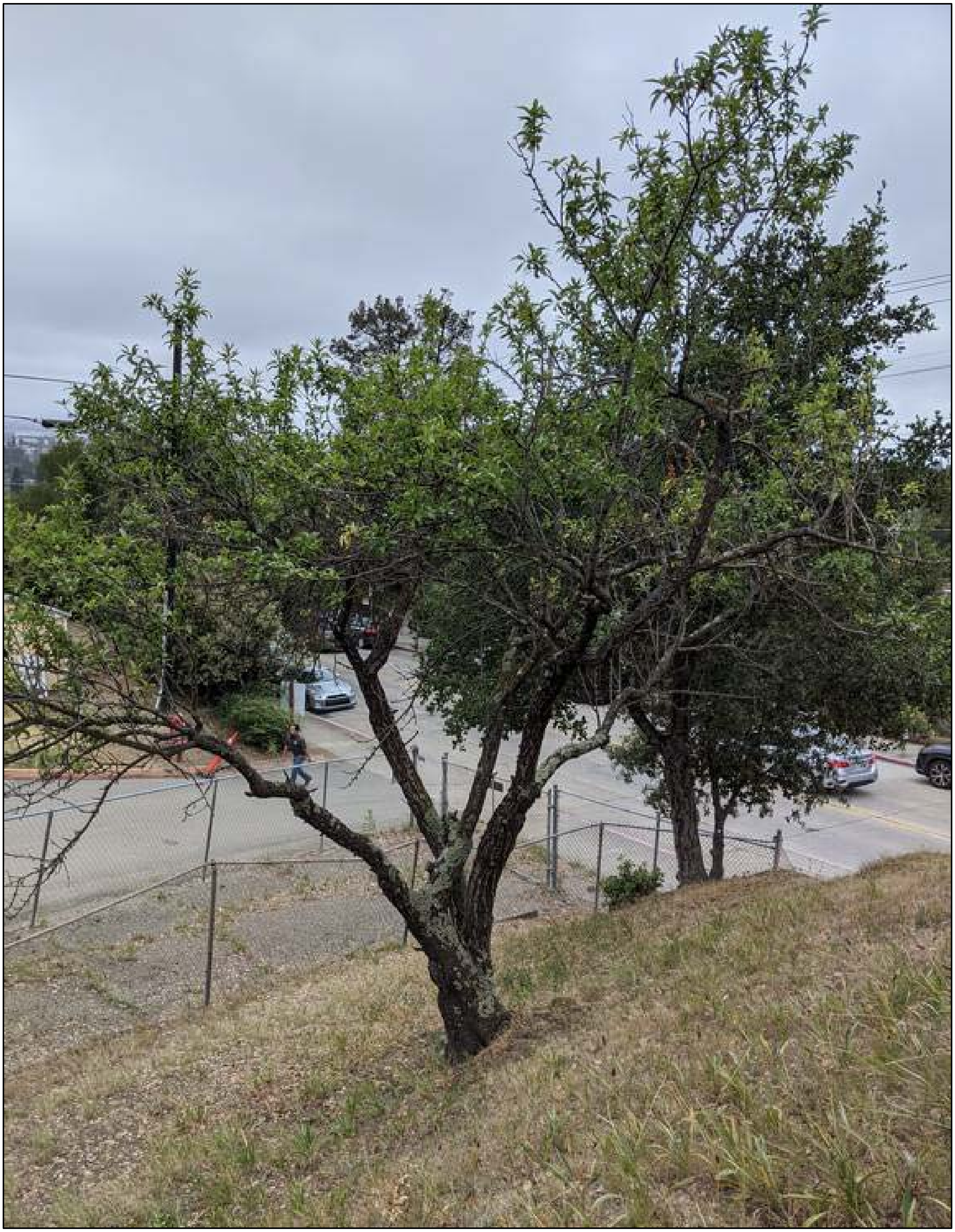


Photo 12. Tree #7379. Sweet almond (*Prunus dulcis*)
This tree is protected and was in fair condition (June 5, 2020).

Appendix E. Updated Tree Disposition Plan

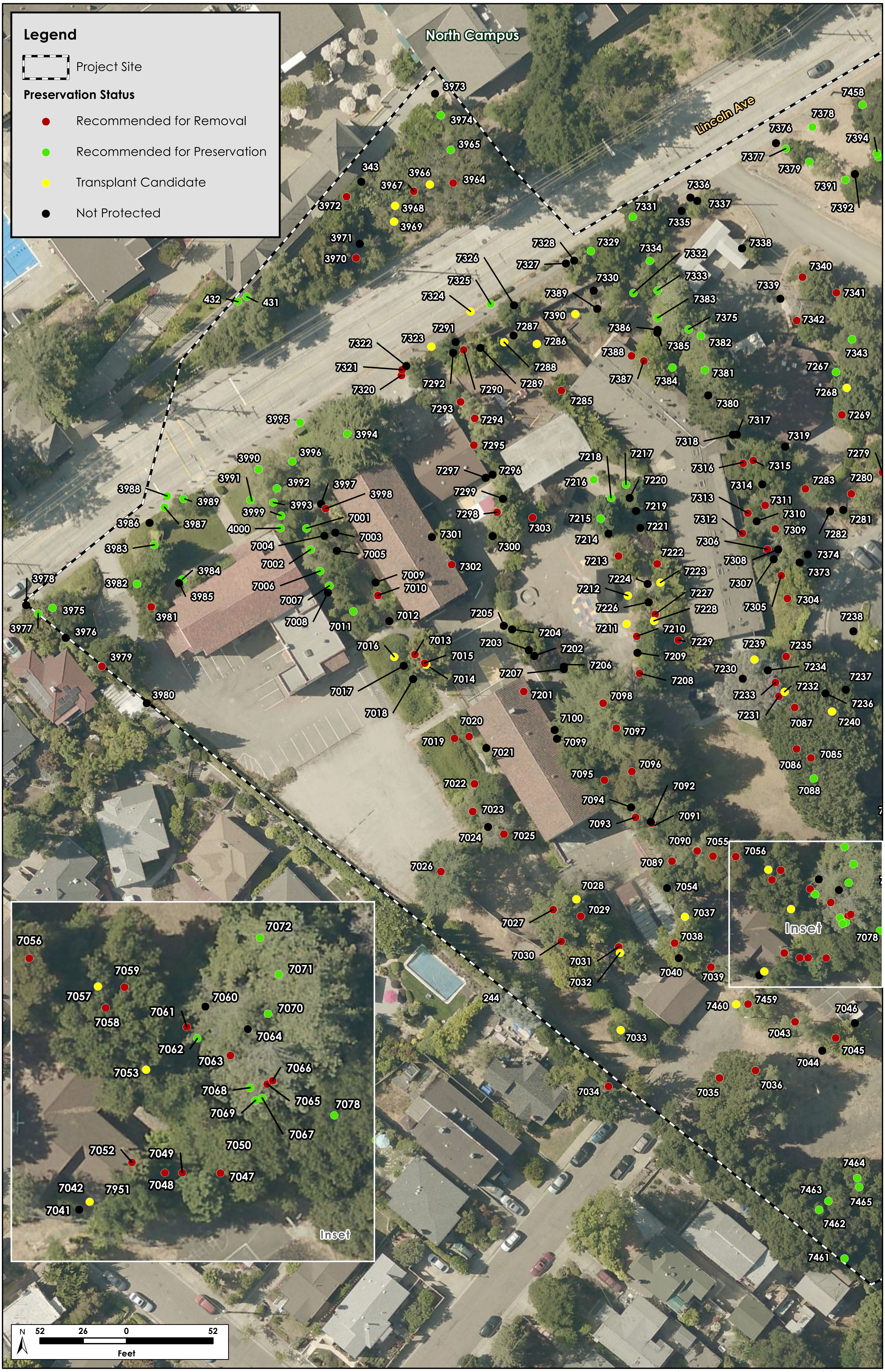
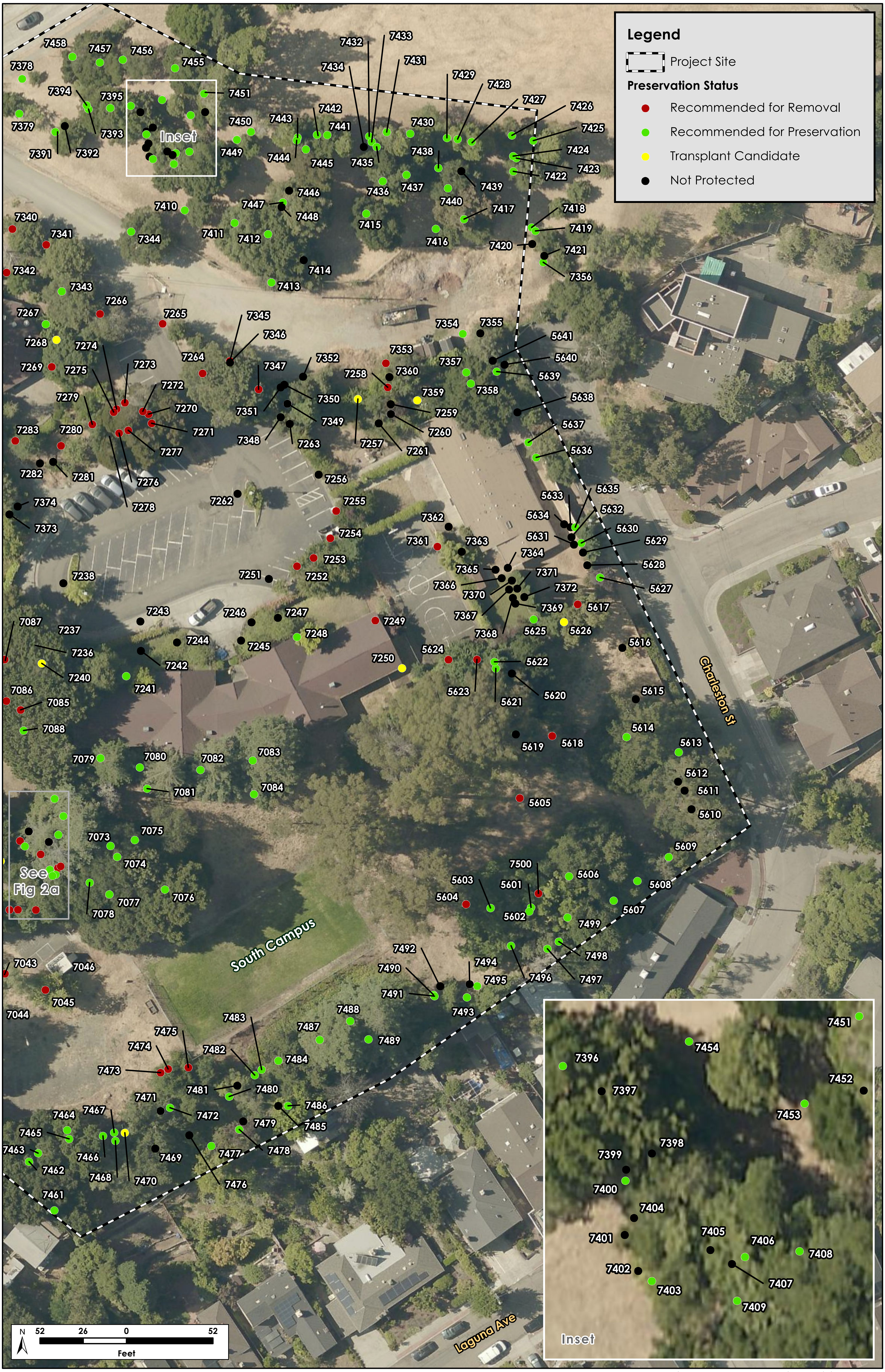


Figure 3a. Tree Disposition Plan
Head-Royce School Detailed Peer Review Arborist Report (4378-01)
August 2020

N:\Projects4300\4378-01\Reports\Arborist Report\Fig 3a Tree Disposition Plan.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants



N:\Projects4300\4378-01\Reports\Arborist Report\Fig 3b Tree Disposition Plan.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 3b. Tree Disposition Plan

Head-Royce School Detailed Peer Review Arborist Report (4378-01)

August 2020

Appendix 7A

Head-Royce School South Campus, 4368 Lincoln Avenue - Historic Resource Evaluation

Page & Turnbull, April 19, 2019

HEAD-ROYCE SCHOOL SOUTH CAMPUS
4368 LINCOLN AVENUE
HISTORIC RESOURCE EVALUATION

OAKLAND, CALIFORNIA
[18336]

PREPARED FOR:
LAMPHIER-GREGORY
OAKLAND, CA

PAGE & TURNBULL

FEBRUARY 16, 2021

imagining change in historic environments through design, research, and technology

FINAL

TABLE OF CONTENTS

I. INTRODUCTION

This Historic Resource Evaluation (HRE) has been prepared at the request of Lamphier-Gregory, for the Head-Royce School South Campus, located at 4368 Lincoln Avenue (APN 29-1009-6) in Oakland, California **(Figure 1)**. The Head-Royce School South Campus was formerly occupied by the Lincoln Child Center (now known as Lincoln) from 1930 to 2013.

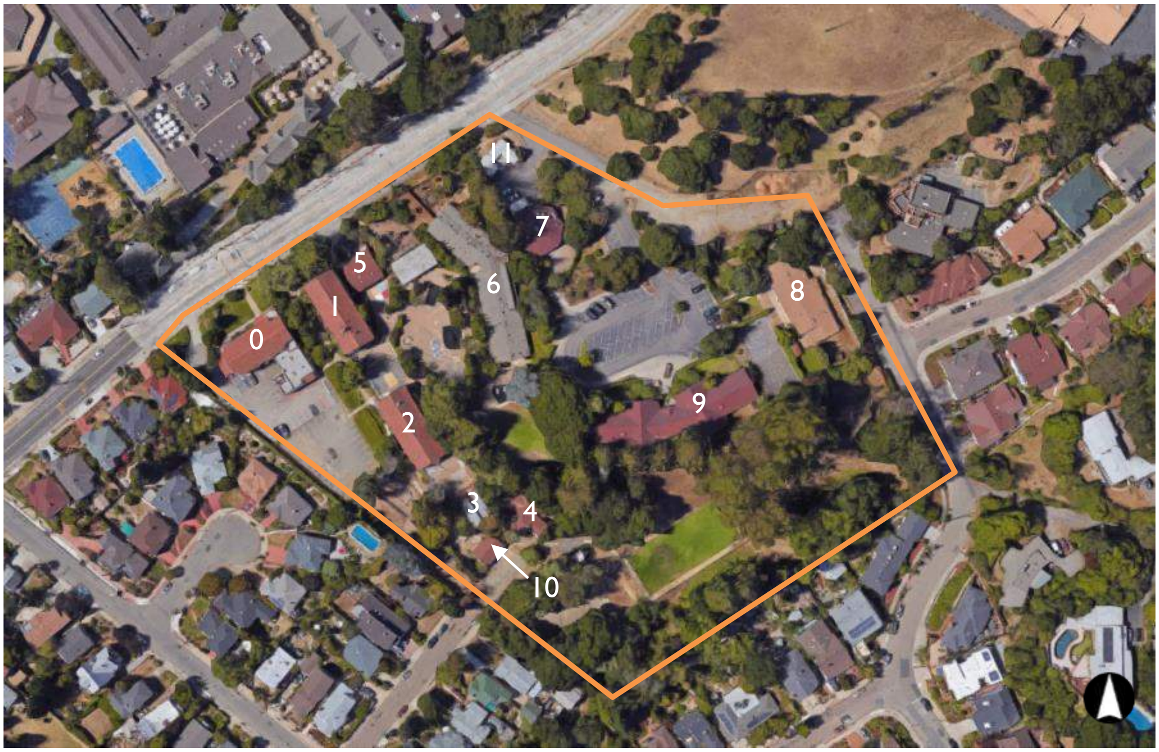


Figure 1. Aerial view of Head-Royce School South Campus, outlined in orange. Buildings are identified by numbers 0 to 11 based on the current Head-Royce School naming system. Source: Google Maps, 2019. Edited by Page & Turnbull.

The Head-Royce School South Campus is a complex of twelve educational-use buildings located on an irregular-shaped lot south of Lincoln Avenue, between Alida Street and Charleston Street in the Lincoln Highlands neighborhood of Oakland.[1] The site is bounded by Lincoln Avenue to the north; the United Cerebral Palsy campus at 4500 Lincoln Avenue and Charleston Street to the east; residences along Charleston Street and Laguna Avenue to the south; and residences along Alida Street, Alida Court, and Linnet Avenue to the west. Campus buildings are between one and two stories in height, and range in date of construction from 1930 (Buildings 1 and 2) to after 2000 (Building 9 and Building 11). All eleven buildings were constructed by the Lincoln Child Center, primarily for educational or residential use related to the organization's mission. The site also includes several maintenance and storage buildings, mature trees, a variety of playground equipment and play areas, pedestrian and auto circulation routes, and several surface parking lots. Head-Royce School uses the surface parking lots at the subject property, and the maintenance staff uses Building 5 and several rooms on the first story of Building 1, but otherwise all of the buildings are unoccupied and used for storage.

[1] The Head-Royce School North Campus is located on the north side of Lincoln Avenue. Evaluation of these buildings is outside the scope of this report.

This HRE provides a review of the existing historic status of all campus buildings; historic context for the Lincoln Heights neighborhood and Lincoln Child Center; and architectural descriptions of the campus and each of its buildings. Each building that is 45 years old or older is evaluated for its historic significance and eligibility for inclusion in the California Register of Historical Resources (California Register) and as a City of Oakland Designated Historic Property. The Head-Royce School South Campus as a whole is also evaluated for eligibility as a historic district for inclusion in the California Register, and as a City of Oakland Local Historic District.

METHODOLOGY

To prepare this HRE, Page & Turnbull conducted an intensive pedestrian architectural survey, extensive historical research, and an evaluation of the historic significance of each building identified to be 45 years old or older. Page & Turnbull prepared this report using research collected at various local repositories, including the Oakland Cultural Heritage Survey, Oakland History Room at the Oakland Public Library, the San Francisco Public Library, the Oakland Building Department, and the College of Environmental Design Archives, University of California, Berkeley. Page & Turnbull also consulted various online sources including California Digital Newspaper Collection, Calisphere, Newspapers.com, and Ancestry.com. Key primary sources consulted and cited in this report include historic drawings provided by SOM and the Oakland Building Department, as well as Oakland Building Department permit applications, historical newspapers, and historical photographs.

The Head-Royce School South Campus contains a number of natural and designed landscape features, including ancillary buildings, playground areas and equipment, circulation paths, and plantings. Landscape features are discussed within this report; however, an inventory and evaluation of individual trees was outside the scope of this report.

Lincoln was not able to provide Page & Turnbull with access to their archives during research for this report. Secondary sources consulted to investigate the history of Lincoln Child Center included Marta Gutman's *A City for Children: Women, Architecture, and the Charitable Landscapes of Oakland, 1850-1950* (Chicago: University of Chicago Press, 2014) and an unpublished history of the organization by Ann Root titled "A History of the Lincoln Families Organization, 1883 to 2016," provided by Lincoln Child Center.

All photographs in this report were taken by Page & Turnbull in March 2019, unless otherwise noted.

SUMMARY OF FINDINGS

The table below summarizes Page & Turnbull's findings for each Head-Royce School South Campus building and the campus site as a whole for both the California Register and a City of Oakland local historic resource based on the Oakland Cultural Heritage Survey (OCHS) rating. The existing OCHS designations are also listed.

Building/Resource	Existing Status	Page & Turnbull Findings		
	OCHS Rating (1996)	California Register Eligibility	OCHS Rating (2019)	CEQA Historic Resource
Building 0 (1935)	C3	Yes	B3a	Yes
Building 1 (1930)	C3	Yes	B3a	Yes
Building 2 (1930)	C3	Yes	C3a	Yes
Building 3 (1990)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Building 4 (c. 1938-46)	No rating assigned	No	D3	No
Building 5 (1967)	No rating assigned	No	D3	No
Buildings 6 & 7 (1958)	F	No	D3	No
Building 8 (1957)	No rating assigned	No	D3	No
Building 9 (1999)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Building 10 (1945)	No rating assigned	No	D3	No
Building 11 (c. 2005-9)	No rating assigned	Not evaluated (not age eligible)	Not evaluated (not age eligible)	No
Campus as a Potential Historic District	PDHP	No	No	No

II. CURRENT HISTORIC STATUS

This section provides an overview of any national, state, and local historical ratings currently assigned to the buildings on the Head-Royce School South Campus.

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

None of the buildings on the subject property are currently listed in the National Register of Historic Places.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (California Register) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through several methods. State Historical Landmarks and National Register-listed properties are automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places.

None of the buildings on the subject property are currently listed in the California Register of Historical Resources.

CALIFORNIA HISTORICAL RESOURCE STATUS CODE

Properties listed or under review by the State of California Office of Historic Preservation are assigned a California Historical Resource Status Code (Status Code) of "1" to "7" to establish their historical significance in relation to the National Register of Historic Places (National Register or NR) or California Register of Historical Resources (California Register or CR). Properties with a Status Code of "1" or "2" are either eligible for listing in the California Register or the National Register, or are already listed in one or both of the registers. Properties assigned Status Codes of "3" or "4" appear to be eligible for listing in either register, but normally require more research to support this rating. Properties assigned a Status Code of "5" have typically been determined to be locally significant or to have contextual importance. Properties with a Status Code of "6" are not eligible for listing in either register. Finally, a Status Code of "7" means that the resource has not been evaluated for the National Register or the California Register, or needs reevaluation.

None of the buildings on the subject property are currently listed in the database with a California Historical Resource Status Code, which means that the buildings have not been formally evaluated using the status codes.

OAKLAND CULTURAL HERITAGE SURVEY

The Oakland Cultural Heritage Survey (OCHS) was established in 1981. Since that time, the OCHS has been evaluating resources according to a system adapted from both the San Francisco Downtown Inventory and Harold Kalman's *The Evaluation of Historic Buildings* (Parks Canada, 1980). The categories, ratings, and guidelines for interpretation that are used by the OCHS closely parallel those presented in *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, Section IV, "How to Identify the Type of Significance of a Property;" and Section V, "How to Determine if a Property has Integrity."

The system uses letters A to F to rate individual properties. In general, A and B ratings indicate outstanding or especially fine landmark-quality buildings, C ratings are given to superior or visually important examples, D ratings are for buildings of minor importance, E ratings indicate that the building is of no particular interest, and F or * ratings are for buildings that are less than 45 years old or that have been modernized. Individual properties can have dual ("existing" and "contingency") ratings if they have been remodeled. Contingency ratings are noted in lowercase letters.

District status is indicated by number: 1 indicates that the building is in an Area of Primary Importance (API) or National Register quality district, 2 indicates that the building is in an Area of Secondary Importance (ASI) or district of local interest, and 3 indicates that the property is not located in a district. For properties in districts, "+" indicates contributors, "-" indicates noncontributors, and "*" potential contributors.

Any property that has at least a contingency rating of C ("secondary importance") or contributes or potentially contributes to a primary or secondary district, may "warrant consideration for possible preservation" according to the City of Oakland. All properties meeting these minimum significance thresholds (and have not already been designated) are called Potential Designated Historic Properties (PDHPs). "PDHP" is not a designation, but rather a category based on the OCHS ratings.

Three buildings on the Head-Royce School South Campus—Building 0, Building 1, and Building 2—were assigned an OCHS rating of "C3" in 1996. This indicates that each is a property of "Secondary Importance" and is not in a historic district. Buildings 6 and 7 were assigned a rating of "F," meaning that they were less than 45 years old at the time of the survey. Other buildings were not assigned a rating at the time of the 1996 survey. The entire property (parcel) is a Potential Designated Historic Property (PDHP).

CITY OF OAKLAND LANDMARKS

City of Oakland Historic Landmarks are the most prominent historic properties in the city. They may be designated for historical, cultural, educational, architectural, aesthetic, or environmental value. They are nominated by their owners, the City, or the public and are designated after public hearings by the Landmarks Board, Planning Commission, and City Council.

None of the buildings on the subject property are currently designated as City of Oakland Landmarks.

III. ARCHITECTURAL DESCRIPTIONS

This section provides an overview of the Head-Royce School South Campus site and a full architectural description of all nine buildings more than 45 years old that are on the site. A brief description and photograph are provided for the three buildings that are less than 45 years old on the site. Brief descriptions of ancillary buildings and structures are also provided.

SITE DESCRIPTION

The Head-Royce School South Campus is located on an irregular seven-and-a-half-acre site bounded by Lincoln Avenue and a driveway (formerly Perkins Street) to the north; by Charleston Street to the east; by Laguna Avenue to the South; and by houses along Alida Court and Linnet Avenue to the west **(Figure 2)**. The site is directly across Lincoln Avenue from the Head-Royce School main campus. The topography is varied, generally sloping downhill to the south and east. The campus is primarily accessed by vehicle from two driveways off Lincoln Avenue—one at the west end of campus by Building 0, and one, which was formerly known as Perkins Street, at the north end of campus, by Building 11. Another vehicular entry is located at the end of Linnet Avenue, near Buildings 4 and 10.

The oldest buildings on the campus, Buildings 0, 1 and 2, are located at the west end of campus, as is Building 5 and the lower parking lot. East of the oldest buildings are several playground areas. Buildings 6, 7 and 11 are located near the north end of campus, by former Perkins Street. Three buildings, Buildings 3, 4, and 10, are located near the driveway off Linnet Avenue. Building 8 is located along Charleston Street, at the northeast end of campus. Building 9 and the upper parking lot are located at the center, north area of the campus. A grass playing field and undeveloped wooded areas are located at the south and east end of the campus.

Figure 2. Aerial view Head-Royce School South Campus, outlined in orange. Buildings are identified by numbers 0 to 11 based on the current Head-Royce School naming system. Source: Google Maps, 2019. Edited by Page & Turnbull.

BUILDING 0 (JUNIOR ALLIANCE HALL)

Construction Date: 1935
Architect: William G. Corlett
Builder: F.C. Stolte

Building 0, originally known as Junior Alliance Hall, is located at the westernmost corner of the site, near Lincoln Avenue. The building faces a lawn and Lincoln Avenue to the north, Building 1 to the east, an asphalt parking lot to the south (formerly playing field), and a driveway to the west. The building is a one-story, Spanish Colonial Revival style, wood-frame building with a partial basement. The concrete foundation of the building is partially exposed, clad in stucco, and defined by a molded base course. Clad in stucco siding, the L-shaped building features a double-height wing with a front-gable roof with terra cotta tiles and a one-story wing with a flat roof and parapet. The gabled roof has overhanging eaves and decorative, carved rafter tails at the northwest and southeast façades. Terra cotta tiles line the coping of the parapet at the flat roof portions of the building. Constructed to house an auditorium and stage, two bedrooms, a kitchen, an office, and several related ancillary rooms, the building was converted to classrooms in the early 1970s. Typical windows are paired steel-sash, three-lite casement windows with two-lite transoms. All windows are steel-sash unless otherwise specified. Typical doors are non-original wood slab doors with one lite or no lites.[2]

Primary (Southwest) Facade

The primary (southwest) façade features paired, divided-lite wood casement windows above a single-height covered entry porch covered by a shed roof clad with terra cotta tiles **(Figure 3)**. The entry porch roof has exposed wood rafters and wood sheathing, and is supported by four square, stucco-clad columns set on stucco-clad piers, on a stucco-clad wall with terra cotta tile coping **(Figure 4)**. The outer two piers are buttressed. A wrought-iron railing spans the central two piers, and a stucco-clad wall with terra cotta tile coping spans between the outer piers. Carved wood beams span from the wall to the outer two columns. Curved terra cotta lined vents are located near the ground-plane of the porch wall.

Figure 3. Primary (southwest) façade of the double-height volume of Building 0, looking, northeast.

[2] Original versus non-original features and openings have been identified in comparison with historic architectural drawings on file at the Oakland Building Department; copies of the historic drawings of Buildings 0, 1 and 2 are included in Appendix D of this report.

The primary entrance to Building 0 is recessed through an arched opening, supported by pilasters, at the center of the entry porch **(Figure 5)**. Typical, paired slab doors are located at the primary entrance. A broken light fixture is mounted to the wood board ceiling at the recessed entryway. A double staircase leads up to the landing of the covered entry porch from the north and south. The stairs have stucco-clad concrete risers and terra cotta tile treads, and the landing is concrete with terra cotta tile edging and decorative diamond patterning **(Figure 6)**.

Figure 4. Exposed rafters and wood sheathing of the entry porch roof.

Figure 6. Concrete entry porch with terra cotta tile edging and diamond patterning.

Figure 5. Replacement primary entry doors at a recessed entryway with an arched opening.

The south flat-roofed wing of Building 0 is recessed from the primary façade **(Figure 7)**. The primary façade of the south façade features four sets of typical windows **(Figure 8)**. A molded lintel is located above each window opening. The casement sashes of one of the windows have been removed for a window air-conditioning unit. At the exposed-basement level of the south wing are two sets of paired, two-lite steel-sash casement windows. A stucco-clad interior chimney is located flush with the primary façade of the south wing, which is the location of the kitchen. South (right) of the windows is a typical door with wood awning clad in terra cotta tiles, featuring decorative, carved wood brackets and rafter tails **(Figure 9)**. South (right) of the door is a two-lite casement window with patterned, opaque glazing. At the southwest corner of the south wing is a small, one-story, flat-roofed addition with typical stucco siding and terra cotta tile coping at the parapet. The northwest-facing wall of the addition volume has a metal grate a the exposed-basement level, and two sets of typical windows on the southwest-facing wall.

Figure 7. Primary façade of the south wing of Building 0, looking northeast. The 1948 addition is visible at the right.

Figure 8. Molded lintels above the windows on the primary façade of the south wing, looking east.

Figure 9. Awning over the entrance at the south wing with decorative wood brackets and rafter tails, looking southeast toward the 1948 addition.

Northwest Façade

The northwest façade of Building 0 features a secondary entrance, accessed via a path from Lincoln Avenue **(Figure 10)**. At the east (left) end of the façade is a projecting cubic volume with a flat roof and terra cotta tile at the coping of the parapet. On the projecting volume are typical windows and a small, two-lite window covered by a wood grill. Above the projecting volume are typical casement windows, but with no transom and with wood shutters.

Figure 10. Northwest façade of Building 0, looking south.

A shed roof extends west (right) from the projecting volume to cover the secondary entrance patio **(Figure 11)**. The shed roof has exposed rafters, decorative carved rafter tails, wood sheathing, and terra cotta tile cladding. Two square columns support the shed roof and a decoratively carved beam spans the length between the front column and a corner pilaster. The patio is concrete with terra cotta edging and diamond patterning. Brick is located at the base of the columns and pilasters of the porch. A typical replacement door is flanked by wood-framed sidelites. A light fixture hangs from the center of the ceiling of the porch roof.

West (right) of the secondary entry porch are six pilasters framing five windows with twelve-lite fixed lower-sashes and six-lite awning upper-sashes **(Figure 12)**. A molded wood frieze spans above the pilasters. A non-original doorway with a typical door is located below the center window. A the far west end of the northwest façade is a recessed bay with a single, three-lite casement window.

Figure 11. Covered entry patio on the northwest façade, looking southeast.

Figure 12. Pilasters, overhanging eaves, and wood cornice at the northwest façade.

Northeast Facade

At the northeast façade, the south wing is nearly flush with the double-height, gable-roofed volume of the building. From south (left) to north (right), the fenestration at the south wing includes a typical window, a typical window with no transom, two typical windows with molded lintels, and a typical window **(Figure 13)**. At the double-height volume of the building, a molded string course is located at the height of the coping of the south wing. A recessed arched bay is located at the center of the double-height volume **(Figure 14)**. North of the double-height volume is a one-story, flat-roofed volume which has a non-original doorway and typical door, accessed by concrete steps and a metal railing **(Figure 15)**.

Figure 13. Northeast façade of the south wing, looking southwest.

Figure 14. Northeast façade of the double-height volume, looking southwest.

Figure 15. Non-original entryway at the flat-roofed volume at the north corner of Building 0, looking southwest.

Southeast Facade

The southeast façade faces an asphalt parking lot. At the western end of the southeast façade is a recessed bay with a single, three-lite casement window behind a metal grate. The southeast façade of the double-height volume features six pilasters which frame five windows **(Figure 16)**. The windows are replacement steel-sash windows, each with a two-lite awning sash at the bottom, a four-lite fixed sash, a second two-lite awning sash, and a fixed two-lite top sash. A molded wood frieze spans above the pilasters. A non-original doorway with a typical door is located between the center pilasters, accessed via wood steps.

Figure 16. Southeast façade of the double-height volume of Building 0, looking northwest.

The southeast façade of the south wing includes a small, one-story addition at the southwest corner **(Figure 17)**. The addition has two sets of paired, four-lite casement windows, and the original volume of the south wing has two typical paired windows with molded lintels. At the east end of the southeast façade is an open porch, covered by a shed roof **(Figure 18)**. The shed roof has wood rafters and sheathing with decorative wood brackets and rafter tails, and is clad with terra cotta tiles. The roof is supported by a pilaster and two columns, which are set on the foundation wall. A wrought-iron railing spans between the columns. The porch is accessed from the east via concrete steps with terra cotta tile treads. The patio is concrete with terra cotta tile edging and diamond patterning. A typical door is located at the west end of the porch and a typical window at the east end. On the northeast-facing wall of the porch is a typical window. Wall-mounted light fixtures are located above the steps and adjacent the porch door.

Figure 17. Southeast façade of the south wing of Building 0, looing northwest. The 1948 addition is at the left.

Figure 18. Steps up to the porch on the southeast façade, looking northwest.

Interior

The interior of Building 0 has been significantly altered since original construction due to fire damage and a conversion from an auditorium to classroom space in 1971. Original flooring has been replaced with carpet and vinyl tiles, the ceiling has been covered in acoustical drop-tiles with fluorescent ceiling light fixtures, and some of the walls have been covered with drywall **(Figure 19)**. The double-height auditorium has been subdivided into three rooms with full-height partition walls **(Figure 20)**. The former stage has been divided into two small rooms, with a narrow hallway running between the former stage and former auditorium **(Figure 21 and Figure 22)**. The kitchen was previously remodeled with new finishes and fixtures, and currently is mostly stripped of all furniture, fixtures, and appliances **(Figure 23)**. Former dressing rooms and bedrooms were converted into offices or small classrooms **(Figure 24)**.

Figure 19. Former auditorium with replaced finishes and partition walls.

Figure 20. Interior partition walls in former auditorium.

Figure 21. Former stage area, divided into smaller rooms and a hallway.

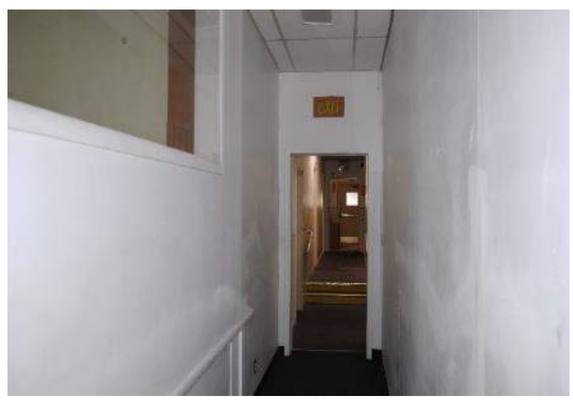


Figure 22. Non-original hallway between the former stage (left) and subdivided former auditorium (right), looking southeast.

Figure 23. Former kitchen with altered finishes and stripped furniture and appliances.

Figure 24. Former office space in the 1948 addition to the south wing.

BUILDING 1 (MARY A. CROCKER COTTAGE)

Construction Date: 1929-1930
Architect: Reed & Corlett
Builder: F.C. Stolte

Building 1, originally known as Mary A. Crocker Cottage, was constructed as a boys' dormitory building **(Figure 25)**. Built in 1929 by architect Reed & Corlett, the building was one of the two first purpose-built buildings on the site. Building 1 is a two-story, Spanish Colonial Revival style, wood frame building with a basement and concrete foundation. The building features textured stucco siding and a side-gable roof with terra cotta tile roofing. The roof has overhanging eaves with decorative wood brackets on the primary and rear façades. The building has two interior chimneys, one is stucco clad with a gable tile roof, and the other has an elaborated top with brick columns, a cornice and pyramid roof. Decorative leader heads are connected to internal wall downspouts. Circular tile vents are located along the basement level of the building. Typical windows are non-original aluminum-sash sliding windows. All windows are aluminum sash set in a wood frame unless otherwise specified. Most windows are recessed within the wall, typically with a simple projecting sill. Diagonal patterned wood and plaster grilles are flush with the exterior wall and painted to match the stucco cladding; the screens have thick wood divided and are located in front of recessed windows.

Figure 25. Partial view of Building 1, looking southeast.

Primary (Southwest) Façade

The primary (southwest) façade of Building 1 faces the rear of Building 0. The primary entrance, a non-original wood slab door with one lite, is located at center of the façade within a slightly recessed archway framed by pilasters with simple molded capitals **(Figure 26)**.[3] Adjacent the primary entrance is a metal plaque that reads "Mary A Crocker Cottage 1929." Two additional archways flank the entry, each with a typical window. The primary entrance is accessed via concrete steps with terra cotta tile treads which lead to an open porch. The concrete porch has terra cotta tile edging and decorative diamond patterning, and is surrounded by a low stucco-clad wall with terra cotta tile coping. Low stucco-clad walls with terra cotta coping and wrought-iron railings flank the steps. Decorative Spanish tile vents are located at the porch walls. North (left) of the primary entrance, at the first story, are two sets of tripartite windows with fixed windows flanking central jalousie (louver) windows, and a typical window. The windows tripartite are spanned by a carved wood lintel beam, with wood and stucco-clad corbeling above **(Figure 27)**. South (right) of the primary entrance, at the first story, is a typical window and two tripartite windows with fixed windows flanking central jalousie (louver) windows Each tripartite window is recessed between pilasters with simple molded capitals **(Figure 28)**. Three three-lite windows are located at the exposed basement level **(Figure 29)**.

Figure 26. Primary entrance to Building 1, looking southeast.

Figure 27. First story windows at the north end of the primary façade, featuring a carved wood lintel and corbeling.

Figure 28. First story windows at the south end of the primary façade, recessed between pilasters.

Figure 29. Three-lite windows at the basement level of the primary façade.

[3] Original versus non-original features and openings have been identified in comparison with historic architectural drawings on file at the Oakland Building Department; copies of the historic drawings of Buildings 0, 1 and 2 are included in Appendix D of this report.

At the north end of the second story are two typical recessed windows set between pilasters **(Figure 30)**. To the south is a small typical window; a typical decorative wood and plaster grille, flush with the exterior wall and painted to match the stucco siding; and a typical window **(Figure 31)**. Directly above the primary entrance is a recessed doorway opening with a non-original window with a fixed and jalousie sash, and window air-conditioning unit. A balconette is located at the central opening at the second story, with a wood plank base, metal railings, a zigzag metal edge pattern, and is supported by curved metal brackets below and hung by metal rods and brackets from above **(Figure 32)**. South of the central opening and balconette is a typical window and a typical decorative wood and plaster grille. At the southernmost end of the second story are two typical, recessed windows. Each window has stucco-clad eyebrow opening and a sill with terra cotta coping and a decorative metal railing **(Figure 33)**.

Figure 30. Northernmost windows at the second story, set between pilasters.

Figure 31. Typical small window, typical wood and plaster grille, and a typical window at the second story.

Figure 32. Central balconette at a door opening with non-original windows, above the primary entrance.

Figure 33. Typical windows with eyebrow openings and sills with terra cotta coping and metal railings.

Southeast Façade

The southeast façade faces a paved half basketball court and Building 2 **(Figure 34)**. Concrete steps parallel with the west end of the façade lead down to the basement, surrounded by a metal railing at the ground level. At the basement level is a wood slab door and a fixed three-lite window covered by a grate **(Figure 35)**. At the west end of the first story are paired typical windows set in a wood frame with a carved wood lintel, separated by a turned wood column. At the east half of the first story are two sliding windows with narrow vertical sashes. A wood fire escape staircase is located at the east end of the façade, leading to a central doorway at the second story. The door is a partially glazed wood panel door with a metal awning above **(Figure 36)**. Metal security fencing is located at the second story level of the fire escape stairs. Typical windows flank the doorway at the second story. A terra cotta tile vent is located near the peak of the gable end, and the façade terminates with no eaves.

Figure 34. Southeast façade of Building 1, looking northwest.

Figure 35. Stairs to basement level of Building 1, looking southwest.

Figure 36. Doorway at second story with metal awning above, looking southwest.

Northeast Façade

The northeast façade faces a paved play area and Building 5 **(Figure 37)**. At the center of the northeast façade is an original arched, wood panel door set in a recessed arched doorway; the door has circular glazed opening with four divided lites **(Figure 38)**. The curved, stucco-clad supports of a balconette frame the first-story doorway. The balconette has a metal railing and original, paired, partially glazed wood panel doors separated by a central craved wood column. The balconette doorway is located at the landing level of the interior staircase. A recessed, pointed horse-shoe arch is located above the doorway. On either side of the balconette are typical wood and plaster grilles, behind which are the only two remaining original, double-hung wood-sash windows. A non-original wood deck and ramp, which runs parallel along the façade, provides access to a wood slab door, recessed between pilasters with a carved, stucco-clad lintel at the north end of the first story **(Figure**

39). North (right) of the slab door are two typical windows recessed between pilasters with carved, stucco-clad lintels, and a typical window with a metal security grate. North (right) of the central arched door is a typical window; paired typical windows with a carved wood lintel and central turned wood column; and a typical window with a security grate **(Figure 40)**.

Figure 37. Northeast façade of Building 2, looking west.

Figure 38. Central arched door at first story, and balconette and pointed horseshoe arch above the paired doors above, looking west.

Figure 39. Wood slab door set between pilasters at the south end of the first story, looking west.

Figure 40. Paired typical windows with a carved wood lintel and central turned wood column at the north end of the northeast façade at the first story.

At the second story of the northeast façade, from south (left) to north (right), is a typical window with original wood shutters; two typical windows set between pilasters; a typical window; two typical windows set between pilasters; and a typical window with original wood shutters **(Figure 41 and Figure 42)**.

Figure 41. Typical window with original wood shutters at the south end of the northeast façade at the second story.

Figure 42. Typical window at the north end of the northeast façade at the second story.

Northwest Facade

The northwest façade faces Lincoln Avenue **(Figure 43)**. At the east end of the first story is a wood slab door in a non-original opening, accessed by wood steps with a wood railing. Flanking the doorway are typical windows. At the west end of the northwest façade first story, is a recessed tripartite window with fixed windows flanking a central jalousie window; a carved wood lintel and wood and stucco-clad corbels are located above the window. A non-original wood fire escape staircase runs up the east end of the building to a doorway at the second story. The second story door is a fully glazed wood door with divided lites, covered by a metal awning. Flanking the door are typical windows with original wood shutters. A terra cotta tile vent is located near the peak of the gable end, and the façade terminates with no eaves.

Figure 43. Northwest façade of Building 2, facing south.

Interior

The interior of Building 1 has been remodeled several times, resulting in the removal and replacement of many of the original finishes and reconfiguration of several rooms to convert the building from dormitory use to administrative and classroom use **(Figure 44 and Figure 45)**. The central reception area accessed via the primary entrance, leads to a double-loaded corridor along the north-south axis of the building. The interior typically features non-original carpeting, drop-ceiling acoustical tiles, fluorescent light fixtures, and non-original wood slab doors. The remaining original interior features include wood ceiling beams in one of the first story rooms, several corridor transom windows, the wood balustrade at the interior stair case, the brick chimney flue (although there are no fireplaces), radiator covers, and some bathroom fixtures **(Figure 46-Figure 49)**. The second story is also organized around a double-loaded corridor, accessed via the central interior staircase.

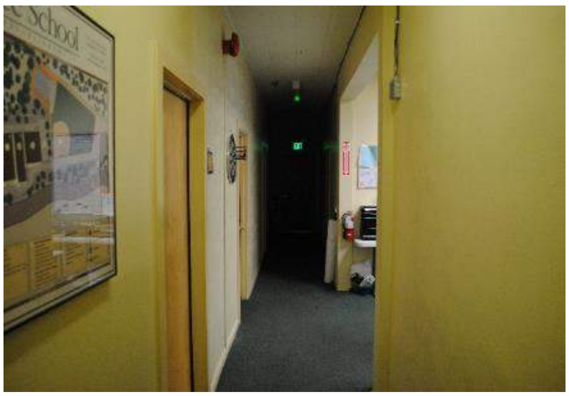


Figure 44. Double-loaded corridor at the first story of Building 1.

Figure 45. Reconfigured interior partition walls for rooms that are currently used by Head-Royce maintenance staff.

Figure 46. Remaining wood beams in the ceiling of one room on the first floor.

Figure 47. Wood balustrade at the interior staircase.

Figure 48. Brick chimney flue at the second story.

Figure 49. Radiator vent in a typical second story room.

BUILDING 2 (GRACE L. TREVOR COTTAGE)

Construction Date: 1929-1930
Architect: Reed & Corlett
Builder: F.C. Stolte

Building 2, originally known as Grace L. Trevor Cottage, was constructed as a girls' dormitory building. Built in 1929 and designed by architectural firm Reed & Corlett, the building was one of the first two purpose-built buildings on the site. Building 2 is a two-story, Spanish Colonial Revival style, wood frame building with a basement and concrete foundation. The rectangle-plan building features textured stucco siding and a side-gable roof with terra cotta tile roofing. The roof has overhanging eaves with decorative wood brackets on the primary and rear façades. Decorative leader heads are connected to internal wall downspouts. Circular tile vents are located along the basement level of the building. Typical windows are non-original aluminum-sash paired casement windows. All windows are aluminum-sash set in a wood frame unless otherwise specified. Most windows are recessed within the wall, typically with a simple projecting sill. Diagonal patterned wood and plaster grilles are flush with the exterior wall and painted to match the stucco cladding; the screens have thick wood divided and are located in front of recessed windows.[4]

Primary (Southwest) Façade

The primary (southwest) façade of Building 2 faces the lower parking lot **(Figure 50)**. The primary entrance, a non-original wood slab door, is located at the center of the façade, recessed within a projecting frame. **(Figure 51)**. At the projecting frame is a metal plaque reading "Grace L Trevor Cottage 1929" and an original wall-mounted light fixture. Above the primary entrance is a balconette with a metal railing and typical recessed window with a cement asbestos spandrel. The primary entrance is accessed via concrete steps with terra cotta tile treads which lead to an open porch. Low stucco-clad walls with terra cotta coping and simple metal railings flank the steps. North (left) of the primary entrance, at the first story, are two typical windows set between pilasters; and two typical windows with cement asbestos spandrels **(Figure 52)**. South (right) of the primary entrance, at the first story, are two typical windows with cement asbestos spandrels; and two recessed, arched windows with tripartite wood frames and non-original aluminums-sash fixed and casement windows **(Figure 53 and Figure 54)**.

[4] Original versus non-original features and openings have been identified in comparison with historic architectural drawings on file at the Oakland Building Department; copies of the historic drawings of Buildings 0, 1 and 2 are included in Appendix D of this report.

Figure 50. Primary façade of Building 2, looking northeast.

Figure 51. Primary entrance to Building 2, looking north.

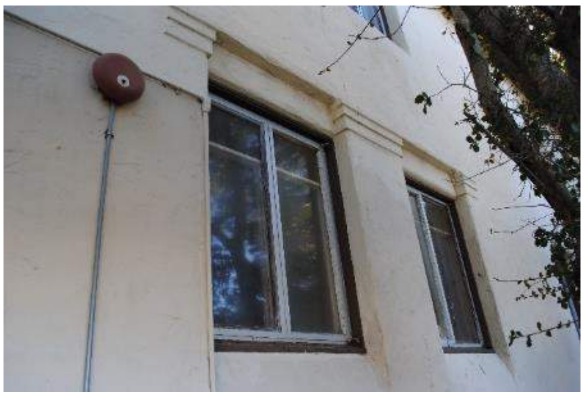


Figure 52. Typical windows set between pilasters at the north end of the primary façade of Building 2.

Figure 53. Typical windows with cement asbestos spandrels.

Figure 54. One of two arched windows at the south end of the primary façade of Building 2.

At the north end of the second story of the primary façade, from north (left) to south (right) are paired typical windows with a carved wood lintel and central turned wood column; a gridded wood and plaster grille; and a typical window **(Figure 55)**. At the south end of the second story, from north (left) to south (right), are paired typical windows with a carved wood lintel and central turned wood column; a typical wood and plaster grille; and two typical windows **(Figure 56)**.

Figure 55. Gridded wood and plaster grille and typical window at the north end of the primary façade at the second story.

Figure 56. Paired typical windows with carved wood lintel and central turned wood column, and a typical wood and plaster grille at the south end of the primary façade at the second story.

Southeast Façade

The southeast façade faces concrete play area **(Figure 57)**. At the first story of the southeast façade, from west (left) to east (right), are fixed one-lite windows flanking paired wood slab doors with one lite, and a typical window. All of the openings at the first story are non-original. At the second story are three typical windows. The center window at the second story is at the location of a former doorway which original led out to a fire escape. A terra cotta tile vent is located near the peak of the gable end, and the façade terminates with no eaves.

Figure 57. Southeast façade of Building 2, looking northwest.

Northeast Façade

The northeast façade faces an uphill slope, a paved play area and grass field **(Figure 58)**. At the north end of the northeast façade is a non-original projecting bay between the first and second floors which houses the landing of an internal stair case **(Figure 59)**. The projecting bay addition has a shed roof with terra cotta clay tile roofing, and is supported by wood posts at the first story level. A fixed, nine-lite aluminum-sash window is located on the projecting bay addition, as is an original metal balconette which was moved from its original location above the central doorway on the northeast façade (which was infilled).

At the first story of the northeast façade is a non-original doorway with a wood slab door with one lite accessed via concrete steps with metal railings. From south (left) to north (right), the first story features a small casement window in a non-original opening; a typical window in a non-original opening; a typical wood and plaster grille; a typical window in a non-original opening; a typical window; a recessed wood slab door in a non-original opening; and a wood slab door with one lite accessed via concrete steps with metal railings **(Figure 60)**. At the south end of the northeast façade is a set of concrete steps supported on metal beams with concrete railings; the steps run along the façade to a non-original opening with a recessed wood slab door with one lite **(Figure 61)**. South of the door is a steel-sash sliding window in a non-original opening. North of the concrete steps at the second story, from south (left) to north (right), is a steel-sash sliding window in a non-original opening; a paired steel-sash casement window in a non-original opening; a typical window in a non-original opening; and two typical windows.

Figure 58. South end of the northeast façade, looking west toward the non-original concrete exterior stairs.

Figure 59. North end of the northeast façade, looking west toward the non-original projecting bay.

Figure 60. Doorway at the north end of the first story northeast façade.

Figure 61. Non-original concrete staircase leading to the second story of the northeast façade.

Northwest Façade

The northwest façade faces a half basketball court and Building 1 **(Figure 62)**. At the basement level is horizontal window covered by a metal grate and a small wood mechanical door **(Figure 63)**. A stairwell and full-height door were originally at the location of the mechanical door. At the first story of the northwest façade, from east (left) to west (right), are two hung aluminum-sash windows with metal grates; and paired typical windows with carved wood lintel and central turned column. The hung windows are in non-original openings. At the second story are three typical windows. The center window at the second story is at the location of a former doorway which original lead out to a fire escape. A terra cotta tile vent is located near the peak of the gable end, and the façade terminates with no eaves.

Figure 62. Northwest façade of Building 2, looking southeast.

Figure 63. Basement level of the northwest façade, looking southeast.

Interior

The interior of Building 2 has been remodeled to convert the building from a dormitory to classrooms, resulting in the removal and replacement of many of the original finishes and significant reconfiguration the rooms and circulation **(Figure 64 and Figure 65)**. The central double-loaded corridor was shifted off-center to accommodate larger classrooms along the southwest side of the building. The original central interior staircase was demolished and a new staircase toward the northeast end of the building was constructed, which has a landing housed in a new projecting bay on the northeast façade **(Figure 66 and Figure 67)**. The interior typically features non-original carpeting, drop-ceiling acoustical tiles, fluorescent light fixtures, and non-original wood slab doors.

Figure 64. Shifted double-loaded corridor at the second story.

Figure 65. Larger classroom space along the southwest side of the building, accommodated by the shifted corridor.

Figure 66. Shifted double-loaded corridor and new staircase at the first story.

Figure 67. Non-original landing at the moved staircase.

BUILDING 3

Construction Date: Installed 1990
Architect: None (Prefabricated)

Building 3, a two-classroom prefabricated portable, was installed in 1990 **(Figure 68)**. Since the building is less than 45 years old, an architectural description is beyond the scope of this report.

Figure 68. Building 3, looking southwest.

BUILDING 4 (EXECUTIVE/LINNET/ETHEL MOORE COTTAGE)

Construction Date: circa 1938-1946
Architect: Unknown

Building 4, which has been known by a variety of names including Executive Cottage, Linnet Cottage, and Ethel Moore Cottage, was constructed at an unknown date between 1938 and 1946 to house the director of Lincoln Child Center. No builder or architect has been identified for the cottage. Building 4 is located near the southwest edge of the property, at the end of a driveway that extends from Linnet Avenue, east of Building 3 and northeast of Building 10. As originally constructed, the building had an irregular-shaped plan, and a projecting wing was constructed on the southeast façade in 1954, and an irregular-shaped addition was constructed in 1971. The one-story, wood frame building is vernacular in style and is set on a post and pier foundation. The original portion of the building has a cross-gabled roof clad in asphalt shingles and stucco siding. The addition is clad in vertical wood siding, and is capped by a flat roof covered with rolled asphalt. Building 4 has an exterior brick chimney and an internal stucco-clad chimney.

Southwest Façade

The building has several entrances. The primary entrance is located on the southwest façade of the projecting southeast addition **(Figure 69)**. The southeast addition has a gable roof and no eaves at the southwest façade. The primary entrance has a wood slab door and metal security gate, accessed via brick stairs with a metal railing, running parallel to the projecting wing. A tripartite fixed window with a wood frame is located adjacent the door **(Figure 70)**. A horizontal wood bracing has been installed at the center of the two westernmost window and the easternmost window has been replaced with a two-part aluminum sash window.

Figure 69. Southwest façade of the 1954 projecting southeast addition which includes the primary entrance, looking northeast.

Figure 70. Primary entrance door and tripartite window on the southwest façade of Building 4, looking north.

The original volume of the building has no eaves, except at the southeast corner of the volume where the shallow eaves of the southeast-facing cross-gabled roof overhang and have exposed rafter tails **(Figure 71 and Figure 72)**. Decorative tile vents are located at the peak of the gable end. A secondary wood slab door with a metal security gate is located at the west end of the original volume, accessed by a set of steps and low stucco-clad wall parallel to the residence. A one-over-one double-hung wood window with ogee lugs is located at approximately the center of the southwest façade of the original volume.

Figure 71. Southwest façade of the original volume of Building 4, looking northeast.

Figure 72. Overhanging eave with exposed rafters and rafter tails at the southeast corner of the original volume, looking north.

West of the main volume is a recessed bay with a double-hung wood window with ogee lugs **(Figure 73)**. The flat-roofed 1971 addition located at the north corner of the building is recessed from the southwest façade of the original volume of the building. A recessed portion of the addition includes a wood slab door and a mechanical door with vertical wood siding to match the wall cladding **(Figure 74)**.

Figure 73. Recessed bay on the southwest façade of Building 4, looking northeast.

Figure 74. Southwest façade of the 1971 addition, looking north.

Southeast Facade

The southeast façade includes a projecting gable-roofed 1954 addition with an exterior brick chimney **(Figure 75)**. The original volume of the southeast façade, south of the addition, features a bay window with a hipped roof and decorative rafter tails **(Figure 76)**. Fixed and sliding aluminum-sash windows have been installed in the original wood-frame openings of the bay window. A decorative tile vent is located on the original volume of the southeast façade. The north end of the southeast façade has exposed rafters and rafter tails and a non-original aluminum-sash hung window **(Figure 77)**.

Figure 75. Southeast façade of Building 4, looking northwest.

Figure 76. Bay window on southeast façade, looking northwest.

Figure 77. North end of the southeast facade, looking west.

Northeast Facade

The northeast façade faces an uphill slope. At the east end of the façade is the 1954 addition which has no eaves **(Figure 78)**. An aluminum-sash hung window, two three-lite fixed wood windows, and a wood slab door are located on the northeast façade of the 1954 addition. The door on the northeast façade accesses a wood deck. A non-original aluminum-sash hung window is located on the original volume of the building, and an original wood-sash double-hung window with ogee lugs is located on the recessed portion of the original volume **(Figure 79)**.

Figure 78. Northeast façade of the 1954 addition, looking southwest.

Figure 79. Northeast façade of the original volume of Building 4, looking southwest.

The flat-roofed 1971 addition includes an aluminum-sash sliding window and a wood slab door **(Figure 80 and Figure 81)**.

Figure 80. Flat-roofed 1971 addition to Building 4, looking west.

Figure 81. Wood slab door at the northeast façade of the 1971 addition, looking southwest.

Northwest Facade

The northwest façade of the 1971 addition to Building 4 has three evenly spaced aluminum-sash sliding windows **(Figure 82)**. The original volume of the building is recessed from the 1971 addition and includes shallow eaves with exposed rafter tails **(Figure 83)**. A non-original fixed aluminum-frame window is located at the original volume of the building, and an aluminum-sash fixed window with a window mechanical unit is located within an original wood-frame opening.

Figure 82. Northwest façade of the 1971 addition to Building 4, looking east.

Figure 83. Partial view of northwest façade of original volume of Building 4, looking southeast.

Interior

Building 4 has a one-room addition at the southeast side and a four-bedroom addition at the north end. The original volume of the Building 4 residence contains the original entry, kitchen, family room, two bathrooms and a bedroom that was used as the counselor's bedroom when the building was converted to a boys group home in 1971 **(Figure 84 and Figure 85)**. Most of the original interior finishes were removed during the 1971 remodel. A living room addition wing with an exposed wood truss roof and exterior brick chimney was constructed in 1954 **(Figure 86)**. Hardwood flooring in the 1954 addition remains **(Figure 87)**. The 1971 addition was constructed to add four bedrooms for the boys group home **(Figure 88 and Figure 89)**.

Figure 84. Bay window at the original entry of Building 4, with non-original tile flooring.

Figure 85. Kitchen in the original portion of the building, remodeled with new finishes in 1971.

Figure 86. Exposed roof truss of the 1954 addition.

Figure 87. Living room in the 1954 addition with hardwood flooring and wood wall paneling.

Figure 88. One of four typical boys' bedrooms in the 1971 addition.

Figure 89. Hallway in the 1971 addition.

BUILDING 5 (MAINTENANCE BUILDING)

Construction Date: 1967
Architect: Robert Goetz Associates

Building 5 is a maintenance garage building designed by Robert Goetz Associates and constructed in 1967. The one-story wood frame building is 36-feet by 40-feet, set on a concrete slab foundation, and is located at the northwest perimeter of the campus with a driveway off of Lincoln Avenue, just northeast of Building 1. Building 5 is a vernacular, utilitarian building which was designed with several modest Spanish Colonial Revival style elements including stucco cladding and Spanish clay tile roofing (which has since been replaced). Building 5 has a gable roof with overhanging eaves and exposed rafters on the primary (northwest) and southeast façades. The roof is clad in rolled asphalt and a metal gutter system hides the exposed rafter tails. The building is clad in a highly textured stucco.

Primary (Northwest) Facade

The primary (northwest) façade faces a concrete driveway accessed from Lincoln Avenue and has two garage openings with horizontal wood rollup doors **(Figure 90)**. A lean-to addition with vertical wood siding and a shed roof clad in asphalt shingles is located at the north end of the primary façade. The majority of the primary façade is enclosed by a chain-link fence **(Figure 91)**.

Figure 90. Partial view of the primary (northwest) façade of Building 5, looking southeast.

Figure 91. Chain-link fence enclosing most of the primary façade of Building 5, looking east.

Southwest Facade

The southwest façade has a simple wood fascia and no eaves **(Figure 92)**. At roughly the center of the façade is a non-original wood slab door. At the south end of the façade are two non-original aluminum sliding windows flanking the original wood slab door with one lite.

Southeast Facade

The southeast façade faces a concrete play area that is at a higher grade than ground-level at the primary and southwest facades **(Figure 93)**. Plywood covers the length of the façade and has been painted with various graffiti. A skylight is located near the top of the southeast-facing roof slope. A metal safety fence is located at the roofline along the southeast façade.

Figure 92. Southwest façade of Building 5, looking southeast.

Figure 93. Southeast façade of Building 5, looking northwest.

Northeast Facade

The northeast façade faces an uphill, sloping grade **(Figure 94)**. Wood fencing has been installed along the majority of the façade, hiding the gable end of the roof and covering part of the stucco-clad façade **(Figure 95)**. The northeast façade features one original aluminum-sash sliding window and one original window opening which is currently boarded up with plywood.

Figure 94. Partial view of northeast façade of Building 5, looking northwest.

Figure 95. Wood fencing along northeast façade of Building 5, and boarded up window, looking southwest.

BUILDING 6 (BUSHELL COTTAGE)

Construction Date: 1958
Architect: Gerald M. McCue & Associates

Building 6 (Bushell Cottage) was designed by Gerald M. McCue and constructed in 1958 to serve as residential dormitory for boys and girls. Building 6 is physically and functionally connected to Building 7 to the east, also built in 1958 by McCue. Building 6 is located east of Buildings 1 and 2, at the north end of the campus, roughly perpendicular to Lincoln Avenue. The wood frame building is one story in height, set on a concrete perimeter foundation, and capped by a low-pitch gable roof. The building, roughly 300 feet long and 30 feet wide, has an irregular plan. A north and south wing form an asymmetrical, obtuse-angled V-shape (or boomerang) with a central notch at the primary entrance. The roof has wide, overhanging eaves with exposed rafters. Designed in a Midcentury Modern style, the building features simple materials including wood board and batten and cement asbestos siding; plain wood fascia; tar and gravel roofing; and cement asbestos sheathing at the eaves. Typical windows are vertically oriented aluminum-sash sliding windows set in wood frames. Typical doors are wood slab doors with one vertical lite. Due to the sloped topography, the main volume of the building cantilevers over the concrete perimeter foundation which is exposed above the ground level on the primary (west) façade. Rectangular and circular skylights are located along the ridge of the roof.

Primary (West) Facade

The primary (west) façade is the interior of the building's angled footprint, and faces toward the playground and Buildings 1, 2 and 5 **(Figure 96)**. The primary façade is asymmetrical with the primary entrance located in a recessed notch of the building, north of center, at the crook of the angled building footprint. A stepped concrete path with wide pavers leads uphill to a set of concrete steps and cantilevered concrete landing surrounded by a metal railing **(Figure 97)**. The irregular-shaped concrete entry patio is uncovered and features a typical door at the primary entrance with fixed transom windows above **(Figure 98)**. A non-original mechanical closet is located beneath the overhanging eaves to the south of the primary entrance door.

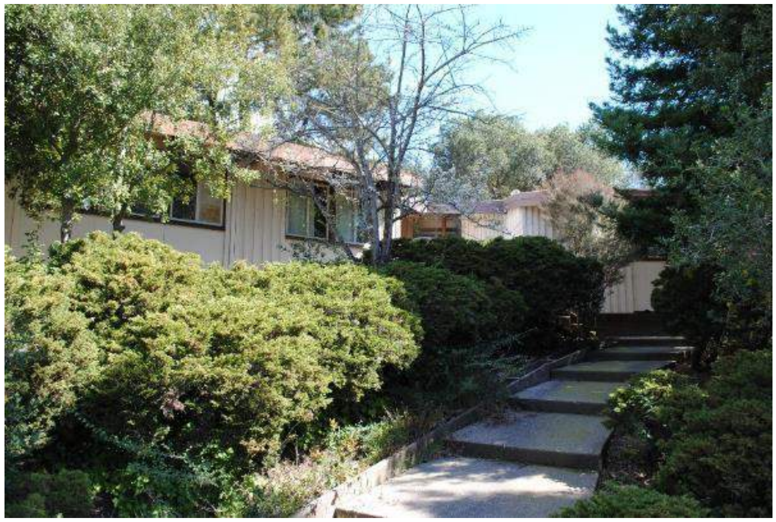


Figure 96. Partial view of the primary façade of Building 6, looking east toward the primary entrance.

Figure 97. Floating concrete steps and cantilevered concrete entry patio at the primary façade of Building 6, looking east.

Figure 98. Primary entrance and transom windows, looking east.

The corners of the roof at the notched entry patio are chamfered with a typical wood fascia. The primary façade of the north wing features typical windows and siding **(Figure 99)**. Board and batten siding is located between the windows, and cement asbestos panels are located above and below the windows **(Figure 100)**. From north (left) to south (right), the north wing features two sets of paired typical windows; a small fixed clerestory window; two typical windows flanking a central fixed window; and paired typical windows.

Figure 99. Primary façade of the north wing of Building 6, looking north. The chamfered corner of the roof is visible.

Figure 100. Paired typical windows at the north end of Building 6 with typical board and batten and cement asbestos siding, looking north.

The primary façade of the south wing also features typical windows and siding **(Figure 99)**. From north (left) to south (right), the north wing features two typical windows flanking a central fixed window; three sets of paired typical windows; a secondary entrance door; and four sets of paired typical windows. The secondary entrance door is a wood flush door accessed via floating concrete stairs to a cantilevered concrete landing with a metal railing.

Figure 101. Primary façade of the south wing of Building 6, looking south.

Figure 102. Concrete steps and landing at the secondary entrance door on at the primary façade of the south wing, looking east.

South Facade

The south façade of Building 6 faces a baseball field. Concrete steps lead to a concrete patio along the east portion of the south façade. The south façade features typical wood board and batten siding and a single typical door, located just east of center **(Figure 103)**. A transom window above the door is angled at the top, following the angle of the gable roof.

Figure 103. South façade of Building 6, looking north.

East Facade

The east façade of Building 6 faces toward an uphill slope and Building 7. The east façade is asymmetrical with the north and south wings separated by the enclosed staircase leading uphill to Building 7. The south end of the south wing has typical wood board and batten siding, two clerestory windows and paired typical windows **(Figure 104)**. The east façade of the south wing features a projecting bay with an accordion wall, which is covered by the overhanging eaves of the primary roof form.

Figure 104. East façade of the south wing of Building 6, looking northwest.

A shed roof clerestory with aluminum-frame windows is located above the accordion wall bay **(Figure 105)**. The accordion wall is clad in cement asbestos boards and has ten bays. The southernmost two bays feature four aluminum-sash sliding windows **(Figure 106)**. The following eight bays alternate having no windows and small, paired horizontal sliding windows. The small horizontal windows have plexiglass with circular holes in one sash **(Figure 107)**. The walls of the enclosed stairway between Buildings 6 and 7 are clad in typical wood board and batten siding **(Figure 108 and Figure 109)**. The east façade of the north wing features typical board and batten siding with cement asbestos paneling beneath typical windows. From south (left) to north (right) along the east façade of the north wing is a wood slab door, paired typical windows, mechanical door with vents, clerestory window, and three evenly spaced typical windows **(Figure 110)**.

Figure 105. Shed-roofed clerestory windows at the east side of the south wing of Building 6, looking northwest.

Figure 106. Accordion wall along east façade of south wing, looking northwest.

Figure 107. Narrow sliding windows on accordion wall of the south wing, looking northwest.

Figure 108. South-facing wall of the enclosed stairway leading from Building 6 (left) to Building 7 (right), looking north.

Figure 109. North-facing wall of the enclosed stairway leading from Building 6 (right) to Building 7 (left), looking south.

Figure 110. East façade of the north wing of Building 6, looking southwest.

North Facade

The north façade of Building 6 faces a yard and Lincoln Avenue. The north façade features typical wood board and batten siding and a single typical door, located just east of center **(Figure 111)**. A transom window above the door is angled at the top, following the angle of the gable roof. The door opens on to a small concrete patio accessed by a narrow path.

Figure 111. North façade of Building 6, looking southwest.

Interior

The rafters of the roof are exposed throughout the interior of Building 6, with cement asbestos roof sheathing also exposed. The primary entrance of Building 6 opens into a mud room with tile flooring. Double-loaded corridors lead from the mud room to the north and south wings **(Figure 112)**. The north wing has four boys' bedrooms, a bathroom, staff room, storage room, visitor room, office and a multi-purpose room **(Figure 113)**. The south wing has a laundry room, two staff rooms, two multi-purpose rooms, three boys' bedrooms, four girls' bedrooms, and two bathrooms. A hallway along the east side of the south wing enclosed by the accordion wall provides access to the girls' portion of the south wing without going past the boys' rooms **(Figure 114 and Figure 115)**. An enclosed staircase leads up to Building 7 **(Figure 116)**.

Figure 112. Double-loaded hallway of the north wing, looking north.

Figure 113. Typical bedroom with exposed ceiling rafters.

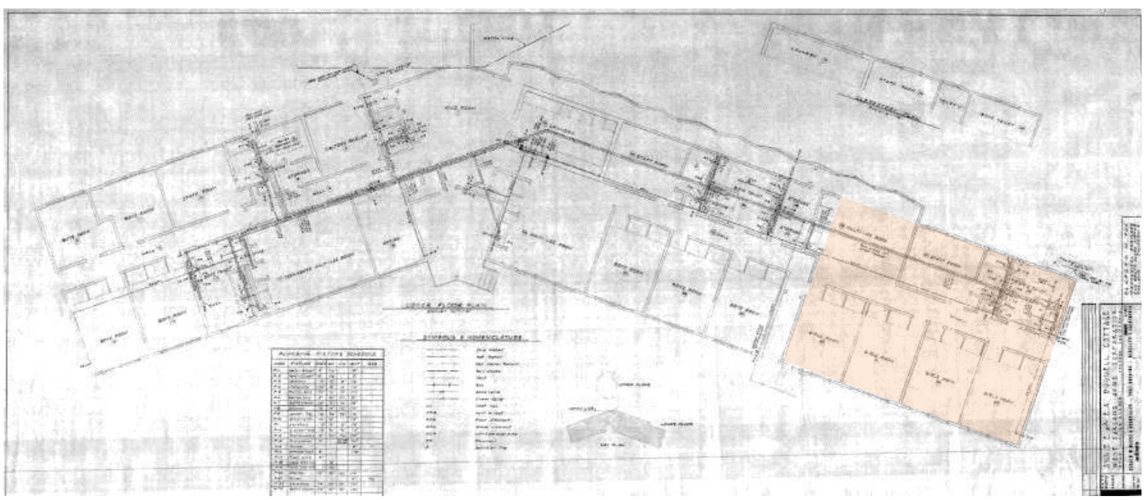


Figure 114. Floor plan of Building 6. Girls' portion of the south wing is shaded in orange. Source: Lower Floor Plan, "Annie E. and E. A. Bushell Cottage, West Oakland Home Corporation," Gerald M. McCue & Associates, Sheet M2, dated October 28, 1957.

Figure 115. Multi-use room in the south wing, looking east toward the accordion wall. The accordion wall hallway accesses the girls' wing.

Figure 116. Enclosed stairs leading up to Building 7.

BUILDING 7 (BUSHELL KITCHEN & DINING HALL)

Construction Date: 1958
Architect: Gerald M. McCue & Associates

Building 7 (Bushell Kitchen & Dining Hall) was designed by Gerald M. McCue and constructed in 1958 to serve as the kitchen and dining hall for Building 6. Building 7 is physically and functionally connected to Building 6 to the west, also built in 1958 by McCue. Building 7 is located south of Building 11, east of Building 6, and accessed via a driveway (formerly known as Perkins Street) off of Lincoln Avenue. Building 7 is an octagonal, wood frame building with wood board and batten siding and asphalt shingle roofing, set on a concrete slab foundation. At the peak of the pyramidal roof is an octagonal aluminum-frame skylight. The roof has shallow eaves and a metal gutter system around the perimeter of the roof. A variety of large vents and mechanical systems are located on the roof, particularly on the north-facing slopes. Typical windows are aluminum-sash single-hung windows with smaller lower lites. Typical exterior doors are hollow metal slab doors with one rectangular lite of various sizes. The primary exterior entrance to Building 7 is located on the south-east facing wall, and features a typical door flanked by typical windows **(Figure 117)**. The primary entrance is accessed via a circular rough-aggregate concrete patio with square pavers with wood dividers.

Figure 117. Building 7, facing northwest toward main exterior entrance.

Moving clockwise around the exterior of Building 7, the second wall features four evenly spaced typical windows **(Figure 118)**. The third wall is taken up by the enclosed staircase connecting to Building 6 **(Figure 119)**. The fourth wall has a typical door flanked by two sets of paired, horizontal aluminum-sash windows **(Figure 120)**. The fifth, northwest-facing wall, is largely obscured by a cubic, walk-in refrigerator addition **(Figure 121)**. The sixth wall has an aluminum-sash sliding window covered by a metal security grate, and an exterior "can wash" sink enclosed by a concrete masonry unit and wood board walls on three sides, with a shed roof clad in asphalt shingles **(Figure 122 and Figure 123)**. Non-original metal security fencing is located around the roof of the can wash. The seventh wall has one aluminum-sash sliding window with a metal security gate **(Figure 124)**. The eighth wall has three typical windows and a typical door **(Figure 125)**.

Figure 118. The second wall, clockwise from the first wall with the primary entrance, looking north.

Figure 119. Enclosed staircase connected to Building 6 (left) and the third wall of Building 7 (right), looking northwest.

Figure 120. Fourth wall of Building 7, looking east.

Figure 121. Fifth wall of Building 7, mostly taken up by a walk-in refrigerator addition, looking south.

Figure 122. Sixth wall of Building 7, including the exterior can wash sink covered by a shed roof, looking south.

Figure 123. Exterior can wash sink, enclosed by three walls and a shed roof, looking east.

Figure 124. Seventh wall of Building 7, looking southwest.

Figure 125. Eighth wall of Building 7, looking northwest.

The primary, second and eighth wall of Building 7 are non-original, constructed during a 2000 alteration to Building 7 which enclosed the formerly open, covered patio.

Interior

The interior of Building 7 has an open central area with brick flooring and board and batten interior walls **(Figure 126)**. The wood frame of the roof is exposed, and wood posts are located within the main open dining area. Around the north and west perimeter are storage, bathrooms and offices, as well as the kitchen. The kitchen has vinyl flooring, commercial stainless steel kitchen appliances and a walk-in refrigerator **(Figure 127)**. A large pass-through window is located between the open dining area and kitchen.

Figure 126. Open dining area with the central skylight and exposed roof framing, looking north toward the kitchen.

Figure 127. Kitchen area of Building 7.

BUILDING 8 (EBAC/CHARLESTON HOUSE/HOLMGREN)

Construction Date: 1957
Architect: Robert Ratcliff

Building 8 was constructed in 1957 for the East Bay Activities Center (EBAC, now known as East Bay Agency for Children), which leased a portion of the subject property from Lincoln Child Center. The building was designed by architect Robert Ratcliff in a modest Midcentury Modern style, featuring wood board and batten siding, a rectangular plan, and a covered patio. Building 8 is located at the northeastern corner of the subject property, at the end of Charleston Street. North of Building 8 is a gravel parking lot. West of Building 8 is an asphalt parking lot constructed in 2000, at the same time as Building 9, which is southwest of Building 8. The one-story building sits on a concrete slab foundation and has a low-pitch gable roof clad in rolled asphalt with overhanging eaves, exposed rafters and a simple wood fascia. The building has several additions, but is still generally rectangular in plan. Building 8 is clad in non-original, highly-textured stucco cladding. Typical windows are rectangular two-lite wood windows with a larger, fixed upper lite, and a smaller, horizontal awning-sash lower lite. Typical doors are non-original wood slab doors with one narrow vertical lite; original doors were slab doors with no lites. Two skylights are located near the ridge of the roof on the northeast-facing slope. Building 8 is located within an approximately 0.53 square acre area that is surrounded by a perimeter fence (chain-link except the concrete wall along Charleston Street). Originally the fenced-in area was a school yard, but has since been altered to include concrete walkways, a concrete paver patio, smaller grass lawns, and an asphalt basketball court **(Figure 128 and Figure 129)**. When occupied by EBAC, the building was approached primarily from Charleston Street with the northeast façade acting as the primary entrance. After EBAC moved out in 1979, Lincoln Child Center began to use the southwest façade as the primary entrance.

Figure 128. Concrete walkway and lawn within the fenced area around Building 8, looking northwest.

Figure 129. Basketball court southwest of Building 8, looking south toward Building 9.

Southwest Façade

The southwest façade of Building 8 faces a basketball court, Building 9 and the upper parking lot **(Figure 130)**. The basketball court is surrounded by a chain-link fence covered in vegetation. The fascia of the southwest façade is obscured by a non-original metal gutter system. At the north end of the southwest façade is a typical window and door **(Figure 131)**. A chain-link fence covered in vines encloses this north end of the façade as well as the garden area north and northwest of Building 8. South of the fence, read north (left) to south (right) is a typical door, a single typical window, a ribbon of four typical windows, a typical door, and a single typical window **(Figure 132)**.

Figure 130. Partial view of primary (southwest) façade of Building 8, looking southeast.

Figure 131. North end of the southwest façade of Building 8, surrounded by a chain-link fence, looking northeast.

Figure 132. Four typical windows arranged in a ribbon window style on the southwest façade, looking east.

The next bay is recessed from the majority of the southwest façade, and appears to be an addition from circa 1966 **(Figure 133)**. The recessed volume is capped by an extension of the low-pitch gable roof with overhanging eaves, exposed rafters, and a simple wood fascia, and features paired typical windows at the southwest façade. An earlier 1963 addition is located at the southeast corner of the building, set back further back from the southwest façade and 1966 addition volume **(Figure 134)**. The 1963 addition also features a low-pitch gable roof, but at a lower ridge height than the primary volume. The primary (southwest) façade of the 1963 addition volume features a typical door, a wood slab door with no lite, and a typical window.

Figure 133. Recessed circa 1966 addition (middle) and further recessed 1963 addition (right) at the southwest façade of Building 8, looking east.

Figure 134. 1963 addition to Building 8 with a low-pitch gable roof with a lower ridge height, looking northeast.

Southeast Façade

There are no window or door openings on the original volume at the southeast façade which is primarily taken up by the 1963 addition. The southeast façade of the 1963 addition features a broad, low-pitch gable roof with a wood fascia **(Figure 135)**. One typical window is located slightly off-center at the southeast façade. The east end of the southeast façade features an open concrete patio covered by the main roof form, supported by wood posts. The roof over the patio features overhanging eaves with exposed rafters. A wood security fence is located at the roofline at the west end of the southeast façade.

Figure 135. Partial view of the southeast façade of Building 8, looking north. The 1963 addition is primarily visible. A gate leading to Charleston Street is visible at the far right.

Northeast Façade

The northeast (rear) façade faces an uphill slope to Charleston Street. The south end of the northeast façade features an open patio covered by the main roof form, as noted in the description of the southeast façade **(Figure 136)**. A typical window is located at the open patio. A non-original chain-link storage enclosure and non-original projecting mechanical storage area are both located within the covered patio. North of the covered patio are two enclosed bays which feature a single typical window and a paired typical window **(Figure 137)**. Above the paired typical window is a metal security fence attached at the roofline of the northeast façade.

Figure 136. Covered patio at the south end of the northeast façade, looking northwest.

Figure 137. Center, enclosed bays of the northeast façade, looking northwest.

The north end of the northeast façade is recessed and features wide overhanging eaves. Two non-original chain-link storage enclosures and a non-original enclosed mechanical storage bay are located under the eaves at the north end of the building **(Figure 138)**. A single typical window and a paired typical window are located at the northern-most end of the northeast façade **(Figure 139)**.

Figure 138. Non-original storage enclosures and mechanical storage at the north end of the northeast façade, looking west.

Figure 139. Typical single and paired windows at the north end of the northeast façade, looking southwest.

Northwest Façade

The northwest façade of Building 8 faces a chain-link fence and tiered garden and gravel parking lot beyond. Two windows are located at either end of the northwest façade. The two windows are similar to the typical windows, except that the top of the upper-lite is angled at the same degree as the low-pitch gable roof **(Figure 140)**.

Figure 140. Northwest façade of Building 8, looking south.

Interior

The interior of Building 8 typically features plaster walls and carpeting. The central volume has an open pitched roof with an exposed ridge beam, while the ends of the building have drop ceilings **(Figure 141)**. A series of smaller rooms which were likely originally used as classrooms by EBAC appear to have later been used as offices by Lincoln Child Center **(Figure 142)**. The wood slab doors and carpeting do not appear to be original and the floor plan of Building 8 has been altered several times with at least three additions. At the center of the floor plan is an irregular shaped room with observation windows **(Figure 143)**. At the center of the east side of the building are two small rooms with padded floors and walls and security doors, one of which has interior observation windows **(Figure 144)**.

Figure 141. Central room with exposed ridge beam, facing north.

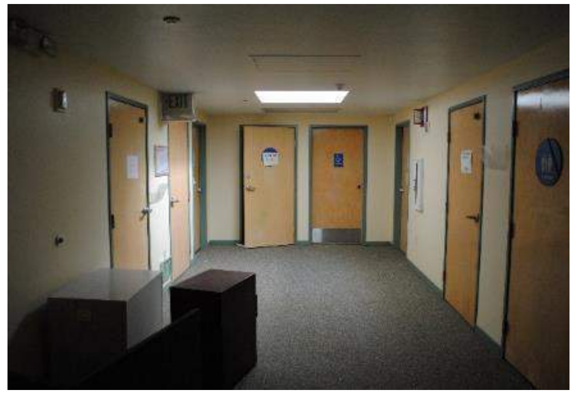


Figure 142. Doors to offices and bathrooms at the north end of Building 8.

Figure 143. Observation room at the center of Building 8, looking northeast.

Figure 144. One of the padded, secured rooms on the east side of the building, looking north.

BUILDING 9 (CHAMPLIN HOUSE)

Construction Date: 2000
Architect: David Wade Byrens/Byrens Associates

Building 3 (Champlin House), a one-story residential group home, was designed by David Wade Byrens of Byrens Associates and completed in 2000 **(Figure 145)**. Since the building is less than 45 years old, an architectural description is beyond the scope of this report.

Figure 145. Partial view of Building 9, looking south.

BUILDING 10 (GARAGE)

Construction Date: 1945
Architect: Paul Hammarberg

Building 10 (Garage) was constructed in 1945, designed by Paull Hammarberg and built by contractor H. K. Jensen, as a "workshop" garage. Building 10 is located at the southwest edge of the campus, along a driveway that extends from the end of Linnet Avenue. Building 10 is immediately southwest of Building 4 and south of Building 3. The wood frame, one-story building is rectangular in plan and set on a concrete slab foundation. Built in a vernacular style, the building has a gable roof clad in asphalt shingles and stucco-clad walls. The roof has overhanging eaves at the southeast and northwest façade with exposed rafters and rafter tails.

Primary (Southeast) Facade

The primary (southeast) façade faces an asphalt driveway that extends from Linnet Avenue **(Figure 146)**. A metal gutter partially obscures the exposed rafter tails along the primary façade. As originally designed, the primary façade was primarily open, with no windows or doors. The stucco-clad wall along the primary façade is non-original, as are the two tripartite aluminum-sash sliding windows, and the wood slab door with metal safety door at the north end of the façade. An HVAC unit covered by a metal grate is located at the center of the southernmost window.

Figure 146. Primary (southeast) façade of Building 10, looking northwest.

Northeast Facade

The northeast façade of Building 10 faces Building 4 and abuts and the upward-sloping hillside **(Figure 147)**. The northeast façade has no window or door openings. The roof has no eaves at the northeast façade and a small metal vent is located near the peak of the gable end. Non-original metal security gates are located at the corners of the building, along the roofline of the northeast façade.

Northwest Façade

The northwest façade of Building 10 faces a concrete patio accessed by full-length concrete steps, surrounded by a poured concrete and a concrete masonry unit retaining wall **(Figure 148)**. A metal gutter partially obscures the exposed rafter tails along the northwest façade. A wood-frame window with a metal-sash insert, covered by a metal security grate, is located near the center of the northwest façade. A wood slab door is located at the south end of the northwest façade; this door and the concrete patio appear likely to be later additions to Building 10. A metal security fence is located along the roofline at the north end of the northwest façade.

Figure 147. Northeast façade of Building 10, looking southwest.

Figure 148. Northwest façade of Building 10, looking east.

Southwest Facade

The southwest façade of Building 10 faces a concrete walkway and the southwest property line of the subject parcel **(Figure 149)**. The southwest façade has no eaves and no window or door openings. A small metal vent is located at the top of the gable end. A non-original metal security fence is located at the south corner of Building 10, along the roofline of the southwest façade.

Figure 149. Southwest façade of Building 10, looking northeast.

BUILDING 11

Construction Date: circa 2005-2009
Architect: None (prefabricated)

Building 11, a series of four combined prefabricated storage sheds, were installed between circa 2005 to 2009 **(Figure 150)**. Since the building is less than 45 years old, an architectural description is beyond the scope of this report.

Figure 150. Building 11, looking northwest.

ANCILLARY BUILDINGS, STRUCTURES & LANDSCAPE FEATURES

The campus includes a variety of ancillary buildings, structures, and landscape features that are included in the following table **(Figure 151)**. The table includes a description of the older and more substantial building, structure and feature and a brief historic context. Research has not revealed the provenance of all of these elements, but all relevant known information has been provided in the table below. In addition to the buildings, structures and features listed in the table, there are five prefabricated storage sheds scattered throughout the site; none of which appear to be significant. These are not listed. Aerial photographs and the 1926 topographical survey indicate that the campus contained numerous trees prior to the development of the site by West Oakland Home. None of the extant trees appear to be part of a designed landscape associated with West Oakland Home (Lincoln Child Center).

A. Play Shelter
Location: Between Building 1 and 6
Creator: Gerald M. McCue, architect
Date: 1959

Description: Open covered structure supported by metal pipe columns, wood rafter beams and wood roof sheathing.

