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Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: Esperanza Village

Responsible Entity: City of El Monte
11333 Valley Boulevard
El Monte, CA 91731

Grant Recipient (if different than Responsible Entity): Same as Responsible Entity

State/Local Identifier: City of El Monte
11333 Valley Boulevard
El Monte CA, 91731

Preparers: Sirius Environmental
1478 North Altadena Boulevard
Pasadena, CA 91107

Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

Certifying Officer Name and Title: Alma Martinez, City Manager
City of El Monte
11333 Valley Boulevard
El Monte, CA 91731

Consultant (if applicable): Sirius Environmental
1478 North Altadena Boulevard
Pasadena, CA 91107

Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, CA 90232

Direct Comments to: Teresa Li, AICP, Contract Planner
City of El Monte
11333 Valley Boulevard
El Monte, CA 91731

Project Location: The proposed project is located on the Los Angeles County-owned 13.79-acre MacLaren Hall property at 4024 Durfee Avenue in the City of El Monte. The MacLaren Hall property is bounded by Durfee Avenue to the west with single-family homes, a church, and an assisted living facility across the street (approximately 100 feet from the MacLaren Hall property), Kerrwood Street to the north with single-family homes across the street (approximately 50 feet from the MacLaren Hall property), Gilman Road to the east with single-family homes and Twin Lakes Elementary School across the street (approximately 50 feet from the MacLaren Hall property), and single-family homes to the south. Many of the residential properties in the neighborhood have several single-family homes on the same property.

Development is proposed on 8.19 acres of the 13.79-acre MacLaren Hall property (proposed development area). The proposed development area is roughly shaped in a "horseshoe" configuration and is generally bounded by Durfee Avenue to the west, Kerrwood Street to the north, Gilman Road to the east, and single-family residential homes to the south. A recently approved 5.6-acre community park project (not part of the proposed development but the park site is part of the proposed General Plan amendment, zone change, tentative tract map, and the Esperanza Village Specific Plan) is generally situated in the inner bend of the proposed development area. An aerial photograph depicting the MacLaren Hall property and the surrounding land uses is presented in **Figure 1**.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]: The proposed project involves the following:

- General Plan Amendment and Zone Change to change the General Plan land use designation and zoning of the 13.79-acre MacLaren Hall property from Public Facilities (PF) to Specific Plan (SP). With the proposed zone change, the MacLaren Hall property would be within the Esperanza Village Specific Plan (SP-5) Zoning District.
- Esperanza Village Specific Plan to guide future development of the 13.79-acre MacLaren Hall property.
- Tentative Tract Map to consolidate the two parcels (six lots) and create eight new parcels on the entire 13.79-acre MacLaren Hall property.
- Development of residential, non-residential mixed-use and County-related uses on 8.19 acres of the 13.79-acre Maclaren Hall property.
- Development Agreement between the developer and the City to define the rules, regulations, commitments, and policies of the residential and mixed-use development on 6.11 acres of the MacLaren Hall property.

Although the proposed General Plan Amendment, Zone Change, Specific Plan, and Tentative Tract Map would apply to the entire 13.79-acre MacLaren Hall property, development associated with the proposed project would occur on 8.19 acres of the property and the development agreement would be for the residential and non-residential mixed-use development. The remaining 5.6-acre portion of the MacLaren Hall property is not part of the 8.19-acre proposed development area and would be developed as a community park (MacLaren Community Park) separately from the proposed project. A Mitigated Negative Declaration (MND) for the 5.6-acre MacLaren Community Park project was adopted and the MacLaren Community Park project was

approved by the Los Angeles County (County) Board of Supervisors on October 19, 2021, in compliance with California Environmental Quality Act (CEQA) requirements. The proposed changes relevant to the community park are essentially nomenclature changes and would make no substantive changes to the previously proposed and approved park use. The community park project is not considered to be part of the proposed project for purposes of this document, but the community park project is a cumulative project to the proposed project analyzed in this document.

The proposed Esperanza Village Specific Plan would provide land use and development standards, as well as design guidelines, for the development and design of the MacLaren Hall property and would supplement other applicable regulations in the City's Zoning Code. The proposed Specific Plan would be the regulatory and land use policy document and would constitute the zoning for the 13.79-acre MacLaren Hall property. Any situation not specifically addressed by the proposed Specific Plan would be subject to the requirements of the El Monte Municipal Code (EMMC), provided that such regulations are not in conflict with the objectives of the proposed Specific Plan. The 5.6-acre community park would be exempt from the regulations and guidelines in the proposed Esperanza Village Specific Plan.

The proposed parcel diagram for the proposed project is shown in **Figure 2**. Of the eight parcels that would be created by the proposed Tentative Tract Map, seven parcels would be developed as part of the proposed project (the eighth parcel would be developed with the previously approved MacLaren Community Park). Four of the seven parcels would be developed with four new affordable apartment buildings (one building per parcel); one parcel would be developed with a new non-residential mixed-use building that would have community-serving facilities; one parcel would be developed with private driveways, surface parking, and common open space for the residential and non-residential mixed-use development; and one parcel would be developed with County-related uses.

Figure 3 is the site plan for the proposed project. The site plan for the County-related parcel is conceptual and is subject to change.

The residential parcels would be 3.64 acres in size. Four buildings totaling 406,135 square feet (340 residential units) would be constructed on the residential parcels. The residential structures would be four stories tall with a maximum height of 54 feet 6 inches. Each building would have podium parking at the ground level. Two of the residential structures (Buildings 1 and 2) would front Gilman Road and would consist of affordable housing for low- and extremely low-income individuals/households, including transitional age youths and the homeless. The other two residential structures (Buildings 3 and 4) would be situated towards the western portion of the MacLaren Hall property and would consist of affordable housing for low- and extremely low-income seniors, including the homeless. The residential units in Buildings 1 through 4 would include a mix of studios, one-, two-, and three-bedroom units. The size of each residential unit would range from approximately 475 square feet (studio) to 1,080 square feet (three-bedroom unit) in size.

The mixed-use parcel would be 0.5 acres in size. The mixed-use parcel would be developed with one 36,000-square foot non-residential structure (Building 5) that would consist of a mix of

community-serving facilities. Building 5 would be two stories tall and would have a maximum height of 49 feet 6 inches.

The circulation/common area parcels would be 1.97 acres in size. The parcel would have private driveways, surface parking areas, a drop-off area, and a common open space area.

The County-related parcel would be 2.08 acres in size. The County-related parcel would be developed by the County of Los Angeles and would be developed separate from the residential, mixed-use, and circulation/common area parcels. Development on the County-related parcel is conceptual and subject to change. However, for the purposes of analysis, it is assumed that the parcel would be developed with one building that would be 20,000 square feet to 40,000 square feet in size and up to three stories tall.

The following off-site improvements would also occur as part of the proposed project:

- Diagonal parking spaces could potentially be provided along the Kerrwood Street and Gilman Road rights-of-way adjacent to the MacLaren Hall property.
- Off-site water improvements on the east side of Durfee Avenue adjacent to the MacLaren Hall property.
- Undergrounding of overhead utility lines on Durfee Avenue and Gilman Road adjacent to the MacLaren Hall property.
- Sewer improvements on Farris Road between Durfee Avenue and Cogswell Road, approximately 0.3 mile from the project site.
- Enhanced pedestrian crossing on Gilman Road at Twin Lakes Elementary School and other potential traffic calming measures.
- A trail/path may potentially be installed along the southerly end of Twin Lakes Elementary School to connect the MacLaren Hall property and the surrounding neighborhood to Emerald Necklace Park and the San Gabriel River Trail.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]: The proposed project will facilitate the development of 340 residential units that are affordable to extremely low- and low-income individuals, of which a total of 170 units would be allocated to seniors. A two-story 36,000-square-foot building that would have a vocational center, medical clinics, and a senior health center would also be developed. The proposed project would provide needed community-serving facilities that would serve the residents of the MacLaren Hall property and the surrounding neighborhood. The Los Angeles County-related building would provide community-serving uses including County offices and may potentially include a clinic, a snack bar/café, and childcare center. The proposed Esperanza Village Specific Plan would provide land use and development standards, as well as design guidelines, for the development and design of the proposed project.

Existing Conditions and Trends [24 CFR 58.40(a)]: From the 1960s until the early 2000s, MacLaren Children's Center operated the MacLaren Hall property as a County facility housing foster youth for short-term stays. As part of the County's foster care system, MacLaren Children's Center provided temporary residential care for displaced children prior to being placed in foster homes; children spent varying amounts of time at the facility. In the 1980's,

MacLaren Children's Center had problems with inadequate care and overcrowding. Despite improvements, conditions continued to be inadequate, and the facility finally closed in 2003. Parts of the MacLaren Hall property are now occupied by the Department of Children and Family Services (DCFS) administrative offices, Alma Family Services, and a Department of Health Services (DHS) medical clinic.

The MacLaren Hall property currently has 12 structures (164,000 square feet in total) and open space areas that were designed and constructed in the mid-1970s for the MacLaren Children's Center. The buildings include an office building, a school/maintenance building, six dormitory buildings, a utilitarian cafeteria building, and three prefabricated trailers. The property has several large mature trees in small clusters. The open space areas consist primarily of flat terrain covered with grass. The south side of the school/maintenance building has a cement deck, a small pool shed building, one small pool, and a larger rectangular swimming pool.

Approximately 130,000 square feet of the existing buildings would be demolished as part of the adjacent MacLaren Community Park. Buildings that would be demolished for the community park include the office building, the school/maintenance building, and two prefabricated trailers. Existing mature trees and landscaping would also be removed. The demolition of these buildings, trees, and landscaping were assessed as part of the MacLaren Community Park project. Eight additional (vacant) structures would be demolished as part of the proposed project – one modular trailer, a cafeteria building, and six dormitory buildings. The cafeteria and dormitory buildings are located towards the southern portion of the MacLaren Hall property. The MacLaren Hall property is relatively flat. Vegetation on the property includes grass, weeds, trees, shrubs, and bushes.

Funding Information

Grant Number	HUD Program	Funding Amount
B-20-MC-060517 B-21-MC-060517 M-18-MC-060509 M-19-MC-060509 M-20-MC-060509 M-21-MC-060509 M-22-MC-060509 M-21-MP-060509	CDBG, HOME, or HOME ARP	$2,200,000

Estimated Total HUD Funded Amount: $2,200,000

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: $231,000,000

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note

applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The MacLaren Hall property is located approximately 1.6 miles southeast of the San Gabriel Valley Airport. The airport is located north of Valley Boulevard on the west side of Santa Anita Avenue between the roadway and the Rio Hondo channel (a regional flood control channel). Neither the Los Angeles County General Plan nor Los Angeles County Airport Land Use Plan identify the MacLaren Hall property as being located within the Airport Influence Area for this airport. The proposed project would not affect or be substantially affected by airport operations, and the MacLaren Hall property is not exposed to significant airport hazards due to landing and take-off cycles. The proposed project complies with 24 CFR Part 51 Subpart D. County of Los Angeles, *Los Angeles County General Plan, Figure 6.2: Airport Influence Areas Policy Map*, adopted October 6, 2015. Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan*, adopted December 19, 1991.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The MacLaren Hall property is located approximately 27 miles east of the Pacific Ocean. The property is located in an upland urban area with no Coastal Barrier resources. The proposed project does not conflict with the Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act. City of El Monte, *"Vision El Monte," El Monte General Plan*, June 2011.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The MacLaren Hall property is not located within a 100-year flood hazard area. A copy of the FEMA National Flood Hazard Layer FIRMette Panel Map for the project area is provided in **Appendix A**. The proposed project does not conflict with the Flood Disaster Protection Act and National Flood Insurance Reform Act. Federal Emergency Management Agency, *FEMA Flood Map Service Center*, https://msc.fema.gov/portal/search#searchresultsanchor, accessed July 2022.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	An air quality and greenhouse gas (GHG) emissions analysis was conducted for the proposed project as part of the Initial Study/Mitigated Negative Declaration (IS/MND) prepared in compliance with CEQA. The emissions calculation worksheets are provided in **Appendix B**. The air quality analysis was conducted in accordance with guidance and methodologies propagated by the South Coast Air Quality Management District (SCAQMD). The California Emissions Estimator Model (CalEEMod, version 2022.1) was used for quantifying air pollutant emissions that would be generated during construction and operation of the proposed project. The analysis concluded that construction emissions would not produce daily emissions in excess of any applicable regional or localized significance threshold established by the SCAQMD. Similarly, operational emissions from vehicle trips, energy use, and area sources would be below the SCAQMD thresholds. The thresholds were specifically developed to avoid exacerbation of air quality violations and not delay timely attainment of state and federal ambient air quality standards or impede the interim emission reductions specified in the SCAQMD Air Quality Management Plan, which was prepared to comply with the state and federal Clean Air Acts and amendments. The proposed project complies with the Clean Air Act. *Esperanza Village Draft Initial Study/Mitigated Negative Declaration,* August 2022.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The MacLaren Hall property is located approximately 27 miles east of the Pacific Ocean. The site is in an upland urban area with no Coastal zone resources. The proposed project does not conflict with the Coastal Zone Management Act. City of El Monte, *"Vision El Monte," El Monte General Plan, June 2011*.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	Two Phase I Environmental Site Assessment (ESA) were prepared for the MacLaren Hall property in September 2021 and July 2022. The Phase I ESAs identified a previously removed 5,000-gallon underground storage tank (UST); Polychlorinated biphenyls (PCB) waste with a Completed-Case Closed status dated December 27, 1996; asbestos containing waste, unspecified sludge waste and waste oil/mixed oil with inactive dates of

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		October 25, 2000, and September 10, 2002. Staining was also identified on and around the chiller in the kitchen and services area and the associated berm area. The staining around the chiller and berm area is considered a recognized environmental concern, and a Phase II subsurface sampling is recommended in and around the chiller and berm area to test for heavy metals, including chromium. The Phase I ESA also recommends that all remaining chemicals, tanks, containers, piping, and residues should be removed and disposed off-site prior to demolition. The Phase I ESA recommends that the water wells are managed accordingly and abandoned, if necessary. The removal of chemicals, tanks, containers, piping, and residues would be handled in compliance with applicable federal, state, and local standards and regulations. The buildings on the MacLaren Hall property have the potential to have asbestos containing materials (ACM) and/or lead-based paint (LBP) since the buildings were constructed before the 1980s. State-certified contractors would perform inspection, testing, and removal (abatement) of ACM and LBP in compliance with applicable health and safety and hazardous materials regulations. In addition to the removal of ACM, and/or LBP, construction of the proposed project would involve the temporary use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. There is a potential for the release of fuels and/or lubricants during construction. Soil that would be removed are required to be tested to ensure that the soils are not contaminated. If contamination were to be encountered, the soils would be treated in accordance with applicable regulations. All hazardous materials, including all remaining site chemicals, tanks, containers, piping, and residues, would be handled in compliance with applicable standards and regulations. The proposed project includes operations and maintenance activities that would involve the use, storage, and periodic transport of hazardous materials to and from the project site. Typical hazardous materials may include various potentially hazardous materials used for maintenance (fertilizers, pesticides, cleaning solutions, paints, lubricants). The use of common hazardous substances would be similar to those that are typically used for residential uses, offices, and medical clinics. Proper handling, health and safety practices, hazard communication, and

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		emergency response training would be provided to all personnel responsible for using hazardous materials. Mitigation Measure **HH-1** would ensure that potential heavy metals around the chiller and berm area are properly identified and removed. Mitigation Measure **HH-2** would ensure that the management and abandonment of the water wells would not create a significant hazard to the public. The project site and the proposed project will comply with 24 CFR Part 50.3(I) & 58.5(i)(2). Converse Consultants, *Phase I Environmental Site Assessment Report: 4024 Durfee Avenue, El Monte, California*, July 27, 2022. Brown and Caldwell, *Phase I Environmental Site Assessment, MacLaren Hall, 4024 Durfee Avenue, El Monte, California 91732*, September 17, 2021.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	A Biological Recourses Constraints Analysis was conducted for the 13.79-acre MacLaren Hall property by a professional biologist on May 6, 2020, and can be found in **Appendix C**. The following discussion summarizes the biological resources evaluation. The MacLaren Hall property is in an urban area surrounded by residential uses, a church, and an elementary school. Existing plant life on the property is limited to non-native and ornamental species used for landscaping. All are common non-native landscape species. While the property includes trees and grassy areas, no natural habitats exist on the property, and the property has no value as a habitat for special status species. An abundance of mature trees and open areas coupled with minimal human activity makes the property attractive to many bird species. None of the species observed on the MacLaren Hall property are considered particularly sensitive and none are specifically protected by state or federal law. Although the proposed project would remove trees on the MacLaren Hall property, which may provide nesting habitat for birds, Mitigation Measure **BR-1** would be implemented to ensure that nesting birds would not be adversely affected by the proposed tree removal. Suitable habitat for special-status wildlife species does not occur within the MacLaren Hall property. Implementation of the proposed project will have no effect on any endangered species and is in compliance with the Endangered Species Act.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		Biological Assessment Services, Biological Resources Constraints Analysis, MacLaren Hall, 4024 Durfee Ave., El Monte CA, May 6, 2020.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	Based on the data and findings in the Phase 1 (ESAs, the MacLaren Hall property does not contain any explosive or flammable hazards. The proposed project will comply with 24 CFR Part 51 Subpart C. Converse Consultants, *Phase I Environmental Site Assessment Report: 4024 Durfee Avenue, El Monte, California*, July 27, 2022. Brown and Caldwell, *Phase I Environmental Site Assessment, MacLaren Hall, 4024 Durfee Avenue, El Monte, California 91732*, September 17, 2021.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	Due to its urban setting, the MacLaren Hall property and its surroundings are not included in the Farmland Mapping and Monitoring Program of the California Department of Conservation. In addition, the MacLaren Hall property is not located within a zone designated for agricultural use. The property is currently zoned PF and have structures that were associated with the former MacLaren Children's Center. No agricultural uses or related operations are present within the MacLaren Hall property or in the surrounding area. .Implementation of the proposed project will have no effect on any farmland and is in compliance with the Farmland Protection Policy Act. California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed June 2022.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	As previously discussed, the MacLaren Hall property is not located within a flood hazard area. A copy of the FEMA National Flood Hazard Layer FIRMette Panel Map for the project area is provided in **Appendix A**. The proposed project does not conflict with Executive Order 11988. Federal Emergency Management Agency, *FEMA Flood Map Service Center*, https://msc.fema.gov/portal/search#searchresultsanchor, accessed July 2022.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	A Historic Resource Evaluation was conducted for the 13.79-acre MacLaren Hall property on May 20, 2020, and can be found in **Appendix D**. While the MacLaren Hall property has a long history dating back to the 1930s, buildings on the property all

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		date from 1975 to 1976. The buildings were part of the MacLaren Hall facility and were designed to house foster youth for short-term stays. The MacLaren Hall facility experienced years of public scrutiny and problems. After 28 years of operation, MacLaren Hall closed in 2003. Since 2003, portions of the MacLaren Hall buildings have remained in use as administrative offices for Los Angeles County departments. The MacLaren Hall property currently contains 12 buildings and open space areas. The MacLaren Hall buildings and site plan were designed by William Allen, who is not considered to be a master architect. The general contractor for the facility, the Vanlar Construction Co. of Long Beach, is not considered to be master builders or craftsmen. The building materials are functional and basic, and the landscape design is unremarkable and typical of office buildings of the late 20th century. Additionally, there is no evidence that any historic persons, events or broad patterns of history are associated with the MacLaren Hall property. A tall concrete wall generally surrounds most of the perimeter of the MacLaren Hall property. In some areas, the interior side of the concrete wall is painted with images, such as cartoon characters and people. The interior side of the wall also has long stretches that do not have any paintings. Research inquiries into County records and staff sources have yielded no information on the provenance of the paintings, and there is no evidence that the paintings are considered to be works of art. As part of the historic resource evaluation, a historic resources records search was conducted at the South Central Coastal Information Center (SCCIC), California State University, Fullerton on June 4, 2020. The rolls of the National Register of Historic Places, California Historical Landmarks, California Points of Historical Interest, the California State Historical Resources Inventory, and Los Angeles County Historical Landmarks Registry were examined. The MacLaren Hall property was not identified in any historic resources survey or determined or designated as a historic resource either in terms of individual buildings or as a historic district. In addition to the historic resources records search, a cultural resources records search was conducted at SCCIC on April 26, 2021. Results of the records search indicated that two cultural resources have been

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		identified and five previous cultural investigations have been reported within 0.25 miles of the MacLaren Hall property. However, no cultural resources have been identified or reported on the property. The MacLaren Hall property and the existing buildings on the property are not listed in the National Register of Historic Places, California Historical Landmarks, California Points of Historical Interest, the California State Historical Resources Inventory, and Los Angeles County Historical Landmarks Registry. Additionally, the historic resource evaluation determined that the property and the buildings do not meet the criteria to be eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or as a Los Angeles County Landmark either for any individual buildings or as a historic district. The majority of the buildings on the MacLaren Hall property (with the exception of six dormitories, the cafeteria building, and a modular trailer) would be demolished as part of the adjacent park project. The study concluded that "no historic properties will be affected by the proposed project. This finding complies with the National Historic Preservation Act of 1966, particularly Sections 106 and 110; 36 CFR Part 800. On April 27, 2022, the City of El Monte submitted a Sacred Land File Search request to the Native American Heritage Commission (NAHC) for the MacLaren Hall property. On May 27, 2022, NAHC provided the results of Sacred Lands File Search. The Sacred Lands File Search results were "positive." As such, NAHC indicated the Gabrieleño Band of Mission Indians – Kizh Nation should be contacted. NAHC also provided a Tribal Consultation List of other California Native American tribes traditionally and culturally affiliated with the project area. The City received a response from the Gabrieleño Band of Mission Indians – Kizh Nation. The Tribe provided maps of some of the prominent tribal cultural features, such as village sites near the San Gabriel River that are associated with the Kizh Nation. The Tribal representative also expressed concerns that tribal cultural resources, including human remains associated with the Tribe, may be located in the soils on the MacLaren Hall property because the NAHC Sacred Lands File Search results were positive and the property is situated in proximity to the San Gabriel River. El Monte staff held a conference call

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		with representatives of Gabrieleño Band of Mission Indians – Kizh Nation on August 4, 2022. As a result of the consultation process, three mitigation measures were identified and are included in the MND (**TR-1** through **TR-3**). These measures would reduce impacts to a less than significant level. Kaplan Chen Kaplan, *MacLaren Hall Campus-DCFS, County of Los Angeles, El Monte, California, Historic Resource Evaluation*, May 20, 2020. Native American Heritage Commission, *Letter Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB 52), Public Resources Code §21080.1, §21080.3.1 and §21080.3.2, Esperanza Village Project, Los Angeles County*, May 27, 2022.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	A noise analysis was conducted for the proposed project as part of the IS/MND prepared in compliance with CEQA requirements. The noise calculation worksheets are provided in **Appendix E**. While the proposed project would be constructed in a manner typical of urban infill projects and would not require unusually noisy activities, such as pile driving, the incremental noise level increase may be disruptive to nearby land uses. The analysis concludes that without mitigation, construction activities would potentially result in significant noise impacts. To reduce construction noise levels at noise sensitive uses, the proposed project would be required to implement Mitigation Measures **N1** through **N5**. Mitigation Measure **N1** would require construction equipment to be equipped with mufflers to reduce engine noise, which would reduce noise levels by approximately 5 dB. Mitigation Measure **N2** would require the existing concrete wall along the southern perimeter of the MacLaren Hall property to remain in place until grading activities have been completed and placement of plywood after that, if feasible, followed by a permanent wall adjacent to residences. Mitigation Measures **N3** through **N5** would also help control noise levels by locating construction staging areas away from noise sensitive receptors, establishing a noise disturbance coordinator to address noise complaints. Operational noise, such as noise from heating, ventilation, and air conditioning (HVAC) equipment, vehicles at the proposed podium parking and surface parking areas, outdoor common areas, and off-site

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		mobile source noise, would not result in ambient noise levels at noise sensitive receptor to noticeably increase or exceed EMMC noise standards. The proposed project will comply with the Noise Control Act, as amended by the Quiet Communities Act. City of El Monte, *Esperanza Village Draft Initial Study/Mitigated Negative Declaration*, August 2022.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	There are no sole source aquifers designated within the San Gabriel River watershed where the project will be implemented. This is based on a review of the Region IX Environmental Protection Agency's published list of sole source aquifers in California. A search was conducted through the Regional Water Quality Control Board's online database Geotracker to identify the presence of any natural underground water wells. The search yielded no results. With no impact to such an aquifer, the proposed project can be implemented in conformance with the Safe Drinking Water Act, as amended. EPA, *Designated Sole Source Aquifers in EPA Region IX* https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b and https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4024+Durfee+Avenue.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	A review of the U.S. Fish and Wildlife Service National Wetlands Inventory, Wetlands Mapper indicated that the MacLaren Hall property does not contain any state or federally protected wetlands. The San Gabriel River is approximately 570 feet east of the MacLaren Hall property. The proposed project does not involve any activities that would alter the San Gabriel River and would not have any effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Development of the MacLaren Hall property would not conflict with Executive Order 11990. U.S. Fish & Wildlife Service, *National Wetlands Inventory*, *https://www.fws.gov/wetlands/Data/Mapper.html*.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	The MacLaren Hall property is located in an urban area within the City of El Monte. While the San Gabriel River is approximately 570 feet east of the MacLaren Hall property, there are no designated surface water areas within the City that are subject to the Wild and Scenic Rivers Act. City of El Monte, *"Vision El Monte," El Monte General Plan*, June 2011.
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	The MacLaren Hall property is located in an Environmental Justice community since over 50 percent of the community's population are minorities and the community is considered low-income based on the U.S. Department of Housing and Urban Development (HUD) threshold of income limits. According to the U.S. Census, 63 percent of the City's population is Hispanic and 31 percent of the population is Asian in 2021. The median household income is $53,874. The median household income for Los Angeles County is $71,358. Based on the HUD threshold of income limit, a community is considered low-income if the percent of low-income is at least 10 percent higher than the Los Angeles County average, or the median household income is less than 80 percent of the median household income for Los Angeles County ($57,086). The proposed project consists of the development of 340 residential units that are affordable to extremely low- and low-income individuals, of which 170 units would be allocated to seniors. A two-story 36,000-square-foot building that would have a vocational center, medical clinics, and a senior health center would also be developed. The Los Angeles County-related portion of the proposed project would be developed by the County and would include a building that could be up to three stories tall and up to 40,000 square feet in size. Uses for the County-related building would be oriented towards the community and may include a clinic, a snack bar/café, childcare center, and County-related offices. The non-residential portions of the development would serve the residents of the proposed development and the surrounding community. Types of facilities proposed would have a positive effect on the community, and the proposed project will not have any adverse human health or environmental effects on minority and low-income populations. This project does not have elements that would

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		adversely affect minority, low-income, or indigenous populations, or tribes. The proposed project would either have beneficial impacts or no significant impacts. The project will receive financial assistance from the HUD. The project's implementation will further economic development and revitalization efforts within this area. Therefore, the proposed project would not result in disproportionately high and adverse effects to Environmental Justice communities. U.S. Census Bureau, *QuickFacts, El Monte City, California*, https://www.census.gov/quickfacts/elmontecitycalifornia. U.S. Census Bureau, *QuickFacts, Los Angeles County*, California, https://www.census.gov/quickfacts/losangelescountycalifornia.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]: Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed, and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified**.

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The MacLaren Hall property has an existing General Plan land use designation and zoning of Public Facilities (PF). The proposed project would construct 340 multi-family affordable residential units, 36,000 square feet of community-serving facilities, and up to 40,000 square feet of County-related uses. To comply with the City's General Plan land use designation and zoning, the proposed project would require a General Plan amendment and a zone change to change the General Plan land use designation and zoning to Specific Plan (SP). According to EMMC Section 17.130.010, the purpose of the SP zone is to serve as a planning tool to enhance development options when current zoning does not adequately provide for an optimal design or development program. The intent of the SP zoning designation is to promote comprehensive planning for quality land development; to encourage a more efficient use of land, to encourage a range of housing and employment activities so as to give imagination and variety in the physical development pattern of the City; to encourage the implementation of sustainable community design principles, use of renewable construction materials, and incorporation of environmental friendly design concepts when possible; and to facilitate development in accordance with the General Plan by permitting greater flexibility and encouraging more creative design development projects. The uses and types of development proposed in the SP Zoning District are required to maintain and enhance the character of the surrounding area, as well as integrate with the surrounding uses. The standards in the proposed Esperanza Village Specific Plan are designed to ensure that future development on the MacLaren Hall property is compatible with the surrounding uses. Massing of the proposed project would be broken up into a series of separate buildings. The overall massing of the proposed project would modulate in height, scale, and proportion, allowing the proposed buildings to transition from the surrounding one- and two-story residential buildings. The proposed surface parking lot at the south end of the MacLaren Hall property and the proposed roof decks of Buildings 1 through 4 along Durfee Avenue and Gilman Road would allow the proposed buildings to step back further from the existing residential structures to reduce the building scale and to allow the proposed buildings to transition to a taller height. The roof decks are strategically placed to maintain the privacy of the surrounding residential properties. A variety of rooflines would be provided to reduce the building scale of the proposed buildings. Pedestrian-scale features would be provided at the ground level.
Soil Suitability/ Slope / Erosion/ Drainage / Storm Water Runoff	2	The MacLaren Hall property is located in an urbanized area that has been subject to previous grading and development. The project site and the surrounding area are relatively flat with no steep slopes or embankments nearby. The proposed project would be constructed in accordance with the California Building Code (CBC) which contains specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. It also regulates grading activities, including drainage and erosion control. In addition, the proposed project would comply with the recommendations contained within the site-specific geotechnical report prepared for the proposed project. According to the Geotechnical Investigation Report, the MacLaren Hall property consists of fill soils that were placed during previous site grading operations and natural alluvial soils to the maximum depth explored of 100.9 feet below ground surface. The fill soil encountered consists of primarily silty sands, sandy silt, and sands. The alluvial soil deposits below the fill consist of silty sands, sands, and sands

Environmental Assessment Factor	Impact Code	Impact Evaluation
		with gravel. The soils are moderately dense near the surface and generally becomes denser with depth. The MacLaren Hall property has very low expansion potential. During construction, surface water quality could potentially be affected by loose soils, debris, construction wastes, and fuels that could be carried off-site by surface runoff in into local storm drains, which drain into water resources. However, the proposed project would be required to comply with local, state, and federal regulations and standards related to minimizing potential erosion impacts, including the latest requirements of the City-enforced National Pollution Discharge Elimination System (NPDES) Construction General Permit, standard erosion control best management practices (BMPs), and applicable pollution control and erosion protection measures pursuant to the City's Stormwater Management and Discharge Control ordinance (EMMC Chapter 13.16) and Grading and Erosion Control ordinance (EMMC Chapter 15.40). The NPDES Construction General Permit requires the development of a Stormwater Pollution Prevention Plan (SWPPP), which the City would review and approve prior to issuing any grading or building permit for the proposed project. The SWPPP would include BMPs to control sedimentation and erosion. Operations of the proposed project would not cause soil erosion or the loss of topsoil. Converse Consultants, *Geotechnical Investigation Report: Esperanza Village Project, 4024 Durfee Avenue, El Monte, California*, July 29, 2022.
Hazards and Nuisances including Site Safety and Noise	3	As discussed in "Contamination and Toxic Substances", above, the Phase I ESA prepared for the MacLaren Hall property recommends that subsurface sampling be conducted in and around the chiller and berm area for heavy metals**,** including chromium. Mitigation Measure **HH-1** would require that Phase II ESA be prepared to ensure that potential heavy metals around the chiller and berm area are properly identified and removed. The project site is subject to typical urban hazards such as aircraft operations, substantial onsite contamination, and seismic/geotechnical hazards. The site is subject to urban level background noise from and existing traffic that will be mitigated for the site to be suitable for the proposed project. On-site security features would reduce the demand on police protection services, and the proposed project would be designed to accommodate emergency access and comply with the County Fire Code and LACFD requirements.
Energy Consumption	2	Construction activities would consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment, round-trip construction worker travel to the MacLaren Hall property, and delivery and haul truck trips. Construction activities would comply with CARB's "In-Use Off-Road Diesel Fueled Fleets Regulation," which limits engine idling times to reduce harmful emissions and reduce wasteful consumption of petroleum-based fuel. Additionally, the proposed project would comply with the California Renewable Portfolio Standard, the Clean Energy and Pollution Reduction Act of 2015 (SB 350). Compliance with local, state, and federal regulations would reduce short-term energy demand during proposed project construction to the extent feasible, and proposed project construction would not result in a wasteful or inefficient use of energy. Energy use associated with operation of the proposed project would be typical of residential uses, community-serving facilities, and offices, requiring electricity and natural gas for interior and exterior building lighting; HVAC; electronic equipment; machinery; refrigeration; appliances; security systems; and more. Maintenance activities during operations, such as landscape maintenance, would

Environmental Assessment Factor	Impact Code	Impact Evaluation
		involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed residential units. However, the proposed project would not involve any characteristics or processes that would require the use of equipment that would be more energy intensive than is used for comparable activities or involve the use of equipment that would not conform to current emissions standards and related fuel efficiencies. The State of California's Code of Regulations (CCR) has several building standards, including Title 24 that could apply towards reducing the energy impacts of the proposed project. The proposed project would be subject to the California Green Building Standards Code, which requires new buildings to reduce water consumption, employ building commissioning to increase building system efficiencies for large buildings, divert construction waste from landfills, and install low pollutant-emitting finish materials. The County has adopted green building standards (LACC Title 31 – Green Building Standards Code). These standards apply to new building construction and are designed to reduce energy consumption during project operation. The City of El Monte has also adopted the County's Green Building Standards Code. The proposed project would be required to comply with the County's green building standards, in addition to the federal and state regulations. The proposed project would include sustainability features that would reduce the energy consumption, such as the installation of PV solar panels over parking spaces on the south side of Building 2, as well as roof-mounted PV solar systems on the proposed buildings. Parking stalls for electric vehicles would also be provided. These design features, as well as compliance with the state's Title 24 building efficiency and green building standards, would ensure that the proposed project's operation would not be wasteful, inefficient, or unnecessarily consume energy resources. The proposed project would be required to meet all building standards applicable at the time the applicant submits for a building permit. These requirements may include the LACC Title 31 (Green Building Standards Code) and the state CCR Title 24 Part 11 (California Green Building Standards Code) that are in effect at the time of the building permit application. The proposed project would provide needed community-serving facilities that would serve the residents of the proposed development and the surrounding neighborhood, which would potentially reduce vehicle miles traveled (VMT) and associated energy use. The proposed project does not include any features (i.e., substantially alter energy demands) that would interfere with implementation of these state, County, and City codes and plans.
SOCIOECONOMIC		
Employment and Income Patterns	1	The proposed project will facilitate the development of 340 residential units that are affordable to extremely low- and low-income individuals, of which a total of 170 units would be allocated to seniors. Construction of the residential buildings is estimated to generate approximately 600 temporary construction jobs. A two-story 36,000-square-foot mixed-use building that would have a vocational center, medical clinics, and a senior health center would also be developed. The mix-use building is estimated to generate approximately 60 temporary construction jobs and 120 full-time new jobs. The County-related parcel would be developed by the County of Los Angeles and would include a building that could be up to three stories tall and up to 40,000 square feet in size. Uses for the building on the County-related parcel may potentially include a clinic, a snack bar/café, childcare

Environmental Assessment Factor	Impact Code	Impact Evaluation
		center, and County-related offices. The proposed uses are conceptual and the number of jobs that could be generated is currently unknown. However, it is expected that workers from nearby communities would be available to serve the needs of the proposed project. Employees are not expected to relocate to the surrounding area and, thus, would not result in a substantial permanent increase in population. The existing uses on-site currently have approximately 195 employees (155 DCFS, 15 DHS, and 25 from Alma Family Services). According to Southern California Association of Governments (SCAG), employment in the City of El Monte is projected to increase from 31,345 in 2020 to 33,020 in 2030. The proposed project would provide needed community-serving facilities that would serve the residents of the proposed development and the surrounding neighborhood.
Demographic Character Changes, Displacement	2	According to the 2020 Census, the average annual household income in El Monte was $68,594, while the median household income was $53,874 per year. Residents aged 25 to 44 on average earned $53,128, while those between 45 and 64 years old on average had a median wage of $61,712. In contrast, people younger than 25 and those older than 65 earned less, at an average of $51,900 and $37,114, respectively. In 2019, El Monte had a population of 116,000 people with a median age of 35.7 and a median household income of $49,003. Between 2018 and 2019 the population of El Monte, declined from 115,669 to 115,517, a −0.131% decrease and its median household income grew from $47,121 to $49,003, a 3.99% increase. Approximately 22 percent of the population earns less than $25,000 per year, 20 percent earns between $25,000 - $44,000 per year, 24 percent earns between $45,000 - $74,000 per year, 27 percent earns between $75,000 - $149,000 per year, and 8 percent earns more than $150,000. As discussed under "Environmental Justice", above, the proposed project is located in a low income and minority community. The proposed project is located in a developed portion of the City with a mix of single- and multi-family residential uses. The proposed project would contribute to the City's "fair share" of regional housing needs as the proposed project would provide 340 residential units that are affordable to extremely low- and low-income individuals, of which 170 units would be allocated to seniors. The proposed project is not expected to change the demographic character of the surrounding neighborhood. The dormitories on the MacLaren Hall property are unused, and no residents currently live on the project site. Therefore, the proposed project would not displace existing people or housing.
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	The proposed project would result in a net increase of 340 residential units, of which 170 units would be allocated to low- and extremely low-income individuals and 170 units would be allocated to low- and extremely low-income seniors. The 170 units that would be allocated to seniors are not expected to generate any school-age children or increase the demand for school services. The remaining 170 units are estimated to generate approximately 120 students to the school districts serving the City. which would potentially generate approximately 20 new students (68 grades K-5 students, 17 grades 6-8 students, and 34 grades 9-12 students). The MacLaren Hall property is located within Mountain View School District and El Monte Union High School District. The MacLaren Hall property is located

Environmental Assessment Factor	Impact Code	Impact Evaluation
		within the school assignment boundaries of Twin Lakes Elementary School, Madrid Middle School, and Mountain View High School. Although Fernando R. Ledesma High School is approximately 0.2 mile from the property, the school does not specifically serve the project site as it is a continuation high school for youths who are at risk of not graduating from high school. The applicant would be required to pay developer school impact fees to the Mountain View School District and El Monte Union High School District. Pursuant to Section 65995(3)(h) of the California Government Code. The payment of statutory fees "is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Additionally, the proposed project would develop a vocational training center that would serve the residents of the proposed development and the surrounding community. There are no cultural facilities in the vicinity of the Maclaren Hall property. The proposed project would be required to comply with the City of El Monte's Art in Public Places Program, which was developed to provide a collection of nationally recognized, permanent outdoor artwork throughout the City to be of public benefit. The proposed project would create a mural on the north side of Building 1. The mural would be displayed in an area that would be visible to the public from MacLaren Community Park. Therefore, while the proposed project's implementation will result in an incremental increase in the demand for educational and cultural facilities, the proposed project would not have a significant impact on these facilities.
Commercial Facilities	2	No commercial uses or businesses will be dislocated with the proposed project's implementation. Access to commercial facilities is available to the MacLaren Hall property within walking distance and by the El Monte Trolley (the nearest Trolley stop is across the street from the MacLaren Hall property at the corner of Kerrwood Street and Durfee Avenue).
Health Care and Social Services	2	An assisted living facility is located approximately 100 feet west and a subacute and rehabilitation center is located approximately 260 feet southwest of the MacLaren Hall property. These facilities and other health care facilities will not be physically impacted by the proposed development. On the contrary, the proposed project would increase the amount of health care and social service facilities as it would develop a two-story 36,000-square-foot building that would have a vocational center, medical clinics, and a senior health center. The County-related development would include a building that could be up to three stories tall and up to 40,000 square feet in size. Uses for the building on the County-related parcel may potentially include a clinic, a snack bar/café, childcare center, and County-related offices.
Solid Waste Disposal / Recycling	2	The City contracts with Valley Vista Services to provide refuse and recycling services to residents and businesses in the City. Solid waste generated during operations of the proposed project could potentially be sent to Lancaster Landfill, Chiquita Canyon Sanitary Landfill, and/or Victorville Sanitary Landfill. The permitted daily intake capacity at the three landfills is 20,100 tons per day. The proposed project is estimated to generate 438.2 tons of solid waste per year, or approximately 1.2 tons of solid waste per day, which represents less than 0.1 percent of the permitted daily intake capacity at the three landfills. Public Resources Code (PRC) Section 41780.01(a) states that it is California's policy goal to reduce, recycle, or compost at least 75 percent of solid waste