Context: This simple, utilitarian structure was designed to cover a play area, and was designed by architect Gerald M. McCue, who designed Buildings 6 and 7.

The play shelter is not individually significant, but rather is a feature that is not uncommon of playgrounds or parks.

B. Climbing Wall/Lookout
Location: Southeast of Building 4
Creator: Unknown
Date: Unknown

Description: A rectangular wood frame volume with a panel door and hung vinyl-sash window on the northwest façade. A sloped, plywood wall on the northeast façade has climbing holds. The flat roof, accessible via the climbing wall, is surrounded by a wood guardrail.

Context: The nature of the structure's construction is unknown, but appears to have been built to serve dual storage and recreational purposes. The storage area is the primary volume of the structure, and a sloped climbing wall provides access to a lookout area.

The structure is unlikely to be age-eligible and does not appear to be individually significant.

C. Playground
Location: Between Buildings 1, 2, and 6
Creator: Robert Royston of Eckbo, Royston & Williams
Date: 1958

Description: Robert Royston designed a playground for Lincoln Child Center which features a concrete yard with simple concrete retaining walls and geometric areas of landscaping dividing various sections and circulation areas. Extant playground features include a "council circle

bench," a biomorphic climbing feature, and a sloped area which original featured a metal slide.

Context: The original design of the playground is characteristic of Modernist landscape design and Royston's playground designs in particular. The playground was constructed at the same time as Building 6 and 7, when the campus was expanding.

Although a characteristic Modernist landscape design by a master landscape architect, the playground lacks integrity of design, materials, and workmanship. The majority of the original features indicated in original drawings and historic photographs have been removed or demolished including a sand "digging area" defined by a concrete perimeter arc (current location of the playground west of the Play Shelter); an area of stacked plywood "playboxes," a wood "teepee" structure; and a pipe "snake." Furthermore, the extant features have been significantly altered by being covered with recycled rubber material. The council circle bench has also been altered by the addition of concrete on top of the original wood design.

D. Other Playground Equipment
Location: Various, between buildings 2, 5, 9, and 4.
Creator: Unknown
Date: Unknown

Description: Several pieces of playground equipment of unknown origin include a metal T-shape structure which appears to have been for swings; a metal slide; and metal pull-up bars.

Context: These various items of playground equipment do not appear in the available documentation for the Royston-designed playground area. Research has not uncovered the date of installation of these features.

These playground features are typical of an educational institution and do not appear to be unique in design, character or age. The features do not appear to be part of Royston's designed playground area, and do not appear to themselves be individually significant or particularly significant to the campus.

E. Metal Gate
Location: Between Buildings 1 and 2
Creator: Unknown
Date: Unknown

Description: Metal fence with a metal gate. Arched portion at the top of the gate includes lettering that reads "Lincoln Child Center."

Context: The fabrication of the gate does not appear to be particular old, and was likely made and installed in the late 20th century or early 21st century.

The metal gate does not appear to have any particular significance to the institution of Lincoln Child Center. It is located between the two oldest buildings, but does not itself appear to be old and is not visible from the public right of way. The gate does not exhibit a particularly noteworthy design or craftsmanship.

F. Buildings 0, 1 and 2 Circulation
Location: Around and between Building 0, 1, and 2
Creator: Unknown
Date: Various

Description: Terraced landscaping separates Building 0 from Buildings 1 and 2 due to the topography of the site. Two sets of concrete stairs lead down (southwest) from a path that runs parallel between Building 0 and Buildings 1 and 2. The concrete path features several types of concrete from different eras, including poured concrete in front of Building 2 and rough-aggregate concrete with wood dividers in front of Building 1. A concrete basketball court is located between Buildings 1 and 2. A path leading to the secondary (northwest) entrance of Building 0 is also rough-aggregate concrete with wood dividers. A metal street light fixture is set on a square wood post near the bottom of the stairs at Building 2.

Context: Documentation reviewed during the course of this research suggests that the extant circulation pattern between Buildings 0, 1 and 2 is not based on any early

 	master planning or specific landscape design. The concrete stair between Buildings 0 and 1 is visible in a 1947 aerial photograph, but distinct paths are not evident and may have been unpaved at the time **(Figure 172)**. A 1958 aerial photograph indicates the concrete steps by Building 2 and a path between Buildings 1 and 2 **(Figure 175)**. Based on the rough-aggregate concrete and wood divider materials, which are typical of midcentury hardscaping, the path was likely repaved circa 1958 when the playground was installed. The basketball court between Buildings 1 and 2 was constructed in 1971, when Building 2 was sustainably renovated, which involved regrading the sloped terrain to a flat surface. The path from Lincoln Avenue to the northwest façade of Building 0 does not appear in the 1965 aerial, and was likely constructed when the Royce School for Boys leased the building, or at a later date **(Figure 178)**. The street light has a typical early 20th century style, and may be from the period of original construction of Buildings 1 and 2, but the date of construction was not definitively determined during the course of research. The feature is not individually significant. The network of paths has been changed over the years and does not feature original materials, and thus does not appear to be significant or contributing to the significance of Buildings 0, 1, and/or 2. The concrete steps between Buildings 1 and 0 date to as early as 1947, but a definitive construction date was not established during the course of research, and the steps to not substantially contribute to the significance of Buildings 0, 1 and/or 2.

Figure 151. Aerial view of Head-Royce School South Campus, outlined in orange. The approximate location of ancillary buildings and landscape features are indicated based on letters assigned in the table above. Source: Google Maps, 2019. Edited by Page & Turnbull.

IV. HISTORIC CONTEXT

HISTORY OF OAKLAND

Native Americans' settlement in Oakland predates the arrival of Spanish explorers in the eighteenth century by more than one thousand years. Huchiuin and Jalquin tribes of Ohlone Indians lived in settlements along the banks of local creeks dating from at least the sixteenth century, including the areas now occupied by the Holy Names College campus and in Indian Gulch, now known as Trestle Glen. Between these two former villages, Dimond Canyon contains Sausal Creek.[5]

In 1772, a small exploration party from the Spanish garrison at Monterey, led by Don Pedro Fages, paused in their travels on a high hill overlooking the site of the future city.[6] Despite Father Juan Crespi's description recorded in his journal of the beauty of this place, the exploration party opted to travel on, and the area went untouched by Europeans for nearly 50 years. In 1820, the Spanish government granted 44,000 acres to Luis Maria Peralta upon his retirement from the military. [7] Peralta's grant extended from the shore of San Francisco Bay to the crest of the Oakland hills, and from San Leandro Creek to "El Cerrito," or the little hill (most likely Albany Hill). Peralta used the land as a cattle ranch, which he sub-divided and bequeathed to his four sons in 1842. The area around Dimond Canyon was within the portion of *Rancho San Antonio* granted to Antonio Maria Peralta.[8]

The 1849 Gold Rush that dramatically influenced San Francisco's development also brought fortune-seekers to Oakland. Miners, lumbermen, businessmen, bankers, speculators, and opportunists settled across the bay in what was then known as Contra Costa, or "the other coast." In 1850, three East Coast men arrived in Contra Costa: Horace W. Carpentier, Edson Adams, and Andrew J. Moon. Each man leased 160 acres of land from Vicente Peralta and opened the area to squatters. The town of Oakland was incorporated on March 25, 1852. Oakland saw rapid growth and improvement after transportation connections were established with other communities. Ferry service to San Francisco began in 1854, and the small settlements of San Antonio and Clinton east of Lake Merritt were connected with Oakland by a bridge built in 1856. Commercial and industrial businesses were established near the wharves, and the Central Pacific Railroad ran through downtown Oakland by 1863.

In 1868, Oakland was chosen as the western terminus for the Transcontinental Railroad. Beginning in 1869, the train brought tourists and workers to California and made Oakland a major port city and manufacturing center.[9] West Oakland became a shipping hub for western U.S. factories and a processing and manufacturing center for raw commodities such as agricultural products and lumber.

As Oakland became an increasingly popular industrial core, residential and commercial communities expanded within the city limits. In 1873, Oakland became the county seat of Alameda County.[10] By 1880, the city's population rose to 34,555, more than 20 times what it had been in 1860.[11] Many of the new residents were San Francisco commuters drawn by Oakland's relatively low density and the ferry service across the bay. Promotional materials advertised Oakland's "world-renowned" climate,

[5] Eleanor Dunn, "A Short History of Diamond Canyon and Sausal Creek," *The Montclarion*, March 24, 1998, accessed March 5, 2019, https://fruitvaleoakland.wordpress.com/category/history/.
[6] Annalee Allen, "House on a Hill: The Hale-Treadwell House at CCAC" *Oakland Heritage Alliance News*, Fall 1987, p. 1.
[7] Mae Chan Frey, Julie Harris, Kate Madden Yee, and Jeff Norman, *Temescal Album: History of a Neighborhoo*d (Oakland, CA: Shared Ground, 1998), 6.
[8] Frey, et al., *Temescal Album: History of a Neighborhood*, 6.
[9] Lois Rather, *Oakland's Image: A History of Oakland, California* (Oakland, CA: The Rather Press, 1972), 53-54.
[10] City of Oakland Historic Preservation Element, 1-5.
[11] Beth Bagwell, *Oakland, The Story of a City* (Oakland, CA: Oakland Heritage Alliance, 1982), 59.

the prosperity of its citizens, its paved streets, and extensive streetcar lines.[12] It was home to several colleges, including the College of California (the precursor of the University of California, Berkeley), Mills Seminary (later Mills College), and St. Mary's College, located at 30th and Broadway.

The city expanded by annexing existing settlements and developing new districts.[13] Clinton, San Antonio, and the small town of Lynn (or Brooklyn) were annexed in 1872, pushing Oakland's eastern city limits out to 36th Street.[14] The small Temescal community, located in north Oakland, expanded in the 1860s with the installation of a telegraph line down present-day Telegraph Avenue and the establishment of a streetcar line to the University of California, Berkeley. Neighborhoods north of Lake Merritt were annexed in 1891, and Temescal, Golden Gate, and other north Oakland neighborhoods were annexed in 1897.[15] By 1900, Oakland's population numbered almost 67,000.

The 1906 earthquake and fire displaced thousands of San Francisco residents to the East Bay for temporary and permanent housing. Oakland continued to grow geographically, increasing to nearly its present size by 1909, with the annexation of the hills area, Fruitvale, Melrose, Elmhurst, and the area south to San Leandro. With those additions, the city's area increased from 22.9 to 60.25 square miles. The city experienced a surge of commercial and civic development in the downtown area after the earthquake as well, including construction of a new city hall, which was the first in the United States designed as a skyscraper. In 1910, the City of Oakland assumed control of its waterfront, which previously had been held by private entities. The change of ownership prompted the expansion of the Port of Oakland.[16] During World War I, Oakland's shipyards provided a "fleet of steel and concrete ships that…within the short space of a year put the Oakland estuary in the national limelight."[17] By 1918, at least 50,000 people were employed by the shipyards.

The 1920s saw continuing prosperity in Oakland.[18] Civic works abounded, including the installation of a new lighting system and procurement of land for an airport. Development slowed during the Great Depression, but Oakland grew into a major shipbuilding center during World War II.[19] The city's population expanded with wartime workers, including many African Americans who migrated from the southern states seeking employment. The Bay Bridge, which opened in 1936, eased the commute between Oakland and San Francisco. In 1945, the city's population was 405,301.

The post-World War II emphasis on the automobile led to increased suburban development and new freeways to reach outlying areas.[20] While freeway construction and redevelopment enticed some businesses and residents away from the city center, in many cases businesses and residents were forced to relocate as the historic commercial and residential fabric of downtown and West Oakland was replaced and disconnected by growing freeway systems. Increased economic and racial segregation were byproducts of this transportation and suburban development pattern, and through the 1960s and 1970s Oakland experienced infrastructure decline associated with entrenched poverty, deindustrialization, and a weak urban tax base.[21]

[12] Rather, *Oakland's Image: A History of Oakland, California*, 63.
[13] Bagwell, *Oakland, The Story of a City*, 59.
[14] City of Oakland Historic Preservation Element, 1-5.
[15] Ibid., 1-7.
[16] Ibid.
[17] Florence B. Crocker, *Who Made Oakland?* (Oakland, CA: Clyde Dalton, 1925), quoted in Rather, *Oakland's Image: A History of Oakland, California*, 87.
[18] Rather, *Oakland's Image: A History of Oakland, California*, 89.
[19] City of Oakland Historic Preservation Element, 1-9.
[20] Ibid.
[21] Robert O. Self, *American Babylon: Race and the Struggle for Postwar Oakland* (Princeton, NJ: Princeton University Press, 2003).

A tight real estate market in San Francisco in the early 1980s sparked new development and preservation projects in Oakland, especially downtown.[22] Homebuyers began seriously considering Oakland neighborhoods, many of which retained strong local character.[23] The 1989 Loma Prieta earthquake damaged many of Oakland's older stock, but the city's population has remained steady throughout the 1990s and 2000s and was recorded as 395,817 in 2011.[24]

DIMOND CANYON & LINCOLN HIGHLANDS NEIGHBORHOOD HISTORY

When Luis Maria Peralta divided the Rancho San Antonio among his four sons in 1842, Antonio Maria Peralta received a large eastern portion, roughly bounded by Dimond Canyon to the west, and what is now Skyline Boulevard to the north, 73rd Avenue to the southeast, and Alameda and San Leandro Bay to the southwest, including the future neighborhoods of San Antonio, Fruitvale, Oakmore, and Lincoln Heights.[25] European settlers began logging the San Antonio redwood forest on Antonio Maria Peralta's land in the 1840s, and built a steam sawmill in 1850 **(Figure 152)**. What is now Park Boulevard was originally a logging road used to transport logs down through Dimond Canyon. Just ten years later, the forest had been completely logged. As Peralta sold off his land, the settlements of San Antonio and Clinton grew, eventually forming Brooklyn township in 1856.

Figure 152. First sawmill in Oakland, located on Palo Seco Creek, which feeds in to Sausal Creek, near Dimond Canyon (c. 1880s). Source: Oakland Public Library, Oakland History Room.

Hugh Dimond purchased the canyon area from Peralta in 1867, and is the namesake of the canyon and district that developed to the south in the twentieth century. By the 1870s, F. Rhoda had purchased a large tract of land to the east of Dimond's estate, which includes future site of the Head-Royce School South Campus. In 1872, the residents of Brooklyn township voted for annexation by Oakland.

[22] Bagwell, *Oakland, The Story of a City*, 260-262.
[23] Ibid., 263.
[24] United States Census data available at https://www.census.gov.
[25] Dunn, "A Short History of Diamond Canyon and Sausal Creek"; and Alameda County 2 Map, Thompson & West, 1878, David Rumsey Map Collection.

Figure 153. Alameda County 2 map, Thompson & West 1878. Approximate future location of the Head-Royce School South Campus indicated by red arrow. Diamond Canyon and Sausal Creek are located to the west. Source: David Rumsey Map Collection. Edited by Page & Turnbull.

A residential district surrounding a commercial area on Hopkins Street (now MacArthur Boulevard) developed beginning in the early twentieth century **(Figure 154)**. The district, known as the Dimond District, was located adjacent to Sausal Creek and Dimond Canyon, south of Hugh Dimond's former property. As with much of the Bay Area, the 1920s were a period of rapid residential and commercial development in the Dimond District and Fruitvale areas. Houses were generally modest-sized Craftsman bungalows or residences with Spanish Colonial Revival influences. In 1926, developer Walter H. Leimert hired engineer George A. Posey to design and construct the Leimert Bridge which would span Sausal Creek **(Figure 155)**.[26] The Leimert Bridge provided access to the Oakmore Highlands area for Leimert to develop as a residential neighborhood in the first half of the twentieth century.

[26] "History of the Leimert Bridge," Oakmore Homes Association, accessed March 5, 2019, http://oakmorehomes.com/history-of-the-leimert-bridge-2/.

Figure 154. Dimond District, looking west on Hopkins Street (now MacArthur Boulevard) into the commercial area (1910). Source: Oakland Public Library, Oakland History Room.

Figure 155. View of Leimert Bridge, looking north up Dimond Canyon (c. 1926). Source: Oakmore Homes Association.

East of Oakmore Highlands across Lincoln Avenue, the Lincoln Highlands residential neighborhood began rapid development in the 1930s, around the same time that West Oakland Home moved to the area. An *Oakland Tribune* article in August 1938 announced that the "H. G. Markham Company's tract in the Coolidge Avenue section, above Hopkins Street, is to be known as "Lincoln Highlands" and that five homes, of the 100 planned, had already been completed to Federal Housing Authority (FHA) standards."[27] The Markham tract featured modest-sized houses in the Minimal Traditional style **(Figure 156)**.[28] In 1940, Coolidge Avenue was extended north and the more curvilinear streets in the hills were developed in a variety of styles, primarily in Minimal Traditional, Midcentury Modern, and California Ranch styles **(Figure 157)**.[29] By the mid-1940s Lincoln Highlands south of Alida Street was largely developed.

Figure 156. Minimal Traditional style residence built by H. G. Markham in Lincoln Highlands. Source: *Oakland Tribune*, August 21, 1938, p 28.

Figure 157. Extension of Cooldige Avenue under construction with homes built by A. R. Lapham and W. H. Wisheropp Co. Source: *Oakland Tribune*, Oakland 27, 1940, p 56.

The Mountain Boulevard Freeway, later known as the Warren Freeway or Highway 13, was constructed in the 1950s. The freeway provided faster, easier access to the residential neighborhoods

[27] "Lincoln Highlands Homes Completed," *Oakland Tribune*, August 14, 1938.
[28] "Lincoln Highlands Home," *Oakland Tribune*, August 21, 1938.
[29] "Lincoln Highlands Is Scene of Activity," *Oakland Tribune*, October 27, 1940.

in eastern reaches of Oakland, and residential development continued during the post-World War II years.[30] This postwar development included the upper reaches of the Lincoln Highlands residential neighborhoods **(Figure 158)**.

Figure 158. Aerial view of Lincoln Highlands in 1965, at which point the area is nearly fully residentially developed. Four major institutional campuses are visible at the north end, including Lincoln Child Center (outlined in red), United Cerebral Palsy Association, Greek Orthodox Cathedral of the Ascension, and the Oakland California Temple. Approximate boundary of Lincoln Highlands neighborhood outlined in dashed orange line. Source: Cartwright Aerial Surveys, Flight CAS-65-130, Frame 6-221, May 14, 1965, University of California, Santa Barbara Library, FrameFinder.

Largely residential, the north end of Lincoln Highlands includes several large institutional campuses. The West Oakland Home, later renamed Lincoln Child Center, moved to Lincoln Highlands in 1929 and continued to grow and develop in the postwar years; the institutional history of West Oakland Home is elaborated in a later section of this report. Another campus site was developed for the United Cerebral Palsy Association in the mid-1950s at 4766 Lincoln Avenue, with the buildings formally dedicated in 1957.[31]

[30] Dunn, "A Short History of Diamond Canyon and Sausal Creek."
[31] "New Oakland Palsy Center To Be Dedicated on Sunday," *Oakland Tribune*, November 22, 1957.

Immediately adjacent the Unite Cerebral Palsy site, the Greek Orthodox Cathedral of the Ascension built a church at 4700 Lincoln Avenue in 1960, originally serving a predominantly immigrant congregation **(Figure 159)**.[32] Noted for its architectural blend of Modernist and traditional elements, the parish was elevated to the status of a cathedral in 1992. In 1964, the Oakland California Temple opened as the 13th temple of the Church of Jesus Christ of Latter-Day Saints (LDS Church or Mormon Church) in the world, located at 4770 Lincoln Avenue **(Figure 160)**.[33] The temple complex includes an event center, visitor center, landscaping and is also home to the Oakland Family History Center, a geological organization run by the Mormon Church.

Figure 159. Greek Orthodox Cathedral of the Ascension (n.d.).
Source: Ascensioncathedral.com.

Figure 160. Aerial view of the Oakland California Temple (c. 1970). Source: Oakland Public Library, Oakland History Room.

EARLY HISTORY OF WEST OAKLAND HOME (1883-1928)

Lincoln, formerly known by many different names including the Little Worker's Home, West Oakland Home and Lincoln Child Center, traces its history back to 1883 and founder Rebecca McWade's home in East Oakland. Rebecca S. McWade (1840-1891) was born in Indiana in 1840 to parents from Virginia.[34] She married David D. McWade (c. 1831-1915), a railroad engineer for Southern Pacific, in 1871 and they moved to California in the late 1850s, where worked as a dressmaker in Oakland **(Figure 161)**.[35] In 1883, McWade began instructing her daughter, Ada, and several of Ada's friends in sewing and dressmaking and the "merits of Christian charity" by making clothing for poor children. The group was known as "The Little Workers of East and West Oakland."[36] The sewing circle, which was common means of civic engagement for women in the late ninetieth century while women were still politically disenfranchised, met at the McWade's home at 1547 (1277) Twelfth Avenue in East Oakland **(Figure 162)**. Although based on Christian values, McWade wanted the group to focus on Oakland and to stay nonsectarian, so in order to prevent the group being coopted by sectarian missionary work, McWade incorporated the group in 1884 with a

[32] "Our History," Ascension Cathedral, accessed March 5, 2019, https://www.ascensioncathedral.com/our-history/.
[33] "Oakland California Temple (Mormon Temple)," Oakland Wiki, accessed March 5, 2019, https://localwiki.org/oakland/Oakland_California_Temple_%28Mormon_Temple%29.
[34] 1880 United States Federal Census, accessed via Ancestry.com; and U.S. Find A Grave Index, 1600s-Current, accessed via Ancestry.com
[35] Marta Gutman, *A City for Children: Women, Architecture, and the Charitable Landscapes of Oakland, 1850-1950* (Chicago: University of Chicago Press, 2014), 112.
[36] "History of Lincoln," Lincoln, accessed April 3, 2019, http://lincolnfamilies.org/about/history; and Gutman, *A City for Children*, 112.

"Board of Lady Managers," of which she was the president. This allowed McWade to retain formal control of the mission and direction of the organization.[37]

Figure 161. Rebecca McWade (n.d.) Source: Lincoln.

Figure 162. McWade's house and the original meeting place of The Little Workers of East and West Oakland at 1547 (1277) Twelfth Avenue, Oakland (extant), pictured in 2001. Source: Gutman, *A City for Childre*n, 114.

In 1885, McWade founded the Little Workers' Home, accepting orphaned infants and children into her new home at Taylor (9th) and Campbell Streets (no longer extant). The first integrated orphanage in Northern California and first documented integrated charity in Oakland, McWade's Little Workers Home was also unusual in that she accepted infants under the age of two, which had a high risk of disease at the time.[38] Need quickly outgrew her small cottage, and McWade's Little Worker's Home rented out several additional cottages.[39] One of the homes also allowed single mothers and their children to live together, known as the "The Foundling Home & Hospital and Refuge for Destitute Children & Indigent Mothers."[40] During this period, children of unwed mothers were considered "illegitimate" and proof of "sinful" relationships. Cases of child abandonment, infanticide and selling babies to "baby farms" was an unfortunately common occurrence. Care for single mothers and their children was seen as radical, as it was often construed as condoning sinful behavior.

By 1887, McWade was suffering from declining health due to breast cancer, but continued to expand her charitable work. She purchased a house at the northwest corner of Taylor (9th) and Campbell streets, known as the Roseberry house, with the charitable assistance of Charles and Mary Crocker, and hired a matron to oversee the orphanage's daily activities. The house was located across the street from Prescott Grammar School and Prescott Primary School, both known for their diversity, which the orphanage's resident children could attend. After the new property was acquired, a new charity was founded, known as the West Oakland Home for Foundlings (commonly called the West Oakland Home), which then absorbed the Little Worker's Home, joined the Associated Charities (now known as Family Service Agency of San Francisco, a nonsectarian, nonprofit providing charitable social services), and began to receive state funding. By the late 1880s, McWade was in such poor health that she gave control of the orphanage to Mary and Ethel Crocker and formally retired in 1890. Mary Crocker, the wife of Charles Crocker, one of the "big four" Central Pacific Railroad

[37] Gutman, *A City for Childre*n, 114-5.
[38] Ibid, 109.
[39] Ibid, 115.
[40] Ibid, 116-7.

magnates, died shortly thereafter in 1889, leaving the orphanage in the control of her daughter-in-law, Ethel. Shortly before Mary's death, Mary and Ethel Crocker began fundraising for the construction of additional space as their facilities were over-capacity.[41]

In January 1891, under the leadership of Ethel Crocker (1863-1934), the organization's first purpose-built home was completed by contractors August Herbst and Daniel McLeod at 907 Campbell Street, as an addition to the Roseberry house **(Figure 163)**. The new three-story dormitory and two-story Roseberry house could provide shelter to over one hundred children. Rebecca McWade died just months after the completion of the new West Oakland Home.[42] In her obituary, McWade was hailed as a "noble Christian" and for caring "little for the good things of this world, almost disregarding the ordinary comforts of life, she lived entirely for others."[43]

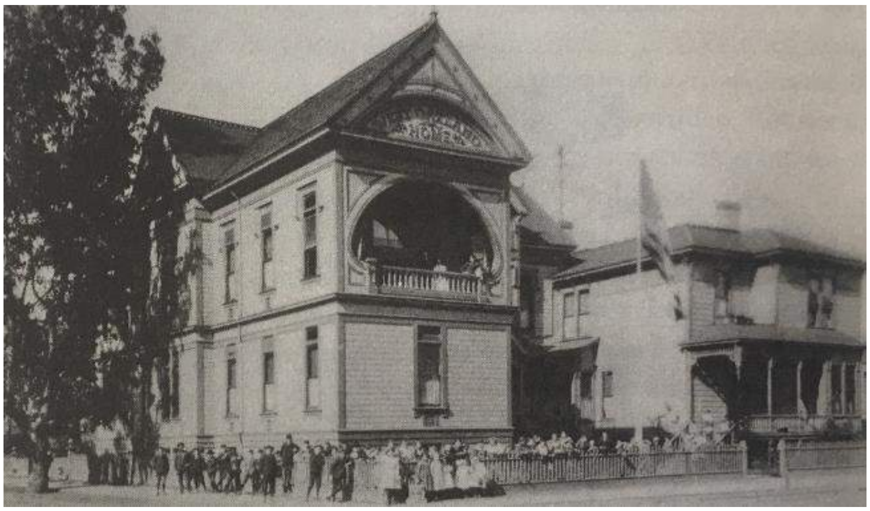


Figure 163. West Oakland Home at 907 Campbell Street in 1891. Roseberry house is at the right and the new West Oakland Home addition is at the left. Source: Lincoln Child Center.

Also in 1891, the West Oakland Home opened a kindergarten. This provided a much-need service to the community as California school boards were refusing to open costly kindergarten facilities at the time.[44] The West Oakland Home acquired an adjacent house at 1666 Taylor (9th) Street to serve as the "Cottage for Babies and Toddlers" in 1903, and in 1904 the Roseberry house was replaced with a new dormitory addition for older children to increase the facility's capacity to about 150 children.[45] The organization opened a summer camp in Trestle Glen in 1916, and in 1923 purchased property in Crow Canyon for the summer camp which ran through 1929.[46]

At the turn of the twentieth century, Progressive Era movements brought about social and political reform, and new government institutions, related to a variety of issues including education, medicine, and labor. The State Board of Charities and Corrections (SBCC), for example, was formed in 1903. This board oversaw institutions such as the West Oakland Home and advocated for "cottages" instead of large institutional facilities as means of promoting better child welfare. Although West Oakland Home had generally be praised for its care in the past, by the 1920s the institution "faced

[41] Ibid, 118-21, 132-4.
[42] Ibid, 132-5.
[43] "Mrs. McWade's Death," *Oakland Tribune,* January 7, 1891.
[44] Gutman, *A City for Childre*n, 136.
[45] Ibid, 263.
[46] Gutman, *A City for Childre*n, 269; and "History of Lincoln," Lincoln, accessed April 3, 2019, http://lincolnfamilies.org/about/history.

charges of egregious child abuse and poor maintenance," according to Marta Gutman's research in *A City for Children: Women, Architecture, and the Charitable Landscapes of Oakland, 1850-1950*. In October 1925, the West Oakland Home suffered a fire which resulted in the roof collapsing. The fire chief and fire commissioner condemned the home as unsafe for habitation and called for its demolition. No casualties resulted from the fire, in part due to barked warnings from the West Oakland Home's pet collie, Rex, but the organization was forced to look a new home.

Gutman has also observed that Progressive Era reforms also had a negative side, especially when it came to issues of race, noting that in the West Oakland Home segregated in the 1920s:

> The Associated Charities, formed to organize relief in the 1880s, had become the representative of the SBCC in Alameda County; it sent only white kids to the orphanage. […] Plenty of black kids in the area needed a home, but the charity closed its doors to them—in keeping with the long-standing policy of the Associated Charites to ensure racial segregation in the city's charities. […] The charity [West Oakland Home] segregated the orphanage, welcoming white children only, Protestants preferred.[47]

In 1926, using funds from an endowment set up in 1910 by long-time member and president of the organization, Grace L. Trevor (1856-1935), the West Oakland Home purchased a seven-and-a-half-acre site on Lincoln Avenue in the West Oakland hills. The property was located above a predominantly white neighborhood which was still in the early days of development, and was surrounded by hills which still had a very rural character.[48]

Rebecca McWade's West Oakland Home was, in many ways, visionary. Although not driven by a progressive agenda, but rather a nonsectarian Christian morality, McWade provided services to some of Oakland's most vulnerable populations, including abandoned infants and orphaned children regardless of age or race, and unwed mothers shunned by society. The first known integrated charity in Oakland and integrated orphanage in Northern California, McWade's organization was also unique in taking in infants under the age of two and single mothers with children. By the time of McWade's death in 1891, the organization had grown significantly in just eight years, aided by a network of woman board members and charitable donations from families such as Mary Crocker and her husband. The West Oakland Home continued to grow and provide important services to the community under the leadership of Ethel Crocker and Grace L. Trevor; however, by the 1920s the community served by West Oakland Home had narrowed to only serve white children, a deviation from McWade's original inclusive vision.

SITE HISTORY: PRIOR TO 1928

The subject property is located within land that was once part of Luis Maria Peralta's portion of the *Rancho San Antonio*. A large area including the subject property was purchased by F. Rhoda by the 1870s.[49] The area remained rural and agricultural into the early twentieth century. In February 1926, West Oakland Home purchased the subject property from two married couples, Franklin H. and Maude Locke, and Harry J. and Frances H. Smith **(Figure 164)**.[50] Franklin Locke was a dentist and Harry Smith was a physician, and neither couple lived at the subject property in 1925, indicating that they had likely purchased the land as a speculative real estate venture.[51] It is not known if the property was occupied the property when it was sold to West Oakland Home in 1926.

[47] Gutman, *A City for Childre*n, 268, 272.
[48] "Miss Trevor Is Taken By Death," *Oakland Tribune*, January 10, 1935, 4.
[49] Alameda County 2 map, Thompson & West 1878, David Rumsey Historical Map Collection.
[50] Grant Deed, F. H. Locke et al to West Oakland Home, February 10, 1926, Alameda County Assessor-Recorder.
[51] U.S. City Directories, 1822-1995, accessed via Ancestry.com.

A topographical site survey of the subject property was prepared for the West Oakland Home in April 1926. The survey map illustrates a two-story frame house with a southwest-facing porch and a rear lean-to, a chicken coop, a barn, and a tank house at the north end of the property off of what was then Perkins Street **(Figure 165)**. Two rows of cypress trees were located on either side of the residence. A tank house windmill was located at the southern end of the property. Prune, apricot, olive, apple, peach, almond, and pear trees were located throughout the property with a large cluster of pear trees at the east end of the property.

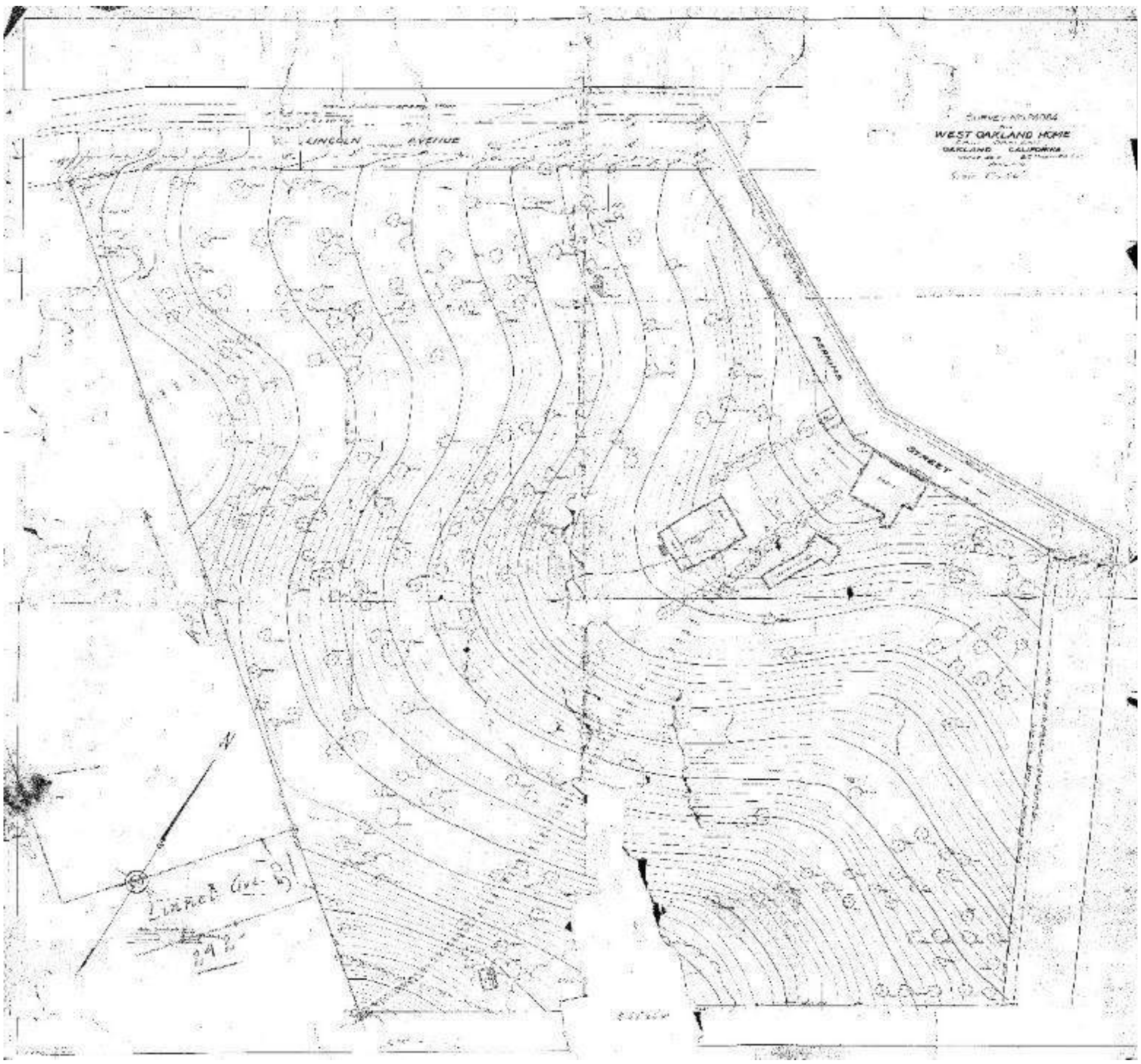


Figure 164. Survey of the future West Oakland Home site. Source: Survey No. 24064 for West Oakland Home, Oakland California by E. C. Prather Civil Engineer, April 1926.

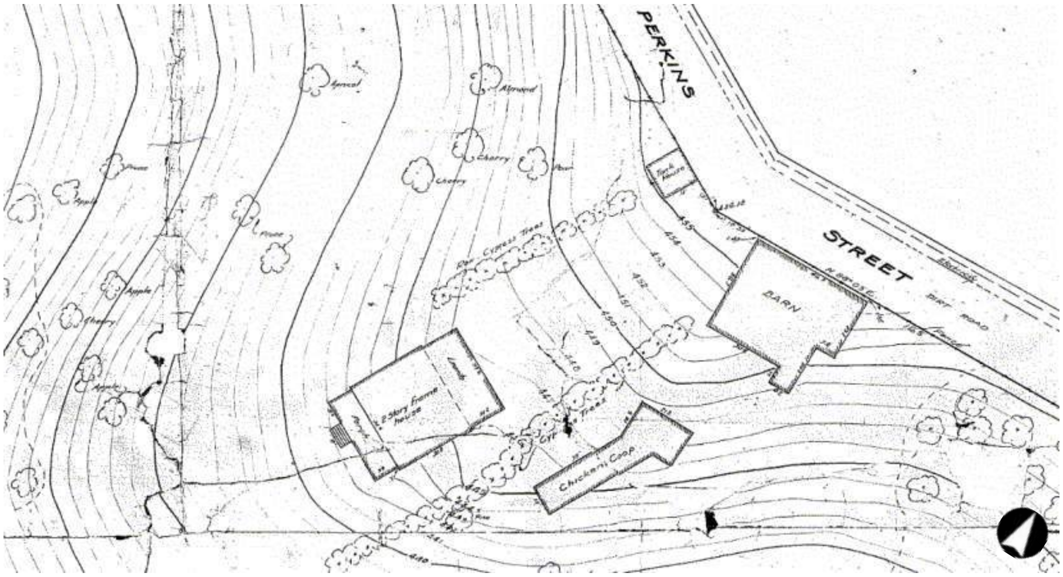


Figure 165. Detail view of the future West Oakland Home site. Source: Survey No. 24064 for West Oakland Home, Oakland California by E. C. Prather Civil Engineer, April 1926.

SITE HISTORY: LINCOLN AVENUE CAMPUS, 1928-2013

1928-1939

In 1928, under the leadership of president Mrs. F. Bruce Maiden, a capital campaign to construct two new "cottages" on the Lincoln Avenue campus was initiated by the West Oakland Home board of directors with a goal of raising $100,000 (roughly the equivalent of $1.4 million today).[52] In the earlier 1920s, the West Oakland Home had become a charter member of the United Way's Community Chest Fund, a fundraising organization that still operates today, which restricted the West Oakland Home to only raising funds from their members. In 1929, the West Oakland Home had 310 recorded members, 225 of whom were listed as "Subscribers to New Building Fund."[53]

With the fundraising goal met, ground was broken on the cottages in 1929. The cottages, each with about 20 rooms, were designed by the firm of local architects Walter Reed and William G. Corlett, Jr. Reed & Corlett, in the Spanish Colonial Revival style. They met the new state standards for orphanages set out by the SBCC, which emphasized the "cottage" model over large institutional buildings, and were fully equipped with "every modern convenience" **(Figure 166 and Figure 167)**.[54] Reed & Corlett also designed a master plan for the construction of future cottages which would be based on the same design and floor plans as the first two buildings **(Figure 166)**. However, Building 1 (Mary A. Crocker Cottage) and Building 2 (Grace L. Trevor Cottage) were the only two cottages constructed according to Reed & Corlett's master plan.

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[52] Ann Root, "A History of the Lincoln Families Organization, 1883 to 2016," unpublished draft, September 4, 2018, provided by Lincoln, 10; and "West Oakland Home for Children Plans Drive," *Oakland Tribune*, November 11, 1928.
[53] Root, "A History of the Lincoln Families Organization,"10.
[54] "Call to Open Answered by Oakland Home Children," *Oakland Tribune*, January 14, 1930, 19.

Figure 166. Mary A. Crocker Cottage (Building 1), designed by Reed & Corlett and completed in 1930 (n.d.). Source: Lincoln Child Center.

Figure 167. Grace L. Trevor Cottage (Building 2), designed by Reed & Corlett and completed in 1930 (pictured 1942). Source: *Oakland Tribune*, June 13, 1952, 14.

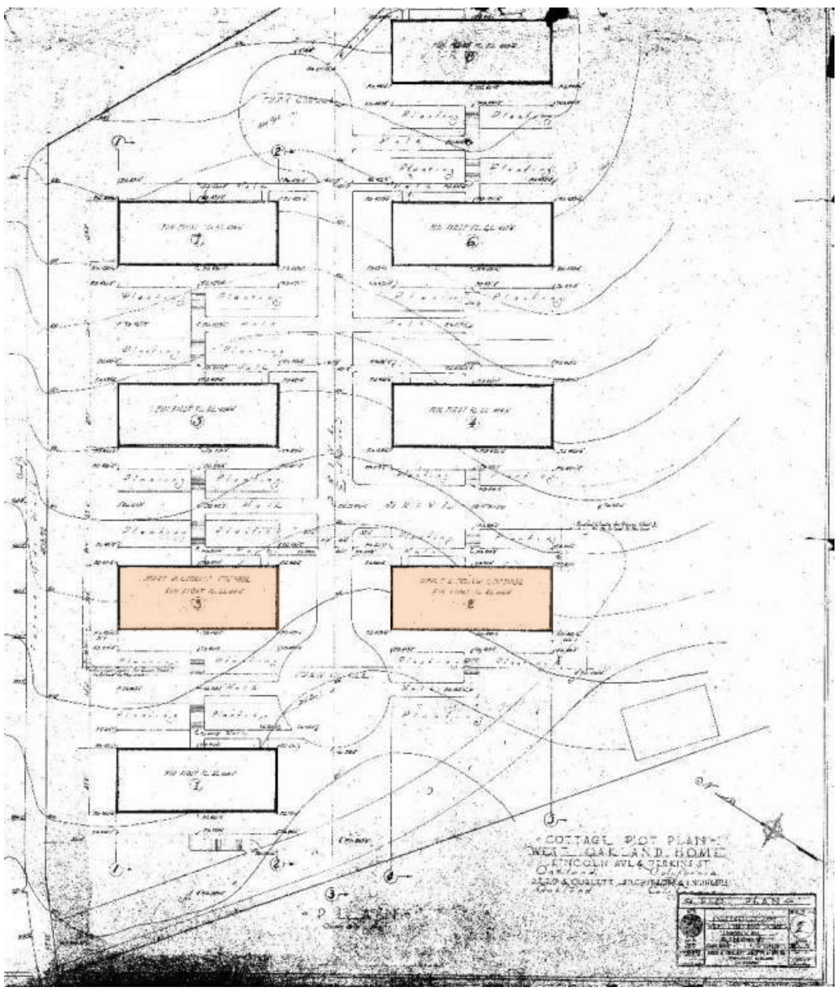

Figure 168. Proposed master plan for the Lincoln Avenue campus designed by Reed & Corlett, 1929. Building 1 (Mary A. Crocker Cottage) and Building 2 (Grace L. Trevor Cottage) are indicated by orange shading. Source: Permit A39344, Oakland Building Department.

The boys' dormitory was named after Mary A Crocker, who had been an early charitable donor to the organization and had served as the president for about a year before her death in 1889, and the girls' dormitory after Grace L. Trevor, a former president of the organization whose endowment had helped pay for the Lincoln Avenue campus property. [55] Trevor also was the longest-serving member of the West Oakland Home at the time and served on the building committee for the two cottages **(Figure 169)**.[56] About 40 children, ages five to thirteen, moved in to the cottages on January 14, 1930, and the buildings were formally dedicated on February 20, 1930. At the time, the children attended publics schools in West Oakland and resided at the Lincoln Avenue campus.[57]

Figure 169. (Left to right) Marion Molsbergen, Grace L. Trevor, Mrs. F. Bruce Maiden, and Hazel Molsbergen at the dedication of Grace L. Trevor Cottage (Building 2). Source: "Structures Are Added To Institution," *Oakland Tribune*, February 21, 1930, 17.

The children of West Oakland Home had all moved to the new campus with their pet rabbits and dog, Rex. With volunteer help from organizations such as the Alameda Rotary Club, Kiwanis Club, Elks Club, Boys Scouts, and Camp Fire Girls, the West Oakland home was able to plant vegetable gardens, build chicken coops and rabbit hutches, and install playground equipment in 1930. The former West Oakland Home buildings in West Oakland were later sold and have since been demolished.

In 1929, a group of women founded the Junior Alliance and opened a thrift shop to fundraise for the West Oakland Home, even as the Great Depression resulted in decreasing funding from the Community Chest. In 1935, the West Oakland Home had 54 children under its care and contributions from the Community Chest had decreased by 40 percent, but the organization was able to construct a new gymnasium and administrative office building using about $18,000 raised by the Junior Alliance.[58] The new building, named the Junior Alliance Hall (Building 0) was also designed in a Spanish Colonial Revival Style by architect William G. Corlett, Jr., formerly of Reed & Corlett **(Figure 170)**.

[55] "Ground Breaking Set For Children's Homes," *Oakland Tribune*, June 24, 1929, 21.
[56] "Structures Are Added To Institution," *Oakland Tribune*, February 21, 1930, 17.
[57] Root, "A History of the Lincoln Families Organization,"10-11.
[58] Root, "A History of the Lincoln Families Organization," 12; and "New Recreation Center," *Oakland Tribune*, August 15, 1935.

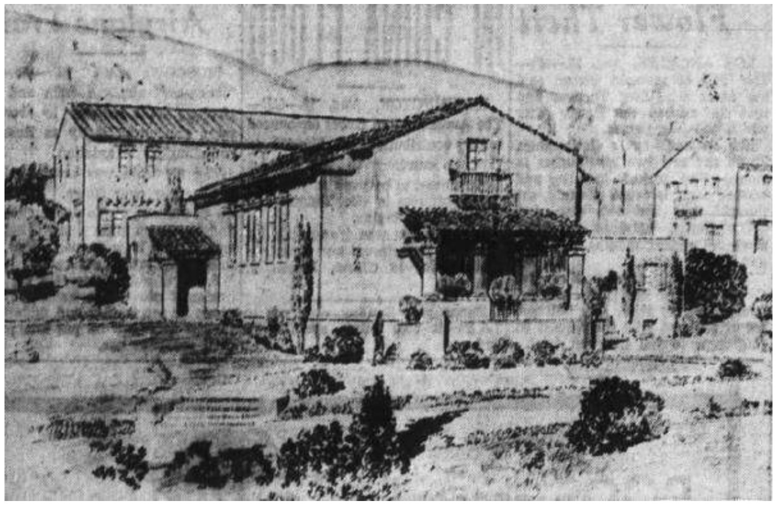

Figure 170. Rendering of Junior Alliance Hall (Building 0), designed by William G. Corlett, Jr., which was constructed in 1935. Source: "New Recreation Center," *Oakland Tribune*, August 15, 1935, 6.

In the late 1930s, the residential areas south and west of West Oakland Home were beginning to develop, but the campus still retained a strongly rural character. The earliest buildings were constructed at the far west end of the campus, and the remainder of the site was still largely undeveloped except for the residence, barn, and other structures left from the previous property owners **(Figure 171)**. Tremendous fundraising efforts had been employed to build the Junior Alliance Hall in 1935 in the midst the Great Depression, and the campus experience little change through the remainder of the decade.

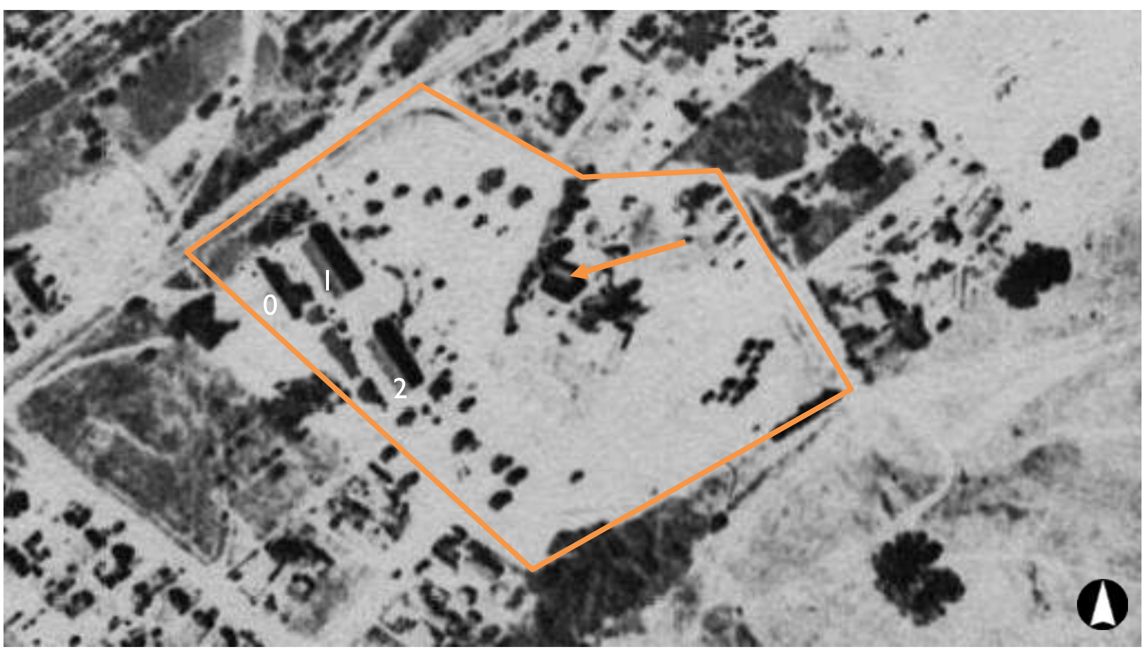

Figure 171. 1938 aerial photograph of the Lincoln Avenue campus. The house and barn from the previous owner are extant, visible to the east of Buildings 0, 1, and 2. Approximate property boundary indicated by orange outline. Former residence and barn indicated by orange arrow. Source: Fairchild Aerial Surveys, Flight C-5750, Frame 289-45, October 2, 1939, University of California, Santa Barbara, FrameFinder.

In the 1930s West Oakland Home accepted children through private application, who stayed for anywhere from a few months to eight years. The organization continued to accept children who were not orphans, and parents payed a small fee for room and board.[59]

1940-1949

In 1940, West Oakland Home began accepting children referred through Oakland agencies at the request of Alameda County. These placements included what were termed "emergency placements" of children who needed shelter for an average of six weeks. According to August 26, 1940 board minutes, "There is at present no receiving home for children other than the Detention Home," which was all the more reason for West Oakland Home to expand their services. Formed in April 1941, the Alameda County Central Applications Bureau for Institutional Services for Children acted as a clearinghouse for the placement of children through the Juvenile Probation Department, Catholic Charities, and government agency known as the Division of Individual Guidance. The children placed at West Oakland Home through Alameda County were typically from troubled backgrounds and had a variety of educational and behavioral issues that the staff were not completely equipped or trained to handle. In 1941, the West Oakland Home housed 70 children, a significant increase from 56 the year before. As indicated in a 1943 report, likely prepared for a license renewal application, the West Oakland Home was no longer primarily an orphanage.[60]

As Second World War efforts increased, resources for child services declined in Oakland and Works Progress Administration (WPA) workers (who had been employed by West Oakland Home since the Great Depression) were no longer available to assist with childcare and other staff positions. The institution faced competition for female workers, with the increase in defense jobs in the area. The number of foster homes in Alameda County was also decreasing at this time, and the county observed insufficient childcare programs, boarding homes, emergency placement facilities, as well as child psychological services.

Although fewer children were referred to West Oakland Home after the war, the organization shifted to handling children with increasingly severe developmental and psychological problems. Beginning in 1946, reports began to use the term "emotionally disturbed," which likely referred to a variety of behaviors such as posttraumatic stress disorder, depression, or extreme anxiety. The organization underwent several significant changes in 1948, including the hiring of Clayton E. Nordstrom as Executive Director and the development of a staff with training in social work. West Oakland Home was also finally renamed, nearly twenty years after moving out of West Oakland, to Lincoln Home for Children.[61]

By 1947, likely in the years immediately following the war, the Executive Cottage (Building 4) and adjacent workshop garage (Building 10) were constructed **(Figure 172)**. In 1948, a small addition was constructed to expand the available office space with in the Junior Alliance Hall (Building 0). By the late 1940s, aerial photographs appear to indicate that the former residence, barn and other outbuildings associated with the previous owners of the property had been demolished.

[59] Root, "A History of the Lincoln Families Organization, 13.
[60] Ibid, 13-5.
[61] IBid, 16.

Figure 172. 1947 aerial photograph of the Lincoln Avenue campus. Approximate property boundary indicated in orange. Source: Clyde H. Sunderland Photographs, Flight AV-11, March 24, 1947, David Rumsey Map Collection.

1950-1959

Lincoln Home for Children experienced a significant period of growth and change in the 1950s. At the beginning of the decade, the campus consisted of five buildings (Buildings 0, 1, 2, 4, and 10) **(Figure 173)**. The Lincoln Home for Children also made strides toward fully embracing new models of child services, which had begun in the late 1940s. Executive director Nordstrom summarized the evolved philosophy stating, "Institutions are no longer considered to be a complete service in themselves but are a part of total care for children which includes care of children in their own homes, foster homes, and institutions."[62] In 1950, the Lincoln Home for Children merged with the Children's Agency, a foster care agency, and the DeFremery House of the Children's Guild, creating a more integrated service model and allowing the Lincoln Home for Children to hire more staff such as a recreational specialist who could coach children on fair play and anti-bullying. Notably, a Child Welfare League of America report called the newly merged organization a "non-sectarian interracial agency," which is the first documented evidence of the organization being reintegrated since the 1920s.[63]

In 1952, the estate of Edward Adolphus and Annie E. Bushell bequeathed approximately $350,000 to Lincoln Home for Children, a substantial amount of money that allowed the institution to plan an expansion of the facilities. In 1955, James Mann took over as executive director and a school classroom was opened on campus for the first time.

[62] Quoted in Root, "A History of the Lincoln Families Organization, 16, from "Executive's Report, October 18, 1950," Lincoln Archives.
[63] Quoted in Root, "A History of the Lincoln Families Organization, 16, from "Report of Membership Study of Children's Foster Care Services, Oakland, California, May 1953," 9. Lincoln Archives.

An act of arson by one of the resident children resulted in damage to several bedrooms in the girls' dormitory (Building 2) in 1952.[64] By the mid-1950s, the Lincoln Home for Children exclusively served "emotionally disturbed" children, which created some tensions amongst members, volunteers and donors who, according Ann Root's account of the school's history, were "dismayed by the damage to the home caused by the residents." In addition to the 1952 fire, two fires occurred in 1956, one at the Junior Alliance Hall (Building 0) and another at the boys' dormitory (Building 1) **(Figure 174)**.

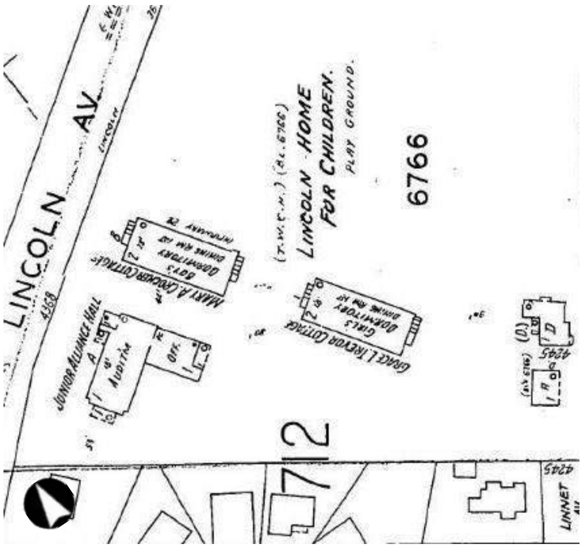

Figure 173. 1951 Sanborn fire insurance map. Junior Alliance Hall (Building 0), Mary A. Crocker Cottage (Building 1), Grace L. Trevor Cottage (Building 2), and the Executive Cottage, also known as Linnet/Ethel Moore Cottage (Building 4) and the garage (Building 10) are all shown. Source: San Francisco Public Library.

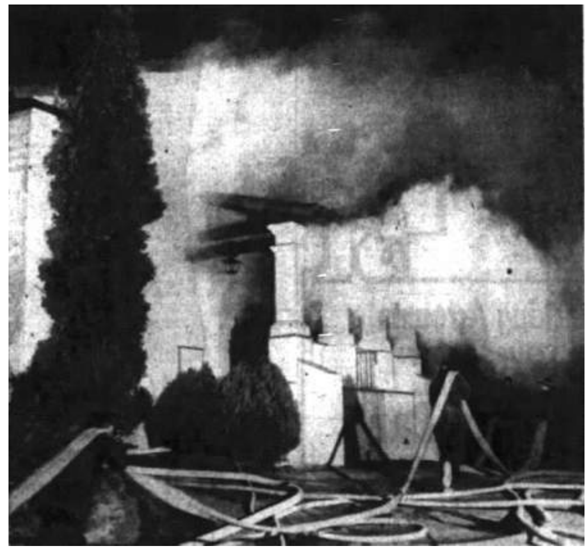

Figure 174. Junior Alliance Hall (Building 0), particularly the gym, was badly damaged in a fire in 1956. Smoke seen coming out of the main entrance on the primary (southwest) façade. Source: "Arson," Oakland Tribune, February 15, 1956, 3.

In the 1950s, Lincoln Home for Children offered three main services: consultation, a foster home program, and residential treatment. The consultation services were part of the intake process, and in part helped the staff and parents or guardians determine whether foster care or residential treatment were suitable for a child. The residential treatment program, which included individual and group therapy, was greatly improved with the construction of Bushell Cottage (Building 6), which included an attached kitchen and dining hall (Building 7), in 1958 and the remodeling of Building 1 to accommodate classrooms and offices in 1959 **(Figure 175)**. The Bushell Cottage and Kitchen & Dining Hall buildings, designed by architect Gerald McCue, were named after the donors who had left money to the institution in 1952 **(Figure 176)**. A landscaped playground area with modern play equipment, designed by Robert Royston, was also constructed in the late 1950s, creating a more cohesive connection between the seven building dedicated to Lincoln Home for Children **(Figure 177)**.

[64] "90 Flee as Fire Perils Apartment House Here," *Oakland Tribune*, June 23, 1952, 19.

Figure 175. 1958 aerial photograph of the Lincoln Avenue campus. Bushell Cottage (Building 6) appears to be near completion, but the attached Bushell Kitchen & Dining Hall (Building 7) has not yet been constructed, but would be completed by the end of the year. Approximate property boundary indicated in orange. Source: Cartwright and Co., Flight BUU-158, Frame 4V-19, August 13, 1958, University of California, Santa Barbara, FrameFinder.

Figure 176. Rendering of the landscaped play area west of Bushell Cottage. The landscape was designed by landscape architect Robert Royston and Bushell Cottage by architect Gerald McCue, and bother were built in 1958. Source: "$250,000 Construction Job Under Way at Lincoln Home," *Oakland Tribune*, June 29, 1958, 13.

Figure 177. Landscaped play area, including unique sculptural play equipment, and Bushell Cottage as constructed, pictured in 1961. Source: "Mrs. McWade's Dream," *Oakland Tribune*, February 19, 1961, M-5.

The development of the Lincoln Home for Children campus continued to be located on the west half of the site, with much of the remaining area left wild and undeveloped. However, in 1957, the organization leased a portion of the site along Charleston Street to the East Bay Activities Center

(EBAC), now known as East Bay Agency for Children. EBAC's stated mission at the time was "To offer a limited group of emotionally disturbed or mentally ill children the same educational and recreational opportunities which contributed to the physical well-being and social growth of all children," which aligned with the mission of the Lincoln Home for Children, although the institutions functioned separately.[65] The EBAC constructed a building to accommodate educational day schooling in 1957, which was then expanded over the years.

1960-1969

In 1961, the institution's name changed again to Lincoln Child Center (LCC).[66] In her unpublished history of LCC, "A History of the Lincoln Families Organization, 1883 to 2016," Ann Root says of the 1960s,

> Reading through the minutes of Lincoln's board meetings in the decade from 1961 to 1970 reveals an organization grappling with becoming an agency that would be on the front lines in the fight against poverty, and social injustice in the East Bay through their work to provide mental health services for children. Beginning in 1961, Lincoln was being asked to accept more public cases than ever before for both day and residential treatment.[67]

LCC opened its first group home in 1965, which operated like a long-term foster placement with several children under the care of the same adult, or adults, and at which many children stayed until turning 18. The next year, LCC started offering tutoring workshops to "troubled youth" in Oakland public schools in order to bring them up to grade-level proficiency. In 1967, LCC reported that it had 31 children in foster homes, 19 in residential treatment, 4 in day treatment, and 50 in tutoring workshops. To accommodate the still changing services and needs of the organization, Building 2 was extensively remodeled in 1967 to be converted from residential use to have classrooms, offices, a group therapy room and several activity rooms. The only new building constructed in the 1960s on the LCC campus was a maintenance garage (Building 5) built in 1967, immediately northeast of Building 1.

[65] Gail Baxter, "A History of the East Bay Activities Center" (Oakland, California, April 1980), 4, accessed March 11, 2019, http://www.ebac.org/downloads/EBAC%20History%20by%20Gail%20Baxter%201980.pdf.
[66] Suzette, "A Rose by Any Other Name," *Oakland Tribune*, January 24, 1961.
[67] Root, "A History of the Lincoln Families Organization, 18.

Figure 178. 1965 aerial photograph of the Lincoln Avenue campus. Source: Cartwright Aerial Surveys, Flight CAS-65-130, Frame 7-30, May 14, 1965, University of California, Santa Barbara, FrameFinder.

1970-1979

In 1971, the Executive Cottage (Building 4) was expanded to accommodate four new bedrooms as a boys' group home and renamed Linnet Cottage. A third group home was opened in 1976. While one of the boys' group homes was on campus in Linnet Cottage (Building 4), the other two group homes were located at off-campus, the Nicol Boys' Group Home at 2841 Nicol Avenue and the Vernon Girls' Group Home at 560 Vernon Avenue in Oakland.[68] Also in 1971, the Junior Alliance Hall (Building 0) was remodeled to accommodate the Royce School for Boys, which is discussed in greater detail below in **Section III. Historic Context: Head-Royce School**.

In 1973, LCC renamed its off-campus East Oakland tutoring workshop the Marcus Foster Tutoring Workshop after the first black superintendent of the Oakland Unified School District and husband of LCC board member Abbe Foster, who was murdered by members of the Symbionese Liberation Army (SLA).[69] Executive director James Mann resigned in 1974, and was succeeded by Violet Feinauer, who had worked at LCC since 1958. By the end of the decade, LCC was running six programs, which included residential treatment, day treatment, group homes, consultation, tutoring workshops, and after care, serving some 700 children and families each year. The types and number of programs offered by LCC had increased greatly since the organization moved to Lincoln Avenue in 1930, and even since the 1950s. No new buildings were constructed on the campus during the 1970s.

1980-2013: Contemporary Developments

In 1980, LCC employed 83 staff members, although not all worked on the Lincoln Avenue campus. At the time, Mary A. Crocker Cottage (Building 1) was being used for administrative offices,

[68] "Lincoln Child Center – Facts, 1979-1980," Lincoln Child Center (September 1980), in Children/Child Care (Other Than Clippings) file, Oakland Public Library, Oakland History Center.
[69] Root, "A History of the Lincoln Families Organization, 20-1.

residential school rooms, residential casework and group home casework. Grace L. Trevor Cottage (Building 2) was being used for day treatment, classrooms, casework, and the Board of Directors' office. The EBAC Building (Building 8) was not being used, as EBAC moved across the street to their permanent facilities at the end of 1979. The Head-Royce School continued to lease the Junior Alliance Hall (Building 0).[70] In 1983, LCC struggled with a deficit as the national economy was in a recession, and the organization further struggled to find qualified foster parents.[71] In the same year, Oakland Public Schools, also struggling during the recession, debated cutting off contracts with nonprofit agencies, but LCC and other agencies such as EBAC were able to successfully negotiate contracts with Oakland Public Schools. Also in 1983, Violet Fainauer retired and was replaced by Mary Ann McKale, who served for 19 years in her capacity as executive director.[72]

In 1987, LCC became an accredited public school. It opened several new programs, including the Intensive Residential Treatment (IRT) program, and began using the Junior Alliance Hall (Building 0) for children's programming.[73] In 1990, a two-room portable classroom (Building 3) was installed on campus, adjacent the Linnet Cottage (Building 4), and a middle school program was established. In 1997, all off LCC's group homes were closed, perhaps as a reflection of public and government agency sentiments which favored providing treatment and services to children in their own home, as opposed to in residential programs.[74] In her 1998 vision statement for Lincoln Child Center, McKale emphasized a desire to provide a diversity of services, beyond just mental health care, at schools and community centers, and to involve the greater community of parents, families, donors, and community leaders. In line with the broader community engagement of LCC in the late twentieth century, in 1999, LCC had a variety of programs in 12 schools in Alameda and Contra Costa counties and leased three sites in Pittsburg and Oakland.[75] A new 16-room residential treatment facility, the Virginia and Malcom Champlin House (Building 9) was completed in 2000, and provided more modern amenities for residential care on the campus **(Figure 179 and Figure 180)**.

After being diagnosed with breast cancer in 1999, Mary Ann McKale died in 2004. McKale's accomplishments at Lincoln Child Center over 19 years included growing the budget from $1 million to $18.5 million, increasing the staff to 300 employees, and serving from 2,000 to 2,5000 children and families each year through residential and day treatment on the Lincoln Avenue campus as well as community programing throughout the area. McKale was succeeded by Dr. Richard Clark President and CEO, then Christine Stoner-Mertz in 2006.

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[70] "Lincoln Child Center – Facts, 1979-1980," Lincoln Child Center (September 1980), in Children/Child Care (Other Than Clippings) file, Oakland Public Library, Oakland History Center.
[71] Root, "A History of the Lincoln Families Organization, 22-3.
[72] Ibid, 23.
[73] Root, "A History of the Lincoln Families Organization, 24; and "History of Lincoln," Lincoln, accessed April 3, 2019, http://lincolnfamilies.org/about/history.
[74] "History of Lincoln," Lincoln, accessed April 3, 2019, http://lincolnfamilies.org/about/history; Root, "A History of the Lincoln Families Organization, 26.
[75] "History of Lincoln," Lincoln, accessed April 3, 2019, http://lincolnfamilies.org/about/history.

Figure 179. 1999 site plan of the subject property prepared by Byrens Associates Architecture and Planning, dated April 12, 1999. Source: Byrens Associates Architecture.

Figure 180. Rendering of Malcom Champlin House (Building 9) by architects Byrens Associates on the cover sheet of a drawing set dated April 12, 1999. Source: Byrens Associates Architecture.

Stoner-Mertz made the decision to close down Lincoln Child Center's 128-year residential program in 2011, due to the fact that program was losing some $2 million a year. In 2010, LCC had opened its Project Permanence Program, a home-based program for families and youth as they transitioned out of foster care or the juvenile justice system, at 1244 14th Street in West Oakland. After closing the residential program, LCC decided to sign a long-term least on the 14th Street property, move all operations to West Oakland just blocks from Rebecca McWade's original West Oakland Home facilities, and sell the Lincoln Avenue property.[76] In February 2013, the Head-Royce School purchased the subject property at 4368 Lincoln Avenue from Lincoln Child Center.[77]

EAST BAY ACTIVITIES CENTER (EBAC)

When first formed in 1952 as the Berkeley Activities Center, the small organization was made up of several concerned parents and clinical psychologists who wanted to provide an alternative to residential care or home schooling for "emotionally disturbed" children. The stated goal of the organization was to provide "the same educational and recreational opportunities which contribute to the physical well-being and social growth of all children." The founders of the organization included Elizabeth Faragoh, a mother, Dr. and Mrs. Hurbert Coffeey, a clinical psychology professor at University of California, Berkeley, and Dr. Phyllis Van Vleet, a clinical psychologist at the Berkeley Public School System.[78] A history of the organization written by Gail Baxter, compiled based on interviews with members of the organization, stated of the early mission, "Implicit in the philosophy was the thought that, while progress might take place, criteria for acceptance into the program would not be based upon likelihood of success. The Center was conceived as a pilot project, to pioneer in action-research with children who were more emotionally disturbed than neurotic. An additional goal was to offer a training facility for teachers and counselors in the field."[79] Betty Meredith-Jones, who worked at the physical education department of University of California, Berkeley and had experience with dance therapy, was the first executive director of the organization.

The organization was renamed the East Bay Activity Center (EBAC) in 1954.[80] When first formed, EBAC met at various playgrounds, parks and school facilities, including Tilden Park, 2352 Broadway and Bushrod Playground in Oakland.[81] However, EBAC sought more permanent facilities in order to provide adequate services, and in 1957, signed a ten-year lease for a portion of the Lincoln Child Center's campus on Lincoln Avenue for no fee.[82] EBAC hired architect Robert Ratcliff to build a modest building for classrooms and day treatment, which was completed in 1957. The building, addressed 2525 Perkins Road (later addressed 2545 Charleston Street), is located at the northwest corner of campus, accessed via Charleston Street **(Figure 223)**. A chain-link fence surrounded the building and a playground area, which consisted of unmanicured grass, playground equipment, several play houses and storage sheds, and a sandbox. Several additions were made to the building while it was occupied by EBAC, as well as after EBAC moved out of the building, which are discussed in detail below in **Section IV. Individual Building Construction Chronologies: Building 8 (EBAC/Charleston House/Holmgren)**.

[76] Root, "A History of the Lincoln Families Organization, 28.
[77] Grant Deed, Document Number 2013-57629, February 7, 2013, Alameda County Assessor-Recorder.
[78] Gail Baxter, "A History of the East Bay Activities Center" (Oakland, California, April 1980), 4, accessed March 11, 2019, http://www.ebac.org/downloads/EBAC%20History%20by%20Gail%20Baxter%201980.pdf.
[79] Baxter, "A History of the East Bay Activities Center," 4.
[80] The organization has often been referred to as the "East Bay Activity Center" in many newspaper articles and other contemporaneous sources, but the organization uses the name East Bay Activities Center on their website; "EBAC – Our History," East Bay Agency for Children, accessed April 4, 2019, https://www.ebac.org/about/history.asp; and Baxter, "A History of the East Bay Activities Center," 8.
[81] "Children Get Larger Center," *Oakland Tribune*, September 16, 1955, 7.
[82] Baxter, "A History of the East Bay Activities Center," 12.

When EBAC opened their first permanent facility on the Lincoln Child Center campus, according to newspapers and the school's own history, they were the only such day school for "emotionally disturbed" children in the West.[83] EBAC pioneered efforts to provide adequate psychological and educational services to children with emotional, psychological or developmental disabilities in the East Bay. Mental and emotional disorders were highly stigmatized in the 1950s through the 1970s when EBAC was founded and growing. In 1975, the popular film *One Flew over the Cuckoo's Nest* exemplifies common perceptions about mental illness and psychiatry. A less well known short documentary film by Bruce Baillie, *Here I Am* (1962) was filmed at the East Bay Activities Center **(Figure 181 and Figure 182)**. An experimental filmmaker from South Dakota, Bruce Baillie founded Canyon Cinema in San Francisco, and his film *Castro Street* (1966) was selected for preservation in the United States' National Film Registry in 1992. One film critic said of *Here I Am*, "It's Baillie's way of allowing these marginalized, oft-forgotten kids to say, I am here, I'm a person too, I deserve some attention too."[84] EBAC typically cared for about 20 children ages two to twelve at their five-day-a-week program.

Figure 181. Still from Bruce Baillie's film *Here I Am* (1962) showing the EBAC building. Source: Bruce Baillie, *Here I Am* (1962), Oakland, film, 7:21, accessed via YouTube.

Figure 182. Still from Bruce Baillie's film *Here I Am* (1962) showing the play area outside the EBAC building. Source: Bruce Baillie, *Here I Am* (1962), Oakland, film, 6:14, accessed via YouTube.

EBAC occupied the building on Lincoln Child Center's campus until 1979, when they were able to raise funds to purchase land to develop their own permanent building across the street at 2540 Charleston Street.[85] The organization is now known as the East Bay Agency for Children (still EBAC), and their Circle of Care program, which supports children and families dealing with a life-threatening illness or the death of loved ones, continues to be based at 2540 Charleston Street.

HEAD-ROYCE SCHOOL

The Head-Royce School has its origins in Berkeley in 1887 when Anna Head (1857-1932) established Miss Head's Preparatory School for Girls, located at a house on Channing and Dana streets.[86] In 1892, the school moved to Channing and Bowdich streets in Berkeley, into a First Bay Tradition style building designed by Soule Edgar Fisher, Head's second cousin **(Figure 183)**. In 1909, Head retired

[83] "School for Emotionally Disturbed Children Opens," *Oakland Tribune,* October 24, 1957, 24.
[84] Ed Howard, "Here I Am," Fandor, accessed April 4, 2019, https://www.fandor.com/films/here_i_am.
[85] Ibid, 64, 66.
[86] All information in this section is adapted from "The History of Head-Royce School," Head-Royce School, accessed March 8, 2019, https://www.headroyce.org/about-us/school-history, unless otherwise noted.

and sold the school to Mary E. Wilson, who was a teacher at the school. When she purchased the school, Wilson also became the school's headmistress and served in that capacity for 29 years. Wilson changed the name of the school to the Anna Head School for Girls in 1919. During the 1910s and 1920s, architect Walter H. Ratcliff, Jr. designed several buildings for the school. Wilson sold the school to Theopholis Rogers "T. R." Hyde and Lea Hyde, née Hodge, when she retired in 1938. Lea Hyde was a friend of Wilson and fellow graduate of Smith College, and T. R. Hyde had worked as the headmaster of Bolles Military School and Chestnut Hill Academy.

In 1950, Daniel and Catherine Dewey purchased the school and in 1956, the Anna Head School for Girls was the first independent school in the Bay Area to integrate. Under the Dewey's leadership, the school became a non-profit in 1963. University of California, Berkeley acquired the school's property through eminent domain and in 1964, the Anna Head School moved to a six-acre parcel on Lincoln Avenue, directly across the street from the subject Property at 4368 Lincoln Avenue **(Figure 184)**.

Figure 183. Miss Head's Preparatory School for Girls building at Channing and Bowdich streets in Berkeley, designed by Soule Edgar Fisher in 1892. Source: Head-Royce School.

Figure 184. Original entry arch for newly constructed the Anna Head School for Girls on Lincoln Avenue in Oakland (c. 1964; since demolished). Source: Head-Royce School.

In 1971, the Anna Head School Board of Trustees established the Josiah Royce School for Boys, named after Anna Head's brother-in-law **(Figure 185)**. The school opened with 27 boys in 7th, 8th, and 9th grades and was located in a leased building on the Lincoln Child Center campus across the street. The school leased the Junior Alliance Hall (Building 0), as well as playing fields to the south of the building and at the north end of the Lincoln Child Center Campus (now the parking lot for Building 9), until 1982.[87] In 1974, the schools were collectively renamed The Head-Royce Schools, and in 1979 the schools become co-educational and are again renamed to The Head-Royce School **(Figure 186)**. The campus underwent a major expansion in 1984 when the school purchased eight acres of adjacent property. Over the next several decades a gym, pavilion, new Upper School, new Lower School, and World Languages buildings would be constructed, as well as new athletic fields. In February 2013, the Head-Royce School purchased the subject property at 4368 Lincoln Avenue from Lincoln Child Center.[88] Head-Royce School uses the subject property for parking and the facilities department uses Building 5 and several rooms in the first story of Building 1; however, all other buildings on the subject property have been unoccupied and used for storage since 2013.

[87] "Lincoln Child Center – Facts, 1979-1980," Lincoln Child Center (September 1980), in Children/Child Care (Other Than Clippings) file, Oakland Public Library, Oakland History Center.
[88] Grant Deed, Document Number 2013-57629, February 7, 2013, Alameda County Assessor-Recorder.

Figure 185. The Royce School for Boys, established in 1971 was originally located in the leased Junior Alliance Hall (Building 0) on the Lincoln Child Center campus (1970s). Source: Head-Royce School.

Figure 186. Looking north from Lincoln Avenue over the newly co-ed Head-Royce School campus (c. 1979). Source: Head-Royce School.

ARCHITECTS & LANDSCAPE ARCHITECTS

This section includes information about the architects and landscape architects who are known to have designed buildings or landscapes on the Head-Royce School South Campus that are more than 45 years old. Architects responsible only for additions or alterations to buildings are not discussed.

Reed & Corlett/William G. Corlett, Jr. (Buildings 0, 1, and 2)

Walter D. Reed, Sr.

Walter D. Reed, Sr. (1896-1933) was born in 1896 in California and graduated from high school in Berkeley before attending the Massachusetts Institute of Technology (MIT).[89] In 1900, Reed worked as a bookkeeper for his father's planing mill before partnering with architect Charles W. Dickey to form Dickey & Reed in about 1903. Dickey & Reed's short-lived partnership, lasting until 1908, produced several known projects including a grocery store at 4030-42 Piedmont Ave (1905-07) and a house at 361 Warwick Avenue (1908). Reed then partnered with F. H. Meyer for several years between 1910 and 1912. In 1912, Reed partnered with William G. Corlett, Jr. to establish the firm Reed & Corlett.

William Greenfield Corlett, Jr.

William Greenfield Corlett, Jr. (1887-1954) was born in 1887 in California to pioneer Napa residents.[90] Corlett received his Bachelor of Architecture from University of California, Berkeley in 1910, and was also a licensed structural engineer.[91] In 1912, Corlett partnered with Walter D. Reed as the firm Reed & Corlett, which lasted until Reed's death in 1933. Subsequently, Corlett maintained an individual practice in Oakland until his retirement in 1944. Corlett's *Oakland Tribune* obituary noted that Henry Gutterson was his "long-time partner" in architecture.[92] While in independent practice,

[89] "Walter Dickson Reed Sr. (Architect)," Pacific Coast Architecture Database (PCAD), accessed March 5, 2019, http://pcad.lib.washington.edu/person/6228/.
[90] California, Death Index, 1940-1997; and "Will G. Corlett, Noted Oakland Architect, Dies," *Oakland Tribune*, October 10, 1954.
[91] "William G. Corlett Jr. (Architect)," Pacific Coast Architecture Database (PCAD), accessed March 5, 2019, http://pcad.lib.washington.edu/person/3526;
[92] "Will G. Corlett, Noted Oakland Architect, Dies," *Oakland Tribune*, October 10, 1954, 1.

Corlett worked as the consulting architect and engineer for Oakland Public Schools from 1933 to 1938, and is credited with the designs for Oakland High School, McClymonds High School, and a circular building for Berkeley High Community Theater. He also designed the Oakland Exposition Building, Napa Junior College, and Peralta, Fairmont and Palo Alto Hospitals. Corlett lectured at University of California, Berkeley in 1924-25, and served as the chairman of the advisory board for the State Department of Public Works, division of architecture from 1933 to 1938.[93]

Corlett was a member of the American Institute of Architects, American Society of Civil Engineers, and American Society of Structural Engineers.[94] William G. Corlett, Jr. was inducted into the American Institute of Architect (AIA) College of Fellows in 1968, which is one of the highest national honors in field.[95] When Corlett died in 1954, his *Oakland Tribune* obituary stated that Corlett was "an architect whose fame rests securely in the Oakland skyline."[96] Corlett's son, William G. Corlett III, also became an architect, forming the firm Corlett & Spackman which is noted for their design collaboration with Ernest Born on the Glen Park BART Station (1970) in San Francisco.[97]

Reed & Corlett

Reed & Corlett was an architecture firm formed by Walter D. Reed and William G. Corlett, Jr. in 1912. Originally based in San Francisco, they soon moved their offices to Oakland. The firm is known for a variety of institutional, industrial and commercial buildings. Among the dozens of buildings that the firm built in Oakland, several notable examples include the iconic Mutual Stores Office and Warehouse Building (built 1928, 5701 International Boulevard), an early twentieth century commercial building with Renaissance and Baroque revival ornamentation including polychromatic terracotta and a large tower, and the Hebern Electric Code Company Building at 801 Harrison Street (built 1923), a twentieth century commercial building with Gothic ornamentation **(Figure 187 and Figure 188)**. Reed & Corlett designed an 18-story tower addition to the Oakland Bank of Savings at 1200 in 1923; Charles W. Dickey had designed the original eight-story Beaux-Artes style building in 1907, and Walter D. Reed assisted with the second phase of construction. Reed & Corlett also designed the 15-story Art Deco style Financial Center Building at 401-415 Fourteenth Street in Oakland in 1929. The firm was adept in numerous architectural styles, from Art Deco to revival styles such as Spanish Colonial, Renaissance and Baroque revivals, and had a significant impact on the architectural development of Oakland in the 1920s. The firm dissolved after Reed's death in 1933.[98]

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[93] Ibid.
[94] AIA Historical Directory of American Architects; and "Will G. Corlett, Well-Known Architect, Dies," *San Francisco Chronicle*, October 29, 1954, 34.
[95] "2017 AIA College of Fellows History & Directory," American Institute of Architects (2017), 141, accessed March 7, 2019, https://issuu.com/aiacollegeoffellows/docs/faia_20directory.
[96] "Will G. Corlett, Noted Oakland Architect, Dies," *Oakland Tribune*, October 10, 1954, 1.
[97] Prepared by Mary Brown, *San Francisco Modern Architecture and Landscape Design 1935-1970: Historic Context Statement-Final Draft* (San Francisco: San Francisco Planning Department, January 12, 2011), 272.
[98] List of projects built in Oakland by Walter D. Reed and Reed & Corlett provided by Oakland Cultural Heritage Survey archive.

Figure 187. Mutual Stores Offices and Warehouse at 5701 International Boulevard, Oakland, designed by Reed & Corlett, built in 1928. Source: Page & Turnbull, June 14, 2018.

Figure 188. Hebern Electric Code Company Building at 801 Harrison Street, designed by Reed & Corlett, built 1923. Source: Computer History Museum.

Gerald M. McCue (Buildings 6 and 7)

Gerald Mallon McCue (b. 1928) was born in Woodland, California, and graduated from University of California, Berkeley with a bachelor's degree in 1951 and a master's degree in architecture in 1952. McCue worked as a draftsman for Berkeley architect Henry Gutterson (who had worked with William Corlett) while in school, then as a designer for J. P. Milano in San Francisco. In 1953, Milano and McCue partnered to form Milano and McCue Architects, a short-lived firm which disbanded in 1954. McCue then formed Gerald M. McCue and Associates in 1954, based in San Francisco, which he ran until 1970. McCue then formed McCue Boone Tomsick, Architects, which was known as MBT Associates by 1984. [99] MBT Associates began operating offices in Seattle, as well as San Francisco, in 1997, until it was acquired by Perkins+Will in 2005.[100]

Gerald McCue was inducted into the American Institute of Architect (AIA) College of Fellows in 1968, which is one of the highest national honors in field.[101] McCue also taught at the University of California, Berkeley College of Environmental Design from 1954 to 1970, and was named chairman of the architecture department in 1965.[102] In 1976, McCue moved across the country to work as Professor of Architecture and Urban Design, Chairman of the Department of Architecture, and Associate Dean of the Faculty of Design at Harvard Graduate School of Design (GSD). In 1980, McCue began a 12-year tenure as Dean of Harvard GSD. McCue retired in 1995 after three years as the John T. Dunlop Joint Professor in Housing Studies at Harvard's John F. Kennedy School of Government.[103] The Gerald M. McCue Professorship of Architecture was established in his name at the Harvard Graduate School in 2002.[104]

McCue's practice included master planning, private residences, and projects for public and corporate clients. Several notable Modernist residences designed by McCue in the East Bay include his first

[99] "CCAIA firm of the year: MBT Associates," *Architecture California* 6, no. 5 (September/October 1984): 13.
[100] "MBT Associates, Architects (Partnership," Pacific Coast Architecture Database (PCAD), accessed March 7, 2019, http://pcad.lib.washington.edu/firm/3015/.
[101] "2017 AIA College of Fellows History & Directory," American Institute of Architects (2017), 141, accessed March 7, 2019, https://issuu.com/aiacollegeoffellows/docs/faia_20directory.
[102] Anthony Alofsin, The Struggle for Modernism: Architecture, Landscape Architecture, and City Planning at Harvard (New York: W. W. Norton & Company, 2002), 299.
[103] Ibid.
[104] "Harvard University History of Named Chairs: Sketches of Donors and Donations, 1991-2004," Harvard University (Cambridge, Massachusetts: Harvard University, 2004), 30, 209, and 290-91, accessed March 7, 2019, https://alumni.neurosurgery.mgh.harvard.edu/docs/Harvard_Professorsips_Book_1991-2004.pdf

personal and second residences at 157 Fairlawn, Berkeley (1955) and 2902 Buena Vista, Berkeley (1968); the Milligan-Wool House at The Sea Ranch in Northern California (1968); and the Epstein House in Orinda, California (1975) **(Figure 189 and Figure 190)**. Other notable public, institutional and commercial projects by Gerald McCue and MBT Associates include the 88-Inch Cyclotron for Lawrence Radiation Laboratory at University of California, Berkeley (1960); Fire Station No. 2 in Berkeley (1966); Research Lab D at the Chevron Corporation Richmond Refinery (1967); a rocket testing station at Ames Research Center at Moffett Field (1968); the Life Sciences Building at Mills College in Oakland (1969); Santa Teresa Lab (STL) for International Business Machines (IBM) in San Jose (1977) and the Almaden Research Center for IBM in San Jose (1986); Los Gatos Civic Center Project; and Oakes College at University of California, Santa Cruz (1978) **(Figure 191-Figure 194)**.[105]

Figure 189. 157 Fairlawn, Berkeley, designed in 1955 by Gerald McCue as his first personal residence. Source: Edificionado: Notable Bay Region Real Estate, accessed March 7, 2019, https://edificionado.wordpress.com/2018/12/06/157-fairlawn-berkeley-2/

Figure 190. Milligan-Wool House at The Sea Ranch in Northern California, designed by Gerald McCue in 1968. Source: Eichler Network.

Figure 191. Research Lab D at the Chevron Corporation Richmond Refinery designed by Gerald McCue, built in 1967. Source: Pintrest.

Figure 192. Oakes College at University of California, Santa Cruz, built in 1978, designed by Gerald McCue with McCue Boone and Tomsick (2003). Source: Photographer Alan Nyiri, Atkinson Photographic Archive, University of California History Digital Archives.

[105] "McCue, Gerald (Mallon)," in *Contemporary Architects,* ed. Muriel Emanuel (New York: St. Martin's Press, 1980), 530-31.