Environmental Assessment Factor	Impact Code	Impact Evaluation
		generated by 2020, and annually thereafter. The proposed project would be required to comply with these and other applicable regulations related to solid waste, including CalGreen Code Section 4.408 and EMMC Section 8.20.261. Waste generated during construction and operation of the proposed project is not expected to be in quantities considered in excess of State or local standards, or in excess of the capacity of local infrastructure, or that could otherwise impair the attainment of solid waste reduction goals. CalRecycle, *Chiquita Canyon Sanitary Landfill (19-AA-0052)*, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3574?siteID=1037, accessed July 2022. CalRecycle, *Lancaster Landfill and Recycling Center (19-AA-0050)*, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3571?siteID=1035, accessed July 2022. CalRecycle, *Victorville Sanitary Landfill (36-AA-0045)*, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1870?siteID=2652, accessed July 2022.
Wastewater / Sanitary Sewers	2	Wastewater generated from the MacLaren Hall property is collected by sewer pipelines that are maintained by the City's Public Works Department. Wastewater collected by the City is then directed to the Sanitation Districts of Los Angeles County (LACSD) trunk sewer pipelines where wastewater is conveyed to the LACSD Whittier Narrows Water Reclamation Plant (WNWRP). As part of the proposed project, approximately 2,000 linear feet off-site, sewer improvements would be made on Farris Road between Durfee Avenue and Cogswell Road, approximately 0.3 mile from the project site. The WNWRP treats approximately 9.1 million gallons per day (mgd) of wastewater and has the capacity to treat up to 15 mgd of wastewater, which leaves an available capacity of 5.9 mgd. The proposed project is estimated to generate approximately 75,840 gallons per day of wastewater, which is approximately 1 percent of the available capacity at WNWRP. The proposed project will not result in the remaining capacity being exceeded. In addition, the City requires that the applicant pay a fair share contribution to improve the sewers that serve the proposed development. The proposed project would improve the sewer line in Farris Road between Durfee Avenue and Cogswell Road as their fair share contribution to the sanitary sewers that serve the MacLaren Hall property. Los Angeles County Sanitation Districts, *Who We Are and What We Do for You, Table 2: Level of Treatment, Capacity, Flow*, https://www.lacsd.org/services/wastewater-programs-permits/wastewater-revenue-program/who-we-are-what-we-do-for-you, accessed July 2022.
Water Supply	2	As part of the proposed project, off-site water improvements would be made on the east side of Durfee Avenue adjacent to the MacLaren Hall property to connect to City's existing potable water system. The MacLaren Hall property lies within the service area for the San Gabriel Valley Water Company. According to the Water Company's 2020 Urban Water Management Plan (UWMP), the population in the San Gabriel Valley Water District's service area was approximately 256,335 in 2020 and is projected to increase to 273,024 in 2045. The San Gabriel Valley Water Company is projected to meet future water demands for normal, single-dry, and multiple-dry year conditions through 2045. The estimated water demand of the proposed project would be typical for residential, community-serving, and office-related uses and is not expected to

Environmental Assessment Factor	Impact Code	Impact Evaluation
		exceed available supplies or the available capacity within the distribution infrastructure that would serve the proposed development. The proposed project is estimated to increase population by up to approximately 1,316 persons, which would be about eight percent of the Water Company's projected service area population increase. The proposed project would increase water demand by approximately 91,008 gallons per day, or 102 acre-feet per year, which represents 0.3 percent of the Water District's available water supply for a normal year and single dry year, and 0.2 to 0.3 percent of the available water supply for multiple dry year. As the proposed project would be within the SCAG population forecast, water demand associated with the proposed project has been accounted for in the 2020 UWMP. Additionally, the proposed project would be required to comply with CalGreen Code Sections 4.303 and 4.304, which require indoor and outdoor water conservation measures to be implemented for residential development, such as low flush toilets, aerators on sinks and showerheads, water efficient appliances, and water-efficient automatic irrigation system controllers. Prior to the issuance of the building permit, the applicant would be required to obtain a will-serve letter from the San Gabriel Valley Water Company to ensure that sufficient water resources are available to supply water to the proposed development. The estimated water demand of the proposed project is not expected to exceed available supplies or the available capacity within the distribution infrastructure that would serve the proposed development. San Gabriel Valley Water Company, *Final 2020 Urban Water Management Plan and Water Shortage Contingency*, June 2021, https://wuedata.water.ca.gov/public/uwmp_attachments/3740369498/FINAL%20San%20Gabriel%20Valley%20Water%20Company%202020%20UWMP.pdf.
Public Safety – Police, Fire and Emergency Medical	2	The El Monte Police Department provides police protection services to residents and businesses within the City. The El Monte Police Department is located at 11333 Valley Boulevard, approximately 1.8 "road miles" west of the MacLaren Hall property. On-site security features would reduce the demand on police protection services, and the proposed project would not increase demand on police protection services in a manner that would adversely affect the El Monte Police Department service ratios, response times, or other performance objectives. The City of El Monte contracts with the County of Los Angeles Fire Department (LACFD) for fire and paramedic services. LACFD Stations 167 and 168 are the closest fire stations to the MacLaren Hall property. Station 167 is approximately 1.2 "road miles" northwest of the property at 11757 Bryant Road, and Station 168 is approximately 1.1 "road miles" southwest of the property at 3207 Cogswell Road. At these distances, the two fire stations would have a maximum response time of five minutes or less. The proposed project would be constructed to comply with the requirements of the County's Fire Code, which requires adequate fire flow for the proposed development, fire prevention and suppression measures, fire access, and a sufficient number of hydrants. In addition, the proposed project would be designed to accommodate emergency access to and within the MacLaren Hall property. As the proposed project would be required to comply with the County Fire Code and LACFD requirements, the proposed project would not increase demand on fire protection services in a manner that would adversely affect LACFD service ratios, response times, or other performance objectives.

Environmental Assessment Factor	Impact Code	Impact Evaluation
Parks, Open Space and Recreation	2	According to the Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, the City has approximately 44.2 acres of existing parks and recreational facilities. MacLaren Community Park will be adjacent to the proposed development and would likely be used by residents of the proposed project. With the addition of MacLaren Community Park, the City will have approximately 49.8 acres of parks and recreational facilities. The proposed project would result in a net population increase of up to approximately 1,316 persons. The population increase would generate direct demand on parks and recreational facilities. The proposed project would include on-site courtyards, roof decks, and ground-level open space areas. These open space areas include amenities for outdoor dining and passive recreation. The project applicant would also be required to pay a development impact fee to pay for any additional park facilities, vehicles, equipment, and services required as a result of the proposed project. Any additional park services required as a result of the proposed project would be mitigated by the applicant paying the development impact fees. County of Los Angeles, *Los Angeles Countywide Comprehensive Park & Recreation Needs Assessment, Appendix A: Study Area Profiles*, May 9, 2016, https://lacountyparkneeds.org/wp-content/root/FinalReportAppendixA/StudyArea_115.pdf, accessed July 2022.
Transportation and Accessibility	2	The proposed project would be located within walking distance of the City's Blue Route trolley stop, approximately 135 feet northwest of the MacLaren Hall property on Durfee Avenue, north of Kerrwood Street. The Blue Route connects the MacLaren Hall property to other local trolley routes and the regional transit system. From the MacLaren Hall property, the Blue Route also connects to Foothill Transit Bus Lines 190 and 488 along Ramona Boulevard. The nearest bus stop for Foothill Transit Bus Lines 190 and 488 is approximately 800 feet northwest of the project site. The proposed project does not include components that would disrupt services to local trolley routes and the regional transit system. Class II bicycle lanes are located along both sides of Durfee Avenue adjacent to the MacLaren Hall property. The proposed project does not include components that would interfere with the use of these bicycle lanes. It would include long-term bicycle parking at the four residential buildings, and short-term bicycle parking at the residential and non-residential mixed-use buildings. The proposed project would provide traffic calming measures along Durfee Avenue and Gilman Road and may improve the proposed project and neighborhood's connection to the San Gabriel River Trail by potentially providing a pedestrian trail/path along the southerly end of Twin Lakes Elementary School. According to the traffic impact analysis for the proposed project, which can be found in **Appendix F**., the proposed project would generate a net total of up to 3,178 daily vehicle trips, of which up to 295 trips would be during the AM peak hour and up to 265 trips would be during the PM peak hour. The traffic impact analysis evaluated LOS at four study intersections (Gilman Drive/Ramona Boulevard, Durfee Avenue/Ramona Boulevard, Durfee Avenue/Kerrwood Street, and Durfee Avenue/Deana Street). According to the traffic impact analysis, the LOS at the Durfee Avenue/Ramona Boulevard intersection is projected to worsen as this intersection is a two-way stop-controlled intersection with stop-sign controlled approach on Durfee Avenue. Although an increase in delay is projected, the proposed project would not cause the traffic signal warrant to be met, and a fair-share financial contribution by the

Environmental Assessment Factor	Impact Code	Impact Evaluation
		proposed project toward future signalization of the intersection is recommended. Consistent with the traffic impact analysis, the proposed project would contribute to the fair-share financial contribution towards the future signalization of the intersection. Vehicle miles traveled (VMT) measures the amount and distance of vehicle travel attributed to a project or use and is now the primary metric used in the evaluation of traffic impacts. Low VMT areas are areas in the City where VMT falls below the City's adopted threshold of significance. Low VMT areas likely already has a good mix of uses and adding additional uses in this area would provide for less and/or shorter trips and bundling of trips. The San Gabriel Valley Council of Governments VMT Evaluation Tool was used to review the screening potential for the proposed project. Based on the results of the VMT Evaluation Tool, the proposed residential uses would result in a reduction of more than 15 percent from the baseline threshold of 15.7 VMT per service population, and the proposed non-residential uses would result in a reduction of 34.1 percent from the baseline threshold of 34.9 VMT per service population. Thus, the proposed residential and non-residential uses would pass the low VMT screening and can be screened from further VMT analysis. The proposed project would be designed to allow adequate emergency access to the proposed development in accordance with the City's driveway standards and LACFD requirements. Additionally, the proposed driveways would be designed to meet the minimum width and turning dimensions as required by the LACFD. Construction of the proposed project may involve temporary lane closures; however, emergency vehicles would still be able to travel along these roadways and access to all surrounding properties would be maintained. As previously discussed, Mitigation Measure **HH-3** requires the applicant to prepare a traffic control plan to address access and egress to the site during construction to ensure that emergency access and traffic and pedestrian safety are maintained. KOA Corporation, *Traffic Study: Esperanza Village Project Traffic Impact Analysis*, August 2022.
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	The MacLaren Hall property is located in an urban area surrounded by residential uses, a church, and an elementary school. The property does not contain any unique natural features or water resources. The property is also surrounded on all sides by urban development. No unique natural features or water resources remain on-site.
Vegetation, Wildlife	2	As previously noted, existing plant life on the property is limited to non-native and ornamental species used for landscaping. An abundance of mature trees and open areas coupled with minimal human activity makes the property attractive to many bird species. The native bird species observed during the survey were black phoebe, lesser goldfinch, house finch, bush tit, Anna's hummingbird, Allen's hummingbird, northern mockingbird, mourning dove, dark-eyed junco, Audubon's warbler and common raven. European starlings were also present. Black phoebe nests were observed in several places in the buildings and house finch young could be heard calling from hidden nests within the structures. Many other avian species utilize the property as residents or transients, the most common of which are likely California towhee, American crow, and Bewick's wren, among many others. None of these species are considered particularly sensitive and none are specifically protected by state or federal law. Due to the highly urbanized character of the MacLaren Hall property and its

Environmental Assessment Factor	Impact Code	Impact Evaluation
		surrounding area, western fence lizard was the only reptile noted during the flaura and fauna survey of the property. Eastern fox squirrels (*Sciurus niger*) were the only mammal directly observed but signs (tracks, scat, burrows, etc.) of pocket gophers (*Thomomys bottae*) and Virginia opossums (*Didelphis virginiana*) were also noted. Many other common urban mammals are also expected to use the property, including raccoons (*Procyon lotor*), striped skunks (Mephitis mephitis), and coyotes (*Canis latrans*). Suitable habitat for special-status wildlife species does not occur within the MacLaren Hall property.
Climate		The proposed project, as a whole, addresses sustainability goals by providing much needed affordable housing, associated services, and services oriented to the local community. While the proposed project would generate GHG emissions, they would not be at a level that represents a substantial contribution to regional emissions. As noted above in the "Energy Consumption" Environmental Assessment Factor, the proposed project would include a number of energy conservation and would result in relatively low VMT. Several state and local GHG emissions reduction regulations, goals, and policies apply directly or indirectly to the proposed project's construction and operation. The proposed project would not conflict with applicable plans, policies, and regulations associated with reducing GHG emissions.
Other Factors	2	No other environmental assessment factors would be affected by the proposed project.

Additional Studies Performed

- Biological Assessment Services, *Biological Resources Constraints Analysis for your project at MacLaren Hall, 4024 Durfee Ave., El Monte CA.*, May 6, 2020.
- Brown and Caldwell, *Phase I Environmental Site Assessment, MacLaren Hall, 4024 Durfee Avenue, El Monte, California 91732*, September 17, 2021.
- Converse Consultants, *Geotechnical Investigation Report: Esperanza Village Project, 4024 Durfee Avenue, El Monte, California*, July 29, 2022.
- Converse Consultants, *Phase I Environmental Site Assessment Report: 4024 Durfee Avenue, El Monte, California*, July 27, 2022.
- Kaplan Chen Kaplan, *MacLaren Hall Campus-DCFS, County of Los Angeles, El Monte, California, Historic Resource Evaluation*, May 20, 2020.
- KOA Corporation, *Traffic Study: Esperanza Village Project Traffic Impact Analysis*, August 2022.
- W.H. Bonner Associates, *Cultural Records Search Results for the MacLaren Community Park Project, City of El Monte, Los Angeles, CA.*, April 26, 2021.

Field Inspection (Date and completed by)**:**
July 12, 2022. Field inspection was conducted by Tena Petrovic, Assistant Planner with Terry A. Hayes Associates.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

- Bahman Janka, PTP, RSP, Transtech, Principal Traffic and Transportation Engineer, 13367 Benson Avenue, Chino, CA 91710
- Brian Marchetti, Vice President and Senior Transportation Planner, KOA Corporation, 1100 Corporate Center Drive, Suite 201, Monterey Park, CA 91754
- California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/.
- California Water Resources Control Board, *Geotracker*, https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4024+Durfee+Avenue.
- City of El Monte, *Esperanza Village Draft Initial Study/Mitigated Negative Declaration,* August 2022.
- City of El Monte, *"Vision El Monte," El Monte General Plan*, June 2016.
- Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan*, adopted December 19, 1991.
- County of Los Angeles, *Los Angeles Countywide Comprehensive Park & Recreation Needs Assessment, Appendix A: Study Area Profiles*, May 9, 2016.
- County of Los Angeles, *Los Angeles County General Plan, Figure 6.2: Airport Influence Areas Policy Map*, adopted October 6, 2015.
- Environmental Protection Agency, *Designated Sole Source Aquifers in EPA Region IX,* https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b.
- Fernando Vasquez, President, Prima Development, 12401 Woodruff Ave., Suite 10 Downey, CA 90241
- Jana Robbins, PE, Transtech, Director of Traffic Engineering and Transportation Planning, 13367 Benson Avenue, Chino, CA 91710
- Pam O'Connor, Architectural Historian, Kaplan Chen Kaplan, 2526 Eighteenth Street Santa Monica, CA 90405
- San Gabriel Valley Water Company, *Final 2020 Urban Water Management Plan and Water Shortage Contingency*, June 2021.
- Teresa Li, AICP, Contract Planner, City of El Monte, 11333 Valley Blvd., El Monte, CA 91731
- Ty M. Garrison, Principal, Biological Assessment Services, 709 E. Woodbury Rd. Altadena, CA 91001
- U.S. Census Bureau, *QuickFacts, El Monte City, California*, https://www.census.gov/quickfacts/elmontecitycalifornia.
- U.S. Census Bureau, *QuickFacts, Los Angeles County*, California, https://www.census.gov/quickfacts/losangelescountycalifornia.
- U.S. Fish & Wildlife Service, *National Wetlands Inventory*, https://www.fws.gov/wetlands/Data/Mapper.html.

List of Permits Obtained: The proposed residential and mixed-use development requires the following entitlements:

- Initial Plan Review (IPR) No. 07-22 for the initial review of the site plan layout, architectural, and landscape design;
- General Plan Amendment (GPA) No. 04-22 to change the General Plan land use designation from Public Facilities to Specific Plan;
- Zone Change (ZC) No. 05-22 to change the zoning of the project site from Public Facilities to Specific Plan (SP-5);
- Specific Plan Amendment (SP) No. 06-22 to establish development standards and design guidelines for the project site;
- Code Amendment No. 802 to codify the development standards for the project site in the City's Zoning Code;
- Design Review (DR) Nos. 06-22 and 08-22 for the construction of the four new four-story residential buildings and one new two-story 36,000-square foot mixed use building;
- Tentative Tract Map (TTM) No. 83843 to consolidate two parcels (six lots) and create seven new parcels; and
- Development Agreement (DA) No. 07-22 between the developer and the City to define the rules, regulations, commitments, and policies of the residential and mixed-use development.

The proposed residential and mixed-use development would also require a tree removal permit, demolition, grading, and building permits from the City of El Monte.

The proposed County-related development would require various clearances, demolition, grading, building permits from the County of Los Angeles.

Other anticipated approvals and permits that would be required from the proposed residential, mixed-use, and County-related development include the following:

- Construction General Permit associated with the National Pollutant Discharge Elimination System from the Los Aneles Regional Water Quality Control Board
- Sewer Connection Permit from the Los Angeles County Sanitation District
- Permit to operate certain equipment or land uses from SCAQMD
- Utility construction and connection permits from the affected utility purveyors

Public Outreach [24 CFR 50.23 & 58.43]: A series of meetings were conducted to receive community input for the proposed project, some of which were held virtually via Zoom due to COVID-19. Meetings associated with the proposed project are as follows:

- Community Advisory Committee (CAC) meeting – February 24, 2022 via Zoom
- Community meeting – March 12, 2022 at Mountain View Park
- Youth Advisory meeting – April 28, 2022 via Zoom
- CAC meeting – September 7, 2022 via Zoom
- Community meeting – September 10, 2022 at Mountain View Park

• Planning Commission Study Session – September 13, 2022 at El Monte City Hall East Council Chambers and via Zoom

The two (2) community meetings had great community participation with approximately 50 to 90 people in attendance. Main concerns from the community include the management of traffic flows along adjacent streets, parking, neighborhood access to health and wellness services, prioritizing City of El Monte residents when the housing units are available for rent, and safety.

Cumulative Impact Analysis [24 CFR 58.32]: None of the environmental topic areas that would result less-than-significant impact with implementation of mitigation measures would cause the proposed project to contribute to significant cumulative impacts.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9] and No Action Alternative [24 CFR 58.40(e)]: Based on the preceding review of the proposed project, no substantial adverse environmental impacts will result from implementing the proposed project. The only alternative considered is the "no project" alternative. Under this alternative no affordable housing, community-serving facilities, and Los Angeles County-related uses would be developed on the MacLaren Hall property and the property would continue to be underutilized. Traffic calming measures would not be provided along Gilman Road and Durfee Avenue, and efforts to improve the neighborhood's connection to the San Gabriel River Trail would not be developed. California Government Code Section 65583 requires a city's housing element to make adequate provision for the housing needs of all economic segments of the community, including assisting in the development of adequate housing to meet the needs of extremely low-, very low-, low-, and moderate-income households. California Government Code Section 65583 also requires local jurisdictions to provide their "fair share" of regional housing needs. The loss of 340 affordable housing units under this alternative would not allow the City to meet its fair share of regional housing needs. The loss of affordable housing units, community serving facilities, traffic calming measures in the neighborhood, and neighborhood connection to the San Gabriel River Trail would be considered a substantial adverse impact.

Summary of Findings and Conclusions: The proposed project can be implemented without any substantial adverse environmental impacts when mitigation is implemented. These mitigation measures are listed below.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below are all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Biological Resources	**BR-1** Trees shall be removed outside of the nesting season. If tree removal during the nesting season (February 1 through August 31) cannot be avoided, a qualified avian biologist shall conduct pre-construction surveys for nesting and breeding birds in all landscaping and trees no more than one week prior to any construction activities (i.e., mobilization, staging, grading). If nests are found within these trees and contain eggs or young, no activities within a 300-foot buffer for nesting birds and/or a 500-foot buffer for nesting raptors shall occur until the young have fledged from the nest or the nest fails, as determined by the project avian biologist. If birds are found to be nesting in construction equipment and the nests contain eggs or young, buffers as described above shall be implemented. The prescribed buffers may be adjusted by a qualified avian biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified avian biologist shall conduct regular monitoring of any nest to determine success/failure and to ensure that project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. The avian shall be responsible for documenting the results of the surveys, nest buffers implemented, and presenting the results in ongoing monitoring reports.
Historic Resources (Paleontological)	**GS-1** A qualified paleontologist shall be retained to conduct a WEAP training for all construction personnel prior to the commencement of any ground-disturbing activities regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. A qualified paleontologist is a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist, which is defined as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California (preferably southern California), and who has worked as a paleontological mitigation project supervisor for a least one year. **GS-2** In the event paleontological resources are encountered during construction, the City of El Monte Community and Economic Development Department shall be immediately informed of the discovery. All work shall cease in the area of the find and a qualified paleontologist shall be contacted to evaluate the find before restarting work in the area. The City shall require that all paleontological resources identified on the MacLaren Hall property be assessed and treated in a manner determined by the qualified paleontologist. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Any significant paleontological resources found during construction monitoring shall be prepared, identified, analyzed, and permanently curated in an approved regional museum repository under the oversight of the qualified paleontologist. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the project paleontologist. Work in the area of the discovery shall resume once the find is properly documented.

Law, Authority, or Factor	Mitigation Measure
Hazardous Materials	**HH-1** A Phase II ESA shall be prepared and shall include subsurface sampling in and around the chiller and berm area for heavy metals, including chromium. All recommendations contained in the Phase II ESA shall be implemented. **HH-2** The management and abandonment of the on-site water wells shall follow the standards compiled in the California Department of Water Resources Bulletins 74-81 and 74-90.
Emergency Access	**HH-3** The applicant shall prepare a traffic control plan to address access and egress to the site during construction to ensure that emergency access and traffic and pedestrian safety are maintained.
Noise	**N-1** Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with muffling devices consistent with manufacturers' standards. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated. **N-2** The existing concrete wall along the southerly perimeter of the MacLaren Hall property shall remain in place until grading and excavation activities within at least 100 feet of the southern property line have been completed. As feasible during construction, a temporary six-foot-tall plywood wall will be placed along the southern property line adjacent to residences after the concrete wall has been demolished. A six-foot-tall concrete masonry unit (CMU) wall will be placed along the southern property line adjacent to residences when construction activities associated with the residential and mixed-use development has been completed. **N-3** Noise generating construction activities whose specific location on the MacLaren Hall property may be flexible (e.g., operation of compressors and generators) shall be conducted as far away as possible from noise-sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses. The construction contractor shall locate construction staging areas away from noise-sensitive uses. **N-4** A "noise disturbance coordinator" shall be established prior to construction. The noise disturbance coordinator shall be responsible for responding to local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 500 feet of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator. **N-5** Prior to initiating construction activity, the construction contractor shall coordinate with the school administrator for Twin Lakes Elementary School to discuss construction activities that generate high noise levels. Coordination between the school administrator and the construction contractor shall continue on an as-needed basis throughout the construction phase of the proposed project to mitigate potential disruption of classroom activities.
Historic Resources (Archeological/Tribal)	**TR-1** The City of El Monte or its representative, referred to as the "City" (for the proposed residential and mixed-use development), and the County of Los Angeles or its representative, referred to as the "County" (for the County-related development), shall retain a Native American monitor from (or approved by) the Gabrieleño Band of Mission Indians – Kizh Nation (the "Kizh" or "Kizh Nation"). The monitor shall be retained prior to the commencement of any ground-disturbing activity for the subject project, at all

Law, Authority, or Factor	Mitigation Measure
	project locations (i.e., both on-site and off-site locations, as applicable, that are included in the project description/definition and/or required in connection with the proposed project, such as public improvement work). Ground-disturbing activity includes pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. The City and County shall provide the Kizh with a minimum of 30 days advance written notice of the general anticipated commencement of any project ground-disturbing activity and 48 hours notice of specific activities so that the Kizh has sufficient time to secure and schedule a monitor for the proposed project. The City and County shall hold at least one pre-construction sensitivity/educational meeting prior to the commencement of any ground-disturbing activities, where a senior member of the Kizh will inform and educate the project's construction and managerial crew and staff members (including any project subcontractors and consultants) about the tribal cultural resources mitigation measures and compliance obligations, as well as places of significance located on the project site (if any), the appearance of potential tribal cultural resources, and other informational and operational guidance to aid in the project's compliance with the TCR mitigation measures. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh. Monitor logs will identify and describe any discovered tribal cultural resources, including but not limited to Native American cultural and historical artifacts, remains, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the City and County on an agreed upon routine basis. Native American monitoring for the proposed project shall conclude upon either: (1) written confirmation from a designated project point of contact to the Kizh that all ground- disturbing activities and all phases that may involve ground-disturbing activities at the project site and at any off-site project location, as applicable, are complete; or (2) written notice by the Kizh to the project applicant/lead agency that no future, planned construction and/or development activity at the project site or at any off-site project location, as applicable, possesses the potential to impact tribal cultural resources. **TR-2** In the event that subsurface objects or artifacts that may be tribal cultural resources are discovered during the course of any ground-disturbing activities associated with the proposed project, all such work in the immediate vicinity of the discovery (i.e., within a 50-foot radius) shall cease, except as needed to maintain safety on-site, and a qualified archaeologist meeting Secretary of Interior standards shall assess the find. Additionally, the County shall contact all tribes listed on the "Native American Contact List" provided for the proposed project by the NAHC, and provide any affected tribe a reasonable period of time (no less than 14 days) to evaluate the discovery and advise the City (for the residential and mixed-use development) and County (for the County-related development) regarding the significance and treatment of any discovered tribal cultural resources, as well as any mitigation and/or monitoring requirements for future ground-disturbing activities. Work on the other portions of the proposed project outside of the buffered area may continue during this assessment period.

Law, Authority, or Factor	Mitigation Measure
	If significant tribal cultural resources are discovered and avoidance cannot be ensured, the City (for the residential and mixed-use development) and County (for the County-related development) shall develop a Monitoring and Treatment Plan (the "Plan"), drafts of which shall be provided to the affected tribe(s) for review and comment. A representative of the affected tribe(s) shall monitor the remainder of the proposed project and implement the Plan accordingly. In addition to any recommendations from the affected tribe(s), the City (for the residential and mixed-use development) and County (for the County-related development) shall take necessary actions to avoid or minimize impacts to the identified tribal cultural resources, consistent with best practices identified by the NAHC and in compliance with all applicable federal, state, and local laws, rules, and regulations. The City (for the residential and mixed-use development) and County (for the County-related development) may recommence ground-disturbing activities within the specified radius of the discovery site only after it has complied with all of the recommendations developed and approved pursuant to the process set forth in the first three paragraphs of Mitigation Measure TR-2, above. Any information determined to be confidential in nature by the City and County shall be excluded from disclosure under the applicable provisions of the California Public Records Act and California Public Resources Code Section 6254, and shall comply with the City and County's AB 52 confidentiality protocols. **TR-3** In the event that human remains and/or funerary objects are encountered during any ground-disturbing activities associated with the proposed project, all such work in the immediate vicinity of the discovery (i.e., within a 100-foot radius) shall cease. The City (for the residential and mixed-use development) and County (for the County-related development) shall immediately report any discoveries of human remains to the County Coroner, in accordance with California Public Resources Code Sections 5097.98(reiterated in the California Code of Regulations Sections 15064.5(e) [hereinafter "CEQA Guidelines"]) and 5097.99, as well as California Health and Safety Code Section 7050.5. The County Coroner will make a determination as to whether the human remains are Native American. If the County Coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact the NAHC within 24 hours, and the City and County shall take any and all actions necessary to comply with State law requirements. (See Health and Safety Code Section 7050.5; Public Resources Code Section 5097.98; and CEQA Guidelines, Section 15064.5(d) and 15064.5(e).) Any discovery of Native American human remains and/or funerary objects shall be kept confidential to prevent further disturbance.

EA Attachments

Figure 1 Project Location Aerial
Figure 2 Parcel Diagram
Figure 3 Site Plan

Appendix A – FEMA National Flood Hazard Layer FIRMette
Appendix B – Air Quality and Greenhouse Gas Emissions Calculations
Appendix C – Biological Resources Constraints Analysis
Appendix D – Historic Resource Evaluation
Appendix E – Noise Calculations
Appendix F – Traffic Impact Analysis

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Teresa Li Date: 9/7/2022

Name/Title/Organization: Teresa Li, Contract Planner, City of El Monte

Certifying Officer Signature: [signature] Date: 9/7/22

Name/Title: Alma K. Martinez, City Manager

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Source: TAHA, 2022.

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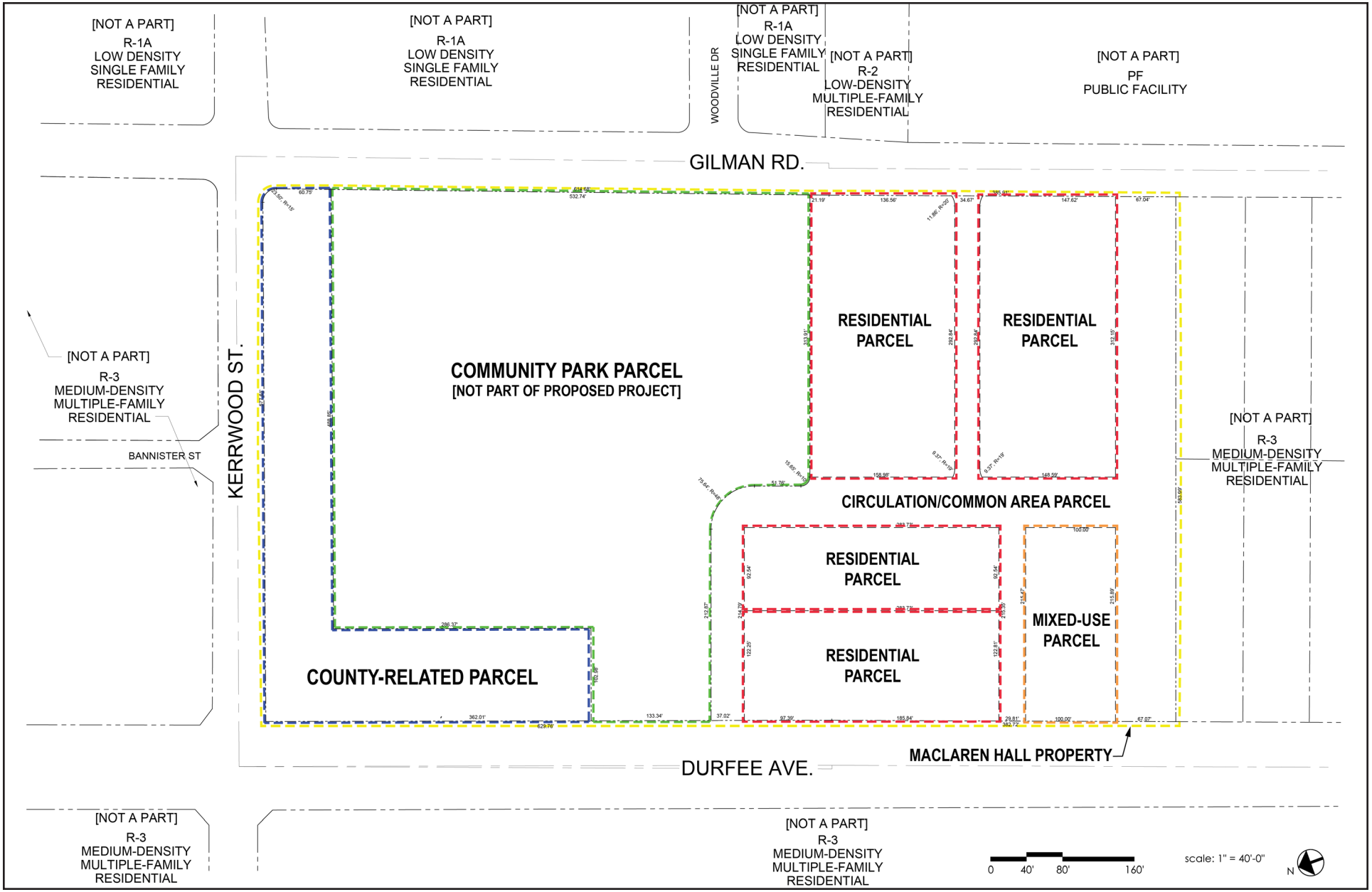
Esperanza Village Environmental Assessment

TAHA 2021-108

FIGURE 1

PROJECT LOCATION AERIAL



Source: Prima Development, AC Martin, 2022. Edited by TAHA, 2022.

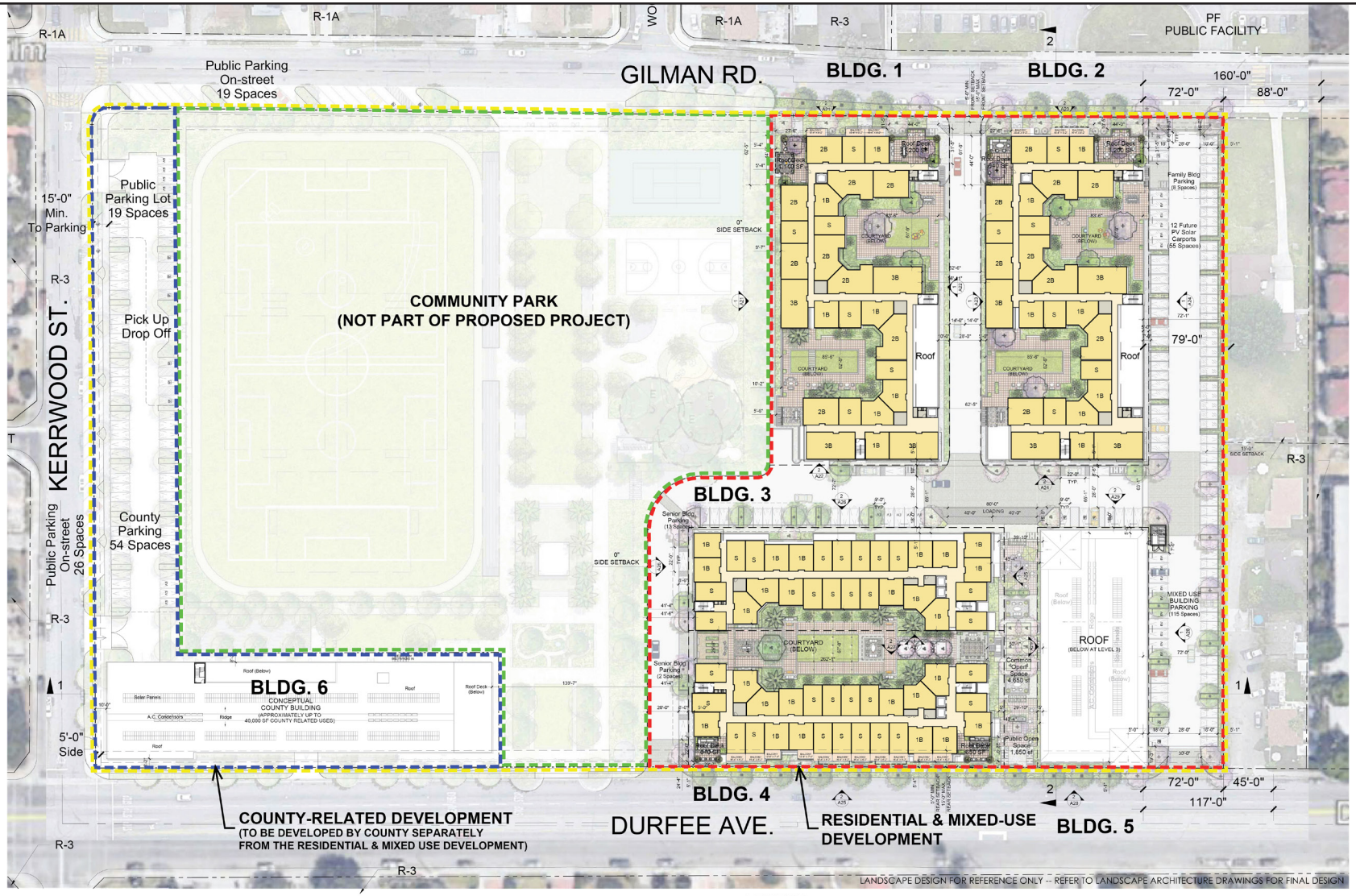
taha environmental planners

Esperanza Village
Environmental Assessment

TAHA 2021-108

FIGURE 2

PARCEL DIAGRAM



Source: Prima Development, AC Martin, 2022. Edited by TAHA, 2022.