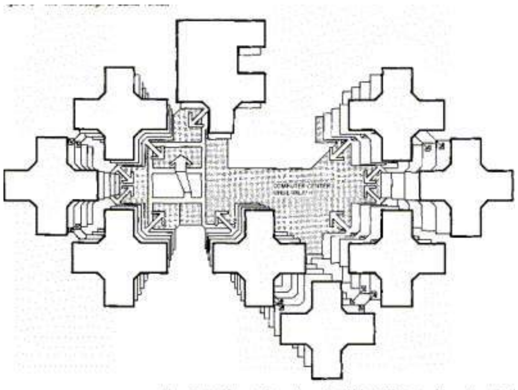

Figure 193. Diagram of plan for IBM Santa Teresa Laboratory in San Jose, designed by Gerald McCue with McCue Boone and Tomsick (1975-1977). Source: Gerald McCue, "IBM's Santa Teresa Laboratory – Architectural Design for Program Development," *IBM Systems Journal* (1978).

Figure 194. IBM Santa Teresa Laboratory in San Jose, designed by Gerald McCue (1977). Source: Photographer G. E. Kidder Smith, MIT Libraries Dome.

Robert W. Ratcliff (Building 8)

Walter H. Ratcliff Jr. (1881-1973) founded an architecture firm in 1906 which still exists today, making it one of the longest running architectural firms in in the Bay Area.[106] Ratcliff graduated from the University of California Berkeley in 1903 and apprenticed under John Galen Howard, with whom he then went into a short-lived partnership. Ratcliff started his own firm in 1906 upon receiving his license and practiced extensively in the Bay Area initially in the Arts & Crafts style. Ratcliff's career spanned fifty years during which time he deployed a range of architectural styles primarily practicing in the East Bay, working as the campus architect for Mills College then Berkey's city architect, and completing over 600 commissions.

Walter Ratcliff's son, Robert W. Ratcliff (1913-1998), and another long-time employee of the firm, Scott Haymond, joined Walter Ratcliff as owners of the firm in 1945. Practicing as Ratcliff, Haymond & Ratcliff, the firm continued to work primarily in Berkeley during the postwar years, focusing on residential work. Between 1953 and 1960, the father and son practiced as Ratcliff and Ratcliff, building housing for the University of California, as well as fraternity and sorority residences, and private residences **(Figure 195)**. During this postwar era, Robert Ratcliff shifted away from his father's Arts & Crafts and revival style influences, embracing the architectural mode of Modernism.

Walter Ratcliff retired in 1955, after which point Robert Ratcliff and two associate architects, Murry A. Slama and A. Burns Cadwalader renamed the firm Ratcliff, Slama & Cadwalader in 1961. During this period, the firm expanded to become one of the largest firms in the East Bay, and the commissions became increasingly large and diverse, including parks, historic renovation, public housing, health facilities, and large civic projects. The firm was renamed The Ratcliff Architects in 1978, and Ratcliff's grandson, Christopher "Kit" P. Ratcliff joined the firm in 1982. In 1996, the firm merged with Crosby Helmich Architects, then was renamed Ratcliff in 2000. Robert Ratcliff died in 1998, but the firm continues to practice with Kit Ratcliff as one of several principals.

The firm possesses a wide-ranging portfolio of buildings spanning 100 years including: numerous private residences, the Anna Head Residence (1911), eight buildings on the Anna Head School

[106] "Legacy," Ratcliff, accessed March 6, 2019, https://ratcliffarch.com/studio/legacy/.

campus (1910s-20s), The Elks Club in Berkeley (1913), Chamber of Commerce Building/Wells Fargo Bank in Berkeley (1925-1927), the Hillside School in Berkeley (1925), Berkeley Day Nursery (1927), University of California, Berkeley Fernwald Dorm (1945), Berkley Fire Station No. 4 (1959), Pacific School of Religion Holbrook Library (1960), Episcopal Church of the Resurrection in Pleasant Hill (1961), PG&E Engineering Research Center (1967), the Oakland Airport Terminal II Expansion (1985), and the renovation of University of California, Berkeley Doe Library (2008) **(Figure 196 and Figure 200)**.[107]

Figure 195. Walter (left) and Robert Ratcliff (right). Source: Ratcliff, ratcliffarch.com.

Figure 196. Anna Head Residence, built by Walter Ratcliff in 1911. Source: Ratcliff, ratcliffarch.com.

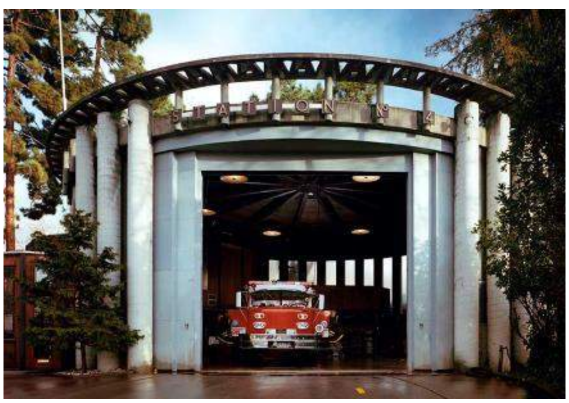

Figure 197. Berkeley Fire Station No. 4, designed by Robert Ratcliff in 1959. Source. Ratcliff, ratcliffarch.com.

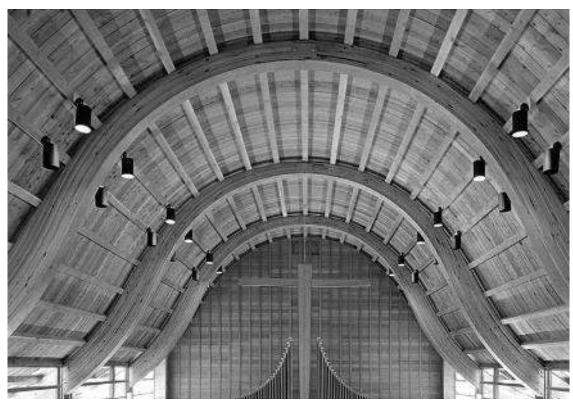

Figure 198. Episcopal Church of the Resurrection in Pleasant Hill, designed by Ratcliff, Slama & Cadwalader in 1961. Source. Ratcliff, ratcliffarch.com.

[107] "Legacy," Ratcliff, accessed March 6, 2019, https://ratcliffarch.com/studio/legacy/; "Walter Ratcliff, Jr., Architect," Berkeley Historical Plaque Project, accessed March 6, 2019, http://berkeleyplaques.org/e-plaque/walter-ratcliff/.

Figure 199. PG&E Engineering Research Center, designed by designed by Ratcliff, Slama & Cadwalader in 1967. Source. Ratcliff, ratcliffarch.com.

Figure 200. Oakland Airport Terminal II expansion, designed by The Ratcliff Architects in 1985. Source. Ratcliff, ratcliffarch.com.

Robert Royston/Royston Hanamoto Beck & Abbey (Playground)

Landscape architect Robert Royston (1918-2008) led several firms throughout his career, which was informed greatly by his training at University of California, Berkeley and through his time spent under the mentorship of noted landscape architect Thomas Church in the early 1940s. In 1945, Royston teamed with Garrett Eckbo and Edward Williams to found the firm Eckbo, Royston, and Williams. The partnership which lasted until 1958, when Royston created a new partnership, Royston, Hanamoto, Alley, and Abbey. Royston's firm would have several iterations with different partners, including Royston Hanamoto Beck & Abbey (RHBA) between 1967 and 1974, then Royston Hanamoto Alley & Abbey, now known as RHAA.[108]

The following details of Robert N. Royston's life and career are excerpted from The Cultural Landscape Foundation's biography of Royston:

> One of California's foremost Modernist landscape architects, Royston earned a degree in landscape design from the University of California, Berkeley. […]
>
> Royston's innovative park work also began during the 1950s. His first major commission was the Standard Oil Rod and Gun Club (1950) located at the Standard Oil Refinery near Point Richmond, California, and was a recreation facility for workers at the refinery. Royston's carefully zoned design provided a gymnasium, swimming pools, imaginatively designed custom play equipment, family picnic areas, and several multi-use areas in a series of skillfully layered spaces on the site of a former skeet range and fishing pier. The biomorphic forms he employed were reminiscent of his residential design work. The facility was an immediate success and attracted the attention of Bay Area planners representing several municipalities. Royston soon was given important park and playground commissions, many of which gained attention in the national media. Among his more important works were Krusi Park in Alameda, Pixie Place in Marin County, Bowden and Mitchell parks in Palo Alto (1956), and, later, Santa Clara's Central Park (1960). Royston rejected the notion of parks as primarily outdoor gymnasiums catering to a narrow range of age groups. He envisioned parks as "public gardens" serving a wide range of users, including families, very young children, and the elderly. Many of his parks contain residential-scale

[108] "A Transition to the Public Realm," *The Landscape Architecture of Lawrence Halprin,* accessed April 17, 2019, https://tclf.org/sites/default/files/microsites/halprinlegacy/uc-santa-cruz.html.

elements such as pergolas and enclosed patio-like areas that create a sense of familiarity and intimacy. Royston also designed urban plazas, such as San Francisco's Portsmouth Square and St. Mary's Square (1952).

In 1958, Royston amicably left the firm of Eckbo, Royston, Williams, and formed a new professional office with Asa Hanamoto. The firm developed into Royston, Hanamoto, Alley and Abbey (RHAA) which is still in existence today.

Robert Royston is the recipient of many professional honors, including Fellow of the American Society of Landscape Architects, The American Institute of Architects Medal, and the American Society of Landscape Architects Medal, the highest award of that professional organization. In recent years, although officially retired, Royston remained active as a consultant to his firm and to clients engaged in the preservation and rehabilitation of his parks. He passed away at his home on September 19, 2008.[109]

Figure 201. Mitchell Park in Palo Alto, adjacent an Eichler Homes development, designed by Robert Royston in 1956. Source: RHAA, rhaa.com

Figure 202. Standard Oil + Rod Club in Richmond, California, designed by Royston in 1950. Source: RHAA, rhaa.com

Figure 203. St. Mary's Square Park on top of a parking garage in San Francisco, designed by Royston in 1957. Source: RHAA, rhaa.com

Figure 204. University of California, Santa Cruz, Quarry Amphitheater, designed by Royston, completed in 1967. Source: RHAA, rhaa.com

[109] Reuben M. Rainey and J.C. Miller, "Robert Royston," *The Cultural Landscape Foundation*, accessed April 17, 2019, https://tclf.org/pioneer/robert-royston.

SPANISH COLONIAL REVIVAL STYLE

Historically rooted in the building traditions of early Spanish and Mexican settlers of California and other Spanish colonies, the Spanish Colonial Revival style was popular in California and throughout the American Southwest from the early 1900s to the 1930s, with variations on the style continuing in popularity today. Earlier Hispanic Revival styles were rooted in regional interpretations of traditional Spanish, Indian, and Mexican design and construction techniques, which were indigenous to California. The Hispanic Revival in California was joined by the more elaborate Mediterranean and Spanish Colonial Revival styles, which came into prominence after the Panama-California Exposition in San Diego and the Panama-Pacific International Exposition in San Francisco opened in 1915.

Making use of terra cotta tile gabled roofs, thick masonry walls, plaster finishes, and smaller fenestration openings than previous popular styles, the Spanish Colonial Revival style was popular between 1915 and 1930 for commercial buildings, institutions, apartments and houses. In the Bay Area, the style was characterized by smooth stucco walls, polychrome tiled entries, wrought iron grilles and balconies or balconettes, terra cotta tile roofing, and ornamented doors and entryways. Unlike Mission Revival buildings, which often feature flat roofs and shaped parapets, Spanish Colonial Revival buildings more often feature gable or hipped roof forms with terra cotta tile roofing. Arched doorways and window openings with decorative wood doors and wood or metal casement windows are typical. Terra cotta tile vents are often used as simple decorative elements in the gable ends.

Very popular as a residential idiom, the Spanish Colonial Revival style was also used in many institutional buildings such as schools, churches, hospitals, and libraries. Several notable local examples include several buildings at Mills College, designed by Julia Morgan between 1904 and 1925; Piedmont High School, designed by W. H. Weeks in 1921; and Chapel of the Chimes, designed by Julia Morgan in 1928 **(Figure 205-Figure 207)**.

Figure 205. Postcard showing Mills College Library designed by Julia Morgan, built in 1906. Source: Edward H. Mitchell Company, 1909.

Figure 206. Piedmont High School library, designed by W. H. Weeks in 1921, pictured 2007. Source: Emiellaiendiay, Wikimedia.

Figure 207. Chapel of the Chimes, designed by Julia Morgan in 1928, photo circa 2014. Source: Our Oakland/Oakland Wiki.

V. INDIVIDUAL BUILDING CONSTRUCTION CHRONOLOGIES

The following section provides a construction chronology for each of the twelve buildings on the Head-Royce School South Campus. These histories are based on a number of sources including Building Permit Applications on file at the Oakland Building Department, architectural plans provided by architect SOM via Byrens Associates and the Oakland Building Department, historic newspaper articles, historic photographs, and visual inspection. The Building Permit Applications on file for the subject property (APN 29-1009-6) were not always specific regarding which building on the campus they pertained to, but information on the permit—such as number of stories, wall cladding, use, or the nature of the permitted work—often provided clues to indicate which building they pertained to. A table of all the building permit applications provided by the Oakland Building Department and reviewed by Page & Turnbull is provided in **Appendix A**.

BUILDING 0 (JUNIOR ALLIANCE HALL)

Building 0 (Junior Alliance Hall) was constructed in 1935, designed by architect William G. Corlett, Jr. in the Spanish Colonial Revival style.[110] Known as the Junior Alliance Hall because the Junior Alliance financed the building's construction, the building was designed to house an auditorium and stage, two dressing rooms, a kitchen, two bedrooms, three bathrooms, an office, and an unfinished basement storage area. In 1948, a small, one room office addition of approximately 13 feet by 12 feet was constructed at the south corner of the flat-roofed wing of the original building **(Figure 208)**.[111]

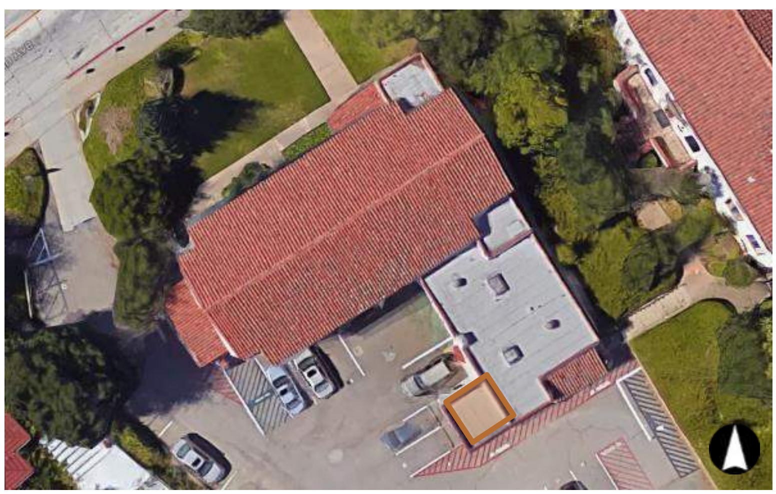

Figure 208. Building 0, formerly known as Junior Alliance Hall. 1948 addition indicated in orange shading and outline. Source: Google Maps.

In 1956, work was conducted at Building 0 to repair damage caused by a fire, including burned floor joists, flooring, plate, bridging, studding, trusses, roof sheathing, sidewall sheathing, as well as interior and exterior trim and millwork.[112] Termite repair work, including chemical treatment of wood, was conducted in 1963.[113]

[110] Building Permit Application A59872, dated December 29, 1935, on file at Oakland Building Department; and architectural drawings "Junior Alliance Hall, West Oakland Home," Will G. Corlett, dated July 15, 1935, revised August 1, 1935.
[111] Building Permit Application B20528, dated April 30, 1948, on file at Oakland Building Department.
[112] Building Permit Application B65157, dated October 24, 1956, on file at Oakland Building Department.
[113] Building Permit Application C12702, dated November 4, 1963, on file at Oakland Building Department.

In 1971, Corlett & Spackman, the firm of Corlett's son William G. Corlett III, remodeled Building 0 to accommodate the Royce School for Boys, which leased the building from Lincoln Child Center.[114] The remodel included the construction of interior partition walls within the auditorium; conversion of the stage into two small and a narrow hallway; and the replacement of interior wall, ceiling and floor finishes. New exterior doorways and doors were constructed at the northwest, southeast, and the northeast façades, and exterior wood stairs were constructed at the new southeast entrance. Replacement steel-sash windows were installed at the southeast façade with a different pattern of lites; the replacement windows are two lites across, as opposed to three, and two awning sashes.

A wrought iron balcony and wood shutters at the upper window on the primary façade, as well as wood shutters at the upper windows at the east end of the southeast façade and along the northeast façade, were removed at an unknown date, possibly in 1971. Wood grills with eight-pointed-star patterning at the west bathroom and coat room windows were also removed at an unknown date. All of the exterior doors have been replaced.

BUILDING 1 (MARY A. CROCKER COTTAGE)

Building 1, known originally as the Mary A. Crocker Cottage, was constructed in 1929 to 1930 as the boys' dormitory for the West Oakland Home **(Figure 209 and Figure 210)**.[115] The building was designed by architects Reed & Corlett in the Spanish Colonial Revival style. The two-story, twelve-room building had a rectangular plan with a front entry porch. Based on original drawings and 1951 Sanborn fire insurance maps, the building originally featured a central balconette at the second story on side façades which was replaced prior to 1951 with simple wood fire escape stairs. The original glazed wood doors were retained and metal awnings installed.

Figure 209. Primary façade of Mary A. Crocker Cottage (Building 1), 1930. Source: "Orphans Aid in Trade Old Home for New," *Oakland Tribune*, January 15, 1930, 19.

Figure 210. View of Mary A. Crocker Cottage (Building 1), looking southwest (n.d.). Source: Lincoln Child Center.

Building permits and plans indicate that several rooms in Building 1 were remodeled for classrooms by architect Gerald M. McCue in 1959.[116] Termite repair work in 1963 appears to have involved the removal of sills at the base of banisters at Building 1, indicating that the current metal railings are

[114] Conditional Use Permit CM71-18, dated February 16, 1971, on file at Oakland Building Department.
[115] Building Permit Application A39344, dated January 24, 1929, on file at Oakland Building Department.
[116] Building Permit Application B84723, dated July 1, 1959, on file at Oakland Building Department.

likely not original.[117] In 1972, interior partition walls were removed, and new walls constructed to create office and classrooms.[118] Two new fire escape stairs were constructed in 1974 **(Figure 211-Figure 213)**.[119]

Figure 211. Building 1 southeast and northeast façades, looking northwest, circa late 60s-early 70s. Source: "Lincoln Child Center," brochure, Robert N. Royston Collection, Environmental Design Archives, University of California, Berkeley.

Figure 212. View of north corner of Building 1, looking south, circa late 60s-early 70s. Source: "Lincoln Child Center," brochure, Robert N. Royston Collection, Environmental Design Archives, University of California, Berkeley.

Figure 213. Fire escape constructed on the southeast façade of Building 1 in 1974 (pictured circa 1990s). Source: Lincoln Child Center.

All original exterior wood windows, except two bathroom windows, were replaced with aluminum-sash windows, 1960s or 1970s remodels. Another office renovation was conducted in 1992 by architect David Wade Byrens, which included the construction of a wood Americans with Disabilities Act (ADA)-compliant ramp on the northeast façade and the construction of a new stair on the northwest façade **(Figure 214)**.[120]

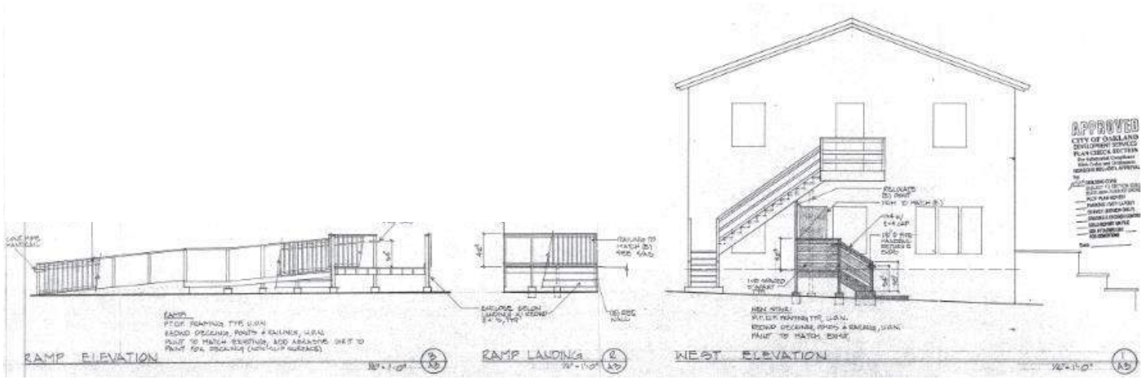

Figure 214. Drawings of ADA-compliant ramp and new stair to the first story entrance on the northwest façade. Source: "Lincoln Child Center, Crocker Building Modification," David Wade Byrens, Sheet A3, dated August 22, 1991.

[117] Building Permit Application C12704, dated November 4, 1964, on file at Oakland Building Department.
[118] Building Permit Application C69200, dated October 17, 1972, on file at Oakland Building Department.
[119] Building Permit Application C78889, dated July 14, 1974, on file at Oakland Building Department.
[120] Building Permit Application B91058741, dated December 17, 1991, on file at Oakland Building Department.

Fabric awnings over several windows on the primary façade of Building 1 are indicated in undated photographs from the twentieth century; it is unknown if the awnings are original, but they have since been removed. Most interior features have been removed or replaced during the various remodels over the decades. Original extant features include several wood beams in the ceiling of one of the rooms on the first floor and several radiators and possibly radiator covers. The wood balustrade of the interior staircase may be original, and a portion of the original brick chimney is still exposed at the second floor, but the fireplace has been covered with drywall.

BUILDING 2 (GRACE L. TREVOR COTTAGE)

Building 2, known originally as the Grace L. Trevor Cottage, was constructed in 1929 to 1930 as the girls' dormitory for West Oakland Home **(Figure 215)**.[121] The building was designed by architects Reed & Corlett in the Spanish Colonial Revival style. The two-story, twelve-room building had a rectangular plan with simple front entry steps. Based on original drawings and 1951 Sanborn fire insurance maps, the building originally featured a central balconette at the second story on side façades which was replaced prior to 1951 with simple wood fire escape stairs. The original glazed wood doors were retained at the time and metal awnings installed, but have since been replaced with windows.

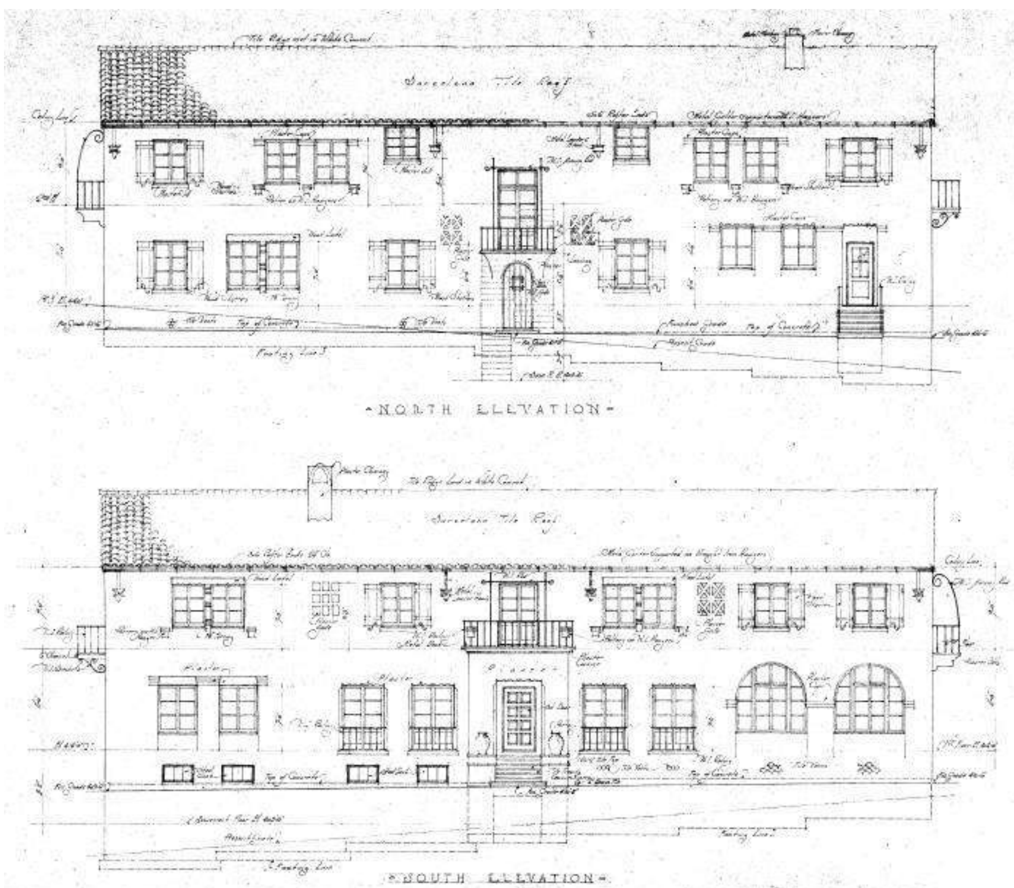

Figure 215. Drawings of the primary and rear elevations of Building 2 (Grace L. Trevor Cottage) by Reed & Corlett, 1929. Source: Permit A39344, Oakland Building Department.

[121] Building Permit Application A39345, dated January 24, 1929, on file at the Oakland Building Department.

In 1952, interior millwork and trim was replaced due to fire damage.[122] Building permits and plans indicate that several rooms in Building 2 were remodeled for classrooms by architect Gerald M. McCue in 1959.[123] In 1967, Building 2 was extensively remodeled to change the building from a dormitory to a day school with classrooms.[124] Designed by architects Reynolds and Chamberlain, the work included replacing all original windows with aluminum sash windows, removing the two original wood fire escape stairs, and installing new concrete fire escape stairs along the northeast façade. The interior floor plan was also completely changed by shifting the central corridor off-center to accommodate larger classrooms along the southwest side of the building, and by demolishing the original central interior staircase and constructing a new staircase toward the northeast end of the building. The new staircase included a landing housed in a projecting bay on the northeast façade, supported by wood posts. A ground level door and a window and balconette, which were located at the level of the interior stair landing, were all removed, and the balconette attached to the new projecting bay. Based on original architectural drawings, architectural drawings for the 1967 remodel, and visual observation, a total of nine original window openings were removed or altered on the northeast façade. The doors at the second story fire escapes on the northwest and southeast facades were replaced with new windows. On the southeast façade, recessed arches and pilasters with molding were removed, the entire façade restuccoed, and three new window openings added. On the northwest façade, two new window openings were installed at the first story; a window replaced the original door at the second story; and a stairwell to the basement was infilled and the basement door replaced with a small mechanical door.

A building permit from 1992 to remove and reset radiators and put in new flooring may refer to Building 2.[125]

BUILDING 3

In 1990, Building 3, a 24-foot by 40-foot portable classroom, was installed on the campus, located east of Building 4 and north of Building 10. [126] The portable is a prefabricated building installed by contractors T. R. Moreland Construction Co. Subsequent to the new construction permit, no building permit applications on file are clearly related to Building 3.

BUIDLING 4 (EXECUTIVE/LINNET/ETHEL MOORE COTTAGE)

Building 4 (Executive/Linnet/Ethel Moore Cottage) was constructed by an unknown builder between 1938 and 1946, and is located at the end of Linnet Avenue, toward the southwest end of campus.[127] The building does not appear on a 1938 aerial photograph, but does appear on a 1947 aerial photograph of the campus **(Figure 171 and Figure 172)**. An adjacent workshop, Building 10, was constructed in 1945, so Building 4 likely was constructed prior or around the same time. The building originally served as the Executive Cottage for the director of the school **(Figure 216)**. Addressed 4245 Linnet Avenue, Building 4 has also been known as the Linnet Cottage and Ethel Moore Cottage. The original portion of the building features stucco cladding and wood-sash windows.

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[122] Building Permit Application B42854, dated July 27, 1952, on file at the Oakland Building Department.
[123] Building Permit Application B84723, dated July 1, 1959, on file at Oakland Building Department.
[124] Building Permit Application C35448, dated February 9, 1967, on file at Oakland Building Department; architectural drawings, "Lincoln Child Center," Reynolds and Chamberlain, dated September 20, 1966.
[125] Building Permit Application, M9200077, dated January 14, 1992, on file at Oakland Building Department.
[126] Building Permit Application B003677, dated July 13, 1990, on file at the Oakland Building Department.
[127] Ethel Moore was a patron of the West Oakland Home and involved in philanthropy related to education in Oakland. No specific connection to Building 4 was uncovered during the course of research. See "Oakland Society Set Stirred, Two Market Days are Planned," *San Francisco Chronicle*, April 23, 1916, 41

A projecting wing containing a large living room on the southeast side of the building, adjacent the bay window, was constructed in 1954 by contractor Herbert S. Taylor **(Figure 217)**.[128] In 1971, another addition was constructed at the northwest end of the building, designed by Goetz, Hallenbeck & Goetz **(Figure 218)**.[129] Four additional bedrooms were constructed to convert the building to a Boys Group Home. The addition consisted of flat roofed volumes with vertical wood siding, wood slab doors and aluminum-sash windows. Most of the original windows were replaced with aluminum-sash windows during the same remodel. The interior of the building was also remodeled with new finishes in 1971. Drawings from the 1971 addition and remodel indicate the roof of Building 4 was originally clad in Spanish clay tiles.

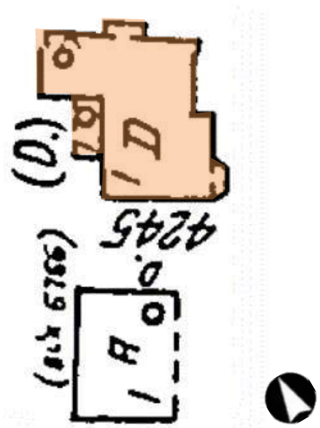

Figure 216. Detail of 1951 Sanborn fire insurance map showing Building 4 labeled as a dwelling. Building 4 is indicated by orange shading. Source: San Francisco Public Library. Edited by Page & Turnbull.

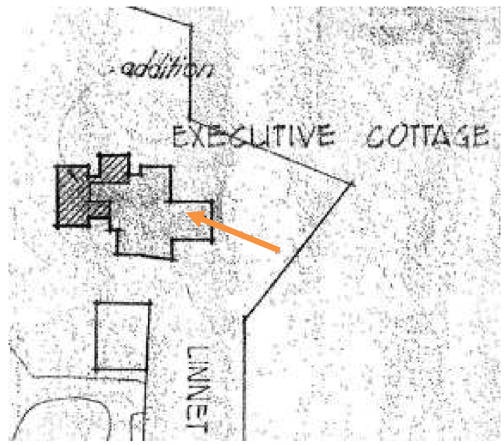

Figure 217: Detail of site plan on architectural drawings illustrating the addition to the Executive Cottage to convert it to a Boys Group Home. Earlier addition indicated by orange arrow. Source: "Executive Cottage Remodel, 4245 Linnet Ave for Lincoln Child Center," by Goetz, Hallenbeck & Goetz, dated February 3, 1971. Edited by Page & Turnbull.

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[128] Building Permit Application B52535, dated August 16, 1954, on file at the Oakland Building Department.
[129] Building Permit Application C60835, dated July 12, 1971, on file at the Oakland Building Department; and architectural plans, "Executive Cottage Remodel, 4245 Linnet Ave for Lincoln Child Center," by Goetz, Hallenbeck & Goetz, dated February 3, 1971.

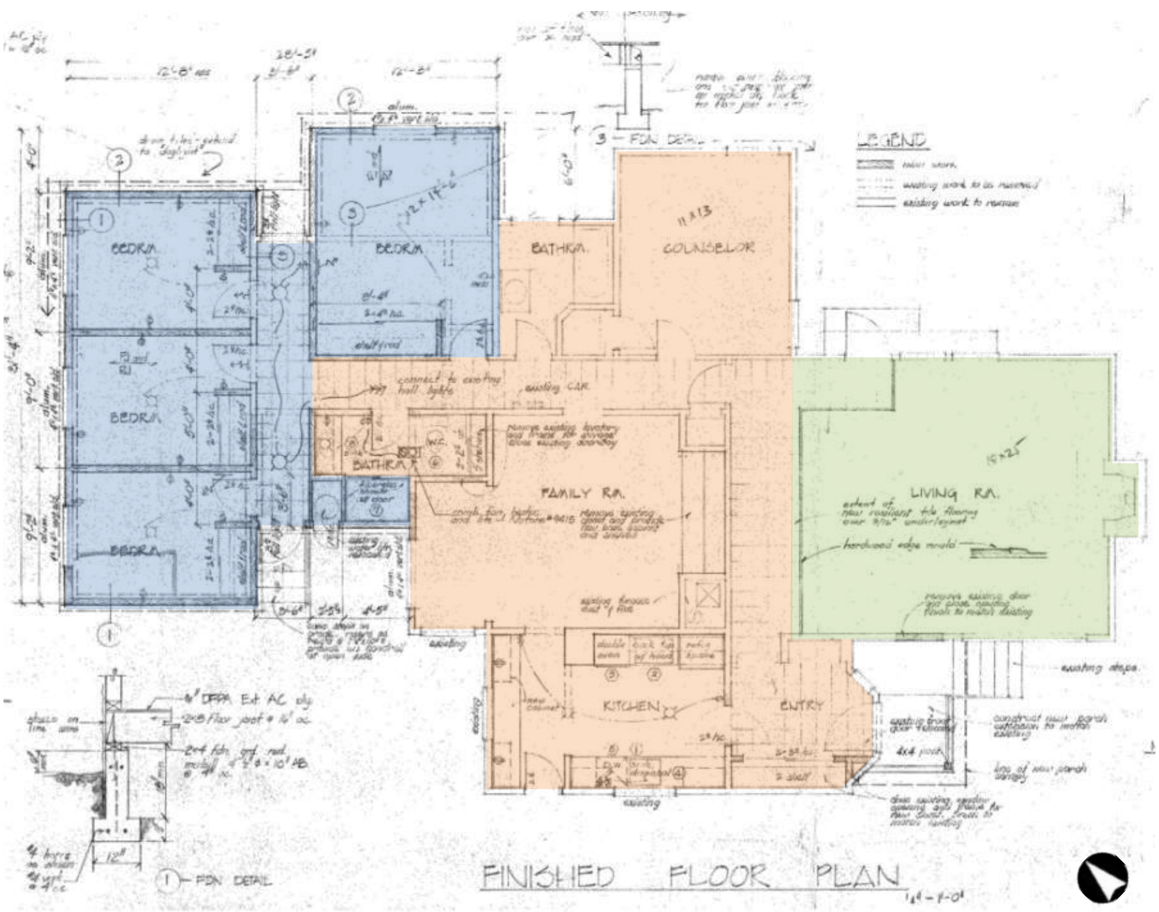

Figure 218. Floor plan of Building 4 indicated in drawings for the 1971 addition and remodel. The original volume of the building is indicated in orange; the 1954 addition is indicated in green, and the 1971 addition is indicated in blue. Source: "Executive Cottage Remodel for Lincoln Child Center," Sheet 1, Goetz, Hallenbeck & Goetz, dated February 3, 1971.

The majority of alterations to the interior finishes, windows and doors appear to have occurred during the 1971 remodel, documented in architectural drawings by Goetz, Hallenbeck & Goetz. Other observed alterations include the removal of the Spanish clay tile roofing, and the cladding of the gable roof elements in asphalt shingles and the flat roof addition in rolled asphalt.

BUILDING 5 (MAINTENANCE BUILDING)

Building 5 (Maintenance Building) was constructed in 1967 and designed by Robert Goetz Associates.[130] The building was designed as a one-story, wood frame building with a side gable roof clad in terra cotta Spanish tiles, overhanging eaves and exposed rafter tails. Original drawings indicate two wood, overhead rollup garage doors on the west façade, a wood pedestrian door with one lite on the southwest façade, and two aluminum-sash sliding windows on the northeast façade.[131] The building has always been used as a maintenance garage.

[130] Building Permit Application C389715, dated August 9, 1967, on file at the Oakland Building Department; and architectural plans "Maintenance Building for Lincoln Child Center" by Robert Goetz Associates, dated June 23, 1967 and revised July 13, 1967.
[131] The northwest façade is referred to as plan west, and so on, in the original architectural drawings; Architectural drawings, "Maintenance Building for Lincoln Child Center," Robert Goetz Associates, June 23, 1967, Revised July 13, 1967.

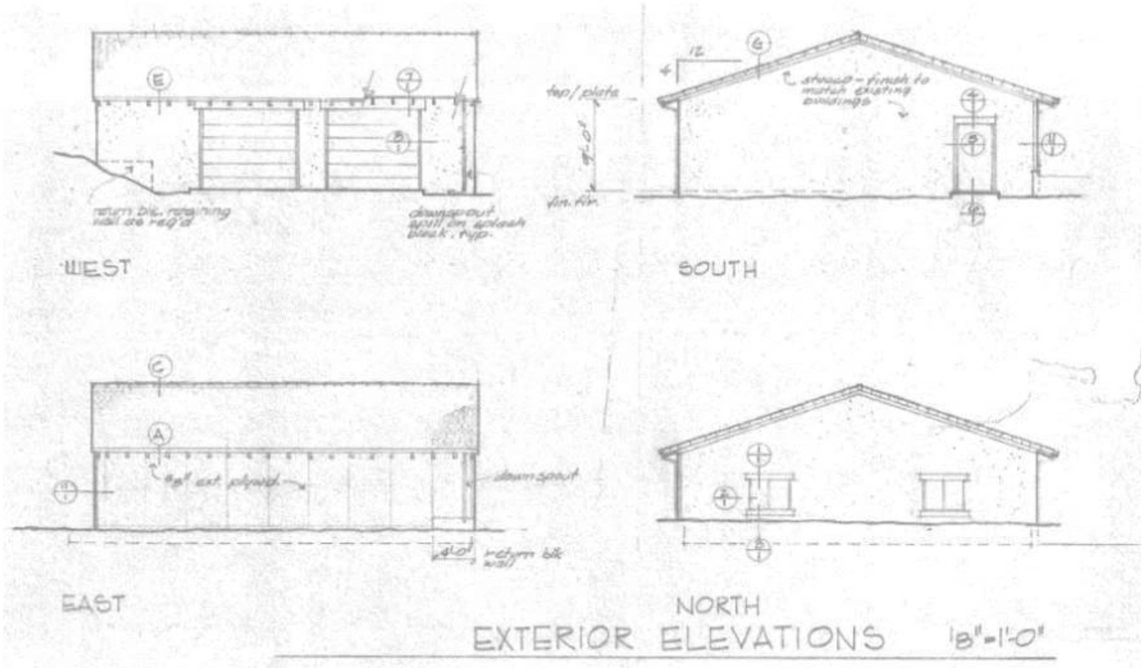

Figure 219. Exterior elevations of Building 5. Source: Robert Goetz Associates, drawings dated June 23, 1967, revised July 13, 1967.

Other than the new construction permit, there are no building permit applications on file are clearly related to Building 5. Observed alterations include the replacement of the Spanish clay tile roofing with rolled asphalt, a lean-to addition at the north end of the primary façade, the installation of a second door and two new windows on the southwest façade, the installation of a skylight on the southeast-facing roof slope, the installation of a chain-link fence around the area in front of the primary façade, the installation of safety fencing, the installation of a gutter system, and the boarding up of a window on the northeast facade. The southeast façade has also bene covered by plywood.

BUILDING 6 (BUSHELL COTTAGE & BUILDING 7 (BUSHELL KITCHEN & DINING HALL)

Building 6 (Bushell Cottage) and Building 7 (Bushell Kitchen & Dining Hall) are connected by an enclosed stairway and were both designed by architect Gerald McCue and built in 1958.[132] As designed, Building 6 was a one-story wood frame building with an asymmetrical, obtuse V-shape floor plan and a narrow, enclosed staircase lead from Building 6 up to the one-story, partial-octagonal Building 7. As designed and originally constructed, Building 7 had an irregular plan composed of an outer and inner octagon plan; the north five walls were located at the outer octagon, and the south three fully-glazed walls at the inner octagon **(Figure 220)**. The roof extended to cover outer octagon footprint, creating an outdoor covered concrete patio at the south side. A brick chimney was located at the edge of the south, inner fully glazed wall **(Figure 221)**. In 2000, Byrens Associates remodeled Building 7 to be fully enclosed on all eight sides by demolishing the chimney, extending the roof, and constructing three new exterior walls to match the existing walls **(Figure 222)**.[133]

[132] Building Permit Application B71996, dated December 6, 1957, on file at the Oakland Building Department; and architectural drawings "Annie E. and E. A. Bushell Cottage, West Oakland Home Corporation," Gerald M. McCue & Associates, dated October 28, 1957.
[133] Building Permit Application B0000396, dated January 31, 2000, on file at the Oakland Building Department, describes "Modifications and addition for the Kitchen & Dining Hall"; and "Bushell Kitchen & Dining Room Modification & Addition, Lincoln Child Center," Byrens Associates, dated August 23, 1999.

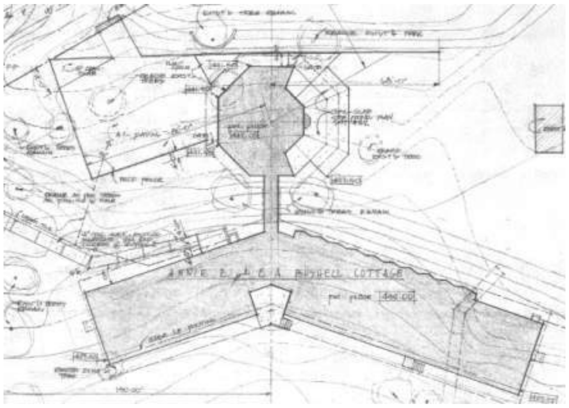

Figure 220. Detail of Buildings 6 and 7 site plan. Source: Site Plan, "Annie E. and E. A. Bushell Cottage, West Oakland Home Corporation," Gerald M. McCue & Associates, Sheet A1, dated October 28, 1957.

Figure 221. Interior view of Building 7, showing original design with a brick chimney, fully glazed inner walls and a covered patio, c. early 1970s. Source: "Lincoln Child Center," brochure, Robert N. Royston Collection, Environmental Design Archives, University of California, Berkeley.

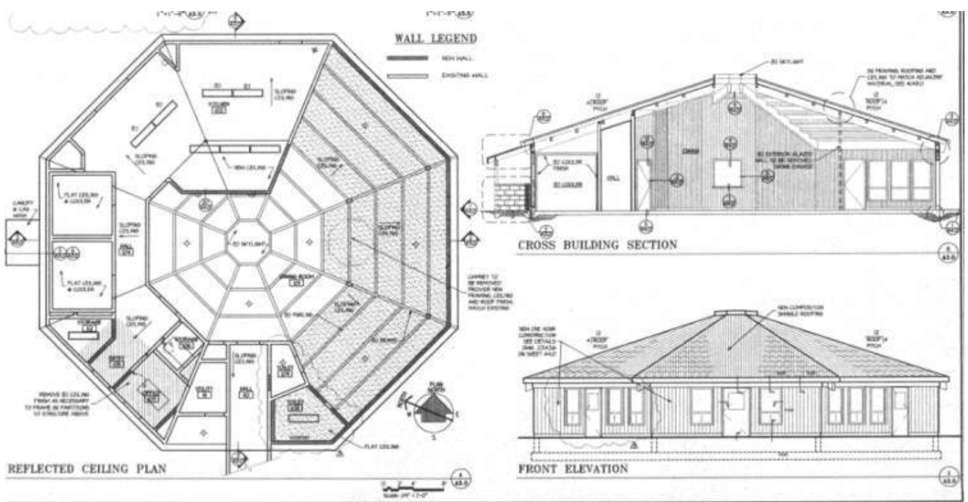

Figure 222. Reflected ceiling plan (left), cross building section (top), and front elevation (bottom) for remodeled Building 7. Source: Elevation, Section & Reflected Ceiling Plan, "Bushell Kitchen & Dining Room Modification & Addition, Lincoln Child Center," Byrens Associates, sheet A3.0, dated August 23, 1999.

A permit dated March 24, 2009 has a description—"Remodel secondary school kitchen facility, including walk-in refrigeration, paving drive/loading area"—which appears to describe the installation of a walk-in refrigerator at the exterior of the north side of Building 7.[134] Other known alterations to Building 6 include an interior bathroom upgrade in 1991 and the replacement of existing windows in-kind with no change to the size or number of openings.[135]

BUILDING 8 (EBAC/CHARLESTON HOUSE/HOLMGREN)

Building 8 (EBAC/Charleston House/Holmgren) was constructed in 1957 by architect Robert Ratcliff for the East Bay Activities Center (EBAC), a school for "emotionally disturbed children"

[134] Building Permit Application B090100, dated March 24, 2008, on file at the Oakland Building Department.
[135] Building Permit Application B9105189, dated October 15, 1991, on file at the Oakland Building Department; and Building Permit Application B91027391, dated August 15, 1991, on file at the Oakland Building Department.

which leased the land from Lincoln Child Center.[136] The building was originally addressed 2525 Perkins Road, and the address was changed to 2545 Charleston Street in 1966.[137] When first constructed the building was "very simple; it was really a rectangle, with the inside divided into rooms" **(Figure 223)**.[138] The rectangular area leased by EBAC was fenced in to create a school yard, and the building was accessed via a path off of Charleston Street.

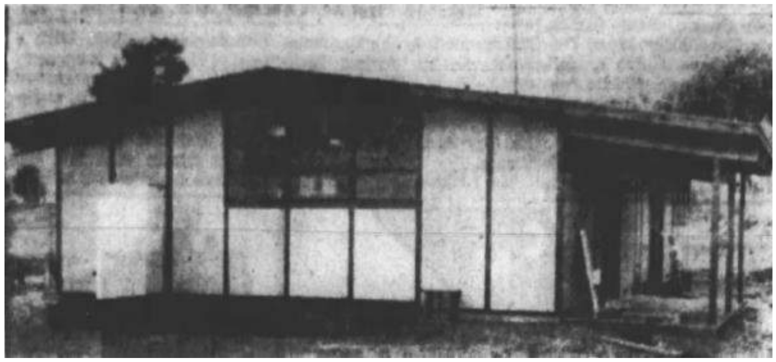

Figure 223. East Bay Activities Center Building (Building 8), later known as Holmgren or Charleston House, built in 1957 by Robert Ratcliff. Source: "School for Emotionally Disturbed Children Opens," *Oakland Tribune*, October 24, 1957, 24.

No building permit applications on file are clearly related to Building 8. However, a 1980 history of the East Bay Activities Center by Gail Baxter details a number of additions and alterations that were executed in the 1960s. In 1960, a 400-square-foot addition was constructed by Ratcliff. Based on 1958 and 1965 aerial photographs, this addition appears to have been a full-width extension at the north end of the building **(Figure 224 and Figure 225)**. In 1963, another room was added at the southeast end of the building; the architect of the addition is not known, but board member Ruth Benner is known to have "supervised and coordinated the project" **(Figure 225)**.[139] The next year, in 1965, the building was renovated and repainted. Another remodel was undertaken in 1966 which was completed with "Navy surplus lumber and glass," the exact nature of the remodel is not described in Baxter's account.[140] Historic aerial photographs, site plan drawings, and visual evidence suggest that another addition was constructed at the southwest end of the building around this time **(Figure 226)**.

In 1968, the EBAC installed a 10-foot by 52-foot portable building, 20 feet southeast of Building 8, to be use for equipment and records storage, a small conference area, and additional bathrooms **(Figure 227)**.[141] Robert Ratcliff designed a "permanent arcade" connecting the portable to the main EBAC building. At the time, the new addition was named the Kay Rinehart Memorial Building. In 1969, additional portable auxiliary buildings for storage of bikes and maintenance equipment and a playhouse were installed around the EBAC building.[142] The EBAC occupied Building 8 until they moved into their own permanent facility across the street at 2540 Charleston Street in December 1979.[143] The building appears to have been subsequently used as administrative offices by Lincoln Child Center, and was known as Charleston House or Holmgren.

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[136] "School for emotionally disturbed children opens," *Oakland Tribune*, October 24, 1957.
[137] Gail Baxter, "A History of the East Bay Activities Center" (Oakland, California, April 1980), 12, accessed March 11, 2019, http://www.ebac.org/downloads/EBAC%20History%20by%20Gail%20Baxter%201980.pdf.
[138] Peggy Hayes quoted in Baxter, "A History of the East Bay Activities Center," 15.
[139] Ibid. 18.
[140] Ibid.
[141] Ibid, 19.
[142] Ibid.
[143] Ibid, 64, 66.

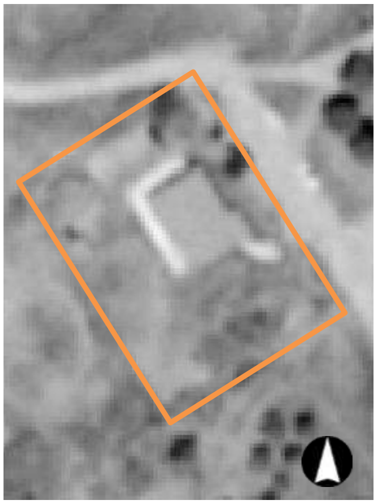

Figure 224. 1958 aerial view of Building 8. Building 8 school yard outlined in orange. Source: Cartwright and Co., Flight BUT-1958, Frame 12V-66, May 14, 1969, UC Santa Barbara FrameFinder.

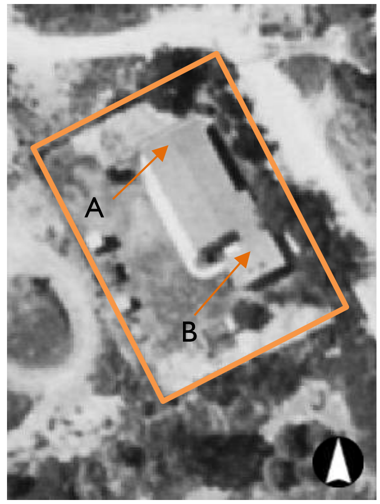

Figure 225. 1965 aerial view of Building 8. Building 8 school yard outlined in orange. A = 1960 addition; B = 1963 addition. Source: Cartwright Aerial Surveys, Flight CAS-65-130, Frame 7-30, May 14, 1965, UC Santa Barbara FrameFinder.

Figure 226. 2019 aerial view of Building 8. Building 8 school yard outlined in orange. C=circa 1966 addition. Source: Google Maps.

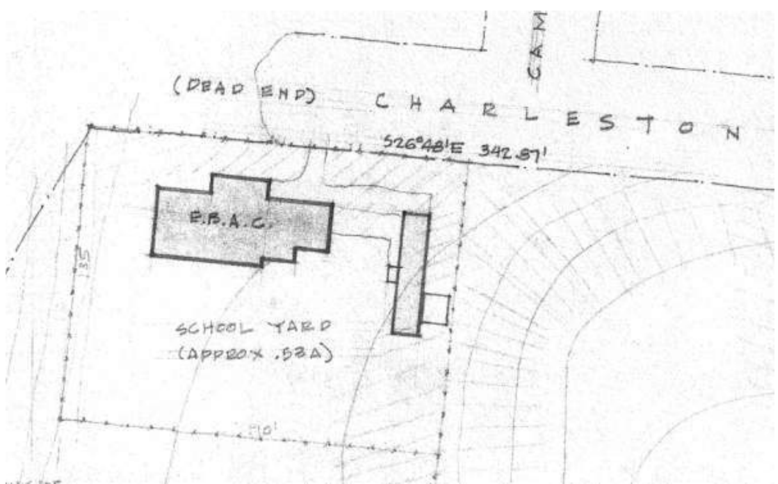

Figure 227. Detail of Building 8 and adjacent portable building in 1976 site plan. Source: Ratcliff Slama Cadwalder Architect, "Site Plan Lincoln Child Center," dated January 1976.

In addition to the alterations and additions described by in the Baxter's 1980 "A History of the East Bay Activities Center," observed alterations include the stuccoing of all the exterior facades which were originally board and batten; the addition of several chain-link fence storage enclosures on the northeast façade; an enclosed mechanical closet on the northeast façade; the installation of a metal gutter system along the primary (southwest) and northeast façades; and the installation of metal and wood security fencing at various locations along the roofline. At an unknown date the portable building and "permanent arcade" were removed. Additionally, based on visual inspection and comparison to Building 8 as depicted in Bruce Baillie's 1962 film *Here I Am*, it is apparent that most of the exterior doors have been replaced; all interior finishes have been replaced; the interior floor plan has been altered with new partition walls replacing the accordion dividing walls; and two new doorways installed at the north end of the southwest façade **(Figure 228 and Figure 229)**.

Figure 228. Children play in Building 8 in Baillie's film *Here I Am*. Accordion dividing walls visible. Source: Bruce Baillie, *Here I Am* (1962), Oakland, film, 3:26, accessed via YouTube.

Figure 229. Children and teacher in Building 8 in Baillie's film *Here I Am*. Original interior wall finishes visible. Source: Bruce Baillie, *Here I Am* (1962), Oakland, film, 4:39, accessed via YouTube.

BUILDING 9 (CHAMPLIN HOUSE)

Building 9 (Champlin House) was completed in 2000, designed by Byrens Associates as a group residential home.[144] Built as a 16-room dormitory, the building was designed in a Mission Revival-inspired style with Spanish clay tile roof and stucco wall cladding. No building permit applications on file, subsequent to the new construction permit, are clearly related to Building 9. Observed alterations include the recladding of the roof in asphalt shingles.

BUILDING 10 (GARAGE)

Building 10 (Garage) was constructed in 1945, designed by architect Paul Hammarberg and built by contractor H. K. Jensen.[145] The building is located at the end of Linnet Avenue, toward the southwest end of campus. The new construction permit application describes the building as a "workshop" with wood frame construction, stucco siding and a terra cotta tile roof. The 1951 Sanborn map labels the building as a garage with an opening spanning most of the southeast façade **(Figure 230)**.

[144] Building Permit Application B9901378, dated April 19, 1999, on file at the Oakland Building Department; architectural drawings "Group Home, Lincoln Child Center," by Byrens Associates, Dated April 12, 1999; and Matthew D. LaPlante, "Lincoln Expands: 16 rooms for child behavioral center," *Oakland Tribune*, September 9, 2000.
[145] Building Permit Application B7354, dated August 29, 1945, on file at the Oakland Building Department.

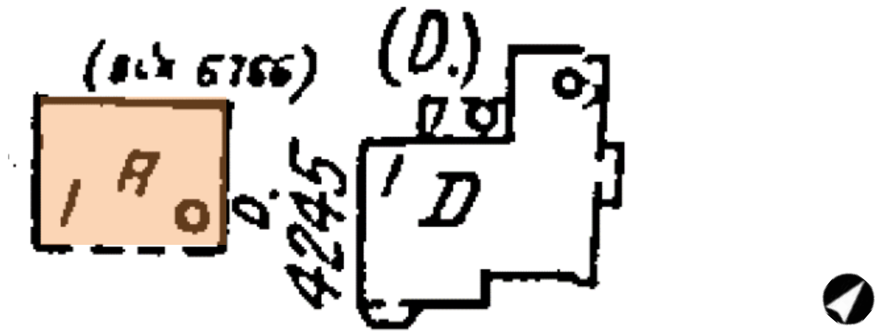

Figure 230. Detail of 1951 Sanborn fire insurance map showing Building 10 labeled as a garage with an open southeast façade. Building 10 is indicated by orange shading. Source: San Francisco Public Library. Edited by Page & Turnbull.

Subsequent to the new construction permit application, no building permit applications on file are clearly related to Building 10. Observed alterations include the enclosure of the southeast façade with a stucco-clad wall with new windows and a new door; the replacement of the clay tile roof with asphalt shingles; and the addition of metal security gates along the roofline.

BUILDING 11

Building 11, a storage facility, located along Lincoln Avenue, south of the driveway (formerly Perkins Avenue) to Building 9. The building is composed of several connected prefabricated storage sheds, and appears to have been installed between 2005 and 2009.[146] No building permit applications on file are clearly related to Building 11. However, a "City of Oakland Building & Housing Department, Building Division, Plan Check" document for building permit application C-38715, dated August 9, 2007 describes a new building of approximately 1,300 square feet, which may refer to Building 11.

[146] Aerial photographs were examined on HistoricAerials.com, and the building does not appear to be present in the 2005 aerial photograph, but does appear in the 2009 aerial photograph; Historic Aerials by NETROnline, accessed March 11, 2019, https://www.historicaerials.com/viewer.

VI. EVALUATION OF HEAD-ROYCE SCHOOL SOUTH CAMPUS BUILDINGS FOR CALIFORNIA REGISTER ELIGIBILITY

The following section evaluates buildings on the Head-Royce School South Campus that are more than 45 years old for eligibility for listing in the California Register of Historical Resources (California Register). The integrity of these buildings is reviewed to determine if they remain eligible for listing in these registers.

The California Register of Historical Resources

The California Register is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. State Historical Landmarks and National Register-eligible properties (both listed and formal determinations of eligibility) are automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places.

In order for a property to be eligible for listing in the California Register, it must be found significant under one or more of the following criteria:

> *Criterion 1 (Event):* Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
>
> *Criterion 2 (Person):* Resources that are associated with the lives of persons important to local, California, or national history.
>
> *Criterion 3 (Architecture):* Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
>
> *Criterion 4 (Information Potential):* Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California or the nation.

Integrity

The concept of integrity is essential to identifying the important physical characteristics of historic resources and hence, evaluating adverse change. For the purposes of the California Register, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (California Code of Regulations Title 14, Chapter 11.5). A property is examined for seven variables, or aspects, that together comprise integrity. These aspects, which are based closely on the National Register, are location, design, setting, materials, workmanship, feeling and association. *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation* defines these seven characteristics:

- *Location* is the place where the historic property was constructed.
- *Design* is the combination of elements that create the form, plans, space, structure and style of the property.

- *Setting* addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building/s.

- *Materials* refer to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.

- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history.

- *Feeling* is the property's expression of the aesthetic or historic sense of a particular period of time.

- *Association* is the direct link between an important historic event or person and a historic property.

BUILDING 0 (JUNIOR ALLIANCE HALL)

Building 0 Significance

Criterion 1 (Events)

Building 0 (Junior Alliance Hall) appears significant under California Register Criterion 1 (Events) for its strong association with the West Oakland Home institution. The Junior Alliance, which was formed to help fundraise for West Oakland Home, provided the funding to construct Building 0, which served as an auditorium and administrative office space for the institution. The funding was pulled together during the Great Depression, when institutions like West Oakland Home struggled with funding and donations. Built soon after the initial construction of the first two West Oakland Home cottages at the new Lincoln Avenue site, Building 0 directly served the mission of the institution to provide a quality home for needy children and was part of the initial establishment of the institution at their new location. Although some of the values of West Oakland Home had shifted during the 1920s and 1930s, notably the segregation of the institution, and moved away from the most progressive and innovate aspects of Rebecca McWade's original vision, the move to Lincoln Heights represents a continuation in the mission to provide shelter to orphans and other needy children in Oakland. Building 0 appears to be significant under Criterion 1 (Events) for a strong association with the West Oakland Home during the transitional period when it was establishing at the new Lincoln Avenue site. The period of significance for Building 0 under Criterion 1 (Events) is 1935, marking its year of construction and the last substantial building project on the site before the institution transitioned toward new services for "emotionally disturbed" children in the 1940s.

Criterion 2 (Persons)

Building 0 (Junior Alliance Hall) does not appear to be significant under California Register Criterion 2 (Persons). The building is not directly associated with any one person, but rather associated with the Junior Alliance organization. Due to the close affiliation between the Junior Alliance organization and West Oakland Home, the significance of the building's construction and funding by the Junior Alliance is best understood under Criterion 1 (events) as related to the broader development of West Oakland Home. Therefore, Building 0 is not significant under Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 0 (Junior Alliance Hall) appears to be significant under California Register Criterion 3 (Architecture) as a representative work by local master architect William G. Corlett, Jr. and as an example of Spanish Colonial Revival style design. The building possesses high artistic value in the detailing and characteristic features and materials of Spanish Colonial Revival design, which was a popular style in the Bay Area during the 1930s, as applied to an institutional building. Built for an institution dedicated to providing homes for needy children and families, Lincoln Child Center (then West Oakland Home) did not have a large budget for capital improvements and the funds for Building 0 were provided by a volunteer organization, the Junior Alliance. While the building does not exhibit lavish or exuberant detailing and ornamentation, Building 0 exhibits many character-defining features of the Spanish Colonial Revival style such as terra cotta tile roofing and decorative flooring, stucco cladding, covered porches, decorative wood brackets, square columns and pilasters, a molded wood frieze, and large steel-sash windows. Known for his abilities in various revival style designs, including the Spanish Colonial Revival style, and for numerous commercial and institutional projects, Building 0 is a good, representative example of Corlett's work as a master architect. For these reasons, Building 0 is significant under Criterion 3 (Architecture). The period of significance for Building 0 under Criterion 3 (Architecture) is 1935, the year the building was completed.

Criterion 4 (Information Potential)

Building 0 does not appear to be individually eligible under Criterion D/4. It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 0 Integrity

Location

Building 0 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

The building retains its integrity of setting because the surroundings generally reflect conditions as they were when the building was constructed. Although the property was largely rural when Building 0 was constructed, the campus was intended to be developed over time. Building 0 retains its spatial relationship to the immediately adjacent Buildings 1 and 2. A parking lot was built to the south of Building 0 and was expanded further south over time, but does not represent a significant change to the setting.

Design

Building 0 retains integrity of design as only a few minor exterior changes have occurred, and most changes have been interior alterations. Exterior alterations include a small, compatible, one-room addition built in 1948 at the south corner of the south wing, which does not significantly impact the overall design or character of the building. Three new doorways were installed at the northwest, southeast, and the northeast façades, but have not significantly impacted the overall Spanish Colonial Revival style design. The installation of interior partition walls has impacted the character-defining double-height volume of the former auditorium space. However, the building overall, retains integrity of design.

Materials

Building 0 retains integrity of materials. All of the exterior doors have been replaced and the windows at the double-height volume on the southeast façade have been replaced. No materials that would be considered character-defining are extant at the interior of the building. The building retains its original stucco cladding, terra cotta tile roofing, porches, the majority of its decorative detailing, and the majority of its original windows. Because Building 0 retains the majority of its character defining materials, it retains integrity of materials.

Workmanship
Building 0 retains integrity of workmanship as contains features and materials that exemplify the craftsmanship of building construction in the 1930s. The Spanish Colonial Revival style building exhibits examples of workmanship in the decorative detailing at the porches such as carved beams and brackets, the terra cotta tile floor patterning, as well as the stucco cladding.

Feeling
Building 0 substantially retains its historic size, massing, and Spanish Colonial Revival style design and materials, which combine to express the building's era of construction and its intended institutional use. Therefore Building 0 retains integrity of feeling.

Association
Building 0 substantially retains integrity of association. Despite interior alterations which altered the building from its original use as an auditorium, even when leased by the Royce School For Boys, Building 0 was used for educational purposes. Since Lincoln Child Center sold the subject property, the building has remained unoccupied. As Building 0 retains the majority of its character-defining feature which express its Spanish Colonial Revival style and institutional use, the building retains integrity of association with West Oakland Home.

Conclusion
Building 0 significant under Criterion 1 (Events) as one of three purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus that represented a new phase in the development of the organization. It is also significant under Criterion 3 (Architecture) for its association local master architect William G. Corlett, Jr. and as a good example of the Spanish Colonial Revival style applied to an intuitional building in Oakland. The period of significance under both criteria is 1935. The building retains sufficient integrity to convey its historic significance. Therefore, Building 0 is eligible for individual listing in the California Register of Historical Resources.

BUILDING 1 (MARY A. CROCKER COTTAGE)

Building 1 Significance

Criterion 1 (Events)
Building 1 (Mary A. Crocker Cottage) appears significant under California Register Criterion 1 (Events) for its strong association with the West Oakland Home institution. Constructed between 1929 and 1930, Building 1 was one of the two first purpose-built buildings at the West Oakland Home's new location on Lincoln Avenue. The term "cottage" as applied to institutional residential buildings such as Building 1 refers to its distinction in type and philosophy from larger, multi-wing institutional buildings popular through the nineteenth century. The design of Building 1 represents an attempt by West Oakland Home to adapt to the cottage model, rather than the institutional model, for providing child care and services in the early twentieth century while dealing with more practical financial constraints. 1929 site plans prepared by architects Reed & Corlett indicate that the West Oakland Home had planned to expand the institution by building new "cottages" of a similar style in the future. Building 1 originally served as a boys' dormitory, directly serving the mission of the institution to provide shelter for needy children, and was part of the initial establishment of the institution on the new site. Although some of the values of West Oakland Home had shifted during the 1920s and 1930s, notably the segregation of the institution, and moved away from the most progressive and innovate aspects of Rebecca McWade's original vision, the move to Lincoln Heights represents a continuation in the mission to provide shelter to orphans and other needy children in Oakland. Building 1 appears to be significant under Criterion 1 (Events) for a strong association with

the West Oakland Home during the transitional period when it was establishing at the new Lincoln Avenue site. The period of significance for Building 1 under Criterion 1 (Events) is 1929 to 1935, beginning with the first year of construction and spanning through the construction of Building 0 (Junior Alliance Hall), which was the last substantial building project on the site before the institution transitioned toward new services for "emotionally disturbed" children in the 1940s.

Criterion 2 (Persons)

Building 1 (Mary A. Crocker Cottage) does not appear to be significant under California Register Criterion 2 (Persons). The building is not directly associated with any one person, but rather associated with West Oakland Home institution. While the building was named after Mary A Crocker, who ran West Oakland Home after Rebecca McWade and was a significant donor to the institution, Crocker died in 1889, many years before the completion of Building 1. Buildings are frequently named after donors, and a namesake association alone is not enough to qualify for historic significance under Criterion 2 (Persons). Therefore, Building 1 is not significant under Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 1 (Mary A. Crocker Cottage) appears to be significant under California Register Criterion 3 (Architecture) as a representative work by local master architects Reed & Corlett and as an example of Spanish Colonial Revival style design. The building possesses high artistic value in the detailing and characteristic features and materials of Spanish Colonial Revival design, which was a popular style in the Bay Area during the 1930s, as applied to an institutional building. While the building does not exhibit lavish or exuberant detailing and ornamentation, due to the financial constraints of such an institution, Building 1 exhibits many character-defining features of the Spanish Colonial Revival style such as a gable roof, terra cotta tile roofing; stucco cladding; balconettes; recessed arches; decorative details such as pilasters, carved wood lintels, corbelling, wood colonettes, wood shutters and leader heads; and brick chimneys with decorative roof caps. Known for their abilities in various revival style designs, including the Spanish Colonial Revival style, and for numerous commercial and institutional projects, Building 1 is a good, representative example of Reed & Corlett's work as local master architects. For these reasons, Building 1 is significant under Criterion 3 (Architecture). The period of significance for Building 1 under Criterion 3 (Architecture) is 1930, the year the building was completed.

Criterion 4 (Information Potential)

Building 1 does not appear to be individually eligible under Criterion D/4. It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 1 Integrity

Location

Building 1 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

The building retains its integrity of setting because the surroundings generally reflect conditions as they were when the building was constructed. Although the property was largely rural when Building 1 was constructed, the campus was intended to be developed over time. Building 1 retains its spatial relationship to the immediately adjacent Buildings 2.

Design

Building 1 retains integrity of design despite several exterior alterations. Prior to 1951, balconettes on the side façades were removed to accommodate wood fire escapes, retaining the original doors. No additions have been constructed and most of the character-defining features are extant. Some wood shutters have been removed, a new doorway was installed on the northwest façade, and the original primary entry door on the southwest façade was replaced. The most substantial alteration to Building 1 was the replacement of all but two second-story bathroom windows with aluminum-sash windows. However, all of the new windows were installed in original openings, retaining the overall pattern and design of the facades. Despite these changes, since the building retains a majority of Spanish Colonial Revival style decorative features and the original form and mass, the building overall, retains integrity of design.

Materials

Building 1 retains sufficient integrity of materials. As noted above, all but two windows were replaced with aluminum-sash windows with different operability and patterns of lites. The primary entry door has been replaced and many of the original wood shutters removed. However, Building 1 retains its stucco cladding, terra cotta tile roofing, metal leader heads, plaster detailing, wood colonettes, metal pot holders, brick and stucco chimney tops, wood and plaster grilles, and an original door on the rear façade. Because Building 1 retains the majority of its character-defining materials, it retains integrity of materials.

Workmanship

Building 1 retains integrity of workmanship as contains features and materials that exemplify the craftsmanship of building construction in the 1930s. The Spanish Colonial Revival style building exhibits examples of workmanship in the decorative features such as wood colonettes, metal balconettes, leader heads, and plaster pilasters.

Feeling

Building 1 substantially retains its historic size, massing, and Spanish Colonial Revival style design and materials, which combine to express the building's era of construction and its intended institutional use. Therefore Building 1 retains integrity of feeling.

Association

Building 1 substantially retains integrity of association. Despite interior alterations which altered the building from its original use as a boys' dormitory, the building was used for educational and administrative purposed until Lincoln Child Center sold the subject property and the building has remained unoccupied. Due to the fact that Building 1 retains integrity of location, setting, design, materials, workmanship, and feeling, the property is identifiable as an institutional building constructed in the 1930s associated with the West Oakland Home.

Conclusion

Building 1 significant under Criterion 1 (Events) as one of the two first purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. It is also significant under Criterion 3 (Architecture) for its association local master architects Reed & Corlett and as a good example of the Spanish Colonial Revival style applied to an intuitional building in Oakland. The period of significance under Criterion 1 is 1929 to 1935, and the period of significance under Criterion 3 is 1930. The building retains sufficient integrity to convey its historic significance. Therefore, Building 1 is eligible for individual listing in the California Register of Historical Resources.

BUILDING 2 (GRACE L. TREVOR COTTAGE)

Building 2 Significance

Criterion 1 (Events)

Building 2 (Grace L. Trevor Cottage) appears significant under California Register Criterion 1 (Events) for its strong association with the West Oakland Home institution. Constructed between 1929 and 1930, Building 2 was one of the two first purpose-built buildings at the West Oakland Home's new location on Lincoln Avenue. The term "cottage" as applied to institutional residential buildings such as Building 2 refers to its distinction in type and philosophy from larger, multi-wing institutional buildings popular through the nineteenth century. The design of Building 2 represents an attempt by West Oakland Home to adapt to the cottage model, rather than the institutional model, for providing child care and services in the early twentieth century while dealing with more practical financial constraints. 1929 site plans prepared by architects Reed & Corlett indicate that the West Oakland Home had planned to expand the institution by building new "cottages" of a similar style in the future. Building 2 originally served as a girls' dormitory, directly serving the mission of the institution to provide shelter for needy children, and was part of the initial establishment of the institution on the new site. Although some of the values of West Oakland Home had shifted during the 1920s and 1930s, notably the segregation of the institution, and moved away from the most progressive and innovate aspects of Rebecca McWade's original vision, the move to Lincoln Heights represents a continuation in the mission to provide shelter to orphans and other needy children in Oakland. Building 2 appears to be significant under Criterion 1 (Events) for a strong association with the West Oakland Home during the transitional period when it was establishing at the new Lincoln Avenue site. The period of significance for Building 2 under Criterion 1 (Events) is 1929 to 1935, beginning with the first year of construction and spanning through the construction of Building 0 (Junior Alliance Hall), which was the last substantial building project on the site before the institution transitioned toward new services for "emotionally disturbed" children in the 1940s.

Criterion 2 (Persons)

Building 2 (Grace L. Trevor Cottage) does not appear to be significant under California Register Criterion 2 (Persons). The building is primarily associated with West Oakland Home institution, rather than any one particular individual. While the building was named after Grace L. Trevor, a long-time volunteer, a donor, and a president of the board of directors, research has not indicated that Trevor had an important impact to local history outside of this institution. Buildings are frequently named after donors, and a namesake association alone is not enough to qualify for historic significance under Criterion 2 (Persons). Therefore, Building 2 is not significant under Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 2 (Grace L. Trevor Cottage) appears to be significant under California Register Criterion 3 (Architecture) as a representative work by local master architects Reed & Corlett and as an example of Spanish Colonial Revival style design. The building possesses high artistic value in the detailing and characteristic features and materials of Spanish Colonial Revival design, which was a popular style in the Bay Area during the 1930s, as applied to an institutional building. While the building does not exhibit lavish or exuberant detailing and ornamentation, due to the financial constraints of such an institution, Building 2 exhibits many character-defining features of the Spanish Colonial Revival style such as a gable roof, terra cotta tile roofing; stucco cladding; balconettes; recessed arches; decorative details such as pilasters, carved wood lintels, corbelling, wood colonettes, wood shutters and leader heads; and brick chimneys with decorative roof caps. Known for their abilities in various revival style designs, including the Spanish Colonial Revival style, and for numerous commercial and institutional projects, Building 2 is a good, representative example of Reed & Corlett's work as local master architect. For these reasons, Building 2 is significant under Criterion 3 (Architecture). The period of significance for Building 2 under Criterion 3 (Architecture) is 1930, the year the building was completed.

Criterion 4 (Information Potential)

Building 2 does not appear to be individually eligible under Criterion D/4. It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 2 Integrity

Location

Building 2 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

The building retains its integrity of setting because the surroundings generally reflect conditions as they were when the building was constructed. Although the property was largely rural when Building 2 was constructed, the campus was intended to be developed over time. Building 2 retains its spatial relationship to the immediately adjacent Buildings 1.

Design

Building 2 no longer retains integrity of design due to extensive alterations. Prior to 1951, balconettes on the side façades were removed to accommodate wood fire escapes, retaining the original doors. A significant remodel in 1967 included the removal of the wood fire escapes; the construction of a new concrete fire escape; a complete reconfiguration of the interior circulation requiring a projecting bay addition at the rear façade; the replacement of all original windows on all façades; the demolition of nine original windows on the rear façade; the demolition of two original doors and a balconette at the rear façade; the construction of two new windows and two new doors on the rear façade; the replacement of an original door with a new window on the second story of each the southeast and the northwest façade; the infill of a basement stairwell and doorway on the northwest façade; the infill of three recessed archways on the southeast façade resulting in the removal of three original windows and plaster pilaster details; and the construction of two new window openings and a door opening on the southeast façade. The primary façade was largely unaltered during the 1967 remodel, apart from all the original windows being replaced with aluminums-sash windows with differing operability and patterns of lites. Building 2 retains some elements of its original Spanish Colonial Revival design, but the cumulative alterations and additions have resulted in a loss of integrity of design.

Materials

Building 2 no longer retains integrity of materials. As noted above, all the original windows were replaced with aluminum-sash windows with different operability and patterns of lites and all original doors have been replaced. All original wood shutters have been removed, both side balconettes and the rear balconette have been removed, and most of the metal pot holders have been removed. Based on the extensive alteration to the pattern of windows and doors on the rear and two side façades, the stucco cladding has been replaced. Additionally, due to the removal of original windows on the rear façade, original materials and features such as a wood colonette and lintel and plaster pilasters have also been lost. Compared to Buildings 0 and 1, Building 2 has lost substantially more of its original materials, and thus no longer retains integrity of materials.

Workmanship
Building 2 no longer retains integrity of workmanship as numerous original features and materials that exemplify the craftsmanship of building construction in the 1930s have been removed, replaced, or altered. The Spanish Colonial Revival style building exhibits only a few examples of the decorative features such as wood colonettes, a metal balconette, leader heads, and plaster pilasters, which would convey the buildings workmanship. Due to cumulative alterations and additions, Building 2 no longer retains integrity of workmanship.

Feeling
Building 2 substantially retains integrity of feeling, despite extensive alterations. Since the majority of the alterations were located on the side and rear façades, some features and materials remain extant at the primary façade. Although all of the windows have been replaced, the pattern of windows and doors and size of openings at the primary façade remain the same. As such, Building 2 can convey its feeling of an early twentieth century institutional building.

Association
Building 2 substantially retains integrity of association. Despite interior alterations which altered the building from its original use as a girls' dormitory, the building was used for educational and administrative purposed until Lincoln Child Center sold the subject property and the building has remained unoccupied. Due to the fact that Building 2 retains integrity of location, setting, and feeling, the property is identifiable as an institutional building constructed in the 1930s associated with the West Oakland Home.

Conclusion

Building 2 significant under Criterion 1 (Events) as one of the two first purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. It is also significant under Criterion 3 (Architecture) for its association local master architects Reed & Corlett and as a good example of the Spanish Colonial Revival style applied to an intuitional building in Oakland. The period of significance under Criterion 1 is 1929 to 1935, and the period of significance under Criterion 3 is 1930. The building retains integrity of location, setting, feeling and association, but no longer retains integrity of design, materials, or workmanship. As such, the building no longer retains sufficient integrity to convey its historic significance under Criterion 3 (Architecture), but retains sufficient integrity to convey its historic significance under Criterion 1. Therefore, Building 2 is eligible for individual listing in the California Register of Historical Resources.

BUILDING 3

Building 3 was not individually evaluated at this time because it was constructed in 1990, and is not yet 45 years of age or older. Therefore, Building 3 is not yet age-eligible for listing in the California Register of Historical Resources.

BUILDING 4 (EXECUTIVE/LINNET/ETHEL MOORE COTTAGE)

Building 4 Significance

Criterion 1 (Events)
Building 4 (Executive/Linnet/Ethel Moore Cottage) does not appear to be significant under California Register Criterion 1 (Events). The building was constructed in the late 1930s or early 1940s to house the executive director of Lincoln Child Center, and was later converted to a residential group home in 1971. Both uses were part of the evolution and ongoing function of Lincoln Child Center's mission to provide residence and care to children in Oakland, but the building does not appear to have a notable or specific association with any significant event or pattern at Lincoln Child

Center, nor does it appear to reflect any specific events that have contributed to broad patterns of local or regional history or to have contributed individually to the cultural heritage of California. Therefore, Building 4 does not appear to be significant under California Register Criterion 1 (Events).

Criterion 2 (Persons)

Building 4 (Executive/Linnet/Ethel Moore Cottage) does not appear significant under California Register Criterion 2 (Persons). Research did not identify the executive director who served in 1945, at the time the house was likely completed. Clayton E. Nordstrom became executive director for Lincoln Child Center in 1948, so would have likely been one of the earliest residents of Building 4. However, Nordstrom does not appear to have a close association with building or have been significant to local, California or national history such that the building would rise to the level of individual significance. Thus, the building cannot be said to have significance under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 4 (Executive/Linnet/Ethel Moore Cottage) does not appear significant under California Register Criterion 3 (Architecture). Building 4 was constructed at an unknown date between 1938 and 1946 by an unknown builder. The residence is vernacular in style and appears to have had some modest Spanish Colonial Revival style features, such as decorative tile vents and a Spanish clay tile roof. However, the building has been substantially altered through additions and replacement features such that it is difficult to conclusively identify its original architectural features. In its current state, the building is not a notable or distinctive example of vernacular or Spanish Colonial Revival style, nor was it built by a master architect. For these reasons, Building 4 does not appear to be significant under California Register Criterion 3 (Architecture).

Criterion 4 (Information Potential)

Building 4 does not appear to be individually eligible under Criterion D/4 (Information Potential). It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 4 Integrity

Although Building 4 has not been found historically significant under any evaluative criteria, integrity is evaluated to determine if the building could contribute to a campus-wide historic district.

Location

Building 4 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

Building 4 has undergone minimal changes to its setting since construction circa 1938-46. A portable classroom, Building 3, was installed to the north in 1990. Building 4 is located northeast of Building 10, which appears to have been constructed at the same time, and Building 4 continues to face a driveway which extends from Linnet Avenue. The area to the east of, and downhill from, Building 4 was turned into a grass playing field in 2000, but much of the surrounding south and east portions of the campus have remained undeveloped. As such, Building 4 retains integrity of setting.

Design
Building 4 has undergone substantial additions and alterations which have diminished its integrity of design. The building appears to have been designed as a modest, vernacular style building with some Spanish Colonial Revival style features that likely were meant to be compatible with the other existing buildings on campus—Buildings 0, 1 and 2. The original Spanish clay tile roofing has been replaced with asphalt shingles and several original wood windows have been replaced with aluminum-sash windows. A large projecting addition on the southeast façade of Building 4 was constructed in 1954 with a gable roof and stucco cladding to match the original building. In 1971, a flat-roofed addition with vertical wood siding was constructed, significantly altering the footprint of the building and resulting in the demolition of much of the original northwest and northeast façades. These cumulative alterations and large additions have resulted in the loss of integrity of design.

Materials
Building 4 has undergone several changes to its original materials, including the replacement of many of the original wood windows with aluminum sash windows, the loss of original walls and associated features due to two additions, and the replacement of the original Spanish clay tile roof with asphalt shingles. As a result, Building 4 no longer retains integrity of materials.

Workmanship
Building 4 was designed and constructed with few, modest expressions of workmanship, and since the design and materials has been substantially altered, Building 5 no longer retains integrity of workmanship.

Feeling
Building 4 does not retain enough of its overall original form, massing, design and materials to express its era of construction or vernacular residential design with Spanish Colonial Revival details.

Association
Building 4 was converted from a residence for the executive director to a small boys group home in 1971. Despite this conversion, the building was still used for residential occupancy directly associated with the mission of Lincoln Child Center, and thus still retains integrity of association.

Conclusion

Building 4 does not appear to be individually significant under any of the four evaluative criteria and is therefore not eligible for individual listing in the California Register of Historical Resources. Building 4 only retains three aspects of integrity, and has lost integrity of design, materials, workmanship and feeling. Overall, Building 4 lacks historic integrity.

BUILDING 5 (MAINTENANCE BUILDING)

Building 5 Significance

Criterion 1 (Events)
Building 5 (Maintenance Building) does not appear to be significant under California Register Criterion 1 (Events). The building was constructed in 1967 to fulfill a utilitarian purpose as maintenance garage, which is a common use for institutional campuses. The building does not have any notable or specific association with any broad pattern of events at Lincoln Child Center, nor reflect any specific events that have contributed to broad patterns of local or regional history or to have contributed individually to the cultural heritage of California. Therefore, Building 5 does not appear to be significant under California Register Criterion 1 (Events).

Criterion 2 (Persons)

Building 5 (Maintenance Building) does not appear significant under California Register Criterion 2 (Persons). Research has revealed no specific close association between Building 5 and any significant person. Thus, the building cannot be said to have significance under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 5 (Maintenance Building) does not appear significant under California Register Criterion 3 (Architecture). Building 5 was constructed in 1967 by Robert Goetz Associates. It is a utilitarian building designed with modest Spanish Colonial Revival style elements such as Spanish Clay tile roofing and stucco cladding, which reference the adjacent Buildings 0, 1 and 2. The Spanish Clay tile roofing has since been removed. The building is not a notable or distinctive example of Spanish Colonial Revival style design, nor was it built by a master architect. For these reasons, Building 5 does not appear to be significant under California Register Criterion 3 (architecture).

Criterion 4 (Information Potential)

Building 5 does not appear to be individually eligible under California Register Criterion 4 (Information Potential). It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 5 Integrity

Although Building 5 has not been found historically significant under any evaluative criteria, integrity is evaluated to determine if the building could contribute to a campus-wide historic district.

Location

Building 5 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

Building 5 undergone minimal changes to its setting since construction in 1967. Building 5 is located between Building 1 (Mary A. Crocker Cottage) and Building 6 (Bushell Cottage), both of which were constructed prior to Building 5. A play shelter and playground were also located to the northeast and southeast of Building 5 when it was constructed. Although the playground has been altered over the years, Building 5 retains integrity of setting.

Design

Building 5 has undergone several alterations that have greatly reduced its integrity of design. The building was designed as a modest, utilitarian building, but with some Spanish Colonial Revival style features that would be compatible with the adjacent Building 1. The original Spanish clay tile roofing has been replaced with rolled asphalt and the overhanging eaves and exposed rafter tails have been covered by a new metal gutter system. A second door and two new windows were installed on the southwest façade, a lean-to addition constructed on the primary façade, and a chain-link fence was installed around the area in front of the primary façade. The entire southeast has been covered by plywood and metal and wood safety fencing has been installed along the southeast roofline and northeast façade. These cumulative alterations have resulted in the loss of integrity of design.

Materials
Building 5 has undergone some changes to its original materials. An original window on the northeast façade was boarded up, the roof cladding was replaced, and the original stucco cladding on the southeast façade has been covered by plywood. Overall Building 5 retains moderate integrity of materials.

Workmanship
Building 5 was designed and constructed in a style that generally includes few expressions of workmanship such as the stucco cladding, and since the design has been altered, Building 5 retains only a moderate degree of integrity of workmanship.

Feeling
Building 5 retains integrity of feeling despite changes to its setting and design. It retains enough of its overall original form, massing, design and materials to express its era of construction and its original use a maintenance garage, specifically through the extant garage openings and wood rollup doors.

Association
Building 5 continues to function as a maintenance garage for an institutional campus, and therefore retains integrity of association.

Conclusion

Building 5 does not appear to be individually significant under any of the four evaluative criteria, and is therefore not eligible for individual listing in the California Register of Historical Resources. Building 5 retains integrity of location, setting, materials, workmanship, feeling, and association, but lacks integrity of design.

BUILDING 6 (BUSHELL COTTAGE) & BUILDING 7 (BUSHELL KITCHEN & DINING HALL)

Bushell Cottage, now known as Building 6, and Bushell Kitchen & Dining Hall, now known as Building 7, were both designed by architect Gerald M. McCue, and were constructed at the same time as part of the same functional complex. Building 7 was designed to be connected to Building 6 and serve as a kitchen and dining hall for the residents of Building 6. Based on the fact the buildings were designed by the same architect, built at the same time, are physically connected, and were designed for interrelated uses, they are evaluated below as one potential historic resource.

Buildings 6 & 7 Significance

Criterion 1 (Events)
Building 6 (Bushell Cottage) and Building 7 (Bushell Kitchen & Dining Hall) do not appear to be significant under California Register Criterion 1 (Events). The building was constructed in 1958 to accommodate a growing student population living at the Lincoln Child Center campus. The facilities were not constructed in accordance any overall master planning efforts, but rather were part of the piecemeal growth that the campus experienced in the second half of the twentieth century. Buildings 6 and 7 do not have any notable or specific association with any broad pattern of events at Lincoln Child Center, nor reflect any specific events that have contributed to broad patterns of local or regional history or to have contributed individually to the cultural heritage of California. Therefore, Buildings 6 and 7 do not appear to be significant under California Register Criterion 1 (Events).

Criterion 2 (Persons)
Building 6 (Bushell Cottage) and Building 7 (Bushell Kitchen & Dining Hall) do not appear significant under California Register Criterion 2 (Persons).Although named after donors Annie E.

and E. R. Bushell, the buildings do not have any other direct association with the Bushells who had donated the money in their will much earlier, in 1924. Research has revealed no specific close association between Buildings 6 and 7 and any significant person. Thus, Buildings 6 and 7 cannot be said to have significance under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 6 (Bushell Cottage) and Building 7 (Bushell Kitchen & Dining Hall) do not appear significant under California Register Criterion 3 (Architecture). Buildings 6 and 7 were constructed in 1958 by architect Gerald M. McCue. The buildings are modest expressions of Midcentury Modern design with limited character-defining features of the style and simple, inexpensive materials. McCue does appear to be a significant local architect for his contributions to industrial, commercial and residential design in various Modernist styles, including a residence at The Sea Ranch, Santa Teresa Lab for IBM in San Jose, and the Almaden Research Center for IBM in San Jose, Los Gatos Civic Center Project, Oakes College at University of California, Santa Cruz, among other projects. However, Buildings 6 and 7 do not embody the same high artistic value as many of McCue's other projects, and thus cannot be said to be representative of his best work. For these reasons, Buildings 6 and 7 do not appear to be significant under California Register Criterion 3 (architecture).

Criterion 4 (Information Potential)

Buildings 6 and 7 do not appear to be individually eligible under California Register Criterion 4 (Information Potential). They do not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Buildings 6 & 7 Integrity

Although Buildings 6 and 7 have not been found historically significant under any evaluative criteria, integrity is evaluated to determine if the buildings could contribute to a campus-wide historic district.

Location

Buildings 6 and 7 have not been moved from the place where they were constructed and therefore retain their integrity of location.

Setting

Buildings 6 and 7 retain integrity of setting. The area to the southeast of Buildings 6 and 7 was formerly an undeveloped field, but in 2000 a large parking lot and Building 9 were constructed. The area to the west of Building 6 and 7, was developed prior to Buildings 6 and 7, and the setting remains largely unchanged. Overall, Buildings 6 and 7 substantially retain integrity of setting.

Design

The design of Building 6 has not been altered, but Building 7 was renovated in 2000. The renovation of Building 7 altered the formerly open, covered patio area to a fully enclosed dining hall through the demolition of an original brick chimney and inner fully glazed walls, and the construction of three new exterior walls. The indoor-outdoor connection of Building 7 was characteristic of Midcentury Modern design of the era, and has changed the building's design. However, the roofline and interior materials of Building 7 remain substantially the same and the design of Building 6 has not been altered. Therefore, Buildings 6 and 7 substantially retain integrity of design.

Materials

Buildings 6 and 7 have undergone several material changes, but substantially retain integrity of materials. Permit records indicate that some or all of the windows of Building 6 were replaced in-kind, but the size and number of openings were not altered. The siding has generally not been altered, and where Building 7 was expanded in 2000, compatible materials were used for the construction of the new walls.

Workmanship

Buildings 6 and 7 were designed and constructed in a modest expression of Midcentury Modern style that generally includes few expressions of workmanship, but since the buildings substantially retain integrity of design and materials, the buildings also substantially retain integrity of workmanship.

Feeling

Buildings 6 and 7 retain integrity of feeling. The buildings generally retain their overall original form, massing, design and materials, which enable them to express the post-World War II era of construction and its original use as an institutional residential building and attached kitchen and dining hall.

Association

Buildings 6 and 7 retain integrity of association. The buildings continued to be used for residential purposes throughout Lincoln Child Center's tenure on the site, and have not been altered since closure of the facility.

Conclusion

Buildings 6 and 7 do not appear to be individually significant under any of the four evaluative criteria, and are therefore not eligible for individual listing in the California Register of Historical Resources. Buildings 6 and 7 substantially retain all seven aspects of integrity.

BUILDING 8 (EBAC/CHARLESTON HOUSE/HOLMGREN)

Building 8 Significance

Criterion 1 (Events)

Building 8 (EBAC/Charleston House/Holmgren) does not appear to be significant under California Register Criterion 1 (Events). Building 8 was constructed in 1957 to house the East Bay Activities Center (EBAC), which aimed to provide educational and recreational space for children with emotional or behavior disabilities, on land leased from Lincoln Child Center. Building 8 was used by EBAC until 1979 when they moved across the street to a permanent location. Subsequently, Building 8 appears to have been used by Lincoln Child Center for various administrative offices and is now used for storage. Building 8 was not constructed by or for Lincoln Child Center and does not have any specific association with the organization's development. While EBAC provided much-needed resources to the community in Oakland, research has not revealed that EBAC was broadly influential within the field of psychology or education such that the building would rise to the level of individual significance. Therefore, Building 4 does not appear to be significant under California Register Criterion 1 (Events).

Criterion 2 (Persons)

Building 8 (EBAC/Charleston House/Holmgren) does not appear significant under California Register Criterion 2 (Persons). Building 8 originally housed EBAC, which was founded by a group of parents and psychologists including Elizabeth Faragoh, Dr. Hubert and Franchon Coffey, and Dr. Phyllis Van Vleet. EBAC also worked with student volunteers from University of California, Berkeley, and had several notable mental health professionals on their board in early years. As such, no one person appears to have a close association with Building 8 such that it would rise to the level of individual significance for their local, state, or national contributions. Thus, the building cannot be said to have significance under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)

Building 8 (EBAC/Charleston House/Holmgren) does not appear significant under California Register Criterion 3 (Architecture). Building 8 was originally constructed by architect Robert Ratcliff in 1957 in a modest expression of Midcentury Modern style, with a low-pitch gable roof, wood board and batten cladding, and a covered patio. Although Robert Ratcliff appears to be a local master architect, Building 8 does not appear to be one of the more notable, significant or distinctive examples of his work. For these reasons, Building 8 does not appear to be significant under California Register Criterion 3 (architecture).

Criterion 4 (Information Potential)

Building 8 (EBAC/Charleston House/Holmgren) does not appear to be individually eligible under California Register Criterion 4 (Information Potential). It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 8 Integrity

Although Building 8 has not been found historically significant under any evaluative criteria, integrity is evaluated to determine if the building could contribute to a campus-wide historic district.

Location

Building 8 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting

Building 8 has undergone several substantial changes to its setting since construction in 1957. When the building was constructed and used by EBAC, an approximately half-acre area around the building was fenced off as a play area, and the surrounding area was relatively rural and undeveloped. Since 1979, concrete walkways and concrete pavers have been added, additional trees planted, and an asphalt basketball court constructed within the former play area. The basketball court is separately fenced off and has significantly altered the immediate area around Building 8. Beyond the former play area, a large parking lot was paved and Building 9 constructed immediately to the west in what was formerly an undeveloped play field used by Lincoln Child Center. Originally Building 8 was oriented toward Charleston Street, but after EBAC moved out, the southwest side of the building, facing in to the campus, was used as the primary entrance. Due to these alterations, Building 8 no longer retains integrity of setting.

Design

Building 8 has undergone substantial additions and alterations which have diminished its integrity of design. The building was designed as a modest expression of Midcentury Modern design by architect Robert Ratcliff, featuring a small rectangle plan, low-pitch gable roof, wood board and batten siding, and fixed wood frame windows. Three additions in the 1960s substantially altered the footprint of the building, added new roof lines, and introduced new windows on the northwest and southeast facades. Furthermore, the addition of chain-link storage enclosures and enclosed mechanical storage closets along the northeast façade, which was originally the primary façade, have significantly altered the design of the building. The cladding of the formerly wood board and batten building in highly textured stucco, which is not compatible with the original Midcentury Modern design, has also significantly altered the design. These cumulative alterations and additions have resulted in the loss of integrity of design.

<u>Materials</u>

Building 8 has undergone extensive changes to its original materials. All of the original wood board and batten siding has been covered with textured stucco. The simple wood fascia and partly exposed rafter tails along the northeast and southwest facades have been obscured by a metal gutter system. Several of the original exterior wood slab doors have been replaced with wood slab doors with one narrow vertical lite. Although some historic windows remain and the windows installed at the 1960s additions match the original design, the original windows at the northwest and southeast façades have been removed. Additionally, all of the interior finishes have been replaced. As a result, Building 8 no longer retains integrity of materials.

<u>Workmanship</u>

Building 8 was constructed with a simple design and affordable materials with few, modest expressions of workmanship. Since the design and materials have been substantially altered, Building 8 no longer retains integrity of workmanship.

<u>Feeling</u>

Building 10 does not retain enough of its overall original form, massing, design or materials to express its era of construction or Midcentury Modern style design. The textured stucco cladding in particular is not compatible with 1950s Midcentury Modern style design.

<u>Association</u>

Building 10 has had several additions and been extensively remodeled at the interior and exterior. Lacking integrity of setting, design, materials, workmanship, and feeling, the building no longer is able to convey an association with a mid-20th century institution for child development and education.

Conclusion

Building 10 does not appear to be individually significant under any of the four evaluative criteria, and is therefore not eligible for individual listing in the California Register of Historical Resources. Building 10 no longer retains integrity of setting, design, workmanship, feeling or association, and therefore lacks historic integrity overall.

BUILDING 9 (CHAMPLIN HOUSE)

Building 9 was not individually evaluated at this time because it was constructed in 1999, and is not yet 45 years or older. Therefore, Building 9 is not yet age-eligible for listing in the California Register of Historical Resources.

BUILDING 10 (GARAGE)

Building 10 Significance

<u>Criterion 1 (Events)</u>

Building 10 (Garage) does not appear to be significant under California Register Criterion 1 (Events). The building was constructed in 1945 to fulfill a utilitarian purpose as workshop garage, and possible general storage. The building does not have any notable or specific association with any broad pattern of events at Lincoln Child Center, nor reflect any specific events that have contributed to broad patterns of local or regional history or to have contributed individually to the cultural heritage of California. Therefore, Building 10 does not appear to be significant under California Register Criterion 1 (Events).

Criterion 2 (Persons)
Building 10 (Garage) does not appear significant under California Register Criterion 2 (Persons). As a workshop garage, the building would have been used by the occupant of the Executive Cottage (Building 4) and by the Lincoln Child Center organization. Research has revealed no specific, close association between Building 10 and any significant person. Thus, the building cannot be said to have significance under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)
Building 10 (Garage) does not appear significant under California Register Criterion 3 (Architecture). Building 10 was constructed in 1945 and designed by architect Paul Hammarberg. Hammarberg has not been identified as a master architect. The building is a utilitarian workshop garage in a vernacular style with very limited architectural or decorative detailing. The building is not a notable or distinctive example of any architectural style or construction method, nor does it appear to have been built by a master architect. For these reasons, Building 10 does not appear to be significant under California Register Criterion 3 (architecture).

Criterion 4 (Information Potential)
Building 10 does not appear to be individually eligible under California Register Criterion 4 (Information Potential). It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Building 10 Integrity

Although Building 10 has not been found historically significant under any evaluative criteria, integrity is evaluated to determine if the building could contribute to a campus-wide historic district.

Location
Building 10 has not been moved from the place where it was constructed and therefore retains its integrity of location.

Setting
Building 10 has undergone minimal changes to its setting since construction in 1945. Building 10 is located south of Building 4, which appears to have been constructed at the same time. A portable classroom, Building 3, was installed to the north in 1990, and a concrete patio on the northwest side of Building 10 appears to have been a later addition. Building 10 continues to front a driveway which extends from Linnet Avenue. Despite some changes to the setting, Building 10 substantially retains integrity of setting.

Design
Building 10 has undergone several alterations that have greatly impacted its integrity of design. The building was designed as a modest, utilitarian garage with one almost entirely open façade, the southeast façade which faces the driveway. The southeast façade has since been infilled, such that the building can no longer truly function as a garage, as there are no longer any large, automobile-sized openings. The building currently is used for storage. New windows and a door have been installed in the new, infilled southeast wall. The door on the northwest façade may also be a later addition. Safety fencing has also been installed along the roofline, and metal gutters have been installed in front of

the exposed rafter tails. These cumulative alterations, primarily the infilling of the southeast façade and installation of new windows and a door, have resulted in the loss of integrity of design.

Materials

Building 10 has undergone a number of changes to its original materials. Extant original materials include the exposed rafters and rafter tails and the stucco cladding. The only original wood window on the northwest façade has had an aluminum-sash inserted, and is covered by a metal security grate. The original terra cotta tile roofing has also been replaced with asphalt shingles. Building 10 exhibits a modest and limited material palette, and the cumulative changes have resulted in a loss of integrity of materials.

Workmanship

Building 10 was designed and constructed in a style that generally includes few expressions of workmanship. The primary feature that conveyed the building function and use, the open southeast façade, has been covered and the interior of the building is no longer readily visible. Due to the significant alteration to the building's design, Building 10 has also lost integrity of workmanship.

Feeling

Building 10 no longer retains integrity of feeling as the building no longer has a garage-style opening and the non-original windows and doors do not convey a building constructed in the mid-1940s.

Association

Building 10 no longer retains integrity of association as it no longer can function as a garage without garage-style openings.

Conclusion

Building 10 does not appear to be individually significant under any of the four evaluative criteria, and is therefore not eligible for individual listing in the California Register of Historical Resources. Additionally, Building 10 no longer retains integrity of design, materials, workmanship, feeling or association, and as such does not retain overall integrity.

BUILDING 11

Building 11 was not individually evaluated at this time because it was constructed in circa 2005-2009, and is not yet 45 years or older. Therefore, Building 11 is not yet age-eligible for listing in the California Register of Historical Resources.

EVALUATION OF THE HEAD-ROYCE SCHOOL SOUTH CAMPUS AS A HISTORIC DISTRICT

Historic districts are made up of components which are significant when grouped together, defined by the National Park Service as possessing a "significant concentration, linkage, or continuity of sites, buildings, structures or objects united historically or aesthetically by a plan or physical development."[147] Individual contributors must work together to tell the shared story of a district's significance, and must be defined as a group by distinguishable boundaries. Boundaries of a historic district are frequently defined by use, connection to an event, or architectural style. Historic districts will include both contributors and non-contributors, and not all contributing resources need to be of the same historical or architectural quality or individually eligible for local, state, or national register listing. A district functions as a group, and may include both contextual buildings and exceptional contributors which help to anchor the district.

Eligibility for listing for historic districts in the California Register, just as for individual resources, is based on two factors: significance and integrity, as defined above.

Head-Royce School South Campus Significance

The following evaluation considers whether the Head-Royce South Campus as a whole, comprising the seven-and-a-half-acre parcel designated as APN 29-1009-6 and the buildings and landscape features therein, may be eligible for the California Register as a historic district.

Criterion 1 (Events)

The Head-Royce South Campus does not appear to possess significance under California Register Criterion 1 (Event). Under founder Rebecca McWade's leadership from 1883 to 1891, the West Oakland Home defied societal norms by accepting children regardless of race or ethnicity, accepting infants, and accepting single mothers and their children. By the 1920s, the West Oakland Home had become racially segregated. When the organization moved from West Oakland to Lincoln Avenue in 1930, the new cottage system was not equipped to accommodate infants or single mothers. Despite changes in the organization's original focus on inclusiveness, Buildings 0, 1, and 2, dating from the initial years of the West Oakland Home's occupation of the Lincoln Avenue site, are significant for their association with the institution's ongoing service to Oakland's needy and orphaned children. In the 1940s the institution departed further from its original mission by refocusing efforts on "emotionally disturbed" children, a worthy effort reflective of the needs of the time and contemporary theories of psychology and child care. The organization that became known as Lincoln Child Center by the 1950s had evolved to be a distinctly different institution from the inclusive, urban-based orphanage and home for single mothers that McWade had founded in the previous century, and which was established on this location with the first three buildings constructed between 1929 and 1935. The buildings, structures, and landscape elements of the Head-Royce South Campus represent eight decades of institutional development responding to changing needs and philosophies, and do not represent a cohesive plan or approach to the care of needy children. The disparate complex of buildings is not representative of the organization's earliest, most innovative and progressive work, and includes a majority of buildings constructed in the 1940s or later, when the organization moved away from its original mission. Therefore, the campus as a whole does not appear to have significance as a district under Criterion 1(Events).

[147] National Park Service, National Register Bulletin No. 15: How to Apply the National Register Criteria for Evaluation (Washington, D.C.: National Park Service, 1997), 5.

Criterion 2 (Persons)

The Head-Royce School South Campus does not appear to possess significance under California Register Criterion 2 (Persons). Rebecca McWade, the founder of West Oakland Home (later Lincoln Child Center) died in 1891, nearly four decades before the institution moved to Lincoln Avenue. Other women associated with the organization included Mary A. Crocker, who donated money to several building projects and ran the organization when McWade fell into ill health, but also died long before the establishment of the Lincoln Avenue campus. Grace L. Trevor, a donor, long-time volunteer, and president of the board of directors, was active within the organization when the first three buildings were constructed. However, Trevor does not have any other known accomplishments that suggest that she had a significant impact on the development of Oakland. Overall, there does not appear to be a significant association with the lives of any persons involved with West Oakland Home that would justify the entire campus's inclusion in the California Register as a historic district in association with any particular person. Therefore, the Head-Royce School South Campus does not appear to be significant as a district under California Register Criterion 2 (Persons).

Criterion 3 (Architecture)

The Head-Royce School South Campus does not appear to possess significance under California Register Criterion 3 (Architecture). The campus includes 12 buildings with construction dates ranging from 1930 (Buildings 1 and 2) to circa 2005-2009 (Building 11). The buildings represent several different loose phases of physical development on campus, and a range of architectural styles and construction types including Spanish Colonial Revival style, Midcentury Modern, vernacular, and prefabricated. Three buildings on campus were designed by recognized Bay Area master architects Reed & Corlett or William G. Corlett, Jr. (of Reed & Corlett); these buildings, Buildings 0, 1 and 2, are recognized with findings of individual historic significance in this report, and do not qualify the entire campus for significance under this criterion. Notable Bay Area architects Gerald McCue and Robert Ratcliff also designed buildings on the campus, but these buildings—Buildings 6 and 7, and Building 8 respectively—are very modest in style and do not represent these architects' best work. Robert Royston designed the playground west of Building 6, which was representative of Midcentury Modern playground design, but lacks integrity as most of the features have been removed, covered, or otherwise altered.

An early campus master plan was developed by Reed & Corlett when they were designing the first two cottages, Buildings 1 and 2. However, this master plan was not executed beyond the construction of the first two buildings. Overall the campus does not represent the work of a master plan designed by any master architect or planner. Rather, design, siting, and frequency of construction appears to be driving primarily by immediate need and limited, available funding.

Overall the campus site is not associated with one specific architect or firm that would render it significant for its architecture or cohesive campus design. The campus as a whole does not represent a particular type, period, or method of construction or represent high artistic values. Therefore, the Head-Royce School South Campus does not appear to be significant as a district under California Register Criterion 3 (Architecture).

Criterion 4 (Information Potential)

The Head-Royce School South Campus does not appear to be individually eligible under Criterion 4 (Information Potential) as a site or collection of buildings that has the potential to provide information important to the prehistory or history of the City of Oakland, state, or nation. It does not appear to feature construction or material types, or embody engineering practices that would, with additional study, provide important information. Page & Turnbull's evaluation of this property was limited to age-eligible resources above ground and did not involve survey or evaluation of the subject property for the purposes of archaeological information.

Head-Royce School South Campus Integrity

As Page & Turnbull has not found the Head-Royce School South Campus to be eligible as a historic district under any of the four criteria, a detailed analysis of its integrity is not included.

Conclusion

The Head-Royce School South Campus does not appear to be significant under any of the four criteria, and thus, does not appear to qualify as a California Register historic district.

VII. EVALUATION OF HEAD-ROYCE SCHOOL SOUTH CAMPUS FOR ELIGIBILITY AS A CITY OF OAKLAND DESIGNATED HISTORIC PROPERTY

This section of the report evaluates nine of the buildings at the Head-Royce School South Campus that are more than 45 years old for their eligibility for listing as a City of Oakland Designated Historic Property. An explanation of the City of Oakland's evaluative criteria for historic significance is described above in **Section II** and included in Appendix D of the Historic Preservation Element of the Oakland General Plan. [148] Evaluation sheets for each of the nine evaluated buildings are included in **Appendix B** of this report.

BUILDING 0 (JUNIOR ALLIANCE HALL)

The Oakland Cultural Heritage Survey assigned Building 0 (Junior Alliance Hall) a preliminary rating of C3 in 1996, indicating that it is a property of secondary importance and is not in an eligible district. Page & Turnbull's evaluation assigns Building 0 a rating of B3a, which means that it is a building of major importance not located in an eligible district, with a contingency rating of "a."

BUILDING 1 (MARY A. CROCKER COTTAGE)

The Oakland Cultural Heritage Survey assigned Building 1 (Mary Crocker Cottage) a preliminary rating of C3 in 1996, indicating that it is a property of secondary importance and is not in an eligible district. Page & Turnbull's evaluation assigns Building 1 a rating of B3a, which means that it is a building of major importance not located in an eligible district, with a contingency rating of "a."

BUILDING 2 (GRACE L. TREVOR COTTAGE)

The Oakland Cultural Heritage Survey assigned Building 2 (Grace L. Trevor Cottage) a preliminary rating of C3 in 1996, indicating that it is a property of secondary importance and is not in an eligible district. Page & Turnbull's evaluation assigns Building 2 a rating of C3a, which means that it is a building of secondary importance not located in an eligible district, with a contingency rating of "a."

BUILDING 3

Building 3 was not individually evaluated at this time because it was constructed in 1990, and is not yet 45 years or older. Therefore, Building 3 is not yet age-eligible for listing as a City of Oakland Designated Historic Property.

BUILDING 4 (EXECUTIVE/LINNET/ETHEL MOORE COTTAGE)

The Oakland Cultural Heritage Survey did not assign Building 4 any rating during the 1996 survey. Page & Turnbull's evaluation assigns Building 4 a rating of D3, which means that it is a building of minor importance and not located in an eligible district.

BUILDING 5 (MAINTENANCE BUILDING)

The Oakland Cultural Heritage Survey did not assign Building 5 any rating during the 1996 survey. Page & Turnbull's evaluation assigns Building 5 a rating of D3, which means that it is a building of minor importance and not located in an eligible district.

[148] City of Oakland, Oakland General Plan, Historic Preservation Element, Sept. 1993.

BUILDING 6 (BUSHELL COTTAGE) & BUILDING 7 (BUSHELL KITCHEN & DINING HALL)

The Oakland Cultural Heritage Survey assigned Buildings 6 and 7 a preliminary rating of F, indicating that it a building was not age-eligible at the time of the survey. Page & Turnbull's evaluation assigns the Buildings 6 and 7 a rating of D3, which means that it is a building of minor importance not located in an eligible district.

BUILDING 8 (EBAC/CHARLESTON HOUSE/HOLMGREN)

The Oakland Cultural Heritage Survey did not assign Building 8 any rating during the 1996 survey. Page & Turnbull's evaluation assigns Building 8 a rating of D3, which means that it is a building of minor importance and not located in an eligible district.

BUILDING 9 (CHAMPLIN HOUSE)

Building 9 was not individually evaluated at this time because it was constructed in 1990, and is not yet 45 years or older. Therefore, Building 9 is not yet age-eligible for listing as a City of Oakland Designated Historic Property.

BUILDING 10 (GARAGE)

The Oakland Cultural Heritage Survey did not assign Building 10 any rating during the 1996 survey. Page & Turnbull's evaluation assigns Building 10 a rating of D3, which means that it is a building of minor importance and not located in an eligible district.

BUILDING 11

Building 11 was not individually evaluated at this time because it was constructed in circa 2005-09, and is not yet 45 years or older. Therefore, Building 11 is not yet age-eligible for listing as a City of Oakland Designated Historic Property.

HEAD-ROYCE SCHOOL SOUTH CAMPUS AS A CITY OF OAKLAND HISTORIC DISTRICT

The Historic Preservation Element of the City of Oakland General Plan describes two levels of Preservation Districts: Class 1 and Class 2. Class 1 Preservation Districts include all APIs identified by intensive survey, and other areas that meet the "Guidelines for Determination of Preservation District Eligibility." Areas of Primary Importance are areas that have been identified by an intensive survey as having a high proportion of individual properties with ratings of "C" or higher. At least two-thirds of the properties within an API must be contributory to the API, i.e. they reflect the API's principle historical or architectural themes. APIs appear eligible for the National Register of Historic Places either as districts or as historically related complexes. Class 2 Preservation Districts include all ASIs identified by intensive survey, and other areas that meet the "Guidelines for Determination of Preservation District Eligibility."[149] Areas of Secondary Importance are similar to Areas of Primary Importance except that (a) an ASI does not appear eligible for the National Register and (b) altered properties which do not now contribute to the ASI but would if restored are counted as contributors for purposes of the two-thirds threshold.

The Head-Royce School South Campus does not appear eligible for listing as a City of Oakland Designated Historic District, either as an API or an ASI. Of the eight buildings that are more than 45 years old, only four have been assigned an OCHS rating of C or higher. In addition, only three of those buildings are associated with the identified period of significance for this campus, which is

[149] Oakland General Plan, Historic Preservation Element, Chapter 4: Preservation Incentives and Regulations, Policy 2.2: Landmark and Preservation District Eligibility Criteria.

1929 to 1935. The other properties, while related to the overall theme of institutional child services, do not reflect the specific significance of the campus during its era of significance, namely the provision of housing to orphaned and needy children. In addition to the fact that nine of twelve buildings on the campus fall outside the identified period of significance, the campus does not illustrate a unified significant architectural theme or master planned design.

Therefore, the Head-Royce School South Campus does not qualify as a City of Oakland Local Historic District.

VIII. STATUS OF HEAD-ROYCE SCHOOL SOUTH CAMPUS BUILDINGS AS HISTORICAL RESOURCES UNDER CEQA

A building may qualify as a historical resource if it falls within at least one of five categories established by the City of Oakland's 2013 CEQA Thresholds of Significance Guidelines (See **Appendix C** for the full list of categories and explanations). The following describes the status of the Head-Royce School South Campus buildings as historic resources for the purposes of CEQA, based on the California Register and City of Oakland Designated Historic Property evaluations in the previous sections.

Status of Building 0 (Junior Alliance Hall) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 0 is individually eligible for listing in the California Register and as a City of Oakland Designated Historic Property. Therefore, the building does qualify a historical resource under CEQA.

Status of Building 1 (Mary A. Crocker Cottage) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 1 is individually eligible for listing in the California Register and as a City of Oakland Designated Historic Property. Therefore, the building does qualify a historical resource under CEQA.

Status of Building 2 (Grace L. Trevor Cottage) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 2 is individually eligible for listing in the California Register and as a City of Oakland Designated Historic Property. Therefore, the building does qualify a historical resource under CEQA.

Status of Building 3 as a Historical Resource Under CEQA

Building 3 is less than 45 years old and does not possess a level of significance that would qualify it for listing as historic resources under CEQA at this time.

Status of Building 4 (Executive/Linnet/Ethel Moore Cottage) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 4 (Executive/Linnet/Ethel Moore Cottage) is not individually eligible for listing in the California Register and does not qualify City of Oakland Potential Designated Historic Property. Therefore, the building does not qualify a historical resource under CEQA.

Status of Building 5 (Maintenance Building) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 5 (Maintenance Building) is not individually eligible for listing in the California Register and does not qualify City of Oakland Potential Designated Historic Property. Therefore, the building does not qualify a historical resource under CEQA.

Status of Building 6 (Bushell Cottage) & Building 7 (Bushell Kitchen & Dining Hall) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 6 (Bushell Cottage) & Building 7 (Bushell Kitchen & Dining Hall) is not individually eligible for listing in the California Register and does not qualify City of Oakland Potential Designated Historic Property. Therefore, the building does not qualify a historical resource under CEQA.

Status of Building 8 (EBAC/Charleston House/Holmgren) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 8 (EBAC/Charleston House/Holmgren) is not individually eligible for listing in the California Register and does not qualify City of Oakland Potential Designated Historic Property. Therefore, the building does not qualify a historical resource under CEQA.

Status of Building 9 (Champlin House) as a Historical Resource Under CEQA

Building 9 is less than 45 years old and does not possess a level of significance that would qualify it for listing as historic resources under CEQA at this time.

Status of Building 10 (Garage) as a Historical Resource Under CEQA

Based on Page & Turnbull's analysis, Building 10 (Garage) is not individually eligible for listing in the California Register and does not qualify City of Oakland Potential Designated Historic Property. Therefore, the building does not qualify a historical resource under CEQA.

Status of Building 11 as a Historical Resource Under CEQA

Building 11 is less than 45 years old and does not possess a level of significance that would qualify it for listing as historic resources under CEQA at this time.

Status of the Head-Royce School South Campus as a Historic District

Based on Page & Turnbull's analysis, the Head-Royce School South Camus as a whole is not eligible for listing in the California Register or as a City of Oakland Designated Historic District. Therefore, the campus does not qualify a historical district under CEQA.

IX. CHARACTER-DEFINING FEATURES

For a property to be eligible for national or state designation under criteria related to type, period, or method of construction, the essential physical features (or character-defining features) that enable the property to convey its historic identity must be evident. These distinctive character-defining features are the physical traits that commonly recur in property types and/or architectural styles. To be eligible, a property must clearly contain enough of those characteristics to be considered a true representative of a particular type, period, or method of construction, and these features must also retain a sufficient degree of integrity. Characteristics can be expressed in terms such as form, proportion, structure, plan, style, or materials.

Character defining features for the three buildings on the Head-Royce School South Campus found significant in this report are listed below.

Building 0 (Junior Alliance Hall)

- Mass, including double-height and single-height wings, and L-shaped footprint of the building;
- Fenestration pattern and original steel-sash and wood-sash windows;
- Stucco cladding including arched recessed areas at northeast facade;
- Gable and flat roof forms with terra cotta clay tiles;
- Three covered entry porches at the southwest, northwest, and southeast façades, including roof, supporting columns, and concrete and terra cotta clay tile floors;
- Pilasters framing the windows at the northwest and southeast façades;
- Terra cotta tile vents;
- Double-height interior volume of the gable-roof wing.

Building 1 (Mary A. Crocker Cottage)

- Two-story over basement massing and rectangular footprint of the building;
- Gable roof form with terra cotta clay tiles and wood brackets;
- Original fenestration pattern;
- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters;
- Open front entry porch;
- Stucco cladding including arched recessed areas at primary and northeast facade;
- Two chimneys tops with decorative roof caps;
- Balconettes at primary and northeast façades;
- Original arched wood door at northeast façade;
- Decorative wood and plaster grilles;
- Decorative leader heads;
- Wall-mounted metal pot holders;
- Terra cotta tile vents.

Building 2 (Grace L. Trevor Cottage)

- Two-story over basement massing and rectangular footprint of the building;
- Gable roof form with terra cotta clay tiles and wood brackets;
- Original fenestration pattern at primary façade;

- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters;
- Stucco cladding;
- Open front entry stairs;
- Balconettes at primary façade;
- Decorative wood and plaster grilles;
- Decorative leader heads;
- Wall-mounted metal pot holders;
- Terra cotta tile vents.

X. CONCLUSION

Page & Turnbull evaluated the Head-Royce School South Campus to arrive at two findings which determine whether the buildings on that campus or the campus as a whole are considered historic resources for the purposes of CEQA:

1. Individual rating of A or B under the Oakland Designated Historic Property Criteria for Eligibility; and

2. Eligibility for listing as an individual resource or historic district in the California Register.

This evaluation finds that three buildings on the Head-Royce School South Campus qualify as individual historic resources for the purposes of CEQA. These include Building 0 (Junior Alliance Hall), Building 1 (Mary A. Crocker Cottage), and Building 2 (Grace L. Trevor Cottage). The campus as a whole was not found to qualify as a historic district for the purposes of CEQA.

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XII. APPENDICES

APPENDIX A: BUILDING PERMIT APPLICATION TABLE

Appendix C includes the front and back pages of building permit applications currently on file with the Oakland Building Department. Permit applications with a status of "Expired" or "Cancelled" were not included. The building permit applications on file for the subject property (APN 29-1009-6) were not always specific regarding tow which building on the campus they pertain. However, information on the permit—such as number of stories, wall cladding, use, or the nature of the permitted work—often provided clues to indicate to which building they pertain.

Building Number	Date Filed	Permit App. #	Listed Owner	Architect / Builder	Description of Work
Building 1	1/24/1929	A39344	West Oakland Home	Reed & Corlett (architect) F. C. Stolte Co (builder)	New construction of 2-story, 12-room orphanage
Building 2	1/24/1929	A39345	West Oakland Home	Reed & Corlett (architect) F. C. Stolte Co (builder)	New construction of 2-story, 12-room orphanage
Building 0	12/29/1935	A59872	Junior Alliance	William Corlett (architect) F. C. Stolte Co (builder)	New construction of a frame building, concrete foundation.
Building 10	8/29/1945	B7354	West Oakland Home	Paul Hammarberg (architect) H. K. Jensen (contractor)	New construction of a 1-story, 1-room workshop of 12'-2" by 20-'4", 8' tall. Wood frame construction with stucco siding and terra cotta tile roof.
Building 0	4/30/1948	B20528	West Oakland Home	B. R [illegible]	Additional office room. 13'-5" by 12'-6"
Building 2	7/27/1952	B42854	West Oakland Home	W. A. Rose (contractor)	Repair damages caused by fire. Replaced burned interior millwork and trim.
Building 4	8/16/1954	B52535	Lincoln Home for Children	Herbert S. Taylor (contractor)	Add on a living room, convert present living room to bedroom, enlarge one bedroom, as shown by plan submitted. The addition is to the executive cottage on the grounds of the Lincoln Home for Children.

Building Number	Date Filed	Permit App. #	Listed Owner	Architect / Builder	Description of Work
Building 1 or 2 [150]	8/8/1955	B58459	Lincoln Home for Children	Herbert S. Taylor (contractor)	Partition a portion of one bed room to allow for a bath. Install water closet, lavatory and shower. Bath to be approximately 6'6" x 8'0", window (existing) is 3'6"x4'6". No structural changes to existing wall except adding non-bearing partition.
Building 0 and/or Building 1	10/24/1956	B65157	West Oakland Home	W. A. Rose Co. (contractor)	Repair damages caused by fire; replace burned floor joist, flooring, plate, bridging, studding, trusses, roof sheathing, sidewall sheathing, and interior and exterior trim and millwork.
Building 6 and 7	12/6/1957	B71996	West Oakland Home Corp.	Gerald M. McCue (architect) Carl E. Joseph (contractor)	New construction of a 30' x 200' irregular plan, wood frame, one-story building with wood and cement asbestos wall siding, and tar and gravel and cement asbestos shingle roofing.
Building 1	7/1/1959	B81973	West Oakland Home Corp.	Gerald M. McCue (architect) Carl E. Joseph (contractor)	Remodeling according to plans dated 8 June 1959 by Gerald McCue Architect (Revised 29 June 1959). Remodel of classrooms.
A-1	11/13/1959	B84723	Lincoln Home	Gerald M. McCue (architect) Aladdin HTG. Corp. (contractor)	Construction of a play shelter between Buildings 1 and 6. 10' tall, 19'-4" by 40'
Building 1 and/or 2	9/17/1963	C11587	Lincoln Child Center	W. A. Rose Co. (contractor)	Repair two (2) fire escapes – replace 2" plank balcony decks, 2" stair stringers, 2" treads and handrails etc.

[150] Building number is not specified, but based on rough plot plan, appears to be Building 1 or 2. Building 1 has a bathroom at the first floor at the southeast corner which appears to best match the description provided on the permit application.

Building Number	Date Filed	Permit App. #	Listed Owner	Architect / Builder	Description of Work
Building 0	11/4/1963	C12702	Lincoln Child Center	Roy L. Burge Inc. (contractor)	Partial termite repairs as per attached report. [Recommendation to remove and replace damaged members as necessary which are weakened by infestation. Chemically treat.]
Building 1	11/4/1963	C12704	Lincoln Child Center	Roy L. Burge Inc. (contractor)	Partial termite repairs as per attached report. [Recommendation to remove section of sills at base of banisters and replace with new at the main entry steps. Recommendation to remove and replace damaged members as necessary which are weakened by infestation. Chemically treat.]
Building 2	11/4/1963	C12703	Lincoln Child Center	Roy L. Burge Inc. (contractor)	Partial termite repairs as per attached report. [Recommendation to remove and replace damaged members as necessary which are weakened by infestation. Chemically treat.]
Building 2	2/9/1967	C35448	West Oakland Home Inc.	Reynolds and Chamberlain Architects W. A. Rose Co. (contractor)	Alteration as per accompanying plans and specifications by Reynolds & Chamberlain. [Enclosed stair addition, exterior concrete stair, aluminum window replacements, interior modification of reception desk.[151]]
Building 2	2/10/1967	N/A	Lincoln Child Center	Roy Chamberlin (architect)	Change of occupancy of existing building. Present use as children's dormitory to operate as a public assembly – day school.

[151] Documentation provided to Page & Turnbull by SOM from Byrens Associates includes Reynolds and Chamberlain Architects Change Order No. 1 (March 6, 1967) and "Revised Interior Stair Enclosure" Reynolds and Chamberlain Architects, Sheet D1, dated March 21, 1967; and "Cabinet Revisions & Additions," Reynolds and Chamberlain Architects, Sheet D2, dated May 13, 1967.

Building Number	Date Filed	Permit App. #	Listed Owner	Architect / Builder	Description of Work
Building 5	8/9/1967	C389715	Lincoln Child Center	Robert Goetz Associates (architect) Kenneth L. McKay (contractor)	New construction of a 35' by 37' garage. One-story, 12' in height, wood frame with stucco cladding and terra cotta tile roof.
Building 0	2/16/1971	CM 71-18	Lincoln Child Center	Corlett & Spackman Architects	Conditional Use Permit and Interior remodel for Royce School for Boys
Building 4	7/12/1971	C60835	Lincoln Child Center	R. W. Boucke (contractor)	Add 5 bed room, increase size of one bed room, remodel kitchen.
Building 1	10/17/1972	C69200	Lincoln Child Center	George Matsumoto and Associates R. W. Boucke (contractor)	Remove non-bearing partitions and add partitions, rearrange bathroom facilities and add light outlets.
Building 1	7/15/1974	C78889	West Oakland Home	Ratcliff, Slama & Cadwalder	2 exterior fire escape stairs to replace existing one.
N/A	3/15/1977	C94830	Lincoln Child Center	Peter Kampf	Relocation of existing wood fence (6' to 8' high) to within 8' to 13' of property line along Lincoln Ave.
Building 7	4/5/1982	D24579	Lincoln Child Center	March Construction Co., Inc.	Remodel kitchen area. Add in area between exist. Eave & ext. wall. Remove ext. & int. walls.
Building 7	9/9/1982	11846	Lincoln Child Center	Hallmark Refrigeration	Kitchen remodel.
Building 3	7/13/1990	B9003677	Lincoln Child Center	T.R. Moreland Construction Co. (contractor)	Installation of 24'0" x 40'0" portable classroom.
N/A	4/17/1991	B9101879	Lincoln Child Center	Philip Moss (contractor)	9' fence screen on property line.
Building 6	8/15/1991	B91027391	Lincoln Child Center	David Byrens (architect)	Upgrade bathroom
Building 6	10/15/1991	B9105189	Lincoln Child Center	Kenney's Sash & Glass	Replacement of existing windows with like kind. No change in size or number of openings.

Building Number	Date Filed	Permit App. #	Listed Owner	Architect / Builder	Description of Work
Building 2	12/17/1991	B91058 741	Lincoln Child Center	David Byrens (architect)	Office renovation.
Unknown [Likely Building 2]	1/14/1992	M9200 077	Lincoln Child Center	None listed	Remove and reset radiators to put in new flooring.
N/A	7/24/1992	B92030 00	Lincoln Child Center	David Byrens (architect) Ed Desilva (contractor)	Repave existing driveway and build new parking area – 20 spaces.
N/A	8/17/1992	B92033 81	Lincoln Child Center	David Byrens (architect) Just Fencing (contractor)	Construct 180'x8' redwood fence. Install 16'x8' chainlink, add gate and slats.
Building 7	10/13/1992	B92041 64	Lincoln Child Center	Macino Const. Co.	Repair wall of existing kitchen building. Approximately 12' of wall section (vehicle damage).
Building 9	4/19/1999	B99013 78	Lincoln Child Center	David Byrens (architect)	New construction.
Unknown [Likely Building 11]	8/9/2007	C-38715	Not listed	Not listed	1,300 square foot building proposed.[152]
Building 7	3/24/2009	B09010 00	Lincoln Child Center	Byrens Associates	Remodel secondary school kitchen facility, including walk-in refrigeration, repaving drive/loading area

[152] Building permit application not on file at Oakland Building Department. Document viewed was a "City of Oakland Building & Housing Department, Building Division, Plan Check" which contained more limited information.

APPENDIX B: OAKLAND LANDMARK PRESERVATION ADVISORY BOARD EVALUATION FORMS

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 0 (Junior Alliance Hall)

A. ARCHITECTURE

1.	**Exterior/Design:** Distinguished ornament and craftsmanship for an institutional building.	E	VG	G	FP
2.	**Interior:** Not evaluated.	E	VG	G	FP
3.	**Construction:** Wood frame with stucco siding.	E	VG	G	FP
4.	**Designer/Builder:** Local master architect, William G. Corlett, Jr.	E	VG	G	FP
5.	**Style/Type:** Good example of Spanish Colonial Revival style in an institutional building.	E	VG	G	FP

B. HISTORY

6.	**Person/Organization:** Auditorium building for West Oakland Home.	E	VG	G	FP
7.	**Event:** Associated with the establishment of West Oakland Home's Lincoln Avenue campus.	E	VG	G	FP
8.	**Patterns:** Associated with general growth of West Oakland Home.	E	VG	G	FP
9.	**Age:** Constructed in 1935	E	VG	G	FP
10.	**Site:** Building has not been moved.	E	VG	G	FP

C. CONTEXT

11.	**Continuity:** Not located in an API or ASI.	E	VG	G	FP
12.	**Familiarity:** Visible from Lincoln Avenue, a familiar feature in the neighborhood.	E	VG	G	FP

D. INTEGRITY

13.	**Condition:** Exhibits only minor surface wear.	E	G	F	P
14.	**Exterior Alterations:** Small addition, new and replacement doors, some replacement windows.	E	G	F	P

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:

City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________________.
(Date)

Attest: ____________________________________
Secretary

EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus

Name: Building 0 (Junior Alliance Hall)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**9**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**34**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**4**
PRELIMINARY TOTAL (Sum of A, B and C) (max. 100)					47
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-1.41
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-11.75
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**33.84**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ Preliminary ❑ Final

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 1 (Mary A. Crocker Cottage)

A. ARCHITECTURE

1.	**Exterior/Design:** Distinguished ornament and craftsmanship for an institutional building.	E	VG	G	FP
2.	**Interior:** Not evaluated.	E	VG	G	FP
3.	**Construction:** Wood frame with stucco siding.	E	VG	G	FP
4.	**Designer/Builder:** Local master architects Reed & Corlett.	E	VG	G	FP
5.	**Style/Type:** Good example of Spanish Colonial Revival style in an institutional building.	E	VG	G	FP

B. HISTORY

6.	**Person/Organization:** Dormitory building for West Oakland Home.	E	VG	G	FP
7.	**Event:** Associated with the establishment of West Oakland Home's Lincoln Avenue campus.	E	VG	G	FP
8.	**Patterns:** Associated with general growth of West Oakland Home.	E	VG	G	FP
9.	**Age:** Constructed 1929-1930.	E	VG	G	FP
10.	**Site:** Building has not been moved.	E	VG	G	FP

C. CONTEXT

11.	**Continuity:** Not located in an API or ASI.	E	VG	G	FP
12.	**Familiarity:** Visible from Lincoln Avenue, a familiar feature in the neighborhood.	E	VG	G	FP

D. INTEGRITY

13.	**Condition:** Exhibits only minor surface wear.	E	G	F	P
14.	**Exterior Alterations:** Most windows replaced, new door, door replaced, some shutters removed.	E	G	F	P

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:
City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________________.
(Date)

Attest: ____________________________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board

EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus

Name: Building 1 (Mary A. Crocker Cottage)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**9**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**34**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**4**
PRELIMINARY TOTAL (Sum of A, B and C)				(max. 100)	47
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-1.41
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-11.75
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**33.84**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ Preliminary ❑ Final

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 2 (Grace L. Trevor Cottage)

A. ARCHITECTURE

1. **Exterior/Design:** Distinguished ornament and craftsmanship for an institutional building. **E VG G FP**
2. **Interior:** Not evaluated. **E VG G FP**
3. **Construction:** Wood frame with stucco siding. **E VG G FP**
4. **Designer/Builder:** Local master architects Reed & Corlett. **E VG G FP**
5. **Style/Type:** Good example of Spanish Colonial Revival style in an institutional building. **E VG G FP**

B. HISTORY

6. **Person/Organization:** Dormitory building for West Oakland Home. **E VG G FP**
7. **Event:** Associated with the establishment of West Oakland Home's Lincoln Avenue campus. **E VG G FP**
8. **Patterns:** Associated with general growth of West Oakland Home. **E VG G FP**
9. **Age:** Constructed 1929-1930. **E VG G FP**
10. **Site:** Building has not been moved. **E VG G FP**

C. CONTEXT

11. **Continuity:** Not located in an API or ASI. **E VG G FP**
12. **Familiarity:** Visible from Lincoln Avenue, a familiar feature in the neighborhood. **E VG G FP**

D. INTEGRITY

13. **Condition:** Exhibits only minor surface wear. **E G F P**
14. **Exterior Alterations:** All windows replaced, pattern of windows/doors altered, addition. **E G F P**

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:
City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________.
(Date)

Attest: ______________________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board

EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 2 (Grace L. Trevor Cottage)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**9**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**34**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**4**
PRELIMINARY TOTAL (Sum of A, B and C)				(max. 100)	47
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-1.41
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-23.5
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**22.09**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ Preliminary ❑ Final

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 4 (Executive/Linnet/Ethel Moore Cottage)

A. ARCHITECTURE

1.	**Exterior/Design:** Undistinguished form, composition, ornament or craftsmanship.	E	VG	G	FP
2.	**Interior:** Not evaluated.	E	VG	G	FP
3.	**Construction:** Wood frame with stucco siding.	E	VG	G	FP
4.	**Designer/Builder:** No known builder or architect.	E	VG	G	FP
5.	**Style/Type:** Vernacular style with limited Spanish Colonial Revival style features.	E	VG	G	FP

B. HISTORY

6.	**Person/Organization:** Residential building for Lincoln Child Center, highly altered.	E	VG	G	FP
7.	**Event:** No association with a specific event.	E	VG	G	FP
8.	**Patterns:** Loose associations with general grown of Lincoln Child Center.	E	VG	G	FP
9.	**Age:** Constructed in circa 1936-1948.	E	VG	G	FP
10.	**Site:** Building has not been moved.	E	VG	G	FP

C. CONTEXT

11.	**Continuity:** Not located in an API or ASI.	E	VG	G	FP
12.	**Familiarity:** No street presence, not particularly conspicuous or familiar.	E	VG	G	FP

D. INTEGRITY

13.	**Condition:** Exhibits significant deterioration of features such as windows and rafter tails.	E	G	F	P
14.	**Exterior Alterations:** Two large additions and replacement of windows and roofing .	E	G	F	P

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:

City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible

Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________.
(Date)

Attest: ______________________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 4 (Executive/Linnet/Ethel Moore Cottage)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCIHTECTURE TOTAL (max. 26)	**0**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**6**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**0**
PRELIMINARY TOTAL (Sum of A, B and C) (max. 100)					6
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-0.18
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-4.5
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**1.32**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 5 (Maintenance Building)

A. ARCHITECTURE

1.	**Exterior/Design:** Utilitarian building with modest Spanish Colonial Revival features.	E	VG	G	FP
2.	**Interior:** Not evaluated.	E	VG	G	FP
3.	**Construction:** Wood frame with stucco siding.	E	VG	G	FP
4.	**Designer/Builder:** Robert Goetz Association	E	VG	G	FP
5.	**Style/Type:** Undistinguished building with some Spanish Colonial Revival elements.	E	VG	G	FP

B. HISTORY

6.	**Person/Organization:** Maintenance building for Lincoln Child Center, loosely associated.	E	VG	G	FP
7.	**Event:** No association with a specific event.	E	VG	G	FP
8.	**Patterns:** Loose associations with general grown of Lincoln Child Center.	E	VG	G	FP
9.	**Age:** Constructed in 1967.	E	VG	G	FP
10.	**Site:** Building has not been moved.	E	VG	G	FP

C. CONTEXT

11.	**Continuity:** Not located in an API or ASI.	E	VG	G	FP
12.	**Familiarity:** Has street presence, but not particularly conspicuous or familiar.	E	VG	G	FP

D. INTEGRITY

13.	**Condition:** Exhibits only minor surface wear.	E	G	F	P
14.	**Exterior Alterations:** A number of exterior alterations and a small addition.	E	G	F	P

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:

City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________________.
(Date)

Attest: ____________________________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 5 (Maintenance Building)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**0**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**4**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**0**
PRELIMINARY TOTAL (Sum of A, B and C) (max. 100)					4
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-0.12
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-2
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**1.88**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board

EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus

Name: Building 6 (Bushell Cottage) & Building 7 (Bushell Kitchen & Dining Hall)

A. ARCHITECTURE

1.	**Exterior/Design:** Unique form and footprint, and sensitive siting.	E	VG	G	FP
2.	**Interior:** Not evaluated.	E	VG	G	FP
3.	**Construction:** Wood frame with wood and cement asbestos siding.	E	VG	G	FP
4.	**Designer/Builder:** Gerald M. McCue, notable local architect, not representative of McCue's best work.	E	VG	G	FP
5.	**Style/Type:** Modest expression of Midcentury Modern institutional building.	E	VG	G	FP

B. HISTORY

6.	**Person/Organization:** Residential building for Lincoln Child Center, loose association with West Oakland home early significance.	E	VG	G	FP
7.	**Event:** No association with a specific event.	E	VG	G	FP
8.	**Patterns:** Loose associations with general growth of Lincoln Child Center.	E	VG	G	FP
9.	**Age:** Constructed in 1958.	E	VG	G	FP
10.	**Site:** Building has not been moved.	E	VG	G	FP

C. CONTEXT

11.	**Continuity:** Not located in an API or ASI.	E	VG	G	FP
12.	**Familiarity:** No street presence, not particularly conspicuous or familiar.	E	VG	G	FP

D. INTEGRITY

13.	**Condition:** Exhibits only minor surface wear.	E	G	F	P
14.	**Exterior Alterations:** Building 7 enclosed; Building 6 windows replaced in kind.	E	G	F	P

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:

City Landmark Eligibility: ❑ Eligible ❑ Not eligible

National Register Status: ❑ Listed ❑ In process

❑ Determined eligible ❑ Appears eligible

❑ Appears ineligible

Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________.

(Date)

Attest: ______________________

Secretary

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY
❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 6 (Bushell Cottage) & Building 7 (Bushell Kitchen & Dining Hall)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**6**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**4**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**0**
PRELIMINARY TOTAL (Sum of A, B and C)				(max. 100)	10
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-0.3
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-2.5
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**7.47**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board

EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus

Name: Building 8 (EBAC/Charleston House/Holmgren)

A. ARCHITECTURE

1. **Exterior/Design:** Modest form, composition and detailing. **E VG G FP**
2. **Interior:** Not evaluated. **E VG G FP**
3. **Construction:** Wood frame, originally with wood board and batten siding. **E VG G FP**
4. **Designer/Builder:** Notable local architect, Robert Ratcliff, but not representative of Ratcliff's best work. **E VG G FP**
5. **Style/Type:** Modest expression of Midcentury Modern style (prior to alterations). **E VG G FP**

B. HISTORY

6. **Person/Organization:** First dedicated location of East Bay Activities Center. **E VG G FP**
7. **Event:** No association with a specific event. **E VG G FP**
8. **Patterns:** Not directly associated with the growth or development of Lincoln Child Center campus. **E VG G FP**
9. **Age:** Constructed in 1957 **E VG G FP**
10. **Site:** Building has not been moved. **E VG G FP**

C. CONTEXT

11. **Continuity:** Not located in an API or ASI. **E VG G FP**
12. **Familiarity:** Not particularly conspicuous or familiar, located at the end of a dead-end street. **E VG G FP**

D. INTEGRITY

13. **Condition:** Exhibits only minor surface wear. **E G F P**
14. **Exterior Alterations:** Multiple additions, completely reclad with textured stucco. **E G F P**

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:
City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ________________________________.
(Date)

Attest: ______________________________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY
❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 8 (EBAC/Charleston House/Holmgren)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**3**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**12**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**0**
PRELIMINARY TOTAL (Sum of A, B and C) (max. 100)					15
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-0.45
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-11.25
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**3.3**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 10 (Garage)

A. ARCHITECTURE

1. **Exterior/Design:** Utilitarian building with limited architectural features. **E VG G FP**
2. **Interior:** Not evaluated. **E VG G FP**
3. **Construction:** Wood frame with stucco siding. **E VG G FP**
4. **Designer/Builder:** Paul Hammarberg, local architect, not a notable project. **E VG G FP**
5. **Style/Type:** Undistinguished building. **E VG G FP**

B. HISTORY

6. **Person/Organization:** Garage building for Lincoln Child Center, altered and built after West Oakland Home significance. **E VG G FP**
7. **Event:** No association with a specific event. **E VG G FP**
8. **Patterns:** Loose associations with general grown of Lincoln Child Center. **E VG G FP**
9. **Age:** Constructed in 1945 **E VG G FP**
10. **Site:** Building has not been moved. **E VG G FP**

C. CONTEXT

11. **Continuity:** Not located in an API or ASI. **E VG G FP**
12. **Familiarity:** No street presence, not particularly conspicuous or familiar. **E VG G FP**

D. INTEGRITY

13. **Condition:** Exhibits only minor surface wear. **E G F P**
14. **Exterior Alterations:** Garage openings have been completely infilled. **E G F P**

Evaluated by: Hannah Simonson (Page & Turnbull) **Date:** April 19, 2019

STATUS
Rating:
City Landmark Eligibility: ❑ Eligible ❑ Not eligible
National Register Status: ❑ Listed ❑ In process
❑ Determined eligible ❑ Appears eligible
❑ Appears ineligible
Site of Opportunity ❑

This evaluation sheet was accepted by the landmarks Preservation Advisory Board at its meeting of ______________________.
(Date)

Attest: ______________________
Secretary

City of Oakland – Landmarks Preservation Advisory Board
EVALUATION TALLY SHEET FOR LANDMARK ELIGIBILITY

❑ **Preliminary** ❑ **Final**

Address: 4368 Lincoln Avenue – Head-Royce School South Campus
Name: Building 10 (Garage)

12	6	3	0	1. Exterior/Design	
6	3	2	0	2. Interior	
6	3	2	0	3. Construction	
4	2	1	0	4. Designer/Builder	
6	3	2	0	5. Style/Type	
				A. ARCHITECTURE TOTAL (max. 26)	**0**
30	15	8	0	6. Person/Organization	
30	15	8	0	7. Event	
18	9	5	0	8. Patterns	
8	4	2	0	9. Age	
4	2	1	0	10. Site	
				B. HISTORY TOTAL (max. 60)	**6**
4	2	1	0	11. Continuity	
14	7	4	0	12. Familiarity	
				C. CONTEXT TOTAL (max. 14)	**0**
PRELIMINARY TOTAL (Sum of A, B and C) (max. 100)					6
-0	-3%	-5%	-10%	13. Condition (From A, B, and C total)	-0.18
-0	-25%	-50%	-75%	14. Exterior Alterations (From A, B and C total excluding 2)	-3
				D. INTEGRITY	
ADJUSTED TOTAL (Preliminary total minus Integrity)					**2.82**

STATUS/RATING

Present Rating (Adjusted Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

Contingency Rating (Preliminary Total): ❑ A(35+) ❑ B(23-34) ❑ C(11-22) ❑ D(0-10)

City Landmark Eligibility: ❑ Eligible (Present Rating is A or B) ❑ Not eligible

APPENDIX C: STATUS OF A BUILDING AS A HISTORICAL RESOURCE FOR CEQA

In the City of Oakland, an historical resource under CEQA is a resource that meets any of the following Thresholds of Significance:

1) A resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources;

2) A resource included in Oakland's Local Register of historical resources, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;

3) A resource identified as significant (e.g., rated 1-5) in a historical resource survey recorded on Department of Parks and Recreation Form 523, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;

4) Any object, building, structure, site, area, place, record, or manuscript which the Oakland City Council determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the California Register of Historical Resources (CEQA Guidelines section 15064.5); or

5) A resource that is determined by the City Council to be historically or culturally significant even though it does not meet the other four criteria listed here.

A "local register of historical resources" means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution, unless the preponderance of evidence demonstrates otherwise.

In March 1994, the Oakland City Council adopted a Historic Preservation Element of the General Plan (amended July 21, 1998). The Historic Preservation Element sets out a graduated system of ratings and designations resulting from the Oakland Cultural Heritage Survey (OCHS) and Oakland Zoning Regulations. The Element provides Policy 3.8: "Definition of 'Local Register of Historical Resources' and Historic Preservation 'Significant Effects' for Environmental Review Purposes" related to identifying historic resources under CEQA:

> For purposes of environmental review under the California Environmental Quality Act, the following properties will constitute the City of Oakland's Local Register of Historical Resources:
>
> 1. All Designated Historic Properties (Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties); and

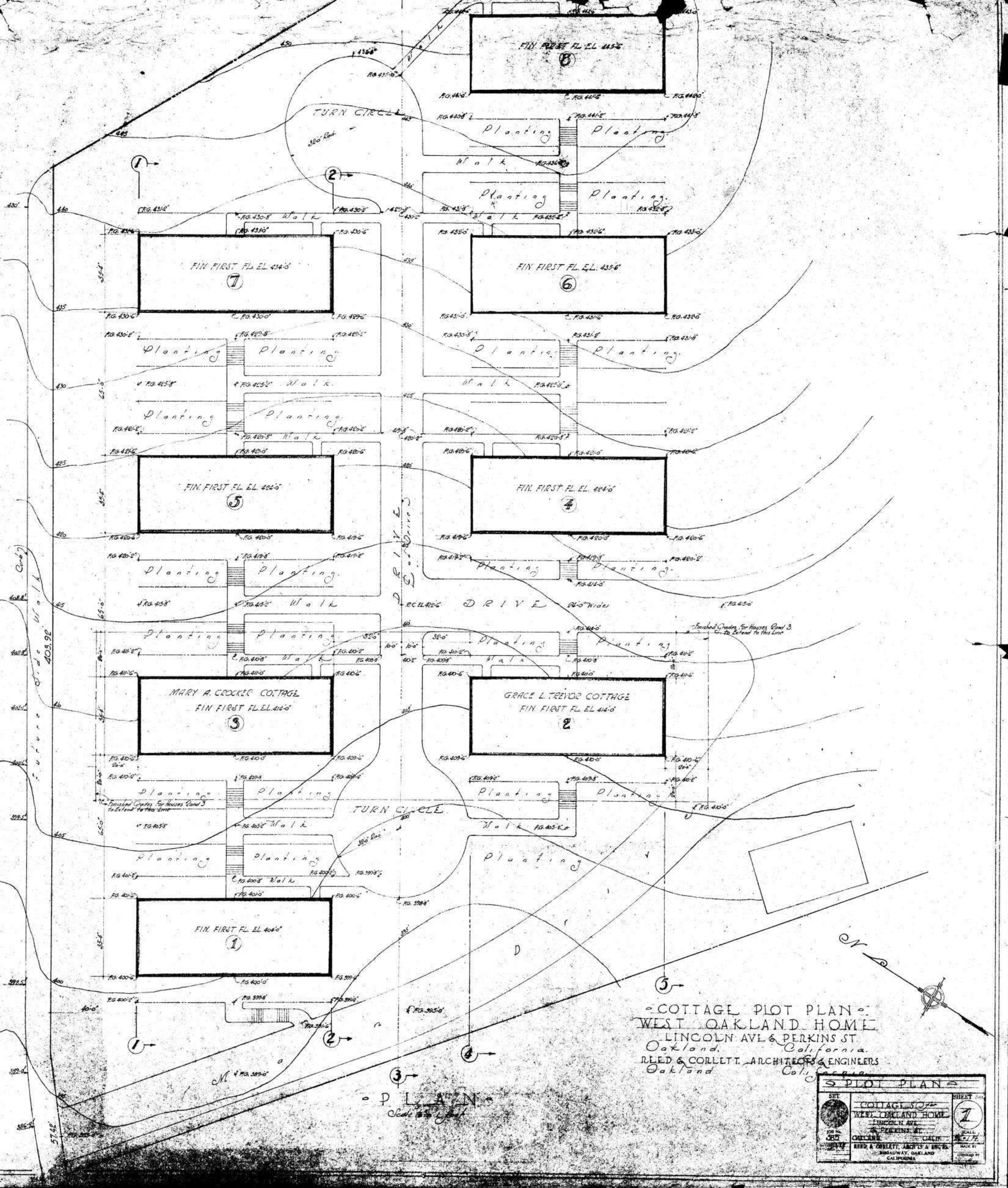
2. Those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance.

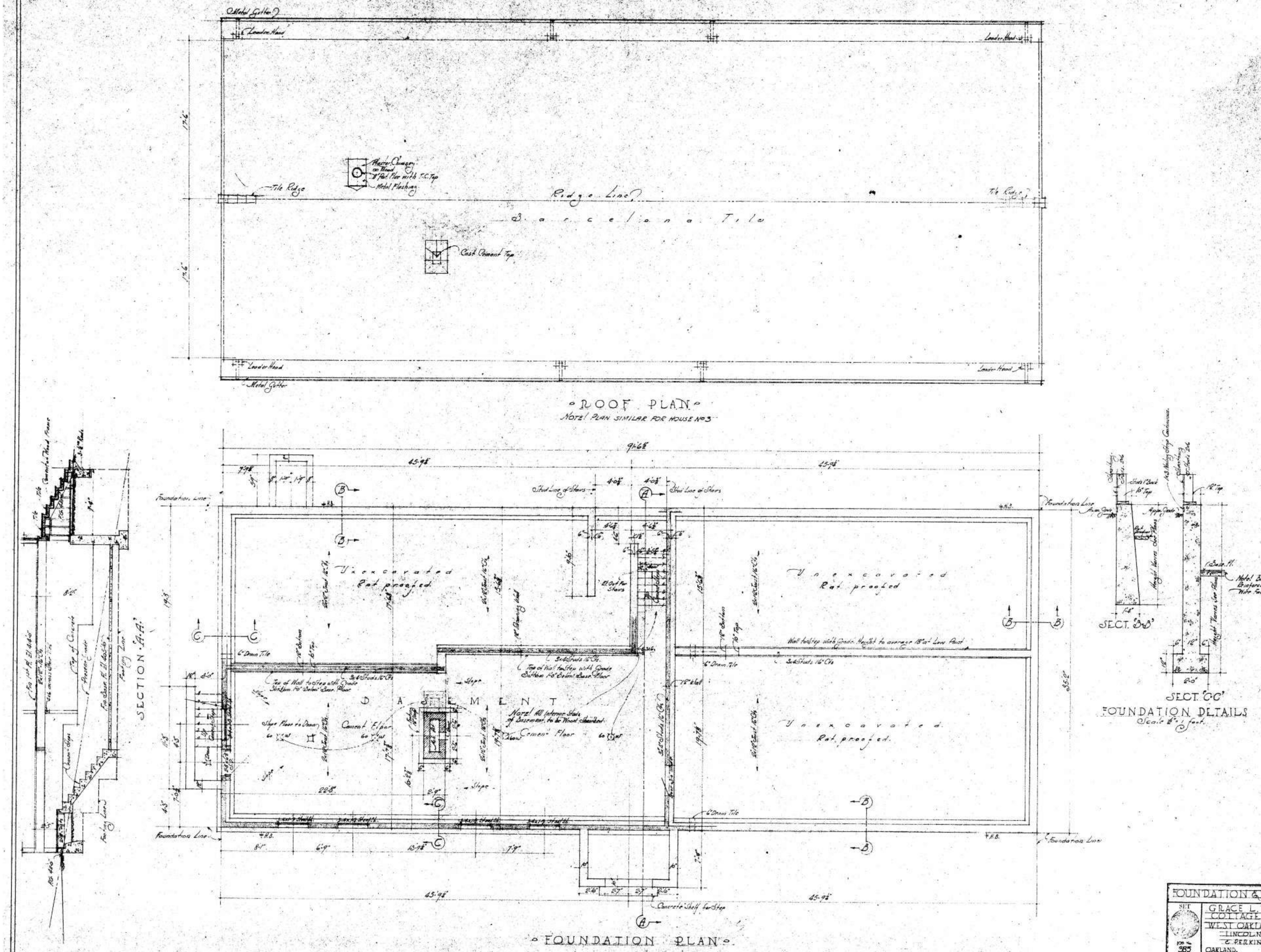
The Local Register also includes properties within Areas of Primary Importance (API). An API is a district that appears eligible for the National Register of Historic Places.

APPENDIX D: HISTORIC DRAWINGS OF BUILDINGS 0, 1, AND 2

Appendix D.1

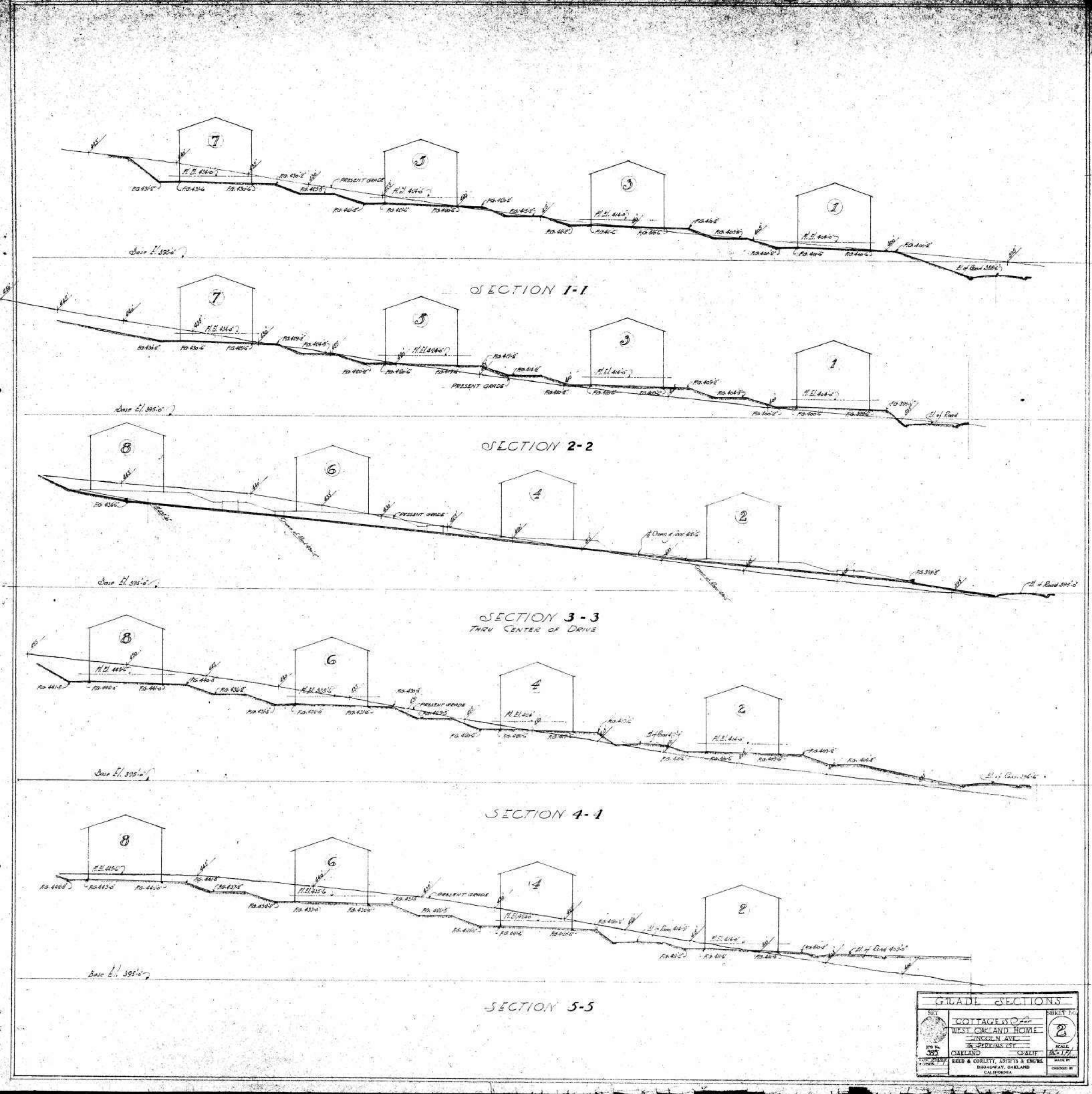
The following drawings are of Buildings 1 (Mary A. Crocker Cottage) and Building 2 (Grace L. Trevor Cottage), drawn by Reed & Corlett in 1929, for permit A39344 and A39345. Drawing set also includes a partially-realized master plan by Reed & Corlett. Drawings were obtained from the Oakland Building Department.


FIN FIRST FL EL 445-6
8
TURN CIRCLE
Planting
Walk
FIN FIRST FL. EL. 434-0
7
FIN FIRST FL. EL. 435-6
6
FIN. FIRST FL. EL. 424-0
5
FIN. FIRST FL. EL. 424-0
4
DRIVE
DRIVE 26-0 Wide
Finished Grades for Houses 2 and 3 to Extend to this Line
MARY A. CROCKER COTTAGE
FIN FIRST FL. EL. 416-0
3
GRACE L. TREVOR COTTAGE
FIN FIRST FL. EL 414-0
2
TURN CIRCLE
FIN. FIRST FL. EL 404-0
1
Future Side Walk
403.92
57.42
PLAN
COTTAGE PLOT PLAN
WEST OAKLAND HOME
LINCOLN AVE & PERKINS ST
Oakland, California
REED & CORLETT, ARCHITECTS & ENGINEERS
Oakland, California
PLOT PLAN
COTTAGES for
WEST OAKLAND HOME
LINCOLN AVE.
& PERKINS ST.
OAKLAND CALIF.
REED & CORLETT, ARCH'TS & ENG'RS.
BROADWAY, OAKLAND
CALIFORNIA
SHEET
1

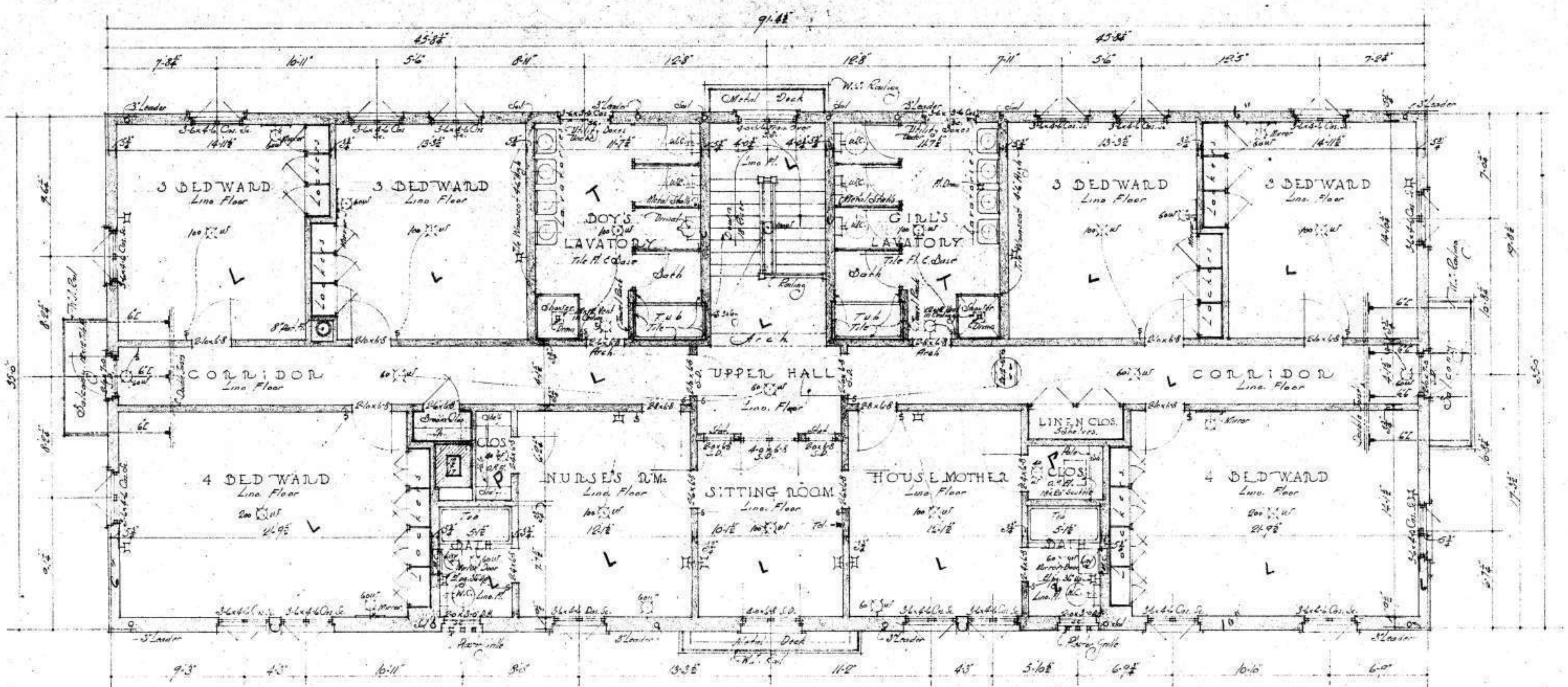


FOUNDATION & ROOF PLAN

SET	GRACE L. TREVOR. COTTAGE No. 2	SHEET No.
JOB No. 385	WEST OAKLAND HOME LINCOLN AVE & PERKINS ST. OAKLAND, CALIF.	1 SCALE ¼"=1 Foot
DATE 9/3/09 REVISED	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY W.T.R. CHECKED



SECTION 1-1
SECTION 2-2
SECTION 3-3
THRU CENTER OF DRIVE
SECTION 4-4
SECTION 5-5
PRESENT GRADE
Base El. 395'-0"
GRADE SECTIONS
SET
COTTAGES for
WEST OAKLAND HOME
LINCOLN AVE
& PERKINS ST
OAKLAND CALIF
JOB No. 385
SHEET No. 2
SCALE
MADE BY
CHECKED BY
REED & CORLETT, ARCH'TS & ENG'RS.
BROADWAY, OAKLAND
CALIFORNIA

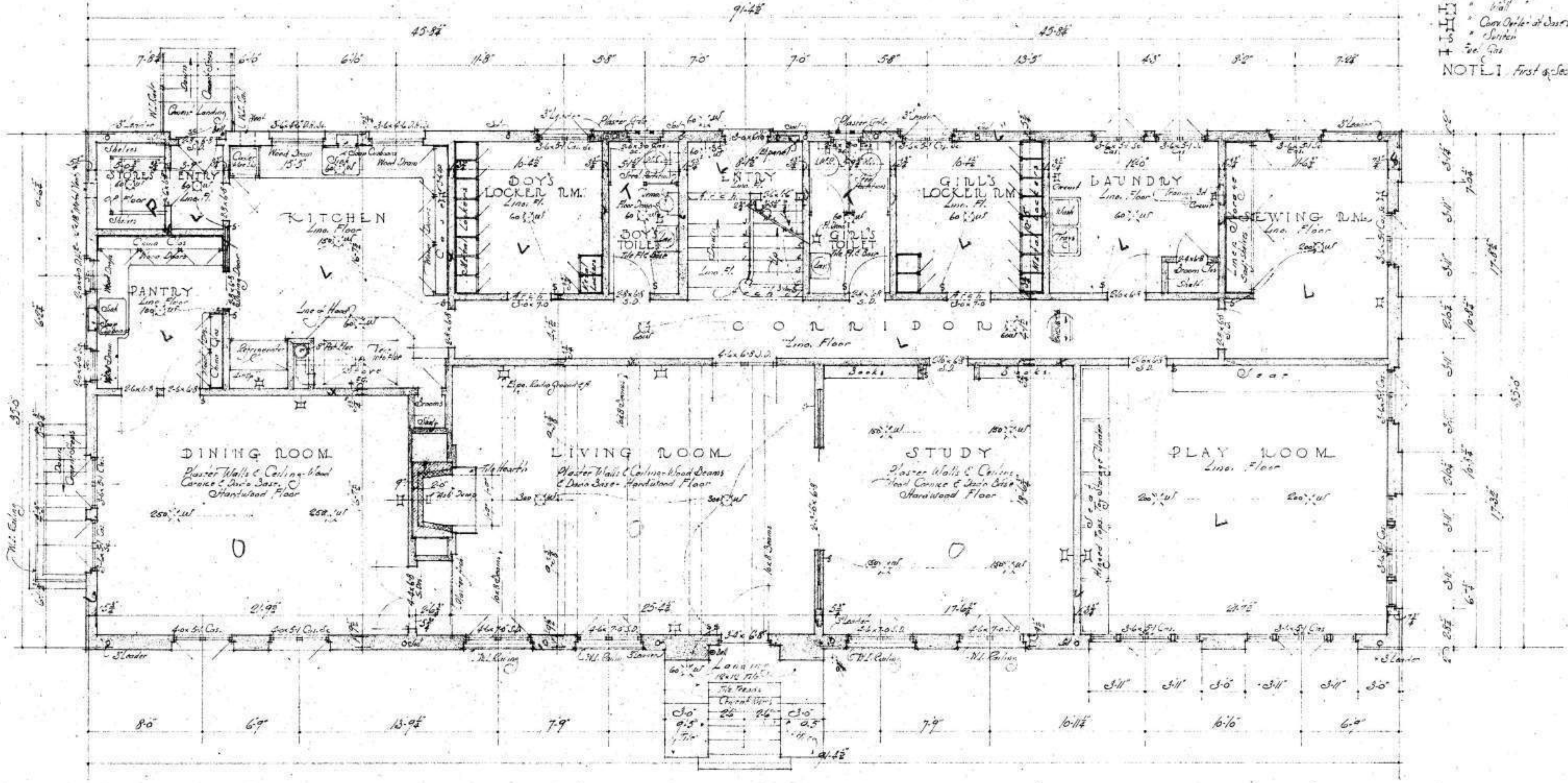


~ SECOND FLOOR PLAN ~

SYMBOLS

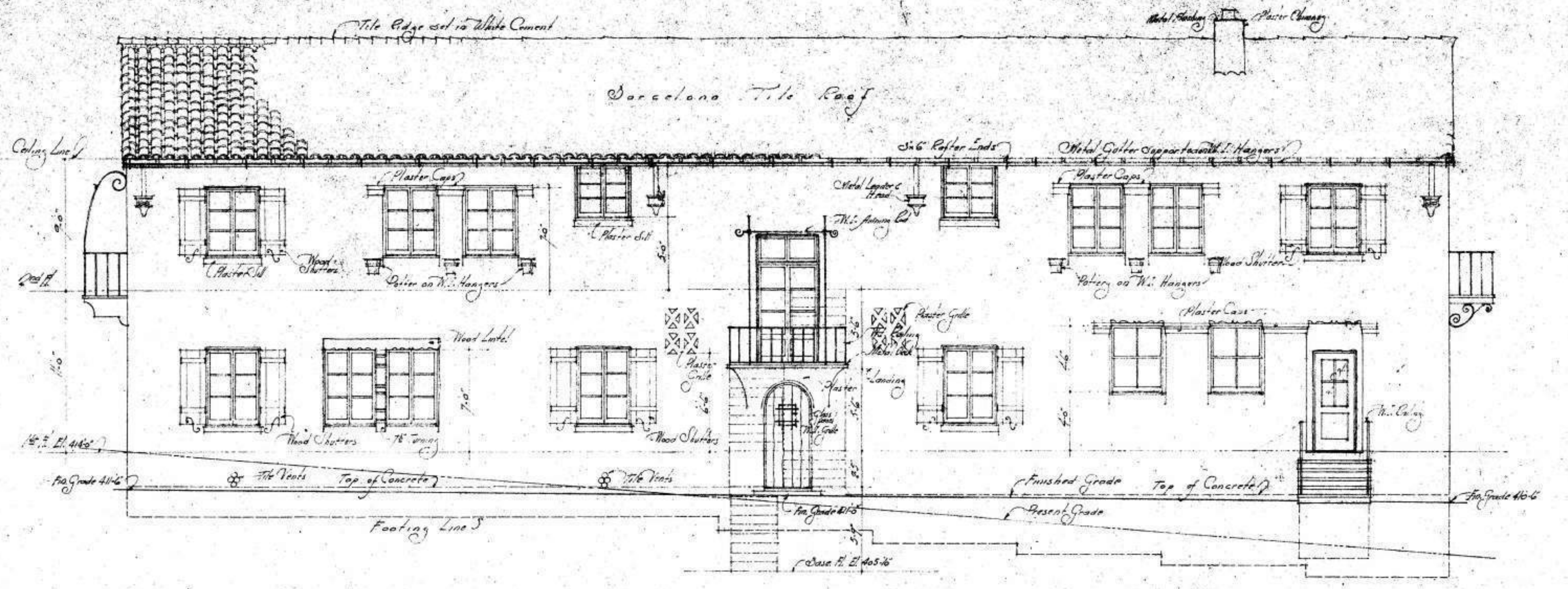
Elec. Ceiling Outlet
" Wall "
" Conv. Outlet at Base where not otherwise marked
" Switch
Elec. Gas

NOTE I First & Second Floor Joists 2x10-16" o.c.