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Environmental Assessment

TAHA 2021-108

FIGURE 3

SITE PLAN

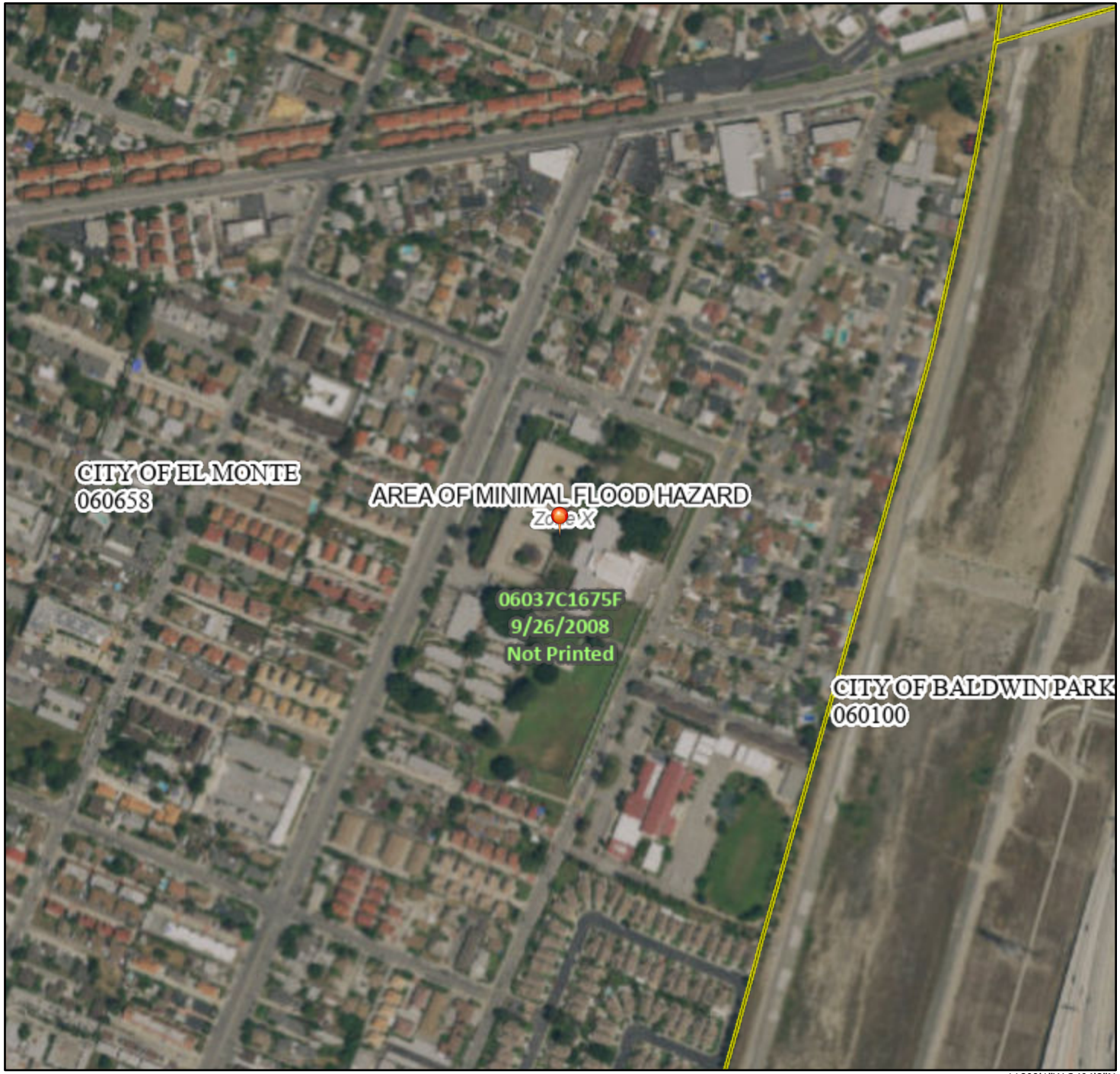
Appendix A

FEMA National Flood Hazard Layer FIRMette

National Flood Hazard Layer FIRMette

FEMA

118°0'39"W 34°4'38"N



118°0'1"W 34°4'8"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/17/2022 at 12:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix B

Air Quality and Greenhouse Gas Emissions Calculations

Construction Emissions

MacLaren Hall Project - Construction Phase 1 Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	MacLaren Hall Project - Construction Phase 1
Lead Agency	City of El Monte
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.2
Location	34.07355114080231, -118.00517440439316
County	Los Angeles-South Coast
City	El Monte
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4194
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	85.0	Dwelling Unit	0.81	86,500	8,500	0.00	252	Building 1
Apartments Low Rise	85.0	Dwelling Unit	0.82	86,500	8,500	0.00	252	Building 2

Unenclosed Parking with Elevator	35.1	1000sqft	0.00	35,110	0.00	0.00	—	—
Unenclosed Parking with Elevator	35.6	1000sqft	0.00	35,625	0.00	0.00	—	—
Parking Lot	79.2	1000sqft	1.82	0.00	3,400	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-4*	Use Local and Sustainable Building Materials

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.60	4.66	45.3	39.6	0.09	1.92	6.64	7.80	1.77	2.92	3.98	—	10,406	10,406	0.44	0.32	5.54	10,516
Mit.	5.60	4.66	45.3	39.6	0.09	1.92	6.64	7.80	1.77	2.92	3.98	—	10,406	10,406	0.44	0.32	5.54	10,516
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.60	30.8	45.4	39.1	0.09	1.92	5.74	7.66	1.77	1.78	3.55	—	10,377	10,377	0.44	0.32	0.38	10,482
Mit.	5.60	30.8	45.4	39.1	0.09	1.92	5.74	7.66	1.77	1.78	3.55	—	10,377	10,377	0.44	0.32	0.38	10,482

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.30	5.07	9.77	10.7	0.02	0.40	1.89	2.20	0.37	0.50	0.87	—	2,509	2,509	0.11	0.11	1.31	2,545
Mit.	1.30	5.07	9.77	10.7	0.02	0.40	1.89	2.20	0.37	0.50	0.87	—	2,509	2,509	0.11	0.11	1.31	2,545
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.92	1.78	1.95	< 0.005	0.07	0.35	0.40	0.07	0.09	0.16	—	415	415	0.02	0.02	0.22	421
Mit.	0.24	0.92	1.78	1.95	< 0.005	0.07	0.35	0.40	0.07	0.09	0.16	—	415	415	0.02	0.02	0.22	421
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.60	4.66	45.3	39.6	0.09	1.92	6.64	7.80	1.77	2.92	3.98	—	10,406	10,406	0.44	0.32	5.54	10,516
2025	1.35	1.13	10.4	13.0	0.02	0.43	2.72	3.15	0.40	0.68	1.08	—	2,398	2,398	0.10	0.02	—	2,406
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.60	4.65	45.4	39.1	0.09	1.92	5.74	7.66	1.77	1.78	3.55	—	10,377	10,377	0.44	0.32	0.38	10,482
2025	1.35	1.13	10.4	13.0	0.02	0.43	2.72	3.15	0.40	0.68	1.08	—	2,398	2,398	0.10	0.02	—	2,406
2026	1.25	30.8	8.94	12.3	0.02	0.33	1.17	1.50	0.30	0.29	0.59	—	1,779	1,779	0.07	0.01	—	1,785
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.30	1.08	9.77	10.7	0.02	0.40	1.54	1.94	0.37	0.50	0.87	—	2,509	2,509	0.11	0.11	1.31	2,545
2025	0.95	0.79	7.36	9.19	0.02	0.30	1.89	2.20	0.28	0.47	0.75	—	1,689	1,689	0.07	0.01	—	1,695
2026	0.20	5.07	1.47	2.02	< 0.005	0.05	0.19	0.24	0.05	0.05	0.10	—	292	292	0.01	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.24	0.20	1.78	1.95	< 0.005	0.07	0.28	0.35	0.07	0.09	0.16	—	415	415	0.02	0.02	0.22	421
2025	0.17	0.14	1.34	1.68	< 0.005	0.06	0.35	0.40	0.05	0.09	0.14	—	280	280	0.01	< 0.005	—	281
2026	0.04	0.92	0.27	0.37	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	48.4	48.4	< 0.005	< 0.005	—	48.6

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.60	4.66	45.3	39.6	0.09	1.92	6.64	7.80	1.77	2.92	3.98	—	10,406	10,406	0.44	0.32	5.54	10,516
2025	1.35	1.13	10.4	13.0	0.02	0.43	2.72	3.15	0.40	0.68	1.08	—	2,398	2,398	0.10	0.02	—	2,406

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.60	4.65	45.4	39.1	0.09	1.92	5.74	7.66	1.77	1.78	3.55	—	10,377	10,377	0.44	0.32	0.38	10,482
2025	1.35	1.13	10.4	13.0	0.02	0.43	2.72	3.15	0.40	0.68	1.08	—	2,398	2,398	0.10	0.02	—	2,406
2026	1.25	30.8	8.94	12.3	0.02	0.33	1.17	1.50	0.30	0.29	0.59	—	1,779	1,779	0.07	0.01	—	1,785
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.30	1.08	9.77	10.7	0.02	0.40	1.54	1.94	0.37	0.50	0.87	—	2,509	2,509	0.11	0.11	1.31	2,545
2025	0.95	0.79	7.36	9.19	0.02	0.30	1.89	2.20	0.28	0.47	0.75	—	1,689	1,689	0.07	0.01	—	1,695
2026	0.20	5.07	1.47	2.02	< 0.005	0.05	0.19	0.24	0.05	0.05	0.10	—	292	292	0.01	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.24	0.20	1.78	1.95	< 0.005	0.07	0.28	0.35	0.07	0.09	0.16	—	415	415	0.02	0.02	0.22	421
2025	0.17	0.14	1.34	1.68	< 0.005	0.06	0.35	0.40	0.05	0.09	0.14	—	280	280	0.01	< 0.005	—	281
2026	0.04	0.92	0.27	0.37	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	48.4	48.4	< 0.005	< 0.005	—	48.6

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.02	2.53	24.4	21.6	0.03	1.06	—	1.06	0.97	—	0.97	—	3,432	3,432	0.14	0.03	—	3,444
Demolition	—	—	—	—	—	—	0.79	0.79	—	0.12	0.12	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.01	1.78	< 0.005	0.09	—	0.09	0.08	—	0.08	—	282	282	0.01	< 0.005	—	283
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	0.32	< 0.005	0.02	—	0.02	0.01	—	0.01	—	46.7	46.7	< 0.005	< 0.005	—	46.9
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573
Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3

Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.02	2.53	24.4	21.6	0.03	1.06	—	1.06	0.97	—	0.97	—	3,432	3,432	0.14	0.03	—	3,444
Demolition	—	—	—	—	—	—	0.79	0.79	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.01	1.78	< 0.005	0.09	—	0.09	0.08	—	0.08	—	282	282	0.01	< 0.005	—	283
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	0.32	< 0.005	0.02	—	0.02	0.01	—	0.01	—	46.7	46.7	< 0.005	< 0.005	—	46.9
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573
Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.08	2.59	25.6	24.5	0.04	1.14	—	1.14	1.05	—	1.05	—	3,918	3,918	0.16	0.03	—	3,931
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.10	2.01	< 0.005	0.09	—	0.09	0.09	—	0.09	—	322	322	0.01	< 0.005	—	323
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	53.3	53.3	< 0.005	< 0.005	—	53.5
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573
Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.08	2.59	25.6	24.5	0.04	1.14	—	1.14	1.05	—	1.05	—	3,918	3,918	0.16	0.03	—	3,931

Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	2.10	2.01	< 0.005	0.09	—	0.09	0.09	—	0.09	—	322	322	0.01	< 0.005	—	323
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	53.3	53.3	< 0.005	< 0.005	—	53.5
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573
Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.29	4.45	43.3	35.9	0.08	1.90	—	1.90	1.75	—	1.75	—	8,409	8,409	0.34	0.07	—	8,438
Dust From Material Movement	—	—	—	—	—	—	4.21	4.21	—	1.49	1.49	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	5.29	4.45	43.3	35.9	0.08	1.90	—	1.90	1.75	—	1.75	—	8,409	8,409	0.34	0.07	—	8,438
Dust From Material Movement	—	—	—	—	—	—	4.21	4.21	—	1.49	1.49	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	< 0.005	22.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.56	2.95	0.01	0.16	—	0.16	0.14	—	0.14	—	691	691	0.03	0.01	—	694
Dust From Material Movement	—	—	—	—	—	—	0.35	0.35	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	114	114	< 0.005	< 0.005	—	115
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573
Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.23	2.55	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	535	535	0.02	0.02	0.06	542
Vendor	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	0.00
Hauling	0.11	0.03	1.83	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,411	1,411	0.08	0.23	0.08	1,480
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.29	4.45	43.3	35.9	0.08	1.90	—	1.90	1.75	—	1.75	—	8,409	8,409	0.34	0.07	—	8,438
Dust From Material Movement	—	—	—	—	—	—	4.21	4.21	—	1.49	1.49	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	0.07	22.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.29	4.45	43.3	35.9	0.08	1.90	—	1.90	1.75	—	1.75	—	8,409	8,409	0.34	0.07	—	8,438
Dust From Material Movement	—	—	—	—	—	—	4.21	4.21	—	1.49	1.49	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.8	21.8	< 0.005	< 0.005	< 0.005	22.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.56	2.95	0.01	0.16	—	0.16	0.14	—	0.14	—	691	691	0.03	0.01	—	694
Dust From Material Movement	—	—	—	—	—	—	0.35	0.35	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	114	114	< 0.005	< 0.005	—	115
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	3.02	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.02	0.02	2.23	573

Vendor	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	0.00
Hauling	0.11	0.03	1.76	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,410	1,410	0.08	0.23	3.24	1,483
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.23	2.55	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	535	535	0.02	0.02	0.06	542
Vendor	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	0.00
Hauling	0.11	0.03	1.83	0.68	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,411	1,411	0.08	0.23	0.08	1,480
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	44.6	44.6	< 0.005	< 0.005	0.08	45.3
Vendor	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	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	116	116	0.01	0.02	0.12	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.39	7.39	< 0.005	< 0.005	0.01	7.49
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.27	1.49	< 0.005	0.06	—	0.06	0.05	—	0.05	—	272	272	0.01	< 0.005	—	273
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.1	45.1	< 0.005	< 0.005	—	45.2
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99	0.88	1.13	12.8	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,676	2,676	0.12	0.10	0.29	2,709
Vendor	0.10	0.04	1.58	0.76	0.01	0.02	0.07	0.09	0.02	0.03	0.04	—	1,291	1,291	0.05	0.18	0.09	1,345
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.13	1.52	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	308	308	0.01	0.01	0.55	313
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	146	146	0.01	0.02	0.17	153
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	51.0	51.0	< 0.005	< 0.005	0.09	51.7
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	24.3	24.3	< 0.005	< 0.005	0.03	25.3
Hauling	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	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.27	1.49	< 0.005	0.06	—	0.06	0.05	—	0.05	—	272	272	0.01	< 0.005	—	273
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.1	45.1	< 0.005	< 0.005	—	45.2
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.99	0.88	1.13	12.8	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,676	2,676	0.12	0.10	0.29	2,709
Vendor	0.10	0.04	1.58	0.76	0.01	0.02	0.07	0.09	0.02	0.03	0.04	—	1,291	1,291	0.05	0.18	0.09	1,345
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.13	1.52	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	308	308	0.01	0.01	0.55	313
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	146	146	0.01	0.02	0.17	153
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	51.0	51.0	< 0.005	< 0.005	0.09	51.7
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	24.3	24.3	< 0.005	< 0.005	0.03	25.3
Hauling	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	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.95	0.79	7.36	9.19	0.02	0.30	—	0.30	0.28	—	0.28	—	1,689	1,689	0.07	0.01	—	1,695
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.34	1.68	< 0.005	0.06	—	0.06	0.05	—	0.05	—	280	280	0.01	< 0.005	—	281
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.95	0.79	7.36	9.19	0.02	0.30	—	0.30	0.28	—	0.28	—	1,689	1,689	0.07	0.01	—	1,695
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.34	1.68	< 0.005	0.06	—	0.06	0.05	—	0.05	—	280	280	0.01	< 0.005	—	281
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.23	9.99	0.02	0.28	—	0.28	0.26	—	0.26	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	0.13	1.19	1.64	< 0.005	0.05	—	0.05	0.04	—	0.04	—	248	248	0.01	< 0.005	—	249
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.1	41.1	< 0.005	< 0.005	—	41.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.23	9.99	0.02	0.28	—	0.28	0.26	—	0.26	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.19	1.64	< 0.005	0.05	—	0.05	0.04	—	0.04	—	248	248	0.01	< 0.005	—	249
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.1	41.1	< 0.005	< 0.005	—	41.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268

Architect Coatings	—	29.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.28	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.9	43.9	< 0.005	< 0.005	—	44.0
Architectural Coatings	—	4.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.27	7.27	< 0.005	< 0.005	—	7.29
Architectural Coatings	—	0.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	1.71	2.27	< 0.005	0.05	—	0.05	0.04	—	0.04	—	267	267	0.01	< 0.005	—	268
Architectural Coatings	—	29.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.28	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.9	43.9	< 0.005	< 0.005	—	44.0
Architectural Coatings	—	4.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.27	7.27	< 0.005	< 0.005	—	7.29
Architectural Coatings	—	0.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2024	8/9/2024	5.00	30.0	Building Demo
Site Preparation	Site Preparation	8/12/2024	9/20/2024	5.00	30.0	Site Clearing
Grading	Grading	9/23/2024	11/1/2024	5.00	30.0	Grading & Excavation
Building Construction	Building Construction	11/4/2024	12/26/2025	5.00	300	Building 1 & 2 Construction
Paving	Paving	1/5/2026	3/27/2026	5.00	60.0	Parking Lot & Access Driveways
Architectural Coating	Architectural Coating	1/5/2026	3/27/2026	5.00	60.0	Coating & Landscaping

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43

Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48
Paving	Pumps	Diesel	Average	1.00	8.00	25.0	0.74
Paving	Plate Compactors	Diesel	Average	1.00	8.00	15.0	0.43

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	2.00	6.00	37.0	0.48
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48
Paving	Pumps	Diesel	Average	1.00	8.00	25.0	0.74
Paving	Plate Compactors	Diesel	Average	1.00	8.00	15.0	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	20.0	20.0	HHDT
Demolition	Onsite truck	1.00	8.00	MHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	20.0	20.0	HHDT
Grading	Onsite truck	1.00	8.00	MHDT
Building Construction	—	—	—	—
Building Construction	Worker	200	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	40.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—

Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	10.2	HHDT,MHDT
Site Preparation	Hauling	20.0	20.0	HHDT
Site Preparation	Onsite truck	1.00	8.00	MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	20.0	20.0	HHDT
Demolition	Onsite truck	1.00	8.00	MHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	20.0	20.0	HHDT
Grading	Onsite truck	1.00	8.00	MHDT

Building Construction	—	—	—	—
Building Construction	Worker	200	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	40.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	0.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	10.2	HHDT,MHDT
Site Preparation	Hauling	20.0	20.0	HHDT
Site Preparation	Onsite truck	1.00	8.00	MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	50%	50%

Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	350,325	116,775	109,665	36,555	4,750

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	38,000	—
Site Preparation	0.00	3,000	30.0	0.00	—
Grading	0.00	3,000	135	0.00	—
Paving	0.00	0.00	0.00	0.00	1.82

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%
Apartments Low Rise	—	0%
Unenclosed Parking with Elevator	0.00	100%

Unenclosed Parking with Elevator	0.00	100%
Parking Lot	1.82	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	18.9	annual days of extreme heat
Extreme Precipitation	6.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	2	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

6.4.1. Temperature and Extreme Heat

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
D-3: Install Drought Resistant Landscaping	Water Conservation	—	1.00	1.00
EH-15: Provide Low-Income Air Conditioning	Improved Public Health, Social Equity	—	2.00	2.00

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	76.9
AQ-PM	78.7
AQ-DPM	84.6
Drinking Water	95.3
Lead Risk Housing	70.6
Pesticides	0.00
Toxic Releases	79.1
Traffic	95.1
Effect Indicators	—
CleanUp Sites	82.5
Groundwater	54.8

Haz Waste Facilities/Generators	20.3
Impaired Water Bodies	33.2
Solid Waste	39.0
Sensitive Population	—
Asthma	81.0
Cardio-vascular	69.3
Low Birth Weights	36.1
Socioeconomic Factor Indicators	—
Education	86.7
Housing	56.0
Linguistic	94.1
Poverty	68.3
Unemployment	26.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	11.90812267
Employed	25.29192865
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	40.40805851
Transportation	—
Auto Access	27.46054151
Active commuting	56.52508662

Social	—
2-parent households	48.69754908
Voting	10.27845502
Neighborhood	—
Alcohol availability	44.32182728
Park access	81.35506224
Retail density	67.81727191
Supermarket access	70.03721288
Tree canopy	54.94674708
Housing	—
Homeownership	29.00038496
Housing habitability	7.108943924
Low-inc homeowner severe housing cost burden	4.298729629
Low-inc renter severe housing cost burden	18.9272424
Uncrowded housing	9.174900552
Health Outcomes	—
Insured adults	36.09649686
Arthritis	43.8
Asthma ER Admissions	23.1
High Blood Pressure	35.1
Cancer (excluding skin)	82.6
Asthma	37.3
Coronary Heart Disease	23.5
Chronic Obstructive Pulmonary Disease	19.2
Diagnosed Diabetes	4.9
Life Expectancy at Birth	43.8
Cognitively Disabled	82.5

Physically Disabled	50.9
Heart Attack ER Admissions	42.0
Mental Health Not Good	14.3
Chronic Kidney Disease	20.1
Obesity	32.5
Pedestrian Injuries	78.5
Physical Health Not Good	7.5
Stroke	15.1
Health Risk Behaviors	—
Binge Drinking	96.4
Current Smoker	16.1
No Leisure Time for Physical Activity	3.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	22.0
Elderly	57.3
English Speaking	1.1
Foreign-born	89.6
Outdoor Workers	71.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	25.3
Traffic Density	88.2
Traffic Access	55.7
Other Indices	—
Hardship	89.1
Other Decision Support	—

2016 Voting	13.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	20.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Project Site Plans
Construction: Construction Phases	Phase 1 Schedule
Construction: Off-Road Equipment	Project-Specific Inventory provided by Applicant.
Construction: On-Road Fugitive Dust	SCAQMD Rule 403 Compliance BMPs for On-Road Dust. Temporary gravel will be laid on unpaved areas for on-road truck travel, and water will be applied multiple times per day.
Construction: Trips and VMT	Project-Specific Trips.

MacLaren Hall Project - Construction Phase 2 Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	MacLaren Hall Project - Construction Phase 2
Lead Agency	City of El Monte
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.2
Location	34.073495134373005, -118.00491535921404
County	Los Angeles-South Coast
City	El Monte
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4194
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	86.0	Dwelling Unit	0.60	59,650	6,000	0.00	129	—
Apartments Low Rise	84.0	Dwelling Unit	0.80	59,580	10,800	0.00	126	—

Medical Office Building	36.0	1000sqft	0.50	36,000	0.00	0.00	—	—
Government Office Building	40.0	1000sqft	0.00	40,000	0.00	0.00	—	—
Unenclosed Parking with Elevator	31.0	1000sqft	0.00	31,000	0.00	0.00	—	—
Parking Lot	51.0	1000sqft	1.17	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-4*	Use Local and Sustainable Building Materials

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.42	26.9	24.6	36.3	0.05	0.97	5.56	6.53	0.89	2.10	2.99	—	8,169	8,169	0.34	0.31	13.6	8,282
Mit.	3.42	26.9	24.6	36.3	0.05	0.97	5.56	6.53	0.89	2.10	2.99	—	8,169	8,169	0.34	0.31	13.6	8,282
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.42	26.9	20.7	34.2	0.05	0.77	2.96	3.72	0.70	0.71	1.41	—	8,025	8,025	0.34	0.31	0.35	8,127

Mit.	3.42	26.9	20.7	34.2	0.05	0.77	2.96	3.72	0.70	0.71	1.41	—	8,025	8,025	0.34	0.31	0.35	8,127
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	6.04	10.7	14.5	0.02	0.41	1.55	1.91	0.38	0.44	0.77	—	3,352	3,352	0.14	0.13	2.27	3,397
Mit.	1.49	6.04	10.7	14.5	0.02	0.41	1.55	1.91	0.38	0.44	0.77	—	3,352	3,352	0.14	0.13	2.27	3,397
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.27	1.10	1.95	2.65	< 0.005	0.07	0.28	0.35	0.07	0.08	0.14	—	555	555	0.02	0.02	0.38	562
Mit.	0.27	1.10	1.95	2.65	< 0.005	0.07	0.28	0.35	0.07	0.08	0.14	—	555	555	0.02	0.02	0.38	562
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.42	2.88	24.6	36.3	0.05	0.97	5.56	6.53	0.89	2.10	2.99	—	8,169	8,169	0.34	0.31	13.6	8,282
2026	2.27	26.9	17.2	21.6	0.04	0.66	2.72	3.39	0.61	0.68	1.29	—	4,134	4,134	0.17	0.03	—	4,148
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.42	2.87	20.7	34.2	0.05	0.77	2.96	3.72	0.70	0.71	1.41	—	8,025	8,025	0.34	0.31	0.35	8,127
2026	2.27	26.9	17.2	21.6	0.04	0.66	2.72	3.39	0.61	0.68	1.29	—	4,134	4,134	0.17	0.03	—	4,148
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.49	1.25	9.61	14.5	0.02	0.36	1.55	1.91	0.33	0.44	0.77	—	3,352	3,352	0.14	0.13	2.27	3,397
2026	1.43	6.04	10.7	13.6	0.02	0.41	1.48	1.89	0.38	0.37	0.75	—	2,445	2,445	0.10	0.02	—	2,453
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.27	0.23	1.75	2.65	< 0.005	0.07	0.28	0.35	0.06	0.08	0.14	—	555	555	0.02	0.02	0.38	562
2026	0.26	1.10	1.95	2.48	< 0.005	0.07	0.27	0.35	0.07	0.07	0.14	—	405	405	0.02	< 0.005	—	406

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.42	2.88	24.6	36.3	0.05	0.97	5.56	6.53	0.89	2.10	2.99	—	8,169	8,169	0.34	0.31	13.6	8,282
2026	2.27	26.9	17.2	21.6	0.04	0.66	2.72	3.39	0.61	0.68	1.29	—	4,134	4,134	0.17	0.03	—	4,148

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.42	2.87	20.7	34.2	0.05	0.77	2.96	3.72	0.70	0.71	1.41	—	8,025	8,025	0.34	0.31	0.35	8,127
2026	2.27	26.9	17.2	21.6	0.04	0.66	2.72	3.39	0.61	0.68	1.29	—	4,134	4,134	0.17	0.03	—	4,148
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.49	1.25	9.61	14.5	0.02	0.36	1.55	1.91	0.33	0.44	0.77	—	3,352	3,352	0.14	0.13	2.27	3,397
2026	1.43	6.04	10.7	13.6	0.02	0.41	1.48	1.89	0.38	0.37	0.75	—	2,445	2,445	0.10	0.02	—	2,453
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.27	0.23	1.75	2.65	< 0.005	0.07	0.28	0.35	0.06	0.08	0.14	—	555	555	0.02	0.02	0.38	562
2026	0.26	1.10	1.95	2.48	< 0.005	0.07	0.27	0.35	0.07	0.07	0.14	—	405	405	0.02	< 0.005	—	406

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.88	2.42	22.7	21.7	0.04	0.95	—	0.95	0.87	—	0.87	—	3,723	3,723	0.15	0.03	—	3,735
Dust From Material Movement	—	—	—	—	—	—	3.41	3.41	—	1.75	1.75	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.07	22.3

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.18	2.08	< 0.005	0.09	—	0.09	0.08	—	0.08	—	357	357	0.01	< 0.005	—	358
Dust From Material Movement	—	—	—	—	—	—	0.33	0.33	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.38	< 0.005	0.02	—	0.02	0.02	—	0.02	—	59.1	59.1	< 0.005	< 0.005	—	59.3
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.17	2.78	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	553	553	0.02	0.02	2.02	561
Vendor	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	0.00
Hauling	0.11	0.02	1.70	0.66	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,386	1,386	0.08	0.22	3.22	1,455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.02	0.24	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	51.0	51.0	< 0.005	< 0.005	0.08	51.7
Vendor	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	0.00
Hauling	0.01	< 0.005	0.17	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	133	133	0.01	0.02	0.13	139
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.45	8.45	< 0.005	< 0.005	0.01	8.56
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.02	23.1

3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.88	2.42	22.7	21.7	0.04	0.95	—	0.95	0.87	—	0.87	—	3,723	3,723	0.15	0.03	—	3,735
Dust From Material Movement	—	—	—	—	—	—	3.41	3.41	—	1.75	1.75	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.07	22.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.18	2.08	< 0.005	0.09	—	0.09	0.08	—	0.08	—	357	357	0.01	< 0.005	—	358

Dust From Material Movement	—	—	—	—	—	—	0.33	0.33	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.38	< 0.005	0.02	—	0.02	0.02	—	0.02	—	59.1	59.1	< 0.005	< 0.005	—	59.3
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.17	2.78	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	553	553	0.02	0.02	2.02	561
Vendor	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	0.00
Hauling	0.11	0.02	1.70	0.66	0.01	0.02	0.11	0.12	0.02	0.04	0.05	—	1,386	1,386	0.08	0.22	3.22	1,455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	51.0	51.0	< 0.005	< 0.005	0.08	51.7
Vendor	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	0.00
Hauling	0.01	< 0.005	0.17	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	133	133	0.01	0.02	0.13	139
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.45	8.45	< 0.005	< 0.005	0.01	8.56
Vendor	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	0.00

Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.02	23.1

3.3. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.38	1.99	18.2	21.7	0.04	0.75	—	0.75	0.69	—	0.69	—	4,135	4,135	0.17	0.03	—	4,149
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.38	1.99	18.2	21.7	0.04	0.75	—	0.75	0.69	—	0.69	—	4,135	4,135	0.17	0.03	—	4,149
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.35	7.56	0.01	0.26	—	0.26	0.24	—	0.24	—	1,440	1,440	0.06	0.01	—	1,445
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.16	1.38	< 0.005	0.05	—	0.05	0.04	—	0.04	—	238	238	0.01	< 0.005	—	239
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96	0.86	0.87	13.9	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,765	2,765	0.12	0.09	10.1	2,807
Vendor	0.09	0.04	1.44	0.71	0.01	0.02	0.07	0.09	0.01	0.03	0.04	—	1,269	1,269	0.05	0.18	3.47	1,327
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.95	0.85	0.96	11.8	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,621	2,621	0.12	0.10	0.26	2,654
Vendor	0.09	0.04	1.50	0.71	0.01	0.02	0.07	0.09	0.01	0.03	0.04	—	1,270	1,270	0.05	0.18	0.09	1,324
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.36	4.32	0.00	0.00	0.06	0.06	0.00	0.00	0.00	—	927	927	0.04	0.03	1.52	939
Vendor	0.03	0.01	0.53	0.25	< 0.005	0.01	0.03	0.03	< 0.005	0.01	0.01	—	442	442	0.02	0.06	0.52	462
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.07	0.79	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	153	153	0.01	0.01	0.25	155
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	73.2	73.2	< 0.005	0.01	0.09	76.4
Hauling	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	0.00

3.4. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.38	1.99	18.2	21.7	0.04	0.75	—	0.75	0.69	—	0.69	—	4,135	4,135	0.17	0.03	—	4,149
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.38	1.99	18.2	21.7	0.04	0.75	—	0.75	0.69	—	0.69	—	4,135	4,135	0.17	0.03	—	4,149
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.35	7.56	0.01	0.26	—	0.26	0.24	—	0.24	—	1,440	1,440	0.06	0.01	—	1,445
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.16	1.38	< 0.005	0.05	—	0.05	0.04	—	0.04	—	238	238	0.01	< 0.005	—	239
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96	0.86	0.87	13.9	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,765	2,765	0.12	0.09	10.1	2,807
Vendor	0.09	0.04	1.44	0.71	0.01	0.02	0.07	0.09	0.01	0.03	0.04	—	1,269	1,269	0.05	0.18	3.47	1,327
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.95	0.85	0.96	11.8	0.00	0.00	0.16	0.16	0.00	0.00	0.00	—	2,621	2,621	0.12	0.10	0.26	2,654

Vendor	0.09	0.04	1.50	0.71	0.01	0.02	0.07	0.09	0.01	0.03	0.04	—	1,270	1,270	0.05	0.18	0.09	1,324
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.36	4.32	0.00	0.00	0.06	0.06	0.00	0.00	0.00	—	927	927	0.04	0.03	1.52	939
Vendor	0.03	0.01	0.53	0.25	< 0.005	0.01	0.03	0.03	< 0.005	0.01	0.01	—	442	442	0.02	0.06	0.52	462
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.07	0.79	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	153	153	0.01	0.01	0.25	155
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	73.2	73.2	< 0.005	0.01	0.09	76.4
Hauling	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	0.00

3.5. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.27	1.89	17.2	21.6	0.04	0.66	—	0.66	0.61	—	0.61	—	4,134	4,134	0.17	0.03	—	4,148
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.27	1.89	17.2	21.6	0.04	0.66	—	0.66	0.61	—	0.61	—	4,134	4,134	0.17	0.03	—	4,148
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	8.09	10.1	0.02	0.31	—	0.31	0.29	—	0.29	—	1,942	1,942	0.08	0.02	—	1,948

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	321	321	0.01	< 0.005	—	323
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.6. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.27	1.89	17.2	21.6	0.04	0.66	—	0.66	0.61	—	0.61	—	4,134	4,134	0.17	0.03	—	4,148
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.27	1.89	17.2	21.6	0.04	0.66	—	0.66	0.61	—	0.61	—	4,134	4,134	0.17	0.03	—	4,148
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	8.09	10.1	0.02	0.31	—	0.31	0.29	—	0.29	—	1,942	1,942	0.08	0.02	—	1,948

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.48	1.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	321	321	0.01	< 0.005	—	323
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.7. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.10	10.0	13.4	0.02	0.42	—	0.42	0.39	—	0.39	—	2,090	2,090	0.08	0.02	—	2,097
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.10	10.0	13.4	0.02	0.42	—	0.42	0.39	—	0.39	—	2,090	2,090	0.08	0.02	—	2,097
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.25	0.21	1.92	2.57	< 0.005	0.08	—	0.08	0.07	—	0.07	—	401	401	0.02	< 0.005	—	402
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.3	66.3	< 0.005	< 0.005	—	66.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.8. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.10	10.0	13.4	0.02	0.42	—	0.42	0.39	—	0.39	—	2,090	2,090	0.08	0.02	—	2,097
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.32	1.10	10.0	13.4	0.02	0.42	—	0.42	0.39	—	0.39	—	2,090	2,090	0.08	0.02	—	2,097
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.92	2.57	< 0.005	0.08	—	0.08	0.07	—	0.07	—	401	401	0.02	< 0.005	—	402
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.3	66.3	< 0.005	< 0.005	—	66.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.9. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.43	4.53	0.01	0.09	—	0.09	0.09	—	0.09	—	534	534	0.02	< 0.005	—	536

Architect Coatings	—	25.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.43	4.53	0.01	0.09	—	0.09	0.09	—	0.09	—	534	534	0.02	< 0.005	—	536
Architectural Coatings	—	25.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.66	0.87	< 0.005	0.02	—	0.02	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	103
Architectural Coatings	—	4.84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.0
Architectural Coatings	—	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.10. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.43	4.53	0.01	0.09	—	0.09	0.09	—	0.09	—	534	534	0.02	< 0.005	—	536
Architectural Coatings	—	25.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.43	4.53	0.01	0.09	—	0.09	0.09	—	0.09	—	534	534	0.02	< 0.005	—	536
Architectural Coatings	—	25.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.66	0.87	< 0.005	0.02	—	0.02	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	103
Architectural Coatings	—	4.84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.0
Architectural Coatings	—	0.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Clearing	Site Preparation	5/19/2025	7/4/2025	5.00	35.0	—
Building Construction	Building Construction	7/7/2025	8/28/2026	5.00	300	Bldg 3, 4, 5, 6 Construction.
Paving	Paving	8/31/2026	12/4/2026	5.00	70.0	Phase 2 Paving
Architectural Coating	Architectural Coating	8/31/2026	12/4/2026	5.00	70.0	Phase 2 Paving

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	2.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	7.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	4.00	6.00	37.0	0.48
Site Clearing	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Clearing	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Site Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Paving	Pumps	Diesel	Average	2.00	7.00	20.0	0.74

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	2.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	4.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	7.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	7.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	4.00	6.00	37.0	0.48
Site Clearing	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Clearing	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Paving	Pumps	Diesel	Average	2.00	7.00	20.0	0.74

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	200	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	40.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	—	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	—	HHDT
Site Clearing	—	—	—	—
Site Clearing	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Clearing	Vendor	0.00	10.2	HHDT,MHDT
Site Clearing	Hauling	20.0	20.0	HHDT
Site Clearing	Onsite truck	1.00	8.00	MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—

Building Construction	Worker	200	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	40.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	—	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	—	HHDT
Site Clearing	—	—	—	—
Site Clearing	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Clearing	Vendor	0.00	10.2	HHDT,MHDT
Site Clearing	Hauling	20.0	20.0	HHDT
Site Clearing	Onsite truck	1.00	8.00	MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	50%	50%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	241,441	80,480	162,795	54,265	3,060

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Clearing	0.00	5,000	35.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.17

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%
Apartments Low Rise	—	0%
Medical Office Building	0.00	0%
Government Office Building	0.00	0%
Unenclosed Parking with Elevator	0.00	100%
Parking Lot	1.17	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	18.9	annual days of extreme heat
Extreme Precipitation	6.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	76.9
AQ-PM	78.7
AQ-DPM	84.6
Drinking Water	95.3
Lead Risk Housing	70.6
Pesticides	0.00
Toxic Releases	79.1
Traffic	95.1
Effect Indicators	—
CleanUp Sites	82.5
Groundwater	54.8
Haz Waste Facilities/Generators	20.3
Impaired Water Bodies	33.2
Solid Waste	39.0
Sensitive Population	—
Asthma	81.0
Cardio-vascular	69.3
Low Birth Weights	36.1
Socioeconomic Factor Indicators	—

Education	86.7
Housing	56.0
Linguistic	94.1
Poverty	68.3
Unemployment	26.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	11.90812267
Employed	25.29192865
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	40.40805851
Transportation	—
Auto Access	27.46054151
Active commuting	56.52508662
Social	—
2-parent households	48.69754908
Voting	10.27845502
Neighborhood	—
Alcohol availability	44.32182728
Park access	81.35506224
Retail density	67.81727191
Supermarket access	70.03721288

Tree canopy	54.94674708
Housing	—
Homeownership	29.00038496
Housing habitability	7.108943924
Low-inc homeowner severe housing cost burden	4.298729629
Low-inc renter severe housing cost burden	18.9272424
Uncrowded housing	9.174900552
Health Outcomes	—
Insured adults	36.09649686
Arthritis	43.8
Asthma ER Admissions	23.1
High Blood Pressure	35.1
Cancer (excluding skin)	82.6
Asthma	37.3
Coronary Heart Disease	23.5
Chronic Obstructive Pulmonary Disease	19.2
Diagnosed Diabetes	4.9
Life Expectancy at Birth	43.8
Cognitively Disabled	82.5
Physically Disabled	50.9
Heart Attack ER Admissions	42.0
Mental Health Not Good	14.3
Chronic Kidney Disease	20.1
Obesity	32.5
Pedestrian Injuries	78.5
Physical Health Not Good	7.5
Stroke	15.1

Health Risk Behaviors	—
Binge Drinking	96.4
Current Smoker	16.1
No Leisure Time for Physical Activity	3.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	22.0
Elderly	57.3
English Speaking	1.1
Foreign-born	89.6
Outdoor Workers	71.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	25.3
Traffic Density	88.2
Traffic Access	55.7
Other Indices	—
Hardship	89.1
Other Decision Support	—
2016 Voting	13.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	20.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes

Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Building 3, 4, 5, & 6. Senior Housing (Bldg 3 & 4) - Lower Population Density.
Construction: Construction Phases	Phase 2 Schedule Provided by Applicant
Construction: Off-Road Equipment	Project Inventory Provided by Applicant.
Construction: Trips and VMT	Project-Specific Trip Generation
Construction: On-Road Fugitive Dust	Gravel will be laid down for temporary access roads for water trucks.