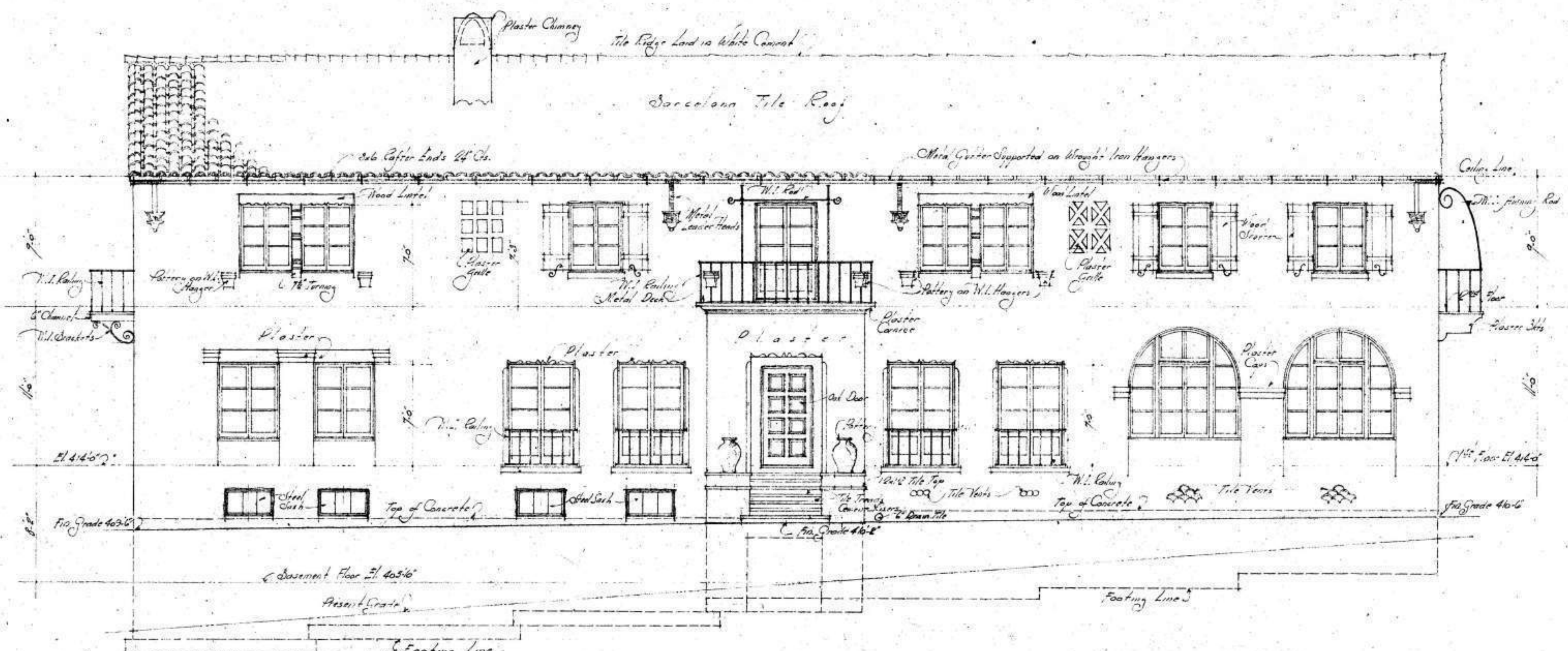


~ FIRST FLOOR PLAN ~
Scale 1/4" = 1 foot

FIRST & SECOND FLOORS		
SET	GRACE L. TREVOR COTTAGE No 2 WEST OAKLAND HOME LINCOLN AVE. & PERKINS ST. OAKLAND CALIF.	SHEET No. 2
JOB No. 385		SCALE 1/4" = 1 Foot
DATE 5/11/29	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY W.A.R. CHECKED BY

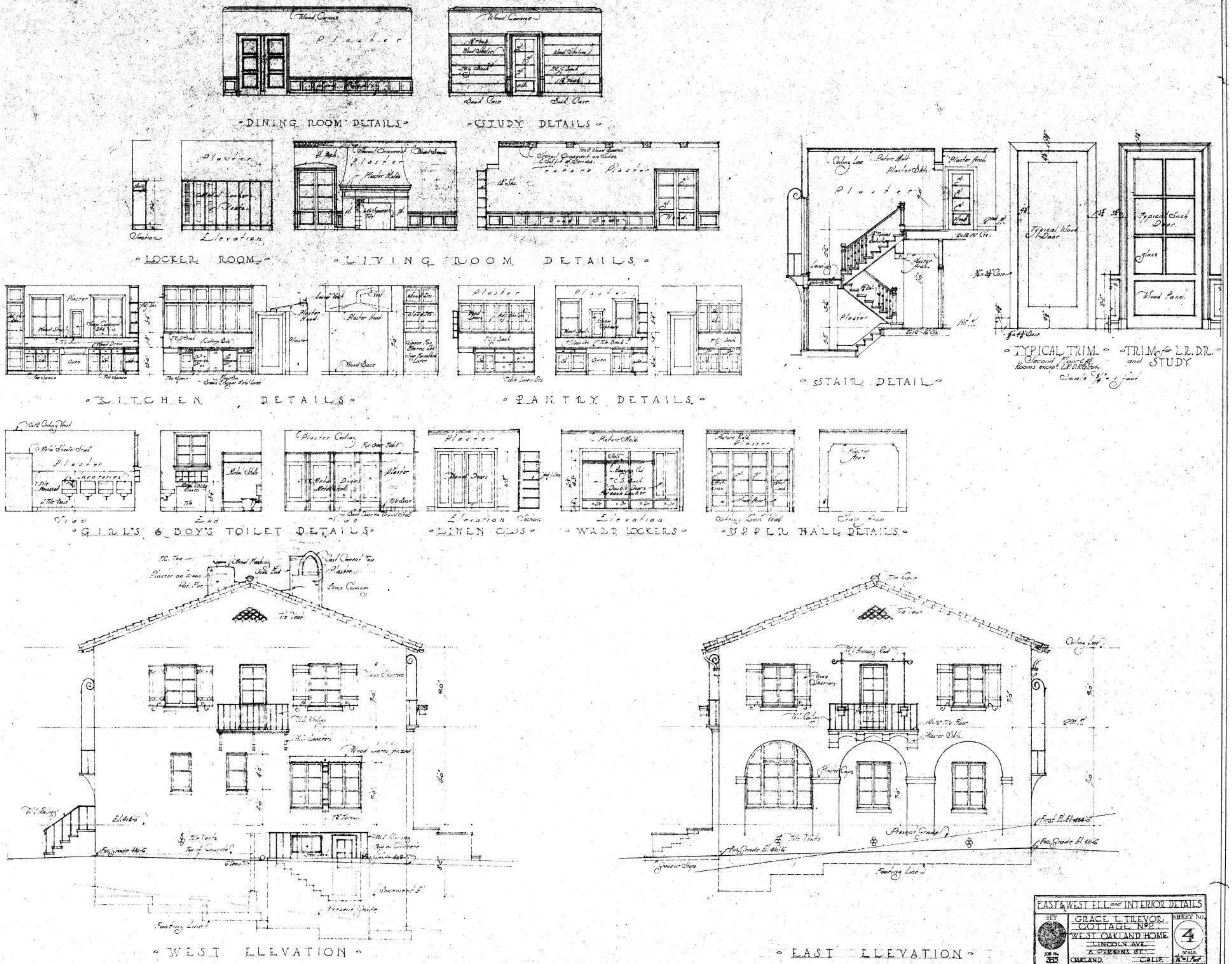


-NORTH ELEVATION-



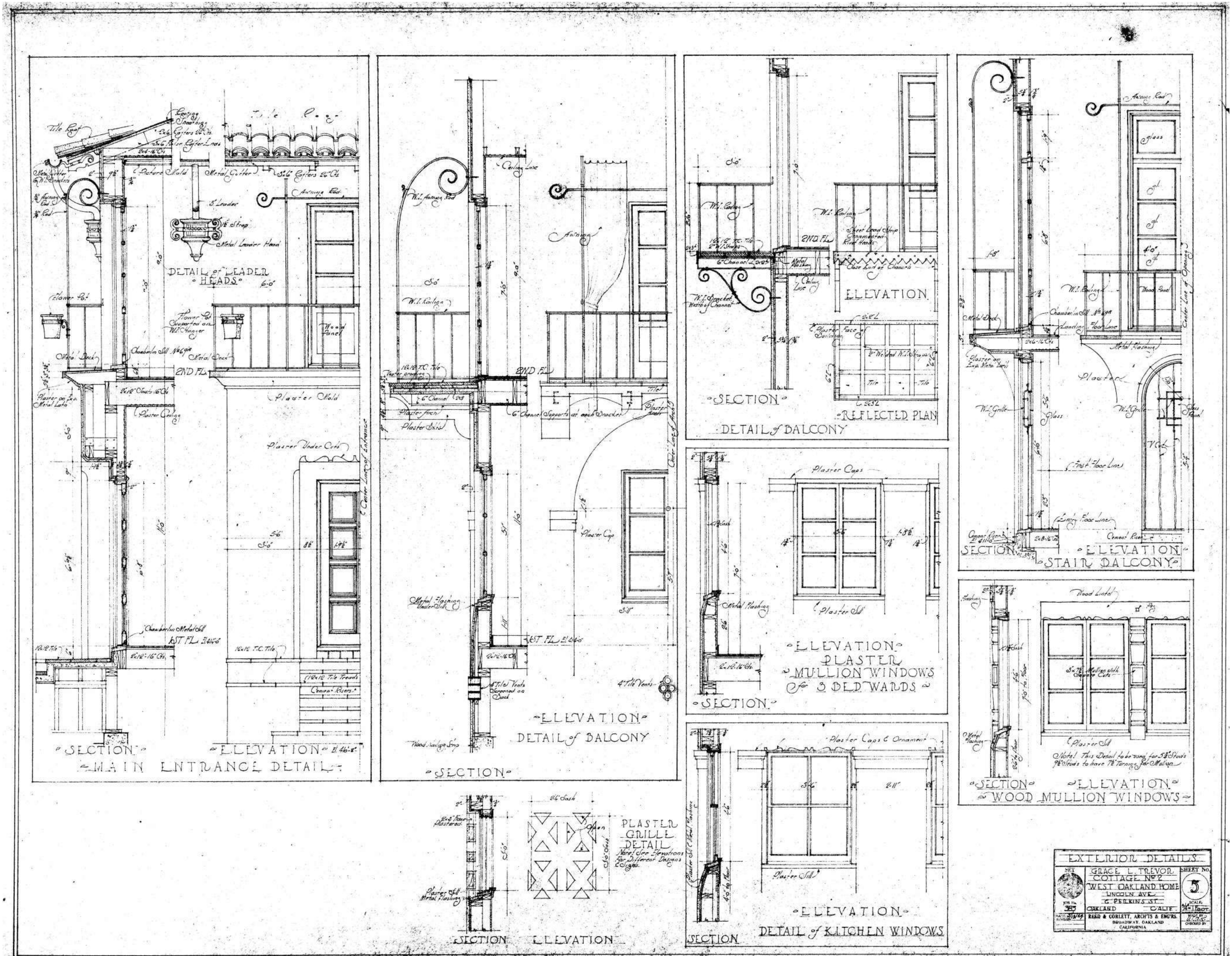
-SOUTH ELEVATION-

NORTH & SOUTH ELEVATION		
SET JOB No. 385	GRACE L. TREVOR COTTAGE No 2 WEST OAKLAND HOME LINCOLN AVE. & PERKINS ST. OAKLAND, CALIF.	SHEET NO. 3 SCALE 1/4" = 1 Foot
DATE 3/21/29 REVISED	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY CHECKED BY

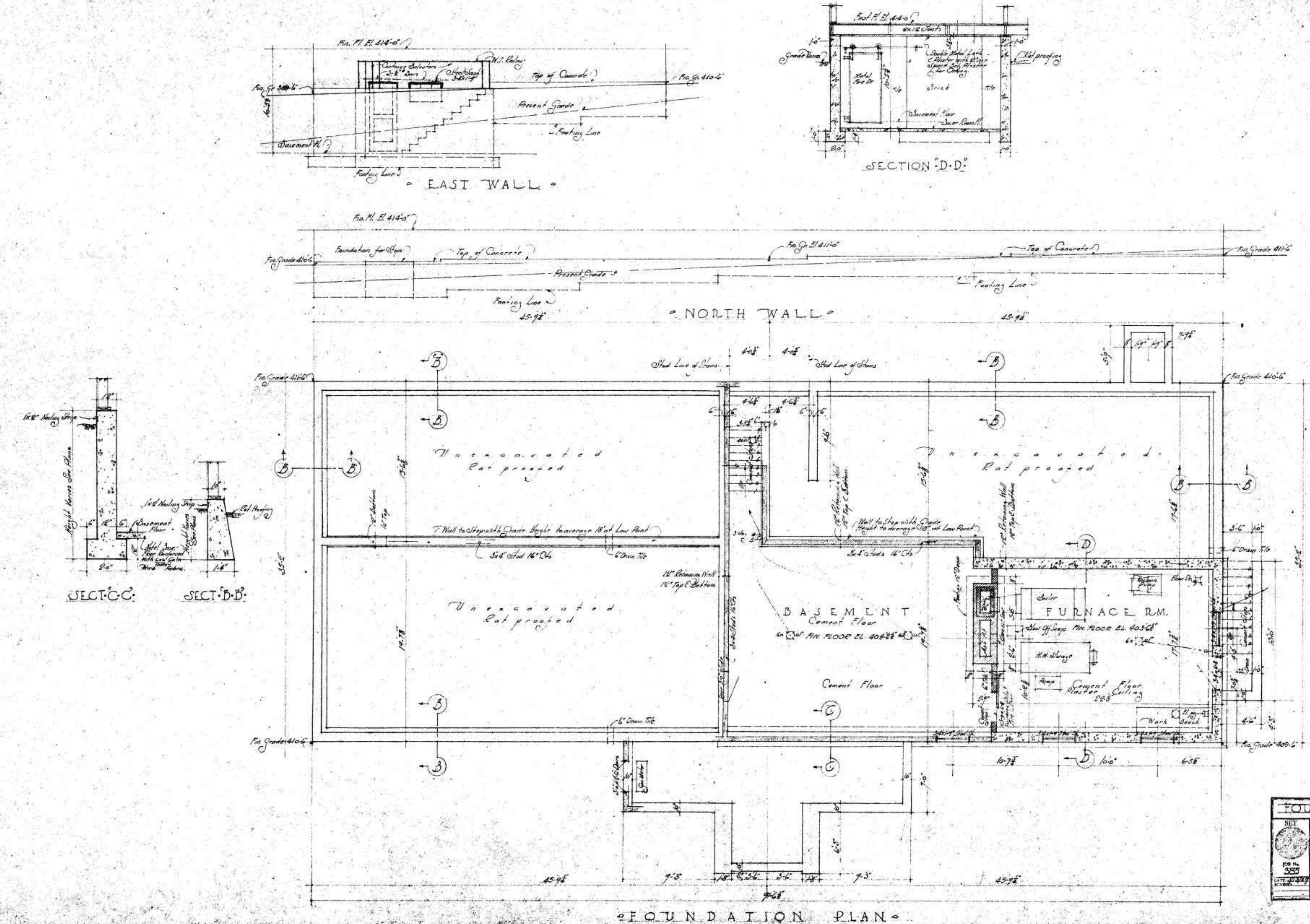


EAST & WEST ELE. and INTERIOR DETAILS

SET JOB No. 385	GRACE L. TREVOR COTTAGE No 2 WEST OAKLAND HOME LINCOLN AVE. & PERKINS ST. OAKLAND. CALIF.	SHEET No. 4 SCALE 1/4" = 1 Foot
DATE 3/14/29 REVISED	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY W.A.R. CHECKED BY

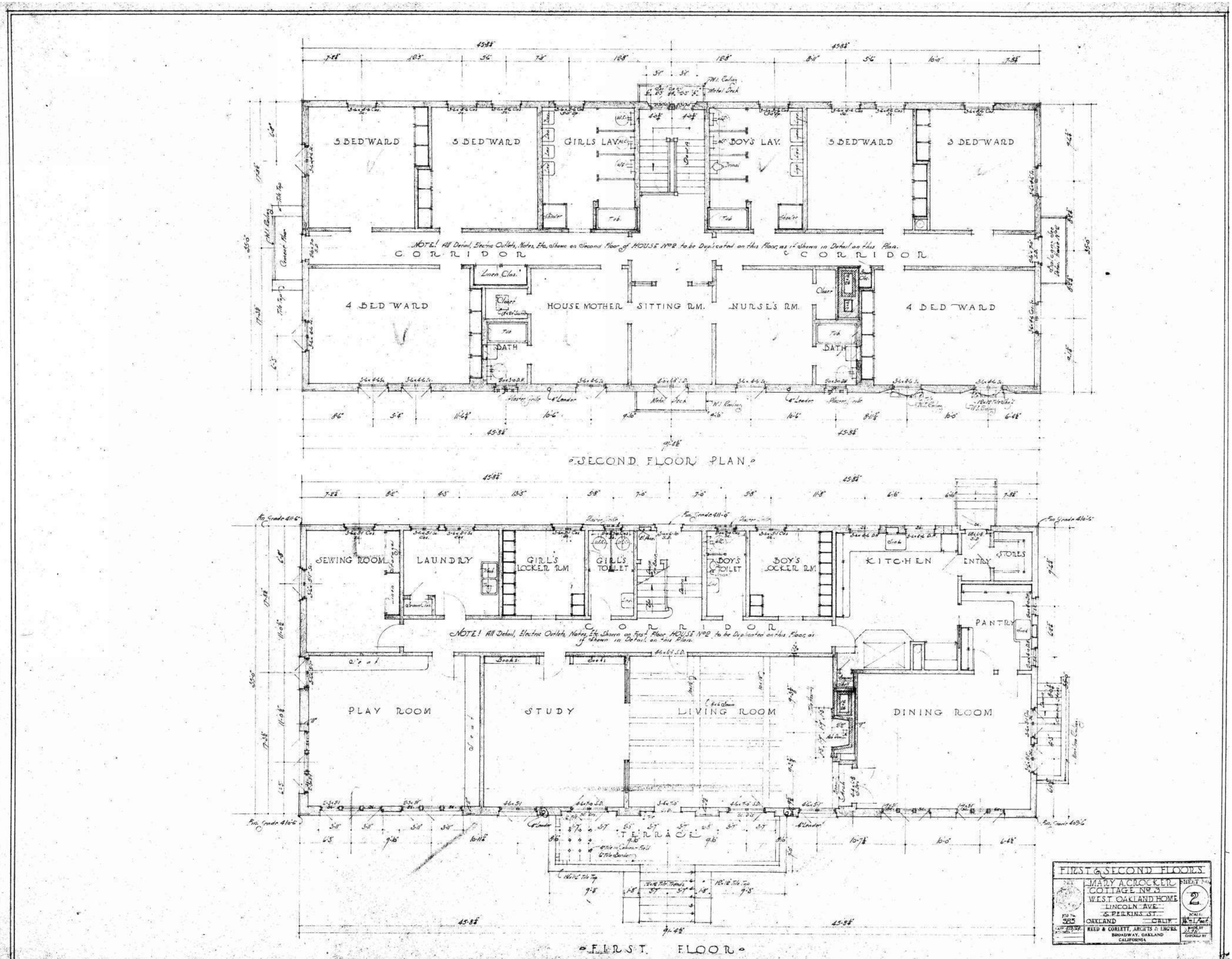


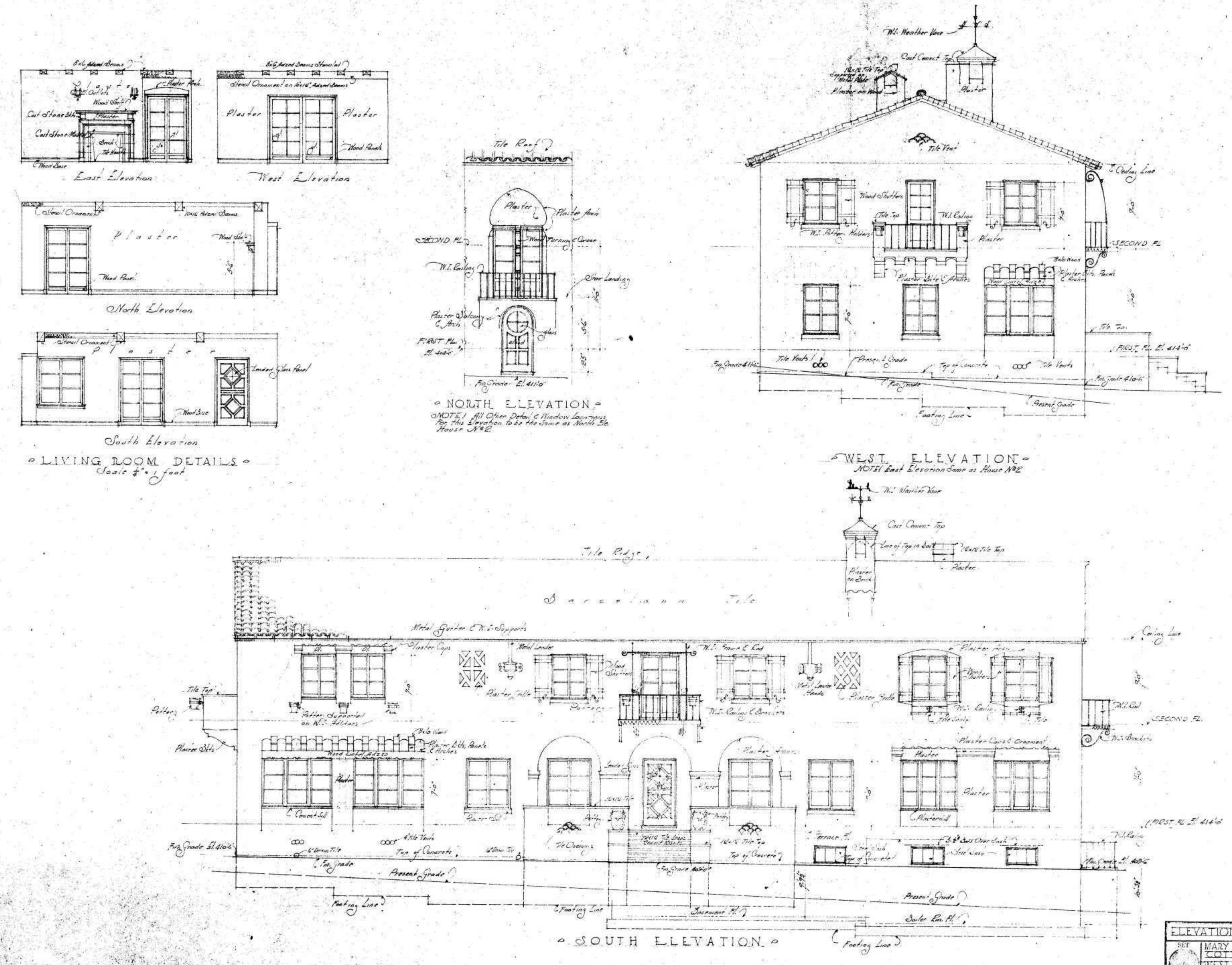
DETAIL of LEADER HEADS
SECTION
ELEVATION
MAIN ENTRANCE DETAIL
ELEVATION
DETAIL of BALCONY
SECTION
SECTION
REFLECTED PLAN
DETAIL of BALCONY
SECTION
ELEVATION
STAIR BALCONY
ELEVATION
PLASTER MULLION WINDOWS for 3 BED WARDS
SECTION
SECTION
ELEVATION
WOOD MULLION WINDOWS
PLASTER GRILLE DETAIL
SECTION
ELEVATION
ELEVATION
DETAIL of KITCHEN WINDOWS
SECTION
EXTERIOR DETAILS
GRACE L. TREVOR COTTAGE Nº 2
WEST OAKLAND HOME
LINCOLN AVE. & PERKINS ST.
OAKLAND CALIF.
SET
JOB No. 385
DATE 3/15/29
SHEET No. 5
SCALE 3/4"=1 Foot
MADE BY
CHECKED BY
REED & CORLETT, ARCH'TS & ENG'RS.
BROADWAY, OAKLAND
CALIFORNIA



FOUNDATION PLAN

SET	MARY A. CROCKER COTTAGE Nº 3 WEST OAKLAND HOME LINCOLN AVE & PERKINS ST OAKLAND CALIF	SHEET No. 1
JOB No. 385		SCALE: 1/4" = 1 Foot
DATE REVISED	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY CHECKED BY


3 BED WARD
3 BED WARD
GIRLS LAV.
BOYS LAV.
3 BED WARD
3 BED WARD
NOTE! All Detail, Electric Outlets, Notes, Etc., Shown on Second Floor of HOUSE No 2 to be Duplicated on this Floor, as if Shown in Detail on this Plan.
CORRIDOR
CORRIDOR
Linen Clos.
4 BED WARD
HOUSE MOTHER SITTING RM.
NURSE'S RM.
4 BED WARD
BATH
BATH
Metal Deck
W.I. Railing
SECOND FLOOR PLAN
SEWING ROOM
LAUNDRY
GIRL'S LOCKER RM
GIRL'S TOILET
BOY'S TOILET
BOY'S LOCKER RM
KITCHEN
ENTRY
STORES
PANTRY
CORRIDOR
NOTE! All Detail, Electric Outlets, Notes, Etc. Shown on First Floor HOUSE No 2 to be Duplicated on this Floor, as if Shown in Detail on this Plan.
PLAY ROOM
STUDY
LIVING ROOM
DINING ROOM
TERRACE
FIRST FLOOR
FIRST & SECOND FLOORS
MARY A. CROCKER COTTAGE No 3
WEST OAKLAND HOME
LINCOLN AVE. & PERKINS ST.
OAKLAND CALIF.
REED & CORLETT, ARCHTS & ENGRS
BROADWAY, OAKLAND
CALIFORNIA
2



ELEVATIONS and DETAILS

SET — JOB No. 585

MARY A. CROCKER.
COTTAGE No. 3
WEST OAKLAND HOME
LINCOLN AVE.
& PERKINS ST.
OAKLAND CALIF.

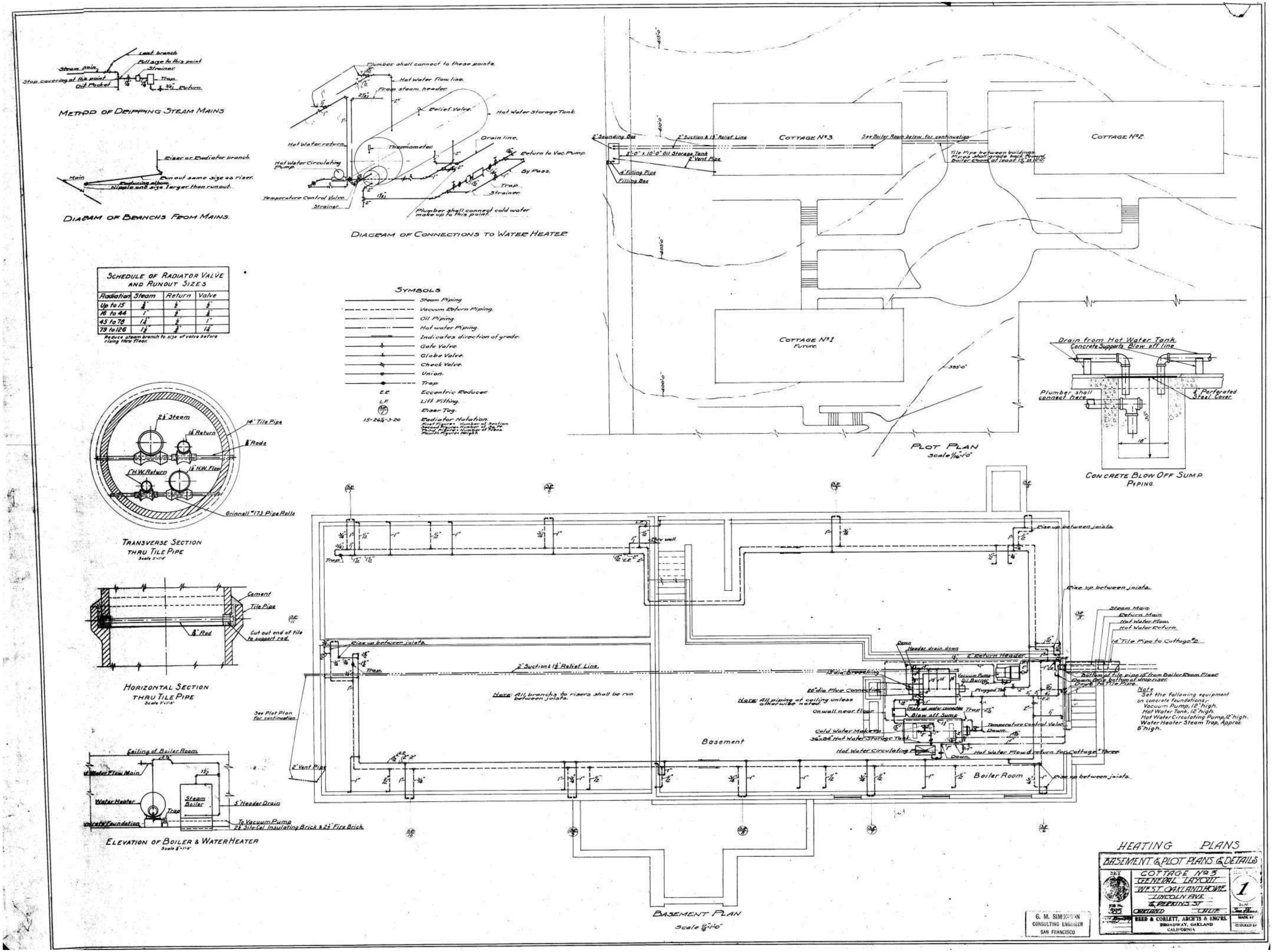
SHEET No. 3

SCALE 1/4" = 1 foot

DATE
REVISED

REED & CORLETT, ARCHTS & ENGRS.
BROADWAY, OAKLAND
CALIFORNIA

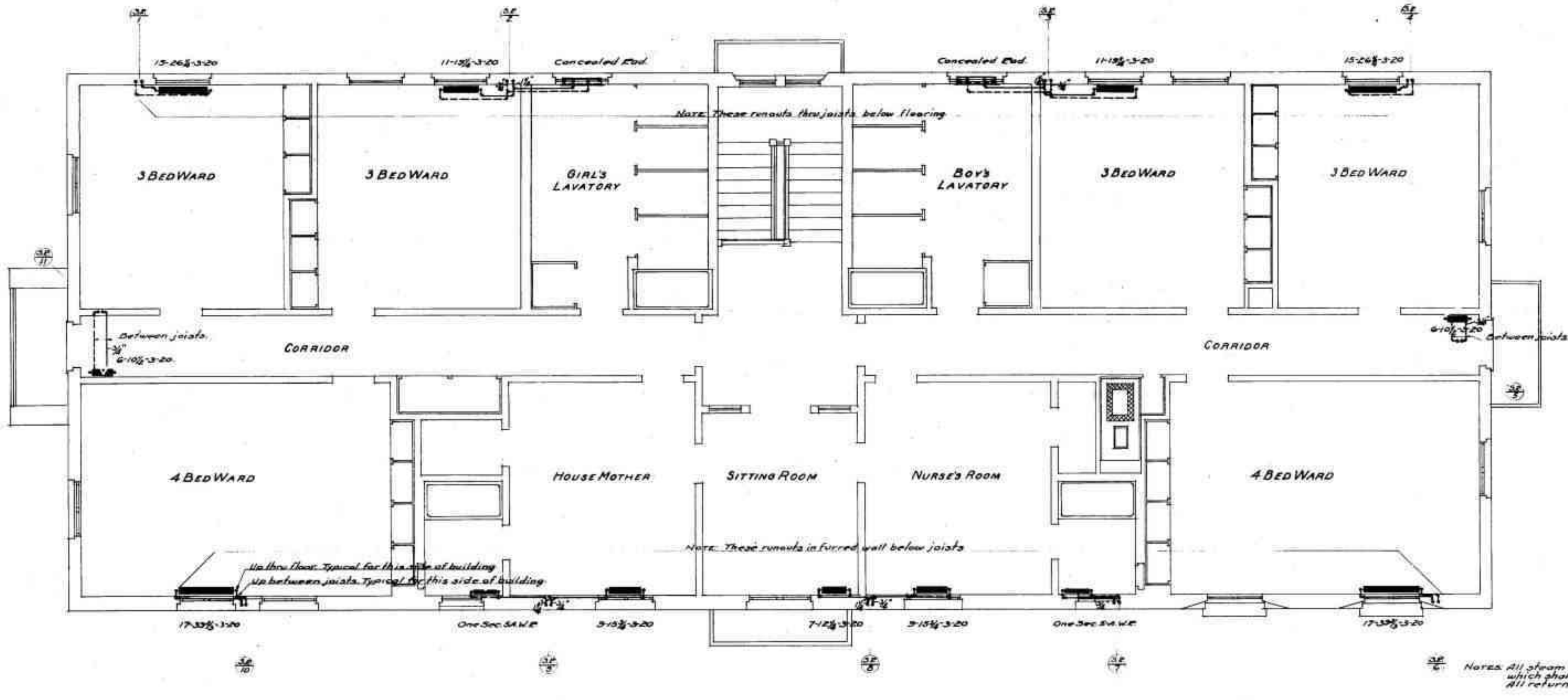
MADE BY W.A.K.
CHECKED BY



Schedule of Radiator Valve and Runout Sizes

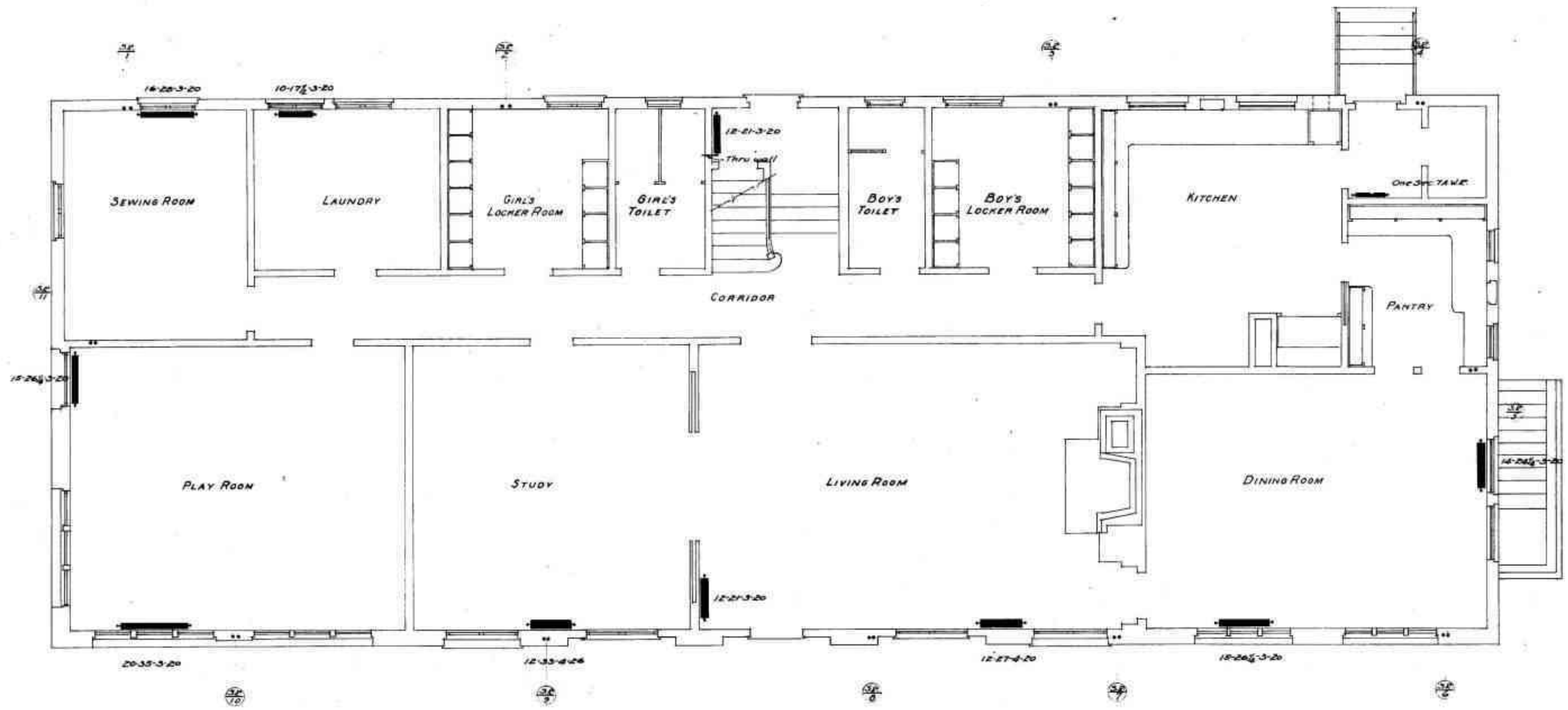
Radiation	Steam	Return	Valve
Up to 15	3/4"	1/2"	1/2"
16 to 44	1"	1/2"	3/4"
45 to 78	1 1/4"	1/2"	1"
79 to 126	1 1/2"	3/4"	1 1/4"

Reduce steam branch to size of valve before rising thru floor.



Notes: All steam risers shall be 1 inch, except #5-7 & 11 which shall be ¾ inch.
All return risers shall be ¾ inch.

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

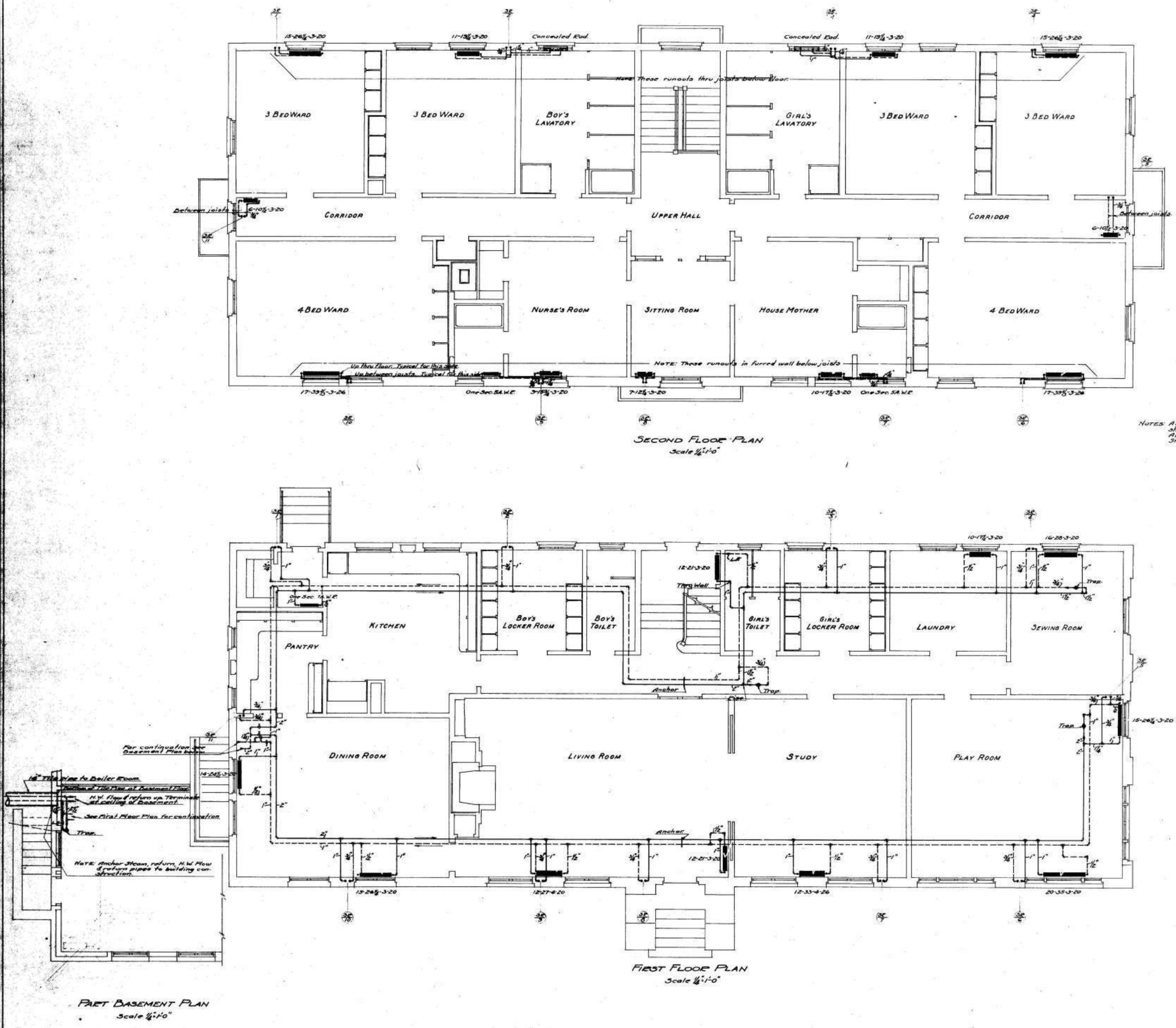


FIRST FLOOR PLAN
Scale 1/8"=1'0"

HEATING PLANS
FIRST & SECOND FLOORS

SET	COTTAGE No 3 WEST OAKLAND HOME LINCOLN AVE & PERKINS ST OAKLAND CALIF.	SHEET No. 2
JOB No.		SCALE
DATE REVISED	REED & CORLETT, ARCH'TS & ENG'RS. BROADWAY, OAKLAND CALIFORNIA	MADE BY CHECKED BY

G. M. SIMONSON
CONSULTING ENGINEER
SAN FRANCISCO



NOTES: All steam risers shall be 1 inch, except #5 & #11 which shall be 3/4 inch.
All return risers shall be 3/4 inch.
Steam & return mains shall be run below First Floor.

G. M. SIMONSON
CONSULTING ENGINEER
SAN FRANCISCO

HEATING PLANS

FIRST & SECOND FLOORS

COTTAGE No 2
WEST OAKLAND HOME

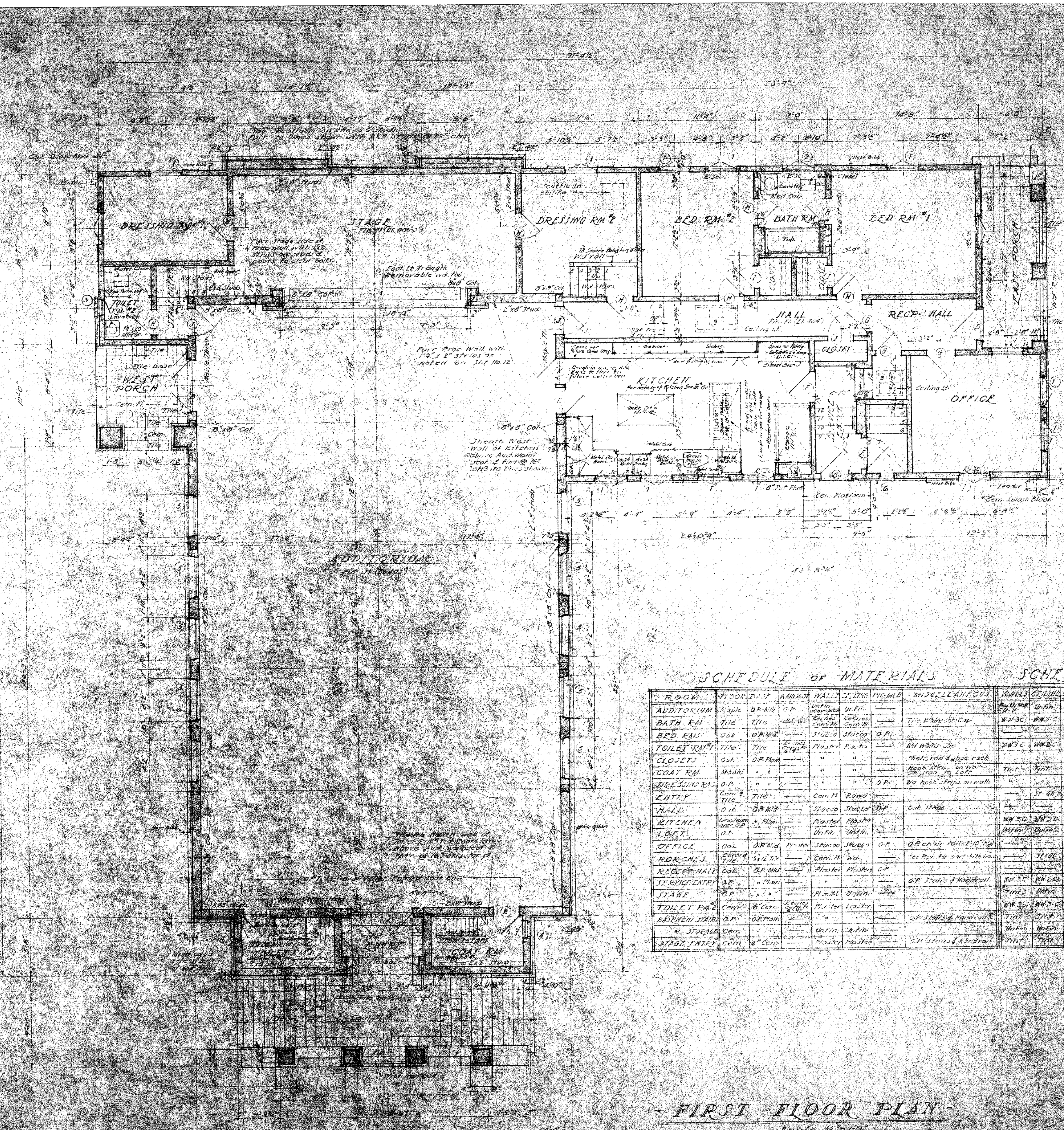
LINCOLN AVE
& PERKINS ST
OAKLAND CALIF.

SET
JOB No. 595
SHEET No. 3
SCALE
DATE
REVISED
MADE BY
CHECKED BY

REED & CORLETT, ARCH'TS & ENG'RS.
BROADWAY, OAKLAND
CALIFORNIA

Appendix D.2

The following drawings are of Buildings 0 (Junior Alliance Hall), drawn by William G. Corlett, Jr. in 1935, for permit A59872. Drawings were obtained from the Oakland Building Department via SOM.



SCHEDULE OF MATERIALS

ROOM	FLOOR	BASE	WAINSCOT	WALLS	CEILING	PIC. MLD	MISCELLANEOUS
AUDITORIUM	Maple	O.P. Mld	O.P.	Unfin. above Wains.	Unfin.	—	
BATH RM	Tile	Tile	—	Keenes Cem. Pl.	Keenes Cem. Pl.	—	Tile Wainscot Cap
BED RMS	Oak	O.P. Mld	—	Stucco	Stucco	O.P.	
TOILET RM #1	Tile	Tile	Keenes Cem. Pl. 6'	Plaster	Plaster	—	Wd. Wains. Cap
CLOSETS	Oak	O.P. Plain	—	"	"	—	Shelf, rod & shoe rack
COAT RM	Maple	" "	—	"	"	—	Hook strips on walls, O.P. stair to Loft
DRESSING RMS	O.P.	" "	—	"	"	O.P.	Wd. hook strips on walls
ENTRY	Cem. & Tile	Tile	—	Cem. Pl.	Board	—	
HALL	Oak	O.P. Mld	—	Stucco	Stucco	O.P.	Oak stairs
KITCHEN	Linoleum over O.P.	" Plain	—	Plaster	Plaster		
LOFT	O.P.	—	—	Unfin.	Unfin.	—	
OFFICE	Oak	O.P. Mld	Plaster	Stucco	Stucco	O.P.	O.P. chair rail 2'-10" (top)
PORCHES	Cem. & Tile	5x12" Tile	—	Cem. Pl.	Wd.	—	See Plan for part tile base
RECEPT. HALL	Oak	O.P. Mld	—	Plaster	Plaster	O.P.	
SERVICE ENTRY	O.P.	" Plain	—	"	"	—	O.P. Stairs & Handrail
STAGE	O.P.	" "	—	Pl. on Ml.	Unfin.	—	
TOILET RM #2	Cem.	6" Cem.	Keenes Cem. Pl. 6'	Plaster	Plaster	—	
BASEMENT STAIRS	O.P.	O.P. Plain	—	"		—	O.P. Stairs & Handrail
" STORAGE	Cem.	—	—	Unfin.	Unfin.	—	
STAGE ENTRY	Cem.	6" Cem.	—	Plaster	Plaster	—	O.P. Stairs & Handrail

SCHEDULE OF PAINTING

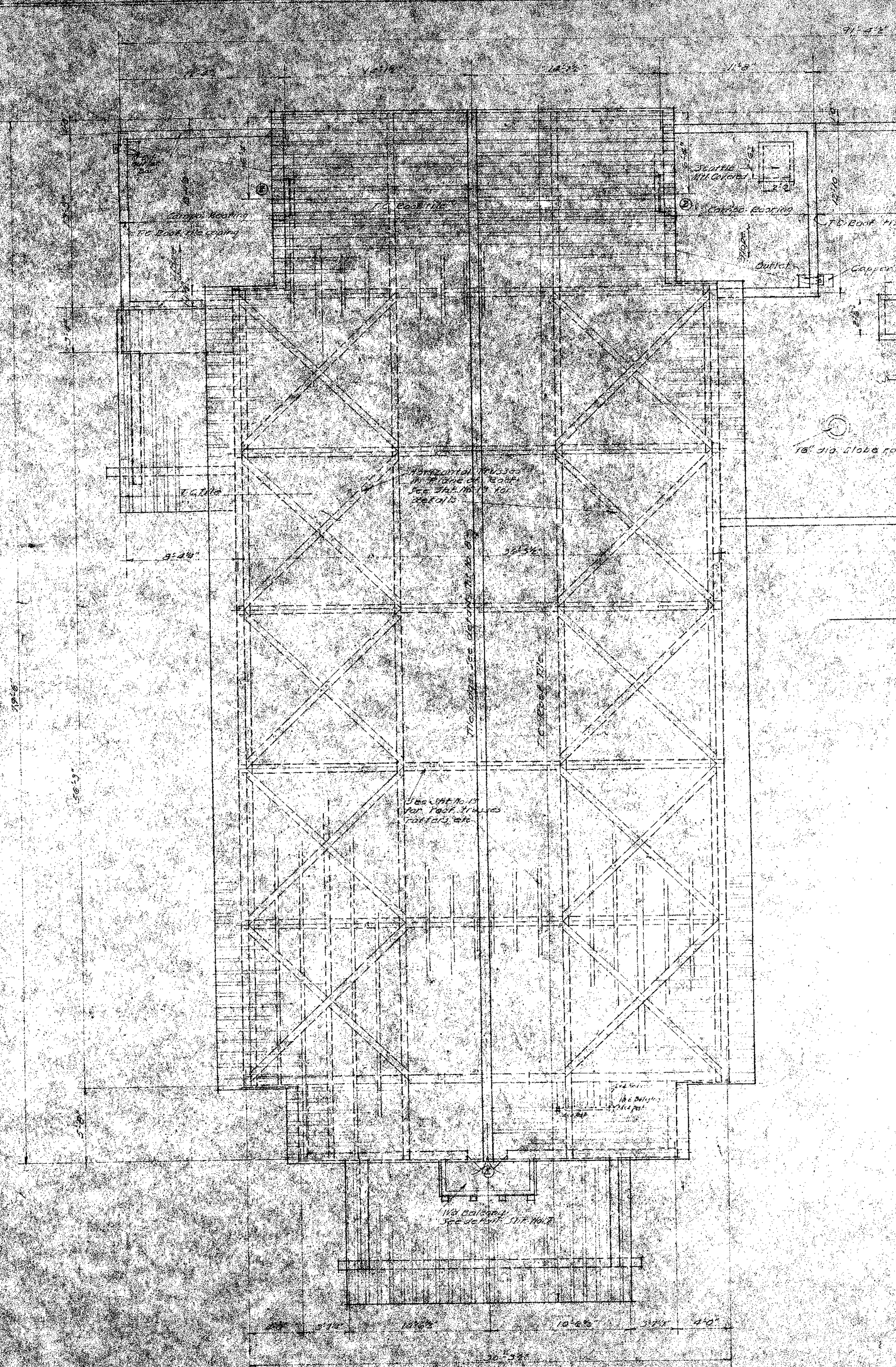
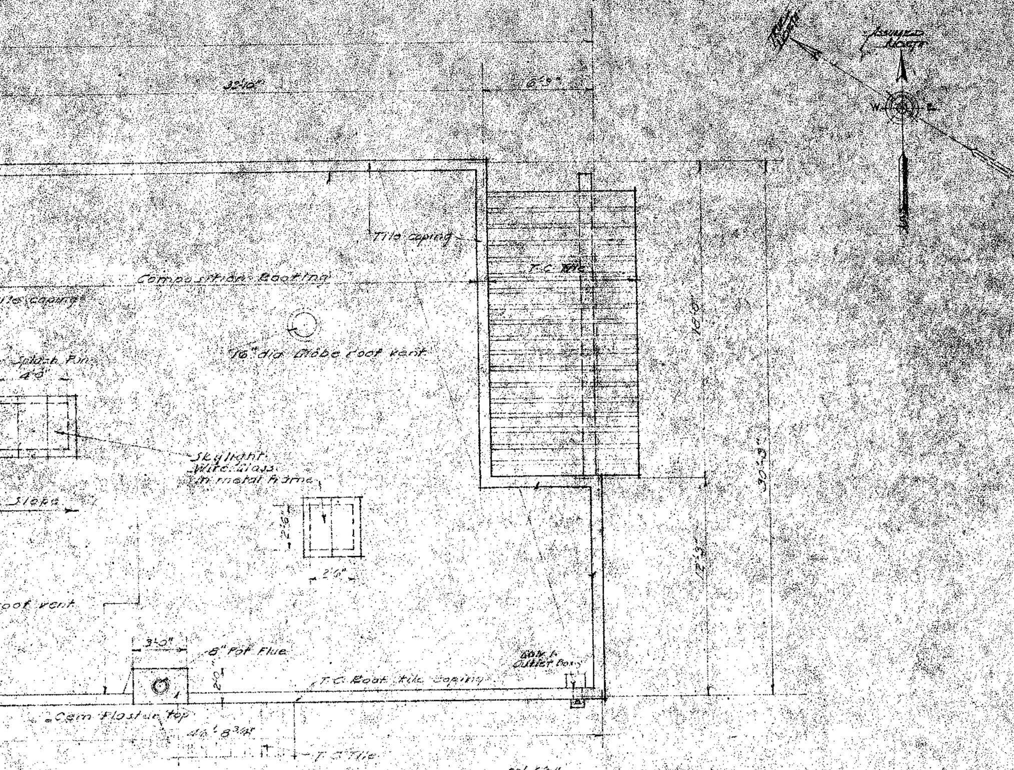
ROOM	WALLS	CEILING	BASE	WAINSCOT	PICT. MLD	DOORS	SASH	MISCELLANEOUS
AUDITORIUM	North Wall St. V.	Unfin.	St. V.	St. V.	—	St. V. 2C	En. 2C	[illegible]
BATH RM	W.W. 3C	W.W. 3C	En. 3C	—	—	En. 3C	En. 2C	
BED RMS	—	—	St. & V.	—	Pt. 3C	St. & V.	Pt. 2C	
TOILET RM #1	W.W. 3C	W.W. 2C	—	En. 3C	—	En. 3C	En. 3C	Toilet seat & ... En. 3C
CLOSETS			St. & C	—	—	St. & V.	—	Shelves etc. Shlc
COAT RM	Tint	Tint	St. V.	—	—	St. V.	En. 2C	Hook strips & Stair St. V.
DRESSING RMS	"	"	" "	—	Pt. 3C	St. V.	En. 2C	Hook strips St. V.
ENTRY	—	St. Gl.	—	—	—	St. 2C	—	[illegible]
HALL	—	—	St. & V.	—	Pt. 3C	St. & V.	—	Stairs St. V.
KITCHEN	W.W. 3C	W.W. 3C	St. & 2C	—	—	St. & 2C	En. 2C	Cases St. V.
LOFT	Unfin.	Unfin.	—	—	—	En. 3C	—	[illegible]
OFFICE	—	—	St. & V.	—	Pt. 3C	St. & V.	Pt. 2C	Chair rail St. & V.
PORCHES	—	St. Gl.	—	—	—	[illegible]	En. 2C	[illegible]
RECEPT. HALL	—	—	St. & V.	—	Pt. 3C	St. & V.	—	
SERVICE ENTRY	W.W. 3C	W.W. 2C	En. 3C	—	—	En. 3C	—	Stairs St. V.
STAGE	Tint	Unfin.	St. V.	—	St. V.	St. V.	En. 2C	
TOILET RM #2	W.W. 3C	W.W. 3C		En. 3C	—	En. 3C	En. 2C	[illegible]
BASEMENT STAIRS	Tint	Tint	St. V.	—	—	En. 3C	En. 2C	Stairs St. V.
" STORAGE	Unfin.	Unfin.	—	—	—	En. 2C	En. 2C	
STAGE ENTRY	Tint	Tint	—	—	—	St. V.	—	Stairs St. V.

- FIRST FLOOR PLAN -

Scale 1/4" = 1'-0"

General Notes:
Dimensions are given to faces & center lines of studs & to centers of openings.
All studs except as noted otherwise are to be 2"x4" @ 16" ctrs. All other studs are to be 2x6 & 2x8 as noted, spaced @ 16" ctrs.
See Sht. No. 6 for door & window schedule.

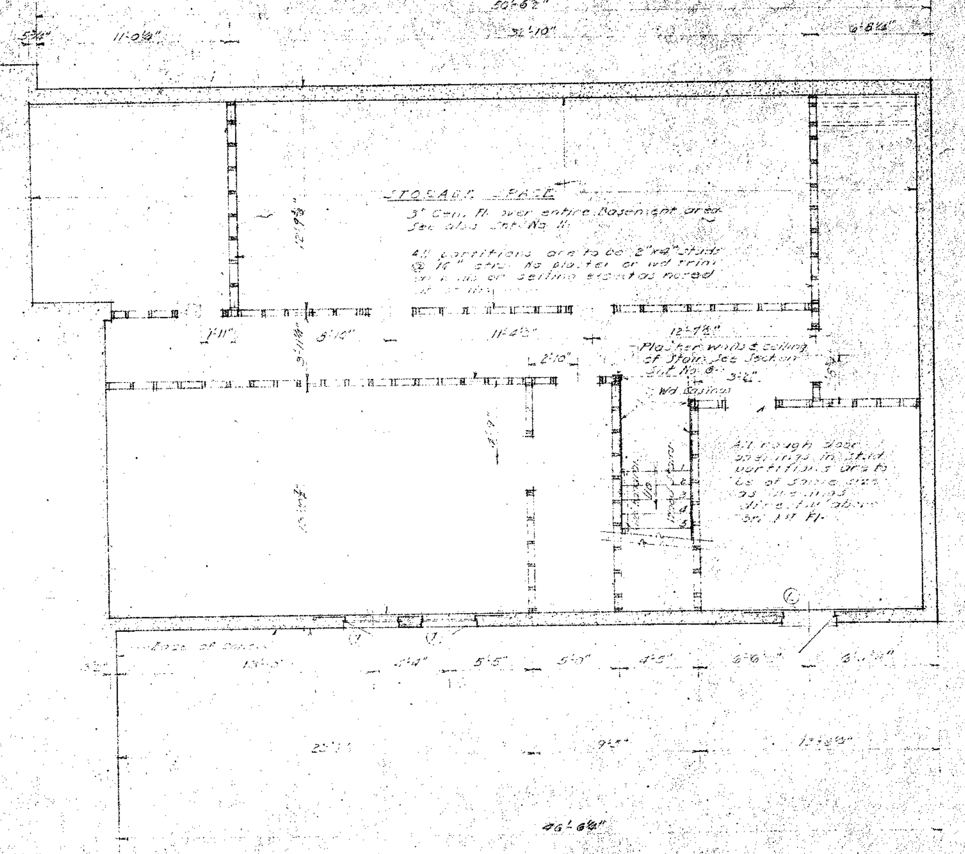
FIRST FLOOR PLAN
JOB NO. 445
JUNIOR ALLIANCE HALL
WEST OAKLAND ...
OAKLAND — CALIFORNIA
SHEET 1
WILL G. CORLETT
ARCHITECT & ENGINEER
1901 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA

ROOF PLAN

Scale 1/4" = 1'-0"

Dimensions are given to stud faces & center lines.



BASEMENT - PLAN -

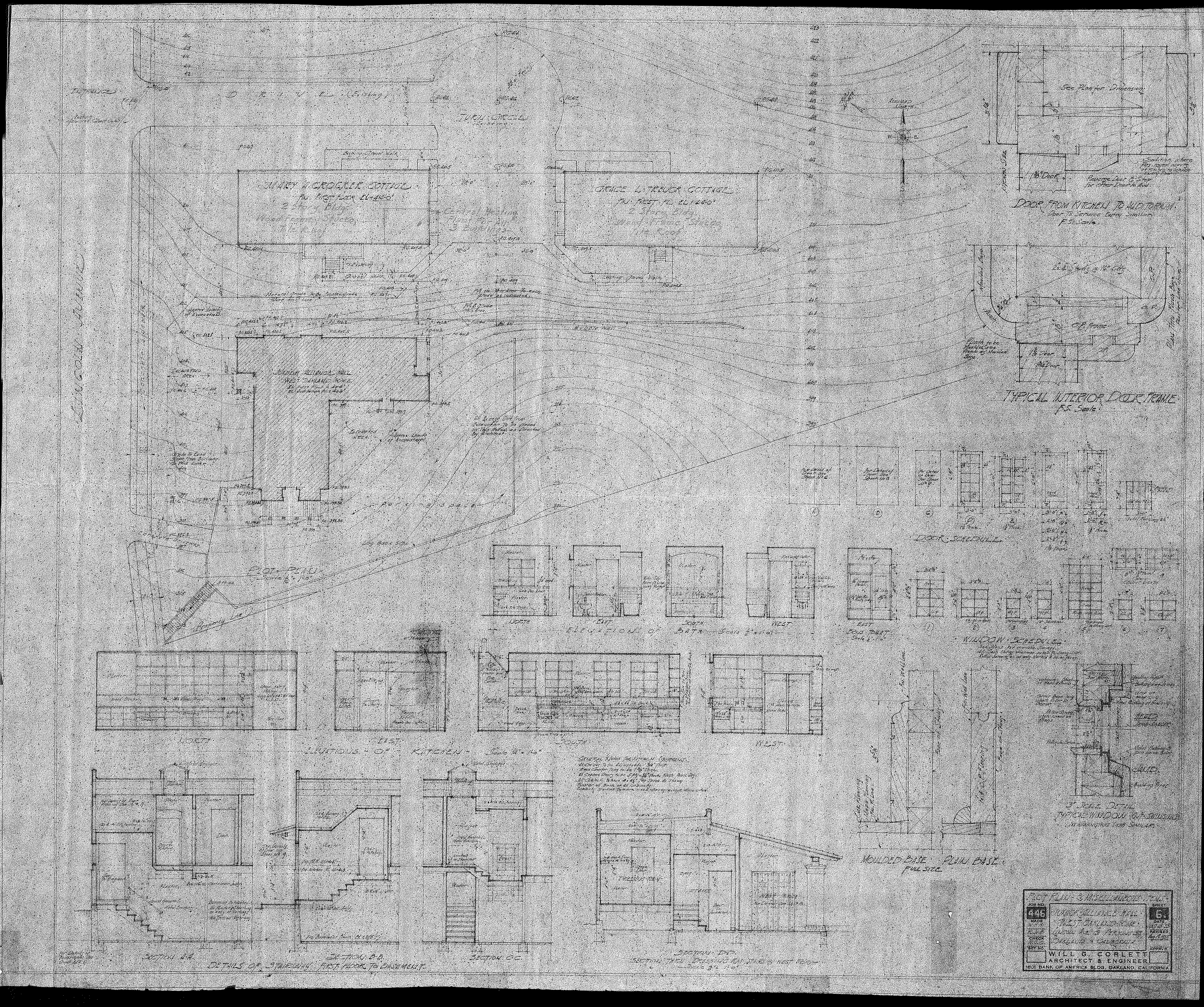
Scale 1/4" = 1'-0"

Notes:
See Sheets No. 10 & No. 11 for all concrete work & wood framing.

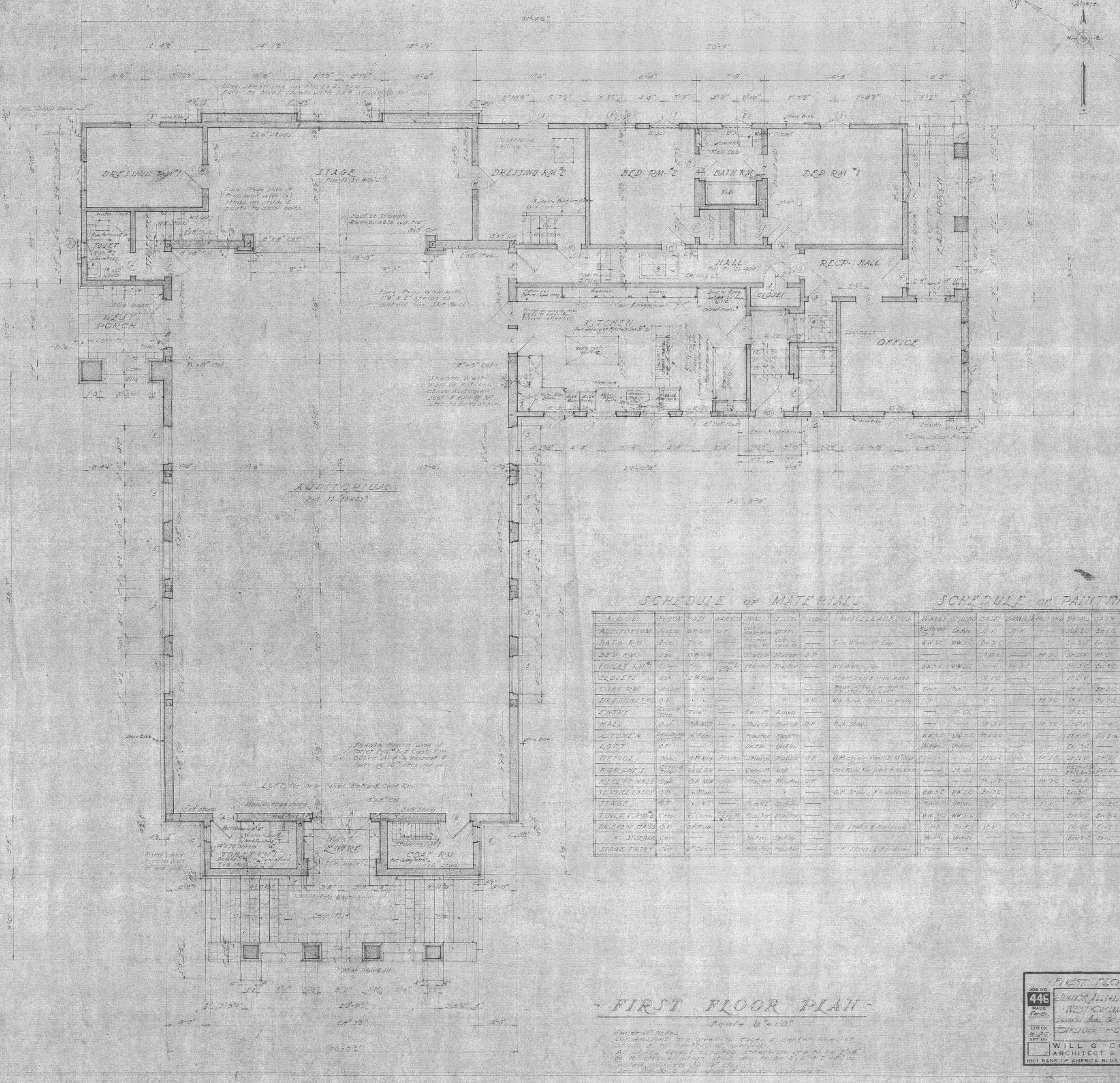
ROOF & BASEMENT PLAN

JOB NO. 446	JUNIOR ALLIANCE HALL · WEST OAKLAND HOME · LINDEN AVE & PERKINS ST · OAKLAND - CALIFORNIA	SHEET 2.
MADE R.W.B.		DATE
CHECK W.G.C.		REVISED
SET NO.	WILL G. CORLETT ARCHITECT & ENGINEER	APPR'D

1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



DRIVE (Existing)
TURN CIRCLE
MARY A. CROCKER COTTAGE
2 Story Bldg.
GRACE L. TREVOR COTTAGE
2 Story Bldg.
Central Heating Plant For All 3 Buildings
LINCOLN AVENUE
PLOT PLAN
DOOR FROM KITCHEN TO AUDITORIUM
F.S. Scale
TYPICAL INTERIOR DOOR FRAME
F.S. Scale
DOOR SCHEDULE
WINDOW SCHEDULE
ELEVATIONS OF BATH
NORTH
EAST
SOUTH
WEST
ELEVATIONS OF KITCHEN
MOULDED BASE
PLAIN BASE
FULL SIZE
3" SCALE DETAIL
TYPICAL WINDOW
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
DETAILS OF STAIRWAY FIRST FLOOR TO BASEMENT
PLOT PLAN & MISCELLANEOUS DETAILS
JOB NO.
446
MADE
CHECK
SET NO.
SHEET
6
DATE
REVISED
APPRVD
JUNIOR ALLIANCE HALL
WEST OAKLAND HOME
LUSSON AVE & PERALTA ST
OAKLAND CALIFORNIA
WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



SCHEDULE OF MATERIALS / SCHEDULE OF PAINTING

ROOM	FLOOR	BASE	WAINSCOT	WALLS	CEILING	PIC. MOLD	MISCELLANEOUS	WALLS	CEILING	BASE	WAINSCOT	PICT. MOLD	DOORS	SASH	MISCELLANEOUS
AUDITORIUM	Maple	O.P. Mld	O.P.	Unfin. Shiplap wall	Unfin.	—		[illegible]	Unfin.	St. V.	St. V.	—	St. & 3C	En. 3C	[illegible]
BATH RM.	Tile	Tile	—	Keene's Cem. Pl.	Keene's Cem. Pl.	—	Tile Wains. & Cap	W.W. 3C	W.W. 3C	En. 3C	—	—	En. 3C	En. 3C	
BED RMS.	Oak	O.P. Mld	—	Stucco	Stucco	O.P.		—	—	St. W.V.	—	Pt. 3C	St. & V.	Pt. 3C	
TOILET RM. #1	Tile	Tile	[illegible]	Plaster	Plaster	—	W.C. Wains. Cap	W.W. 3C	W.W. 3C	—	En. 3C		En. 3C	En. 3C	[illegible]
CLOSETS	Oak	O.P. Plain	—	"	"	—	Shelf, rod & shoe rack			St. & C	—	—	St. & V.	—	Shelves etc. St. & C
COAT RM.	Maple	" "	—	"	"	—	Hook Strips on Walls, Ck. Stair to Loft	Tint	Tint	St. V.	—	—	St. V.	En. 3C	Hook Strips [illegible]
DRESSING RMS.	O.P.	" "	—	"	"	O.P.	No base, strips on walls	"	"	" "		Pt. 3C	St. V.	En. 3C	Hook Strips St. V. [illegible]
ENTRY	Cem. & Tile	Tile	—	Cem. Pl.	R. Wd.	—		—	St. Ck.	—	—	—	St. & C	—	[illegible]
HALL	Oak	O.P. Mld	—	Stucco	Stucco	O.P.	Oak Stair	—	—	St. & V.	—	Pt. 3C	St. & V.	—	[illegible]
KITCHEN	Linoleum over O.P.	" Plain	—	Plaster	Plaster			W.W. 3C	W.W. 3C	St. & 3C	—	—	St. & 3C	En. 3C	Cases St. [illegible]
LOFT	O.P.	—	—	Unfin.	Unfin.	—		Unfin.	Unfin.	—	—	—	En. 3C	—	[illegible]
OFFICE	Oak	O.P. Mld	Plaster	Stucco	Stucco	O.P.	O.P. chair rail 2'10" hg.	—	—	St. & V.	—	Pt. 3C	St. & V.	Pt. 3C	Chair rail St. & V.
PORCHES	Cem. & Tile	Cem. & Tile	—	Cem. Pl.	Wd.	—	See Plan for part. tile base	—	St. Ck.	—	—	—	[illegible]	En. 3C	[illegible]
RECEPT. HALL	Oak	O.P. Mld	—	Plaster	Plaster	O.P.		—	—	St. & V.	—	Pt. 3C	St. & V.	—	
SERVICE ENTRY	O.P.	" Plain	—	"	"	—	O.P. Stairs & Handrail	W.W. 3C	W.W. 3C	En. 3C	—	—	En. 3C	—	Stairs St. V.
STAGE	O.P.	" "	—	Pl. on Wd.	Unfin.	—		Tint	Unfin.	St. V.		St. V.	St. V.	En. 3C	
TOILET RM. #2	Cem.	6" Cem.	Cem. Plas.	Plaster	Plaster	—		W.W. 3C	W.W. 3C		En. 3C		En. 3C	En. 3C	[illegible]
BASEMENT STAIRS	O.P.	O.P. Plain	—	"	"	—	O.P. Stairs & Handrail	Tint	Tint	St. V.			En. 3C	En. 3C	Stairs St. [illegible]
" STORAGE	Cem.	—	—	Unfin.	Unfin.	—		Unfin.	Unfin.	—	—	—	En. 3C	En. 3C	
STAGE ENTRY	Cem.	6" Cem.	—	Plaster	Plaster	—	O.P. Stairs & Handrail	Tint	Tint	—	—	—	St. V.		Stairs St. V.

FIRST FLOOR PLAN

Scale 1/8" = 1'-0"

General Notes

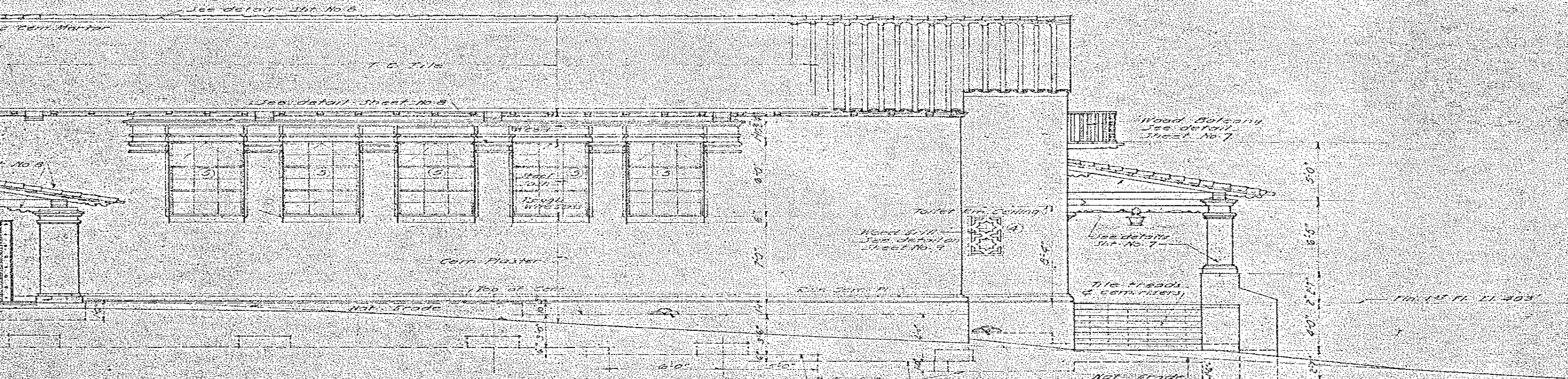
Dimensions are given to faces & center lines of studs & to centers of openings.

All studs except sheathed steel wire are to be 2"x4" @ 16" ctrs. All other studs are to be 2x6 & 2x4, as noted, spaced @ 16" ctrs.

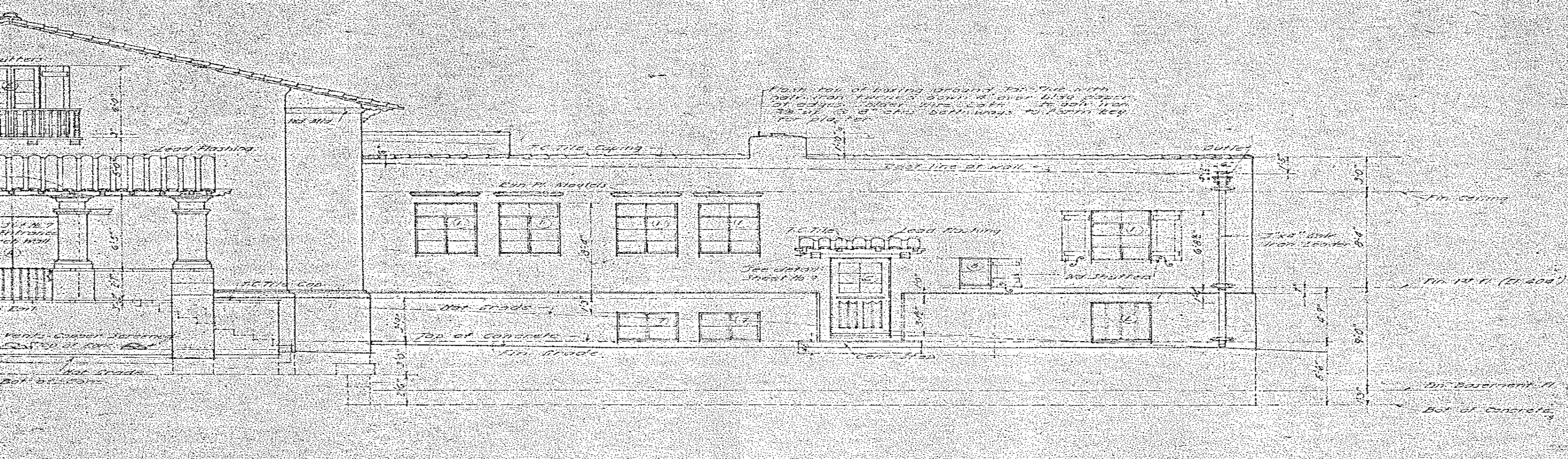
See Sht. No. 6 for door & window schedules.

JOB NO. 446 MADE [illegible] CHECK. [illegible] SET NO.	FIRST FLOOR PLAN JUNIOR ALLIANCE HALL WEST OAKLAND HOME [illegible] Ave. & Perkins St. Oakland — California	SHEET 1. DATE [illegible] REVISED [illegible] APPROVED

WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



- WEST - ELEVATION -
Scale 1/8" = 1'-0"

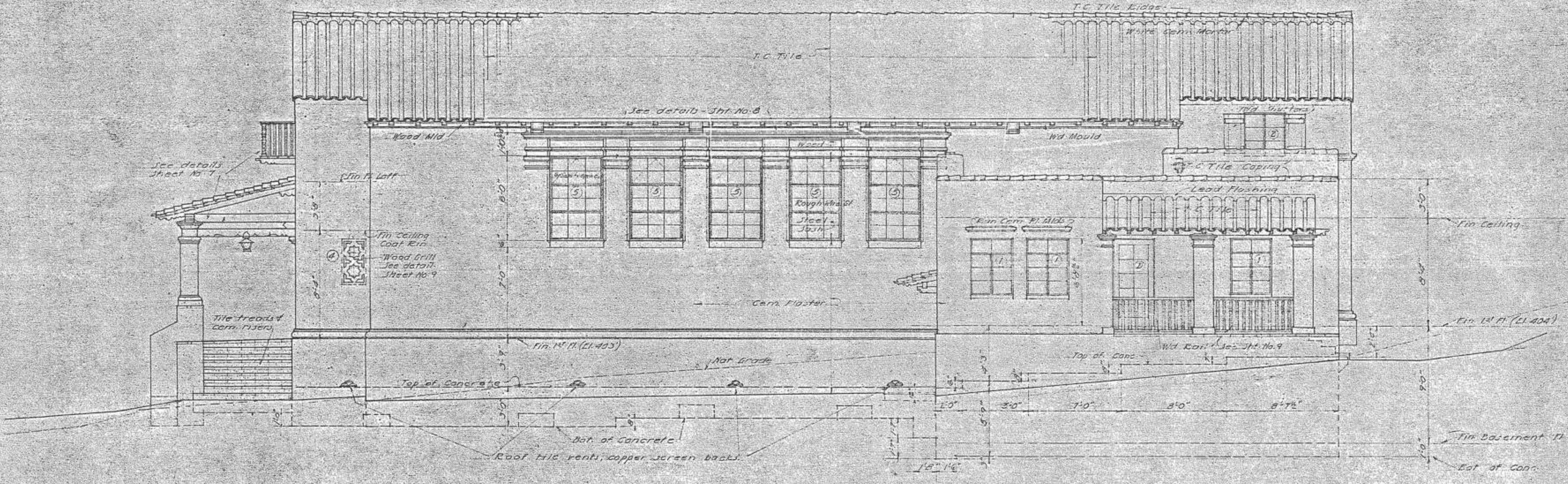


...TH ELEVATION
Scale 1/8" = 1'-0"

WEST · & · SOUTH · ELEVATION ·

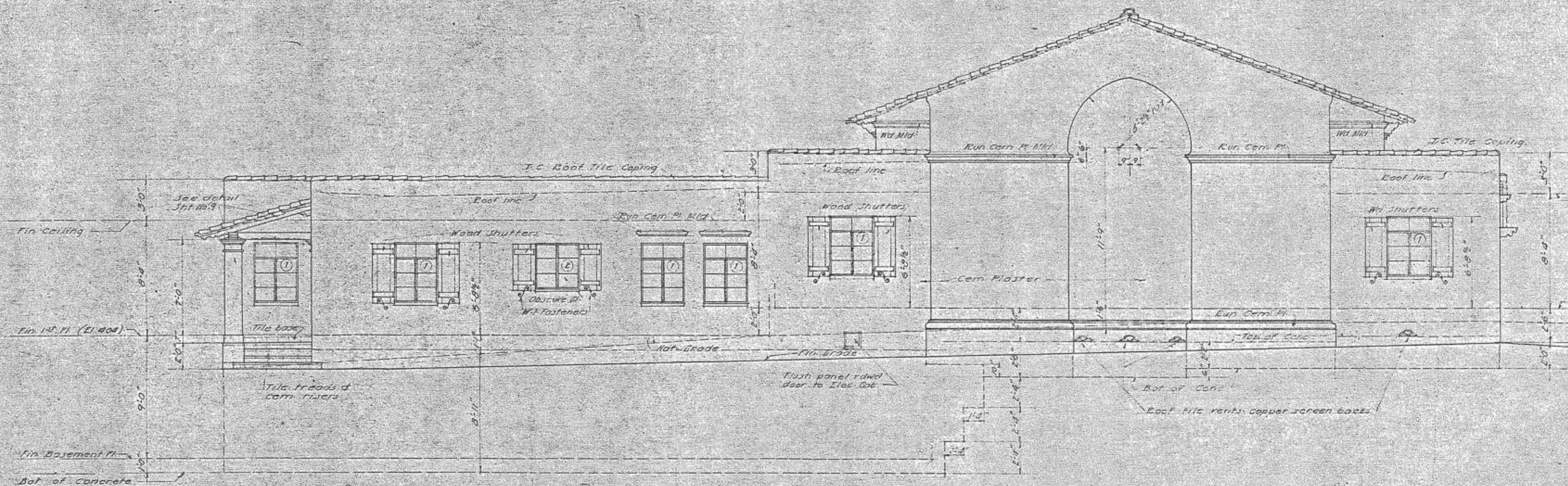
JOB NO. 446	JUNIOR ALLIANCE HALL · WEST OAKLAND HOUSE · LINCOLN AVE & PERKINS ST. OAKLAND - CALIFORNIA.	SHEET 3.
MADE E.W.B.		DATE Aug. 15. 35
CHECK W.G.C.		REVISED
SET NO.	WILL G. CORLETT ARCHITECT & ENGINEER	APPRVD.

1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



-EAST - ELEVATION-

Scale 1/4" = 1'-0"



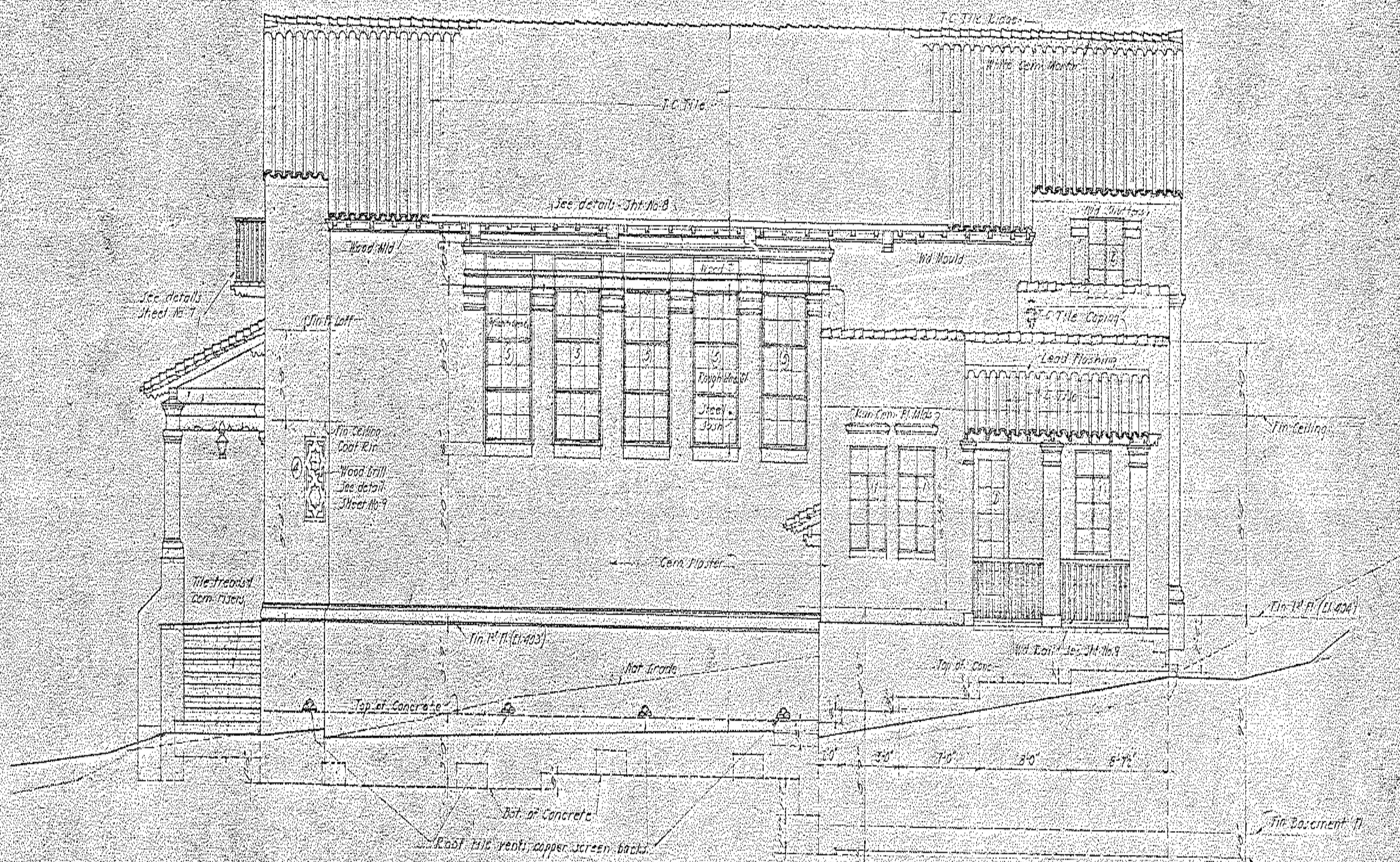
-NORTH - ELEVATION-

Scale 1/4" = 1'-0"

NORTH & EAST - ELEVATIONS

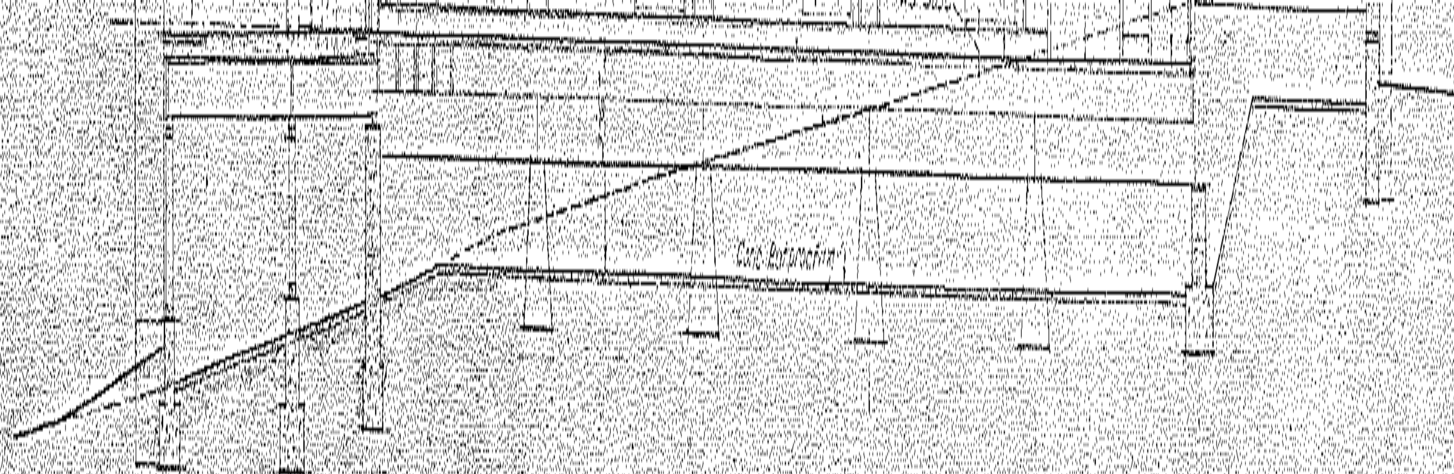
JOB NO. 446	JUNIOR - ALLIANCE - HALL WEST - OAKLAND HOME LINCOLN AVE & PERKINS ST. OAKLAND - CALIFORNIA	SHEET 4.
MADE R.W.B.		DATE JULY 15 '3[illegible]
CHECK W.G.C.		REVISED Aug 1st 1935

WILL G. CORLETT
ARCHITECT & ENGINEER
1901 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



EAST ELEVATION

Scale 1/4" = 1'-0"



LONGITUDINAL SECTION THRU AUDITORIUM LOOKING WEST

Scale 1/4" = 1'-0"

East Wall similar except doors.