Operation Emissions

MacLaren Hall Project - Operations Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	MacLaren Hall Project - Operations
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.2
Location	34.07357428252776, -118.00475010833702
County	Los Angeles-South Coast
City	El Monte
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4194
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	85.0	Dwelling Unit	0.81	86,500	8,500	0.00	252	Building 1
Apartments Low Rise	85.0	Dwelling Unit	0.82	86,500	8,500	0.00	252	Building 2

Unenclosed Parking with Elevator	35.1	1000sqft	0.00	35,100	0.00	0.00	—	Building 1 Parking
Unenclosed Parking with Elevator	35.6	1000sqft	0.00	35,625	0.00	0.00	—	Building 2 Parking
Parking Lot	79.2	1000sqft	1.82	0.00	3,400	0.00	—	Surface Lot (S)
Apartments Low Rise	86.0	Dwelling Unit	0.60	59,650	6,000	0.00	129	Building 3
Apartments Low Rise	84.0	Dwelling Unit	0.80	59,580	10,800	0.00	126	Building 4
Medical Office Building	36.0	1000sqft	0.50	36,000	0.00	0.00	—	Building 5
Government Office Building	40.0	1000sqft	0.00	40,000	0.00	0.00	—	Building 6
Unenclosed Parking with Elevator	31.0	1000sqft	0.71	31,000	0.00	0.00	—	Building 6 Parking
Parking Lot	51.0	1000sqft	1.17	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Transportation	T-1	Increase Residential Density
Transportation	T-4	Integrate A ordable and Below Market Rate Housing
Energy	E-7*	Require Higher Efficacy Public Street and Area Lighting
Water	W-5	Design Water-Efficient Landscapes
Waste	S-4*	Recycle Demolished Construction Material

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.3	17.7	6.44	81.1	0.14	0.28	4.60	4.88	0.28	0.81	1.09	324	20,272	20,596	33.6	0.58	39.8	21,648
Mit.	8.42	15.9	5.60	67.0	0.11	0.26	3.40	3.67	0.26	0.60	0.86	324	17,091	17,415	33.4	0.49	30.8	18,427
% Reduced	18%	10%	13%	17%	23%	6%	26%	25%	5%	26%	21%	—	16%	15%	< 0.5%	16%	23%	15%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.06	14.6	6.49	49.7	0.13	0.26	4.59	4.85	0.26	0.80	1.06	324	19,514	19,837	33.6	0.59	4.05	20,857
Mit.	5.19	12.9	5.59	36.8	0.10	0.25	3.39	3.64	0.24	0.60	0.84	324	16,543	16,867	33.5	0.50	3.82	17,856
% Reduced	26%	12%	14%	26%	22%	6%	26%	25%	6%	26%	21%	—	15%	15%	< 0.5%	16%	6%	14%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.71	16.2	6.32	65.7	0.12	0.27	4.21	4.48	0.27	0.74	1.00	324	18,721	19,044	33.5	0.55	17.5	20,065
Mit.	6.86	14.5	5.42	52.5	0.09	0.25	3.02	3.27	0.25	0.53	0.78	324	15,710	16,033	33.4	0.46	13.6	17,019
% Reduced	21%	11%	14%	20%	24%	6%	28%	27%	6%	28%	22%	—	16%	16%	< 0.5%	17%	22%	15%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.59	2.96	1.15	12.0	0.02	0.05	0.77	0.82	0.05	0.13	0.18	53.6	3,099	3,153	5.55	0.09	2.89	3,322
Mit.	1.25	2.64	0.99	9.57	0.02	0.05	0.55	0.60	0.05	0.10	0.14	53.6	2,601	2,654	5.53	0.08	2.26	2,818
% Reduced	21%	11%	14%	20%	24%	6%	28%	27%	6%	28%	22%	—	16%	16%	< 0.5%	17%	22%	15%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—

Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.87	6.30	3.75	52.6	0.12	0.07	4.60	4.67	0.07	0.81	0.87	—	12,465	12,465	0.57	0.42	36.7	12,641
Area	3.16	11.2	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	83.4	83.4	< 0.005	< 0.005	—	83.7
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	254	302	4.95	0.12	—	462
Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	10.3	17.7	6.44	81.1	0.14	0.28	4.60	4.88	0.28	0.81	1.09	324	20,272	20,596	33.6	0.58	39.8	21,648

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.78	6.22	4.05	48.2	0.12	0.07	4.59	4.66	0.06	0.80	0.87	—	11,790	11,790	0.58	0.43	0.94	11,934
Area	0.00	8.28	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
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	254	302	4.95	0.12	—	462
Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	7.06	14.6	6.49	49.7	0.13	0.26	4.59	4.85	0.26	0.80	1.06	324	19,514	19,837	33.6	0.59	4.05	20,857
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.27	5.76	3.72	45.7	0.11	0.06	4.21	4.28	0.06	0.74	0.80	—	10,940	10,940	0.53	0.39	14.4	11,084
Area	2.17	10.3	0.17	18.5	< 0.005	0.01	—	0.01	0.02	—	0.02	0.00	57.1	57.1	< 0.005	< 0.005	—	57.3
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	254	302	4.95	0.12	—	462
Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	8.71	16.2	6.32	65.7	0.12	0.27	4.21	4.48	0.27	0.74	1.00	324	18,721	19,044	33.5	0.55	17.5	20,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.14	1.05	0.68	8.34	0.02	0.01	0.77	0.78	0.01	0.13	0.15	—	1,811	1,811	0.09	0.07	2.38	1,835
Area	0.40	1.88	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.45	9.45	< 0.005	< 0.005	—	9.49
Energy	0.05	0.03	0.44	0.27	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,237	1,237	0.09	0.01	—	1,241
Water	—	—	—	—	—	—	—	—	—	—	—	7.97	42.1	50.1	0.82	0.02	—	76.5
Waste	—	—	—	—	—	—	—	—	—	—	—	45.6	0.00	45.6	4.56	0.00	—	160
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51
Total	1.59	2.96	1.15	12.0	0.02	0.05	0.77	0.82	0.05	0.13	0.18	53.6	3,099	3,153	5.55	0.09	2.89	3,322

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.98	4.55	2.91	38.5	0.09	0.05	3.40	3.46	0.05	0.60	0.65	—	9,286	9,286	0.43	0.33	27.7	9,422
Area	3.16	11.2	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	83.4	83.4	< 0.005	< 0.005	—	83.7
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	252	300	4.95	0.12	—	459
Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	8.42	15.9	5.60	67.0	0.11	0.26	3.40	3.67	0.26	0.60	0.86	324	17,091	17,415	33.4	0.49	30.8	18,427
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.92	4.49	3.16	35.3	0.09	0.05	3.39	3.45	0.05	0.60	0.65	—	8,822	8,822	0.44	0.34	0.71	8,935
Area	0.00	8.28	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
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	252	300	4.95	0.12	—	459
Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	5.19	12.9	5.59	36.8	0.10	0.25	3.39	3.64	0.24	0.60	0.84	324	16,543	16,867	33.5	0.50	3.82	17,856
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.42	4.04	2.82	32.5	0.08	0.05	3.02	3.07	0.04	0.53	0.58	—	7,931	7,931	0.39	0.30	10.5	8,041
Area	2.17	10.3	0.17	18.5	< 0.005	0.01	—	0.01	0.02	—	0.02	0.00	57.1	57.1	< 0.005	< 0.005	—	57.3
Energy	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	7,470	7,470	0.54	0.04	—	7,495
Water	—	—	—	—	—	—	—	—	—	—	—	48.2	252	300	4.95	0.12	—	459

Waste	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Total	6.86	14.5	5.42	52.5	0.09	0.25	3.02	3.27	0.25	0.53	0.78	324	15,710	16,033	33.4	0.46	13.6	17,019
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.81	0.74	0.51	5.93	0.01	0.01	0.55	0.56	0.01	0.10	0.11	—	1,313	1,313	0.06	0.05	1.74	1,331
Area	0.40	1.88	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.45	9.45	< 0.005	< 0.005	—	9.49
Energy	0.05	0.03	0.44	0.27	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,237	1,237	0.09	0.01	—	1,241
Water	—	—	—	—	—	—	—	—	—	—	—	7.97	41.7	49.6	0.82	0.02	—	76.0
Waste	—	—	—	—	—	—	—	—	—	—	—	45.6	0.00	45.6	4.56	0.00	—	160
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51
Total	1.25	2.64	0.99	9.57	0.02	0.05	0.55	0.60	0.05	0.10	0.14	53.6	2,601	2,654	5.53	0.08	2.26	2,818

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	3.79	3.50	1.68	28.2	0.06	0.03	0.34	0.38	0.03	0.10	0.13	—	6,354	6,354	0.29	0.19	18.0	6,435
Unenclosed Parking with Elevator	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	0.00

Parking Lot	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	0.00
Medical Office Building	1.44	1.32	0.89	10.3	0.02	0.02	0.15	0.17	0.01	0.05	0.06	—	2,501	2,501	0.12	0.10	7.63	2,542
Government Office Building	1.65	1.48	1.18	14.1	0.04	0.02	0.22	0.24	0.02	0.07	0.09	—	3,609	3,609	0.16	0.14	11.1	3,664
Total	6.87	6.30	3.75	52.6	0.12	0.07	0.71	0.78	0.07	0.22	0.28	—	12,465	12,465	0.57	0.42	36.7	12,641
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	3.72	3.46	1.78	25.8	0.06	0.03	0.34	0.37	0.03	0.10	0.13	—	5,934	5,934	0.28	0.19	0.46	5,996
Unenclosed Parking with Elevator	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	0.00
Parking Lot	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	0.00
Medical Office Building	1.42	1.30	0.98	9.59	0.02	0.02	0.15	0.17	0.01	0.05	0.06	—	2,398	2,398	0.13	0.11	0.20	2,433
Government Office Building	1.63	1.46	1.29	12.9	0.03	0.02	0.22	0.24	0.02	0.07	0.09	—	3,458	3,458	0.16	0.14	0.29	3,505
Total	6.78	6.22	4.05	48.2	0.12	0.07	0.71	0.77	0.06	0.22	0.28	—	11,790	11,790	0.58	0.43	0.94	11,934
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.67	0.63	0.33	4.83	0.01	0.01	0.06	0.07	0.01	0.02	0.02	—	996	996	0.05	0.03	1.27	1,007

Unenclosed	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	0.00
Parking Lot	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	0.00
Medical Office Building	0.26	0.24	0.18	1.79	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	402	402	0.02	0.02	0.55	408
Government Office Building	0.21	0.19	0.17	1.72	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	414	414	0.02	0.02	0.57	420
Total	1.14	1.05	0.68	8.34	0.02	0.01	0.12	0.13	0.01	0.04	0.05	—	1,811	1,811	0.09	0.07	2.38	1,835

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	1.89	1.75	0.84	14.1	0.03	0.02	0.17	0.19	0.02	0.05	0.07	—	3,176	3,176	0.14	0.09	8.99	3,216
Unenclosed Parking with Elevator	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	0.00
Parking Lot	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	0.00
Medical Office Building	1.44	1.32	0.89	10.3	0.02	0.02	0.15	0.17	0.01	0.05	0.06	—	2,501	2,501	0.12	0.10	7.63	2,542

Government Office Building	1.65	1.48	1.18	14.1	0.04	0.02	0.22	0.24	0.02	0.07	0.09	—	3,609	3,609	0.16	0.14	11.1	3,664
Total	4.98	4.55	2.91	38.5	0.09	0.05	0.54	0.59	0.05	0.17	0.22	—	9,286	9,286	0.43	0.33	27.7	9,422
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	1.86	1.73	0.89	12.9	0.03	0.02	0.17	0.18	0.02	0.05	0.07	—	2,966	2,966	0.14	0.09	0.23	2,997
Unenclosed Parking with Elevator	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	0.00
Parking Lot	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	0.00
Medical Office Building	1.42	1.30	0.98	9.59	0.02	0.02	0.15	0.17	0.01	0.05	0.06	—	2,398	2,398	0.13	0.11	0.20	2,433
Government Office Building	1.63	1.46	1.29	12.9	0.03	0.02	0.22	0.24	0.02	0.07	0.09	—	3,458	3,458	0.16	0.14	0.29	3,505
Total	4.92	4.49	3.16	35.3	0.09	0.05	0.54	0.59	0.05	0.17	0.22	—	8,822	8,822	0.44	0.34	0.71	8,935
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.34	0.31	0.16	2.41	0.01	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	498	498	0.02	0.02	0.63	504
Unenclosed Parking with Elevator	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	0.00

Parking Lot	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	0.00
Medical Office Building	0.26	0.24	0.18	1.79	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	402	402	0.02	0.02	0.55	408
Government Office Building	0.21	0.19	0.17	1.72	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	414	414	0.02	0.02	0.57	420
Total	0.81	0.74	0.51	5.93	0.01	0.01	0.09	0.10	0.01	0.03	0.03	—	1,313	1,313	0.06	0.05	1.74	1,331

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,900	1,900	0.12	0.01	—	1,908
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	418	418	0.03	< 0.005	—	419
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	166	166	0.01	< 0.005	—	167
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	935	935	0.06	0.01	—	939

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.06	0.01	—	1,043
Total	—	—	—	—	—	—	—	—	—	—	—	—	4,458	4,458	0.28	0.03	—	4,475
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,900	1,900	0.12	0.01	—	1,908
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	418	418	0.03	< 0.005	—	419
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	166	166	0.01	< 0.005	—	167
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	935	935	0.06	0.01	—	939
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.06	0.01	—	1,043
Total	—	—	—	—	—	—	—	—	—	—	—	—	4,458	4,458	0.28	0.03	—	4,475
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	315	315	0.02	< 0.005	—	316
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	69.2	69.2	< 0.005	< 0.005	—	69.4

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5	< 0.005	< 0.005	—	27.6
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	155	155	0.01	< 0.005	—	155
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.01	< 0.005	—	173
Total	—	—	—	—	—	—	—	—	—	—	—	—	738	738	0.05	0.01	—	741

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,900	1,900	0.12	0.01	—	1,908
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	418	418	0.03	< 0.005	—	419
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	166	166	0.01	< 0.005	—	167
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	935	935	0.06	0.01	—	939
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.06	0.01	—	1,043

Total	—	—	—	—	—	—	—	—	—	—	—	—	4,458	4,458	0.28	0.03	—	4,475
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,900	1,900	0.12	0.01	—	1,908
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	418	418	0.03	< 0.005	—	419
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	166	166	0.01	< 0.005	—	167
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	935	935	0.06	0.01	—	939
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,039	1,039	0.06	0.01	—	1,043
Total	—	—	—	—	—	—	—	—	—	—	—	—	4,458	4,458	0.28	0.03	—	4,475
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	315	315	0.02	< 0.005	—	316
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	69.2	69.2	< 0.005	< 0.005	—	69.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5	< 0.005	< 0.005	—	27.6
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	155	155	0.01	< 0.005	—	155

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.01	< 0.005	—	173
Total	—	—	—	—	—	—	—	—	—	—	—	—	738	738	0.05	0.01	—	741

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,777	1,777	0.16	< 0.005	—	1,782
Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	585	585	0.05	< 0.005	—	586
Government Office Building	0.06	0.03	0.54	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	—	650	650	0.06	< 0.005	—	652
Total	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	3,011	3,011	0.27	0.01	—	3,020
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Low Rise	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,777	1,777	0.16	< 0.005	—	1,782
Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	585	585	0.05	< 0.005	—	586
Government Office Building	0.06	0.03	0.54	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	—	650	650	0.06	< 0.005	—	652
Total	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	3,011	3,011	0.27	0.01	—	3,020
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.03	0.01	0.26	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	294	294	0.03	< 0.005	—	295
Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.01	< 0.005	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.8	96.8	0.01	< 0.005	—	97.1
Government Office Building	0.01	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	0.01	< 0.005	—	108

Total	0.05	0.03	0.44	0.27	< 0.005	0.04	—	0.04	0.04	—	0.04	—	499	499	0.04	< 0.005	—	500

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,777	1,777	0.16	< 0.005	—	1,782
Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	585	585	0.05	< 0.005	—	586
Government Office Building	0.06	0.03	0.54	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	—	650	650	0.06	< 0.005	—	652
Total	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	3,011	3,011	0.27	0.01	—	3,020
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,777	1,777	0.16	< 0.005	—	1,782

Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.05	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	585	585	0.05	< 0.005	—	586
Government Office Building	0.06	0.03	0.54	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	—	650	650	0.06	< 0.005	—	652
Total	0.28	0.14	2.43	1.46	0.02	0.19	—	0.19	0.19	—	0.19	—	3,011	3,011	0.27	0.01	—	3,020
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.03	0.01	0.26	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	294	294	0.03	< 0.005	—	295
Unenclosed Parking with Elevator	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
Parking Lot	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
Medical Office Building	0.01	< 0.005	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.8	96.8	0.01	< 0.005	—	97.1
Government Office Building	0.01	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	0.01	< 0.005	—	108
Total	0.05	0.03	0.44	0.27	< 0.005	0.04	—	0.04	0.04	—	0.04	—	499	499	0.04	< 0.005	—	500

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.16	2.96	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	—	83.4	83.4	< 0.005	< 0.005	—	83.7
Total	3.16	11.2	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	83.4	83.4	< 0.005	< 0.005	—	83.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	8.28	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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

Consum Products	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	0.40	0.37	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.45	9.45	< 0.005	< 0.005	—	9.49
Total	0.40	1.88	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.45	9.45	< 0.005	< 0.005	—	9.49

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consum er Products	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	3.16	2.96	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	—	83.4	83.4	< 0.005	< 0.005	—	83.7
Total	3.16	11.2	0.25	27.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	83.4	83.4	< 0.005	< 0.005	—	83.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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

Consumer	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	8.28	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	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
Consumer Products	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.40	0.37	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.45	9.45	< 0.005	< 0.005	—	9.49
Total	0.40	1.88	0.03	3.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.45	9.45	< 0.005	< 0.005	—	9.49

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	24.3	130	155	2.50	0.06	—	235

Unenclosed	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.37	0.37	< 0.005	< 0.005	—	0.37
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	8.66	44.8	53.5	0.89	0.02	—	82.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	15.2	78.8	94.1	1.57	0.04	—	144
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	254	302	4.95	0.12	—	462
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	24.3	130	155	2.50	0.06	—	235
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.37	0.37	< 0.005	< 0.005	—	0.37
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	8.66	44.8	53.5	0.89	0.02	—	82.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	15.2	78.8	94.1	1.57	0.04	—	144
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	254	302	4.95	0.12	—	462
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.02	21.6	25.6	0.41	0.01	—	38.9
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.06	0.06	< 0.005	< 0.005	—	0.06
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.43	7.42	8.85	0.15	< 0.005	—	13.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.52	13.1	15.6	0.26	0.01	—	23.9
Total	—	—	—	—	—	—	—	—	—	—	—	7.97	42.1	50.1	0.82	0.02	—	76.5

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	24.3	128	152	2.50	0.06	—	233
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.06	-0.06	> -0.005	> -0.005	—	-0.06
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	8.66	44.8	53.5	0.89	0.02	—	82.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	15.2	78.8	94.1	1.57	0.04	—	144
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	252	300	4.95	0.12	—	459
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	24.3	128	152	2.50	0.06	—	233
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.06	-0.06	> -0.005	> -0.005	—	-0.06
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	8.66	44.8	53.5	0.89	0.02	—	82.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	15.2	78.8	94.1	1.57	0.04	—	144
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	252	300	4.95	0.12	—	459
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	4.02	21.2	25.2	0.41	0.01	—	38.5

Unenclosed	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.01	-0.01	> -0.005	> -0.005	—	-0.01
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	1.43	7.42	8.85	0.15	< 0.005	—	13.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.52	13.1	15.6	0.26	0.01	—	23.9
Total	—	—	—	—	—	—	—	—	—	—	—	7.97	41.7	49.6	0.82	0.02	—	76.0

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	45.8	0.00	45.8	4.58	0.00	—	160
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	210	0.00	210	20.9	0.00	—	733

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	20.0	0.00	20.0	2.00	0.00	—	70.1
Total	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	45.8	0.00	45.8	4.58	0.00	—	160
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	210	0.00	210	20.9	0.00	—	733
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	20.0	0.00	20.0	2.00	0.00	—	70.1
Total	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	7.58	0.00	7.58	0.76	0.00	—	26.5
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	34.7	0.00	34.7	3.47	0.00	—	121
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.32	0.00	3.32	0.33	0.00	—	11.6
Total	—	—	—	—	—	—	—	—	—	—	—	45.6	0.00	45.6	4.56	0.00	—	160

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	45.8	0.00	45.8	4.58	0.00	—	160
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	210	0.00	210	20.9	0.00	—	733
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	20.0	0.00	20.0	2.00	0.00	—	70.1
Total	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	45.8	0.00	45.8	4.58	0.00	—	160
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	210	0.00	210	20.9	0.00	—	733
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	20.0	0.00	20.0	2.00	0.00	—	70.1
Total	—	—	—	—	—	—	—	—	—	—	—	275	0.00	275	27.5	0.00	—	963
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	7.58	0.00	7.58	0.76	0.00	—	26.5
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	34.7	0.00	34.7	3.47	0.00	—	121

Government	—	—	—	—	—	—	—	—	—	—	—	3.32	0.00	3.32	0.33	0.00	—	11.6
Total	—	—	—	—	—	—	—	—	—	—	—	45.6	0.00	45.6	4.56	0.00	—	160

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.09	2.09
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.09	2.09
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92

Government	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.35	0.35
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.09	2.09
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.09	2.09
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.35	0.35
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.51	0.51

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	409	409	409	149,230	3,323	3,323	3,323	1,212,794
Apartments Low Rise	409	409	409	149,230	3,323	3,323	3,323	1,212,794
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Apartments Low Rise	136	136	136	49,596	1,104	1,104	1,104	403,068
Apartments Low Rise	133	133	133	48,443	1,079	1,079	1,079	393,695
Medical Office Building	430	430	430	156,950	3,223	3,223	3,223	1,176,340
Government Office Building	452	0.00	0.00	117,791	4,688	0.00	0.00	1,222,196
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Low Rise	204	204	204	74,585	1,661	1,661	1,661	606,155
Apartments Low Rise	204	204	204	74,585	1,661	1,661	1,661	606,155
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Low Rise	67.9	67.9	67.9	24,788	552	552	552	201,454
Apartments Low Rise	66.3	66.3	66.3	24,212	539	539	539	196,769
Medical Office Building	430	430	430	156,950	3,223	3,223	3,223	1,176,340
Government Office Building	452	0.00	0.00	117,791	4,688	0.00	0.00	1,222,196

Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	85
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	85
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	86
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	84
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	85
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	85
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	86
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	84
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0

Pellet Wood Stoves	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
591765.75	197,255	273,841	91,280	9,672

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	325,979	532	0.0330	0.0040	1,385,982

Apartments Low Rise	325,979	532	0.0330	0.0040	1,385,982
Unenclosed Parking with Elevator	98,912	532	0.0330	0.0040	0.00
Unenclosed Parking with Elevator	100,391	532	0.0330	0.0040	0.00
Parking Lot	69,379	532	0.0330	0.0040	0.00
Apartments Low Rise	329,814	532	0.0330	0.0040	1,402,288
Apartments Low Rise	322,144	532	0.0330	0.0040	1,369,677
Medical Office Building	641,530	532	0.0330	0.0040	912,473
Government Office Building	712,811	532	0.0330	0.0040	1,013,859
Unenclosed Parking with Elevator	87,358	532	0.0330	0.0040	0.00
Parking Lot	44,676	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	325,979	532	0.0330	0.0040	1,385,982
Apartments Low Rise	325,979	532	0.0330	0.0040	1,385,982
Unenclosed Parking with Elevator	98,912	532	0.0330	0.0040	0.00
Unenclosed Parking with Elevator	100,391	532	0.0330	0.0040	0.00
Parking Lot	69,379	532	0.0330	0.0040	0.00
Apartments Low Rise	329,814	532	0.0330	0.0040	1,402,288
Apartments Low Rise	322,144	532	0.0330	0.0040	1,369,677
Medical Office Building	641,530	532	0.0330	0.0040	912,473
Government Office Building	712,811	532	0.0330	0.0040	1,013,859

Unenclosed Parking with Elevator	87,358	532	0.0330	0.0040	0.00
Parking Lot	44,676	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	3,168,273	145,700
Apartments Low Rise	3,168,273	145,700
Unenclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	47,684
Apartments Low Rise	3,205,547	102,847
Apartments Low Rise	3,130,999	185,125
Medical Office Building	4,517,299	0.00
Government Office Building	7,946,387	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	3,168,273	76,703
Apartments Low Rise	3,168,273	76,703
Unenclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	20,085

Apartments Low Rise	3,205,547	33,850
Apartments Low Rise	3,130,999	116,128
Medical Office Building	4,517,299	0.00
Government Office Building	7,946,387	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	-27,599

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	21.2	0.00
Apartments Low Rise	21.2	0.00
Unenclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	0.00
Apartments Low Rise	21.5	0.00
Apartments Low Rise	21.0	0.00
Medical Office Building	389	0.00
Government Office Building	37.2	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	21.2	0.00
Apartments Low Rise	21.2	0.00

Unenclosed Parking with Elevator	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	0.00
Apartments Low Rise	21.5	0.00
Apartments Low Rise	21.0	0.00
Medical Office Building	389	0.00
Government Office Building	37.2	0.00
Unenclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	18.9	annual days of extreme heat
Extreme Precipitation	6.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	76.9
AQ-PM	78.7
AQ-DPM	84.6
Drinking Water	95.3
Lead Risk Housing	70.6
Pesticides	0.00
Toxic Releases	79.1
Traffic	95.1
Effect Indicators	—
CleanUp Sites	82.5
Groundwater	54.8
Haz Waste Facilities/Generators	20.3
Impaired Water Bodies	33.2
Solid Waste	39.0
Sensitive Population	—
Asthma	81.0
Cardio-vascular	69.3
Low Birth Weights	36.1
Socioeconomic Factor Indicators	—
Education	86.7
Housing	56.0
Linguistic	94.1
Poverty	68.3

Unemployment	26.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	11.90812267
Employed	25.29192865
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	40.40805851
Transportation	—
Auto Access	27.46054151
Active commuting	56.52508662
Social	—
2-parent households	48.69754908
Voting	10.27845502
Neighborhood	—
Alcohol availability	44.32182728
Park access	81.35506224
Retail density	67.81727191
Supermarket access	70.03721288
Tree canopy	54.94674708
Housing	—
Homeownership	29.00038496
Housing habitability	7.108943924

Low-inc homeowner severe housing cost burden	4.298729629
Low-inc renter severe housing cost burden	18.9272424
Uncrowded housing	9.174900552
Health Outcomes	—
Insured adults	36.09649686
Arthritis	43.8
Asthma ER Admissions	23.1
High Blood Pressure	35.1
Cancer (excluding skin)	82.6
Asthma	37.3
Coronary Heart Disease	23.5
Chronic Obstructive Pulmonary Disease	19.2
Diagnosed Diabetes	4.9
Life Expectancy at Birth	43.8
Cognitively Disabled	82.5
Physically Disabled	50.9
Heart Attack ER Admissions	42.0
Mental Health Not Good	14.3
Chronic Kidney Disease	20.1
Obesity	32.5
Pedestrian Injuries	78.5
Physical Health Not Good	7.5
Stroke	15.1
Health Risk Behaviors	—
Binge Drinking	96.4
Current Smoker	16.1
No Leisure Time for Physical Activity	3.9

Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	22.0
Elderly	57.3
English Speaking	1.1
Foreign-born	89.6
Outdoor Workers	71.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	25.3
Traffic Density	88.2
Traffic Access	55.7
Other Indices	—
Hardship	89.1
Other Decision Support	—
2016 Voting	13.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	20.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

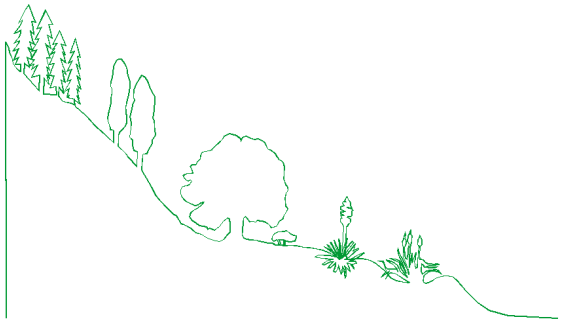
Screen	Justification
Land Use	Project Land Uses
Operations: Vehicle Data	KOA, 2022
Operations: Hearths	No Hearths in Project Design
Operations: Consumer Products	SCAQMD
Operations: Fleet Mix	Residential uses do not generate heavy duty truck trips.

Appendix C

Biological Resources Constraints Analysis

May 6, 2020

Ms. Wendy Lockwood
Sirius Environmental
1478 N Altadena Dr.
Pasadena, CA 91107
wl@siriusenvironmental.com
Transmitted Via E-mail



Biological Assessment Services

Subject: **Biological Resources Constraints Analysis** for your project at MacLaren Hall, 4024 Durfee Ave., El Monte CA.

Dear Ms. Lockwood:

Introduction
This letter reports on the biological conditions present at MacLaren Hall. A brief floral and faunal survey of the site was conducted on April 14, 2020. The purpose of the survey was to determine the general biologic character of the site and attempt to determine the potential for any significant biological impact resulting from change of use on the site. No attempt was made to thoroughly catalogue all of the species present on the property. The site was walked on foot and the entire site was accessible. The sky was clear and the weather mild, with temperature steady at around 73°f. The California Natural Diversity Database and the California Native Plant Society's lists of sensitive plants were accessed for the nine USGS quadrangle maps surrounding the site. The potential for the occurrence of any species found on these lists was evaluated.

Site Description
The approximately 13.6-acre property is located in the heart of the urbanized San Gabriel Valley. Nearly flat and level, the site averages 313 feet of elevation. Site acreage and elevation were derived from Google Earth. The property is occupied by several large buildings, smaller associated structures, parking lots, and large grassy lawns.

Vegetation
MacLaren Hall, in its current form, was developed in the 1970s and the entire site is occupied by structures, hardscape, or landscaped vegetation. There are no natural habitats on the property. The landscaping present consists entirely of perennial shrubs, subshrubs, lawns and mature trees. Annual weeds are present in the lawns and planted areas as is typical in southern California.

Among the shrubs and other low growing vegetation present were Indian hawthorne (*Raphiolepsis indica*), Heavenly bamboo (*Nandina domestica*), Mexican sage (*Salvia leucantha*), African bush daisy (*Euryops* sp.), bottlebrush (*Callistemon* sp.), hibiscus (*Hybiscus* sp.), foxtail agave (*Agave attenuata*) and Mexican feather grass (*Stipa tenuissima*). All are common nonnative landscape species.

Based on size and placement in relation to the onsite infrastructure, most of the trees likely date to 1970s era site development and include the following:

Common Name	Scientific Name	Common Name	Scientific Name
Aleppo pine	*Pinus halepensis*	Am. sweet gum	*Liquidambar styraciflua*
Italian stone pine	*Pinus pinea*	Shamel ash	*Fraxinus uhdei*
Canary Island pine	*Pinus canariensis*	Indian fig	*Ficus nitida*
Norfolk Island pine	*Araucaria heterophylla*	loquat	*Eriobotrya japonica*
fern pine	*Podocarpus gracilior*	ornamental pear	*Pyrus* sp.
Brazilian pepper	*Schinus teribenthifolia*	unidentified citrus	*Citrus* sp.
Jacaranda	*Jacaranda mimosifolia*	Mexican fan palm	*Washingtonia robusta*
carrotwood Tree	*Cupaniopsis anacardioides*	Spanish dagger	*Yucca gloriosa*

Wildlife

The highly urbanized character of the site and surrounding area, in addition to the cursory nature of the site survey conducted in support of a constraints analysis, resulted in relatively few wildlife observations. Western fence lizard was the only reptile noted during the survey. Eastern fox squirrels (*Sciurus niger*) were the only mammal directly observed but sign (tracks, scat, burrows, etc.) of pocket gophers (*Thomomys bottae*) and Virginia opossum (*Didelphis virginiana*) were also noted. Many other common urban mammals are also expected to use the property including raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*).

An abundance of mature trees and open areas coupled with minimal human activity makes the site attractive to many bird species. The native bird species observed during the brief survey were black phoebe, lesser goldfinch, house finch, bush tit, Anna's hummingbird, Allen's hummingbird, northern mockingbird, mourning dove, dark-eyed junco, Audubon's warbler and common raven. European starlings were also present. Black phoebe nests were observed in several places in the buildings and house finch young could be heard calling from hidden nests within the structures.

There are undoubtedly many other avian species that utilize the site as residents or transients, the most common of which are likely California towhee, American crow, and Bewick's wren, among many others. None of these species are considered particularly sensitive and none are specifically protected by state or federal law. However, all bird species that occur on the site are protected from nest disturbance by the federal Migratory Bird Treaty Act and the California Fish and Game Code. These regulations prohibit the disturbance of nesting birds in any manner that may cause reproductive failure. In general, this means that land clearing must be accomplished during winter months while the birds are not nesting. If clearing cannot be accomplished during the non-nesting season (Currently considered to be from September 30 through January 1 per CDFW) nesting bird surveys must be conducted and any nests discovered must be avoided during construction. In general, nesting bird surveys are required for any construction that takes place between January 1 and September 30. Because the buffer distances recommended by CDFW (500 feet for raptors and 300 feet for all other species) extend far beyond the property limits in many cases, nest detection and avoidance may be difficult or impossible on adjacent private properties. In these cases,

appropriate nest avoidance strategies may be determined by a qualified biological monitor who is onsite if land clearance is scheduled during nesting season.

Sensitive Biological Resources
There are 155 biological resources listed as sensitive and reported in the 9-quad area surrounding the project site. Most of the species listed as protected and occurring in the region have very specific habitat types that do not, and never did, occur on the project site, such as marine aquatic, coastal salt marsh, or vernal pool. As such, these have been eliminated from further consideration. Several protected bird species, including several raptors, and numerous migratory songbirds, may fly over the site, and occasionally forage there, but would never reside on the property. These have also been eliminated from consideration.

Because the site is devoid of native plant species, and possesses no native habitat, it is concluded that no sensitive wildlife or plant species occur on the property.

Conclusion
Several native wildlife species were noted on the site, and the site may be adequate to support a few ground-dwelling mammals and reptiles. Birds are highly mobile, and the site does not completely support any bird species, though they may utilize portions of the site as part of their territory and even nest onsite. Others may use the property as transients during migration.

The MacLaren Hall project site does not support any Rare, Threatened or Endangered species or habitat that would support those species. No species listed as Rare, Threatened, or Endangered by the state or federal governments were found on the property or are thought likely to occur there. An analysis was made of the likelihood of listed species occurring there based on known range and habitat preferences of these species. Any birds that nest on the site are protected by the Migratory Bird Treaty Act and the California Fish and Game Code.

There are no definable streamcourses or riparian habitat elements present. Therefore, no permits or interactions with the agencies that regulate impacts to jurisdictional waters of the U.S. or State are required.

It is a pleasure working with you and I look forward to the opportunity to continue assisting with this project if necessary.

Sincerely,
Biological Assessment Services

Ty M. Garrison
Principal

Appendix D

Historic Resource Evaluation

MacLaren Hall Campus-DCFS,
County of Los Angeles
El Monte, California
Historic Resource Evaluation

May 20, 2020

Submitted by:

Kaplan Chen Kaplan
2526 Eighteenth Street
Santa Monica, CA 90405

David Kaplan, Principal
Pam O'Connor, Architectural Historian

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Attachments

Attachment A: Photographs
Attachment B: Maps
Attachment C: Historic Aerials and Sanborn Insurance Maps
Attachment D: Drawings
Attachment E: SCCIC Report

EXECUTIVE SUMMARY AND PURPOSE

This report, completed by Kaplan Chen Kaplan, presents the findings of the historic resource evaluation conducted for the property known as MacLaren Hall, a facility of the County of Los Angeles located in El Monte, California. The purpose of this evaluation is to determine whether the property contains historical resources as defined by the California Environmental Quality Act (CEQA).

The MacLaren Hall site contains buildings and open space areas that were designed and constructed in the mid 1970s. There are two major buildings, an Office Building (originally shown as two buildings, one for the Department of Public Social Services and the other for the Probation Department), a School/Maintenance Building, as well as six dormitory buildings. These buildings are arranged along an axis and the buildings' plans are a hybrid of the finger- and cluster plans. A utilitarian Cafeteria Building and two prefabricated trailers are also located on the site. There are two major open space areas, on the North and the South which consist primarily of flat terrain covered with grass. There are large mature trees in small clusters around the site.

The parcels that created the site contained groves of trees in the early 20th Century. The groves of trees were removed as the parcels were developed first as the Ruth Protective Home for Girls in 1930 which was added onto later in the decade as the site expanded and in the 1940s as the site evolved to become the Sister Kenny Polio Treatment Hospital.

In 1960 Los Angeles County acquired the site and used the existing buildings to open MacLaren Hall, a facility to house foster youth for short-term stays. In 1971, with funding from passage of a bond, planning for redevelopment of the site began and was implemented in two phases. All of the existing buildings were demolished, and landscape elements removed to make way for the new MacLaren Hall which was opened in 1975. The new MacLaren Hall operated from 1975 to 2003 but following years of public scrutiny and problems, it was closed after 28 years in operation.

The buildings at MacLaren Hall are a modest version of the Modern architectural style. The design of the buildings is spare and employs a vocabulary of elements that are repeatedly used on the two major buildings and the Dormitories. The site plan was based on school site design principles developed decades earlier in the 1940s to 1960s. The MacLaren Hall buildings and site plan were designed by William Allen; Allen is not considered to be a master architect. The materials were basic and unremarkable. The general contractor, the Vanlar Construction Co. of Long Beach. Vanlar is not considered to be master builders or craftsmen.

There is no evidence that any historic persons. events or broad patterns of history are associated with the subject property.

The findings of this report are the result of thorough research, field observations and building evaluations using current technical guidance from national, state, and local historic preservation agencies. Based on this evaluation, the MacLaren Hall buildings and do not meet the criteria to be eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or as a Los Angeles County Landmark either for any individual buildings or as a historic district.

SUMMARY OF RESEARCH AND METHODOLOGY

A comprehensive methodology for researching the development history of properties and evaluation of the research to determine potential historic eligibility included conducting the following activities:

- Field review of subject property in May 2020
- Field review of adjacent area in May 2020
- Photography of subject property and adjacent area
- Review of original building plans
- Los Angeles County Assessor data research
- Research online databases and sources
- Research Los Angeles Public Library online resources
- Review of aerial and topographic maps
- Research online photographic databases
- Research historic newspaper databases
- Records search South Central Coastal Information Center
- Evaluation of properties in accordance with federal, state and local eligibility criteria

All of the field data and research data were analyzed and evaluated by an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards for Historic Preservation and by an architect who meets the Professional Qualification Standards for Historic Architect.

REGULATORY FRAMEWORK

The importance of historic resources has been recognized by federal, state, and local governments through programs and legislation that identify and recognize buildings, structures, object, landscapes and districts that possess historic significance.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) considers historical resources part of the environment. A project that may cause a substantial adverse effect on the significance of an historical resource may have a significant effect on the environment. A property that is eligible for listing in the California Register of Historical Resources, is listed in a local register of historical resources, or has been identified as historically significant in an historic resources survey that meets specific criteria is considered a historical resource under CEQA. In order to determine if a property is a potential historical resource it must be evaluated for its eligibility for inclusion on the National Register of Historic Places, the California Register of Historical Resources and/or as a local historical resource.

National Register of Historic Places

The National Historic Preservation Act (NHPA) of 1966 established the National Register of Historic Places (National Register) as an authoritative guide "used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and indicate what properties should be afforded protection from destruction or impairment."[1] Buildings, districts, sites and structures may be eligible for listing in the National Register if they possess significance at the national, state or local level in American history, culture, architecture or archeology, and in general, are over 50 years old. Significance is evaluated using established criteria:

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or

B. Are associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yield, or may be likely to yield, information important in prehistory or history.

Significance of Association National Register Bulletin 32, Guidelines for Evaluating and Documenting Properties Associated with Significant Persons, provides guidance on evaluating potential historic association with people who have "made contributions or played a role that can be justified as significant." For association with leaders or prominent families it is necessary "to explain their significant accomplishments" and they "must be compared to those of others who were active, successful, prosperous, or influential in the same field." Most properties nominated for associations with significant persons also are nominated for other reasons and a majority of properties nominated under the association criterion are also significant in the area of architecture or for the area in which the individual(s) achieved recognition.

National Register Bulletin 32 adds that the fact that we value certain professions or the contributions of certain groups historically does not mean that every property associated with or used by a member of that group is significant. Associations with one or more individuals in a particular profession, economic or social class, or ethnic group will not automatically qualify a property. The contribution must be distinctive: it is not enough to show that an individual has acquired wealth, run a successful business, or held public office, unless any of these accomplishments, or their number or combination, is a significant achievement in the community in comparison with the activities and accomplishments of others.

Integrity. Properties may be eligible for inclusion on the National Register as individual resources and/or as contributors to an historic district. *National Register Bulletin 15: How to Apply National Register Criteria for Evaluation* states that in addition to meeting at least one of the four criteria, a resource should be evaluated to assess its integrity. For

[1] 36 Code of Federal Regulations, Section 60.

individual resources to qualify for inclusion they must represent an important aspect of an area's history and possess integrity. An historic district must retain integrity as a whole, "the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished."

The seven aspects of integrity are location, design, feeling, association, setting, workmanship and materials. To "retain historic integrity a property will always possess several, and usually most, of the aspects." For a resource to be evaluated as significant for its design, a "property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique."

Historic Context. A resource must also be significant within an historic context. *National Register Bulletin 15* states that an historic context explains "those patterns, themes, or trends in history by which a specific…property or site is understood and its meaning…is made clear." To be determined eligible for listing on the National Register a property must possess significance within a historic context and possess integrity.

Historic District. According to *National Register Bulletin 15,* an historic district derives its importance from being a unified entity whose identity as a district "results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment." An historic district is "a definable geographic area that can be distinguished from surrounding properties by changes such as density, scale, type, age, style of sites, buildings, structures, and objects, or by documented differences in patterns of historic development or associations...the boundaries must be based upon a shared relationship among the properties constituting the district."[2]

California Register of Historical Resources

The California Register, based on the National Register, is the "authoritative guide to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and indicate which properties are to be protected." A building, site, structure, object, or historic district may be eligible for inclusion on the California Register if it meets one or more of the following criteria:

1. It is 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

2. It is associated with the lives of persons important to local, California, or national History

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

[2] National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, pp. 5-6, https://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf

California Office of Historic Preservation Technical Assistance Series #6, California Register and National Register: A Comparison states that in addition to meeting one of the criteria of significance, a resource must "retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance" and "integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. " Historical resources that "have been rehabilitated or restored may be evaluated for listing."

Series 6 Guidance also states, "Alterations over time to a resource or historic changes in its use may themselves have historical, cultural, or architectural significance." Historical resources that do not retain sufficient integrity to qualify for the National Register may still be eligible for listing in the California Register: "a resource that has lost its historic character or appearance may still have sufficient integrity for the California Register if it maintains the potential to yield significant scientific or historical information or specific data."[3]

Los Angeles County Historic Preservation Ordinance

In 2015, the County of Los Angeles established a historic preservation program to recognize the importance of preserving the County's distinctive architectural and cultural history by adopting the Historic Preservation Ordinance that specifies criteria and procedures for the designation of landmarks and historic districts.[4]

Criteria for Designation of Landmarks and Historic Districts.

A. A structure, site, object, tree, landscape, or natural land feature may be designated as a landmark if it is 50 years of age or older and satisfies one or more of the following criteria:

    1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, State, County, or community in which it is located;

    2. It is associated with the lives of persons who are significant in the history of the nation, State, County, or community in which it is located;

    3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, State, County, or community in which it is located; or possesses artistic values of significance to the nation, State, County, or community in which it is located;

    4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, State, County, or community in which it is located;

[3]California Office of Historic Preservation Technical Assistance Series #6: California Register and National Register: A Comparison, p. 3.
[4] Los Angeles County Code Section 22.82.010 addresses historic districts and Section 22.124 of the Code contains the Historic Preservation Ordinance.

5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources;

6. If it is a tree, it is one of the largest or oldest trees of the species located in the County; or

7. If it is a tree, landscape, or other natural land feature, it has historical significance due to an association with a historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

B. A property less than 50 years of age may be designated as a landmark if it meets one or more of the criteria set forth in Subsection A, above, and exhibits exceptional importance.

C. The interior space of a property, or other space held open to the general public, including but not limited to a lobby, may be designated as a landmark or included in the landmark designation of a property if the space qualifies for designation as a landmark under Subsection A or B, above.

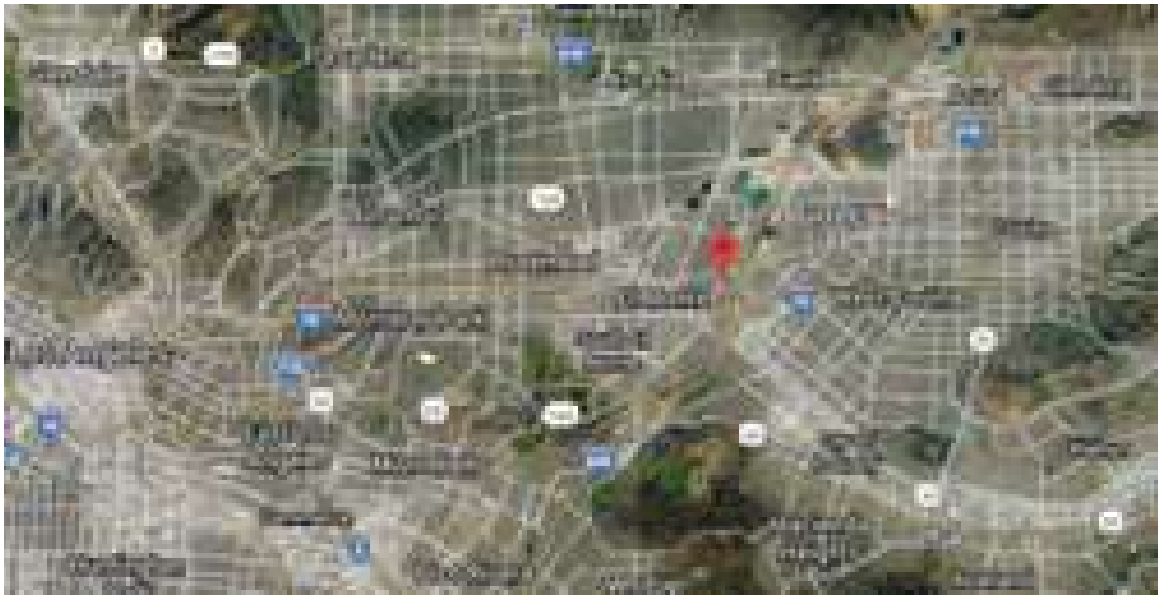
D. Historic Districts. A geographic area, including a noncontiguous grouping of related properties, may be designated as a historic district if all of the following requirements are met:

1. More than 50 percent of owners in the proposed district consent to the designation;

2. The proposed district satisfies one or more of the criteria set forth in Subsections A.1 through A.5, above; and

3. The proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning.

PROJECT LOCATION AND SETTING



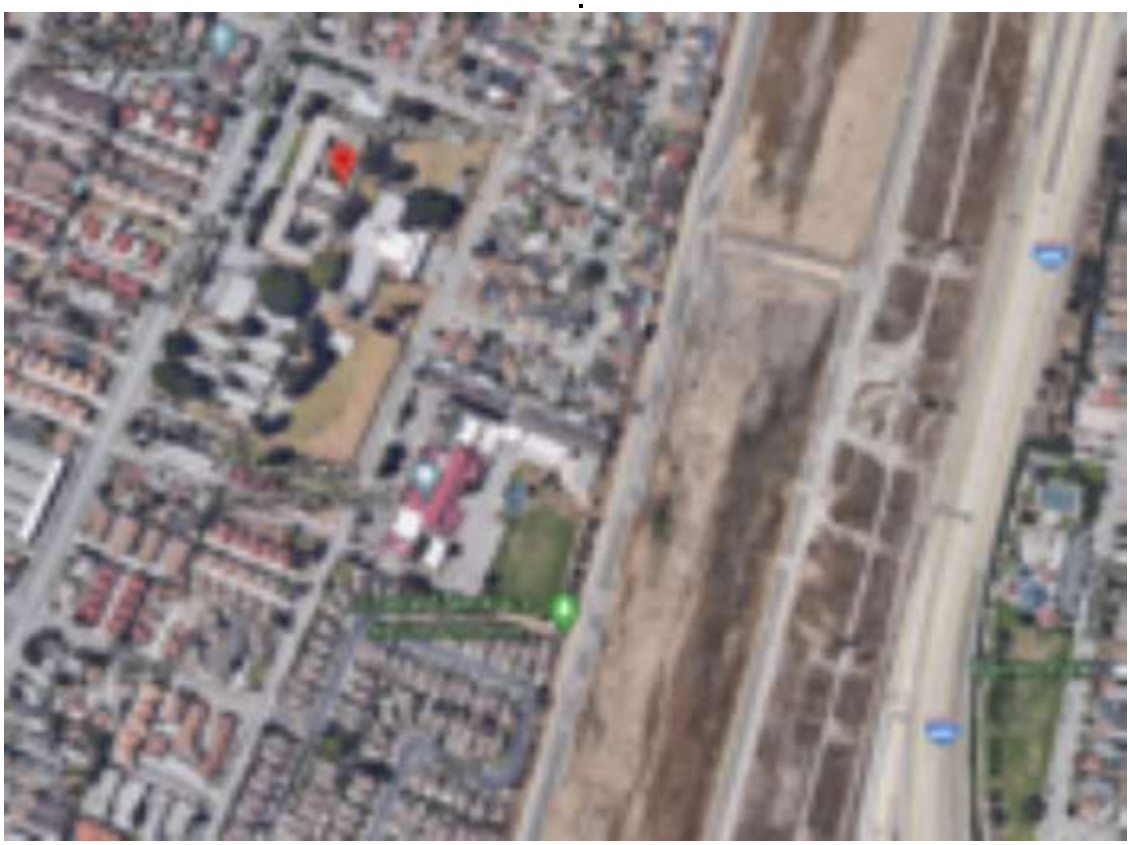
Location Maps, c2019 (Google Earth)

The MacLaren Hall campus is located in the City of El Monte in the San Gabriel Valley in the eastern area of Los Angeles County. The facility is about 15 miles east of the Los Angeles County Hall of Administration in downtown Los Angeles.

The site address is 4024 Durfee Avenue. The site is composed of two large parcels with Los Angeles County Assessor ID Numbers of 8549-004-900 and 8549-005-900. The site is bounded by Durfee Avenue on the west, Kerrwood Street on the north, and Gilman Road on the east. The south boundary abuts residential development that extends south to Deana Street.

Across Gilman Road at the south end of the campus it the Twin Lakes Elementary School.

To the east of the facility is the San Gabriel River and a wash and river trail which is part of the Emerald Necklace Nature Preserve in the San Gabriel Valley and Gateway Cities Regions of Los Angeles County. The 605 Freeway is located to the east of the river.


Area around MacLaren Hall site (Google Earth, 2019)

HISTORY OF MACLAREN HALL

William Gordon MacLaren (1869-1946) was born in Scotland to s family with z heritage of tea plantations in the East Indies. MacLaren began a career with a Glasgow tea firm and in 1893 came to the US as a salesman in Chicago for a tea and coffee import company. While in Chicago he attended the Moody Bible School and subsequently was appointed as superintendent of a Chicago mission and settlement house and became an ordained Free Methodist minister.

MacLaren worked his way westward in superintendent positions in a number of rescue missions eventually locating in Portland, Oregon where he founded the Pacific Coast Rescue and Protective Society (the Protective Society) in 1908. The purpose of the Protective Society was “to conduct missions for the uplifting of fallen humanity and to do any and all things necessary for the physical, mental and moral betterment of those who come under its custody and care.” The Protective Society worked in the states of Oregon, Washington, Idaho and California.

The Protective Society opened the Louise Home in Portland, a rescue home “For the care of unfortunate girls and women” which provided care and medicate treatment for maternity cases, girls infected with venereal disease, and delinquent girls. The Portland program became a model for similar programs including the Washington Girls; Home I Everett (1917), the California Rescue Home for Girls in Oakland (1924), and the Ruth

Sanitarium for Girls (later The Ruth Home named after Ruth Kerr) in Los Angeles (1924).[5]

The Ruth Protective Home was established at 3931 Compton Avenue in Los Angeles in 1924-25. The first Ruth Home was a small Craftsman style cottage that provided temporary housing for infected girls. By 1929 the facility was "struggling along in inadequate quarters" and began raising funds to construct a new home to be located on a ten acre site in El Monte. The $15,000 donation of land was made by Ruth Kerr, wife of the secretary of the Pacific Protective Society, Alexander H. Kerr.[6]

In 1930 construction began on the new Ruth Protective Home's first unit which was built at a cost of $85,000 with J.J. Frauenfelder as architect. The buildings were Spanish Colonial revival in style. Objectives of the institution according to Mrs. Kerr were to "prevent blindness at birth, to provide scientific treatment for young mothers, to help decrease insanity and to educate and make worth-while citizens of the young women who enter the institution…we also try to find suitable homes and employment for our patients." [7] The new facility was to provide accommodations for 66 girls and forty babies including a 100-bed hospital and a school building. Every effort was to "be made to create a homelike atmosphere for its occupants" and training was seen as an essential program element.[8]

By 1935 The Ruth Home "was treating an average of 320 girls and babies annually, most of whom were younger than 12 years of age and whose stay ranged from two months to two years." The Ruth Home operated into the 1940s. Development of anti-biotics such as penicillin for treatment of sexually transmitted diseases in the 1940s rendered many programs of the Ruth Home obsolete and by the end of the 1940s portions of the facility had been decommissioned.
In 1948 Los Angeles County Juvenile facilities were under scrutiny by the Grand Jury which

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[5] *" The Louise Home Hospital and Residence Hall," National Register for Historic Places Registration Form, 1987.* https://npgallery.nps.gov/GetAsset/85b2504d-6f82-4555-b6d3-aaa389e9a299
[6] "Ruth Home Radio Plea Made," *Los Angeles Times,* August 16, 1929.
[7] "New Ruth home to Rise: Work Starts at El Monte on ?first Unit Which Will Increase Capacity of Institution," *Los Angeles Times,* August 15, 1930.
[8] "Home for Girls Ceremony Set," *Los Angeles Times,* October 23, 1930.

registered concern that non-delinquent children and delinquent children were being confined together.[9] The Juvenile Hall had been constructed in 1929 to house 320 children and was overcrowded. A bond measure was to be put to the voters to construct a new Juvenile Center that "would provide for segregation of delinquent and non-delinquent children and have a capacity of 550."[10] With passage of the bond, a new facility was to be constructed on Henry Street and Eastlake Avenue replacing the older Juvenile Hall. However, until that facility could be constructed the County needed interim facilities.

The County Board of Supervisors pursued leasing a vacant portion of the Ruth Home campus as a "'stop-gap branch' of Juvenile Hall to house up to 50 non-delinquent juveniles." The vacant buildings could be immediately occupied and "kitchen, sleeping and other equipment" were available and the facility was deemed "the County's best chance to solve a problem which developed as correctional facilities lagged behind population growth." The converted quarters were opened in late 1948 and operated for approximately two years.

In the 1940s the number of infantile paralysis began to increase in Southern California and the nation and growing into an epidemic by the end of the decade. Poliomyelitis, known as polio, is an infectious disease caused by the poliovirus. There was no vaccine or cure for the disease in the 1940s. A treatment for polio victims was developed by Australian nurse Sister Elizabeth Kenny and caused a major controversy in the medical field. Her treatment of "re-educating muscles" was ultimately accepted by the medical profession and was praised at the California Medical Convention in 1942.[11]

(Photo: Ruth Home, c1948)

In 1949-50 an effort was undertaken in Los Angeles to establish a hospital facility dedicated to treating polio victims using the Kenny treatment. The sister Elizabeth Kenny Campaign for a hospital included many civic leaders in its fund raising drive. The group identified the Ruth Home in El Monte which would be offered rent-free to the Kenny Foundation and was considered a "front-line bulwark against childhood's most feared disease."[12] The facility included a 100-bed hospital with nurses' quarters, operating rooms, executive offices, reception rooms and school for elementary and high school grades.[13] The arrangement was for the Foundation to use the facility with the provision

[9] "County Seeks Remedies at Juvenile Hall: Grand Jury Awaits Reply to Criticism of Detention Unit." *Los Angeles Times*, October 20, 1948.
[10] "Juvenile Hall Branch at Ruth Home Sought," *Los Angeles Times,* October 27, 1948.
[11] "Nurse's Paralysis Therapy Indorsed (sic)," *Los Angeles Times,* May 7, 1942.
[12] "Sister Kenny Hospital Drive Enters Final Week," *Los Angeles Times,* January 11, 1950.
[13] "Ruth Home Proposed as First Kenny Permanent Center for Polio in West," *Los Angeles Times,* May 15, 1950.

that they equip the establishment and maintain the property, paying all operating costs. It was to be known as the Ruth Home-Sister Kenny Polio Hospital. In 1950 Sister Kenny was given a cottage on the hospital's campus as her Southern California home.[14] In 1953 another of the Ruth Home's buildings was reconditioned to become a hospital annex to the polio hospital.[15] In 1955 Jonas Salk developed an effective vaccine to prevent polio and the need for treatment of the disease ceased and the Ruth Home-Kenny Polio Hospital closed in the mid-1950s.

Los Angeles County continued to need facilities to care for juveniles and in 1958 the County Probation Department surveyed the grounds of the Ruth Home-Kenny Polio Hospital as a possible location for a facility for non-delinquent youth.

Los Angeles County began providing social services for children in 1913 with establishment of the Department of Charities. In 1935 California law allowed for abandoned children to be eligible for adoption. In 1938 the Division of Outdoor Relief was expanded and renamed the Bureau of Indigent Relief and was renamed the Bureau of Public Assistance in 1943 which became the Department of Public Social Services in 1966.[16]

The County purchased the property in 1960 for $300,000 and invested another $300,000 to "bring it up to required standards as a shelter for youths." The facility was to serve 148 youths and 100 staff. In addition to rehabilitating existing buildings a perimeter security system was installed and new features including a small courtroom in one wing and a library were developed.[17] The facility for non-delinquent children who were wards of the County Probation Department opened in March 1961.[18] By 1967 there were 1,400 child welfare institutions in the U.S. of which 150 were public institutions.[19]

Just two years later, the facility was described as "overcrowded." Bond measures were placed before votes in 1963 and 1964. The 1962 measure was to add 200 more beds to the facility. The 1964 bond measure was for an expansion and improvement program. Both measures failed. Another bond measure, this one to replace MacLaren Hall, was placed on the November 1968 ballot and was passed by the voters of Los Angeles County.

A new facility and campus was proposed and all of the existing buildings and structures including the Spanish Colonial Revival style buildings from the Ruth Home and facilities of the Kinney Polio Hospital were to be demolished. Construction of the new facility was done in two phases so that the County facility could continue to care for children during construction of the new facility. The architect for the buildings was William Allen and the contractor was Vanlar Construction, Inc. of Long Beach.[20]

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[14] "Sister Kenny Given Cottage at El Monte," *Los Angeles Times,* October. 9, 1950.
[15] "Sister Kenny Hospital Annex Dedicated," *Los Angeles Times,* October 29, 1953.
[16] Los Angeles Department of Child and Family Services, website: https://dcfs.lacounty.gov/about/who-we-are/
[17] "New MacLaren Hall to House Juvenile Wards," *Los Angeles Times,* November 6, 1960.
[18] "Dedication of Neglected Child Facility Held," *Los Angeles Times,* March 28, 1961.
[19] Geiser, Robert L., *The Illusion of Caring: Children in Foster Care," p. 170.*
[20] "County to Investigate Lack of Bidders on Pact for Gasoline," *Los Angeles Times*, May 2, 1973. There were problems with the construction bids and the Vanlar Construction Company was eventually awarded the contract.

The new facility plan consisted of a pair of two-story buildings, one for the Probation Department and the other for the Department of Public Social Services, "along with an education building with basement, six single-story living units and a one-story service building with a kitchen and employs dining facilities. The 15-acre property will be landscaped, and parking will be provided for 156 cars." The Probation Department would be responsible for the care of 150 non-delinquent children and the Department of Public Social Services (DPSS) would operate a 50 bed "diagnostic and treatment facility for children who are emotionally disturbed." The two operations would have separate housing, classrooms and play areas with the gymnasium-auditorium to be shared by both groups.[21]

Construction of the facility was completed in 1976. In 1975 the six dormitories, an infirmary, nursery and administrative offices were completed and in 1976 the school building was finished. The nursery was for children under four years old The children had been housed in large dormitories but with the new facilities there will be "20 in each dormitory, 10 each in two wings with a multi-purpose room in the center…. A high fence surrounds MacLaren and serves not only to keep the children in but to keep out relatives and others who might complicate the treatment and care of the youths."[22]

In describing the MacLaren Hall facility an article in the *Los Angeles Times* in 1975 describes the youth as "about equally divided between boys and girls. Their ages vary from a few months to 18 years, and they may stay from a few hours to a month or so….and the youth are those who, for various reasons, have come under court custody and are laced there until a court detention hearing puts them in a foster home or returns them to their own home. They come to MacLaren at all hours…battered children whose injuries do not require hospitalization and those sexually assaulted and in need of protection from parents or other adults find their way to MacLaren. Older children who couldn't make it in one foster home are sent there until another placement can be found. From throughout the county they come scared, angry, bewildered."[23]

In the 1970s and 1980s nationwide saw a shift in mental health laws, medicine and treatment. In late 1975 the County Board of Supervisors approved transfer of MacLaren Hall from the Probation Department to the Department of Public Social Services (DPSS). Board Chair James Hayes said of the youths housed at MacLaren, "they are not criminals, but youngsters who are getting the short end of the stick from society either because of shattered families or other problems." Hayes added that DPSS could provide the treatment non-delinquent youth needed. With this separation the Probation Department had "as its key function the care of youngsters in the juvenile justice system" who were housed at other county facilities.[24]

In 1977 there were an estimated 7,000 children in placement with 6,000 in foster homes and 1,00 in group homes and institutions. There are an additional 2,500 children who have committed felony or misdemeanor crimes and under the supervision of the Probation Department. The *Los Angeles Times* featured a major article about the foster care system in Los Angeles County. They observed that "on any day, more than 10,000 children in Los Angeles County are living away from their homes and parents…The

[21] "Pasadena Firm May Get $6.8 Million Pact," *Los Angeles Times,* January 29, 1973.
[22] "MacLaren Hall Awaits Completion of Buildings," *Los Angeles Times,* April 6, 1975.
[23] "MacLaren Hall Awaits Completion of Buildings," *Los Angeles Times,* April 6, 1975.
[24] "MacLaren Hall Transfer OKd," *Los Angeles Times,* December 4, 1975.

County's foster care population changes from day to day, week to week; some stay only a few days while others sent their entire childhood. Where they live, how long they stay and what happens to these children is the responsibility of a sprawling chaotic, fragmented system that the Los Angeles County government calls 'out-of-home placement' [which] meanders over three separate county departments, employs about 2,600 county workers, utilizes the services of over 4,000 private households and more than 500 group homes and large institutions."[25]

The article goes on to observe that "the system suffers from all the expected frailties of large bureaucracies—mountains of paper work, limited funds, inadequate resources and a general lack of communication among its various parts… Both participants and observers agree—the system does not work as well as it should." It adds that "not surprisingly then, the foster care system here is frequently criticized. A federal General Accounting Office study released earlier this year accused the county of warehousing and forgetting children."[26]

Amid charges of inadequate care and overcrowding of MacLaren Hall in 1980 the *Los Angeles Times* ran several articles on problems at the facility as the Public Social Service Commission began to hold hearings on conditions at MacLaren. "Shortages and staffing problems combined with a high population have created a poor atmosphere for children who have a desperate need for a stable atmosphere, critics of MacLaren say. The staffers say they are 'burned out;' administrators say they are disgruntled."[27]

"Officials said one of the principal problems facing the facility is finding an adequate way to deal with the sometimes psychotic and sometimes violence-prone youngsters who are sent to MacLaren by other institutions." MacLaren Hall had been designed as "a temporary home for displaced youngsters, acting as a halfway house for youngsters sent on to foster homes. But in recent years, officials said they have been receiving children who are prone to violence or who are suffering from severe mental disorders." The County's Public Social Services Commission began a study of the problems "of overcrowding, short staffing and alleged inadequate care at MacLaren."[28]

Between 1976 and 1984 MacLaren Hall had four directors and eight residential care directors. In 1984 the County consolidated all children's services from three departments into a new Department of Child Services. The new department was created "in response to a public outcry over the mishandling of children under county care." The new department was given "a mandate to improve services to nearly 50,000 abused or neglected children a year and to implement recent state law." The Board of Supervisors also appointed a new Commission for Children's Services.[29] [30]

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[25] "Foster Homes: A Huge System With Major Problems: Quality Too Variable, Placements Too Many, Case Loads Too Heavy," *Los Angeles Times,* December 4, 1977.
[26] Foster Homes: A Huge System With Major Problems: Quality Too Variable, Placements Too Many, Case Loads Too Heavy," *Los Angeles Times,* December 4, 1977.
[27] "Basics Often Lacking at MacLaren Hall: Children May Find Their Problems Compounded at Facility," *Los Angeles Times,* February 13, 1980.
[28] "Officials Begin Study of Overcrowding, Inadequate Staffing at MacLaren Hall," February 15, 1980.
[29] "5 Finalists Named for County Child Services Post; Selection Set for Today," *Los Angeles Times,* September 4, 1984.
[30] In 1994 the department was renamed the Department of Child and Family Services. Los Angeles Department of Child and Family Services, website: https://dcfs.lacounty.gov/about/who-we-are/

In 1984, the director of the new department, Lola Hobbs, said that MacLaren's problems were "not unique: they are the same faced by public shelters throughout the nation and to some extent by all 24-hour institutions, such as jails and hospitals. She and her team are looking at similar systems 'to see what we can borrow to use here, rather than invent."[31] A year later Robert L. Chaffee was appointed interim director of the Department replacing Hobbs (and later in the year he was appointed as permanent director). He appointed a new assistant director for MacLaren Hall, Helen Maxwell. "Chaffee said he created the assistant's post because the job of director 'is almost overwhelming for any one single person.'"[32] In 1986 Helen Maxwell became MacLaren's eighth director in ten years.[33] In 1989 The *Los Angeles Times* featured a profile of MacLaren's Director Maxwell and reported on improvements.[34]

However, in spite of improvements the last decade of the 20th Century saw continuation of problems at MacLaren. An article in *Los Angeles Magazine* in 2003 stated that "the County has been down this road before, pushed by deaths and scandals and lawsuits into pronouncing a new day, trying new programs—even a privatized version of MacLaren that lasted less than a year in the 80's. For three decades the problem of MacLaren has persisted."[35]

The ACLU filed a lawsuit regarding conditions at MacLaren in 2002 and the article observed that "odds are good that the suit will lead to some sort of agreement to alter MacLaren, perhaps an assurance that it will be used as a temporary shelter, the way it was intended to be…[and] despite the good intentions of many of its workers, MacLaren is not designed to be a wholesome home for needy kids."[36] The tenure of MacLaren Hall was described as having "a bleak, decades-long history of faltering attempts to provide children with a safe, welcoming place during the fitful first hours after they are removed from their homes."[37]

Just a few months later in 2003 Los Angeles County announced that the MacLaren Hall facility in El Monte would be closed. The *Los Angeles Times* reported that MacLaren Hall was "shadowed by a federal lawsuit over its treatment of mentally ill children." MacLaren Hall had been "intended to house foster children for just a few days or weeks [but] had grown perilously overcrowded with a mix of mentally ill, delinquent and abused youths who often lived there for months. Children ran away, and violent outbursts were common, as were staff shakeups and lawsuits against the center." The article reported that on Friday, March 7, MacLaren said goodbye to its last child, a 17 year-old boy who was sent to a group home, and closed its doors" as a facility to provide services and housing to youth.[38]

Since 2003 portions of MacLaren's buildings have remained in use as administrative offices for County departments.

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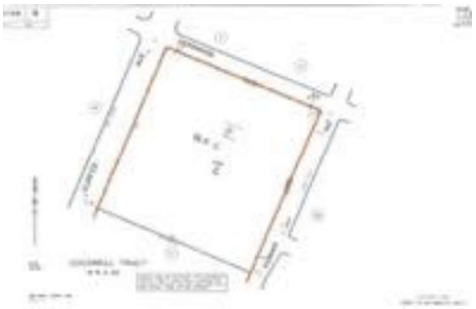
[31] "MacLaren Hall: The Storing of Neglected Children," *Los Angeles Times,* December 11, 1984.
[32] "Veteran County Aide to Head Troubled MacLaren Center," *Los Angeles Times,* April 20, 1985.
[33] "New Director To Take Reins at MacLaren," *Los Angeles Times,* April 13, 1986.
[34] "Director Healing MacLaren's Wounds," *Los Angeles Times,* September 7, 1989.
[35] "The Unwanted," *Los Angeles Magazine,* January 2003, p. 136.
[36] "The Unwanted," *Los Angeles Magazine,* January 2003, p. 136.
[37] "Los Angeles to Shutter Celebrated Center for Abused Children," *The Chronicle of Social Change,* February 11, 2016. https://chronicleofsocialchange.org/featured/los-angles-to-shutter-celebrated-center-for-abused-children/15655
[38] "County Closes Center for Troubled Children," *Los Angeles Times,* March 11, 2003.

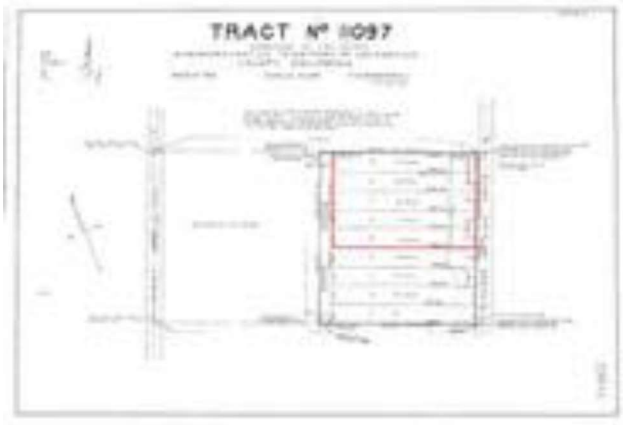
DEVELOPMENT HISTORY OF MACLAREN HALL SITE

MacLaren Hall campus covers two parcels that result from the consolidation of parcels. The north half of the property was Block C of the Cogswell Tract, a subdivision of a portion of the Champion Tract that was recorded in 1902. The southern half of the campus included five long, narrow parcels in Tract No. 11097. That Tract was recorded in 1936 and five of the long narrow parcels of that Tract were consolidated and became part of the campus in 1960 when Los Angeles County acquired these parcels and Block C of the Cogswell Tract.[39]

Cogswell Tract, recorded 1902



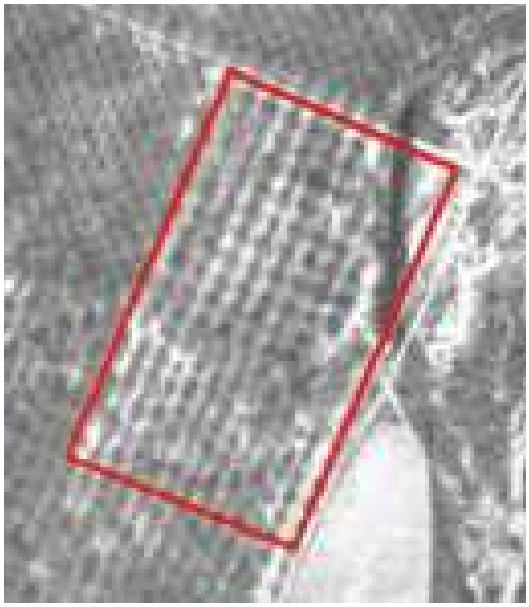
Block C of Cogswell Tract



Tract No. 11097, recorded in 1936

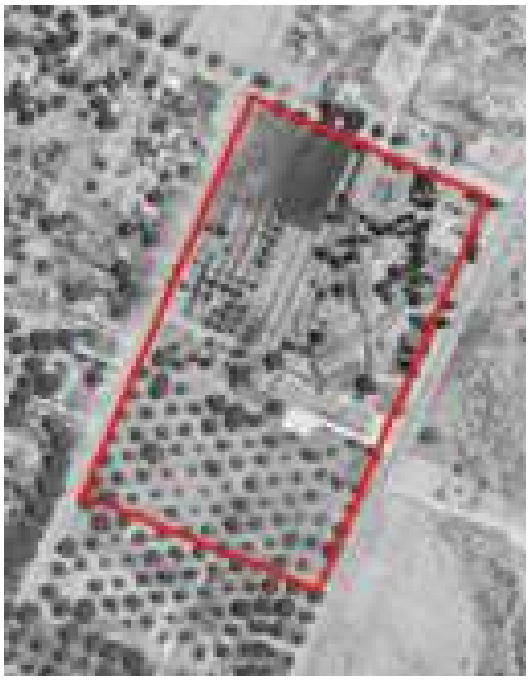
[39] The Block C Tract, on the north side of the MacLaren campus, is slightly more than one-half of the site. For ease of reading throughout the report the campus will be described as two halves, north and south, although the south "half" is slightly less than half. Also, throughout the report at times the campus will be described using quadrant references.

An aerial image of the MacLaren campus site from 1928 shows the area containing a grove of planted trees and no development around it. The 1938 aerial image shows the south half of the MacLaren campus still with a grove of trees. The northern half had been developed with the Ruth Home buildings on the northeast quadrant of today's campus. In the 1938 image a building with five wings radiating from a central pavilion. In the northwest corner of that quadrant was a rectangular building. There were a number of trees planted throughout that northeast quadrant. The northwest quadrant appears to have no plantings at its north end and smaller vegetation in that quadrant's south section did in 1938.



1928

1938



1948

1972

1977

2009

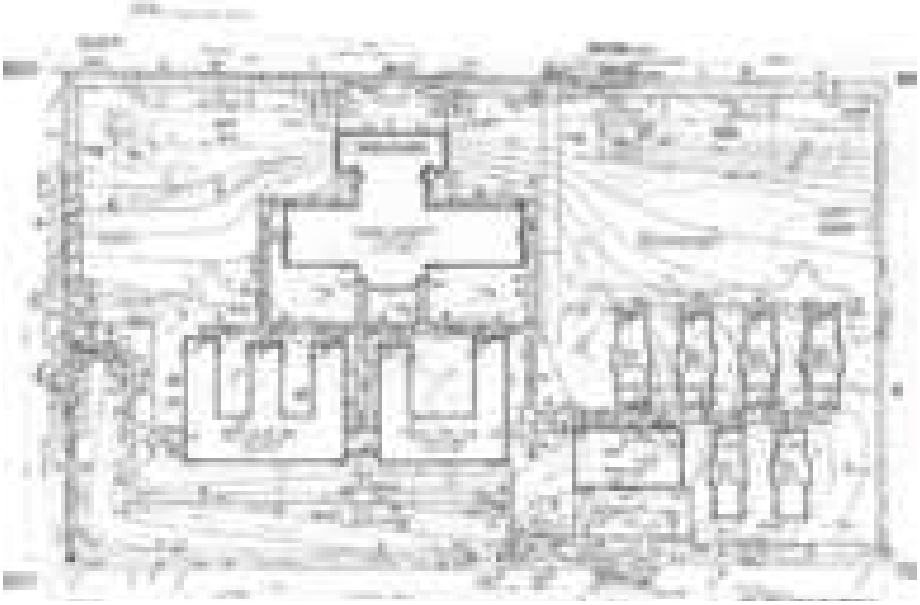
The 1948 aerial image shows a similar pattern to the 1938 image except that a few new buildings appear to the south of the main five-wing building. Los Angeles County acquired the parcels from both Tracts in 1960 and began operating the facility in 1961.

Satellite view c2019 (Google Earth)

Existing Conditions, c2019

The 1972 aerial image shows the MacLaren Hall campus right before the redevelopment of the site began. The 1972 image shows that all the groves of trees had been removed except for those in the northeast quadrant. The other three quadrants were mostly unplanted open space; there were only a few trees along the south border of the property and a few trees in-between two surface parking lots.

The 1977 aerial image shows the redeveloped MacLaren Hall campus. The campus as seen in 2019 is substantially the same in terms of building placement. Three prefabricated trailer buildings have been added , two on the Open Space North area and another adjacent to the Open Space North Area. A pool was added to the Open Space South area. The 1977 aerial image shows that most of the trees and landscaping elements on the site at that time were removed—the site was scraped to make way for the new MacLaren Hall development.



Site Plan, 1971

Site Plan, 2018

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The MacLaren Hall Existing Conditions Site Plan from 2018 shows that the major buildings built on the site in the early 1970s remain today. A swimming pool and small pool house was added to the open space in the southeast quadrant of the campus and temporary structures were added at the north end of the campus.

Buildings on the site included the Department of Public Social Services Building, an "E" shaped building in plan was located at the northwest quadrant of the site. To its south was the "U" shaped Probation Department Building. These two buildings are connected by a public lobby/entry. They are considered a single building today providing offices and are known as Building 6144 MacLaren Children Center in the *2018 Full Site Report for the MacLaren Children Center.* This complex will be referred to as the Office Building throughout the current report.

The northeast quadrant of the site included an open space at the north end and an Education Maintenance and Storage Building to the east of the Probation Department Building. This building is known as Building 6146 MacLaren Child Center School/Maintenance Building in the *2018 Full Site Report for the MacLaren Children Center.* The building spaces include services, offices, gym, and classrooms. This building will be referred to as the School/Maintenance Building throughout the current report.

There are six linear shaped Residential Buildings located in the southwest quadrant of the site as is a Service Building. They are known as Buildings 6147 – 6152, Maclaren Child Center Residence Cottages F through K in the *2018 Full Site Report for the MacLaren Children Center.* These buildings will be referred to as the Dormitories throughout the current report.

There is a Service Building with service yard in the southwest quadrant adjacent to Durfee Avenue. The building is known as Building 6145 Cafeteria in the *2018 Full Site Report for the MacLaren Children Center.* This building will be referred to as the Cafeteria throughout the current report.

There are Open Space areas on the east side of the site, to the north and to the south of the School/Maintenance Building on the Gilman Road side. They will be referred to as Open Space South and Open Space North in the current report. There are three prefabricated trailer buildings in the Open Space North area and are referred to as Prefabricated trailer Buildings.

Security walls surround much of the site. Public access is allowed to the main office building by a single entrance lobby. A surface parking lot is located along the Durfee Avenue and Kerrwood Street sides of the Office Building with no security walls or barriers to the public sidewalk. A tall concrete perimeter wall is attached to the "E" shaped building along Kerrwood Street and continues around the site, along Kerrwood Street, along Gilman Road (except for a vehicular opening into the service area), along the southern boundary of the property and then along Durfee Avenue until it meets the Service Building. A segment of security wall connects the Service Building to the Office Building.

The vehicular entrance onto the side is a vehicle entrance off of Kerrwood Street. There are service yards behind the Education, Maintenance & Storage Building and behind the Service Building; both have driveways onto the adjacent streets.

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HISTORIC CONTEXT: INSTITUTIONAL SITE DESIGN

The purpose, planning and design of the MacLaren Hall site and buildings was to support the care of children including their housing and schooling needs. Other functions of buildings on the site were to provide administrative offices for social service agencies, care of infants and toddlers as well as provision of health care.