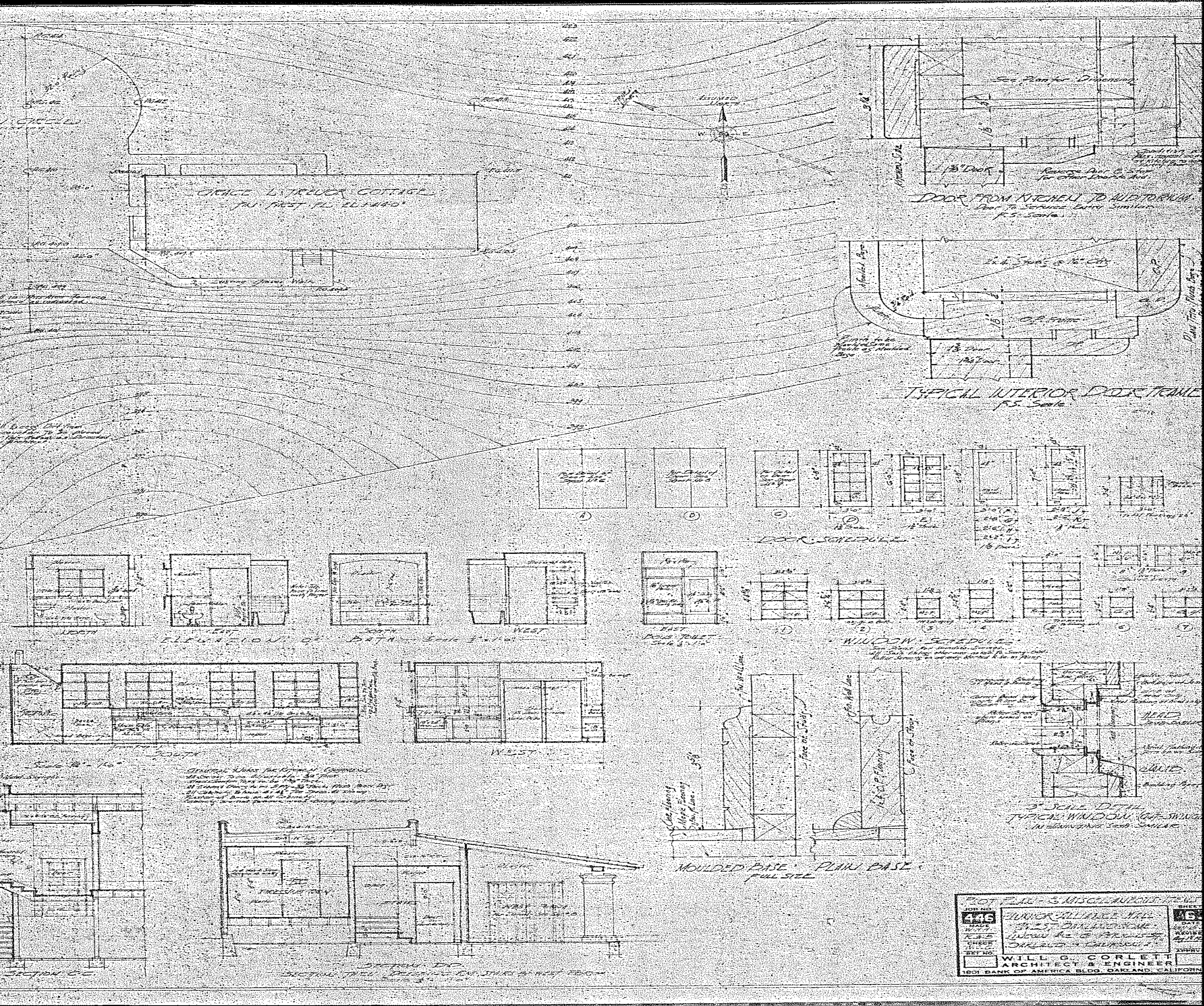
Sections Thru Auditorium

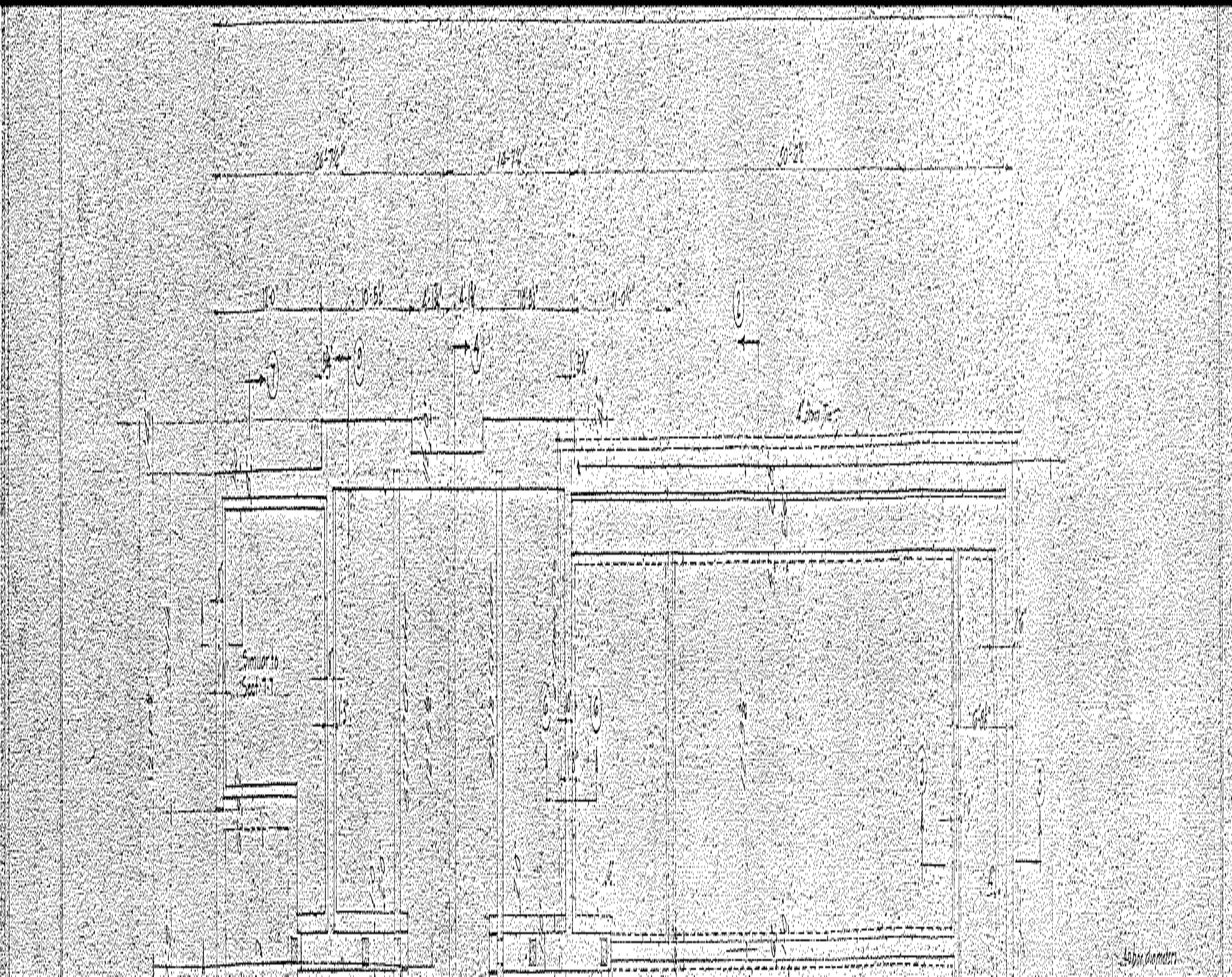
JOB NO

SHEET

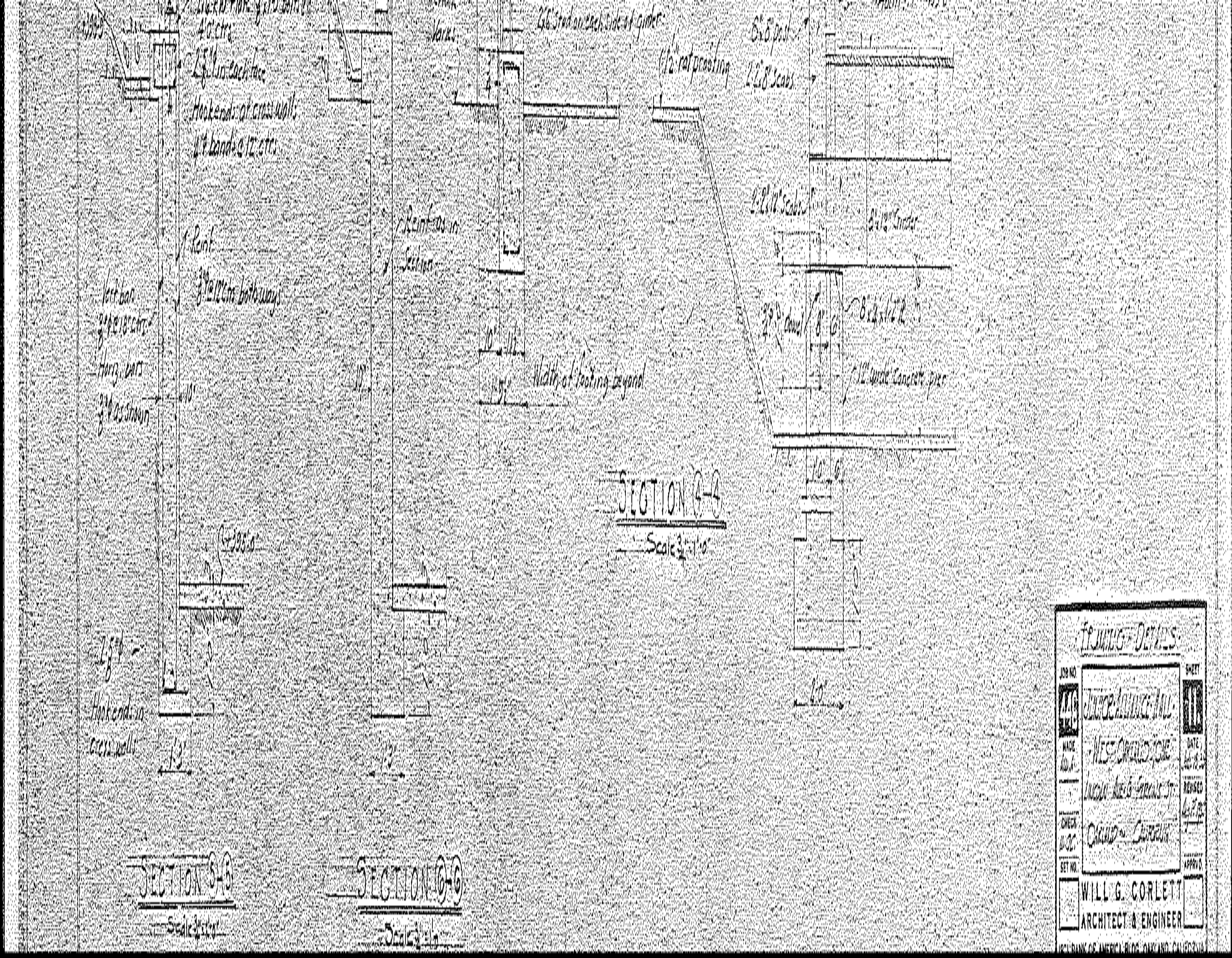
MADE

DATE

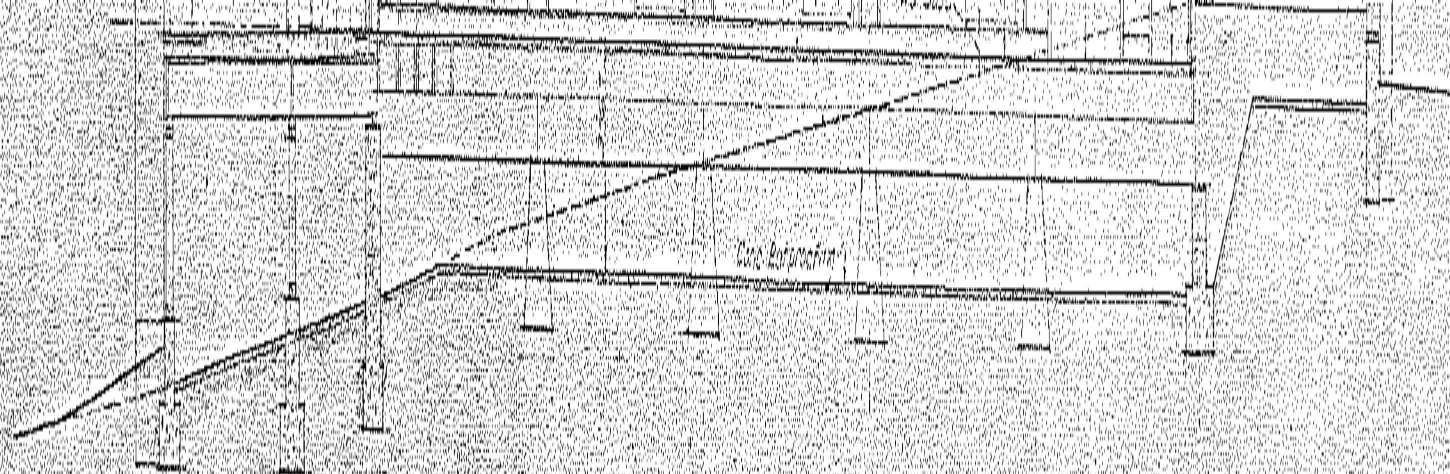

GRACE L. TREVOR COTTAGE
FIRST FL. EL.
DOOR FROM KITCHEN TO AUDITORIUM
F.S. Scale
TYPICAL INTERIOR DOOR FRAME
F.S. Scale
DOOR SCHEDULE
NORTH
EAST
SOUTH
WEST
ELEVATION OF BATH
WINDOW SCHEDULE
SOUTH
WEST
MOULDED BASE
FULL SIZE
PLAIN BASE
3" SCALE DETAIL
TYPICAL WINDOW
SECTION C-C
SECTION D-D
446
WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



Similar to
Sect 7-7
4 bar diameters



Width of footing beyond
12" wide concrete pier
SECTION 4-4
Scale 3/4"=1'0"
SECTION 5-5
SECTION 6-6
FRAMING DETAILS
JOB NO.
SHEET
MADE
DATE
REVISED
CHECK
SET NO.
APPR'D
JUNIOR ALLIANCE HALL
WEST OAKLAND HOME
LINCOLN AVE & ... ST.
OAKLAND CALIFORNIA
WILL G. CORLETT
ARCHITECT & ENGINEER
BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



LONGITUDINAL SECTION THRU AUDITORIUM · LOOKING WEST ·

Scale 1/4" = 1'-0"

East Wall similar, except doors.

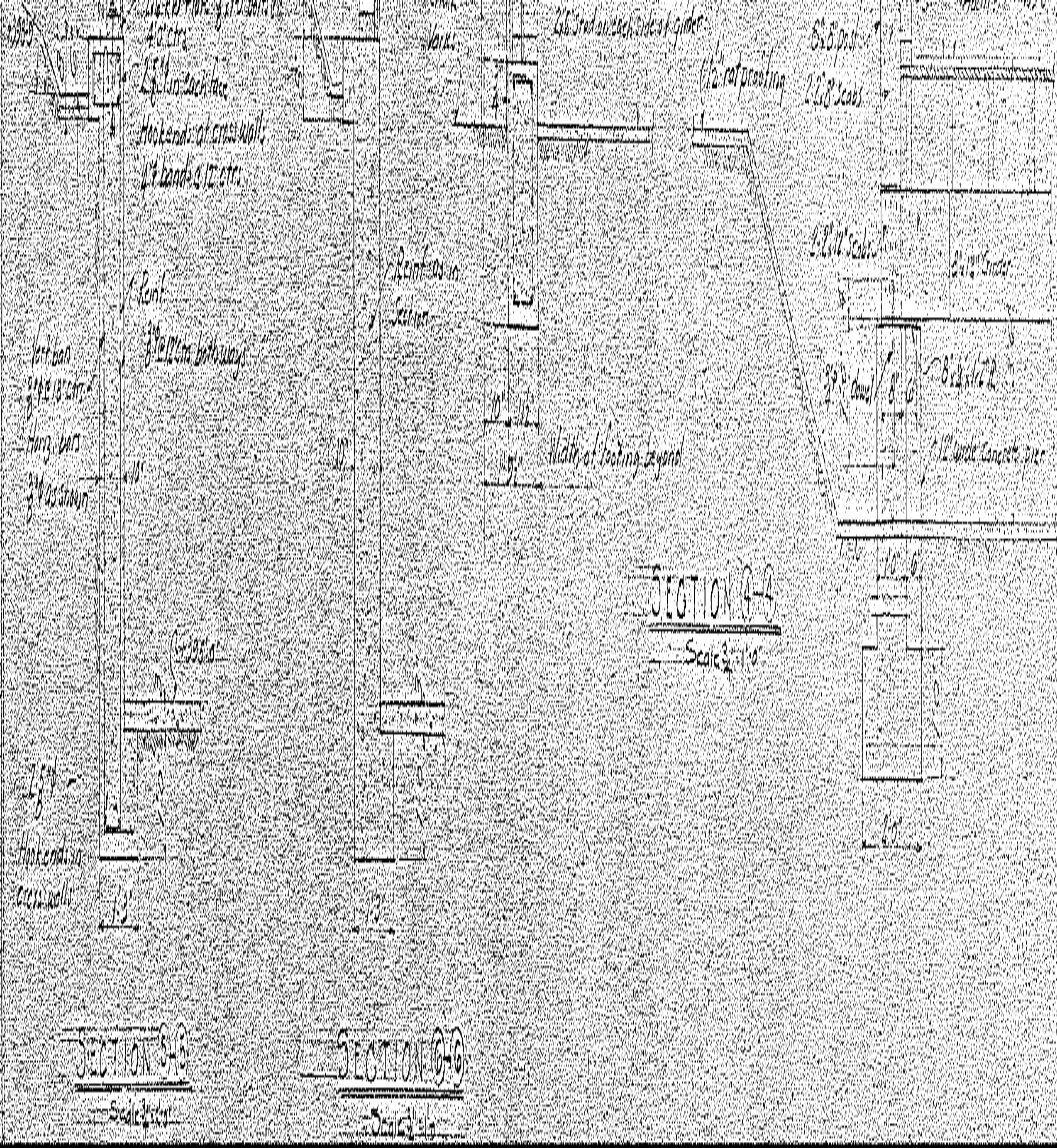
SECTIONS THRU AUDITORIUM

JOB NO

SHEET

MADE

DATE

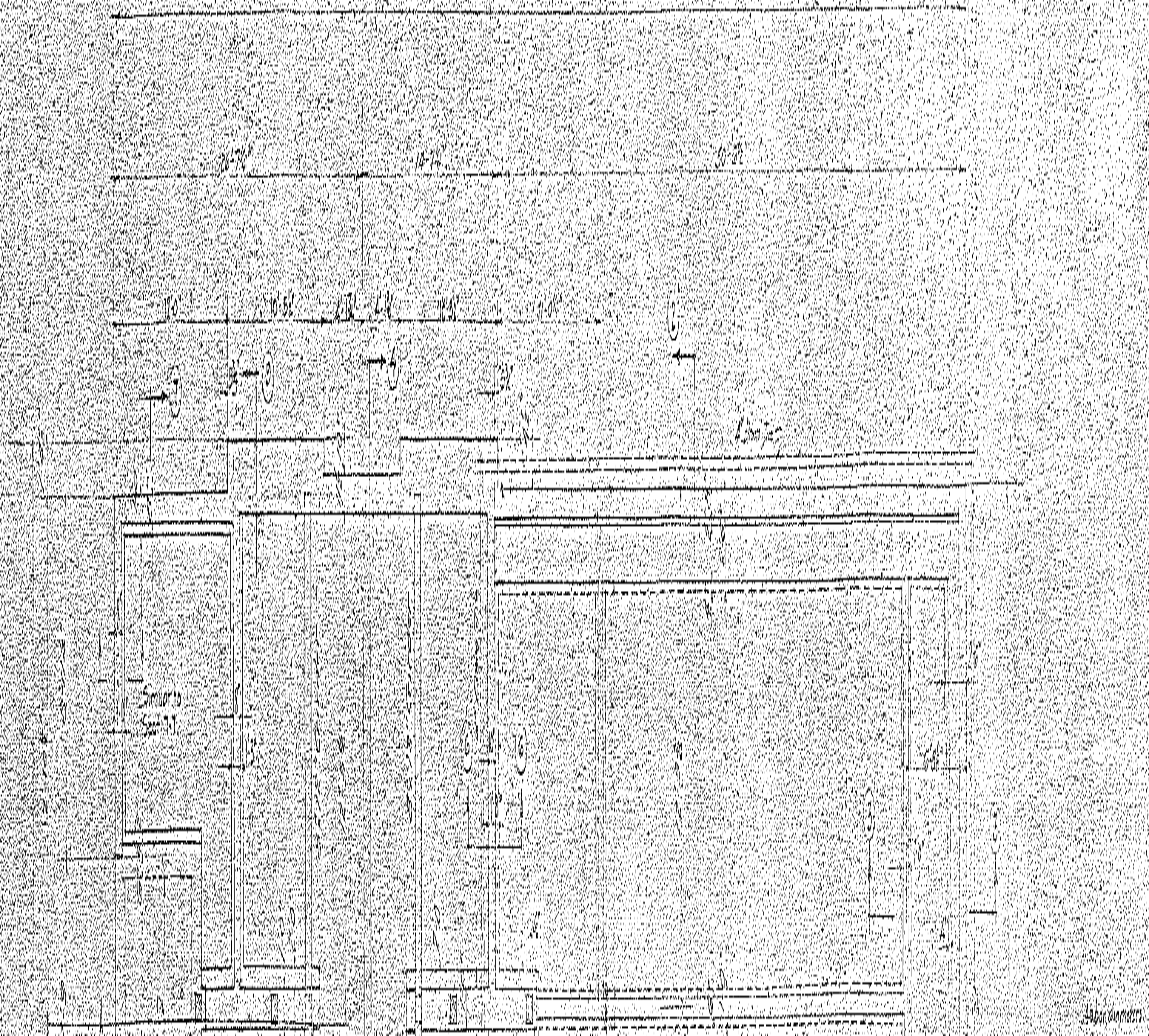


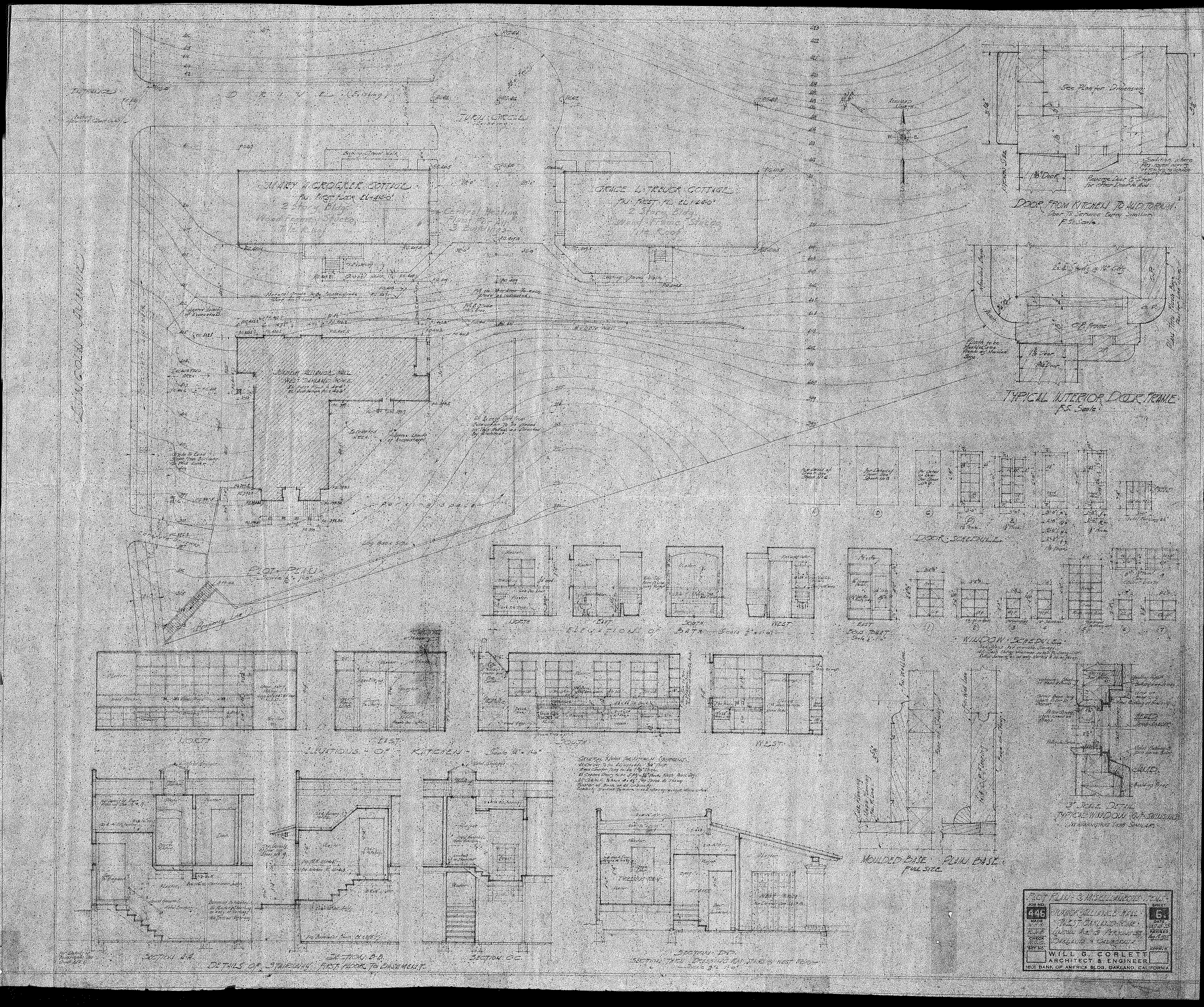
FRAMING DETAILS

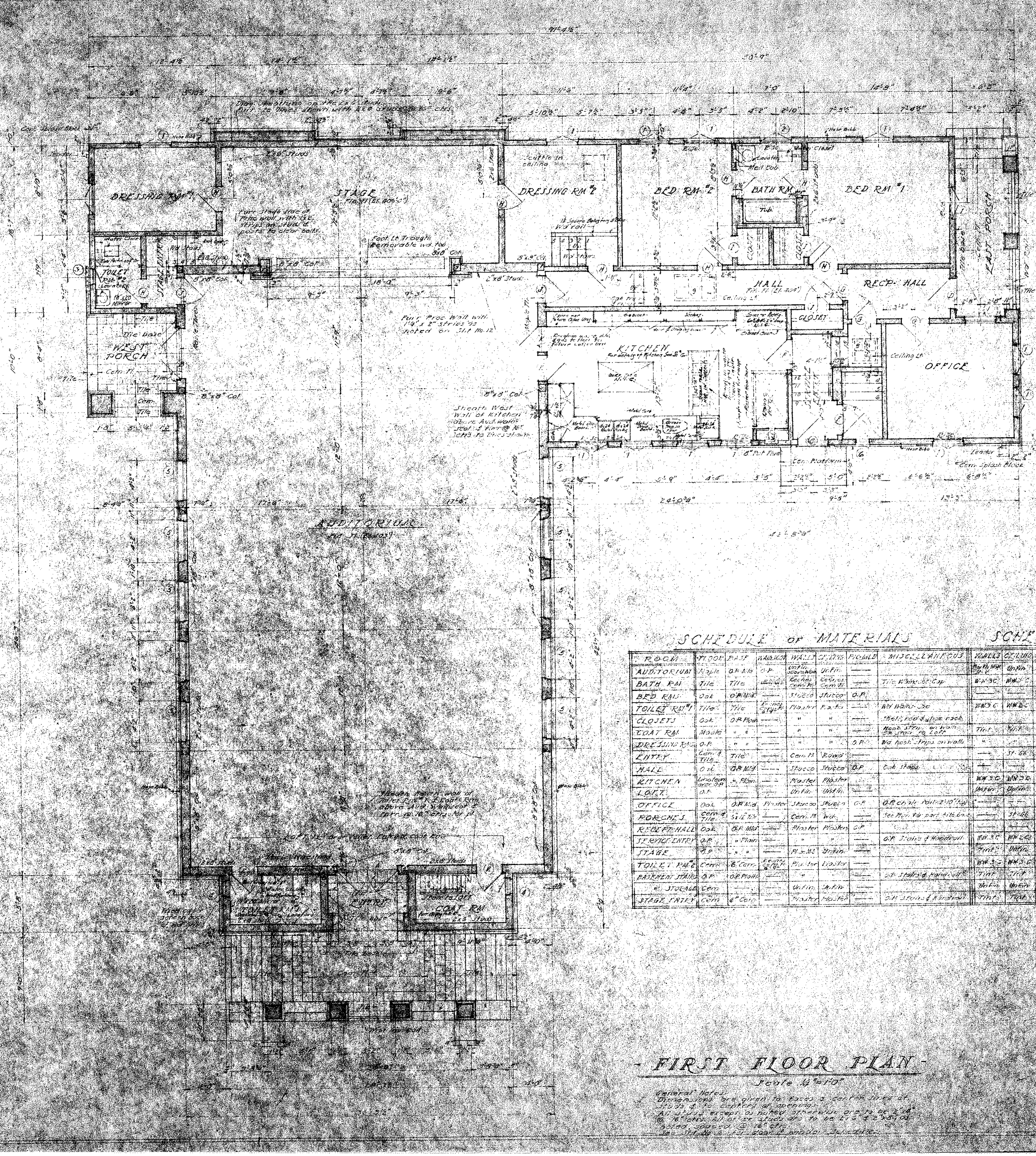
JUNIOR ALLIANCE HALL
WEST OAKLAND HOME
OAKLAND — CALIFORNIA

JOB NO. | SHEET | MADE | DATE | CHECK | REVISED | SET NO. | APPROVD

WILL G. CORLETT
ARCHITECT & ENGINEER


Similar to
Sect 7-7
4 Bars Typ
4 bar diameters


DRIVE (Existing)
TURN CIRCLE
MARY A. CROCKER COTTAGE
GRACE L. TREVOR COTTAGE
2 Story Bldg.
LINCOLN AVENUE
PLOT PLAN
DOOR FROM KITCHEN TO AUDITORIUM
TYPICAL INTERIOR DOOR FRAME
F.S. Scale
DOOR SCHEDULE
ELEVATIONS OF BATH
NORTH
EAST
SOUTH
WEST
WINDOW SCHEDULE
ELEVATIONS OF KITCHEN
MOULDED BASE
PLAIN BASE
FULL SIZE
SECTION A.A.
SECTION B.B.
SECTION C.C.
SECTION D.D.
DETAILS OF STAIRWAY FIRST FLOOR TO BASEMENT
TYPICAL WINDOW
JOB NO.
446
MADE
CHECK
SET NO.
SHEET
6
DATE
REVISED
APPR'VD
WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



SCHEDULE OF MATERIALS

ROOM	FLOOR	BASE	WAINSCOT	WALLS	CEILING	PIC. MLD	MISCELLANEOUS
AUDITORIUM	Maple	O.P. Mld	O.P.	Unfin. above Wain.	Unfin.	—	
BATH RM	Tile	Tile	—	Keenes Cem. Pl.	Keenes Cem. Pl.	—	Tile Wainscot Cap
BED RMS	Oak	O.P. Mld	—	Stucco	Stucco	O.P.	
TOILET RM #1	Tile	Tile	Keenes Cem. Pl. 6'-0"	Plaster	Plaster	—	Wd Wains. Cap
CLOSETS	Oak	O.P. Plain	—	"	"	—	Shelf, rod & shoe rack
COAT RM	Maple	" "	—	"	"	—	Hook strips on walls. O.P. stair to Loft
DRESSING RMS	O.P.	" "	—	"	"	O.P.	Wd. hook strips on walls
ENTRY	Cem. & Tile	Tile	—	Cem. Pl.	Board	—	
HALL	Oak	O.P. Mld	—	Stucco	Stucco	O.P.	Oak Steps
KITCHEN	Linoleum over O.P.	" Plain	—	Plaster	Plaster	—	
LOFT	O.P.	—	—	Unfin.	Unfin.	—	
OFFICE	Oak	O.P. Mld	Plaster	Stucco	Stucco	O.P.	O.P. chair rail 2'-10" high
PORCHES	Cem. & Tile	5x12 Tile	—	Cem. Pl.	Wd.	—	See Plan for part tile base
RECEPT. HALL	Oak	O.P. Mld	—	Plaster	Plaster	O.P.	
SERVICE ENTRY	O.P.	" Plain	—	"	"	—	O.P. Stairs & Handrail
STAGE	O.P.	" "	—	Pl. on M.L.	Unfin.	—	
TOILET RM #2	Cem.	6" Cem.	Keenes Cem. Pl. 6'-0"	Plaster	Plaster	—	
BASEMENT STAIRS	O.P.	O.P. Plain	—	"	"	—	O.P. Stairs & Handrail
" STORAGE	Cem.	—	—	Unfin.	Unfin.	—	
STAGE ENTRY	Cem.	6" Cem.	—	Plaster	Plaster	—	O.P. Stairs & Handrail

SCHEDULE OF PAINTING

ROOM	WALLS	CEILING	BASE	WAINSCOT	PIC. MLD	DOORS	SASH	MISCELLANEOUS
AUDITORIUM	North Wall St. V.	Unfin.	St. V.	St. V.	—	St. V. 3 C	En. 2 C	[illegible]
BATH RM	W.W. 3 C	W.W. 3 C	En. 3 C	—	—	En. 3 C	En. 3 C	
BED RMS	—	—	St. B.W.K.	—	Pl. 3 C	St. D.W.	Pl. G.L.	
TOILET RM #1	W.W. 3 C	W.W. 3 C	—	En. 3 C		En. 3 C	En. 3 C	Toilet Stall & Door En. 3 C
CLOSETS			St. 1 C	—	—	St. C. V.	—	Shelves etc. St. 1 C
COAT RM	Tint	Tint	St. V.	—	—	St. V.	En. 3 C	Hook strips & Stair St. V.
DRESSING RMS	"	"	" "		Pl. 3 C	St. V.	En. 2 C	Hook Strips St. V. Stairs St. V.
ENTRY	—	St. G.K.	—	—	—	St. 2 C	—	[illegible]
HALL	—	—	St. D.W.	—	Pl. 3 C	St. D.W.	—	[illegible]
KITCHEN	W.W. 3 C	W.W. 3 C	St. W.2 C	—	—	St. W. 2 C	En. 2 C	Cases St. V.
LOFT	Unfin.	Unfin.	—	—	—	En. 3 C	—	[illegible]
OFFICE	—	—	St. D.V.	—	Pl. 3 C	St. D.V.	Pl. G.L.	Chair rail [illegible]
PORCHES	—	St. G.L.	—	—	—	[illegible]	En. 2 C	[illegible]
RECEPT. HALL	—	—	St. D.W.	—	Pl. 3 C	St. D.W.	—	
SERVICE ENTRY	W.W. 3 C	W.W. 2 C	En. 3 C	—	—	En. 3 C	—	Stairs St. V.
STAGE	Tint	Unfin.	St. V.		St. V.	St. V.	En. 2 C	
TOILET RM #2	W.W. 3 C	W.W. 3 C		En. 3 C		En. 3 C	En. 3 C	[illegible]
BASEMENT STAIRS	Tint	Tint	St. V.	—		Pl. 3 C	En. 2 C	Stairs St. V.
" STORAGE	Unfin.	Unfin.	—	—	—	En. 2 C	En. 2 C	
STAGE ENTRY	Tint	Tint	—	—	—	St. V.		Stairs St. V.

- FIRST FLOOR PLAN -

Scale 1/4" = 1'-0"

General Notes:
Dimensions are given to faces & center lines of studs & to centers of openings.
All studs except as noted otherwise are to be 2"x4" @ 16" ctrs. All other studs etc. to be 2"x6" & 2"x8" as noted spaced @ 16" ctrs.
See Sht. No. 6 for door & window Schedule.

FIRST FLOOR PLAN

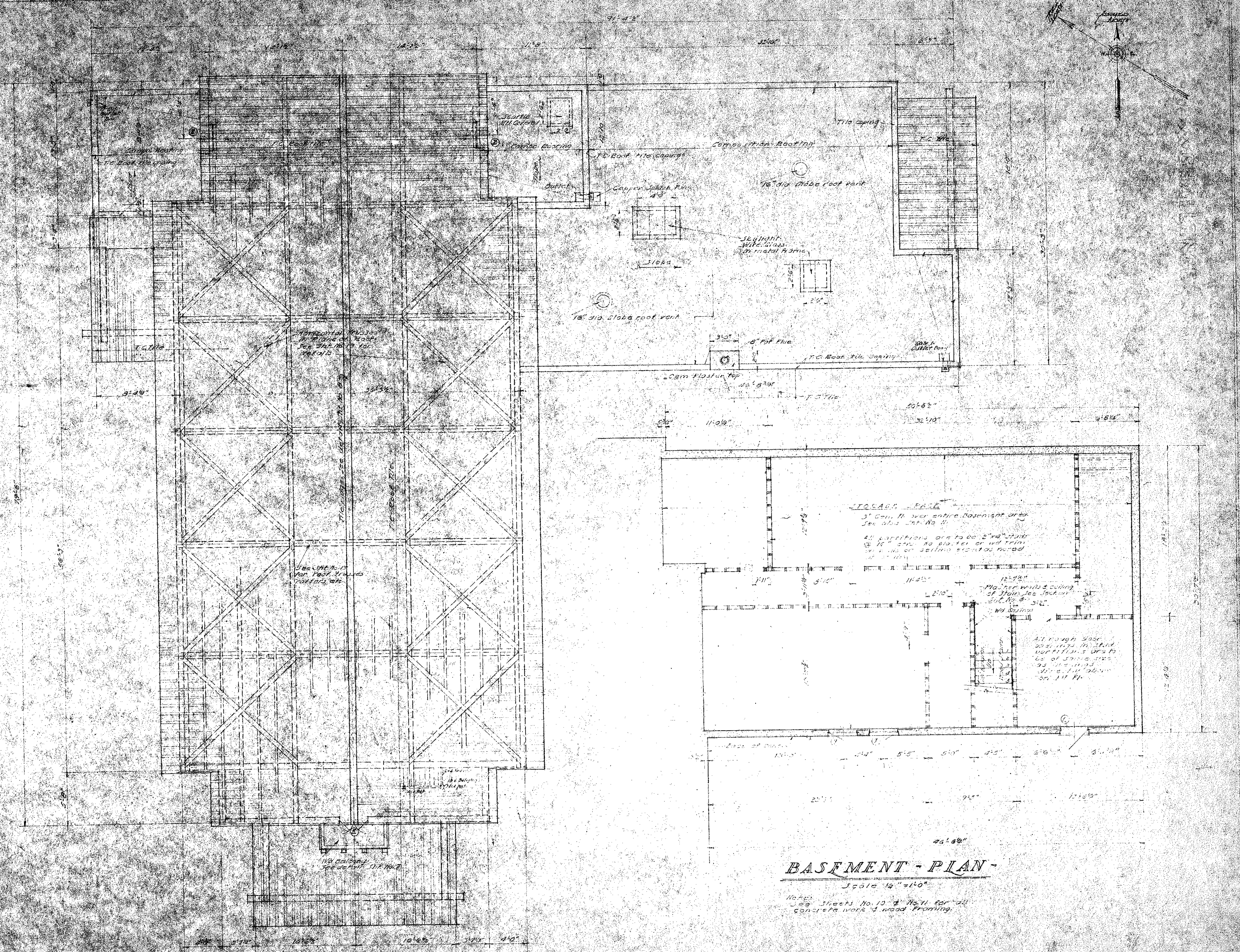
JOB NO. 446

JUNIOR ALLIANCE HALL, WEST OAKLAND [illegible], [illegible] Ave. & [illegible] St., OAKLAND - CALIFORNIA

SHEET 1

WILL G. CORLETT ARCHITECT & ENGINEER

[illegible] BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



ROOF PLAN

Scale 1/4" = 1'-0"

Dimensions are given to stud faces & center lines.

BASEMENT - PLAN -

Scale 1/4" = 1'-0"

Notes:
See Sheets No. 10 & No. 11 for all concrete work & wood Framing.

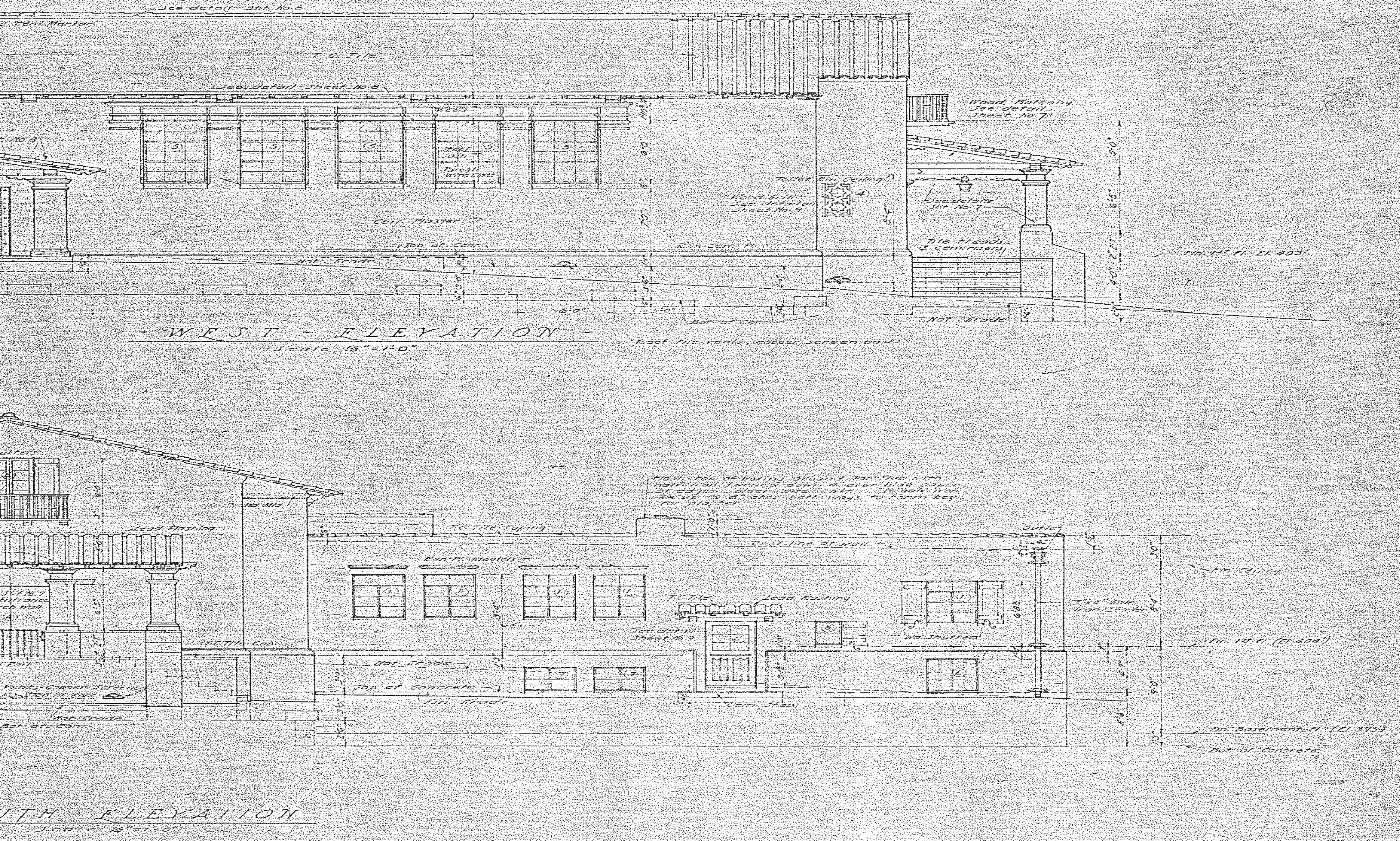
ROOF & BASEMENT PLAN

JOB NO. 446 | MADE R.W.B. | CHECK W.G.C. | SET NO.

JUNIOR ALLIANCE HALL
WEST OAKLAND HOME
LINCOLN AVE & PERKINS ST
OAKLAND - CALIFORNIA

SHEET 2.

WILL G. CORLETT
ARCHITECT & ENGINEER
1601 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



WEST & SOUTH ELEVATION

JOB NO. 446

MADE E.W.B.

CHECK W.G.C.

SET NO.

JUNIOR ALLIANCE HALL
WEST OAKLAND HOUSE
LINCOLN AVE & PERKINS ST.
OAKLAND - CALIFORNIA

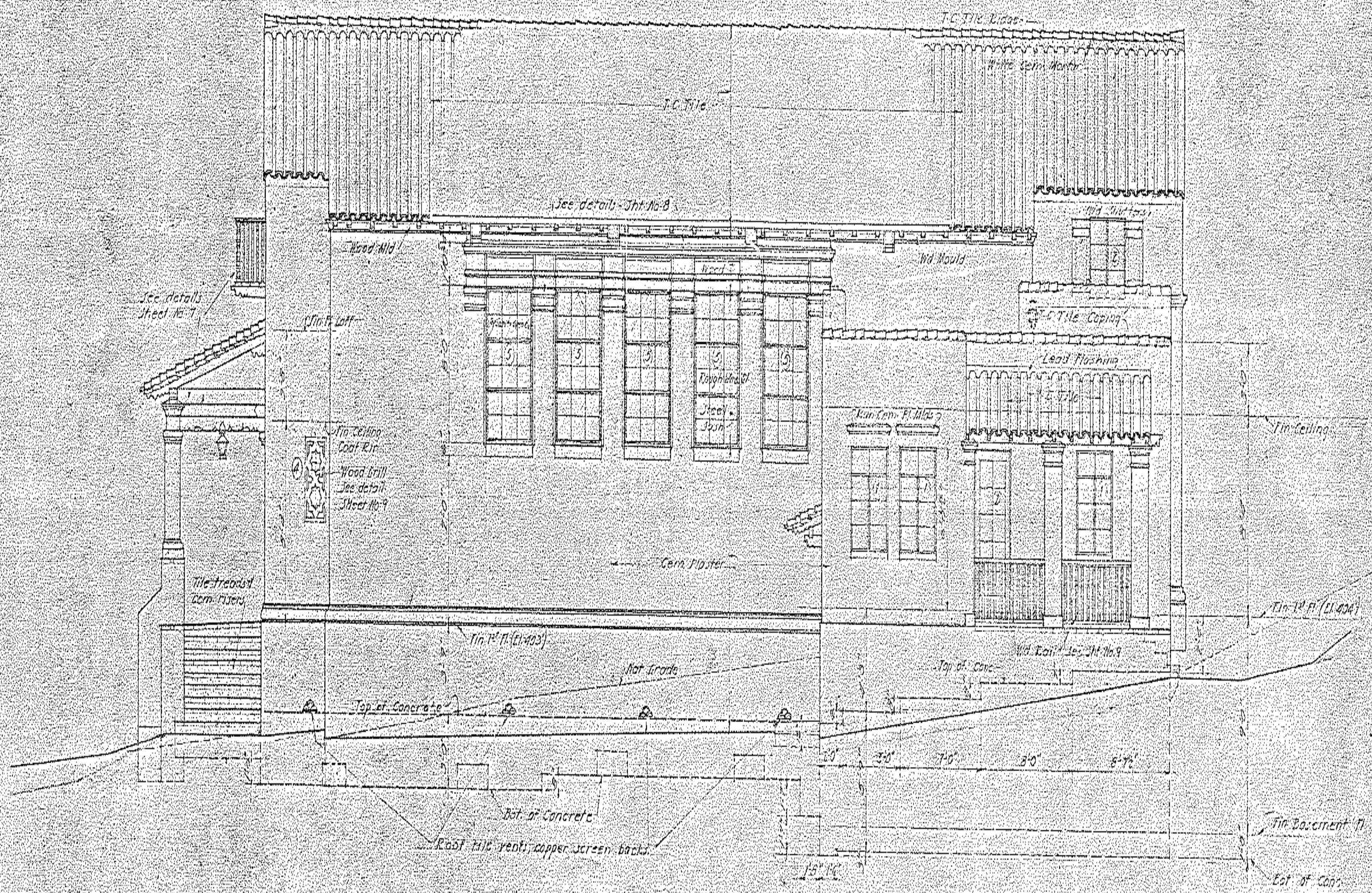
SHEET 3.

DATE Aug. 15. 35

REVISED

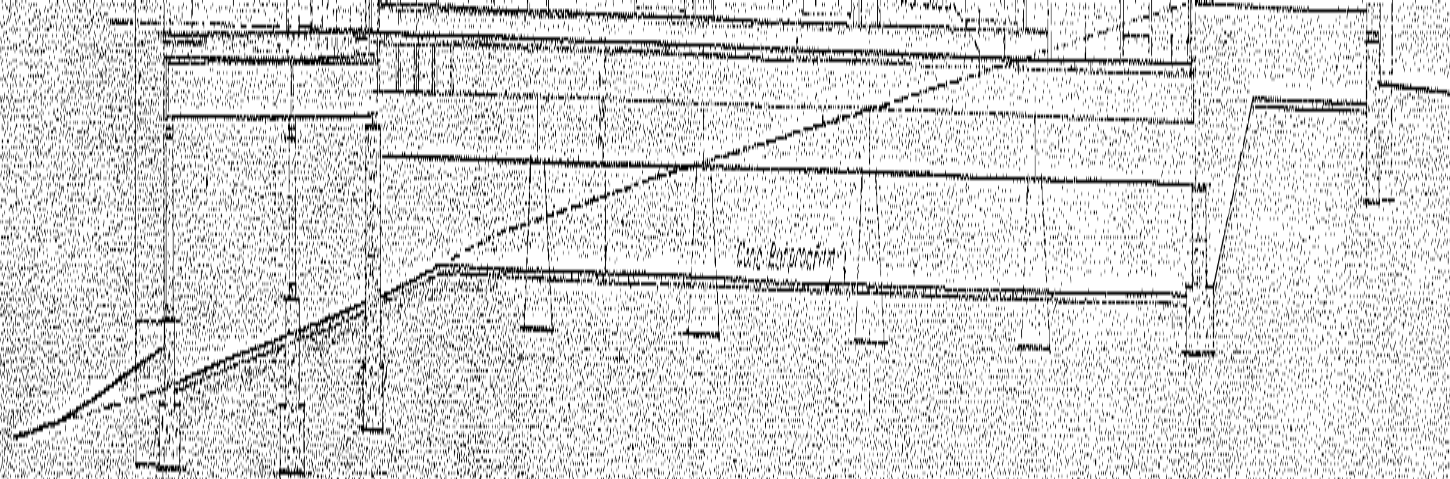
APPRV'D.

WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA



EAST ELEVATION

Scale 1/4" = 1'-0"



LONGITUDINAL SECTION THRU AUDITORIUM · LOOKING WEST ·

Scale 1/4" = 1'-0"

East Wall similar, except doors.

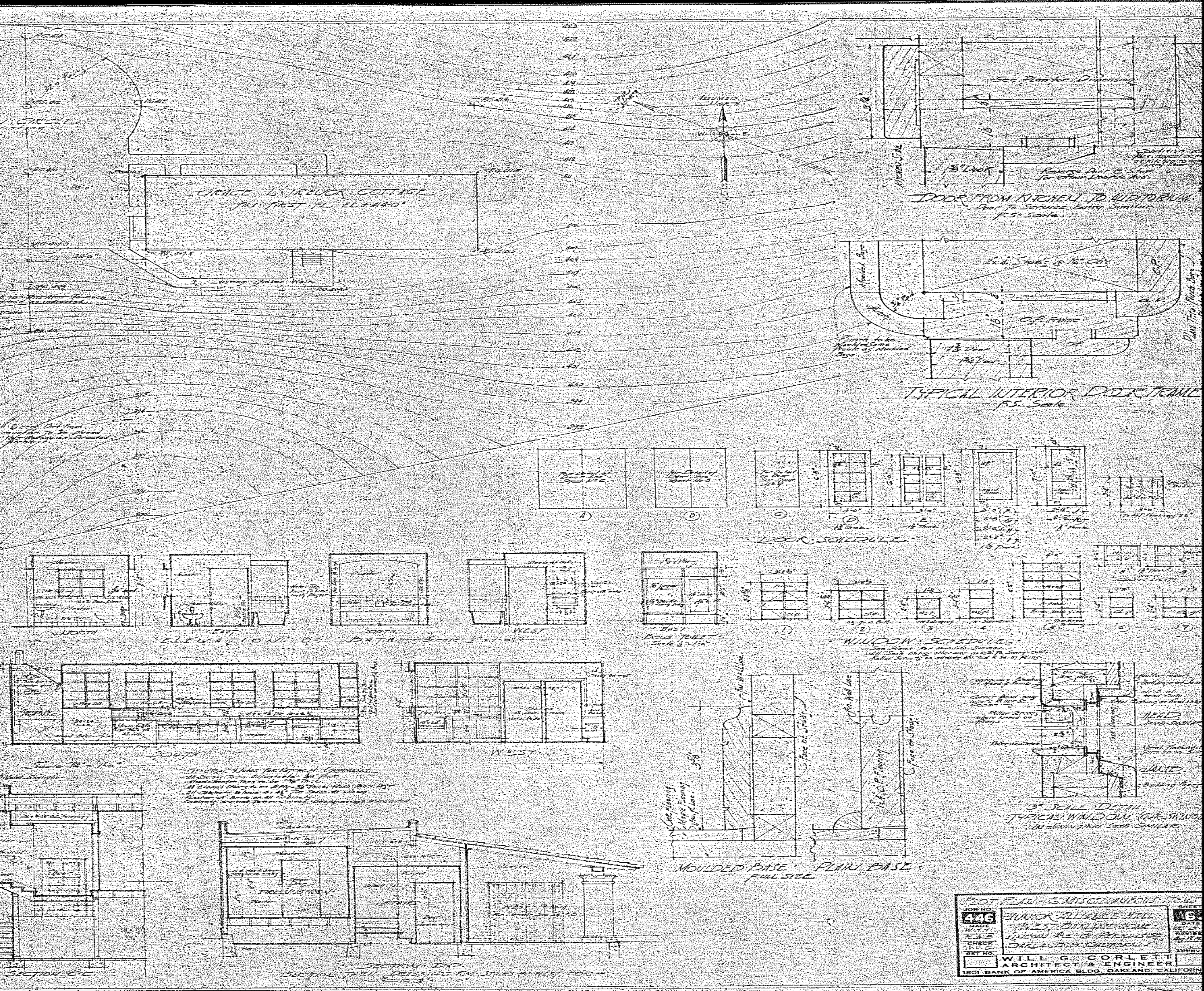
SECTIONS THRU AUDITORIUM

JOB NO

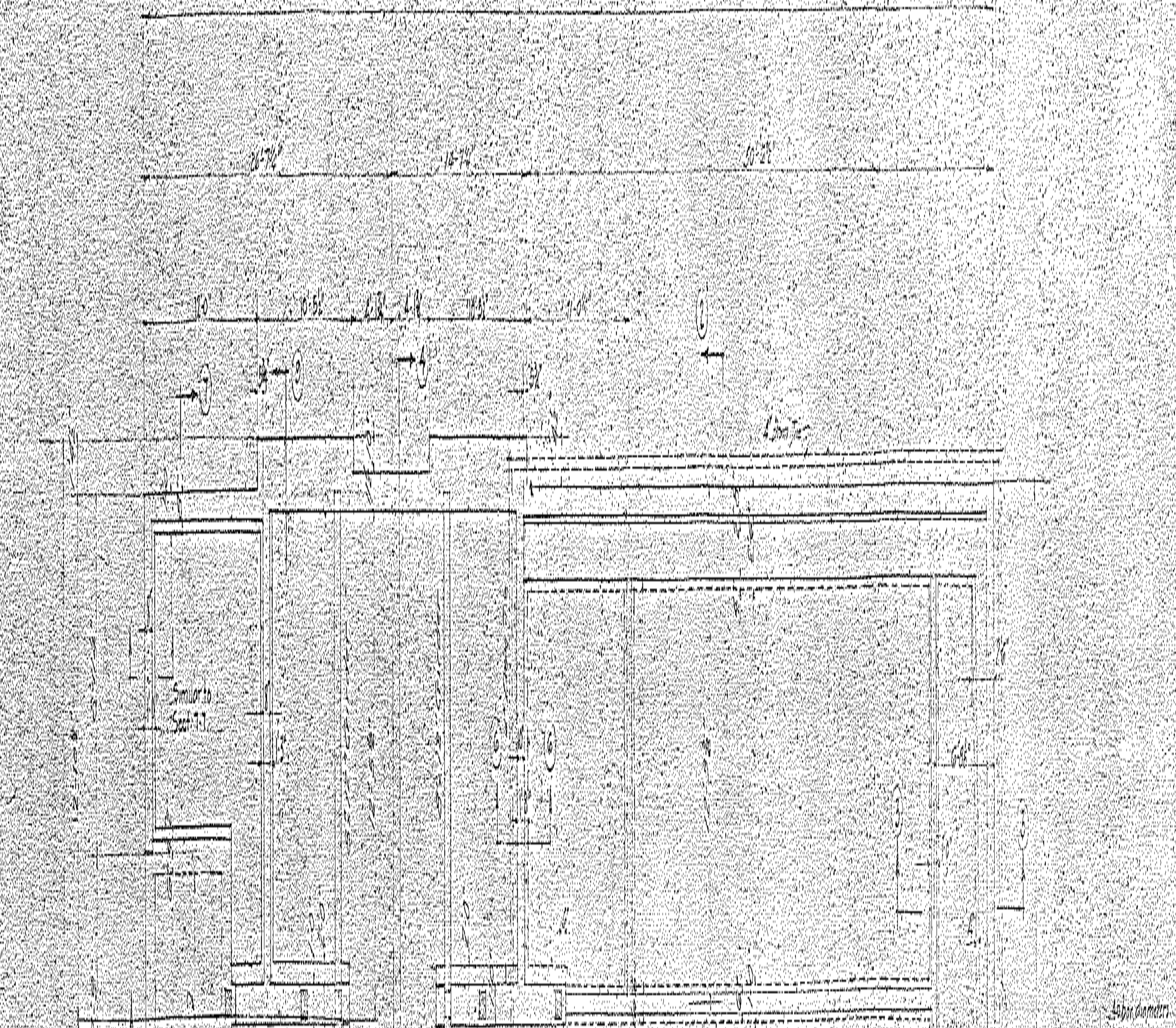
SHEET

MADE

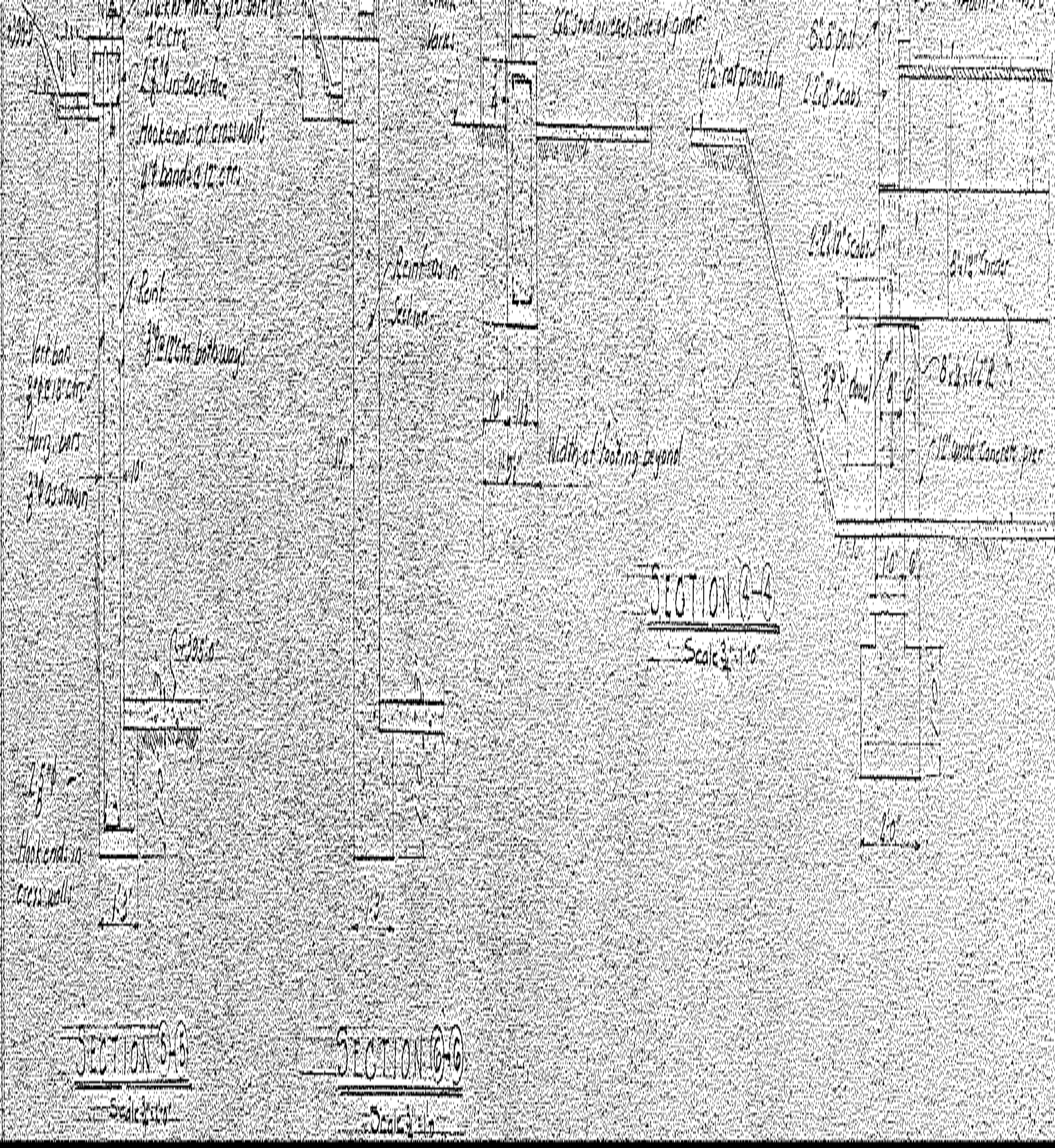
DATE



GRACE L. TREUOR COTTAGE
DOOR FROM KITCHEN TO AUDITORIUM
F.S. Scale
TYPICAL INTERIOR DOOR FRAME
F.S. Scale
DOOR SCHEDULE
ELEVATION OF BATH
NORTH
EAST
SOUTH
WEST
BOYS TOILET
WINDOW SCHEDULE
SOUTH
WEST
MOULDED BASE
FULL SIZE
PLAIN BASE
3" SCALE DETAIL
TYPICAL WINDOW
SECTION C-C
SECTION D-D
JOB NO.
446
MADE
CHECK
SET NO.
SHEET
DATE
REVISED
WILL G. CORLETT
ARCHITECT & ENGINEER
1801 BANK OF AMERICA BLDG. OAKLAND, CALIFORN



26'-7¼"
Similar to
Sect 7-7



FRAMING DETAILS

JOB NO.

SHEET

MADE

DATE

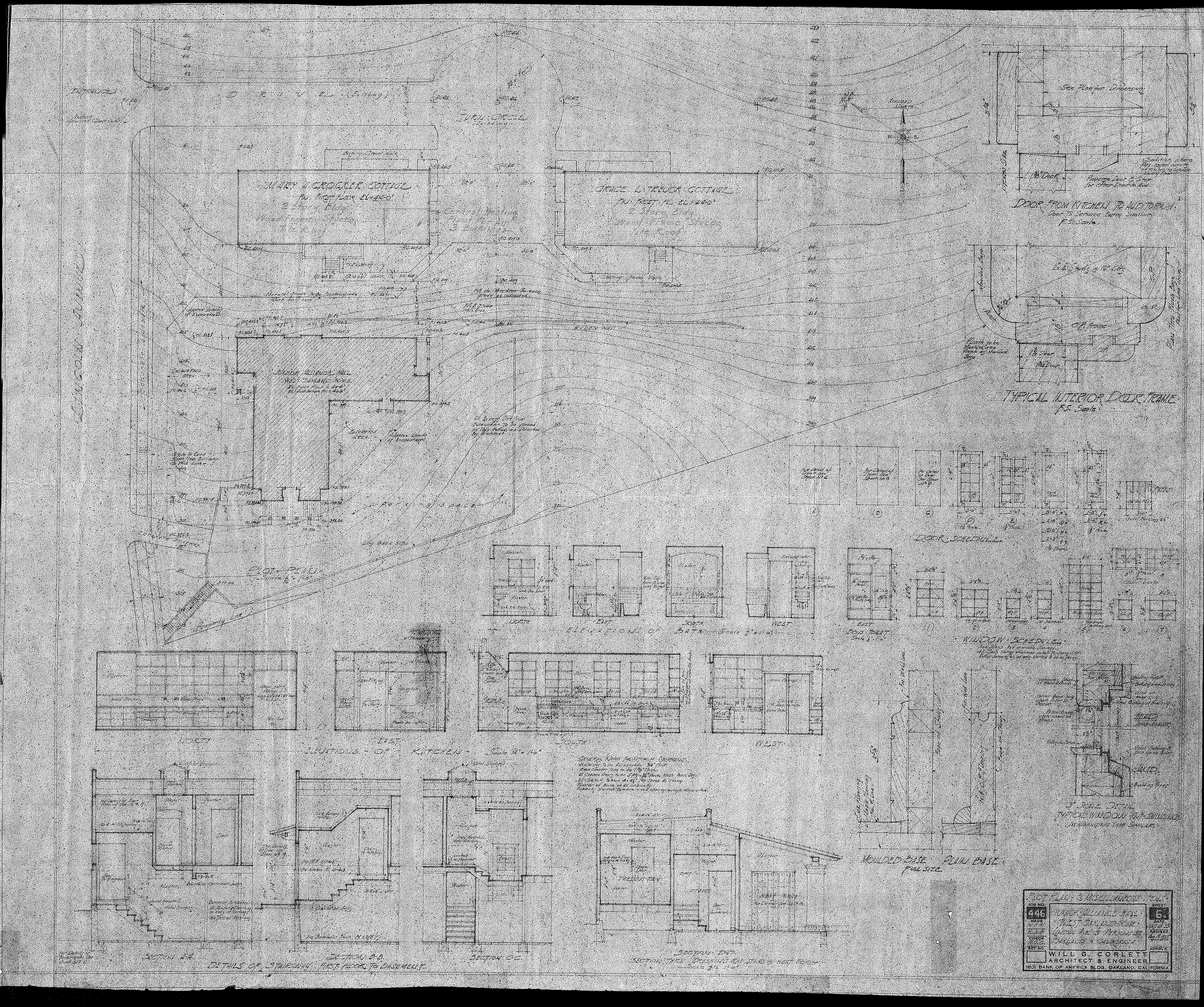
REVISED

CHECK

APPROVED

SET NO.

WILL G. CORLETT
ARCHITECT & ENGINEER



ENTRANCE
DRIVE (Existing)
TURN CIRCLE
MARY A. CROCKER COTTAGE
2 Story Bldg.
GRACE L. TREVOR COTTAGE
2 Story Bldg.
Central Heating Plant for 3 Buildings
LINCOLN AVENUE
PLOT PLAN
DOOR FROM KITCHEN TO AUDITORIUM
F.S. Scale
TYPICAL INTERIOR DOOR FRAME
F.S. Scale
DOOR SCHEDULE
NORTH
EAST
SOUTH
WEST
ELEVATIONS OF BATH
WINDOW SCHEDULE
ELEVATIONS OF KITCHEN
MOULDED BASE
PLAIN BASE
FULL SIZE
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
DETAILS OF STAIRWAY FIRST FLOOR TO BASEMENT
PLOT PLAN & MISCELLANEOUS DETAILS
JOB NO.
445
MADE
CHECK
SET NO.
SHEET
6
DATE
REVISED
APPRVD.
JUNIOR ALLIANCE HALL
WEST OAKLAND HOME
LINCOLN AVE. & PERALTA ST.
OAKLAND, CALIFORNIA
WILL G. CORLETT
ARCHITECT & ENGINEER
1601 BANK OF AMERICA BLDG. OAKLAND, CALIFORNIA

Appendix 7B

Head-Royce School South Campus, 4368 Lincoln Avenue - Proposed Project Analysis

Page & Turnbull, April 16, 2020

HEAD-ROYCE SCHOOL SOUTH CAMPUS
4368 LINCOLN AVENUE
PROPOSED PROJECT ANALYSIS

OAKLAND, CALIFORNIA
[18336]

PREPARED FOR:
LAMPHIER-GREGORY
OAKLAND, CA

PAGE & TURNBULL

APRIL 16, 2020

imagining change in historic environments through design, research, and technology

TABLE OF CONTENTS

I. INTRODUCTION

This Project Impact Analysis has been prepared at the request of Lamphier-Gregory, for the Head-Royce School South Campus, located at 4368 Lincoln Avenue (APN 29-1009-6) in Oakland, California **(Figure 1)**. The Head-Royce School South Campus was formerly occupied by the Lincoln Child Center (formerly known as West Oakland Home, now known as Lincoln) from 1930 to 2013.

The Head-Royce School South Campus is a complex of twelve educational-use buildings located on an irregular-shaped lot south of Lincoln Avenue, between Alida Street and Charleston Street in the Lincoln Highlands neighborhood of Oakland. The site is bounded by Lincoln Avenue to the north; the United Cerebral Palsy campus at 4500 Lincoln Avenue and Charleston Street to the east; residences along Charleston Street and Laguna Avenue to the south; and residences along Alida Street, Alida Court, and Linnet Avenue to the west. Campus buildings are between one and two stories in height, and range in date of construction from 1930 (Buildings 1 and 2) to after 2000 (Building 9 and Building 11). All eleven buildings were constructed by the Lincoln Child Center, primarily for educational or residential use related to the organization's mission. The site also includes several maintenance and storage buildings, mature trees, a variety of playground equipment and play areas, pedestrian and auto circulation routes, and several surface parking lots. Head-Royce School uses the surface parking lots at the subject property, and the maintenance staff uses Building 5 and several rooms on the first story of Building 1, but otherwise all of the buildings are unoccupied and used for storage.

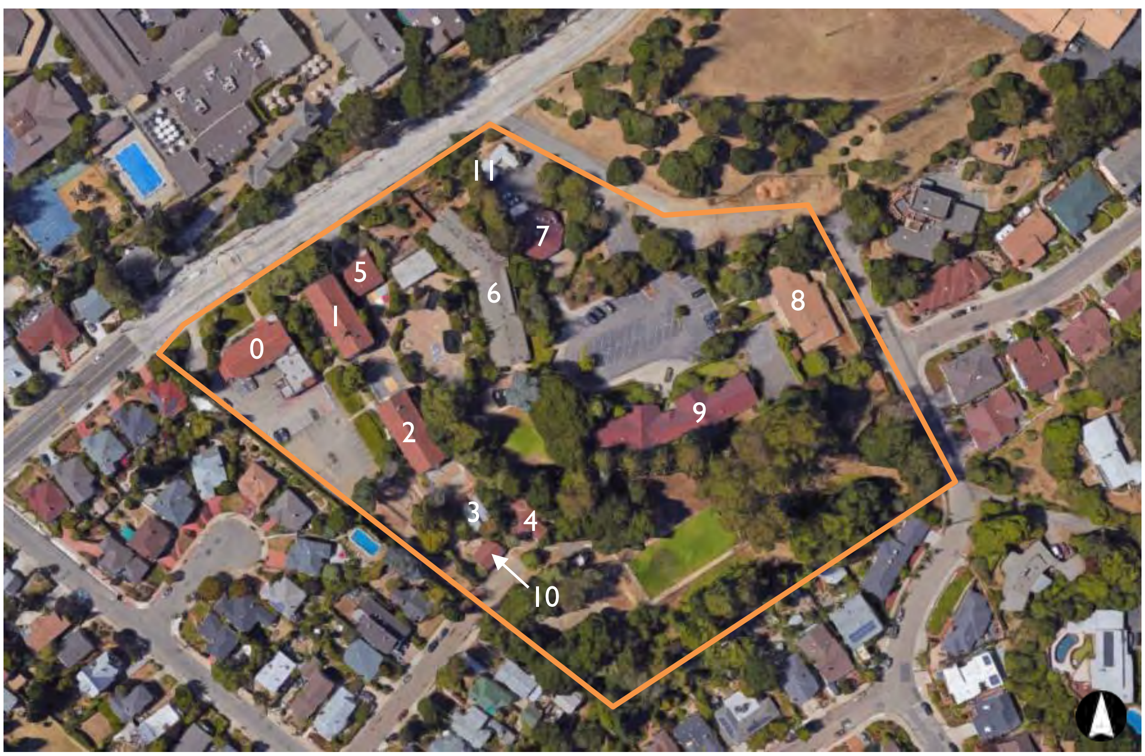


Figure 1. Aerial view of Head-Royce School South Campus, outlined in orange. Buildings are identified by numbers 0 to 11 based on the current Head-Royce School naming system. Source: Google Maps, 2019. Edited by Page & Turnbull.

Page & Turnbull evaluated the Head-Royce School South Campus in April 2019, and found that Building 0, Building 1, and Building 2 are each individually eligible for the California Register of

Historical Resources (California Register) under Criterion 1 (Events) and Criterion 3 (Architecture).[1] Therefore, Buildings 0, 1, and 2 are considered historic resources under the California Environmental Quality Act (CEQA). Page & Turnbull additionally found that the South Campus as a whole is not eligible for listing in the California Register as a district or locally as a City of Oakland Area of Primary Importance (API) or Area of Secondary Importance (ASI).

Head-Royce School seeks to unify the North Campus and South Campus for K-12 education, and proposes rehabilitation and reuse of four existing buildings (Building 0, 1, 2, and 9) and demolition of eight existing buildings (Buildings 3-8 and 10). Proposed new construction includes a new Performing Arts Center building and ancillary buildings. Building 9 would be adapted to provide interim housing for newly hired faculty and staff while they seek permanent housing. Building 0 would be used for assembly and meeting space, and Buildings 1 and 2 for classrooms and administrative functions. The impacts of the proposed project on Building 9 are not analyzed in this report because the building is not yet age-eligible.

METHODOLOGY

This report includes a summary of the property's current historic status, significance, and a list of character-defining features that enable Buildings 0, 1, and 2 to convey their historic significance. Based on the finding of historic significance, the proposed project is evaluated using the *Secretary of the Interior's Standards for Rehabilitation*. Page & Turnbull prepared this report using photographs taken during a March 2019 site visit; a site plan provided by architects Skidmore, Owings & Merrill, LLP (SOM) dated August 16, 2019 and sent to Page & Turnbull on February 12, 2020; drawings by SOM for Buildings 0, 1, and 2, dated April 3, 2020 and sent to Page & Turnbull on April 8, 2020; and the "Head-Royce School Preliminary Development Plan Application" (December 2018, Revised March 2019) submitted to the City of Oakland.

[1] Page & Turnbull, "Historic Resource Evaluation: Head-Royce School South Campus," (Draft, April 2019), submitted to the City of Oakland.

II. SIGNIFICANCE & CHARACTER-DEFINING FEATURES

SIGNIFICANCE

Page & Turnbull prepared a Historic Resource Evaluation (HRE) for the Head-Royce School South Campus at 4368 Lincoln Avenue, which was submitted to the City of Oakland in April 2019.[2] Page & Turnbull found that the Buildings 0, 1, and 2 on the Head-Royce School South Campus were individually eligible for listing in California Register for significance under Criterion 1 (Events) and Criterion 3 (Architecture).

Building 0 is significant under Criterion 1 (Events) as one of three purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus that represented a new phase in the development of the organization. It is also significant under Criterion 3 (Architecture) for its association with local master architect William G. Corlett, Jr. and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under both criteria is 1935, the year of construction. Building 0 retains historic integrity for eligibility under Criteria 1 and 3.

Building 1 is significant under Criterion 1 (Events) as one of the first two purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. It is also significant under Criterion 3 (Architecture) for its association with local master architects Reed & Corlett and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 1 is 1929 to 1935, and the period of significance under Criterion 3 is 1930, the year of construction. Building 1 retains historic integrity for eligibility under Criteria 1 and 3.

Building 2 is significant under Criterion 1 (Events) as one of the first two purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus. It is also significant under Criterion 3 (Architecture) for its association with local master architects Reed & Corlett and as a good example of the Spanish Colonial Revival style applied to an institutional building in Oakland. The period of significance under Criterion 1 is 1929 to 1935, and the period of significance under Criterion 3 is 1930, the year of construction. Building 2 retains integrity of location, setting, feeling and association, but no longer retains sufficient integrity of design, materials, or workmanship. As such, the building no longer retains sufficient integrity to convey its historic significance under Criterion 3 (Architecture), but retains sufficient integrity to convey its historic significance under Criterion 1.

CHARACTER-DEFINING FEATURES

For a property to be eligible for national or state designation under criteria related to type, period, or method of construction, the essential physical features (or character-defining features) that enable the property to convey its historic identity must be evident. These distinctive character-defining features are the physical traits that commonly recur in property types and/or architectural styles. To be eligible, a property must clearly contain enough of those characteristics to be considered a true representative of a particular type, period, or method of construction, and these features must also retain a sufficient degree of integrity. Characteristics can be expressed in terms such as form, proportion, structure, plan, style, or materials.

Character-defining features for the three buildings on the Head-Royce School South Campus found significant in this report are listed below.

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[2] Page & Turnbull, "Historic Resource Evaluation: Head-Royce School South Campus," (Draft, April 2019), submitted to the City of Oakland.

Building 0 (Junior Alliance Hall)

- Mass, including double-height and single-height wings, and L-shaped footprint of the building;
- Fenestration pattern and original steel-sash and wood-sash windows;
- Stucco cladding including arched recessed areas at northeast facade;
- Gable and flat roof forms with terra cotta clay tiles;
- Three covered entry porches at the southwest, northwest, and southeast façades, including roof, supporting columns, and concrete and terra cotta clay tile floors;
- Pilasters framing the windows at the northwest and southeast façades;
- Terra cotta tile vents;
- Double-height interior volume of the gable-roof wing.

Building 1 (Mary A. Crocker Cottage)

- Two-story over basement massing and rectangular footprint of the building;
- Gable roof form with terra cotta clay tiles and wood brackets;
- Original fenestration pattern;
- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters;
- Open front entry porch;
- Stucco cladding including arched recessed areas at primary and northeast facade;
- Two chimneys tops with decorative roof caps;
- Balconettes at primary and northeast façades;
- Original arched wood door at northeast façade;
- Decorative wood and plaster grilles;
- Decorative leader heads;
- Wall-mounted metal pot holders;
- Terra cotta tile vents.

Building 2 (Grace L. Trevor Cottage)

- Two-story over basement massing and rectangular footprint of the building;
- Gable roof form with terra cotta clay tiles and wood brackets;
- Original fenestration pattern at primary façade;
- Decorative features at window and door openings such as pilasters, carved wood lintels, corbeling, wood colonettes and wood shutters;
- Stucco cladding;
- Open front entry stairs;
- Balconettes at primary façade;
- Decorative wood and plaster grilles;
- Decorative leader heads;
- Wall-mounted metal pot holders;
- Terra cotta tile vents.

III. PROJECT IMPACT ANALYSIS

This section analyzes the project-specific impacts of the proposed project at Head-Royce School South Campus on the environment, as required by CEQA. The following analysis describes the proposed project; assesses its compliance with the *Secretary of the Interior's Standards for Rehabilitation*; and identifies cumulative impacts.

PROPOSED PROJECT DESCRIPTION

This proposed project description is based on the "Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Head-Royce School Planned Unit Development Permit (PUD) Project" dated February 1, 2019; a site plan provided by architects SOM (dated August 16, 2019); drawings by SOM for Buildings 0, 1, and 2, (dated April 3, 2020); and the "Head-Royce School Preliminary Development Plan Application" (December 2018, Revised March 2019) submitted to the City of Oakland. For the purposes of this report, an overall project description is provided as well as a more detailed description of changes to Buildings 0, 1, and 2 as they have been identified as historic resources. The site plan and proposed project drawings for Buildings 0, 1, and 2 by SOM are included in **Appendix A and B** of this report.

Overall Project Description

The NOP provides the following overall project description (see **Figure 2-Figure 5** of this report):[3]

> Head-Royce School wishes to integrate the North Campus with the South Campus to create a unified 22-acre K-12 school. As part of this Project, the School proposes to rehabilitate and reuse four of the existing buildings on the South Campus (Buildings 0, 1, 2 and 9) and to remove eight existing buildings. New construction will include a new 15,900 square-foot 32-foot tall Performing Arts Center building (containing up to 450 seats) for school-related purposes only, and construction of approximately 2,500 square feet of other ancillary building space. The School also seeks to provide interim housing within an existing building on the South Campus (Building 9) for newly hired faculty and staff while they secure permanent housing. With demolition of approximately 16,500 square feet of building space and construction of approximately 18,400 square feet of new space, there would be a net increase of approximately 1,900 square feet of building space on the site. Other proposed physical improvements to the South Campus […] include:
>
> - A new internal, one-way Loop Road would ring the internal perimeter of the South Campus. The entrance to this Loop Road would be at the existing curb cut and driveway off Lincoln Avenue at the upper end of the South Campus, and the exit would be at a similar existing curb cut and driveway off Lincoln at the lower end of the South Campus. The new Loop Road would provide approximately 1,000 linear feet of on-Campus (off-street) queuing space, as well as drop-off/pick-up locations. Other than public and private bus loading and unloading, all pick-up and drop-off activity for the School would occur along this Loop Road, rather than as currently occurs along Lincoln Avenue.
> - The Lincoln Avenue right-of-way would be reconfigured at the upper Loop Road entrance to accommodate a downhill left-turn pocket and an uphill right-turn pocket into the South Campus, and a new traffic signal would control this intersection. The existing traffic signal that controls pedestrian movement across Lincoln Avenue at the existing Head-Royce guardhouse

[3] References to figures in the text of the NOP have been removed and are indicated by ellipses.

would be moved to the lower Loop Road exit intersection. The uppermost traffic signal at the existing entrance to the Head-Royce parking lot (Lot F in the North Campus) would be retained.

- The existing 129 parking spaces within the South Campus would be reconfigured to accommodate new construction and the Loop Road, and an additional 25 more parking spaces would be added, for 154 total parking spaces on the South Campus. As enrollment increases […] the School would either add stacked parking at the existing Lot F on the North Campus, or reduce parking demand by prohibiting some or all students from driving to school.
- New landscaping within the South Campus would include ADA-accessible paths and trails, secondary pathways with staircases, a central commons space, outdoor wood deck classrooms, and new planting with native, drought-tolerant species.
- The Project proposes two options to provide a pedestrian connection between the North and South Campus. The first option is construction of a pedestrian tunnel under Lincoln A venue. The tunnel would be 18-feet wide and approximately 12 feet tall, and constructed underneath Lincoln Avenue at about the mid-point of the South Campus frontage on Lincoln. Access to the tunnel would only be through property owned by the school and it would be not being publicly accessible. The second option would be to continue use of an at-grade pedestrian crossing across Lincoln Avenue, controlled by the relocated traffic signal at the southerly exit of the South Campus Loop Road, where it intersects with Lincoln Avenue.

The proposed changes to the North Campus consist of:

- The opening for the proposed pedestrian tunnel;
- Reuse of the existing MEW Auditorium as a gymnasium, its original use; and
- Reuse of existing administrative and classroom space on the North Campus whose current functions are relocated to the South Campus, for classroom or other administrative functions.[4]

[4] "Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Head-Royce School Planned Unit Development Permit (PUD) Project," Case File Number PLN18532-ER01 (February 1, 2019), accessed February 21, 2020, http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak072015.pdf.

Figure 2. Proposed renovation and demolition at Head-Royce School. Source: Head-Royce School, "Head-Royce School Draft Preliminary Development Plan," (Revised March 2019), 14.

Figure 5.02: Proposed & Renovated Structures

Note: All dimensions approximate. See Figures 5.22 through 5.24 for sections.

Figure 3. Proposed new construction and renovation of existing Buildings 0, 1, 2, and 9. Source: Head-Royce School, "Head-Royce School Draft Preliminary Development Plan," (Revised March 2019), 19.