The design of MacLaren Hall site and buildings employed principles developed for designs of schools from the period 1940 to 1969. By the post-war period, school design had entered "a new age of innovation"' In California and elsewhere, three main plan types emerged during the period 1940-1969: the finger-plan school, the cluster-plan school, and the open-plan school. As trends came and went, these plan typologies morphed, hybridized, and changed and by the 1950s and 1960s there was a proliferation of standardized plans and facades. They shared "basic design principles, and most reflected the tenets of midcentury modern design."[40]

The "finger-plan," based on a trunk corridor with side branches, emerged in the 1940s. By the early 1950s, the popularity of the finger-plan school began to decline as its design required large swaths of land. Also, the need for cost-effective design and construction was another factor. This led to development of a more compact campus plan design, the cluster-plan which called for the grouping wings, or fingers, more closely. As with the finger-plan, the cluster-plan "was interpreted and designed in many different variations but the basic ideas remained the same." The hybridized design featured buildings arranged on an axis with finger-like wings.[41]

The Modern architectural style, the International Style "became the idiom of choice for expressing the new ideas, for its relative economy, informality, accessibility, and, increasingly, 'democratic' spirit." These "ideas about how to create the best possible modern school were developed in tandem and shared among architects, builders, researchers, and school officials throughout the United States" in the 1940s to 1970sand were based on "evolving philosophies about childhood development and education." [42]

The "stylistic vocabulary of choice" in this period was modernistic, an anti-historicist modern design idiom, decentralized, with "function instead of style the driving concern." Buildings were informal and non-monumental in scale.[43] Buildings were primarily one-story but "when necessary, massing might climb to two stories…roofs were flat, sloped, or occasionally gabled, with simple, exposed construction systems of steel or concrete framing." Buildings were of concrete frame construction with generous expanses of windows set flush to the wall plane, and a sheltered corridor with unadorned post supports providing circulation and outdoor spaces.[44]

Ornamentation was spare and "in terms of materials, the treatment and finishing were simple and unpretentious." Buildings were clad with brick, concrete, stucco, stone, wood. Materials included steel and aluminum for windows which were plentiful. The varying

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[40] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* p. 82.
[41] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* p. 88.
[42] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* pp. 73, 75-76.
[43] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* p. 77.
[44] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* pp. 77, 82

elevations of the buildings and their wings displayed differentiated window sizes and configurations.[45]

In the postwar period, architects economized through use of new prefabricated materials, such as plywood, glass, and steel, as well as modular design and coordination. Modular design, independent parts of standard interfaces, allowed designs to be customized, upgraded and repaired and for parts to be reused. Use of standardized components and construction techniques allowed for expedited construction and easy expansion. Modular design imparted a rhythmic, asymmetrical but balanced composition. Modular design also lent itself particularly well to creating indoor-outdoor connections.[46]

Outdoor walkways with canopies were "essential" parts of both the finger- and cluster-plan designs. Supports were "simple posts or pilotis, either in steel or wood post-and-beam. It was a feature used in schools throughout the United States. Outdoor corridors lined classroom wings, providing sheltered circulation throughout the campus as well as outdoor gathering spaces." These outdoor corridors form links between buildings on the site.[47]

The basic plans were axial with building placement organized along the axis in a finger-like or clustered manner or a hybridized combination of the two. Site design was unified with buildings extending across the site and oriented in relation to outdoor spaces such as courtyards, patios, outdoor play areas. And typical of these campus plans, the site plan turned inward with automobile traffic and drop-off areas located on the exterior. Within the campus the landscape design of outdoor spaces included patios, courtyards, terraces as well as landscaped awn areas and recreation fields.

DESCRIPTION OF MACLAREN HALL SITE FEATURES

MacLaren Hall is organized as a hybrid finger- and cluster-plan. There is a main axis with the major buildings with fingers, clustered along the north-south axis. The two major buildings, the original Department of Public Social Services Building and the connected Probation Department Building, are now treated as a single Office Building. This building is located along the west side of the main axis in the northwest area of the site. To the south of the Office Building, the main axis shifts slightly west and a series of six Dormitories and a cafeteria are clustered to the west of the axis. On the east side of the axis, at the middle of the site, is the School/Maintenance Building. To either side of this building, to its north and its south are large open space areas.

The vehicular access is from Kerrwood Street on the north and a "L"-shaped surface parking lot is located along the northwest corner of the site. This is the only publicly accessible area of the site. There are shallow areas of lawn on both sides of the parking area which includes landscaping of trees and shrubs and other plantings. The majority of the perimeter of the site has tall concrete security along the property line. The interior of the site has controlled access.

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[45] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* pp. 77, 81.
[46] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* p. 81.
[47] *Los Angeles Unified School District Historic Context Statement, 1870 to 1969,* p. 79.

MacLaren Hall site (Google Earth, c2019)

Durfee Avenue elevations, parking area and security wall (Google Earth, c2019)

Gilman Road elevations and security wall (Google Earth, c2019)

Kerrwood Street elevations and security wall (Google Earth, c2019)

Southern border of MacLaren site with security wall (Google Earth, c2019)

Kerrwood St. and Durfee Ave.

Gilman Road and Kerrwood Street

Gilman Road

South border of site and Gilman Road

Durfee Ave. and south border of site.

Along Durfee Avenue

North end of Durfee Road

Vehicle entry from Kerrwood St.

Service area of School/Maintenance Building along Gilman Road

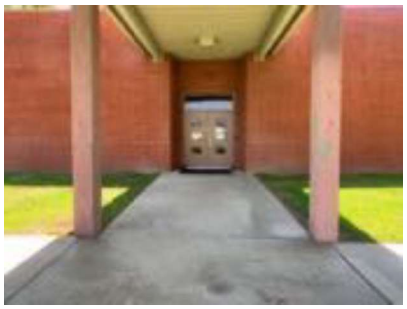
Service area of Cafeteria along Durfee Ave.

Architectural Vocabulary of Architectural Elements of MacLaren Hall

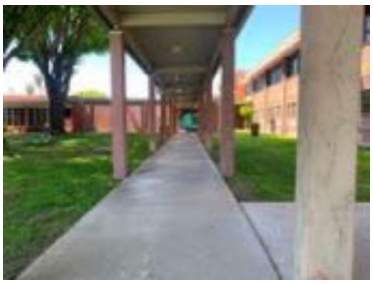
The major buildings on the MacLaren Hall site use the same architectural vocabulary of arranged in a variety of ways. The major repeating elements include: windows, concrete panels, brick in stretcher pattern, aluminum frame windows; doors; and covered walkways.

Repeating modules include windows, concrete panels, brick in stretcher pattern, aluminum frame windows and canopies. Window modules are rectangular and organized in stacks of two or three. One type of window is horizontal oriented; another is closer to square. Windows have metal/aluminum frames. Areas of concrete exterior are defined by narrow vertical and horizontal bands of concrete strips. End sections of buildings can consist of a brick clad bay with bricks laid in stretcher pattern.

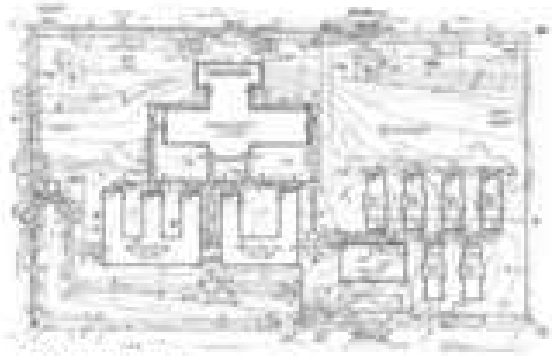
Repeating modules include doors. The majority of door assemblies include double doors of painted metal with each of the doors having three stacked glass panes and a glass transom. Doors on the Dormitories include a wider single door with a stack of three glass panes and a single adjacent fixed panel with three square stacked glass panes.



Repeating elements: covered walkways. Covered walkways connect buildings and spaces on the site. The walkways have cement paved paths with flat roof metal canopy supported by simple squared posts.



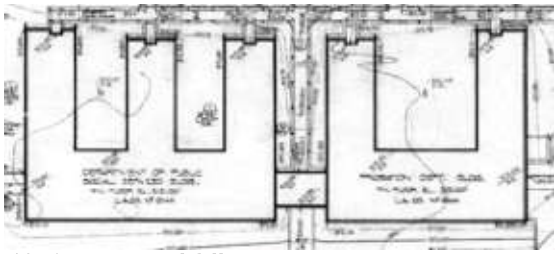
Building Descriptions


1971 Site Plan

Existing Conditions, c2019

Office Building Description

The Office Building was originally treated as two separate buildings with a one-story connection. One of the buildings, constructed to house the Department of Public Social Services is “E” shaped in plan—with three projecting fingers. The other building, constructed for the Probation Department is “U” shaped in plan with two projecting fingers. Both buildings are connected by a narrow lobby module.


1971 Drawing of Office Building

Office Building plan view, c2019 (Google Earth)

The west elevation of the two sections of the Office Building have long expanses that face the public right of way. These sections are two-stories high with a flat roof. The ends of each building has a wide bay that is clad with bricks laid in a stretcher bond. Between these brick clad end modules are bands of windows at the upper story and ground story with concrete panels between the rows of windows. These panels and the windows are separated by thin concrete vertical and horizontal strips. The rows of windows consist of horizontal windows in stacks of three clustered five to a bay with the

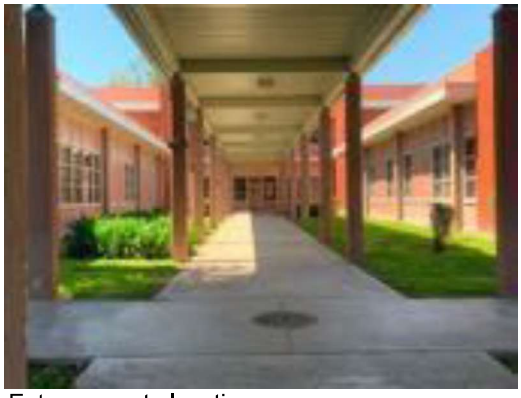
bays separated by vertical concrete piers. A canopy projects above the upper row of windows. The area above the canopy at the cornice, is clad with vertical metal siding.

There is a narrow two-story bay that connects the two original buildings. The main entry into the MacLaren Hall site is located in this connector. The connector consists of door flanked by windows on the ground floor and a row of windows on the upper story. There is a projecting canopy over the upper level windows and above the door assembly.

West elevation

West elevation

Entry on west elevation

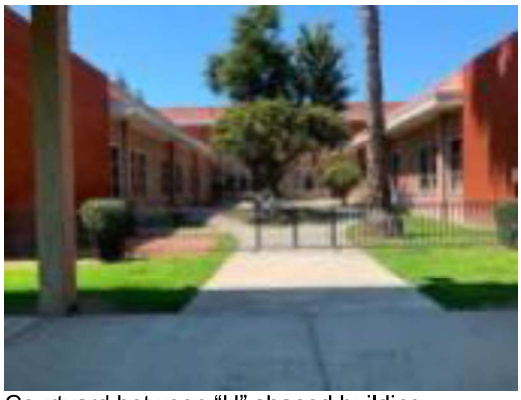


Entry on east elevation

The fingers at the far end of the building complex, the farthest north and farthest south fingers are two-stories high; the other three fingers are one-story high. The ends of the long elevations of long elevations of the fingers have a brick section that projects out beyond the plan of the finger's east elevation; a canopy stretches along the east elevation attached to each of the projecting wall segments. The area above the canopy is clad with vertical metal sheathing. The upper level has two pairs of three stacked windows. On the ground level, the entry door module is centered and there is a talk stack of windows on one side of the door. The east elevations of the fingers of the building are clad with brick laid in a stretcher bond.

East end of two-story finger

East end of one-story finger


Courtyard between “U” shaped building

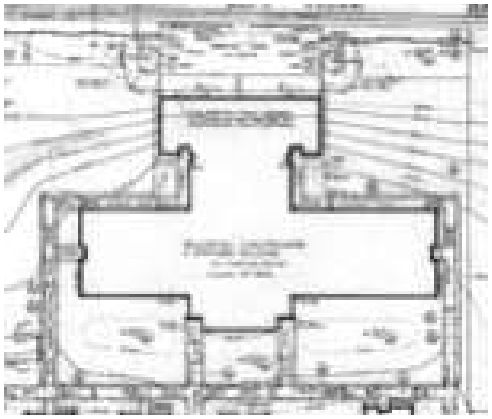
Courtyard between two fingers of “E” finger

The long elevations of the fingers have flat roofs and have a brick clad module at the far east end. The rest of those elevations consist of a series of stacked window modules and concrete panels defined by narrow concrete strips, in a similar vocabulary and design as the west elevations. Similar to the west elevations, there is a canopy over the first story windows supported with wood posts on the one-story fingers and a projecting canopy over the upper story windows on the two-story fingers. The area above the canopies have the vertical metal sheathing.

The courtyard area of the “U” shaped section has a tree located in the center with a paved walkway around it. The courtyards of the “E” shaped fingers are paves with no landscape elements.

School/Maintenance Building Description

The School/Maintenance Building was constructed as the Education Maintenance and Storage Building.


1971 Drawing of Office Building

School/Maintenance Building plan view, c2019 (Google Earth)

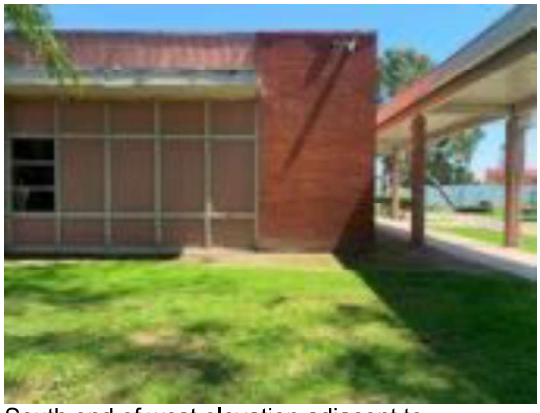
The building is generally "T" shaped in plan. The building is one-story with a partially subterranean basement and a two-story gymnasium. It is a reinforced brick building with a flat roof. The building exterior combines the typical modular elements used on buildings throughout the site and includes brick bays without windows, long expanses of concrete exteriors with panels and windows separated by thin concrete vertical and horizontal strips. Windows are grouped and stacked at various locations along the building's elevations except for the gymnasium and rear storage/maintenance areas of the building. The south wing of the building is longer than the north wing. A front entry area is located slightly off center (due to the longer south wing); this area projects out slightly. It is clad with concrete and features the modular panel and stacked window design.

South wing

South elevation

North elevation

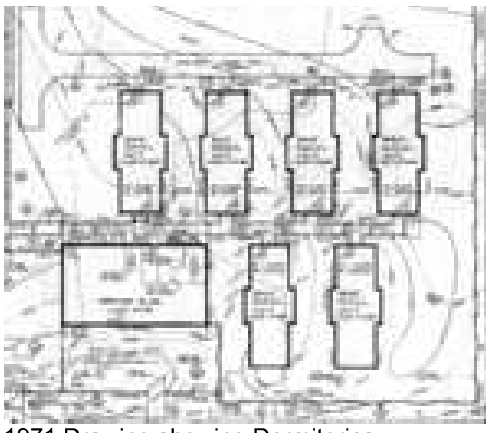
Entry wing, west elevation


South end of west elevation adjacent to Open Space South

North wing, west elevation

Dormitory Building Descriptions

Six dormitory buildings are located in the southwest quadrant of the site (along with the cafeteria building). The buildings are sited with two near the western perimeter of the site and another four dormitory building to the east The buildings are staggered along both sides of a covered walkway.


1971 Drawing showing Dormitories

Dormitories, plan view, c2019 (Google Earth)

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The dormitory buildings are basically “I” shape in plan with a slightly projecting bay located on the long elevations of the building. The roof is flat; there is a deep fascia at the cornice that runs around the length of each building. The exterior sides of the long elevations of each dormitory building feature the concrete modules and stacked windows typical of the site’s architectural vocabulary. The narrow, end elevations, are clad with brick laid in stretcher bond. The entry door assembly is centered along this elevation and consists of a single door with a panel of stacked sidelights. There is a column of stacked windows on this elevation on both sides of the door.

Dormitories area

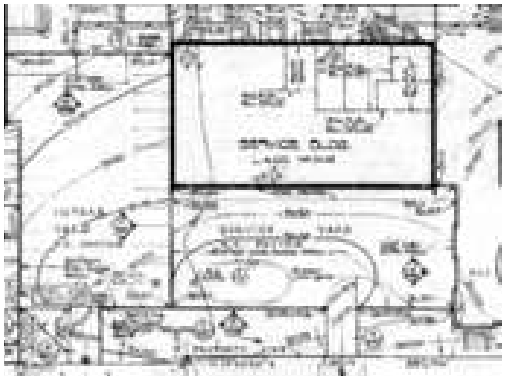
Typical dormitory building, front elevation

Area between dormitory buildings

Dormitory buildings adjacent to security wall

Cafeteria Building Description

The Cafeteria Building is a one-story building, square in plan with a flat roof. It is located on the west side of the site, near Durfee Avenue. There is a paved service yard to the north of the building and on the west side of the building. The west parking/service yard area opens onto Durfee Avenue.



1971 Drawing showing Cafeteria Building (originally Service Building)

Cafeteria plan view, c2019 (Google Earth)

The Cafeteria Building incorporates elements of the site's architectural vocabulary on its east elevation which faces into the site towards the dormitory cluster. The building has areas of concrete panels and stacked windows. The other elevations of the building are more utilitarian, and the "rear" west elevation includes a loading dock service area.

East elevation

Cafeteria Building entrances

Prefabricated Trailer Buildings

There are three prefabricated trailer buildings on the site located in the north area of the site. These are not original buildings and are not permanent buildings. They are prefabricated trailers with wood exterior siding and wood frame windows and doors.

Prefabricated Trailer

Prefabricated Trailer

Perimeter Wall

The MacLaren facility was designed as a secure facility with limited points of entry. The public face of the facility is along Durfee Avenue. The main office buildings have their long elevations facing Durfee Avenue and a side elevation facing Kerrwood Street. These buildings create a barrier to entrance to the site. Sited along the area further south along Durfee Avenue is the cafeteria/service building which also served as a barrier. The rest of the perimeter of the site is bounded by a tall concrete wall.

Plan view of MacLaren Hall facility with perimeter wall (Google Earth, c2019)

The cement wall is painted. Portions of the interior side of the wall also have images painted on them. These "murals" appear on portions of the wall's interior facing sides. They are simple images including cartoon characters. Other segments have painting of people. There are also long stretches of the interior side of the wall without any "murals."

Examples of murals located on the interior side of the cement perimeter walls

Example of murals located on the interior side of the cement perimeter walls

Examples of murals located on the interior side of the cement perimeter walls

Portion of interior side of cement wall without murals

Portion of interior side of cement wall without murals

Research inquiries into County records and staff sources have yielded no information on the provenance of the paintings and there is no evidence that they are considered to be works of art.

Open Space North

The Open Space North area is rectangular in plan located to the east of the Dormitory cluster and south of the School/Maintenance Building. The security wall bounds the Open Space North area on the north and east sides. There are two prefabricated trailers located in the Open Space North area. The area planted with grass. The aerial image from 1977 shows the only plantings were a few trees at the west side of the Open Space North area. Since then additional trees were planted adjacent to the School/Maintenance Building.

Aerial view of Open Space North 1977

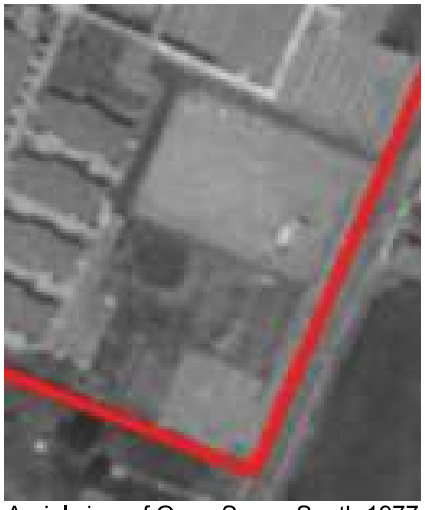
Aerial view of Open Space North c2019

Looking east at Open Space North from Dormitories

Looking west at Open Space North towards Dormitories

Open Space South Description

The Open Space South area is rectangular in plan located at the southeast corner of the site due east of the Dormitory buildings. In 1977 this area of the site was bare except for what appear to be a few trees near the Dormitories. The rest of the area was not landscaped. Over the years most of the area has remained lawn area devoid of other plantings.


Aerial view of Open Space South 1977.

Aerial view of Open Space South c2019

A swimming pool area was added to the Open Space South area in 1983. This pool area includes a cement deck with one small pool and a larger rectangular swimming pool. There is also a small pool shed building. The pools, deck and shed are contained by a metal rail fence.

Looking west toward Dormitories and the southwest corner of the sit

Looking north toward pool

Looking north along south border security wall.

Looking south toward southeast corner of site bounded by security walls

Looking toward Pool Area

Pool Area

Pool Area

Pool

Pool shed in pool area

Pool area

REVIEW OF PREVIOUS SURVEYS

A records search was conducted at the South Central Coastal Information Center (SCCIC), California State University, Fullerton. The rolls of the National Register of Historic Places, California Historical Landmarks, California Points of Historical Interest , and the California State Historical Resources Inventory were examined. Also reviewed was the Los Angeles County Historical Landmarks Registry. The City of Downey does not have a historic preservation program or an ordinance that enables designation of historic resources.

There is no documentation or evidence that MacLaren Hall was identified in any historic resources survey or determined or designated as an historic resource either in terms of individual buildings or as a historic district.

EVALUATION OF SIGNIFICANCE

National Register of Historic Places

The property at MacLaren Hall is evaluated for eligibility for inclusion on the National Register of Historic Places under the four National Register criteria for significance. The National Register has a threshold of 50 years of age for a resource to be placed on the National Register.

The National Register Criteria for Evaluation exclude properties that achieved significance within the last fifty years unless they are of exceptional importance. Fifty years is a general estimate of the time needed to develop historical perspective and to evaluate significance. This consideration guards against the listing of properties of passing contemporary interest and ensures that the National Register is a list of truly historic places. Special Consideration G of the National Register evaluation guidance provides the method for evaluating properties less than 50 years old to determine if they possess exceptional importance.

The MacLaren Hall property is less than 50 years old however it is approaching 50 years of age as the planning and design of the site began in 1971. The redevelopment of the site took place in two stages (with services continuing at the site during construction)

and was the second stage was completed in 1975. As the timeline for any new proposed development to the site would push beyond the 50 year mark, the MacLaren Hall property will be evaluated under the criteria for buildings 50 years old or older.

Criterion A

To be eligible for inclusion on the National Register under Criterion A, a property must have a direct association with events that have made a significant contribution to the broad patterns of our history and cultural heritage.

A portion of the MacLaren Hall site was first developed in 1930 as the Ruth Protective Home for young girls. Buildings were added to the site in the 1930s however with the discovery of anti-biotics, the services provided for the Ruth Protective Home were no longer needed. The facility was adapted for use as a hospital for the treatment of polio in the late 1940s-early 1950s. With the discovery of a vaccine for polio the services provided by this, the Sister Kenny Polio Hospital, were no longer needed.

In 1960 Los Angeles County acquired the property and adapted it for use as MacLaren Hall, a facility to serve non-delinquent who needed foster care. The buildings were used for this purpose until the early 1970s when the County embarked on redevelopment of the site. The redevelopment was staged over four years and included removal of all of the buildings on the site and removal of most of the vegetation on the site (the acreage had been planted with groves of trees throughout the 20th Century; the trees were removed as the facility expanded). Thus, the earliest years of Los Angeles County providing services at this site pre-dates the current buildings of MacLaren Hall.

The history of providing services to young people in need began with the first facilities constructed on the site: the Ruth Home which evolved into the Sister Kenny Polio Hospital during the first half of the 20th Century. Another social mission, that of serving foster children began in the later part of the 20th Century. There are no buildings, structures or landscape features that date from the period of the Ruth Protective Home, the Sister Kenny Polio Hospital which established the mission for which the site was used throughout the 20th Century. The first 15 years of the County's use of the MacLaren Hall site to deliver social services to non-delinquent youth. The current facilities were constructed in the later part of the 20th Century. No historic resources from the first half of the 20th Century, when the uses of the site to provide social services was established, remain to represent the broad pattern of history of social services.

The buildings of the 1975 MacLaren Hall redevelopment, which remain today, were used to provide services to youth for 28 years until MacLaren Hall was closed in 2003. During those 28 years services were provided to youth however there is no evidence that during this brief period any service innovations or significant practices were developed. Since 2003 portions of the facility have been used for County administrative offices. There is no evidence that any significant service was performed at this site during the period 2003 to today. There is no evidence that any significant historic events took place on the at MacLaren Hall.

As the current MacLaren Hall has no physical resources connected with operations in the early and mid-20th Century and thus no longer any association with the early delivery of social services and as there is no evidence of any historic events occurring at the site

in its 28 years of operation as a care facility for youth or during the past 15 years of use as administrative offices, the MacLaren Hall property, its buildings and site, does not meet Criterion A and is not eligible for the National Register of Historic Places under this criterion.

Criterion B

To be eligible for inclusion on the National Register under Criterion B, a property must be associated with the lives of persons significant in the past who have made an important impact on national, state or local history.

There are no longer any physical features, buildings, structures or landscaping that are associated with the early service providers of the Ruth Protective Home, the Sister Kenny Polio Hospital or the first 15 years of MacLaren Hall thus, there is no association with individuals from that period.

During the 28 years the redeveloped facility was in operation as MacLaren Hall (1975-2003) the facility was served by many dedicated staff. However, there is no evidence that any of the staff accomplishments, their number or combination, were of a significant achievement in comparison with the activities and accomplishments of others in similar occupations and situations. There is no evidence that any individual achieved historic significance through their work at MacLaren Hall during its period of operation as a youth care facility.

Many notable people contributed financial support to the facility as well as serving on boards and committees that supported MacLaren Hall in its mission. Financial and social support for an organization from notable community members does not impart historic significance to a property.

The property at MacLaren Hall does not meet Criterion B and is not eligible for the National Register of Historic Places under this criterion.

Criterion C

A property is eligible under Criterion C if it embodies the distinguishing characteristics of an architectural type, specimen, or is inherently valuable for study of a period style or method of construction. A property also is eligible if it represents notable work of a master builder, designer or architect or possesses high artistic values or represents a significant and distinguishable entity whose components may lack individual distinction.

The building was designed by architect William Allen who was born in 1901. Allen had a full professional career as an architect. He began work in Southern California as an “architectural designer” in the mid-1920s. He partnered with Allen Ruoff in the late 1920s and with William George Lutzi from 1939 to 1953. He continued to practice on his own from 1953 until his death in 1986 at the age of 85. He designed MacLaren Hall late in his career. Allen worked with Los Angeles County on several projects in the later years of his career including county courthouses in Los Angeles and Huntington Park.

The firm of Allen and Lutzi designed the Burbank City Hall, a Late Moderne style building in 1941. The building is listed on the National Register of Historic Places. Other than this

building, there are no references to Allen's work in local architectural histories. Little biographical information could be located regarding Allen and his career. There are no monographs regarding Allen and his body of work. William Allen is not considered to be a master architect.

No biographical information was identified about the history of the Vanlar Construction Co. which was the general contractor for the MacLaren Hall redevelopment project. There is no evidence that they would be considered master builders or craftsmen.

The design of the buildings at MacLaren Hall used principles developed in the years between 1940 to 1969 for institutional uses especially applied to schools. The site organization is an axial design with buildings located along the axis in a manner that combines the finger-plan and the cluster-plan. This hybrid type of site design had been in use for over 20 years by the time the MacLaren Hall 1970s redevelopment was developed. These principles for design of school/institutional facilities had been widely shared throughout the architectural and design field among professionals who worked in institutional design and development.

Thus, the use of these principles to guide the design of MacLaren Hall were not ground-breaking or creatively applied but rather were typical. The use of these hybrid design principles for MacLaren Hall was not an innovative or exceptional design as it had been well established in the institutional design community for over 20 years.

The buildings on the site, the Office Building, School/Maintenance Building and Dormitories all are of the Modern style of architecture, popularized in the mid-20th Century. The choice of the style was especially suited to frugal institutional budgets as ornamentation was spare and simple building materials employed. The buildings of the campus were designed from a "kit of parts." These parts included modules of brick and concrete which were used on building elevations. There were two basic window types that could be stacked in columns of two to four based on programmatic needs. A few basic door types were used throughout the buildings of the site.

The Cafeteria Building is a simple, utilitarian building that is even sparer in its design and use of materials. There are two prefabricated buildings on campus that are not permanent structures.

The only spaces on the campus where the public was allowed (unescorted) was the central lobby area between the original Department of Social Services wing and the Probation Department wing. That area is unremarkable with utilitarian finishes. The other interior spaces of the buildings were work areas and offices, health care facilities, classrooms and activity spaces and dormitories, and back of house support areas such as kitchens, storage and maintenance spaces. These spaces were typical of utilitarian private areas of facilities and many of the spaces have been modified by their users over the decades. There is no evidence of any historic interior spaces within the buildings of MacLaren Hall.

There are two major open space areas on the MacLaren Hall site, Open Space North and Open Space South. The full acreage of the site was planted with groves of trees in the early 20th Century. These trees were removed as the portions of the site were developed with institutional facilities over most of the 20th Century. In the early 1970s

when MacLaren Hall was redeveloped, the site was essentially scraped of all buildings, plantings and most of its remaining trees. It does not appear from historic aerial images that there was any landscape design of the site before the 1970s redevelopment. A swimming pool, deck and pool shed were added to the Open Space South area in 1983.

Other than small lawn areas, regularly placed trees and other plantings that are typical of later 20th Century office parks which are located in front of the west elevation of the Office Building (the only building elevations visible from the public right of way) there is no evidence of any landscape design on the site. The two open space areas on the site are primarily lawn areas with a few trees located near buildings or the perimeter security walls. There are no other plantings in either the Open Space North or Open Space South areas.

There are courtyard areas between the fingers of the Office Building however, except for one which has a tree, these areas are devoid of landscape features. There are small areas of vegetation along some of the elevations of buildings but there is no consistency or significant design related to this vegetation.

The cement wall that surrounds the property has sections which have characters (primarily cartoon characters) painted on the interior side of the walls. Los Angeles County records and staff were consulted but no information was identified as to the provenance of these paintings. Also, there is no record of these paintings being considered as artistic murals.

The site design is not innovative or exceptional but is based on design principles for institutional/school buildings that had been well established at least 20 years before the design of MacLaren Hall. The main buildings of MacLaren Hall, the Office Building, the School/Maintenance and the Dormitories are not excellent examples of the Modern Architecture style. The materials are functional and basic. The massing, volume, and juxtaposition of building elements are not creative or unusual and the materials are ordinary. The architect, William Allen, is not considered a master architect. The general contractor is not considered to be a master builder. There is no evidence of landscape design; the two major open space areas are primarily lawn with little other vegetation. The landscaped area on the public side of the Office Building is unremarkable and typical of office buildings of the late 20th century.

There are several bronze plaques around the facility identifying donors. There is also a display that includes cornerstones from buildings that were previously on the property and have been demolished. These cornerstones have been removed from their original context and are now artifacts. Honorific plaques and artifacts are not eligible for inclusion to the National Register of Historic Places.

None of the buildings or open space areas of MacLaren Hall meet Criterion C and thus none of the features of MacLaren Hall are eligible for inclusion on the National Register of Historic Places under this criterion.

Criterion D.

This criterion applies to archaeological resources. The property was constructed during historic times in the late 20th Century replacing development from the early 20th Century.

The construction techniques and materials from the late 20th Century are known and will not yield information important to the prehistory or early history of the area, state or nation. Thus, Criterion D is not applicable to MacLaren Hall under this criterion.

California Register of Historical Resources

Because the California Register criteria are based on the National Register criteria, the MacLaren Hall property, evaluated above, is ineligible for listing to the California Register for the same reasons explained under the National Register evaluation.

County of Los Angeles Historic Resource

Criterion1 through 4 of the County of Los Angeles Criteria for Designation of Landmarks and Historic Districts are based on the National Register criteria. As such, the MacLaren property, evaluated above, is ineligible for designation a County of Los Angeles landmark for the same reasons explained under the National Register evaluation.

There are three additional criteria in the County of Los Angeles ordinance, and they are analyzed below:

Criterion 5. A property is eligible under Criterion 5 of the County of Los Angeles Landmark Ordinance if It is listed, or has been formally determined eligible by the U.S. National Park Service for listing, in the National Register of Historic Places, or is listed, has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resource.

None of the buildings or open spaces at MacLaren Hall have been determined eligible or listed on the National Register of Historic Places or to the California Register of Historical Resources either individually or as contributors to an eligible historic district.

None of the buildings or open space areas of MacLaren Hall meet Criterion 5 of the Los Angeles County Landmark ordinance.

6. A property is eligible under Criterion 6 of the County of Los Angeles Landmark Ordinance if it is a tree that is one of the largest or oldest trees of the species located in the County.

In the early 20th Century the MacLaren Hall site was covered with groves of trees. As areas of those parcels were developed the trees were removed. In the early 20th Century as buildings were constructed on the site, trees were removed. When the site was redeveloped in the 1970s all buildings and it appears most of the trees and landscaping were removed. There are no legacy or exceptional/mature specimen trees located on the premises of MacLaren Hall.

Thus, none of the trees at MacLaren Hall meet Criterion 6 of the Los Angeles County Landmarks ordinance.

7.A property is eligible under Criterion 7 if it is a tree, landscape, or other natural land feature, and it has historical significance due to an association with a historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

None of the trees, landscape or natural features of the MacLaren Hall property are associated with any historic event, person, site, street, or structure at MacLaren Hall as explained under National Register Criteria B and C.

Historic District Evaluation

According to *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation*" a district derives its importance from being a unified entity, even though it is often composed of a variety of resources. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties." In addition, "a district must be significant, as well as being an identifiable entity. It must be important for historical architectural…values." Also "the majority of the components that add to the district's historic character, even if they are individually undistinguished, must possess integrity." And "the number of noncontributing properties a district can contain yet still convey its sense of time and place and historical development depends on how these properties affect the district's integrity."[48]

The County of Los Angeles Historic Preservation Ordinance allows for designation of historic districts if "the proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning."

As explained under the National Register criteria evaluation, while the buildings are organized on an axis in a hybrid version of the finger- and cluster-plans, this organization is not of historical significance. That pattern had been employed in institutional/school settings for at least 20 years before the 1971 design of MacLaren Hall and is not historic as applied in a 1970s era project. While the design of the major buildings (the Office Building, School/Maintenance Building and the Dormitories) employ a similar scale and vocabulary, they are not excellent examples of the Modern architectural style. There is no eligible historic district that includes the properties of MacLaren Hall.

[48] https://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf, p. 5.

CONCLUSION

Based on the facts presented above, the property at MacLaren Hall is not eligible for the National Register of Historic Places, the California Register of Historical Resources, as a Los Angeles County Landmark either for any individual buildings nor as a historic district as the property:

- Is not associated with any historic events or patterns of history;
- Is not associated with any historic persons;
- is not excellent historic example of the Modern architectural style;
- is not the work of a master architect, designer, or master craftsman;
- does not possess high quality workmanship or materials;
- are not contributing buildings to an eligible historic district.

Therefore, the property at MacLaren Hall does not contain any historic resources as defined by CEQA and there will be no adverse impacts as a result demolition of any building on the property or from any changes made to any of the buildings or landscape elements of the property.

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"Drive Launched for Ruth Home," April 17, 1930.
"New Ruth Home to Rise: Work Starts at El Monte on First Unit Which will Increase Capacity of Institution," August 13, 1930.
"Home for Girls Ceremony Set: New Cornerstone to Be Laid Saturday," October 23, 1930.
"New Hospital at Ruth Home to Br Dedicated," April 23, 1931.
"Date Announced for Open House at Ruth Home," February 23, 1934.
"Nurse's Paralysis Therapy Indorsed (sic)," May 7, 1942.
"Sister Kenny, Famed Nurse, Acclaimed Here," January 18, 1943.
"Health Officer Reports New Paralysis Cases," June 22, 1943.
"County Seeks Remedies at Juvenile Hall: Grand Jury Awaits Reply to Criticism of Detention Unit," October 20, 1948.
"Juvenile Hall Branch of Ruth Home Sought," October 27, 1948.
"Juveniles to Get Use of Part of Ruth Home: Converted Quarters in El Monte Will Be Ready for Nondelinquents in Two Weeks," November 4, 1948.
"Sister Kenny Sees Program in Good Hands," January 19, 1949.
"County's Building Plans Means Jobs," February 26, 1950.
"Sister Kenny Hospital Drive Enters Final Week." June 11, 1950.
"Sister Kenny Planning Polio Hospital Here," April 19, 1950.
"Ruth Home Proposed as First Kenny Permanent Center for Polio in West," May 15, 1950.

"Hundreds See El Monte Polio Hospital Facility: Invite Civic, Business and Social Leaders Will Continue Inspection Tours Today," May. 21, 1950.
"Kenny. Hospital Drive Extended to June 17," June 4, 1950.
"Sister Kenny Attends Polio Hospital Opening," August 25, 1950.
"Sister Kenny Given Cottage at El Monte," October 9, 1950.
"Sister Kenny Hospital Annex Dedicated," October 29, 1953.
"Grandson of Hospital's Benefactor Fights Polio," November 18, 1954.
"Sister Kenny Hospital Feted," August 21, 1955.
"Importance of Kenny Hospital Told as Fund Campaign Starts, January 9, 1957.
:Sister Kenny Hospital Expansion Cited. As Groups Receive Awards at Ceremony," June 19, 1957.
"Facility Eyed for Juveniles," January 30, 1958.
"Work to Begin on Home for Juvenile Girls," April 26, 1959
"New MacLaren Hall to House Juvenile Wards," Nov. 6, 1960.
"Children Sent to New Home," March 5, 1961.
"Dedication of Neglected Child Facility Held," March 28, 1961.
"Children in Trouble Find Help, Comfort," Jan/ 30, 1963."
"El Monte's MacLaren Hall; County's Deprived Children Find a Home Away From Home," Sept. 16, 1964.
"New Juvenile Hall Jammed; 30 Children Sleep on Floor," March 24, 1966.
"MacLaren Hall Bond Issue Will Be Put on Ballot," July 23, 1969
"Bigger Child Care Role Mapped at MacLaren Hall in El Monte," May 2, 1971
"Pasadena Firm May Get $6.8 Million Pact: Supervisors to Award Contract
"Tuesday for Facilities at MacLaren Hall in El Monte," Jan. 29, 1973
"Building Bid 'Error' to Be Checked by County," April 20, 1973.
"Interim Water Service OKd," Aug. 9, 1973.
"El Monte Home Called Overcrowded: Improper Care at Child Shelter Charged," May 23, 1979
"MacLaren Hall Awaits Completion of Building," April 6, 1975.
"MacLaren Hall Transfer OKd," Dec. 4, 1975.
"Foster Homes: A Huge System With Major Problems," Dec. 4, 1977.
"Officials Begin Study of Overcrowding, Inadequate Staffing at MacLaren Hall," Feb. 15, 1980.
"Basics Often Lacking at MacLaren Hall," Feb. 13, 1980.
"MacLaren Hall: A Blanket Case for Shame, "Feb. 21, 1980.
"Rewards at MacLaren Hall: Children Get Scrip for Their Good Behavior," Feb. 7, 1982.
"5 Finalists Named for County Child Services Post; Selection Set for Today," Sept. 4, 1984
"MacLaren Hall: The Storing of Neglected Children," Dec. 11, 1984.
"L.A. County is Facing a Crisis in Foster Care; Social Services Officials Alarmed as Homes Dwindle and Children With Problems Increase. Dec. 30, 1984.
"Veteran County Aide to Head Troubled MacLaren Center," April 20, 1985.
"2 New Children's Centers Sought to East Overcrowding at Facility in L.A. County," Feb. 31, 1985.
"County Names Chaffee to Head Child Agency," Nov. 8, 1985.
"Children Lose, Poor Win in Funding for L.A. County Programs, July 8,. 1985.
"L.A. Board Names Director of Child Agency," Nov. 9, 1985.
"Study on Hospital Conversion Ordered," December 11, 1985.
"Baby's Death Tests Agency's Safeguards on Child Neglect," March 24, 1986

"New Director to Take Reins at MacLaren," April 13, 1986
"Children's Services Workers Face Emergencies in Urban Jungle," March 28, 1987.
"Children's Center Seeking Homes Away From Home for Abused Tots," Nov. 6, 1988.
"Open House: On a Moment's Notice, Families Agree to Take In Young Strangers on the Battlefront of Foster Care," Nov. 6, 1988.
"Director Healing MacLaren's Wounds," Sept. 7, 1989.
"Grand Jury Urges Wide Foster Care Program Reforms," April 18, 1989.
"County Closes Center for Troubled Children," March 11, 2003.