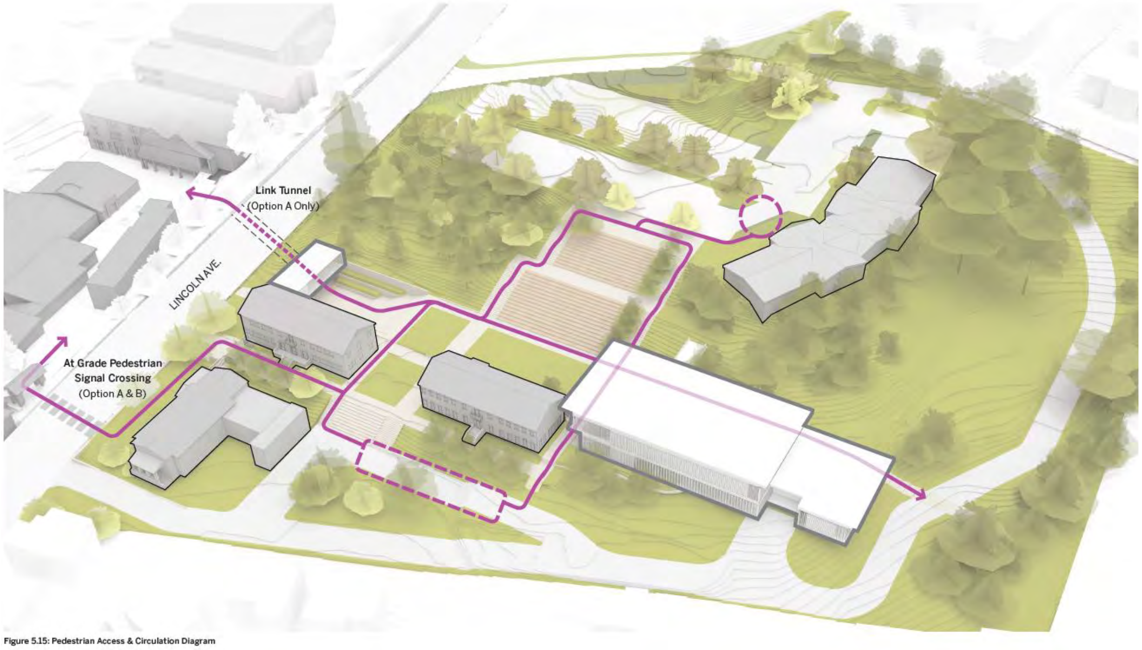

Figure 4. Proposed pedestrian access and circulation.
Source: "Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Head-Royce School Planned Unit Development Permit (PUD) Project," 27.

Figure 5. View of Building 1 (left), Building 2 (center), and the proposed Performing Arts Center (right). Building 9 is partially visible behind the Performing Arts Center. Source: Head-Royce School, "Head-Royce School Draft Preliminary Development Plan," (Revised March 2019), 34.

Proposed Building 0 Alterations

The overall footprint and massing of Building 0 would be unchanged in the proposed project. Rehabilitation work would include stucco patching and repair as needed, and restoration work would include the installation of wood shutters "to replicate historic shutter" and molded plaster caps at locations where the historic shutters and caps have been previously been removed. Other typical alterations would include the removal of existing non-historic scuppers and downspouts. A new terrace with a wood trellis is proposed at the southwest corner of the building, between the north and east wings, and would feature solid stucco perimeter walls and handrails. The interior spaces of Building 0 would be reconfigured to accommodate a double-height community performance center space, four huddle rooms, an open meeting room, an office, a scullery, and bathrooms; original and non-original partition walls would be removed. Original plaster-coated wood grilles and clay tile vents would be retained in place.

Treatment of windows at Building 0, 1, and 2 fall into three types, and are labeled as such on the design drawings prepared by SOM **(see Appendix B)**:

- **Type 1:** Repair and reglazing of existing steel sash windows in existing frames

- **Type 2:** New steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles
- **Type 3:** New aluminum frame, full lite, double glazed windows in new openings.

Primary (West) Façade
Proposed alterations to the primary (west) façade of Building 0 include replacement or modifications of the non-original double hollow metal doors at the covered portico entrance to meet egress requirements **(see Appendix B, Sheet A5.0.01)**.[5] A non-original stairway at the south façade of the north wing would be removed in order to construct the proposed new terrace, which would extend most of the length of the west side of the east wing, with two stairways with solid stucco handrails. An existing doorway at ground level of the primary façade of the east wing would be removed and infilled with stucco cladding, and the original terra cotta-clad awning would be removed. A small original window opening to the south (right) of the door, and two windows at the basement level, on the east wing would also be removed and infilled. All windows at the primary (west) façade would be Type 2 (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles).

North Façade
The proposed project would involve the removal of a non-original door on the north façade (below the central window), and infilling the non-original opening with stucco cladding **(see Appendix B, Sheet A5.0.01)**. A non-original door in an original but altered opening at the covered portico entrance would be repaired as needed or modified to meet egress requirements. The five larger original steel sash windows along the north façade would be repaired and reglazed in their existing frames (Type 1), and two small windows on the north facade would also be retained and repaired as needed. Two casement windows at the east (left) end of the north façade would be Type 2 (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles). New wood shutters to "replicate historic shutter" are proposed at the eastern window on the north façade.

East Façade
Proposed alterations to the east façade include the removal of a non-original door and opening, and replacement with a Type 2 window with wood shutters to match the original window in that location **(see Appendix B, Sheet A5.0.00)**. Other original steel sash windows at the east façade would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles). New, replica wood shutters would also be installed at three windows along the east façade that historically featured wood shutters. Molded plaster caps (to match historic plaster caps at the south elevation and on original drawings) would be constructed above two windows where the caps have been previously removed.

South Façade
As previously noted, a new terrace is proposed at the southwest corner of Building 0, which would extend along a portion of the south façade of the north wing **(see Appendix B, Sheet A5.0.00)**. The non-original windows on the south façade of the north wing would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles) that would extend down as low as the existing replacement windows. A non-original door below the central window on the north wing would be removed and the non-original opening would be infilled with stucco cladding. New wood doors with divided lites to match the windows above, would be installed at new openings below the second and fourth windows, accessing

[5] Buildings 0, 1, 2 are oriented slightly southwest of true west; however, for the sake of clarity the southwest facades will be referred to as the west façade, and so on, as this terminology is used in the design drawings and other materials prepared by architects Skidmore, Owings & Merrill.

the terrace. The windows at the south façade of the east wing would be replaced with Type 2 windows.

Proposed Building 1 Alterations

The overall footprint and massing of Building 1 would be unchanged in the proposed project except for the addition of an accessible ramp along the primary (west) façade accessing the entry porch. The ramp would be located at the south end of the primary façade and feature stucco-clad walls. Rehabilitation work would include stucco patching and repair as needed and patching and painting as needed at the metal railings and brackets. Restoration work would include the installation of wood shutters "to replicate historic shutter" locations where the historic shutters have been removed; repair, paint, and patching as needed at the historic plaster brackets and wood lintel details; and the removal of non-original exterior stairs at the north and south facades. Original plaster-coated wood grilles and clay tile vents would be retained in place.

Treatment of windows at Building 1 fall into the same three types as described above in the Proposed Building 0 Alterations section.

Other typical alterations would include the removal of existing non-historic downspouts. The exterior portions of the unreinforced brick chimney and stucco roof vent are proposed to be reinforced and repaired as needed. The interior spaces of Building 1 would be reconfigured to accommodate new classrooms, offices, and an elevator. Although the hallway and stairs would be relocated, the floor plan would still be organized around a central double-loaded corridor.

Primary (West) Façade
Proposed alterations to the primary (west) façade of Building 1 include the modification of the non-original primary entry door or replacement with a wood and glass door to match the design of the historic door **(see Appendix B, Sheet A5.1.01)**. All non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles). The non-original window at the second-story central balconette would be replaced with new double-glazed doors to match the profile of the original doors. A non-original window and opening at the second floor would be removed and infilled with stucco. An original bronze scupper would be relocated from the east façade to the primary façade, to replace a missing scupper. Replica wood shutters would be installed in locations that originally had shutters. As previously noted, an accessible ramp with a stucco-clad wall would be constructed at the south end of the entry porch, along the primary façade. The front stairs may be modified to meet egress requirements.

North Façade
The proposed project would involve the restoration of the north façade to its original configuration of windows and doors **(see Appendix B, Sheet A5.1.01)**. All non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles), and wood shutters would be installed at the two second floor windows to match the original design. The non-original exterior wood staircase would be removed and a balconette with plaster brackets would be constructed at the second story to match the design of an original balconette that had previously been removed.

East Façade
Proposed alterations to the east façade include a number of alterations to the fenestration, which had been previously extensively altered from the original **(see Appendix B, Sheet A5.1.00)**. Ten non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1 historic window profiles). New,

replica wood shutters would also be installed at two first story windows that historically featured wood shutters. Six original window openings and associated trim and lintel details—three at the south end of the first floor and three at the second floor—would be demolished, and the openings infilled and patched with stucco cladding. The historic arched wood panel door at the center of the first story would be repaired and/or modified to meet egress path requirements. The balcony and original paired multi-lite doors above the arched door would be repaired as needed and retained in place.

A new fixed, double-glazed window (Type 3) with a painted aluminum frame would wrap around the southeast corner at the first floor. The new window would be contemporary in style with a slim aluminum frame, painted to match the color of the historic window frames. Another Type 3 window would be installed at the same height to the north (right) of the new corner window. A third Type 3 window with a vertical orientation would be installed at the north end of the second story east façade.

As previously noted, an original bronze scupper would be relocated from the east façade to the primary façade, to replace a missing scupper on the primary façade; a scupper is also missing on the east façade and the relocation of the scupper would result in a symmetrical appearance of the remaining two scuppers on the east façade.

South Façade
The proposed project would involve the restoration of the south façade to its original configuration of windows and doors at the second story, as well as at the west side of the first story **(see Appendix B, Sheet A5.1.00)**. Non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles), and wood shutters would be installed at the two second floor windows to match the original design. As noted in the discussion of the east façade, a new fixed, double-glazed window (Type 3) with a painted aluminum frame would wrap around the southeast corner at the first floor; the new window would be contemporary in style with a slim aluminum frame, painted to match the color of the historic window frames. The non-original exterior wood staircase would be removed and a metal balconette with metal brackets would be constructed at the second story to match the design of an original balconette that had previously been removed. The original second story door would be repaired, or replaced with a replica to match the original.

Propose Building 2 Alterations

The overall footprint and massing of Building 2 would unchanged in the proposed project except for the addition of an accessible ramp along the primary (west) façade accessing the entry porch. The ramp would be located at the north end of the primary façade and feature stucco-clad walls.[6] Rehabilitation work would include stucco patching and repair as needed and patching and painting as needed at the metal railings and brackets. Restoration work would include the installation of wood shutters "to replicate historic shutter" locations where the historic shutters have been removed; and the removal of non-original exterior stairs and a projecting bay supported by wood posts at the east façade. Original plaster-coated wood grilles and clay tile vents would be retained in place.

Treatment of windows at Building 2 fall into the same three types as described above in the Proposed Building 0 Alterations section.

[6] The accessible ramp at Building 2 is shown to the north of the entrance in the proposed project elevation drawings by SOM (Appendix B, Sheet A5.2.01), but to the south in the plan drawings (Sheet A2.2.01). SOM confirmed that the design intention is to have the ramp to the north of the entrance in an email to Page & Turnbull on April 16, 2020.

Other typical alterations would include the removal of existing non-historic downspouts. The interior spaces of Building 2 would be reconfigured to accommodate new classrooms, maker space, a double height theater scene shop, and a central gallery space, flexible space, and an elevator.

Primary (West) Façade
Proposed alterations to the primary (west) façade of Building 2 include the modification of the non-original primary entry door or replacement with a wood and glass door to match the design of the historic door **(see Appendix B, Sheet A5.2.01)**. All non-original aluminum-sash windows would be replaced with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles). The non-original window at the second-story central balconette would be replaced with new double-glazed doors to match the profile of the original doors. Replica wood shutters would be installed in locations that originally had shutters. A non-original grate at the basement level of the primary façade would be removed and the clay tile vents restored or reconstructed.

As previously noted, an accessible ramp with a stucco-clad wall would be constructed at the north end of the entry porch, along the primary façade. The construction of the ramp would result in the removal of four small basement windows. The original primary entry stair would be replaced with a new stair and larger landing to meet ADA requirements, in keeping with the orientation and style of the original stair.

North Façade
The proposed project would involve the restoration of the north façade to its original configuration of windows and doors at the second story, as well as at the west side of the first story **(see Appendix B, Sheet A5.2.01)**. Four non-original aluminum-sash windows would Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles), and wood shutters would be installed at the two second floor windows to match the original design. A metal balconette with metal brackets would be constructed at the second story to match the design of an original balconette that had previously been removed. Two small original first-story window openings would be removed with the installation of a new Type 3 window with a horizontal orientation with a slim metal frame, painted to match the color of the historic window frames.

East Façade
Proposed alterations to the east façade include a number of alterations to the fenestration, which had been previously extensively altered from the original, and the removal of a non-original concrete and metal staircase and a non-original projecting bay supported on wood posts **(see Appendix B, Sheet A5.2.00)**. Two non-original doors and six non-original windows, all in non-original or altered openings, would be infilled and clad with stucco. Three non-original aluminum-sash windows in original openings would be replaced with Type 2 windows. Two historic windows, as well as the historic plaster cap spanning the two windows, would be reconstructed in their original location at the second story. New, replica wood shutters would also be installed the northernmost second-story window, which historically featured wood shutters.

An original doorway and steps, with a non-original door, at the north end of the east façade would be removed and replaced with a new Type 3 window with a horizontal orientation. At the south end of the east façade, the non-historic concrete stairs would be removed and a large double-height opening would be punched out to install a double-glazed overhead door. The horizontal Type 3 window and double-height opening would both have slim metal frames, painted to match the color of the historic window frames. A new double-glazed door with an aluminum frame would be installed at the center of the east façade at the first floor.

South Façade
Three non-original aluminum-sash windows at the second story would be replaced with Type 2 windows **(see Appendix B, Sheet A5.2.00)**. Non-original paired doors and three non-original windows at the first floor—all of which are in non-original openings—would be removed. A horizontally oriented Type 3 window would be installed at the west end of the first floor south façade, and a single-lite Type 3 window would be installed at the east end.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA is state legislation (Pub. Res. Code §21000 et seq.) that provides for the development and maintenance of a high-quality environment for the present-day and future through the identification of significant environmental effects.[7] CEQA applies to "projects" proposed to be undertaken or requiring approval from state or local government agencies. "Projects" are defined as "…activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps."[8] Historic and cultural resources are considered to be part of the environment.

According to CEQA, a "project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment."[9] Substantial adverse change is defined as: "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired."[10] The significance of an historical resource is materially impaired when a project "demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources."[11] Thus, a project may cause a substantial change in a historic resource but still not have a significant adverse effect on the environment as defined by CEQA as long as the impact of the change on the historic resource is determined to be less-than-significant, negligible, neutral, or even beneficial.

In general, the lead agency must complete the environmental review process as required by CEQA. The basic steps are:

1. Determine if the activity is a "project;"
2. Determine if the project is exempt from CEQA;
3. Perform an Initial Study to identify the environmental impacts of the Project and determine whether the identified impacts are "significant." Based on the finding of significant impacts, the lead agency may prepare one of the following documents:

    a) Negative Declaration for findings of no "significant" impacts;
    b) Mitigated Negative Declaration for findings of "significant" impacts that may revise the Project to avoid or mitigate those "significant" impacts;
    c) Environmental Impact Report (EIR) for findings of "significant" impacts.

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[7] California Environmental Quality Act (CEQA), accessed February 21, 2020, http://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=PRC&division=13.&title=&part=&chapter=&article=.
[8] Ibid.
[9] CEQA Guidelines subsection 15064.5(b).
[10] CEQA Guidelines subsection 15064.5(b)(1).
[11] CEQA Guidelines subsection 15064.5(b)(2).

STATUS OF EXISTING BUILDING AS A HISTORICAL RESOURCE

In completing an analysis of a project under CEQA, it must first be determined if the project site possesses a historical resource. A site may qualify as a historical resource if it falls within at least one of four categories listed in CEQA Guidelines Section 15064.5(a). The four categories are:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).

2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. 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 SS5024.1, Title 14 CCR, Section 4852).

4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Pub. Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Pub. Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Pub. Resources Code sections 5020.1(j) or 5024.1.

In general, a resource that meets any of the four criteria listed in CEQA Guidelines Section 15064.5(a) is considered to be a historical resource unless "the preponderance of evidence demonstrates" that the resource is not historically or culturally significant."[12]

City of Oakland Threshold for Significance Guidelines

Per the City of Oakland's October 28, 2013 "Thresholds of Significance Guidelines," an historical resource under CEQA is a resource that meets any of the following criteria:

1. A resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources;
2. A resource included in Oakland's Local Register of historical resources, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
3. A resource identified as significant (e.g., rated 1-5) in a historical resource survey recorded on Department of Parks and Recreation Form 523, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
4. Meets the criteria for listing on the California Register of Historical Resources; or

[12] Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.

5. A resource that is determined by the Oakland City Council to be historically or culturally significant even though it does not meet the other four criteria listed above.[13]

Based on analysis and evaluation contained in the Historic Resource Evaluation (Draft), prepared by Page & Turnbull, Buildings 0, 1, and 2 meet the criteria for eligibility for listing in the California Register, and should therefore be considered historical resources under CEQA. In the case of the proposed project at Head-Royce School South Campus, the City of Oakland acts as the lead agency.

SECRETARY OF THE INTERIOR'S STANDARDS

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings provides standards and guidance for reviewing proposed work on historic properties.[14] The Standards for the Treatment of Historic Properties are used by federal agencies in evaluating work on historic properties. They have also been adopted by local government bodies across the country for reviewing proposed rehabilitation work on historic properties under local preservation ordinances. The Standards for the Treatment of Historic Properties are a useful analytic tool for understanding and describing the potential impacts of substantial changes to historic resources. Projects that comply with the Standards for the Treatment of Historic Properties benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historic resource.[15] Projects that *do not* comply with the Standards for the Treatment of Historic Properties may cause either a substantial or less-than-substantial adverse change in the significance of a historic resource.

The Secretary of the Interior offers four sets of standards to guide the treatment of historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

> **Preservation:** The Standards for Preservation "require retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time."
>
> **Rehabilitation:** The Standards for Rehabilitation "acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character."
>
> **Restoration:** The Standards for Restoration "allow for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods."
>
> **Reconstruction:** The Standards for Reconstruction "establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes."[16]

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[13] City of Oakland, "CEQA Thresholds of Significance Guidelines, October 28, 2013," accessed February 21, 2020, http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak051200.pdf.
[14] Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings,* (U.S. Department of the Interior National Park Service Technical Preservation Services, Washington, D.C.: 2017), accessed February 21, 2020, https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf.
[15] CEQA Guidelines subsection 15064.5(b)(3).
[16] Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (2017).

Typically, one set of standards is chosen for a project based on the project scope. In this case, the proposed project scope is seeking to alter three historic buildings and construct new buildings and landscape features on the site. Therefore, the Standards for Rehabilitation will be applied.

STANDARDS FOR REHABILITATION ANALYSIS

The following analysis applies each of the ten *Secretary of the Interior's Standards for Rehabilitation* to the proposed project at Head-Royce School South Campus. This analysis is based upon the proposed site plan **(Appendix A)** and project drawings for Buildings 0, 1, and 2 **(Appendix B)** prepared by SOM, and the "Head-Royce School Preliminary Development Plan Application" (December 2018, Revised March 2019).

Rehabilitation Standard 1: *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

Discussion: The proposed project would substantially retain the historic use of the buildings which have always functioned as institutional buildings. Building 0 will be used as a community performance center, which is consistent with its original use as an auditorium. Although Buildings 1 and 2 were originally constructed as residences, they were also used for office, classroom and educational spaces during the tenure of Lincoln Child Center. Under the proposed project, Buildings 1 and 2 would serve as offices and classrooms, and the changes required to accommodate these uses in a contemporary setting are primarily interior alterations.

Therefore, the proposed project is in compliance with Rehabilitation Standard 1.

Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.*

Discussion: The historic character of the property, as expressed by Buildings 0, 1, and 2, will be retained and preserved as the majority of character-defining features will be either retained or restored. The mass, fenestration, stucco cladding, roof forms and clay tile roofing, and decorative features will generally be retained and rehabilitated where extant. An exterior terrace will be constructed at the southeast corner of Building 0, replacing an asphalt parking area, but will not significantly alter any of the historic character, materials, features, or spatial relationships of the building. Accessible entry ramps will be constructed at the primary facades of both Buildings 1 and 2, but their original entry sequence will be retained with central staircase, and the ramps will feature compatible stucco-clad walls.

The spatial relationship between the historic buildings (Buildings 0, 1, and 2) and the non-historic buildings (Buildings 3, 4, 5, 6, 7, 8 ,9, 10, and 11) is not a character-defining feature of the property. The demolition of other buildings and site features and related new construction as these changes relate to the historic character of the site are discussed in greater detail under Rehabilitation Standard 9.

Therefore, as designed, the proposed project is in compliance with Rehabilitation Standard 2.

Rehabilitation Standard 3: *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historical properties, will not be undertaken.*

Discussion: No conjectural features or elements from other historic properties are proposed to be added. All Type 2 windows proposed to replace incompatible, non-original aluminum sash windows. Replacement wood shutters, and replacement balconettes, will be designed based on available historical design drawings, and are therefore not conjectural. No features that are not documented in historical architectural drawings are proposed to be added. In cases where new windows or doors are proposed at Buildings 0, 1, and 2, they are clearly contemporary in style and material, with undivided lites and slim aluminum frames, which avoids any potential for a false sense of historical development.

Therefore, as designed, the proposed project is in compliance with Rehabilitation Standard 3.

Rehabilitation Standard 4: *Changes to a property that have acquired significance in their own right will be retained and preserved.*

Discussion: A number of alterations to Buildings 0, 1, and 2 have occurred over time, including extensive alterations to the windows and fenestration patterns at Buildings 1 and 2 and addition of exterior stairs. However, none of these changes is known to have occurred in the period of significance, 1930 to 1935, and the changes have not acquired significance in their own right. Likewise, the other buildings and site features on the Head-Royce School South Campus were constructed after the period of significance for Buildings 0, 1, and 2, and do not contribute to the significance of the historic buildings.

Furthermore, a number of features added outside the period of significance that detract from the integrity of the buildings are proposed to be removed; these features include exterior stairways, aluminum-sash windows with incompatible design (operability and pattern of lites), and added doorways.

Therefore, as designed, the proposed project is in compliance with Rehabilitation Standard 4.

Rehabilitation Standard 5: *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

Discussion: As noted in the discussion of Rehabilitation Standard 2, most extant character-defining features will be fully retained or minimally altered at Buildings 0, 1, and 2, including distinctive materials, features, finishes, and examples of craftsmanship. Specifically, at Building 0, the large steel sash windows along the north (Lincoln Avenue) façade will be retained, as well as the stucco cladding, gable roof with terra cotta clay tiles, three covered entry porches, pilasters, and terra cotta tile vents. At both Buildings 1 and 2, the stucco cladding, gable roof with terra cotta clay tiles, decorative features surrounding the windows and doors, chimney tops, balconettes, plastered-wood grilles, decorative leader heads, and terra cotta tile vents will all be retained. The arched partially glazed wood panel door at the east façade of Building 1 (one of only two doors that appears to be original at any of the three historic buildings), which is a good example of 1930s era craftsmanship, is proposed to be repaired or replicated to meet egress path requirements. As most of the original windows and doors at Buildings 0, 1 and 2 have previously been replaced, the decorative features such as chimney tops, details around windows and doors (brackets, lintels, corbelling, colonettes, shutters, etc.), the plastered-wood grilles, and tile vents are all distinctive materials and features that convey the Spanish Colonial Revival style design and 1930s craftsmanship.

Several smaller steel sash windows at Building 0 are proposed to be replaced with compatible double-glaze steel sash windows (Type 2). The wall-mounted pot holders at Buildings 1 and 2 are not identified on the proposed project drawings, so it is not known if they will be removed or retained. The front entry porches at Buildings 1 and 2 will be somewhat altered to incorporate new accessible entry ramps, but a portion of the original materials and finishes will be retained, and the original design will remain legible.

As demonstrated, the majoring of character-defining features will be fully retained or minimally altered at all three historic buildings. Therefore, as designed, the proposed project in compliance with Rehabilitation Standard 5.

Rehabilitation Standard 6: *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

Discussion: Most of the extant historic features and materials at Buildings 0, 1, and 2 will be retained in place, including siding, roofing, decorative details around the windows, clay tile vents, and plastered-wood grilles. As noted in the discussion of Rehabilitation Standard 3, all missing features, including windows, shutters, and balconettes, will be reconstructed based on documentary evidence provided by the original architectural drawings for Buildings 0, 1, and 2. However, a number of original steel sash windows at Building 0 are proposed to be replaced in-kind with Type 2 windows (new steel sash windows with divided lites, double glazed, with profiles to replicate Type 1, historic window profiles), rather than repaired in place.

Therefore, as designed, the proposed project is partially in compliance with Rehabilitation Standard 6.

Rehabilitation Standard 7: *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

Discussion: Several extant original windows, metal balcony railings, and bracket and lintel details are proposed to be repaired and repainted in place. If it is necessary to propose chemical or physical treatments, these methods would not involve the use of harmful treatments that would damage the historic elements.

As planned, the proposed project does not involve chemical or physical treatments and thus will be in compliance with Rehabilitation Standard 7.

Rehabilitation Standard 8: *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

Discussion: The proposed project will involve excavation work to build a new Performing Arts Center building, new landscape features, and a new pedestrian tunnel and "link pavilion." If any archaeological material is discovered during this process, provided that standard discovery procedures for the City of Oakland are followed, the proposed project will adhere to Rehabilitation Standard 8.

Rehabilitation Standard 9: *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.*

Discussion: As discussed in Rehabilitation Standards 2, an exterior terrace will be constructed at the southeast corner of Building 0 and accessible entry ramps will be constructed at the primary facades of Buildings 1 and 2. The construction of the terrace at Building 0 requires the removal of several basement windows and an original doorway and decorative awning; however the loss of these features does not diminish the overall integrity of design and materials of Building 0. The terrace and entry ramps all have low stucco-clad walls which are compatible with the material and design of Buildings 0, 1, and 2. The features themselves have clearly contemporary functions and uses, and appropriate in scale and location relative to the buildings.

As noted in the discussion of Rehabilitation Standard 5, the proposed exterior alterations include the removal of a number of non-contributing features added outside the period of significance, including exterior stairways, aluminum-sash windows with incompatible design (operability and pattern of lites), and added doorways. The original fenestration pattern at the primary (west) facades of Buildings 1 and 2 would be restored and compatible Type 2 steel sash windows with profiles to match the historic windows (previously replaced with incompatible aluminum sash windows) would be installed. The fenestration pattern of the north façade of Building 1, which fronts Lincoln Avenue and is visible from the public right-of-way, will also be fully restored with Type 2 windows. The south façade of Building 1 and north and south façades of Building 2 will be largely restored to the original fenestration pattern with Type 2 windows, and limited new interventions with contemporary Type 3 windows. The rear (east) facades of Buildings 1 and 2 would have more extensive interventions in the proposed project, and are also the facades that have been the most substantially altered in the past. At the rear facades, Type 2 windows would be installed at locations where original window openings would remain, but contemporary Type 3 windows would be installed at locations where new openings are created or the openings are altered in size, which creates a clear differentiation between the historic fenestration pattern and contemporary interventions.

The proposed project includes the demolition of Buildings 3, 4, 5, 6, 7, 8, 10, and 11—none of which are eligible historic resources. The demolition of these buildings and adjacent site features such as play areas and parking lots would not have a negative impact on the historic character of Buildings 0, 1, and 2 as the buildings and features proposed for demolition were all constructed after the period of significance of the historic buildings. During the 1929-1935 period of significance for Buildings 0, 1, and 2 the site remained otherwise undeveloped, and the surrounding area of the site was extensively altered in the decades following. The construction of a new Performing Arts Center building to the south of Building 2, and a new Link Pavilion and Link Tunnel to the east of Building 1, will not impact the spatial relationship between Buildings 0, 1, and 2. Furthermore, the construction of a new vehicle drop-off at the west end of the site; a new parking lot at the east end of the site; and a new Play Field at the south end of the site are consistent with the educational/institutional character of the site and do not impact the historic character or spatial relationships of Buildings 0, 1 and 2.

The Link Pavilion is proposed to be located at the current location of Building 5, which is not a historic resource. The Link Pavilion will be to the west of Building 1, and will not obscure the view of the primary façade of Building 1. Like the current Building 5, the Link Pavilion is one story (16 feet) in height and has an appropriate setback, scale, and siting relative to Building 1, such that it will not impair the integrity of the historic building. The Link Tunnel is primarily underground, except for the uncovered steps that rise up to ground level south of the Link Pavilion. The Link Tunnel will not have a negative effect on the integrity of Building 1 or its environment. The Performing Arts Center is proposed to be located south of Building 2, in approximately the current location of Buildings 3, 4, and 10 (none of which are historic resources). The proposed Performing Arts Center would be two-stories, approximately 32-feet, tall, which is approximately the height of the top of the gable roof of Building 2. The Performing Arts Center is located behind the historic resources and will not obscure views of the historic resources from the public right-of-way along Lincoln Avenue. Furthermore, the Performing Arts Center is approximately the same height Building 2, so the scale and massing will not overwhelm the historic resources, and is sited such that it will not affect the spatial relationships between the three historic buildings or negatively affect their environment. While compatible in siting, massing, and scale, the Link Pavilion and Performing Arts Center are both contemporary in style and materials, and so will be differentiated from the historic Buildings 0, 1, and 2.

Therefore, as designed, the proposed project is in compliance with Rehabilitation Standard 9.

Rehabilitation Standard 10: *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

Discussion: The propose project includes minor additions of a terrace at Building 0 and accessible entry ramps at Buildings 1 and 2. If these additions were removed in the future, the essential form and integrity of the buildings would remain intact and the buildings would still be able to convey their significance for inclusion on the California Register.

The proposed adjacent new buildings and site features, including the Performing Arts Center, Link Pavilion, or Link Tunnel, are physically separated from the historic Buildings 0, 1, and 2; and thus, if any of the adjacent new buildings or features were demolished in the future, there would be no detrimental effects on Buildings 0, 1, or 2.

Thus, as designed, the proposed project is in compliance with Rehabilitation Standard 10.

Summary of Standards for Rehabilitation Analysis

The proposed project is in compliance with nine of the ten *Secretary of the Interior's Standards for Rehabilitation*, and is in partial compliance with one of the Standards (Standard 6). The exterior alterations to Buildings 0, 1, and 2 include rehabilitation and restoration work, which will improve historic integrity of design, particularly at the primary facades of Buildings 1 and 2, and at the north (Lincoln Avenue) façades of Building 0 and 1. Other exterior alterations such as the terrace at Building 0 and accessible entry ramps at Buildings 1 and 2, will not have a negative effect on the buildings' ability to convey their historic significance, and are appropriately sited and designed to be compatible with the continuing educational uses of the buildings. The addition of new Type 3 windows at Buildings 1 and 2 is limited to the rear and least publicly visible side facades, which are also the facades that had previous been extensively altered from their original design. The proposed new windows and doors are clearly contemporary and differentiated but are compatible in their simplicity and slim metal frames painted to match the color of the historic window frames; in other words, they do not detract or overwhelm the historic design or historic features. The proposed demolition of non-historic buildings and site features would not have a negative effect on the historic resources, their spatial relationships, or their environment. The proposed new Link Pavilion, Link Tunnel, and Performing Arts Center are separate buildings or structures from the historic buildings and are sited such that they will not impair existing views of the historic buildings from the public right-of-way. Furthermore, the scale of the proposed Link Pavilion and Performing Arts Center are compatible and will not overwhelm the existing historic buildings.

Therefore, the proposed project, as currently designed, is in overall compliance with the *Secretary of the Interior's Standards for Rehabilitation*.

ANALYSIS OF PROJECT-SPECIFIC IMPACTS UNDER CEQA

As the above analysis demonstrates, the proposed project, as currently designed, is in compliance with nine of the ten *Secretary of the Interior's Standards for Rehabilitation*, and is in partial compliance with one of the Standards (Standard 6). The proposed project, as currently designed, is in overall compliance with the Standards for Rehabilitation. Thus, the proposed project would not negatively affect the ability of Buildings 0, 1, and/or 2 to be listed on the California Register.

According to Section 15126.4(b)(1) of the Public Resources Code (CEQA), if a project complies with the Standards, the project's impact "will generally be considered mitigated below a level of significance and thus is not significant." As the proposed project at Buildings 0, 1, and 2 of the Head-Royce School South Campus is in overall compliance with the Standards for Rehabilitation, it does not appear that the project will cause a substantial adverse change in the significance of the resource as defined by CEQA.

PROJECT IMPROVEMENT RECOMMENDATIONS

As currently designed, the proposed project at the Head-Royce School South Campus is in overall compliance with the *Secretary of the Interior's Standards for Rehabilitation*. While the proposed project is in full compliance with nine of the Standards, it is only in partial compliance with Rehabilitation Standard 6.

It should be noted that the following recommendation is provided in order to improve compliance with Rehabilitation Standard 6, but even if the recommendation is not followed, the proposed project as currently designed is in overall compliance with the Standards for Rehabilitation and would not cause a substantial adverse change in the significance of the resource as defined by CEQA.

Project Improvement Recommendation – Retain and Rehabilitate All Historic Steel Sash Windows

Page & Turnbull recognizes and appreciates that the large historic steel sash windows at the north façade of Building 0, which are visible from the public right-of-way along Lincoln Avenue, are proposed to be retained and repaired as necessary. Page & Turnbull recommends that, except in demonstrated cases of severe deterioration *beyond repair*, all historic steel windows at Building 0 be retained and rehabilitated in order to fully comply with Rehabilitation Standard 6. Per Rehabilitation Standard 6, repair, rehabilitation, and thermal upgrading should be pursed as primary strategy before considering replacement with compatible, in-kind replacement windows (such as the Type 2 windows indicated in the proposed project). While double-glazed windows have increased thermal performance, there are other ways to improve thermal performance of existing historic steel sash windows. Furthermore, overall thermal performance of the building may be accomplished through improved insulation of wall and roof assemblies, while retaining all historic steel sash windows.

For further guidance on repair and thermal upgrading of historic steel windows, refer to:

- Sharon C. Park, "Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows" (Washington D.C.: Technical Preservation Services, U.S. Department of the Interior, September 1984), available online at https://www.nps.gov/tps/how-to-preserve/briefs/13-steel-windows.htm (accessed April 14, 2020).

Retaining and rehabilitating all historic steel windows at Building 0 as described above would improve compliance with Rehabilitation Standard 6, and bring the proposed project in to full compliance with Rehabilitation Standard 6.

V. CONCLUSION

The Head-Royce School South Campus at 4368 Lincoln Avenue was evaluated in a Historic Resource Evaluation, prepared by Page & Turnbull and submitted to the City of Oakland in April 2019. Page & Turnbull found that the Buildings 0, 1, and 2 on the Head-Royce School South Campus were individually eligible for listing in California Register for their significance under Criterion 1 (Events), as purpose-built buildings constructed for West Oakland Home at its new Lincoln Avenue campus that represented a new phase in the development of the organization. Page & Turnbull also found that the buildings were individually eligible under Criterion 3 (Architecture), as the works of local master architects William G. Corlett, Jr. and Reed & Corlett and as good examples of the Spanish Colonial Revival style applied to intuitional buildings in Oakland. No other buildings on the Head-Royce School South Campus were found to be individually eligible historic resources, and no eligible historic district was identified. Therefore, Buildings 0, 1, and 2 are each considered historic resources under the CEQA.

The proposed project at the Head-Royce School South Campus was evaluated according to the *Secretary of the Interior's Standards for Rehabilitation* and was determined to fully comply with nine of the ten Standards. The project partially complies with Standard 6 and would fully comply if the Project Improvement Recommendation described by Page & Turnbull is followed. However, the proposed project, as currently designed (even without the Project Improvement Recommendation) is substantially in compliance with the *Secretary of the Interior's Standards for Rehabilitation*.

The proposed project would not negatively impact the eligibility of Building 0, 1, or 2 for listing in the California Register. As such, the project as currently designed would not result in project-specific impacts and would not cause a substantial adverse change in the significance of the resource as defined by CEQA.

VI. REFERENCES CITED

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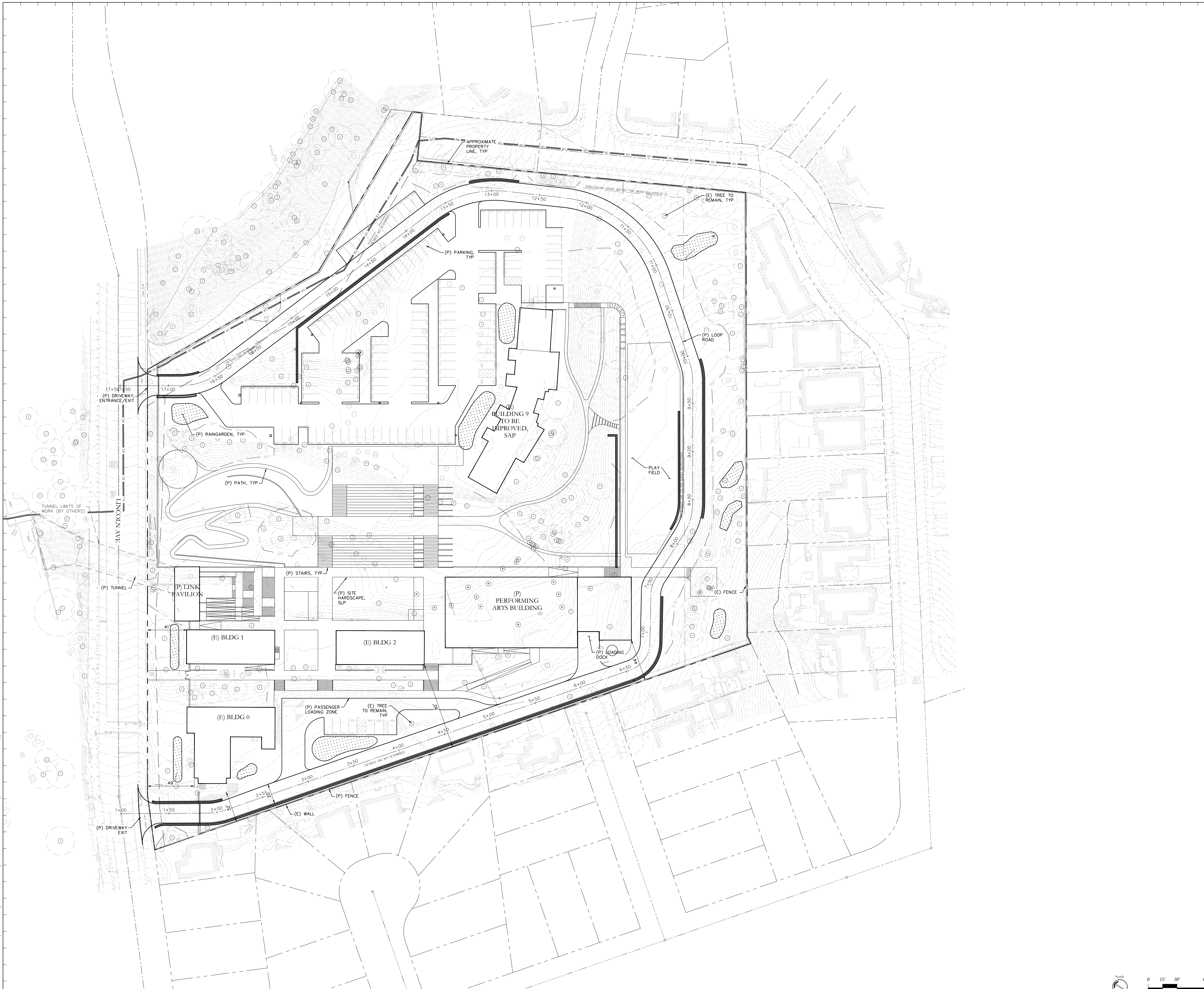
Park, Sharon C. "Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows." Washington D.C.: Technical Preservation Services, U.S. Department of the Interior, September 1984. Accessed April 14, 2020, https://www.nps.gov/tps/how-to-preserve/briefs/13-steel-windows.htm.

APPENDICES

APPENDIX A - PROPOSED PROJECT SITE PLAN

Site plan for the proposed project at Head-Royce School South Campus by architects Skidmore, Owings & Merrill (SOM). The site plan is dated August 16, 2019 and was sent to Page & Turnbull on February 12, 2020.



HEAD ROYCE SCHOOL

4315 Lincoln Ave
Oakland, CA 94602

Architect:

SOM

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ONE FRONT STREET SAN FRANCISCO, CA 94111

Consultants:

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

Seal & Signature:

Issued For:

No.	Description	Date
1	PDP APP	2/15/2019
2	DRAFT FDP APPLICATION	8/14/2019

ADMINISTRATIVE DRAFT - NOT FOR PUBLIC REVIEW

Key Plan

Sheet Name:

SITE PLAN

Project No.: 214043

Sheet No.: C1.0

Scale: 1"=30'

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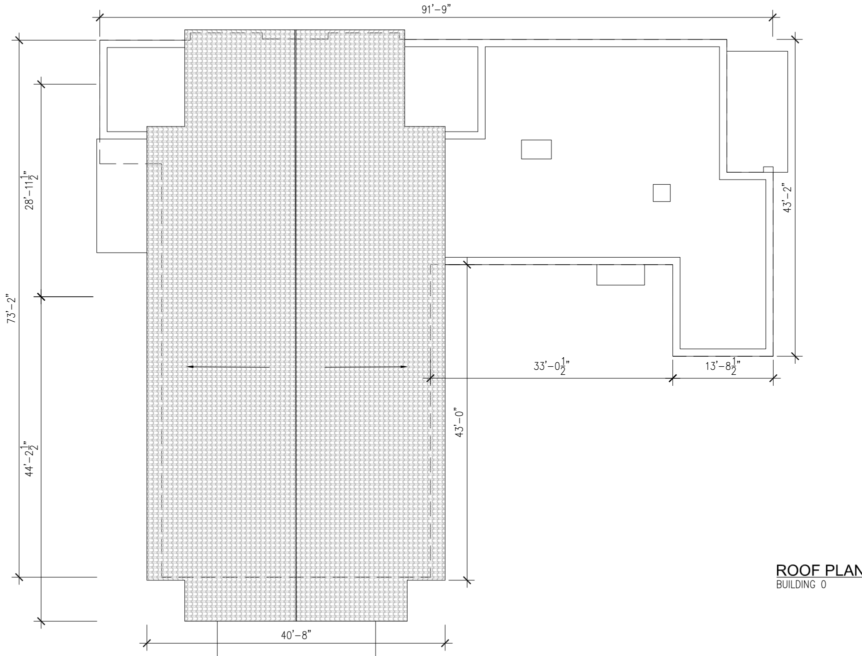
APPENDIX B - PROPOSED PROJECT DRAWINGS FOR BUILDINGS 0, 1 & 2

Drawing set for the proposed project at Head-Royce School South Campus Buildings 0, 1, and 2 by architects Skidmore, Owings & Merrill (SOM). The drawing set is dated April 3, 2020 and was sent to Page & Turnbull on April 8, 2020.



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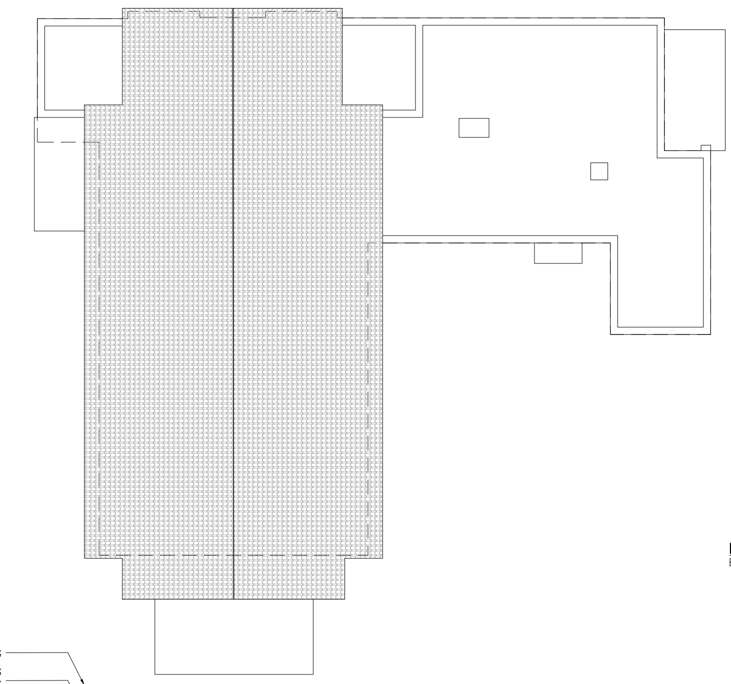

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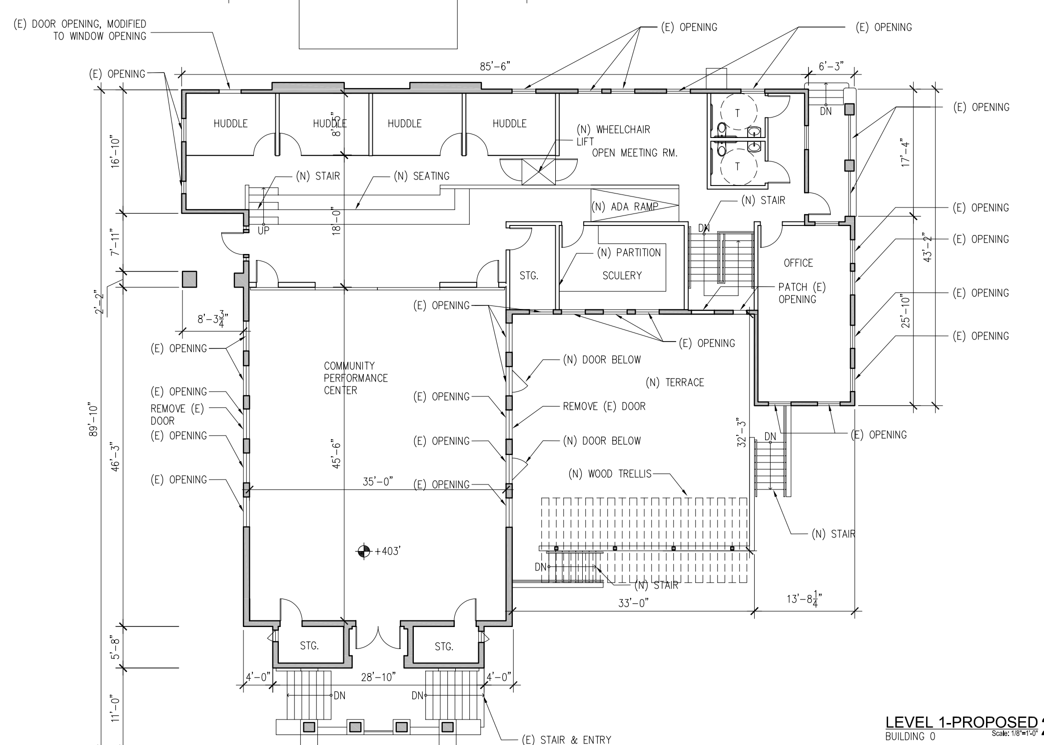

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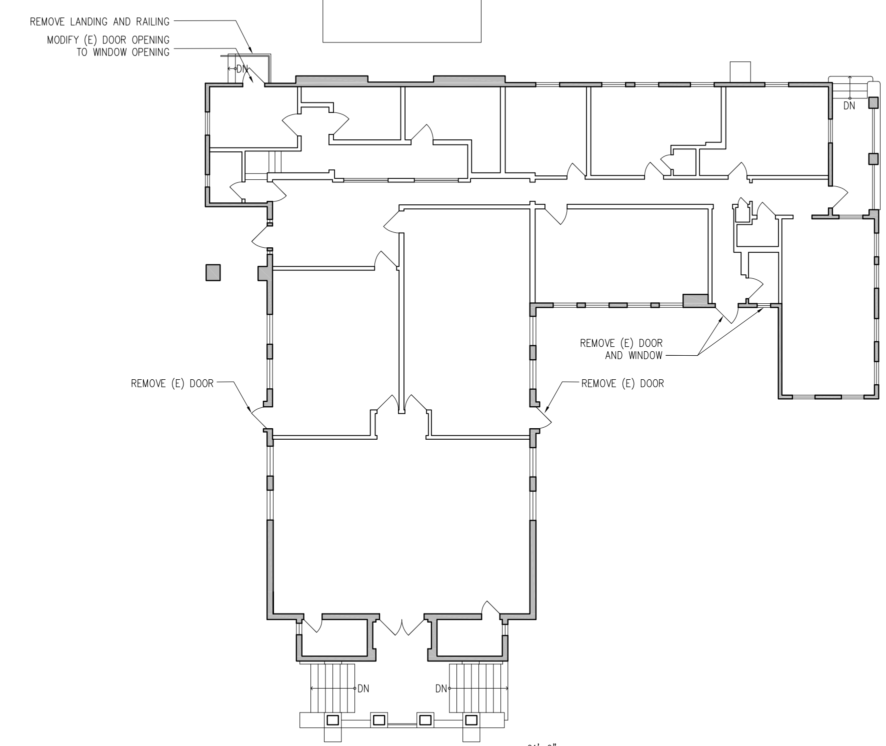

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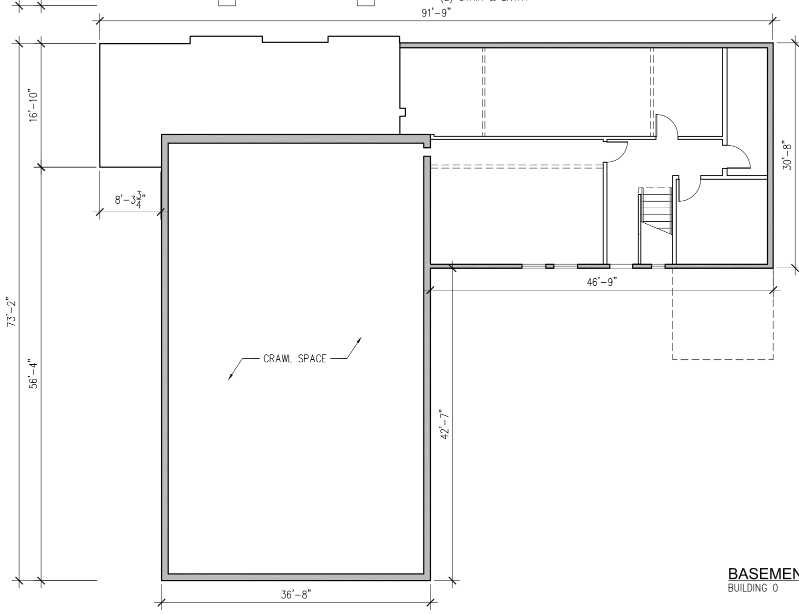

BASEMENT LEVEL-PROPOSED 25
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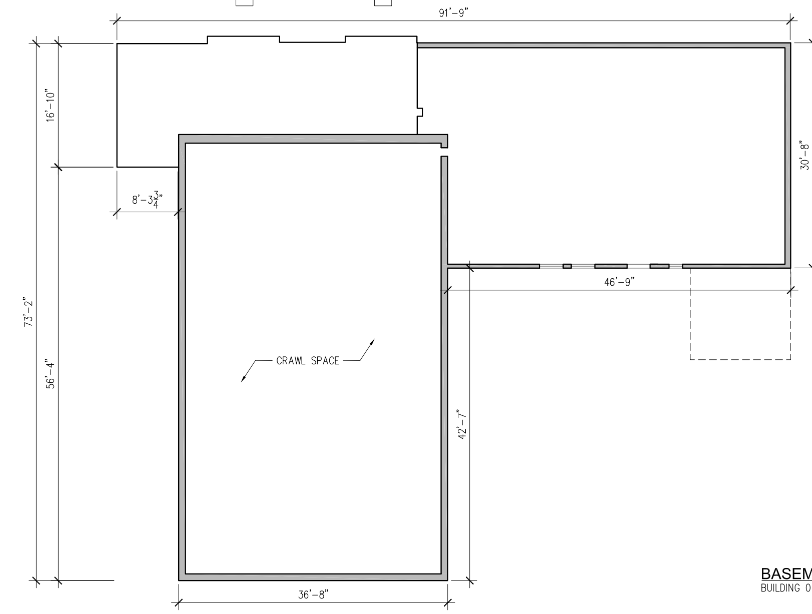

BASEMENT LEVEL-EXISTING 01
BUILDING 0 Scale: 1/8"=1'-0"

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Consultants:

Seal & Signature:

Issued For:

No.	Description	Date
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01	HISTORIC REVIEW - REV 1	2020.04.03

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NOT FOR PUBLIC REVIEW

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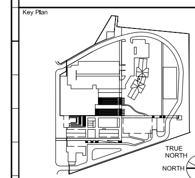

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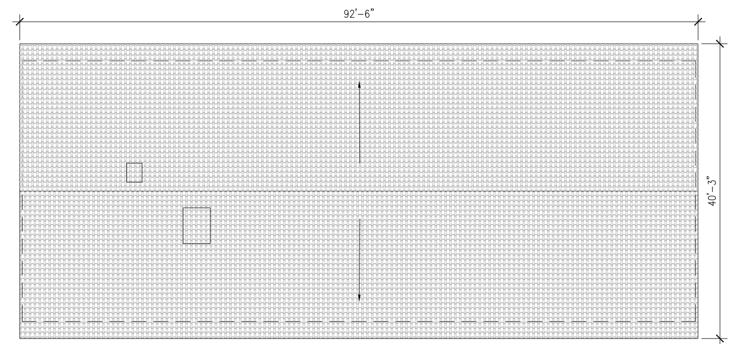

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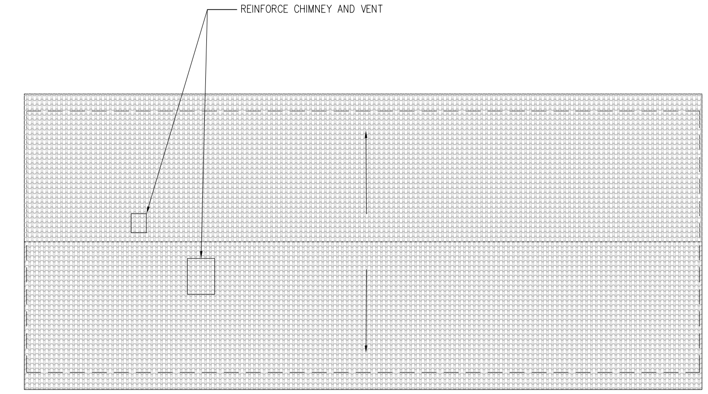

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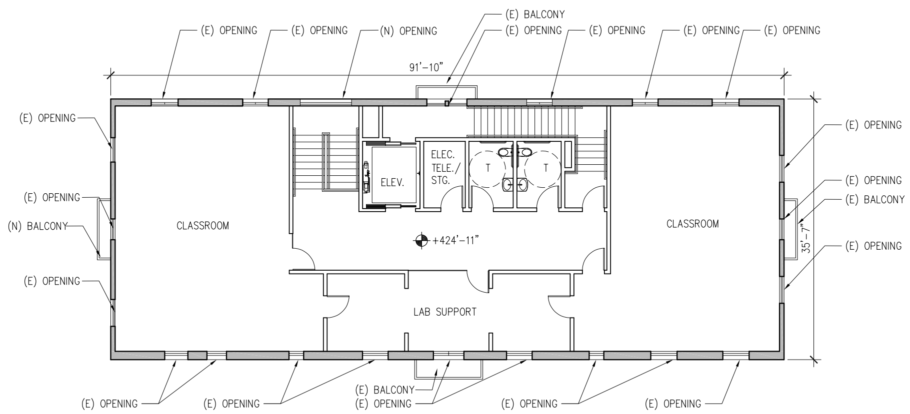

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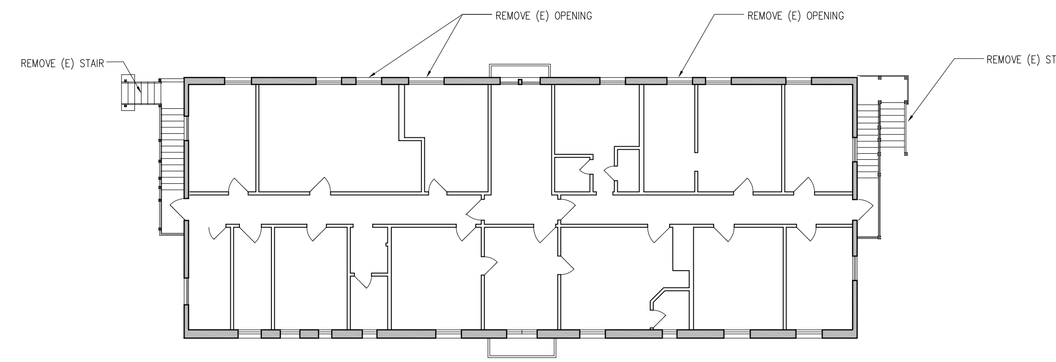

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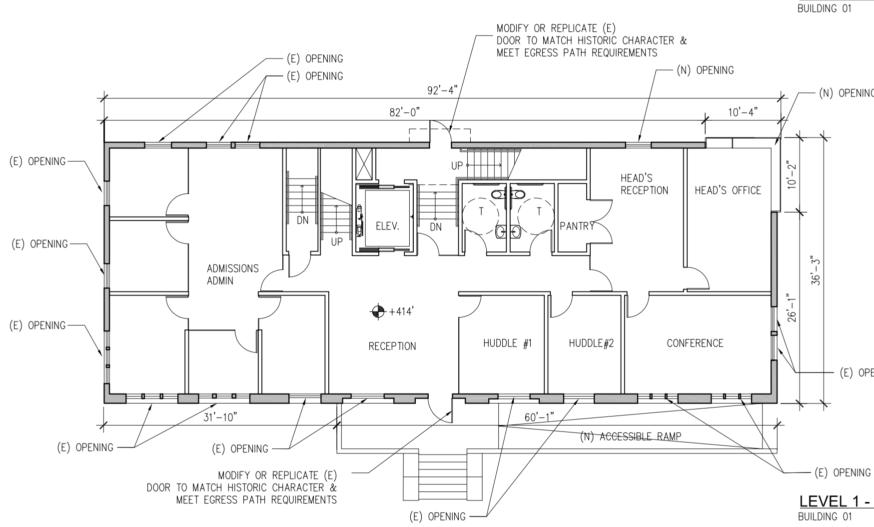

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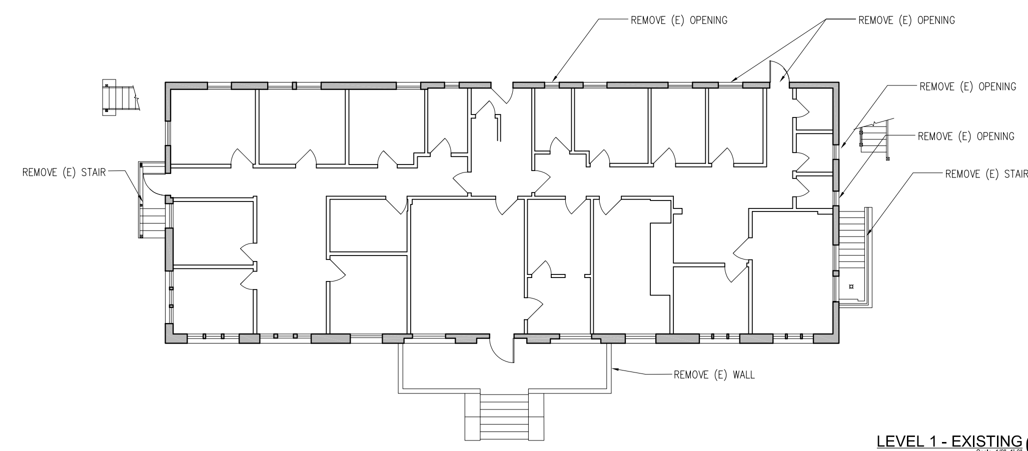

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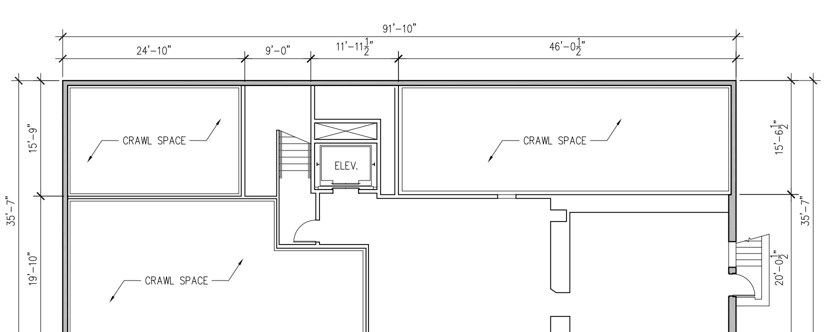

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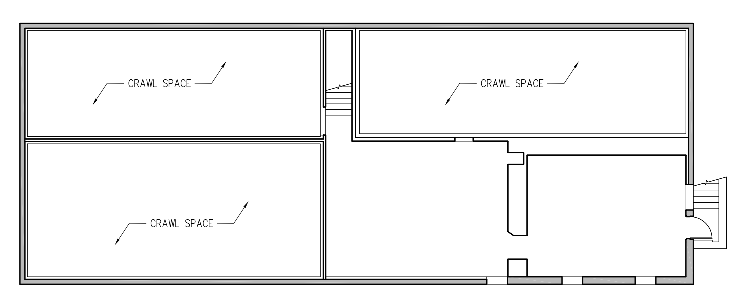

BASEMENT LEVEL - EXISTING 01
BUILDING 01
Scale: 1/8"=1'-0"

ADMINISTRATIVE DRAFT
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HEAD ROYCE SCHOOL
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Consultants:

Seal & Signature:

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No.	Description	Date
00	HISTORIC REVIEW	2019.05.16
01	HISTORIC REVIEW - REV 1	2020.04.03

Key Plan

TRUE NORTH
NORTH

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EXIST. & PROPOSED

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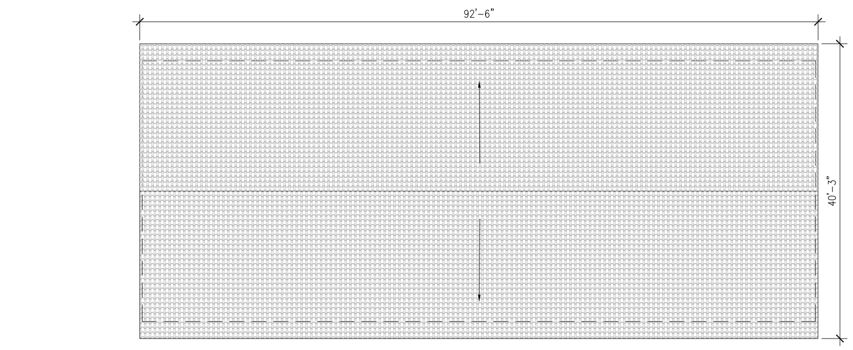
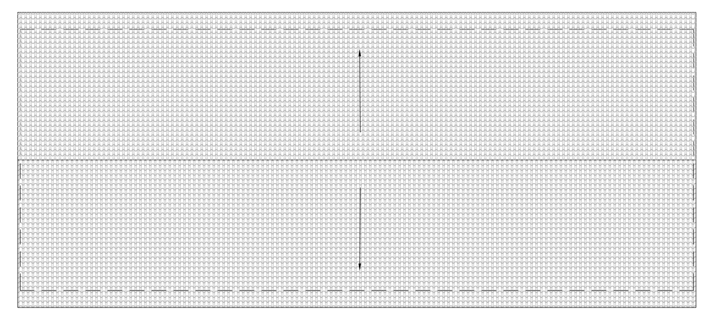
Sheet No.: A2.1.01



ROOF PLAN - PROPOSED 29
BUILDING 02
Scale: 1/8"=1'-0"



ROOF PLAN - EXISTING 05
BUILDING 02
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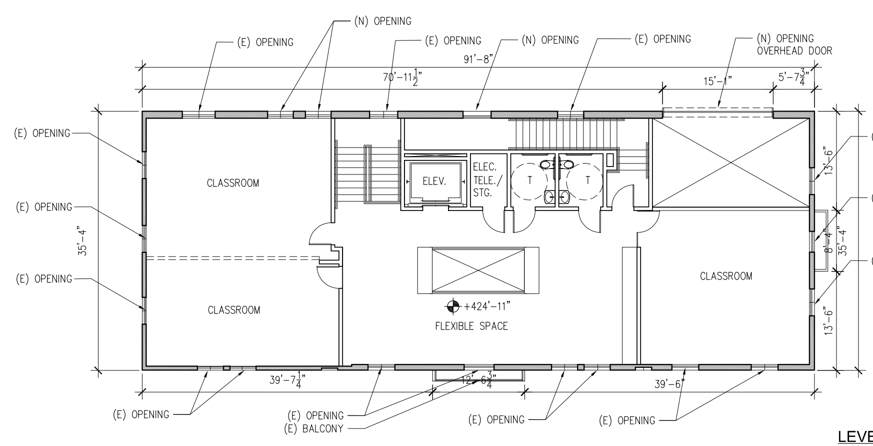

LEVEL 2 - PROPOSED 28
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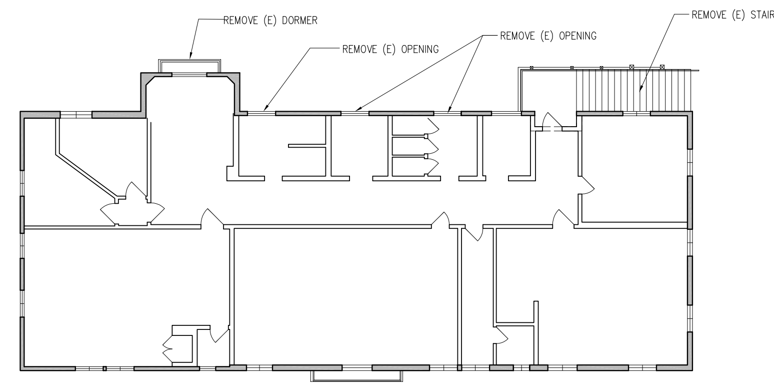

LEVEL 2 - EXISTING 04
BUILDING 02
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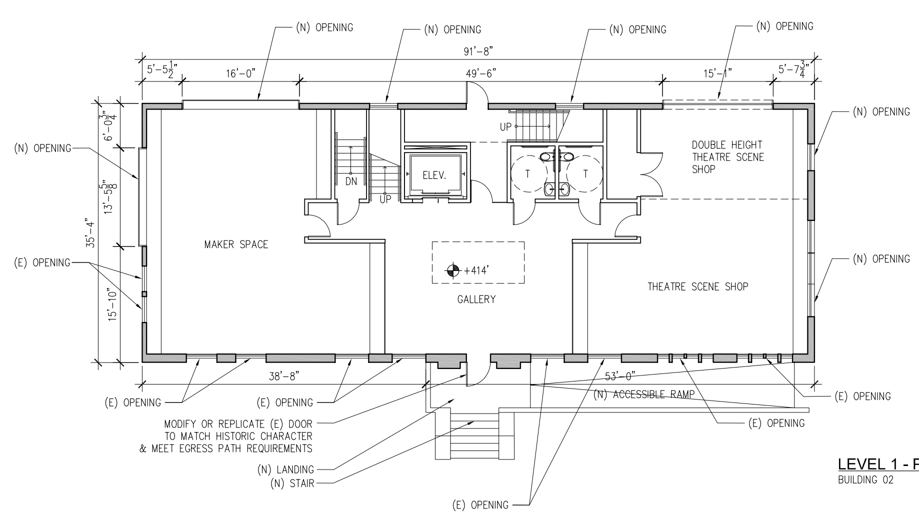

LEVEL 1 - PROPOSED 26
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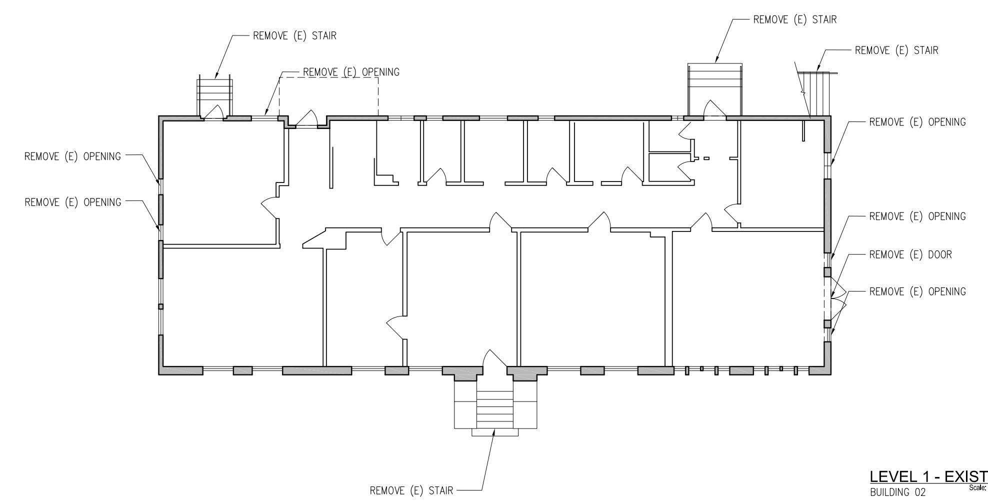

LEVEL 1 - EXISTING 02
BUILDING 02
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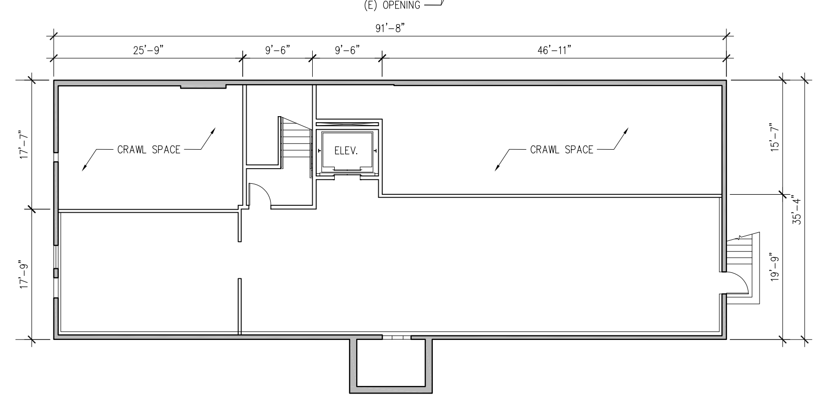
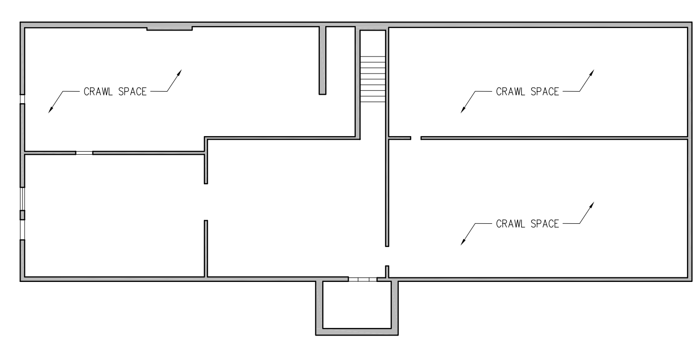


BASEMENT LEVEL - PROPOSED 25
BUILDING 02
Scale: 1/8"=1'-0"



BASEMENT LEVEL - EXISTING 01
BUILDING 02
Scale: 1/8"=1'-0"

HEAD ROYCE SCHOOL

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Architect:

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Consultants:

Seal & Signature:

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00	HISTORIC REVIEW	2019.05.16
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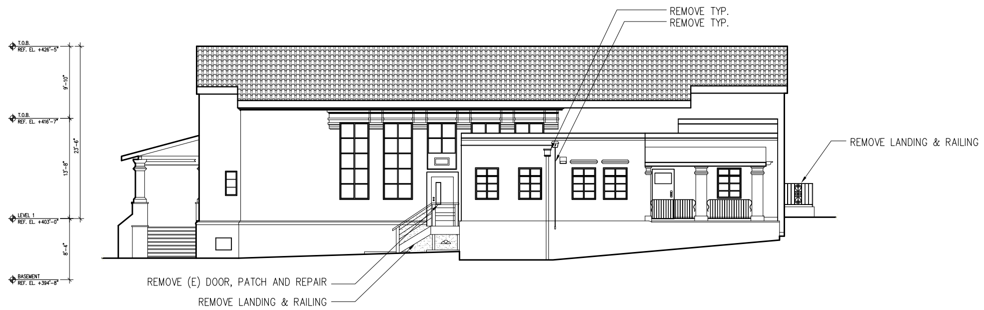
Key Plan:

TRUE NORTH
NORTH

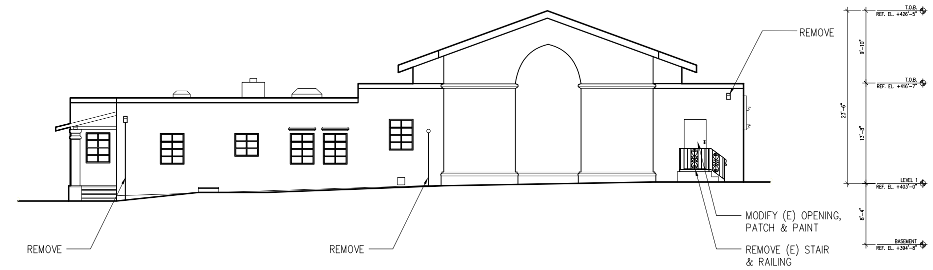
Sheet Name:

BUILDING 2
LEVEL B1,1, 2, ROOF
EXIST. & PROPOSED

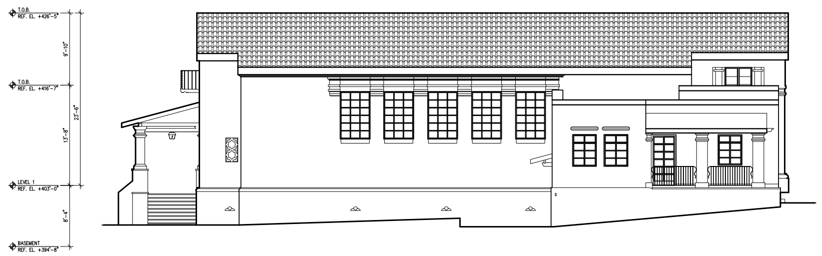
Project No.: 214043
Drawn By: TEAM
Checked By: LEAD
Scale: 1/8"=1'-0"
Sheet No.: A2.2.01



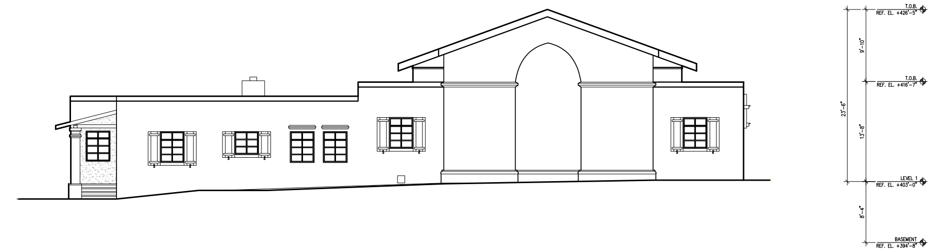
SOUTH ELEVATION-EXISTING 29
BUILDING 0
Scale: 1/8"=1'-0"



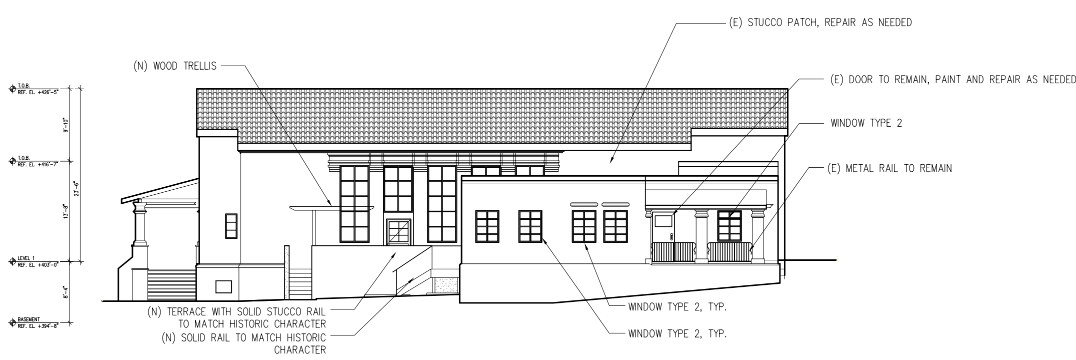
EAST ELEVATION-EXISTING 05
BUILDING 0
Scale: 1/8"=1'-0"



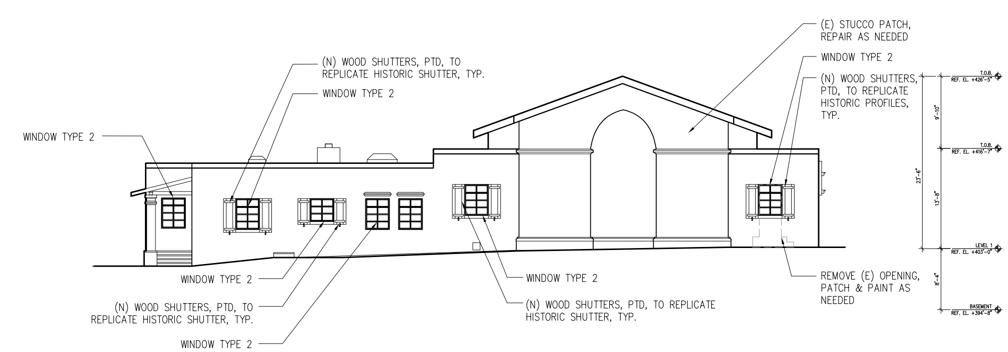
SOUTH ELEVATION-ORIGINAL 28
BUILDING 0
Scale: 1/8"=1'-0"



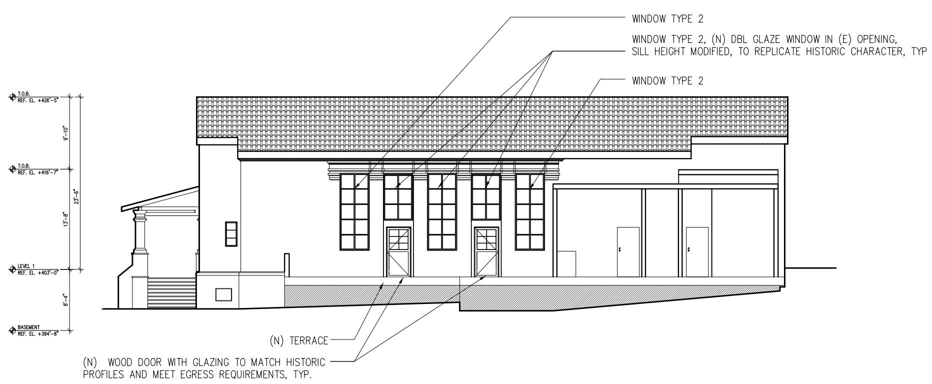
EAST ELEVATION-ORIGINAL 04
BUILDING 0
Scale: 1/8"=1'-0"



SOUTH ELEVATION-PROPOSED 26
BUILDING 0
Scale: 1/8"=1'-0"



EAST ELEVATION-PROPOSED 02
BUILDING 0
Scale: 1/8"=1'-0"



SOUTH SECTIONAL ELEVATION-PROPOSED 25
BUILDING 0
Scale: 1/8"=1'-0"

WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE, PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TYPE 3: (N) ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING

HEAD ROYCE SCHOOL
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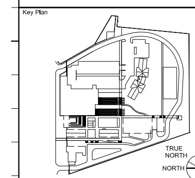
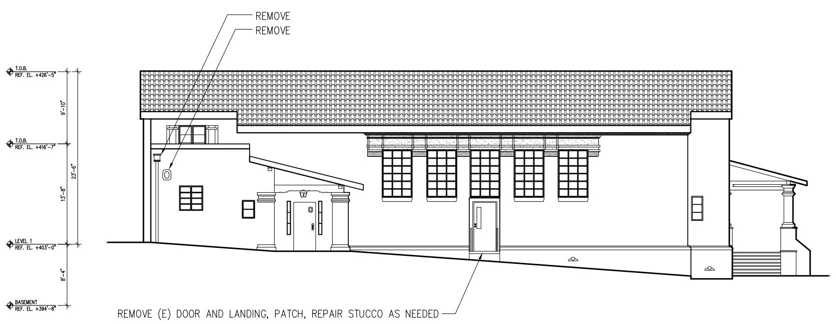
Key Plan:

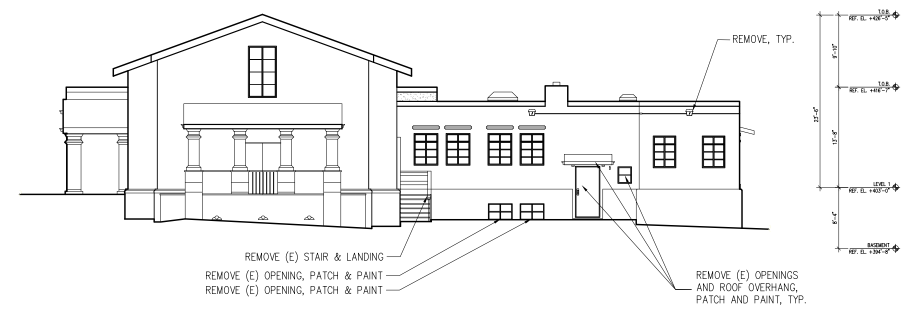


Sheet Name:
BUILDING 0
SOUTH / EAST
ELEVATIONS

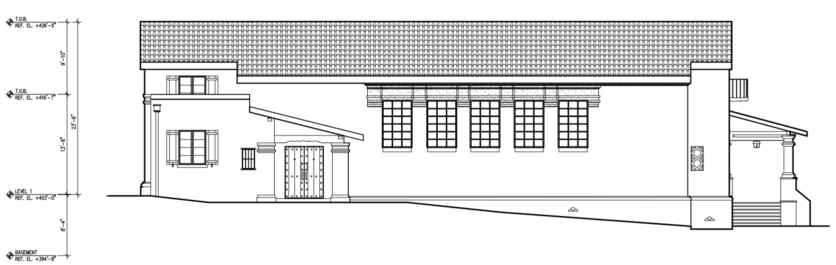
Project No.: 214043
Drawn By:
Checked By:
Scale: 1/8"=1'-0"
Sheet No.: A5.0.00



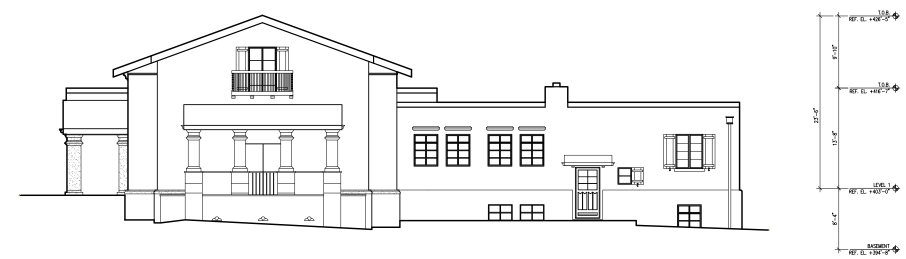
NORTH ELEVATION-EXISTING 29
BUILDING 0 Scale: 1/8"=1'-0"



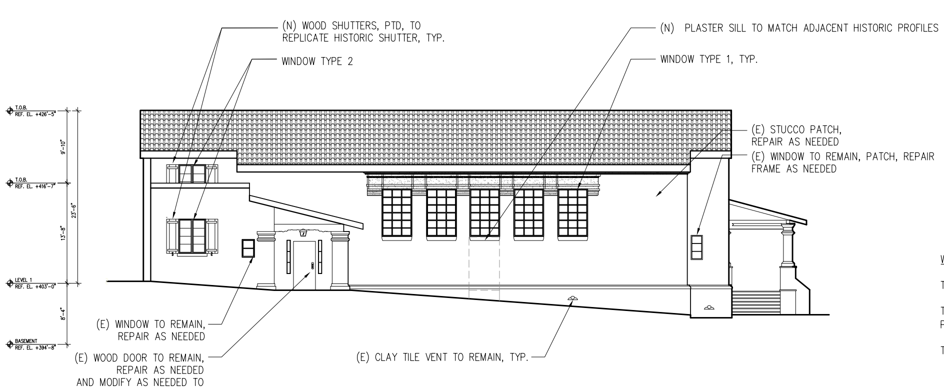
WEST ELEVATION-EXISTING 05
BUILDING 0 Scale: 1/8"=1'-0"



NORTH ELEVATION-ORIGINAL 27
BUILDING 0 Scale: 1/8"=1'-0"



WEST ELEVATION-ORIGINAL 03
BUILDING 0 Scale: 1/8"=1'-0"



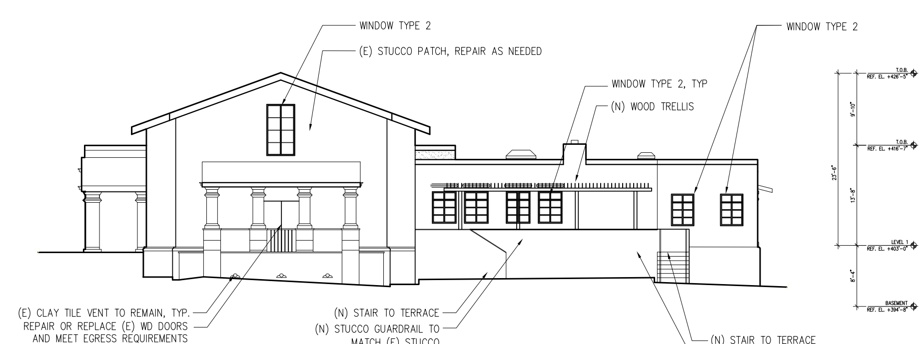
NORTH ELEVATION-PROPOSED 25
BUILDING 0 Scale: 1/8"=1'-0"

WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE,
PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TYPE 3: (N) ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING



WEST ELEVATION-PROPOSED 01
BUILDING 0 Scale: 1/8"=1'-0"

HEAD ROYCE SCHOOL

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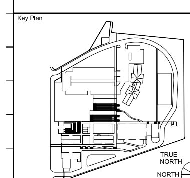


Sheet Name:

BUILDING 0
NORTH / WEST
ELEVATIONS

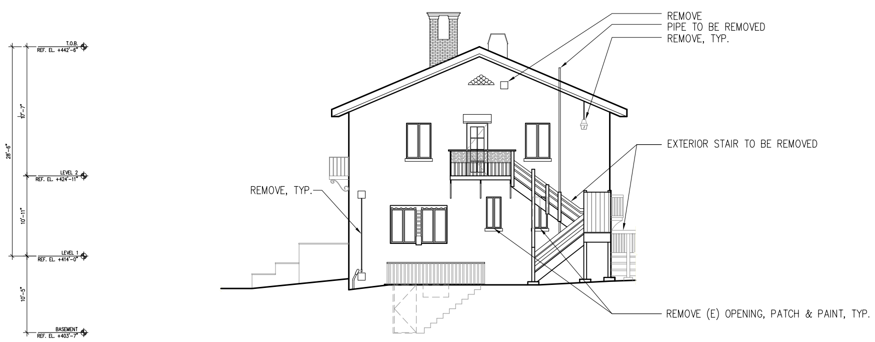
Project No.: 214043

Drawn By: TEAM

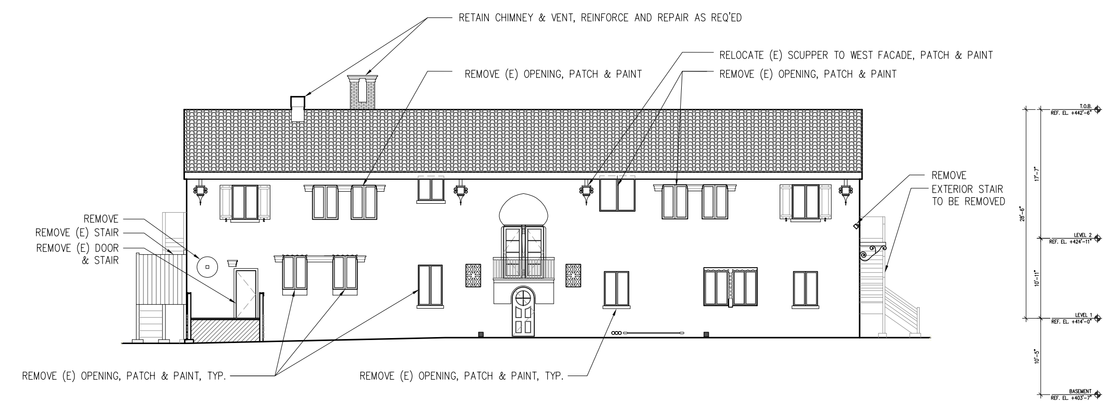
Checked By: LEAD

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

Sheet No.: A5.0.01

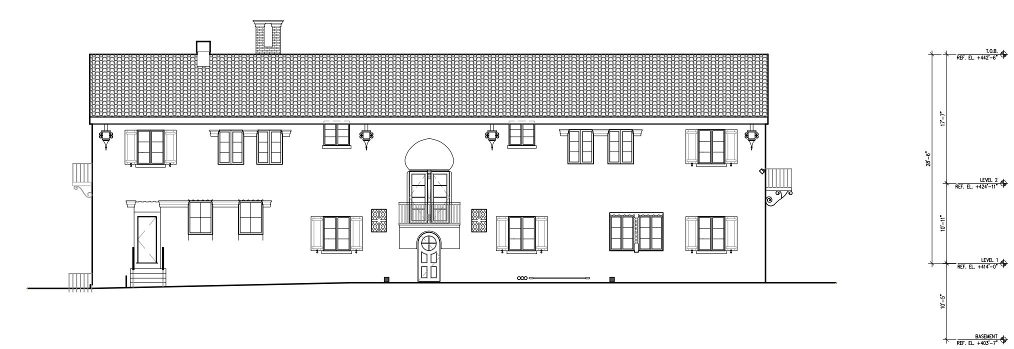


SOUTH ELEVATION-EXISTING 29
BUILDING 01
Scale: 1/8"=1'-0"

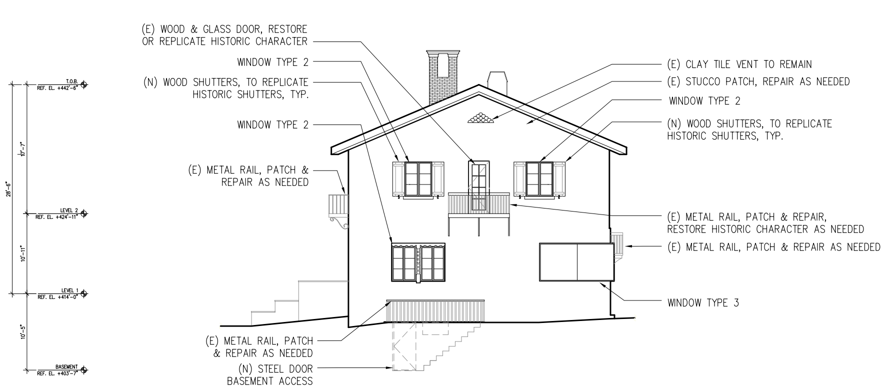


EAST ELEVATION-EXISTING 05
BUILDING 01
Scale: 1/8"=1'-0"

SOUTH ELEVATION-ORIGINAL 27
BUILDING 01
Scale: 1/8"=1'-0"



EAST ELEVATION-ORIGINAL 03
BUILDING 01
Scale: 1/8"=1'-0"



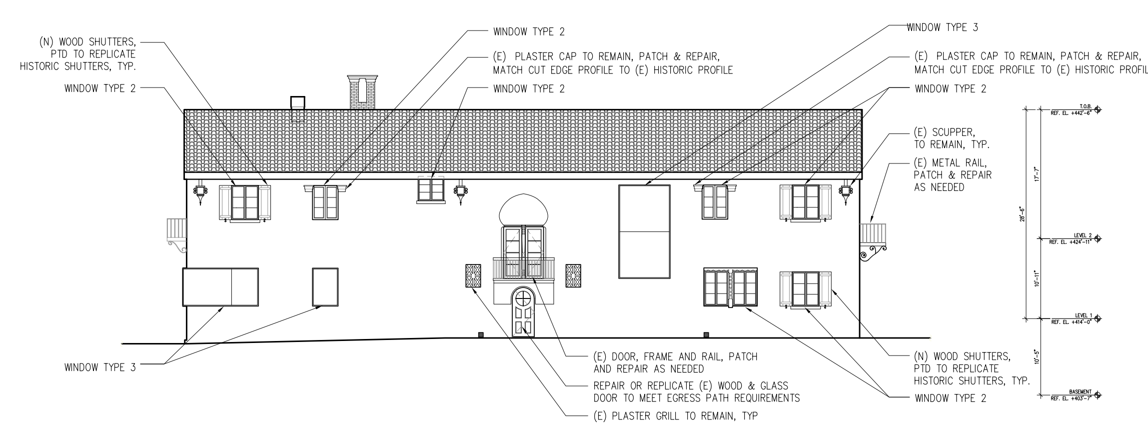
SOUTH ELEVATION-PROPOSED 25
BUILDING 01
Scale: 1/8"=1'-0"

WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE,
PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TYPE 3: (N) PT. ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING



EAST ELEVATION-PROPOSED 01
BUILDING 01
Scale: 1/8"=1'-0"

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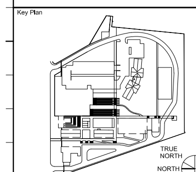
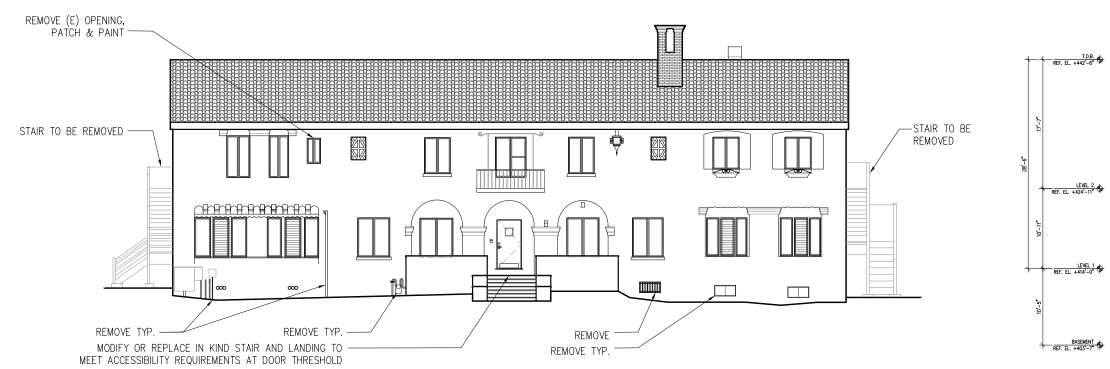
Key Plan:



Sheet Name:
BUILDING 1
SOUTH / EAST
ELEVATIONS

Project No.: 214043
Sheet No.: A5.1.00
Drawn By: TEAM
Checked By: LEAD
Scale: 1/8"=1'-0"

NORTH ELEVATION-EXISTING 29
BUILDING 01
Scale: 1/8"=1'-0"



WEST ELEVATION-EXISTING 05
BUILDING 01
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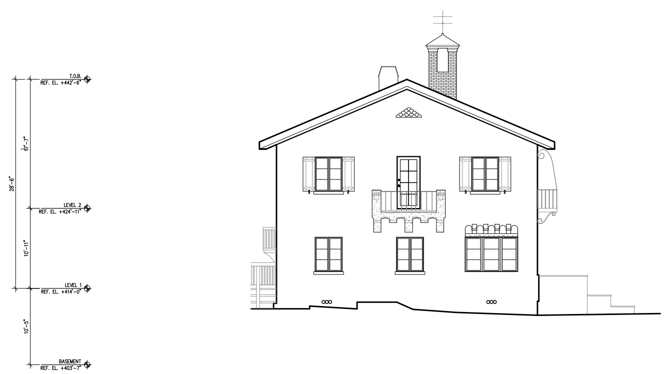
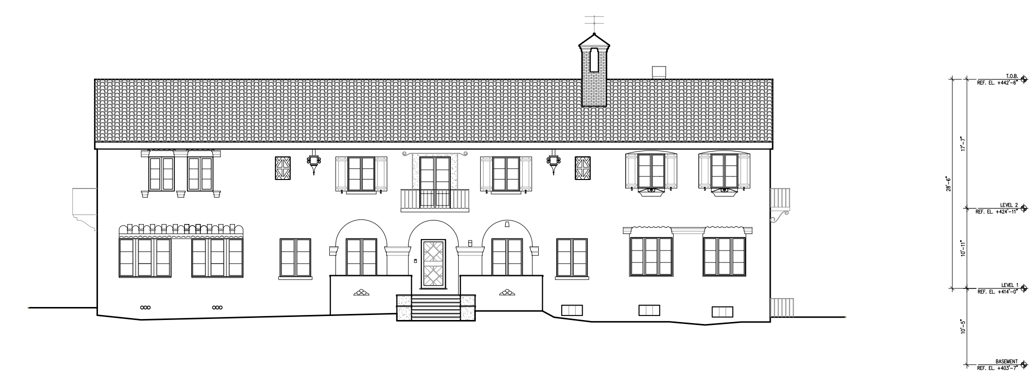
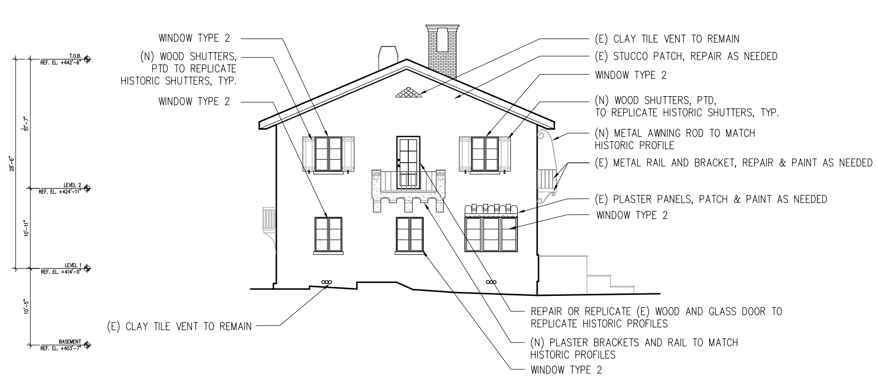


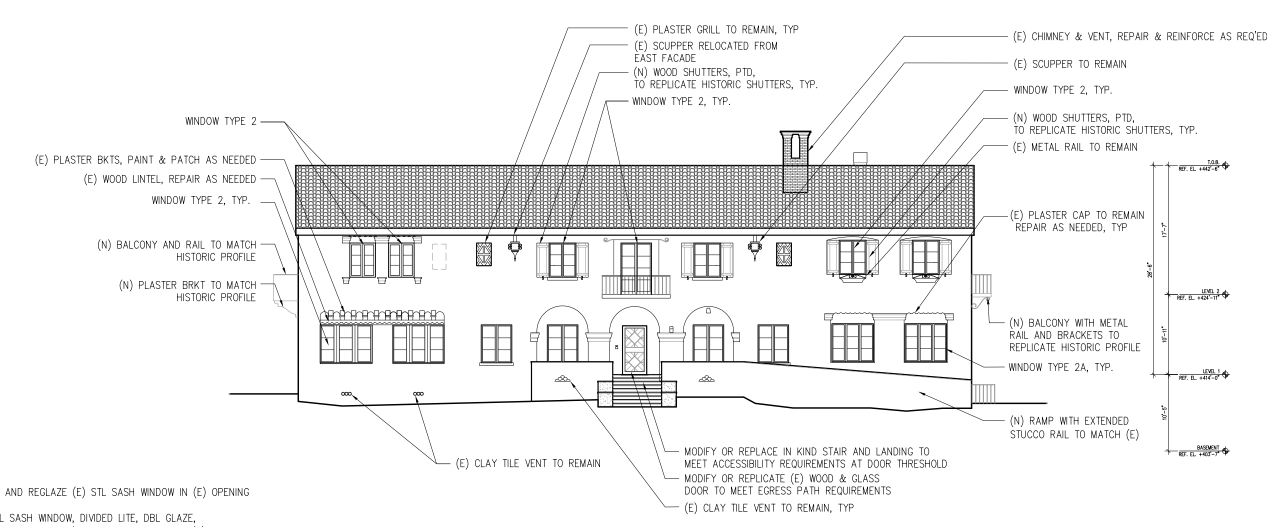
NORTH ELEVATION-ORIGINAL 27
BUILDING 01
Scale: 1/8"=1'-0"



WEST ELEVATION-ORIGINAL 03
BUILDING 01
Scale: 1/8"=1'-0"



NORTH ELEVATION-PROPOSED 25
BUILDING 01
Scale: 1/8"=1'-0"



WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE, PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TYPE 3: (N) PT. ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING

WEST ELEVATION-PROPOSED 01
BUILDING 01
Scale: 1/8"=1'-0"

HEAD ROYCE SCHOOL

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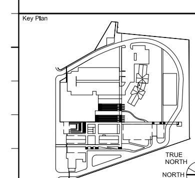
Key Plan:



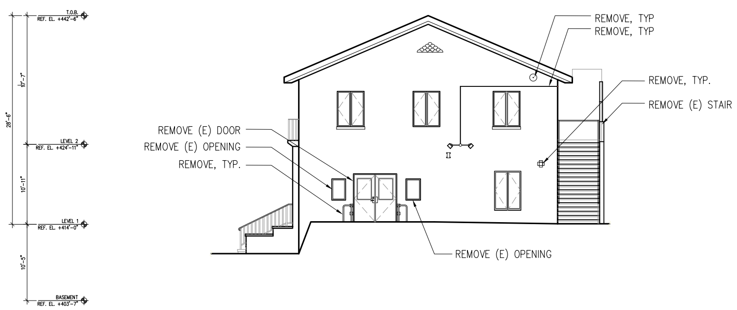
Sheet Name:

BUILDING 1
NORTH / WEST
ELEVATIONS

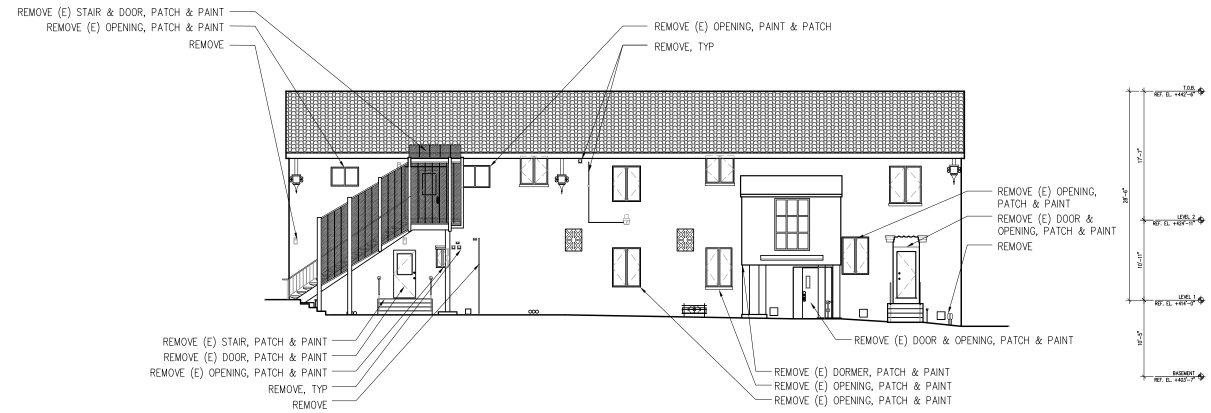
Project No.: 214043

Drawn By: TEAM
Checked By: LEAD
Scale: 1/8"=1'-0"

Sheet No.: A5.1.01

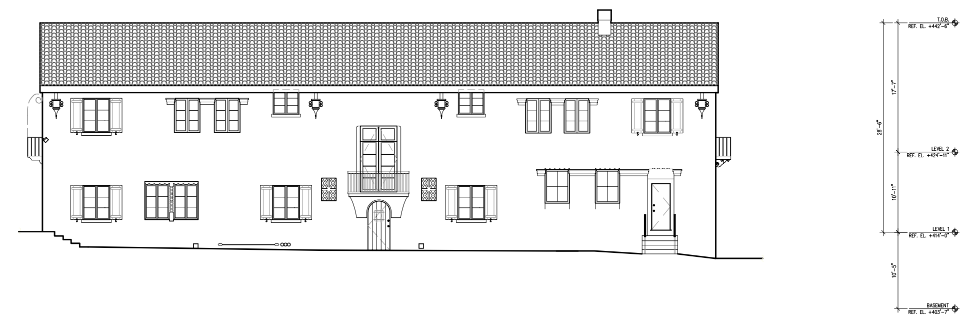


SOUTH ELEVATION-EXISTING 29
BUILDING 02
Scale: 1/8"=1'-0"

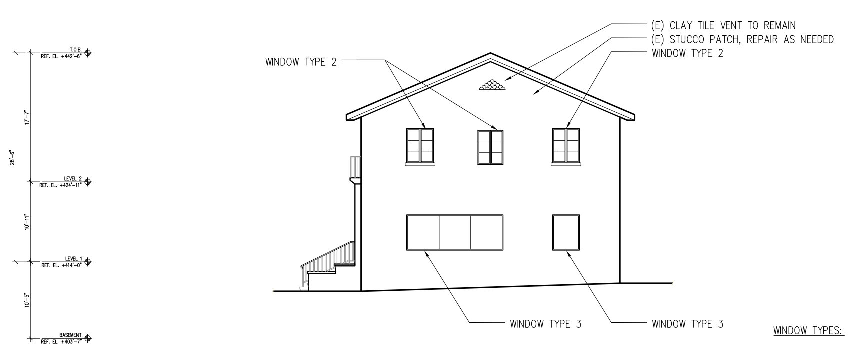


EAST ELEVATION-EXISTING 05
BUILDING 02
Scale: 1/8"=1'-0"

SOUTH ELEVATION-ORIGINAL 27
BUILDING 02
Scale: 1/8"=1'-0"



EAST ELEVATION-ORIGINAL 03
BUILDING 02
Scale: 1/8"=1'-0"



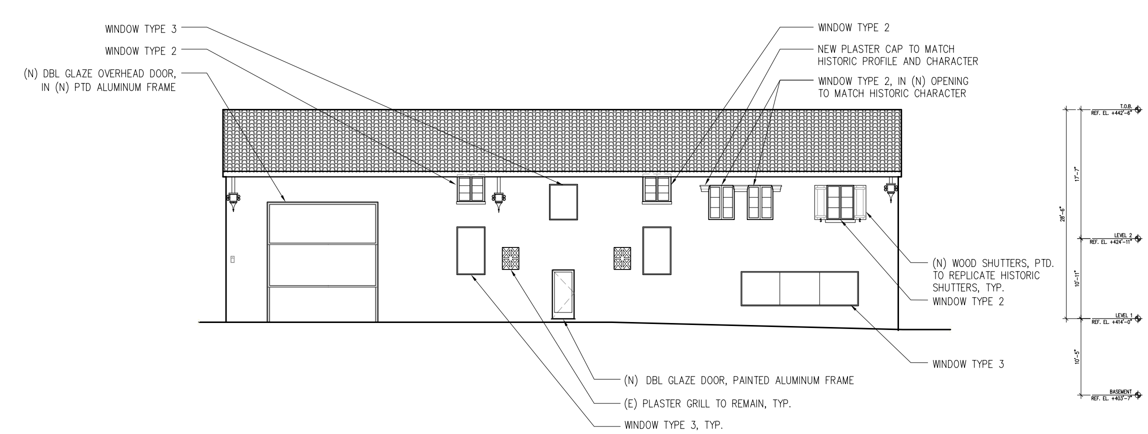
WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE, PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TYPE 3: (N) ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING

SOUTH ELEVATION-PROPOSED 25
BUILDING 02
Scale: 1/8"=1'-0"



EAST ELEVATION-PROPOSED 01
BUILDING 02
Scale: 1/8"=1'-0"

HEAD ROYCE SCHOOL
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ADMINISTRATIVE DRAFT
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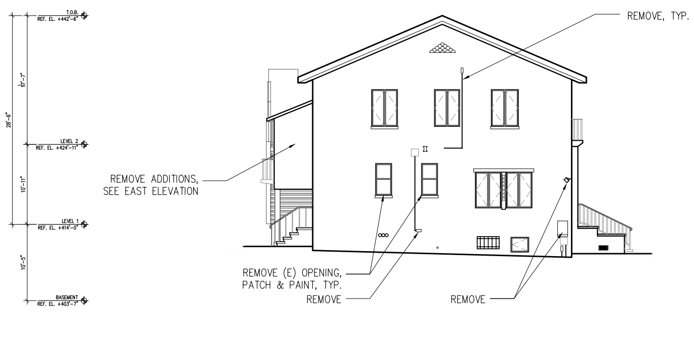
Key Plan:

Sheet Name:
BUILDING 2
SOUTH / EAST
ELEVATIONS

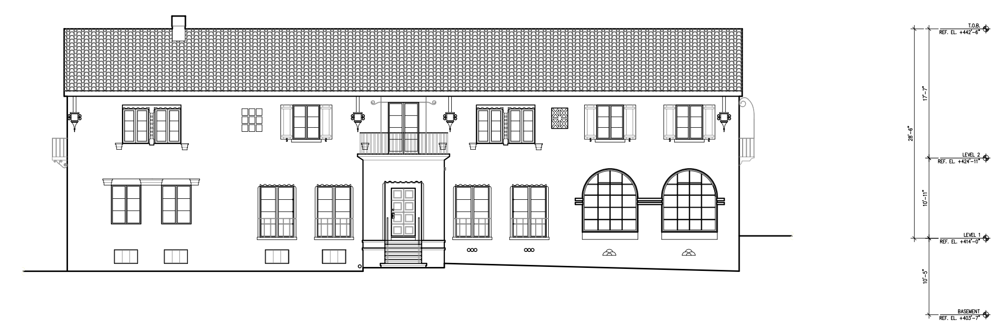
Project No.: 214043
Sheet No.: A5.2.00
Drawn By:
Checked By:
Scale: 1/8"=1'-0"



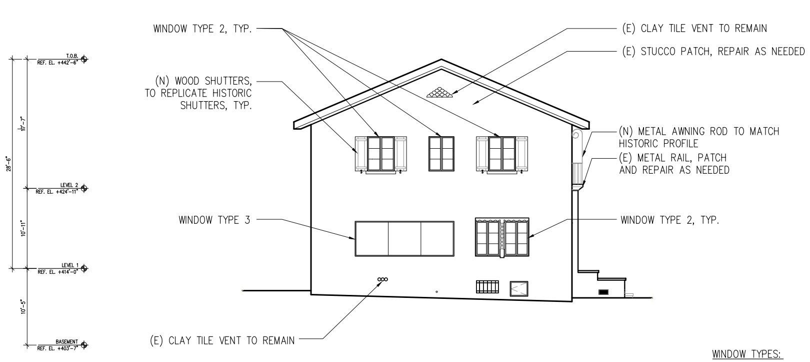
NORTH ELEVATION-EXISTING 29
BUILDING 02
Scale: 1/8"=1'-0"

WEST ELEVATION-EXISTING 05
BUILDING 02
Scale: 1/8"=1'-0"

NORTH ELEVATION-ORIGINAL 27
BUILDING 02
Scale: 1/8"=1'-0"



WEST ELEVATION-ORIGINAL 03
BUILDING 02
Scale: 1/8"=1'-0"



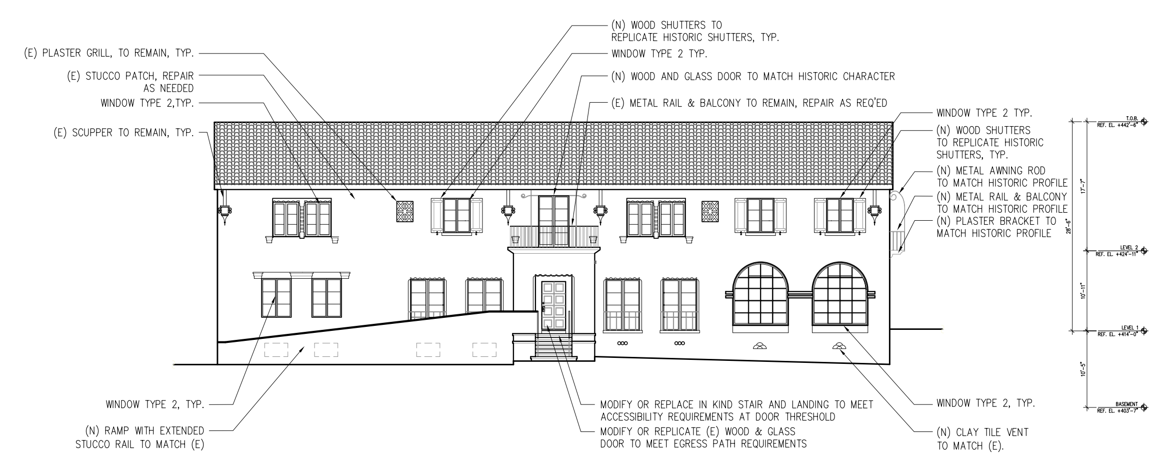
NORTH ELEVATION-PROPOSED 25
BUILDING 02
Scale: 1/8"=1'-0"

WINDOW TYPES:

TYPE 1: REPAIR AND REGLAZE (E) STL SASH WINDOW IN (E) OPENING

TYPE 2: (N) STL SASH WINDOW, DIVIDED LITE, DBL GLAZE, PROFILE TO REPLICATE TYPE 1/HISTORIC CHARACTER, IN (E) OPENING UON

TTYPE 3: (N) ALUMINUM SASH WINDOW, FULL LITE, DBL GLAZE, IN (N) OPENING



WEST ELEVATION-PROPOSED 01
BUILDING 02
Scale: 1/8"=1'-0"

HEAD ROYCE SCHOOL
4315 Lincoln Ave
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Architect:
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Key Plan:

Sheet Name:
BUILDING 2
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Appendix 7C

Cultural Resources Technical Report, Head-Royce School Project

PaleoWest. Inc., January 23, 2020

PALEOWEST

Cultural Resources Technical Report Head-Royce School Project, City of Oakland, Alameda County, California

Submitted to:

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Technical Report 19-433

January 23, 2020

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CULTURAL RESOURCES TECHNICAL REPORT

HEAD-ROYCE SCHOOL PROJECT, CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Prepared by:
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Prepared for:
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Technical Report No. 19-433

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January 23, 2020

Keyword: CEQA

CONTENTS

MANAGEMENT SUMMARY

As requested by Lamphier-Gregory, PaleoWest Archaeology (PaleoWest) performed cultural resources studies and tribal outreach services in support of the preparation of an Environmental Impact Report (EIR) for the proposed Head-Royce School Project (Project) in Oakland, California.

This report summarizes the methods and results of the cultural resource investigation of the Project area. This investigation included a cultural resource literature search and communication with the Native American Heritage Commission (NAHC) and interested Native American tribal groups. A pedestrian survey was conducted for this cultural resource assessment; the Project area is fully developed with a small percentage of open landscape. The purpose of the investigation was to determine the potential for the Project to impact historic resources for the purposes of the California Environmental Quality Act (CEQA).

A cultural resource records search and literature review was conducted on December 16, 2019, at the Northwestern Information Center of the California Historical Resource Information System housed at Sonoma State University, Rohnert Park. The records search indicated that four previous studies have been conducted within a ¼-mile of the Project area. In addition, two historic-era built environment resources have been recorded within ¼-mile of the Project area. Neither of the resources or studies are within the Project area. The historic-era resources include two historic buildings that are not eligible for the National Register of Historic Places (NRHP).

As part of the cultural resource assessment of the Project area, PaleoWest also requested a search of the Sacred Lands File (SLF) from the NAHC. Results of the SLF search indicate that there are no known Native American cultural resources within the immediate Project area but suggested contacting seven individuals/representatives of seven Native American tribal groups to find out if they have additional information about the Project area. All seven individuals were contacted. Two responses were received as a result of the outreach efforts. Ms. Gould, Chairperson of The Confederated Villages of Lisjan, asked for more specific information about the location of the Project. Ms. Perez, Chairperson of the North Valley Yokuts Tribe, indicated that they are unaware of the proposed Project being sensitive for cultural resources.

A pedestrian survey was conducted for the 22-acre Project area. No cultural material was observed during the survey effort. Therefore, no additional cultural resources work is recommended. In the event that archaeological materials (e.g., structural remains, bottles and other glass, ceramics, faunal bone, shell, charcoal and ash, etc.) are encountered during Project-related ground-disturbing activities, all work should be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource.

In the event that Native American human remains or funerary objects are discovered, the provisions of the California Health and Safety Code should be followed.

The Historic Resource Evaluation for this Project has been completed by Page & Turnbull in April 2019.

1.0 INTRODUCTION

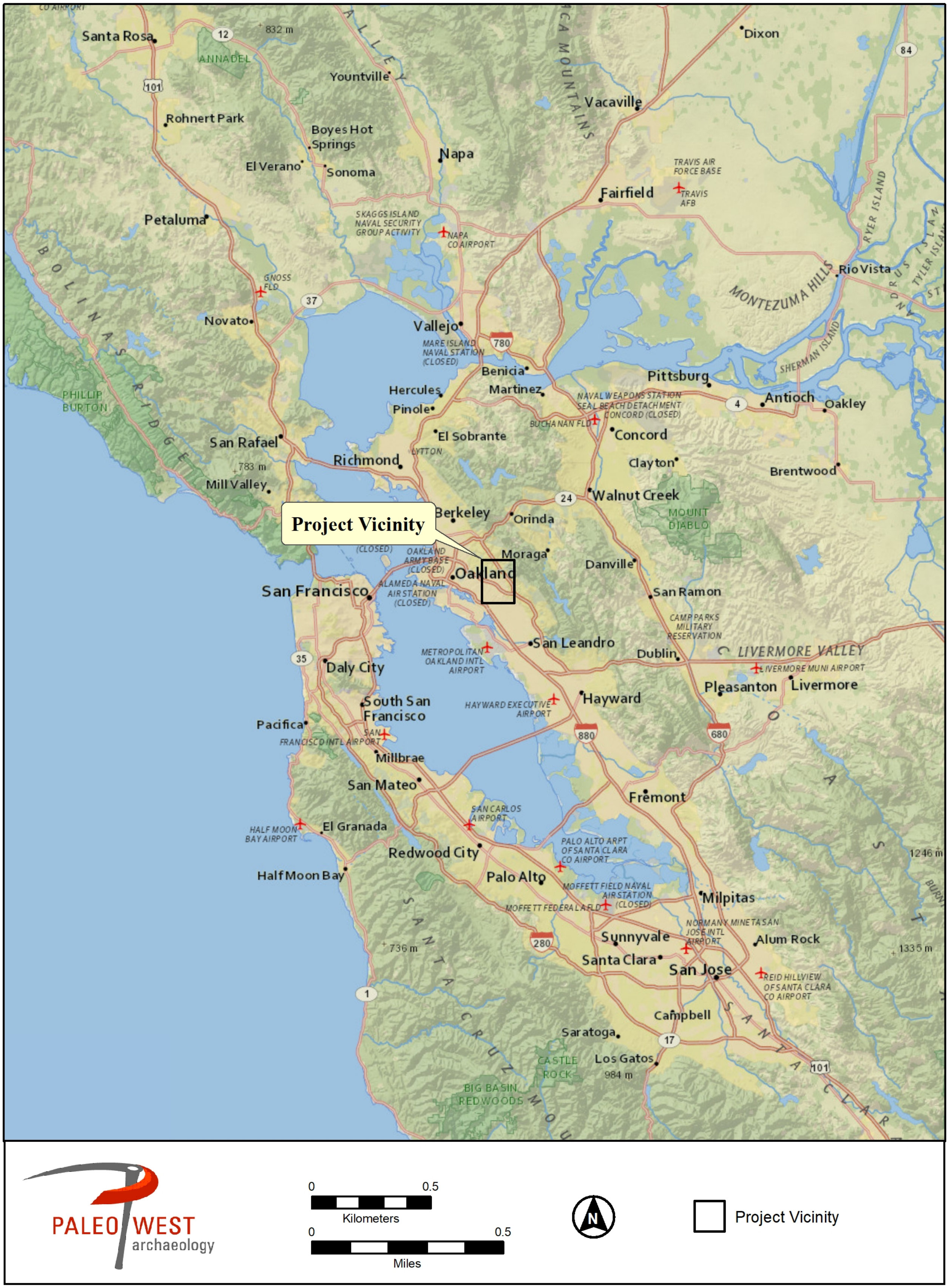
The Head-Royce School Project (Project) involves the development of an underground tunnel with an at-grade pedestrian crossing to connect two school campuses together, in Oakland, California. PaleoWest Archaeology (PaleoWest) was retained by Lamphier-Gregory to prepare a Cultural Resources Technical Report (CRTR) for the Project in compliance with the California Environmental Quality Act (CEQA).

1.1 PROJECT LOCATION AND DESCRIPTION

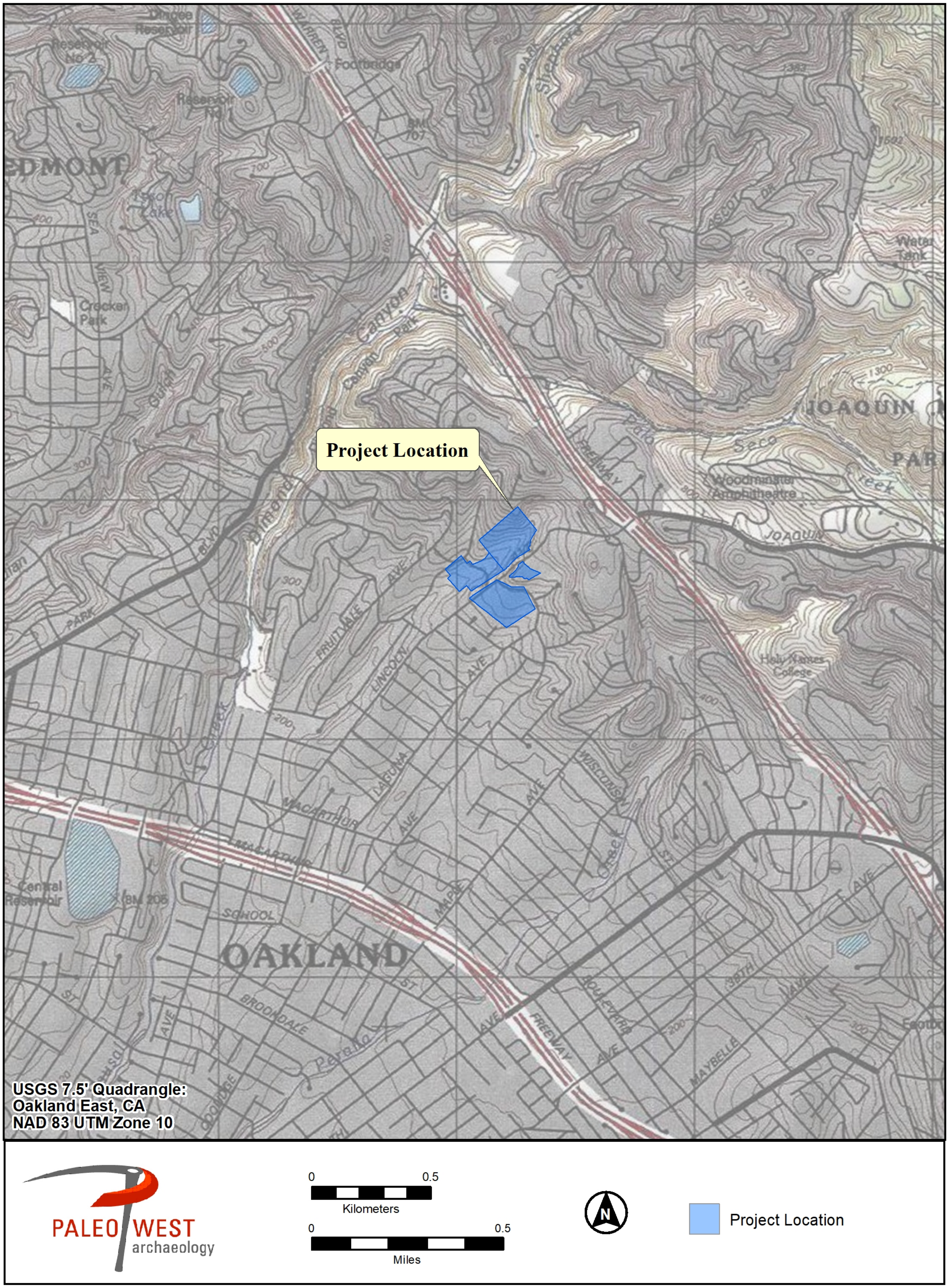
The Head-Royce school, a preparatory day school located at 4315 Lincoln Ave, Oakland, proposes to integrate the existing Head-Royce School (North Campus) with the former Lincoln Child Center campus (South Campus) to create a unified K-12 school (Project). The entire Project area encompasses 22 acres and is located to the north and south of Lincoln Avenue approximately 0.4 miles south of Highway 13 and 0.9 miles north of Interstate 580 (I-580). The Project involves connecting these two campuses via an underground tunnel below Lincoln Avenue with an at-grade pedestrian crossing across Lincoln Avenue. There are four properties that make up the Project area, which include the South Campus, former Lincoln Child Center (Assessor's Parcel # 29-100906), the North Campus with two properties (Assessor's Parcel # 29A-1367-4.4) (Assessor's Parcel # 29A-1367-1-14), and a property at 4500 Lincoln Ave (Assessor's Parcel # 29-1009-10-5). The first two buildings on the Head-Royce South campus were built in 1930 followed by one building in 1935, two buildings between 1938-1946, one building in 1957, one in 1958, 1967, 1990, 1999, and 2005-2009. There are eleven buildings in total.

1.2 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation conducted for the proposed Project. **Chapter 1** has introduced the Project location and description. **Chapter 2** states the regulatory context that should be considered for the Project. **Chapter 3** synthesizes the natural and cultural setting of the Project area and surrounding region. The results of the cultural resource literature and records search conducted at the Northwest Information Center (NWIC) and the Native American outreach are presented in **Chapter 4**. The results of the archaeological survey are outlined in **Chapter 5** with management recommendation provided in **Chapter 6**. This is followed by bibliographic references and appendices.



Project Vicinity
Santa Rosa
Rohnert Park
El Verano
Sonoma
Boyes Hot Springs
Yountville
Napa
Petaluma
Novato
San Rafael
Mill Valley
Vallejo
Benicia
Martinez
Hercules
Pinole
El Sobrante
Richmond
Berkeley
Orinda
Moraga
Oakland
San Francisco
Daly City
South San Francisco
Pacifica
Millbrae
San Mateo
El Granada
Half Moon Bay
Redwood City
Palo Alto
San Leandro
Hayward
Fremont
Milpitas
Sunnyvale
Santa Clara
San Jose
Alum Rock
Campbell
Saratoga
Los Gatos
Vacaville
Dixon
Fairfield
Rio Vista
Pittsburg
Antioch
Oakley
Brentwood
Concord
Clayton
Walnut Creek
Danville
San Ramon
Dublin
Pleasanton
Livermore
LIVERMORE VALLEY
MONTEZUMA HILLS
MOUNT DIABLO
Kilometers
0
0.5
Miles
0
0.5
Project Vicinity



Project Location
PIEDMONT
OAKLAND
JOAQUIN
Woodminster Amphitheatre
Holy Names College
Central Reservoir
Crocker Park
MACARTHUR
FREEWAY
USGS 7.5' Quadrangle:
Oakland East, CA
NAD 83 UTM Zone 10
PALEO WEST
archaeology
0
0.5
Kilometers
0
0.5
Miles
N
Project Location

2.0 REGULATORY CONTEXT

2.1 CALIFORINA ENVIRONMENTAL QUALITY ACT

The proposed Project is subject to compliance with the California Environmental Quality Act (CEQA), as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the Project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the Project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. 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,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered. Additionally, any proposed project that may affect historically significant cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the responsible agency and prior to construction.

3.0 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The San Francisco Bay region is defined by the San Francisco Peninsula on the southwest, the Marin Peninsula on the northwest, and the Berkeley Hills and the Diablo Range on the east. The heart of the region is the San Francisco Bay system, which occupies a late Pliocene trough that flooded repeatedly during the Pleistocene interglacials, the last flooding occurring approximately 10,000 years ago. This trough extends to the south where it forms the Santa Clara and San Benito valleys and to the north where it forms the Petaluma, Napa, and Sonoma valleys (Moratto 1984:219). About 15,000 years ago the coastal shoreline extended more than 15 miles west of today's coastline. The California River flowed through the gorge that is now the Golden Gate and across what is today's submerged continental shelf, finally reaching the ocean far west of today's coastline (Moratto 1984:219).

Approximately 8,000 years ago, with the rising sea levels associated with the melting of continental glaciers, marine waters began to invade the San Francisco trough, creating a lush and bountiful marshland environment on the shores surrounding a newly-created bay. Elk, deer, and waterfowl inhabited the marshlands and surrounding environs. The waters of the bay and ocean produced abalone, oyster, mussels, clams, salmon, sturgeon, seabass, shark, perch, and many other fish species. Tule and marsh grasses provided raw material for a variety of implements fashioned by the earliest inhabitants.

The flanks of the coastal mountain ranges provide the biotic zone of the coastal grasslands. These mountain ranges are the product of tectonic activity caused by the collision of the Pacific continental plate and the continent of North America. A variety of geological composition and soil variability are the result of this activity. The geologic foundation underlying the coastal grasslands is largely granite bedrock intermixed with large areas of sedimentary shales, sandstones and composites of igneous rock (Brown 1985:86). Mineral resources for both tool manufacture and trade were abundant. Obsidian, prized for projectile points and blades, was available to the north at Anadel and Napa's Glass Mountain. Franciscan chert was found locally in streambeds and rock outcroppings while banded Monterey chert could be found in coastal deposits to the south (Moratto 1984:221).

Native grasses covered the middle-elevation hillsides in the coastal areas prior to the late 18th century. The grasses now covering the coastal grassland region are not the same as those that would have been found in the area 250 years ago. Although the types of animals inhabiting the coastal regions before the influx of humans are largely known, the type of plants that may have occupied the coastal grassland is not as well defined.

Annual precipitation in the San Francisco Bay region varies from 20 to 40 in. with precipitation concentrated in the fall, winter, and spring months. This climate is much like that found in the Mediterranean: mild, rainy winters, and warm, dry summers. After the first rain at the end of October or early November, the vegetation becomes and remains green, but not growing, until late February, when it begins to grow rapidly. By early May, grasses have usually changed to dry golden-colored and remain that way until fall (Brown 1985:86). Due to the cooling effects of the local Bay environment, temperatures in the Project area are mild in the summer, usually averaging 55-65°F (Moratto 1984:223).

3.2 PREHISTORIC SETTING

Research into local prehistoric cultures began in the early 1900s with the work of N. C. Nelson of the University of California at Berkeley. Nelson documented 425 shellmounds along the Bay shore and adjacent coast when the Bay was still ringed by salt marshes three to five miles wide (Nelson 1909:322-331). He maintained that the intensive use of shellfish, a subsistence strategy reflected in both coastal and bay shoreline middens, indicated a general economic unity in the region during prehistoric times, and he introduced the idea of a distinct San Francisco Bay archaeological region (Moratto 1984:227). Three sites, in particular, provided the basis for the first model of cultural succession in Central California, the Emeryville Shellmound (CA-ALA-309), the Ellis Landing Site (CA-CCO-295), and the Fernandez Site (CA-CCO-259) (Moratto 1984:227).

Investigations into the prehistory of the Central Valley of California, presaged by early amateur excavations in the 1890s, began in earnest in the 1920s. In the early 20th century, Stockton-area amateur archaeologists J. A. Barr and E. J. Dawson separately excavated a number of sites in the Central Valley and made substantial collections. On the basis of artifact comparisons, Barr identified what he believed were two distinct cultural traditions, an early and a late. Dawson later refined his work and classified the Central Valley sites into three “age-groups” (Schenck and Dawson 1929:402).

Professional or academic-sponsored archaeological investigations in central California began in the 1930s, when J. Lillard and W. Purves of Sacramento Junior College formed a field school and conducted excavations throughout the Sacramento Delta area. By seriating artifacts and mortuary traditions, they identified a three-phase sequence similar to Dawson’s, including Early, Intermediate, and Recent cultures (Lillard and Purves 1936). This scheme went through several permutations (see Lillard et al. 1939; Heizer and Fenenga 1939). In 1948 and again in 1954, Richard Beardsley refined this system and extended it to include the region of San Francisco Bay (Beardsley 1948, 1954). The resulting scheme came to be known as the Central California Taxonomic System (CCTS) (Fredrickson 1973; Hughes 1994:1). Subsequently, the CCTS system of Early, Middle, and Late Horizons was applied widely to site dating and taxonomy throughout central California.

As more data were acquired through continued fieldwork, local exceptions to the CCTS were discovered. The accumulation of these exceptions, coupled with the development of radiocarbon dating in the 1950s and obsidian hydration analysis in the 1970s, opened up the possibility of dating deposits more accurately. Much of the subsequent archaeological investigation in central California focused on the creation and refinement of local versions of the CCTS.

In the 1960s and 1970s, archaeologists including Ragir (1972) and Fredrickson (1973) revised existing classificatory schemes and suggested alternative ways of classifying the prehistory of California. Fredrickson (1973:113-114) proposed four “major chronological periods” in prehistoric California: the Early Lithic Period (described as hypothetical), a Paleoindian Period, an Archaic Period, and an Emergent Period. The Archaic and Emergent Periods were further divided into Upper and Lower periods. Subsequently, Fredrickson (1974, 1994) subdivided the Archaic into Lower, Middle, and Upper. Milliken et al. (2007) have recently updated and further refined this scheme.

A series of “patterns,” emphasizing culture rather than temporal periods, can be identified throughout California prehistory. Following Ragir, Fredrickson (1973:123) proposed that the nomenclature for each pattern relates to the location at which it was first identified, such as the Windmiller, Berkeley, and Augustine Patterns.

Various modifications of the CCTS (e.g., Bennyhoff and Hughes 1987; Fredrickson 1973, 1974; Milliken and Bennyhoff 1993) sustain and extend the system’s usefulness for organizing our understanding of local and regional prehistory in terms of time and space. The cultural patterns identified in the Bay Area that in a general way correspond to the CCTS scheme are the Berkeley and Augustine patterns (for information on the Berkeley and Augustine Patterns see Fredrickson 1973, Milliken et al. 2007, Moratto 1984 and Wiberg 1997). Dating techniques such as obsidian hydration analysis or radiometric measurements can further increase the accuracy of these assignments.

Most recently, Milliken et al. (2007:99-123) developed what they term a “hybrid system” for the San Francisco Bay Area, combining the Early-Middle-Late Period temporal sequence with the pattern-aspect-phase cultural sequence. Dating of the cultural patterns, aspects, and phases was based on Dating Scheme D of the CCTS, developed by Groza (2002). Groza directly dated over 100 Olivella shell beads, obtaining a series of AMS radiocarbon dates representing shell bead horizons. The new chronology she developed has moved several shell bead horizons as much as 200 years forward in time.

Milliken et al.’s (2007) San Francisco Bay Area Cultural Sequence includes:

Early Holocene (Lower Archaic) from 8000 to 3500 B.C.
Early Period (Middle Archaic) from 3500 to 500 B.C.
Lower Middle Period (Initial Upper Archaic) from 500 B.C. to A.D. 430
Upper Middle Period (Late Upper Archaic) from A.D. 430 to 1050
Initial Late Period (Lower Emergent) from A.D. 1050 to 1550
Terminal Late Period, post-A.D. 1550

No archaeological evidence dating to pre-8000 B.C. has been located in the Bay Area. Milliken et al. (2007) posit that this dearth of archaeological material may be related to subsequent environmental changes that submerged sites, buried sites beneath alluvial deposits, or destroyed sites through stream erosion. A brief summary of the approach presented by Milliken et al. (2007) follows.

A “generalized mobile forager” pattern marked by the use of milling slabs and handstones and the manufacture of large, wide-stemmed and leaf-shaped projectile points emerged around the periphery of the Bay Area during the Early Holocene Period (8000 to 3500 B.C.). Beginning around 3500 B.C., evidence of sedentism, interpreted to signify a regional symbolic integration of peoples, and increased regional trade emerged. This Early Period lasted until ca. 500 B.C. (Milliken et al. 2007:114, 115).

Milliken et al. (2007:115) identify “a major disruption in symbolic integration systems” circa 500 B.C., marking the beginning of the Lower Middle Period (500 B.C. to A.D. 430). Bead Horizon M1, dating from 200 B.C. to A.D. 430, is described by Milliken et al. (2007:115) as marking a ‘cultural climax’ within the San Francisco Bay Area.

The Upper Middle Period (A.D. 430 to 1050) is marked by the collapse of the Olivella saucer bead trade in central California, abandonment of many Bead Horizon M1 sites, an increase in the occurrence of sea otter bones in those sites that were not abandoned, and the spread of the extended burial mortuary pattern characteristic of the Meganos complex into the interior East Bay. Bead Horizons M2 (A.D. 430 to 600), M3 (A.D. 600 to 800), and M4 (A.D. 800 to 1050) were identified within this period (Milliken et al. 2007:116).

3.3 ETHNOHISTORY

This section provides a brief summary of the ethnography of the Project vicinity and is intended to provide a general background only. More extensive reviews of Ohlone ethnography are presented in Bocek (1986), Cambra et al. (1996), Kroeber (1970), Levy (1978), Milliken (1995), and Shoup et al. (1995).

The Project area lies within the region occupied by the Ohlone or Costanoan group of Native Americans at the time of historic contact with Europeans (Kroeber 1970:462-473). Although the term Costanoan is derived from the Spanish word Costaños, or "coast people," its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978:82-84). Costanoan actually designates a family of eight languages.

Tribal groups occupying the area from the Pacific Coast to the Diablo Range and from San Francisco to Point Sur spoke the other seven languages of the Costanoan family. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljon group, which occupied the San Gregorio watershed in San Mateo County (Bocek 1986:8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about A.D. 500, having moved south and west from the Sacramento-San Joaquin Delta. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern previously described (Levy 1978:486).

Although linguistically linked as a family, the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other. However, beyond neighborhood boundaries, each group's language was reportedly unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. These groups were independent political entities, each occupying specific territories defined by physiographic features. Each group controlled access to the natural resources of its territory, which also included one or more permanent villages and numerous smaller campsites used as needed during a seasonal round of resource exploitation. Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the "east shore of San Francisco Bay between Richmond and Mission San Jose, and probably also in the Livermore Valley" (Levy 1978:485).

A chief, who inherited the position patrilineally and could be either a woman or man, provided leadership. The chief and a council of elders served mainly as community advisers. Specific responsibility for feeding visitors, providing for the impoverished and directing ceremonies, hunting, fishing, and gathering fell to the chief. Only during warfare was the chief's role as absolute leader recognized by group members (Levy 1978:487).

Extended families lived in domed structures thatched with tule, grass, wild alfalfa, or ferns (Levy 1978:492). Semisubterranean sweathouses were built into pits excavated in stream banks and covered with a structure against the bank. The tule raft, propelled by double-bladed paddles, was used to navigate across San Francisco Bay (Kroeber 1970:468).

Mussels were an important staple in the Ohlone diet, as were acorns of the coast live oak, valley oak, tanbark oak, and California black oak. Seeds and berries, roots and grasses, and the meat of deer, elk, grizzly, rabbit, and squirrel formed the Ohlone diet. Careful management of the land through controlled burning served to ensure a plentiful, reliable source of all these foods (Levy 1978:491).

The Ohlone usually cremated a corpse immediately upon death but, if there were no relatives to gather wood for the funeral pyre, interment occurred. Mortuary goods comprised most of the personal belongings of the deceased (Levy 1978:490).

The arrival of the Spanish in 1775 led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal life ways. Brought into the missions, the surviving Ohlone, along with the Esselen, Yokuts, and Miwok, were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup et al. 1995). Following secularization of the mission system in the 1830s, numerous ranchos were established in the 1840s. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos.

In the 1990s, some Ohlone groups (e.g., the Muwekma, Amah, and Esselen further south) submitted petitions for federal recognition (Esselen Nation 2007; Muwekma Ohlone Tribe 2007). Many Ohlone are active in preserving and reviving elements of their traditional culture and are active participants in the monitoring and excavation of archaeological sites.

3.4 HISTORICAL SETTING

The historic period in the eastern San Francisco Bay region began with the Fages-Crespi expedition of 1770. The Fages party explored the eastern shore of San Francisco Bay, eventually reaching the location of modern Fremont, where they traded with the local Costanoans. Members of the expedition eventually sighted the entrance to San Francisco Bay from the Oakland Hills. In 1772, a second Fages expedition traveled from Monterey through what are now Milpitas, San Lorenzo, Oakland, and Berkeley, finally reaching Pinole on March 28, 1772 (Cook 1957:131). From there they traveled through the locations of today’s Rodeo and Crockett to Martinez, made a brief foray into the delta region of the Central Valley, and then camped somewhere near Pittsburg or Antioch. On March 31, the Fages party began the return journey to Monterey. They traveled to the vicinity of today’s Walnut Creek, turned south, and then made their way to the Danville area, where they spent the night. On April 1st, they passed through today’s San Ramon, Dublin, and Pleasanton, finally arriving back in the area of Milpitas on the following day.

In 1776, the Anza-Font expedition traveled through the same area and also traded with residents of native villages encountered along the way. The most significant impact of the European presence on the local California natives, however, was not felt until the Spanish missions were established in the region (Cook 1957:132).

In 1775, Captain Juan Manuel Ayala's expedition studied the San Francisco Bay and ventured up the Sacramento and San Joaquin rivers. The first mission in the region was established the following year with the completion of Mission San Francisco de Asis (Mission Dolores) in San Francisco. Mission Santa Clara followed in 1777, and Mission San Jose in 1797. The Mission era lasted approximately 60 years and proved to be the downfall of the native inhabitants of the region, who were brought to the missions to be assimilated into a new culture as well as to provide labor for the missionaries. Diseases introduced by the early explorers and missionaries, and the contagions associated with the forced communal life at the missions killed a large number of local peoples, while changes in land use made traditional hunting and gathering practices increasingly difficult. Cook (1976) estimates that by 1832, the Costanoan population had been reduced from a high of over 10,000 in 1770 to less than 2,000.

In 1820, Sergeant Luis Maria Peralta received a grant of “10 square leagues” of land in the East Bay in recognition of his long, faithful military service in California. Peralta named his grant Rancho San Antonio. It comprised the land that lay from the water's edge to the crest of the Oakland hills between San Leandro Creek to the south and El Cerrito Creek to the north (Hendry and Bowman 1940), completely encompassing modern-day Oakland, Berkeley, Emeryville, Piedmont, Albany, Alameda, and a portion of San Leandro (Sher 1994:9).

Following the U.S. takeover of Alta California from Mexico in 1848, rancho lands began to be divided up and generally overrun by Anglo immigration to the area that was coincident with the land boom following the Gold Rush of 1849. Rancho San Antonio suffered the fate of most Mexican land grants in northern California, with squatters taking quasi-legal title to lands, and the courts denying title to the original grantees (Hendry and Bowman 1940).

Early surveyors mapped parts of Oakland just after the time that Peralta’s dominance began to give way to recently-settled American interests. The 1856 Survey of the Coast of the United States depicts the area that would become known as downtown and West Oakland. Although streets had been laid out near Broadway, much of the dry land remained covered in groves of oaks and was relatively unpopulated. Marshland extended as far north as modern-day Fifth Street in several locations, and Gibbons Pier, located at the end of Seventh Street, was the only sign of the industry to come. Oakland’s early growth was concentrated near the wharves and rail lines that eventually transformed the rural outpost into a transportation center for both passengers and goods.

The first growth period followed the completion of the San Francisco & Oakland Railroad (SF&ORR) along Seventh Street in 1863, connecting Oakland to San Francisco by way of San Jose and enticing real estate speculators who saw the area as ideal for development. Only six years after the local rail connection was completed, the Big Four (Collis Huntington, Leland Stanford, Charles Crocker and Mark Hopkins) made a decision that would shape Oakland’s future. The Central Pacific Railroad would locate the western terminus of its transcontinental route at Oakland Point (Scott 1959:48). Buildings were clustered at the foot of Broadway as well as at the end of the alignment of Seventh Street, where wharves extended into the bay. The businesses and residents that would soon fill the area, however, did not yet surround the local and transcontinental rail lines. City streets had been surveyed, although many blocks remained wooded or had become home to only small numbers of people. The large lots characteristic of a more rural settlement pattern were still present, and the northeastern portions of the city were growing far slower than downtown and West Oakland.

By the turn-of-the-century, electric railways connected the most densely populated areas of Oakland to the outlying suburbs. Some previously urban middle-class families now chose a suburban life in the relatively open spaces of the East Bay, and the 1906 earthquake further encouraged some urban residents to relocate to outlying areas.

The Oakland, Antioch & Eastern Railroad (OA&E) was also depicted on the 1915 USGS map along an alignment that ran southeast to northwest, ½-mile east of the Project area. The OA&E, an interurban line, shared the Key system ferry terminal in Oakland and made travel between San Francisco and emerging suburbs and recreation areas easier and more cost efficient. Lines between Oakland and Sacramento were operational by 1913 and eventually became part of the Sacramento Northern Railroad (Groff 2011; Western Railway Museum 2014).

World War I was a catalyst for the shipyards on the Oakland waterfront, as new workers were enticed to the area by increased economic activity. Beth Bagwell summarized the growth of Oakland's hillside neighborhoods.

After the earthquake, Oakland experienced a housing construction boom; bungalows replaced the remaining hayfields in Rockridge, Claremont, and the district north to the Berkeley border. In the 1920s, the demand continued, spurred by the post-war prosperity and by the opening of new real estate tracts made easily reachable by the automobile. Piedmont, Montclair, Trestle Glen, and the Lakeshore district were among neighborhoods that experienced their greatest growth at this time. In 1923, a graph in the *Oakland Tribune Yearbook* showed a 900 percent increase in the number of dwellings built over the previous five years (Bagwell 1982:200).

Oakland did not escape the consequences of the Great Depression. Although the Southern Pacific Railroad (which merged with the Central Pacific Railroad in 1885) remained solvent, large numbers of jobs were lost. The San Francisco Bay Bridge was constructed between 1933 and 1936 in the midst of the Great Depression, and although it may not have been evident at the time, the bridge would significantly change a community that had built itself around its transportation terminals.

World War II brought a degree of economic relief through another round of increased shipbuilding, and it also saw the construction of the Oakland Army Base and the Naval Supply Center. As the outlying areas of Oakland continued to fill with new immigrants and residents who had left the city center, the oldest areas of downtown struggled, as automobiles and trucks began to dominate the transportation market that had defined Oakland's early growth.

4.0 CULTURAL RESOURCES INVENTORY

A literature review and records search were conducted by Nazih Fino, PaleoWest's GIS specialist at the Northwest Information Center (NWIC), housed at Sonoma State University, Rohnert Park on December 16, 2019. This inventory effort included a search of the Project area and a $^{1}/_{4}$-mile radius around the Project area, collectively termed the Project study area. The objective of this records search was to identify any cultural resources that have been previously recorded within the study area during previous cultural resource investigations.

4.1 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

The records search results indicate that four previous investigations have been conducted and documented within the Project study area since 2001; none of the previous studies encompass the Project area. (Table 4-1 and Appendix A).

Table 4-1
Previous Cultural Studies Within the Project Study Area

Report No.	Date	Author(s)	Title
S-029550	2001		Nextel Communications CA-2317A / Highway 13-Lincoln Avenue, 2860 Mountain Boulevard, Oakland, California
S-036999	2010	Carolyn Losee	Cultural Resources Investigation for Clearwire #CA-SFO0137D "5025 Woodminster Lane", 5025 Woodminster Lane, Oakland, Alameda County, California 94602 (letter report)
S-039859	2012	Carrie D. Wills and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02062A (Mountain Blvd.), 2810 Mountain Boulevard, Oakland, Alameda County, California (letter report)
S-040260	2012	Wayne H. Bonner and Kathleen A. Crawford	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02062A (Mountain Blvd.), 2810 Mountain Boulevard, Oakland, Alameda County, California (letter report)

4.2 CULTURAL RESOURCES REPORTED WITHIN 1/4 MILE OF THE PROJECT AREA

The records search results indicated that two cultural resources have been previously recorded within the Project study area (Table 4-2 and Appendix A). These resources include two historic buildings (built environment resources). Each resource is briefly described in the table below.

Resource P-01-009395 is a 3-story single-family home located at 4300 Fruitvale Avenue that has not been evaluated for the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). This building is located just slightly inside the ¼ mile buffer study area and is not located in the Project area. Resource P-01-011379 is public utility building located at 2810 Mountain Boulevard that was built in 1965 and evaluated in 2012. This building is not eligible for listing in the NRHP or the CRHR and is outside of the Project area. They are called out in Table 4-2 below and Appendix A.

Table 4-2
Cultural Resources Recorded within 1/4 Mile of the Project Study Area

Primary No.	Type	Age	Year Built	Description
P-01-009395	Building	Historic	Not listed	4300 Fruitvale Ave – single family home
P-01-011379	Building	Historic	1965	2819 Mountain Blvd – utility building

4.3 NATIVE AMERICAN COORDINATION

PaleoWest contacted the NAHC, as part of the cultural resource assessment, on December 9, 2019, for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded with a letter dated December 12, 2019, stating "a records search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed for the information you have submitted for the above referenced Project. The results were negative; however, the absence of specific site information in the SFL does not indicate the absence of cultural resources in any project area. The NAHC requested that seven Native American tribal groups be contacted to elicit information regarding cultural resource related to the proposed Project. Seven tribal groups were contacted by email on December 13, 2019.

Two tribal groups responded by email. Corrina Gould, Chairperson of The Confederated Villages of Lisjan responded on December 14, 2019 and asked what was plan for the project and if she could have a better description of the location of the project. A response to Ms. Gould's email was sent on December 16th with no response back. Katherine Perez, Chairperson of the North Valley Yokuts Tribe responded on December 26, 2019, and said that they are unaware of the project being culturally sensitive.

Follow up emails were sent on January 2, 2020 to the tribes who did not response to the first round of emails. Copies of this correspondence are provided, and the results summarized, in Appendix B.

5.0 FIELD INVESTIGATION

5.1 FIELD METHODS

A PaleoWest Archaeologist conducted an intensive pedestrian survey of the Head-Royce School Project area, as part of a Cultural Resources Investigation for Lamphier-Gregory. The Request for Proposal (RFP) by Lamphier-Gregory required that a cultural resources investigation be conducted in accordance with CEQA. The pedestrian survey was conducted to evaluate potential project impacts to cultural resources.

The survey was conducted by a one-person crew, the project area was surveyed in 10 meter transect intervals. Photographs of the survey area were recorded and included general views of the survey area and existing ground conditions. A photo log was maintained to include the photo number, date, orientation, photo description, and the photographer's name. A sample of survey photographs is included in Figures 5-1 to 5-4.

Survey area maps were provided prior to the survey. A PaleoWest archaeologist used these maps, along with Trimble GeoXT handheld GPS receiver, to locate the survey areas while in the field. The Munsell Color System was used to classify soil colors.

Exposed ground surface within the survey areas was examined for the presence of historic or prehistoric site indicators. Historic site indicators include, but are not limited to, foundations, fence lines, ditches, standing buildings, objects or structures such as sheds, or concentrations of materials at least 50 years in age, such as domestic refuse (glass bottles, ceramics, toys, buttons or leather shoes), or refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, horse shoes) or structural materials (e.g., nails, glass window panes, corrugated metal, wood posts or planks, metal pipes and fittings, etc.). Prehistoric site indicators include but are not limited to areas of darker soil with concentrations of ash, charcoal, bits of animal bone (burned or unburned), shell, flaked stone, ground stone, or human remains.

5.2 FIELD RESULTS

On December 23, 2019, PaleoWest archaeologist Christopher Singer conducted a survey of the Project area, primarily located on the former Lincoln Child Center campus (South Campus) perpendicular to Lincoln Avenue, the practice field associated with the Ability Now Bay Area property. Photos were also taken of the north hillside above the North Campus (main campus) baseball field and faculty-student parking lot. The majority of the survey area was paved, though one parking lot on the east side of campus was primarily gravel (Parking Lot D). Most of the south portion of the South Campus was undeveloped, with an exception of the rectangular grass play field bounded by a fence. Ground visibility was roughly 90 percent with bushes and shrubs that were covering some of the ground visibility.

The day of the survey was partly cloudy with some sun. The surveyor began from the northwest corner of the project area, investigating the perimeter of the site. From the grass playfield looking north the land slopes up with a parking lot and buildings on top of the hill. Play structures and buildings with classrooms are in the center of the Project area, with concrete pathways running through the whole area. Once the South Campus was surveyed, the surveyor walked east of Lincoln Avenue to the Ability Now Bay Area campus, where photos were taken of the well-kept grass field. No cultural material was observed during the survey. It is recommended that no additional cultural resource management is needed because of the disturbance of the Project area from the development of the campus.

Figure 5-1 Facing North, former Lincoln Child Center

Figure 5-2 Facing Southwest, Practice field

Figure 5-3 Facing South, Lincoln Ave

Figure 5-4 Facing North, Head-Royce Campus

6.0 MANAGEMENT RECOMMENDATIONS

In the event that archaeological materials (e.g., structural remains, bottles and other glass, ceramics, faunal bone, shell, charcoal and ash, etc.) are encountered during Project-related ground-disturbing activities, all work should be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource.

In the event that Native American human remains or funerary objects are discovered, the provisions of the California Health and Safety Code should be followed. Section 7050.5(b) of the California Health and Safety Code states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for "protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction." A combination of preconstruction worker training and intermittent construction monitoring by a qualified archaeologist will serve to achieve compliance with this requirement for protection of human remains. Worker training typically instructs workers as to the potential for discovery of cultural or human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof.

Finally, should additional actions be proposed outside the currently defined Project area that have the potential for additional subsurface disturbance, further cultural resource management may be required.

7.0 REFERENCES

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Appendix A.
Cultural Resource Studies

Report Detail: S-029550

Identifiers

Report No.: S-029550
Other IDs:
Cross-refs:

Citation information

Author(s):
Year: 2001 (Jul)
Title: Nextel Communications CA-2317A / Highway 13-Lincoln Avenue, 2860 Mountain Boulevard, Oakland, California
Affliliation: EarthTouch Inc
No. pages:
No. maps:
Attributes: Archaeological, Field study
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Alameda
USGS quad(s): Oakland East
Address:

Address	*City*	*Assessor's parcel no.*	*Zip code*
2860 Mountain Avenue	Oakland		

PLSS:

Database record metadata

	Date	*User*
Entered:	4/25/2005	leigh
Last modified:	12/18/2017	hagell

IC actions:	*Date*	*User*	*Action taken*
	11/29/2017	carlosp	no author submitted

Record status: Verified

Report Detail: S-036999

Identifiers

Report No.: S-036999
Other IDs:
Cross-refs:

Citation information

Author(s): Carolyn Losee
Year: 2010 (Apr)
Title: Cultural Resources Investigation for Clearwire #CA-SFO0137D "5025 Woodminster Lane", 5025 Woodminster Lane, Oakland, Alameda County, California 94602 (letter report)
Affliliation: Archaeological Resources Technology
No. pages:
No. maps:
Attributes: Archaeological, Architectural/historical, Field study
Inventory size: c. .25 acres
Disclosure: Not for publication
Collections: No

General notes

The report contains a copy of S-29550.

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Alameda
USGS quad(s): Oakland East
Address:

Address	*City*	*Assessor's parcel no.*	*Zip code*
5025 Woodminster Lane	Oakland		

PLSS:

Database record metadata

	Date	*User*
Entered:	8/4/2010	guldenj
Last modified:	12/18/2017	hagell

IC actions:
Record status: Verified

Report Detail: S-039859

Identifiers

Report No.:	S-039859
Other IDs:	
Cross-refs:	

Citation information

Author(s):	Carrie D. Wills and Kathleen A. Crawford
Year:	2012 (Sep)
Title:	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC, Candidate BA02062A (Mountain Blvd.), 2810 Mountain Boulevard, Oakland, Alameda County, California (letter report)
Affiliation:	Michael Brandman Associates
No. pages:	
No. maps:	
Attributes:	Archaeological, Architectural/historical, Field study
Inventory size:	
Disclosure:	Not for publication
Collections:	No

General notes

Associated resources

No. resources:	0
Has informals:	No

Location information

County(ies):	Alameda
USGS quad(s):	Oakland East

Address:	*Address*	*City*	*Assessor's parcel no.*	*Zip code*
	2810 Mountain Blvd.	Oakland		

PLSS:

Database record metadata

	Date	*User*
Entered:	1/25/2013	baileyl
Last modified:	2/15/2013	grahams

IC actions:	
Record status:	Verified

Report Detail: S-040260

Identifiers

Report No.: S-040260
Other IDs:
Cross-refs:

Citation information

Author(s): Wayne H. Bonner and Kathleen A. Crawford
Year: 2012 (Nov)
Title: Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02062A (Mountain Blvd.), 2810 Mountain Boulevard, Oakland, Alameda County, California (letter report)
Affliliation: Michael Brandman Associates
No. pages:
No. maps:
Attributes: Architectural/historical, Evaluation, Field study
Inventory size:
Disclosure: Unrestricted
Collections: No

General notes

Associated resources

Primary No.	Trinomial	Name
P-01-011379		T-Mobile West LLc BA02062A/M

No. resources: 1
Has informals: No

Location information

County(ies): Alameda
USGS quad(s): Oakland East
Address:

Address	City	Assessor's parcel no.	Zip code
2810 Mountain Boulevard	Oakland	029-1260-010-02	

PLSS:

Database record metadata

	Date	User
Entered:	3/11/2013	baileyl
Last modified:	3/13/2013	grahams

IC actions:
Record status: Verified

Resource Detail: P-01-009395

19-523 resources

Identifying information

Primary No.:	P-01-009395	
Trinomial:		
Name:	4300 Fruitvale Avenue	
Other IDs:	*Type*	*Name*
	Resource Name	4300 Fruitvale Avenue
	OHP Property Numb	106124
	OTIS Resource Num	499974
	OHP PRN	4623-3063-0000
	Other	Serial No. B1490
Cross-refs:		

Attributes

Resource type:	Building
Age:	Historic
Information base:	Survey
Attribute codes:	HP02 (Single family property)
Disclosure:	Unrestricted
Collections:	No
Accession no(s):	
Facility:	

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
9/30/1996	[none]	Oakland Cultural Heritage Survey	HRI: 4623-3063-0000

Associated reports

Location information

County:	Alameda			
USGS quad(s):	Oakland East			
Address:	*Address*	*City*	*Assessor's parcel no.*	*Zip code*
	4300 Fruitvale Avenue	Oakland	029A 1311 017 01	94602
PLSS:				
UTMs:				

Management status

Database record metadata

	Date	*User*	
Entered:	4/1/2005	icrds	
Last modified:	12/6/2017	moored	
IC actions:	*Date*	*User*	*Action taken*
	12/4/2017	raelync	HRI received from Joseph: updated DB.
	3/12/2002	AOOHP2	Primary number 01-009395 assigned.
	4/1/2005	jay	Appended records from discontinued ICRDS.
	6/14/2002	AOOHP2	OHP Property file import
	11/29/2017	raelync	Entered OHP identifiers and Resource Name; OHP PRN: 4623-3063-0000 not on file at the NWIC, requested from Joseph.
Record status:	Verified		

Resource Detail: P-01-011379

19-523 resources

Identifying information

Primary No.:	P-01-011379	
Trinomial:		
Name:	T-Mobile West LLc BA02062A/Mountain Blvd	
Other IDs:	*Type*	*Name*
	Other	Pacific Bell
	Resource Name	T-Mobile West LLc BA02062A/Mountain Blvd
Cross-refs:		

Attributes

Resource type:	Building
Age:	Historic
Information base:	Survey
Attribute codes:	HP09 (Public utility building)
Disclosure:	Unrestricted
Collections:	No
Accession no(s):	
Facility:	

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
10/30/2012	K.A. Crawford,	Michael Brandman Associates	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-040260	2012	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate BA02062A (Mountain Blvd.), 2810 Mountain Boulevard, Oakland, Alameda County, California (letter report)	Michael Brandman Associates

Location information

County:	Alameda			
USGS quad(s):	Oakland East			
Address:	*Address*	*City*	*Assessor's parcel no.*	*Zip code*
	2810 Mountain Blvd	Oakland	029-1260-010-02	
PLSS:				
UTMs:				

Management status

Database record metadata

	Date	*User*
Entered:	3/13/2013	grahams
Last modified:	11/29/2017	raelync
IC actions:		
Record status:	Verified	

Appendix B.
Native American Heritage Commission

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: ____

County: ____

USGS Quadrangle
Name: ____

Township: __________ Range: ________ Section(s): ______________________

Company/Firm/Agency:

____

Contact Person: ____

Street Address: ____

City: ______________________________ Zip: ______________________

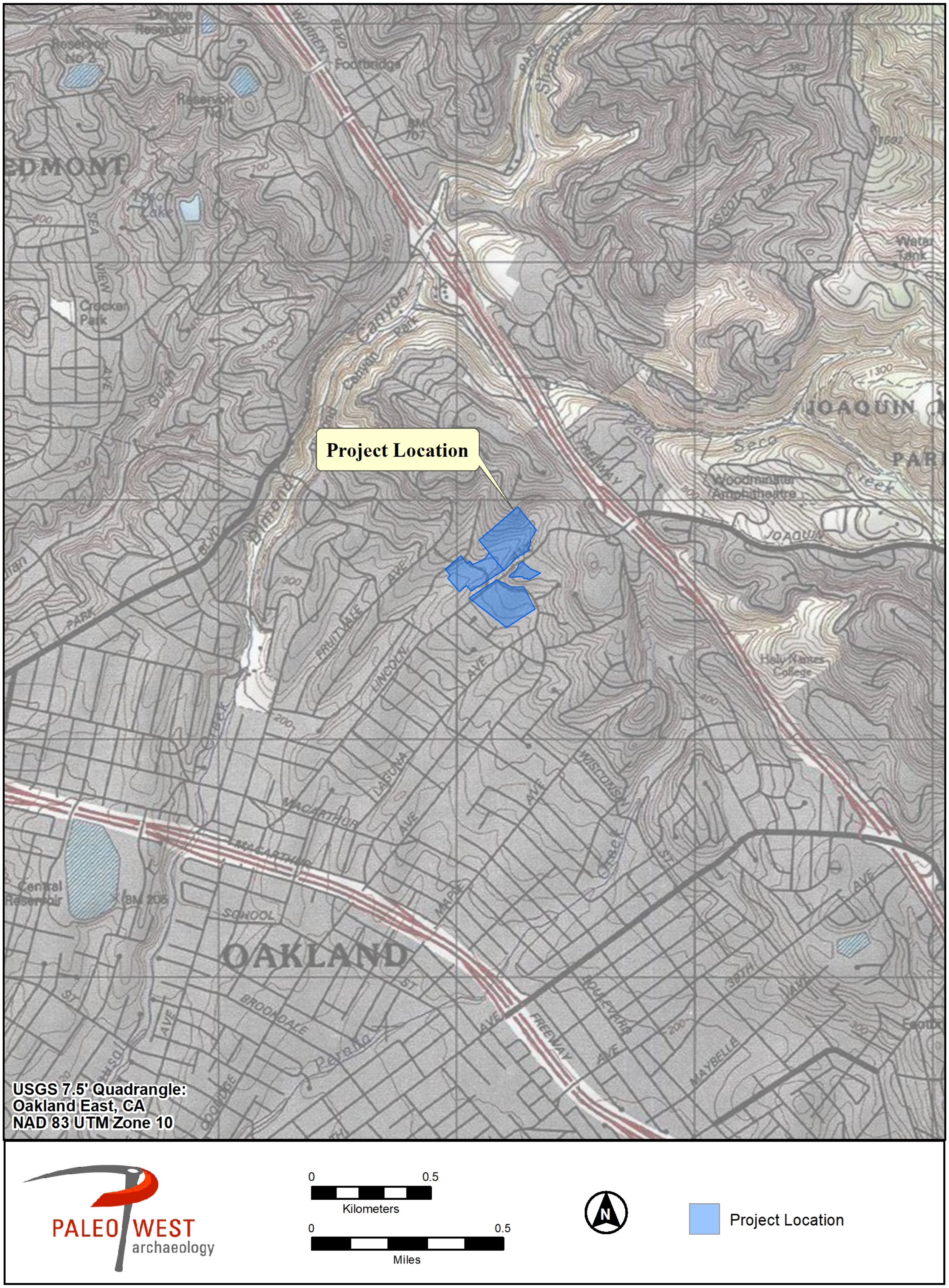
Phone: ____________________ Extension: ______________________

Fax: ____

Email: ____

Project Description:

☐ Project Location Map is attached


Project Location
PIEDMONT
OAKLAND
JOAQUIN
Woodminster Amphitheatre
Holy Names College
Central Reservoir
Crocker Park
Reservoir No 1
Reservoir No 2
Dingee Reservoir
Footbridge
Water Tank
MACARTHUR
FREEWAY
USGS 7.5' Quadrangle:
Oakland East, CA
NAD 83 UTM Zone 10
PALEO WEST
archaeology
0
0.5
Kilometers
0
0.5
Miles
N
Project Location

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

December 12, 2019

Ashley Schmutzler
PaleoWest Archaeology

VIA Email to: aschmutzler@paleowest.com

RE: Head Royce Survey, Alameda County

Dear Ms. Schmutzler:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Nancy Gonzalez-Lopez
Staff Services Analyst

Attachment

Native American Heritage Commission
Native American Contacts List
December 12, 2019

Amah MutsunTribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside ,CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 332-1526 Fax

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue — Ohlone/Costanoan
Oakland ,CA 94603
corrinagould@gmail.com
(510) 575-8408

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Ohlone/Costanoan
Pomona ,CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3388 — Ohlone, Bay Miwok, Plains Miwok, Patwin
Fremont ,CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell
(510) 687-9393 Fax

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister ,CA 95024
ams@indiancanyon.org
(831) 637-4238

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232 — Ohlone / Costanoan
Castro Valley ,CA 94546
cnihmeh@muwekma.org
(408) 464-2892
(408) 205-9714

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717 — Ohlone/Costanoan, Northern Valley Yokuts, Bay Miwok
Linden ,CA 95236
canutes@verizon.net
(209) 887-3415
(209) 649-8972

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

**This list is only applicable for contacting local Native Americans Tribes for the proposed:
Head Royce Survey, Alameda County.**

PALEOWEST archaeology
925.253.9070 | paleowest.com | 1870 Olympic Boulevard, Suite 100 | Walnut Creek, CA 94596

December 13, 2019

Tony Cerda, Chairperson
Coastanoan Rumsen Carmel Tribe
244 E. 1st St
Pomona, CA 91766

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Mr. Cerda,

PaleoWest has been contracted by Lamphier-Gregory to prepare a Cultural Resources Technical Report for the Head-Royce School Project, located in Oakland, Alameda County. The Project area is shown on the attached map.

PaleoWest has conducted a Records Search with the Northwest Information Center (NWIC) of the 22-acre proposed project area and a 1/4-mile radius to identify known cultural resource sites and previous surveys in or near the project area.

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We would appreciate receiving any comments, concerns, or information you wish to share regarding cultural resources or sacred sites within the immediate project area. If you could provide your response in writing, at your earliest convenience, to the address below, we will make sure the relevant information is considered in preparing our report. Should you have any questions, I can be reached at aschmutzler@paleowest.com or by phone at (925) 253-9070.

Thank you again for your assistance.
Sincerely,

Ashley Sm

Ashley Schmutzler, MA, RPA
Supervisory Archaeologist/Project Manager

PALEOWEST archaeology

925.253.9070 | paleowest.com | 1870 Olympic Boulevard, Suite 100 | Walnut Creek, CA 94596

December 13, 2019

Irene Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA, 94062

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Ms. Zwierlein,

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December 13, 2019

Charlene Nijmeh, Chairperson
Muwekma Ohlone Indian Tribe of the SF Bay Area
20885 Redwood Rd, Suite 232
Castro Valley, CA 94546

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Ms. Nijmeh,

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December 13, 2019

Corrina Gould, Chairperson
The Confederated Villages of Lisjan
10926 Edes Ave
Oakland, CA 94603

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Ms. Gould,

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December 13, 2019

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, CA 94539

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Mr. Galvan,

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December 13, 2019

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
PO Box 717
Linden, CA 95236

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Ms. Perez,

PaleoWest has been contracted by Lamphier-Gregory to prepare a Cultural Resources Technical Report for the Head-Royce School Project, located in Oakland, Alameda County. The Project area is shown on the attached map.

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December 13, 2019

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

RE: Lamphier-Gregory, Head Royce Project, Alameda County, California

Dear Ms. Sayers,

PaleoWest has been contracted by Lamphier-Gregory to prepare a Cultural Resources Technical Report for the Head-Royce School Project, located in Oakland, Alameda County. The Project area is shown on the attached map.

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Ashley Schmutzler, MA, RPA
Supervisory Archaeologist/Project Manager

Native American Correspondence – Head-Royce School

Name/Affiliation	Date Email Sent	Comments	Date of Follow Up Email	Comments
Charlene Nijmeh, Chairperson Muwekma Ohlone Indian Tribe of the SF Bay Area 20885 Redwood Rd, Suite 232 Castro Valley, CA 94546 (408) 464-2892 cnijmeh@muwekma.org	12/13/19	No response	1/2/20	No response
Tony Cerda, Chairperson Coastanoan Rumsen Carmel Tribe 244 E. 1st St Pomona, CA 91766 (909) 524-8041 rumsen@aol.com	12/13/19	No response	1/2/20	No response
Katherine Erolinda Perez, Chairperson North Valley Yokuts Tribe PO Box 717 Linden, CA 95236 (209) 887-3415 canutes@verizon.net	12/13/19	Responded on 12/26/19 "We are unaware of the proposed project being sensitive." (no follow up email needed)		
Ms. Irene Zwierlein, Chairperson Amah Mutsun Tribal Band of Mission San Juan Bautista 789 Canada Road Woodside, CA 94062 (650) 851-7489 amahmutsuntribal@gmail.com	12/13/19	No response	1/2/20	No response
Ann Marie Sayers, Chairperson Indian Canyon Mutsun Band of Costanoan P.O. Box 28 Hollister, CA 95024 (831) 637-4238 ams@indiancanyon.org	12/13/19	No response	1/2/20	No response
Andrew Galvan The Ohlone Indian Tribe P.O. Box 3388 Fremont, CA 94539 (510) 882-0527 chochenyo@aol.com	12/13/19	No response	1/2/20	No response
Corrina Gould, Chairperson The Confederated Villages of Lisjan 10926 Edes Ave Oakland, CA 94603 corrinagould@gmail.com (510) 575-8408	12/13/19	Responded on 12/14/19 (See response below)	12/16/19	Sent requested information to Ms. Gould

Corrina Gould's response to email:

Thank you for your email and reaching out to the Confederated Villages of Lisjan. As we can not determine by the topographical map, where this property is located, could you be a bit more specific? At first glance it looks like it may lay on or near a village site. Could you let me know what is planned for this project? I will be going on medical leave beginning Monday December 16th and will be sporadically answering emails over the following month. Thank you in advance for your cooperation on this matter.