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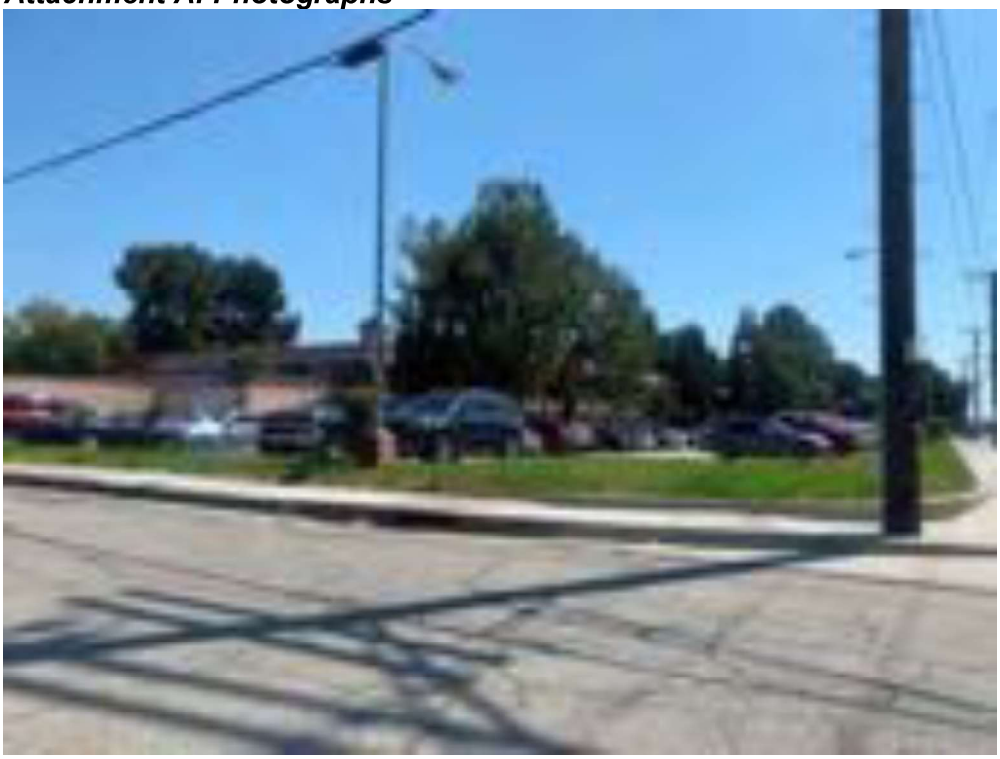
National Register Bulletin 15, How to Apply National Register Criteria for Evaluation

Ruth Home Arts and Crafts Buildings – El Monte CA.,
https://livingnewdeal.org/projects/ruth-home-arts-crafts-building-el-monte-ca/

Sanborn Maps. EDR Environmental Data Resources, Inc.

Attachment A: Photographs



1.MacLaren site perimeter at Kerrwood Street and Durfee Avenue

2. MacLaren site perimeter at Kerrwood Street and Gilman Road

3. MacLaren site perimeter at Gilman Road

4. MacLaren site perimeter at south border and Gilman Road

5. MacLaren site perimeter at south border and Durfee Avenue

6. MacLaren site perimeter along Durfee Road

7. MacLaren site perimeter, vehicular access area of School/Maintenance Building off Gilman Road

8. MacLaren site perimeter, vehicle entrance from Kerrwood Street

9. MacLaren site perimeter, School/Maintenance Building vehicular access area along Gilman Road

10. MacLaren site perimeter, Cafeteria Building vehicular access area along Durfee Avenue

11. Office Building, west elevation

12. Office Building, main entry and parking area on west side

13. Office Building, main entry, west elevation

14. Office Building, west elevation

15. Office Building, north wing, west elevation

16. Office Building, south wing, west elevation

17. Office Building, walkway to lobby from east side

18. Office Building, elevation of one-story wing

19. East side of Office Building with walkway

20. East side of Office Building, two-story wing

21. East side of Office Building, one-story wing

22. East side of Office Building, one-story wing

23. East side of Office Building, two-story wing

24. East side of Office Building, patio area between wings (former Probation Dept. Building)

25. East side of Office Building, patio area between wings (former Dept. Public Social Services Building)

26. Office Building, north elevation and security wall

27. Walkway to School/Maintenance Building and its west elevation

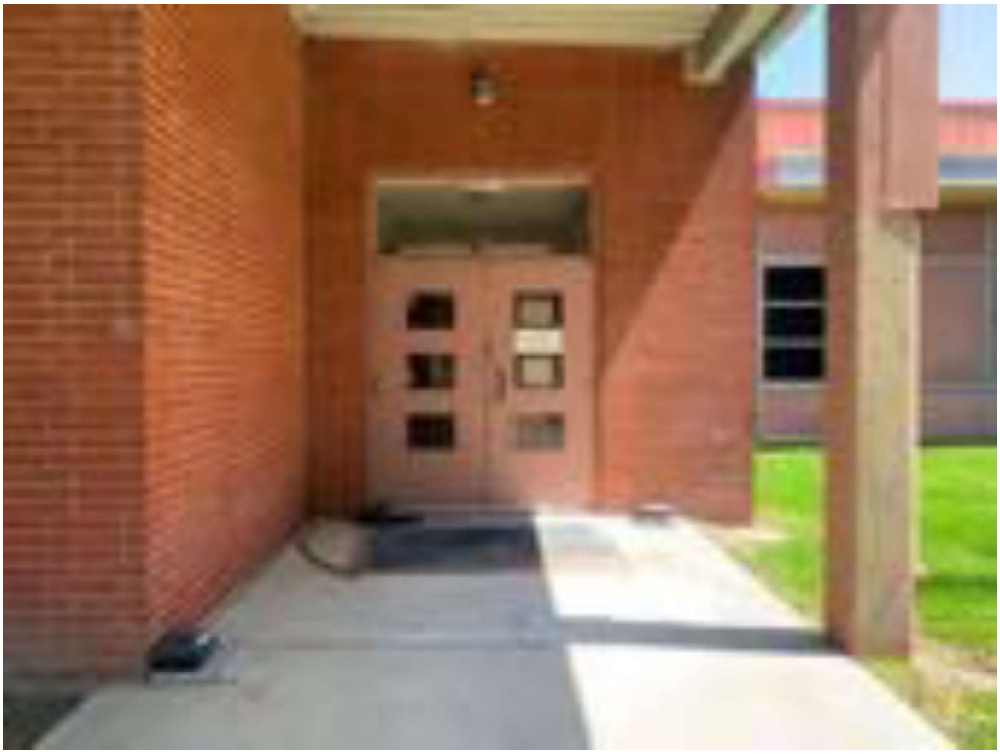
28. West elevation of School/Maintenance Building

29. School/Maintenance Building, north wing, west elevation

30. School/Maintenance Building, south wing, west elevation and walkway

31. School/Maintenance Building, south end of west elevation adjacent to Open Space South

32. School/Maintenance Building, Entry Wing, west elevation



33. School/Maintenance Building, Entry Door on west elevation

34. School/Maintenance Building, north elevation

35. School/Maintenance Building, south elevation

36. Dormitories area

37. Dormitory F, east elevation

38. Dormitory G, east elevation

39. Dormitory H, east elevation

40. Dormitory I, east elevation

41. Dormitory K, west elevation

42. Area between Dormitories

43. Area between Dormitories

44. Area between Dormitories

45. Dormitories adjacent to south security wall

46. Cafeteria Building, east elevation

47. Cafeteria Building, east elevation and Dormitory, north elevation

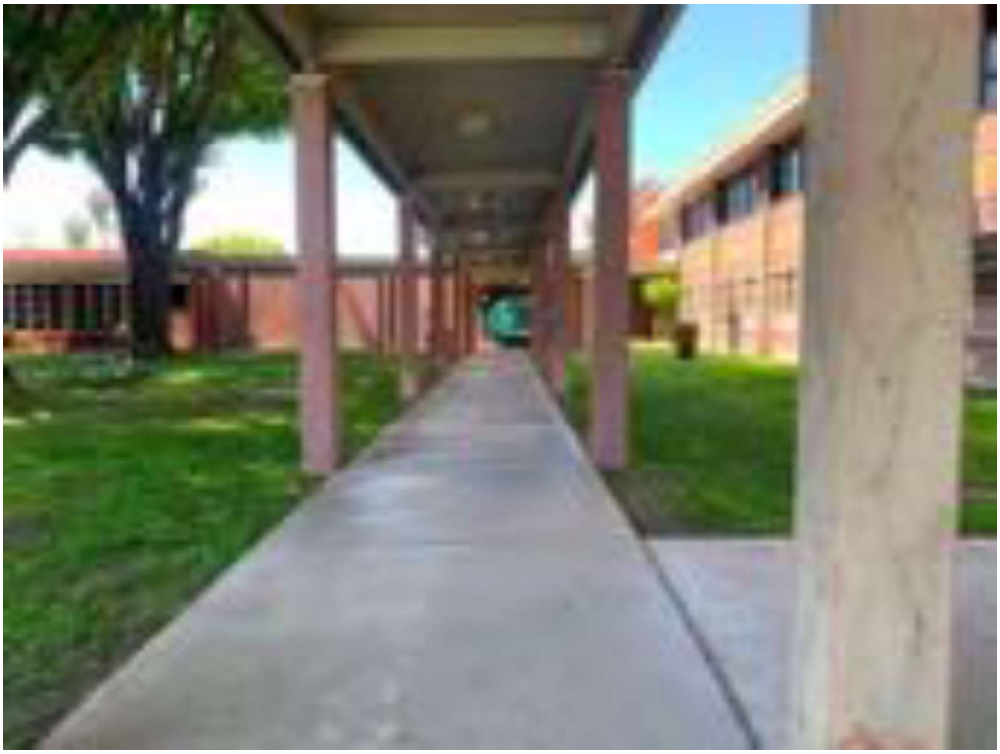
48. Cafeteria Building, east elevation

49. Cafeteria Building, west elevation

50. Walkway system

51. Walkway system

52. Walkway system


53. Walkway system

54. Detail of Walkway post

55. Detail of Walkway ceiling

56. Detail of Walkway posts and ceiling

57. Detail of Walkway ceiling

58. Window and concrete panel and brick detail

59. Window and concrete panel detail

60. Window and concrete panel and brick detail

61. Window and concrete panel detail

62. Window and concrete panel bulkhead detail

63. Window and brick bulkhead detail

64. Brick stretcher pattern detail

65. South end of School/Maintenance Building adjacent to Open Space South

66. Open Space South looking west towards Dormitories

67. Open Space South looking west toward Dormitories and the southwest corner of the site

68. Basketball court by Dormitories adjacent to Open Space South

69. Open Space South, looking north

70. Open Space South looking north toward pool

71. Open Space South looking north along south border security wall

72. Open Space South looking south toward southeast corner of site bounded by security walls

73. Pool area in Open Space South

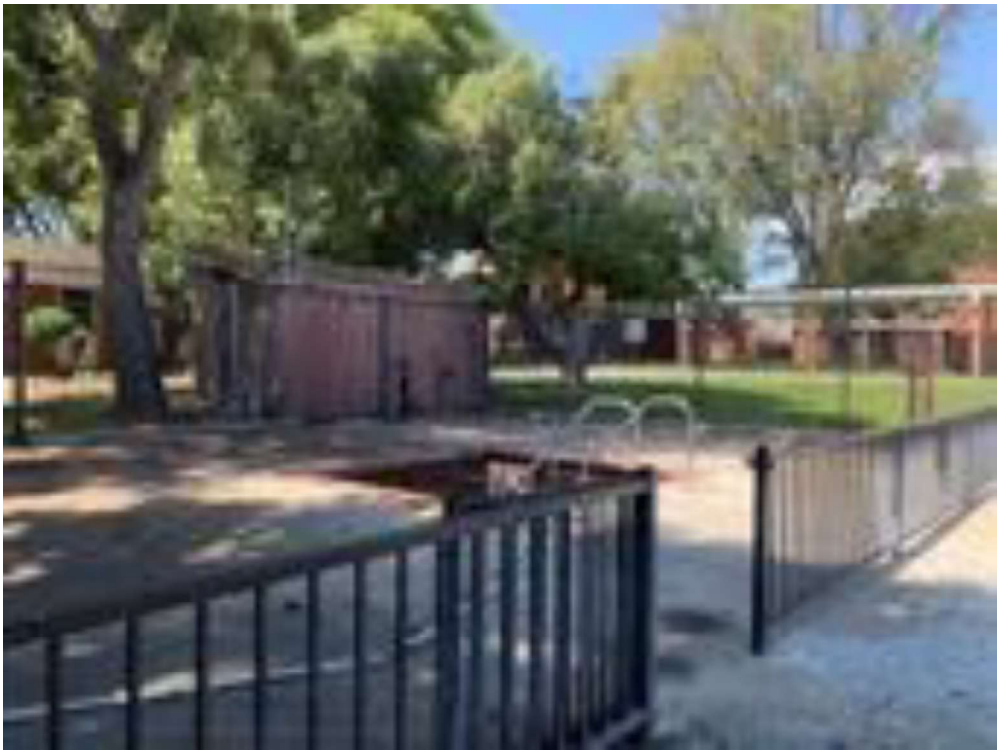
74. Pool Area in Open Space South

75. Pool in Open Space South

76. Pool in Open Space South

77. Pool deck area in Open Space South

78. Pool Hours in Open Space South



79. Pool House and small pool in Open Space South

80. Marker at Pool in Open Space South

81. Looking towards Open Space North

82. Basketball Court at west side of Open Space North

83. Looking east at Open Space North from basketball court

84. Looking east at Open Space North and Modular Buildings from basketball court

85. Modular Building along Kerrwood Street, west elevation in Open Space North

86. Modular Building along Kerrwood Street, south elevation in Open Space North

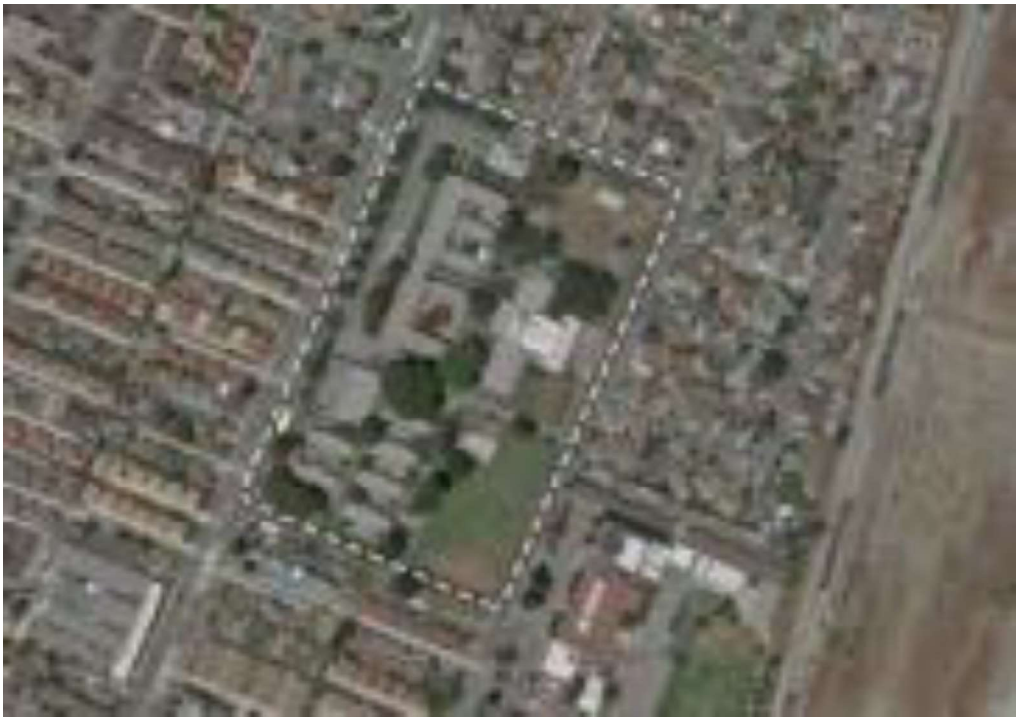
87. Modular Building along Gilman Road, north and east elevations, by security wall in Open Space North

88. Open Space North, looking southwest

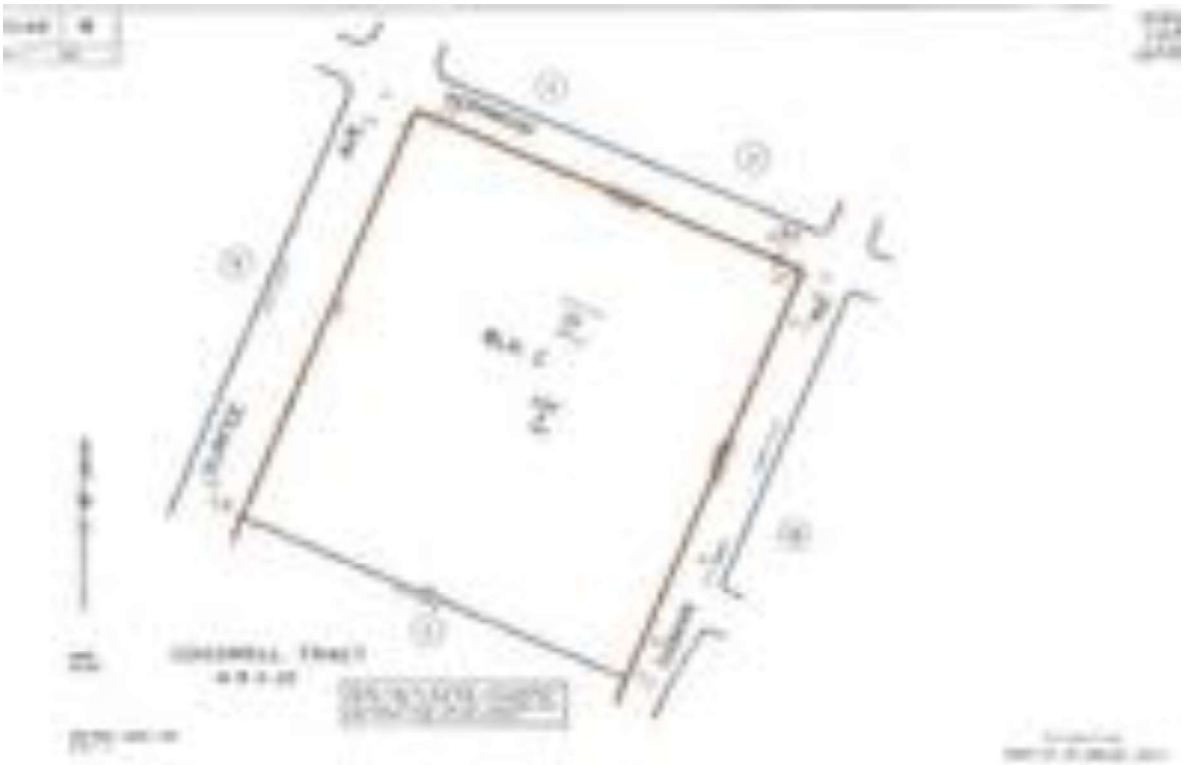
89. Open Space North, looking north to Kerrwood Street from northwest corner near the Office Building

90. Marker with cornerstones from demolished buildings and dedication for current buildings

Attachment B: Maps



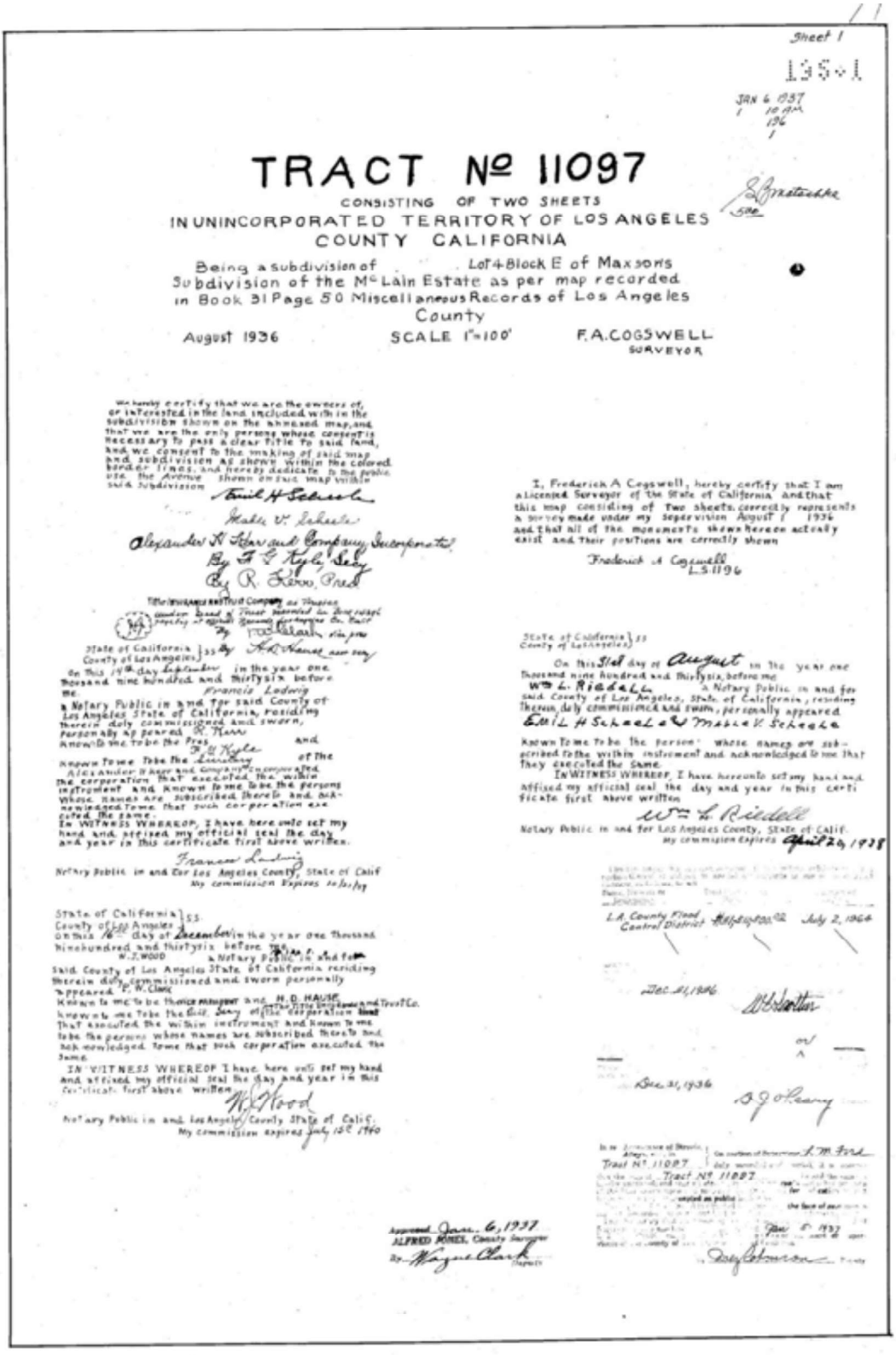
Aerial photograph (ca. 2018)



Los Angeles County Assessor's Map (part 1)

Los Angeles County Assessor's Map (part 2)

Original Tract Map



Sheet 1

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JAN 6 1937
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TRACT Nº 11097

CONSISTING OF TWO SHEETS
IN UNINCORPORATED TERRITORY OF LOS ANGELES
COUNTY CALIFORNIA

Being a subdivision of Lot 4 Block E of Maxsons Subdivision of the McLain Estate as per map recorded in Book 31 Page 50 Miscellaneous Records of Los Angeles County

August 1936 SCALE 1"=100' F.A. COGSWELL SURVEYOR

We hereby certify that we are the owners of, or interested in the land included within the subdivision shown on the annexed map, and that we are the only persons whose consent is necessary to pass a clear title to said land, and we consent to the making of said map and subdivision as shown within the colored border lines, and hereby dedicate to the public use the Avenue shown on said map within said Subdivision

Emil H. Schaefle
Mable V. Schaefle
Alexander Hamilton Company, Incorporated
By F. G. Kyle, Secy
By R. Hann, Pres

The Title Insurance and Trust Company as Trustee under Deed of Trust recorded in Book ... Page ... Official Records of Los Angeles County
By ...
By ...

State of California } ss
County of Los Angeles }

On this 19th day September in the year one thousand nine hundred and thirty six before me Francis Ludwig a Notary Public in and for said County of Los Angeles State of California, residing therein duly commissioned and sworn, personally appeared R. Hann and known to me to be the Pres and F. G. Kyle known to me to be the Secretary of the Alexander Hamilton Company Incorporated the corporation that executed the within instrument and known to me to be the persons whose names are subscribed thereto and acknowledged to me that such corporation executed the same.
IN WITNESS WHEREOF, I have here unto set my hand and affixed my official seal the day and year in this certificate first above written.

Francis Ludwig
Notary Public in and for Los Angeles County, State of Calif
My commission Expires 10/21/39

State of California } ss
County of Los Angeles }

On this 16th day of December in the year one thousand nine hundred and thirty six before me W. L. Wood a Notary Public in and for said County of Los Angeles State of California residing therein duly commissioned and sworn personally appeared F. W. Clark known to me to be Trust Officer and H. D. Hause known to me to be the Asst. Secy of the Title Insurance and Trust Co. that executed the within instrument and known to me to be the persons whose names are subscribed thereto and acknowledged to me that such corporation executed the same.
IN WITNESS WHEREOF I have here unto set my hand and affixed my official seal the day and year in this certificate first above written

W. L. Wood
Notary Public in and for Los Angeles County State of Calif.
My commission expires July 15 1940

I, Frederick A Cogswell, hereby certify that I am a Licensed Surveyor of the State of California and that this map consisting of two sheets correctly represents a survey made under my supervision August / 1936 and that all of the monuments shown hereon actually exist and their positions are correctly shown

Frederick A Cogswell
L.S. 1196

State of California } ss
County of Los Angeles }

On this 31st day of August in the year one thousand nine hundred and thirty six, before me W. L. Riddell a Notary Public in and for said County of Los Angeles, State of California, residing therein, duly commissioned and sworn, personally appeared Emil H. Schaefle and Mable V. Schaefle known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

W. L. Riddell
Notary Public in and for Los Angeles County, State of Calif.
My commission Expires April 24, 1938

L.A. County Flood Control District July 2, 1964

Dec. 31, 1936

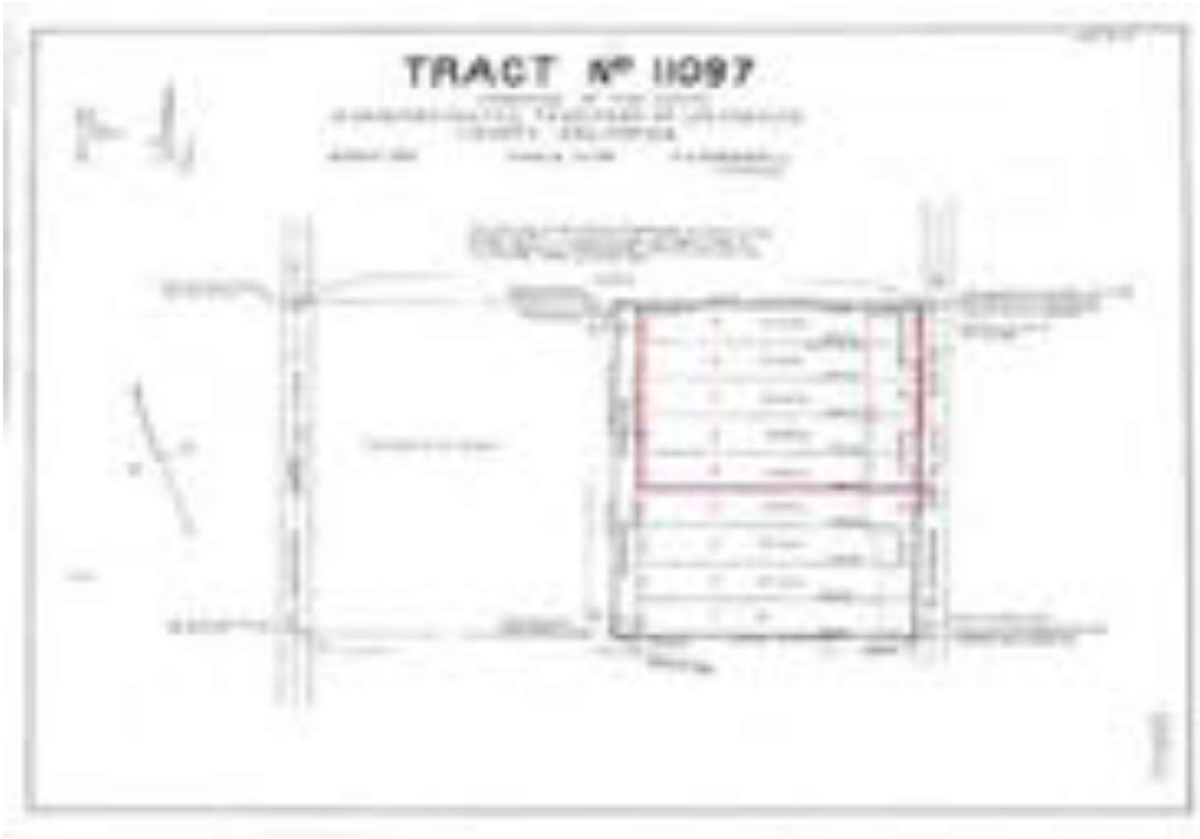
Dec 31, 1936

Approved June 6, 1937
ALFRED HOMES, County Surveyor
By Wayne Clark Deputy

Tract Nº 11097

Tract Nº 11097

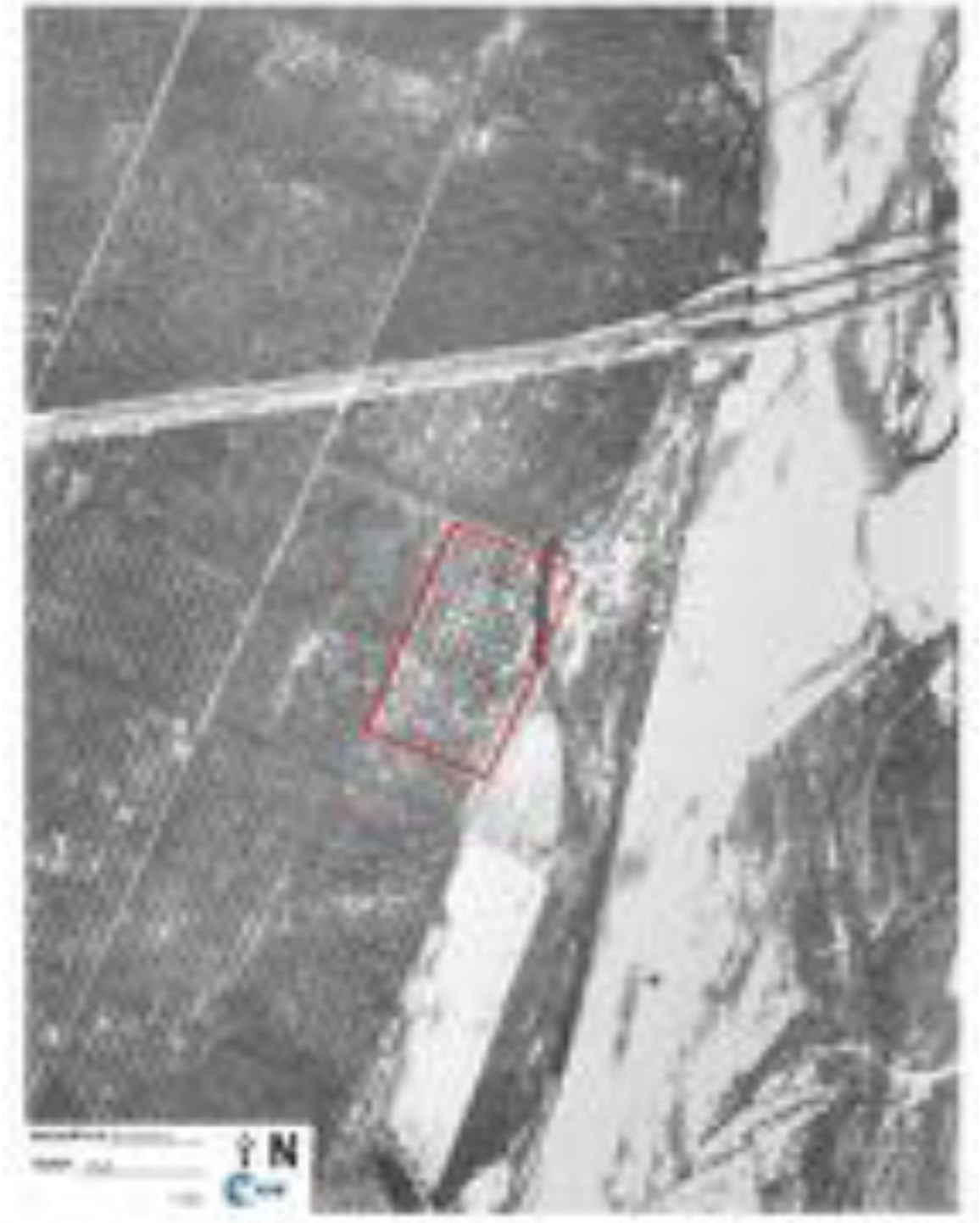
Original Tract Map



Original Tract Map

Attachment C: Historic Aerials and Sanborn Insurance Maps

Historic Aerials



Aerial Photo 1928

Aerial Photo 1938

Aerial Photo 1948

Aerial Photo 1952

Aerial Photo 1964

Aerial Photo 1972

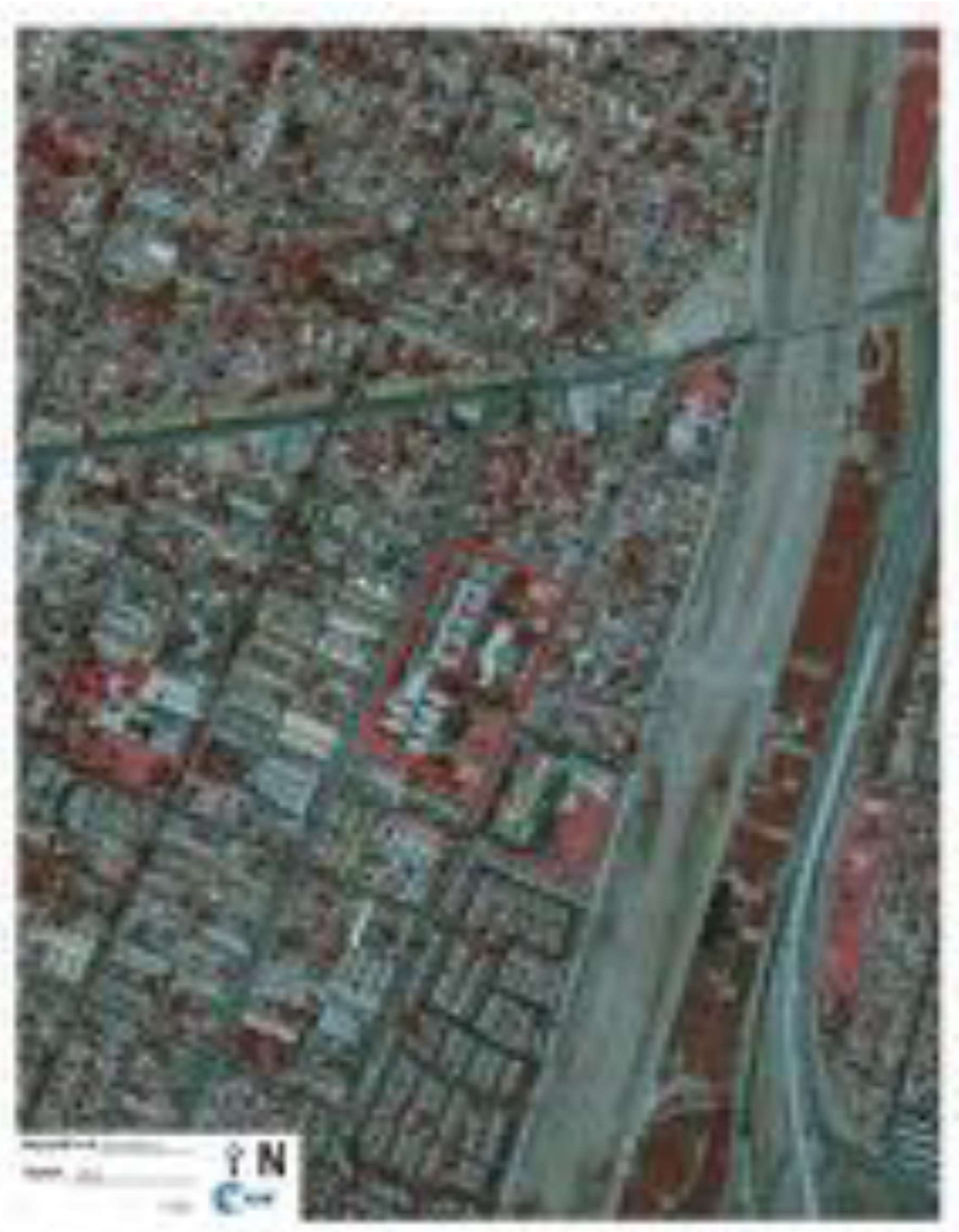
Aerial Photo 1977

Aerial Photo 1981

Aerial Photo 1989

Aerial Photo 1990

Aerial Photo 1994



Aerial Photo 2002

Aerial Photo 2005

Aerial Photo 2009

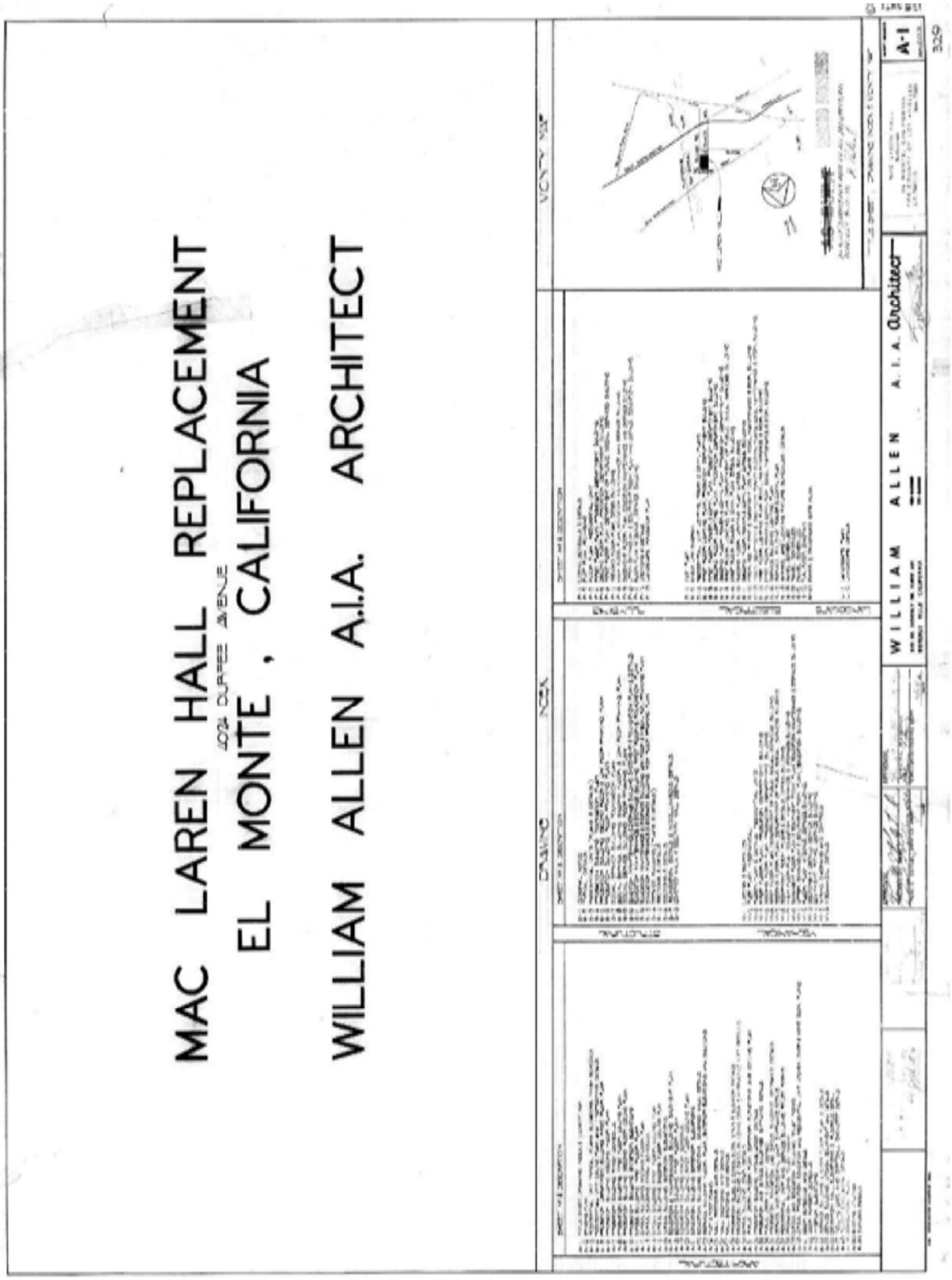
Aerial Photo 2012

Aerial Photo 2016

Sanborn Insurance Maps

There are no Sanborn Maps available for this site

Attachment D: Drawings:



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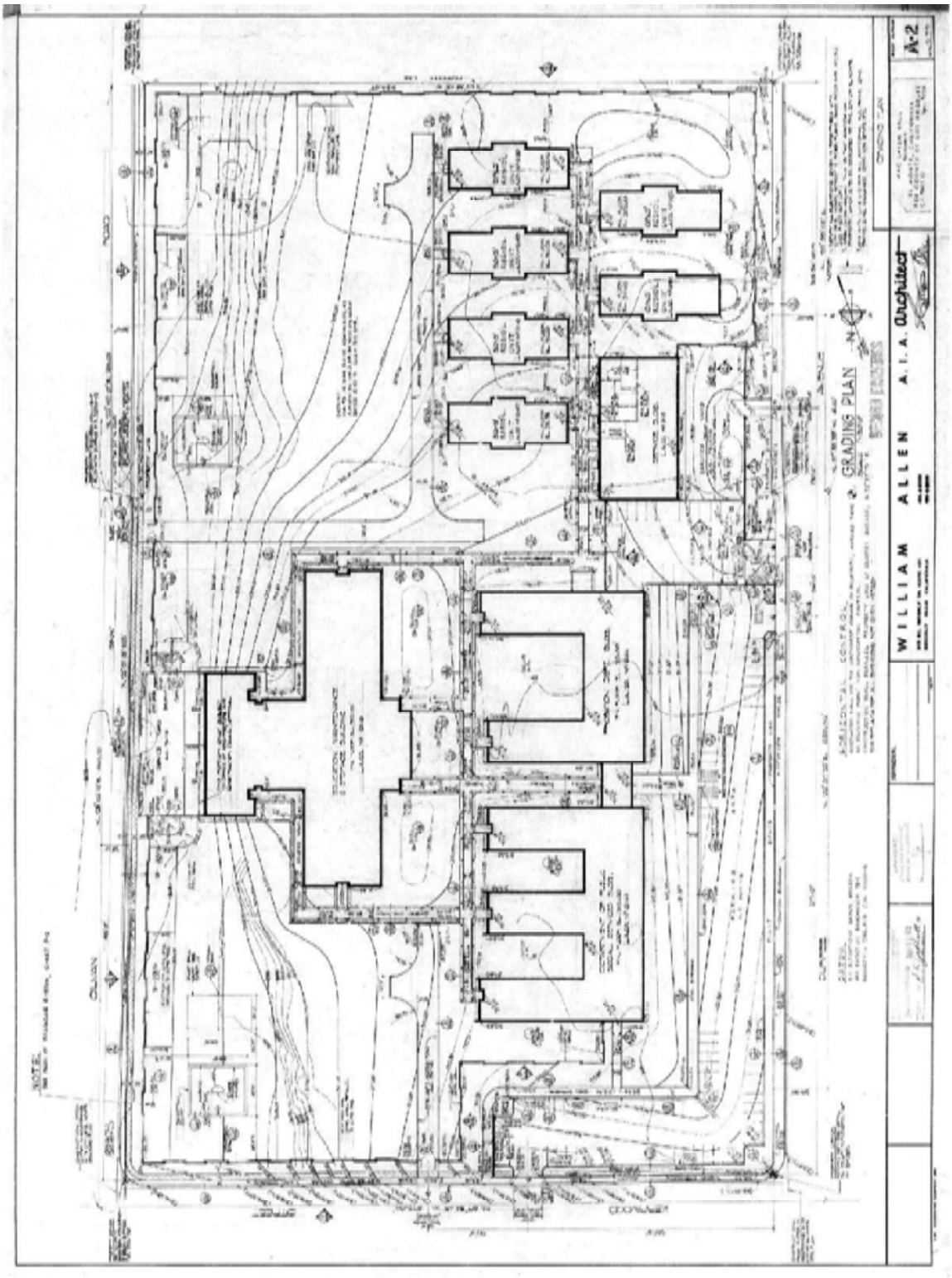

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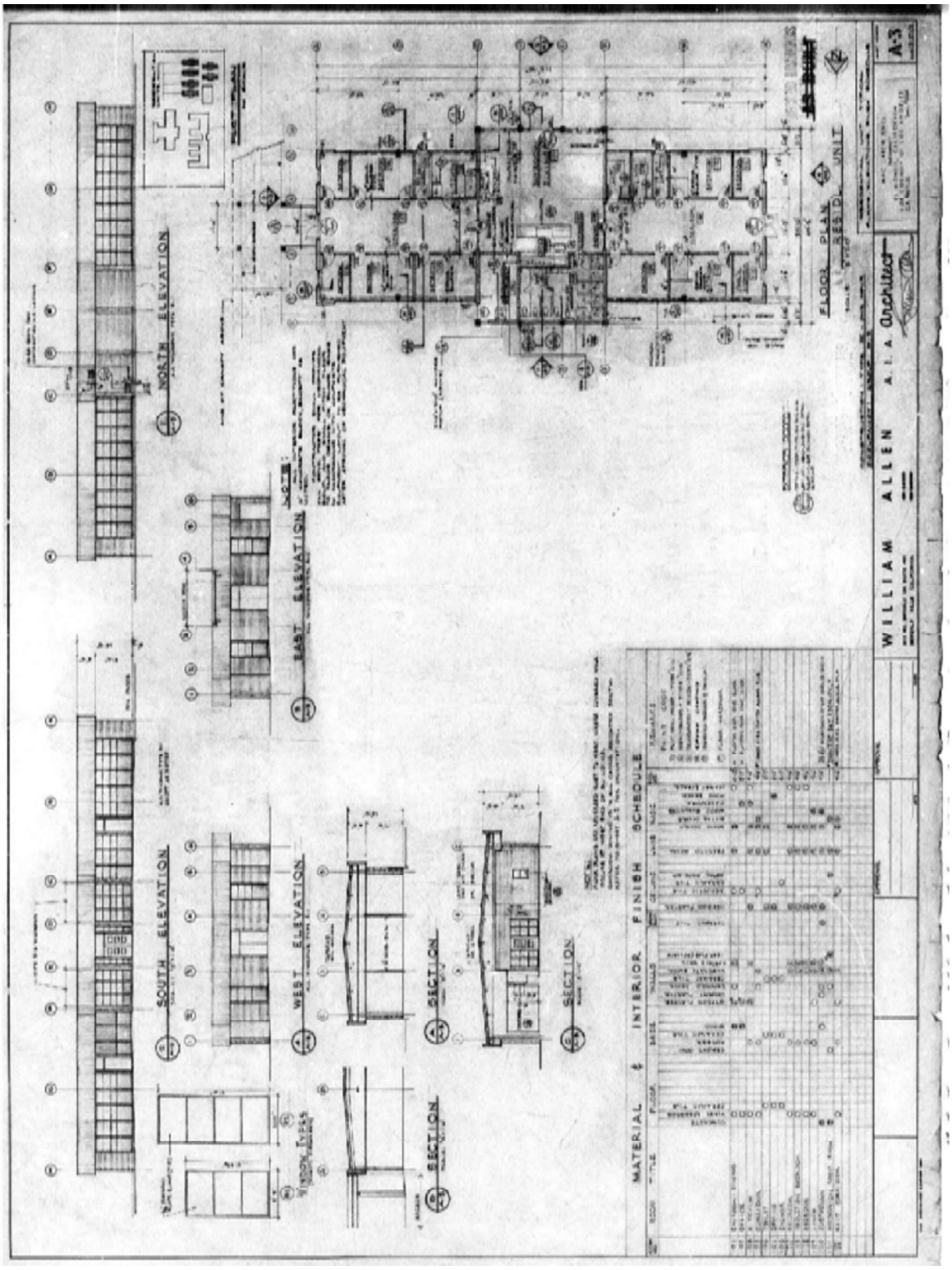
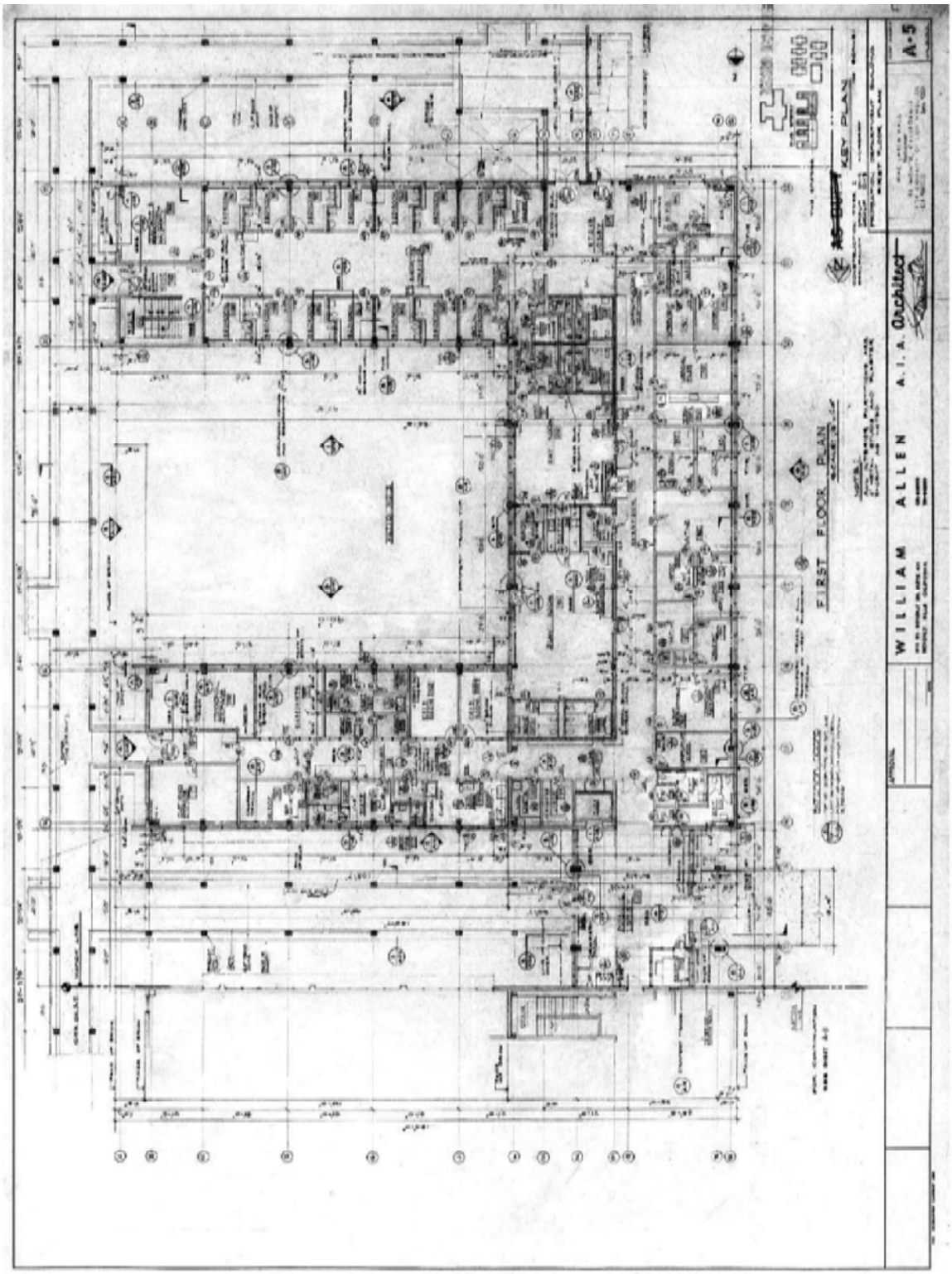

A-3
WILLIAM ALLEN A.I.A. Architect
FLOOR PLAN RESID. UNIT
NORTH ELEVATION
EAST ELEVATION
SOUTH ELEVATION
WEST ELEVATION
SECTION
SECTION
SECTION
MATERIAL & INTERIOR FINISH SCHEDULE

A-3



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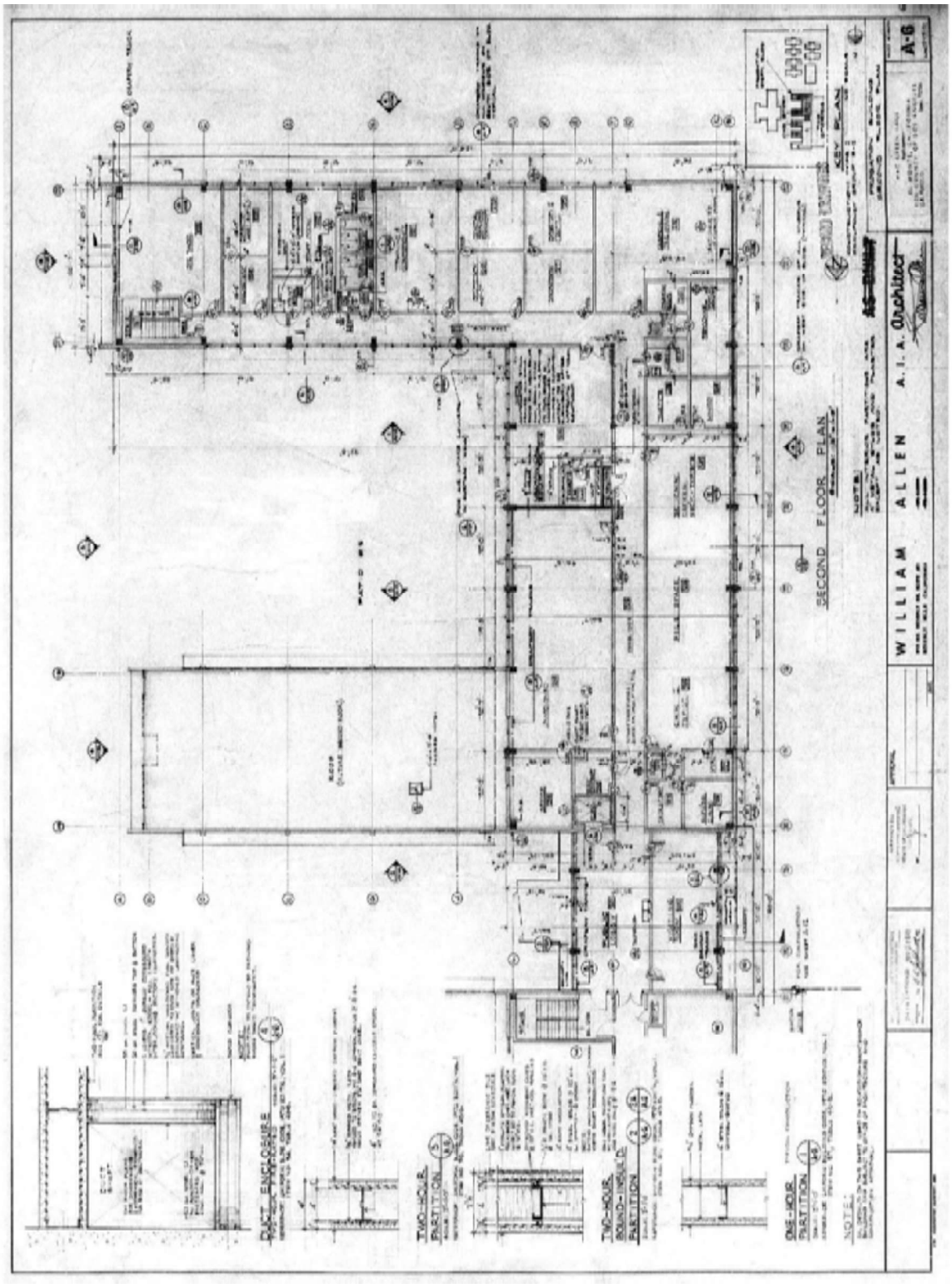
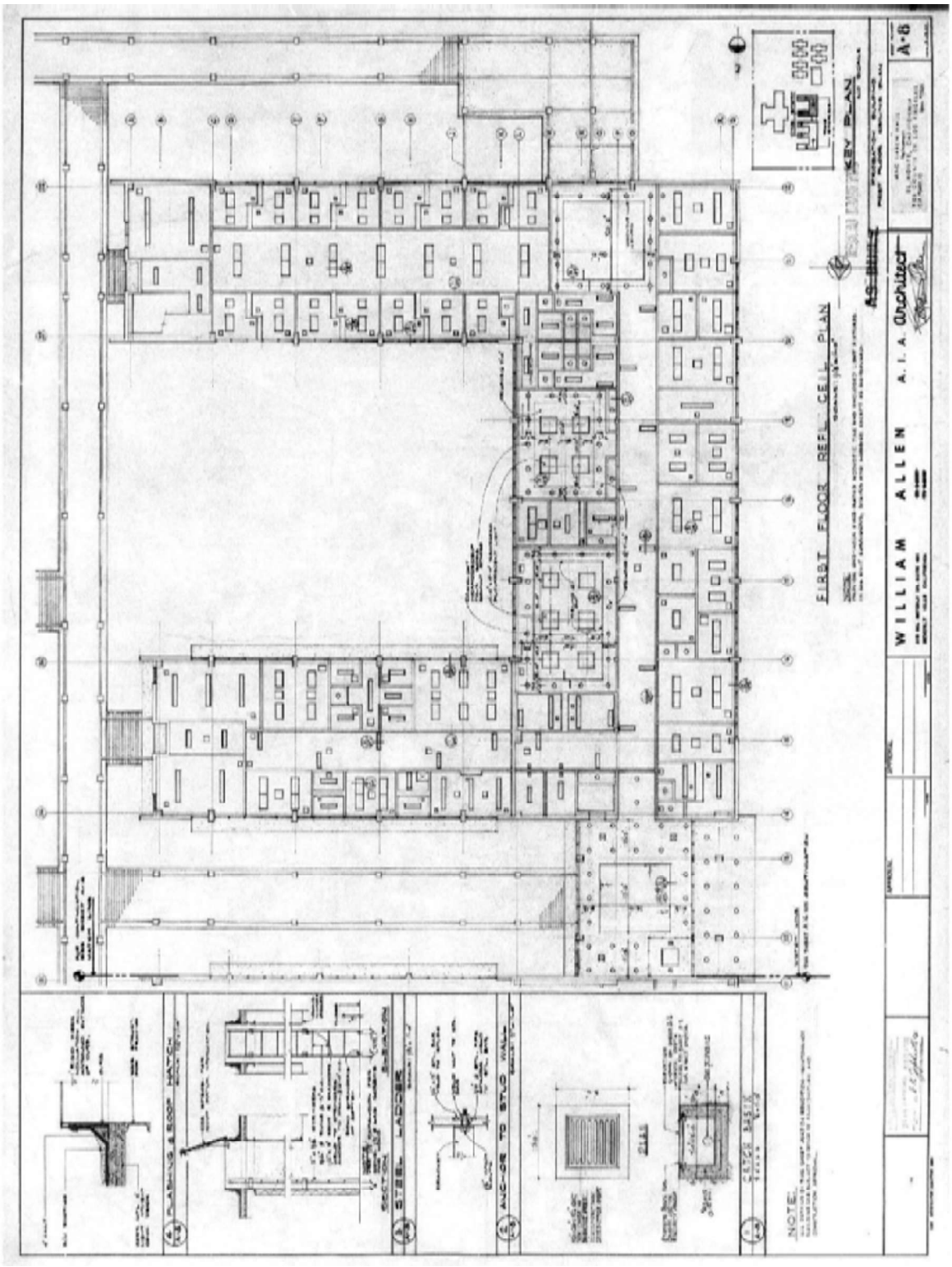
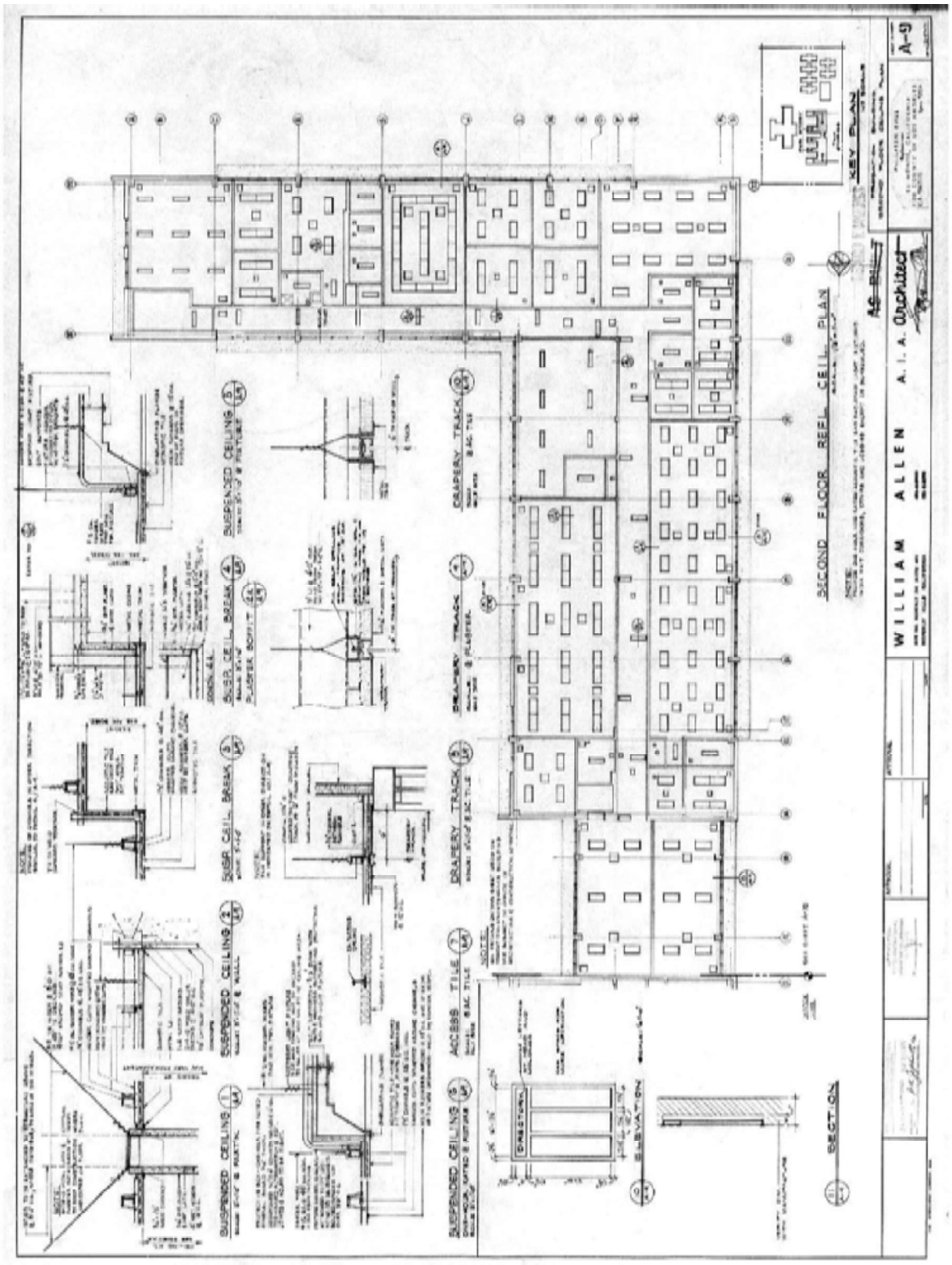
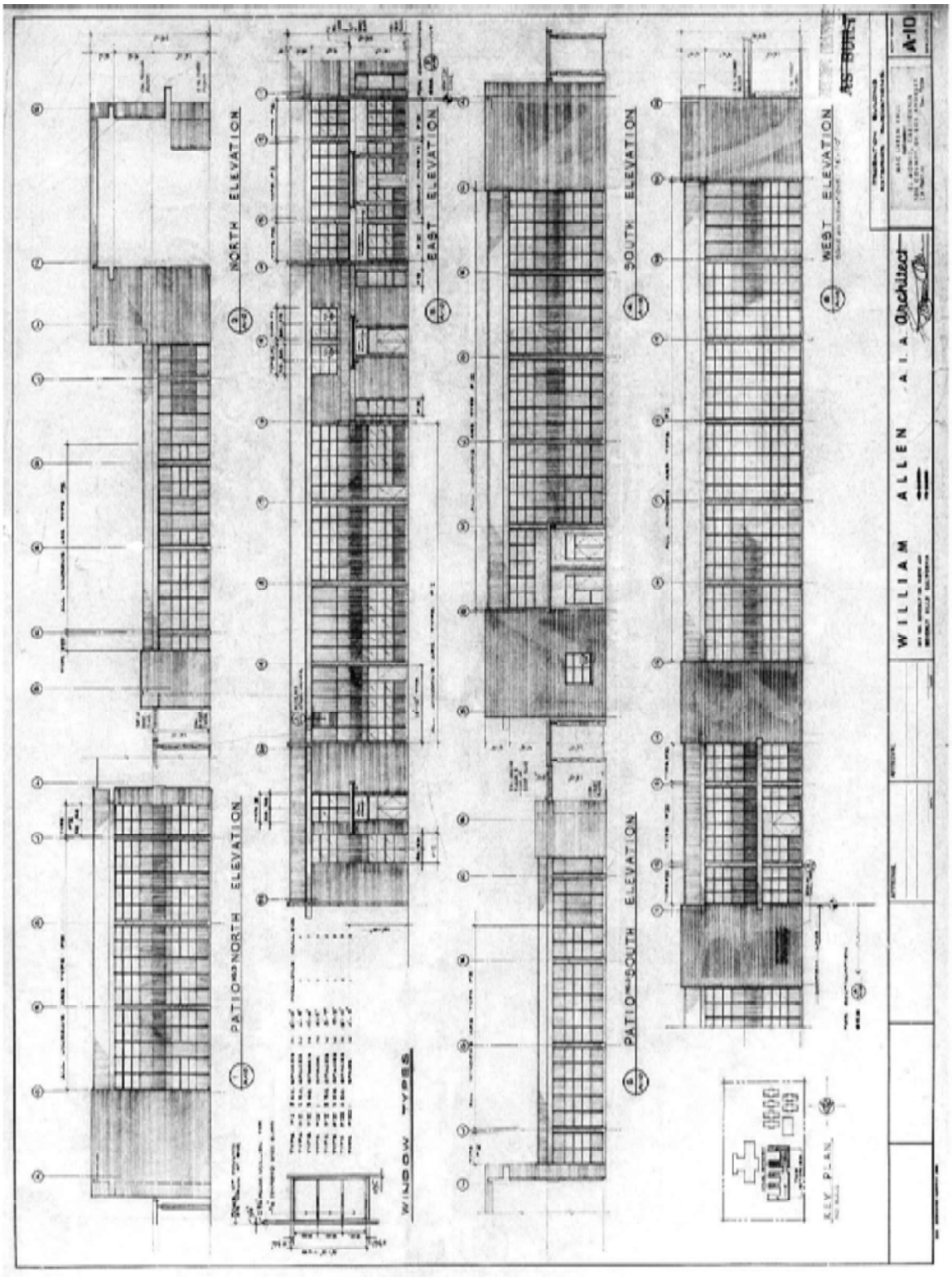

WILLIAM ALLEN A.I.A. Architect
A-6
SECOND FLOOR PLAN
KEY PLAN
DUCT ENCLOSURE
TWO-HOUR PARTITION
TWO-HOUR ROUND-HOUSE PARTITION
ONE-HOUR PARTITION

A-6

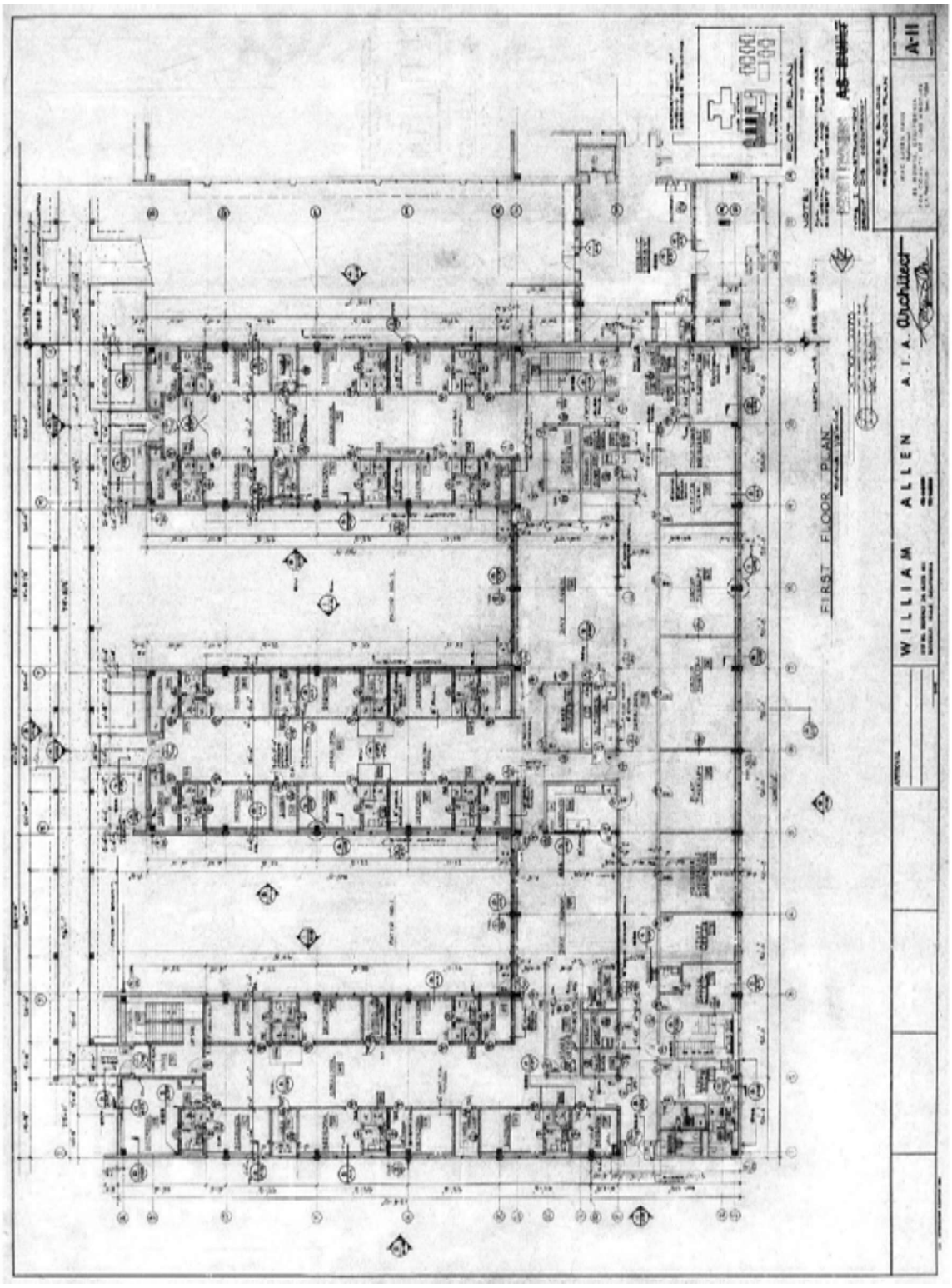

WILLIAM ALLEN A.I.A. Architect
A-8
FIRST FLOOR REEL CELL PLAN
KEY PLAN
NOTE:

A-8


WILLIAM ALLEN A. I. A. Architect
SECOND FLOOR REFL. CEIL. PLAN
KEY PLAN
A-9
SUSPENDED CEILING
SUSPENDED CEILING
SUSPENDED CEILING


NORTH ELEVATION
EAST ELEVATION
SOUTH ELEVATION
WEST ELEVATION
PATIO NORTH ELEVATION
PATIO SOUTH ELEVATION
WINDOW TYPES
KEY PLAN
WILLIAM ALLEN A.I.A. Architect
A-10

A-10



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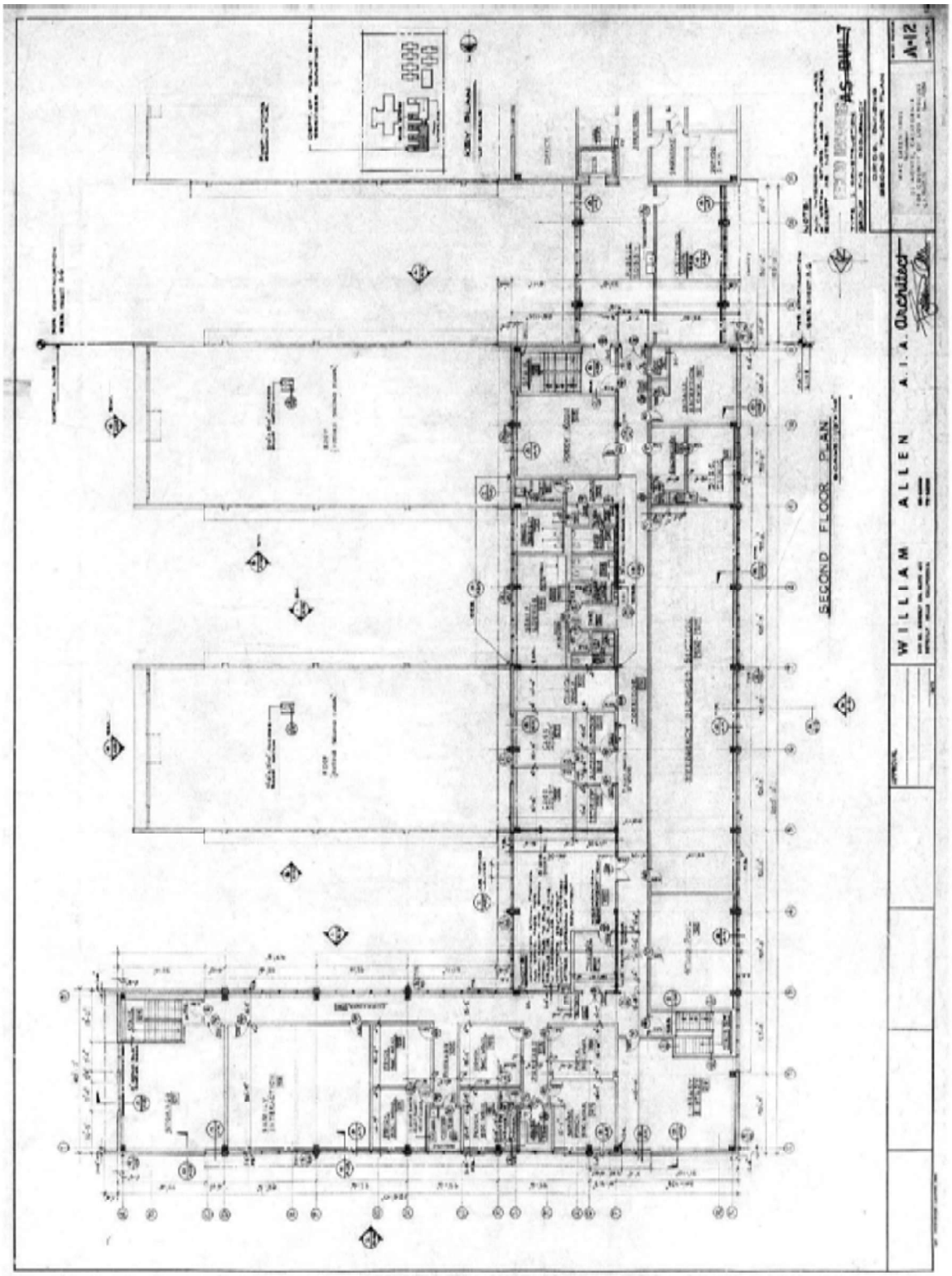

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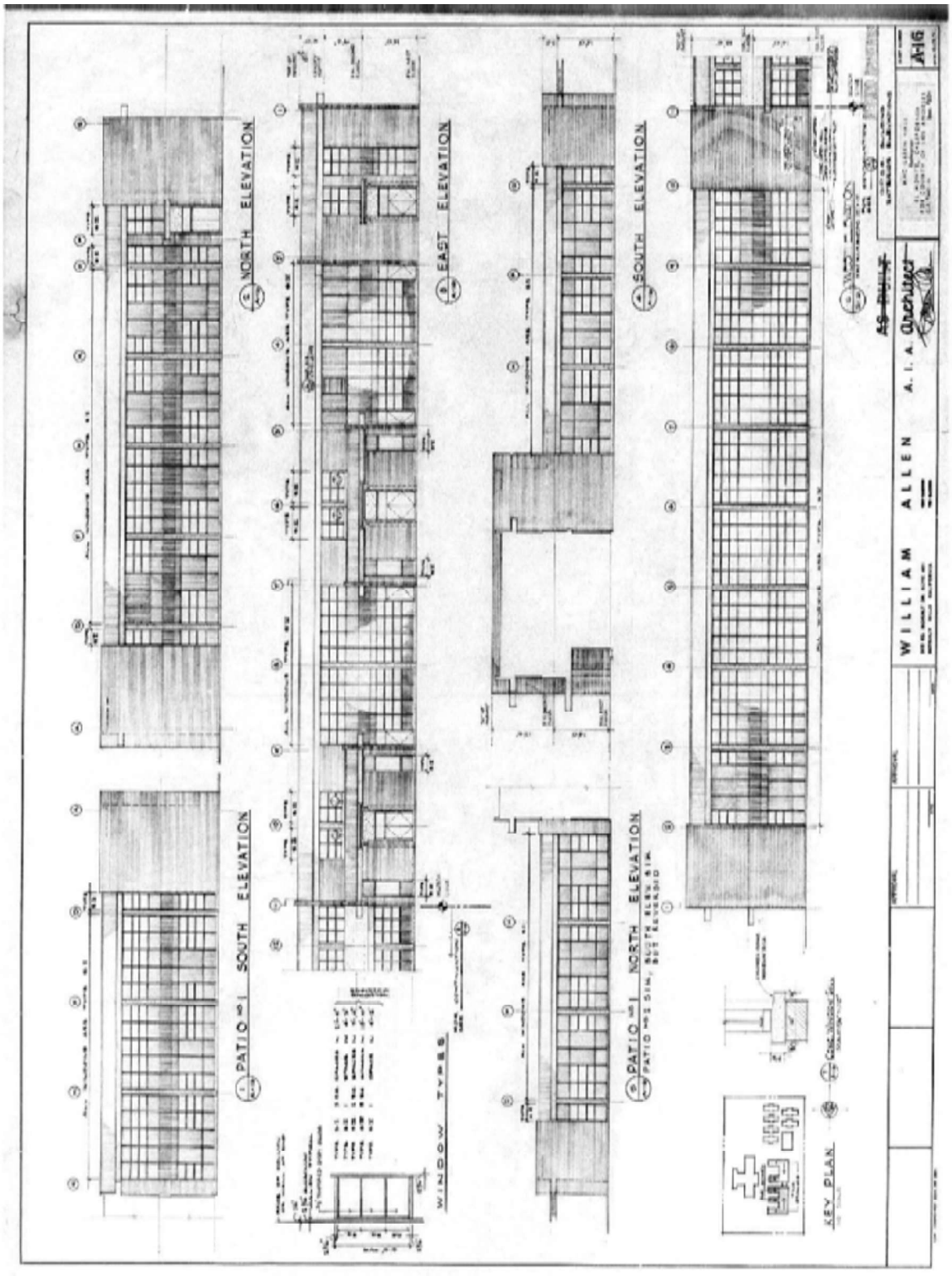
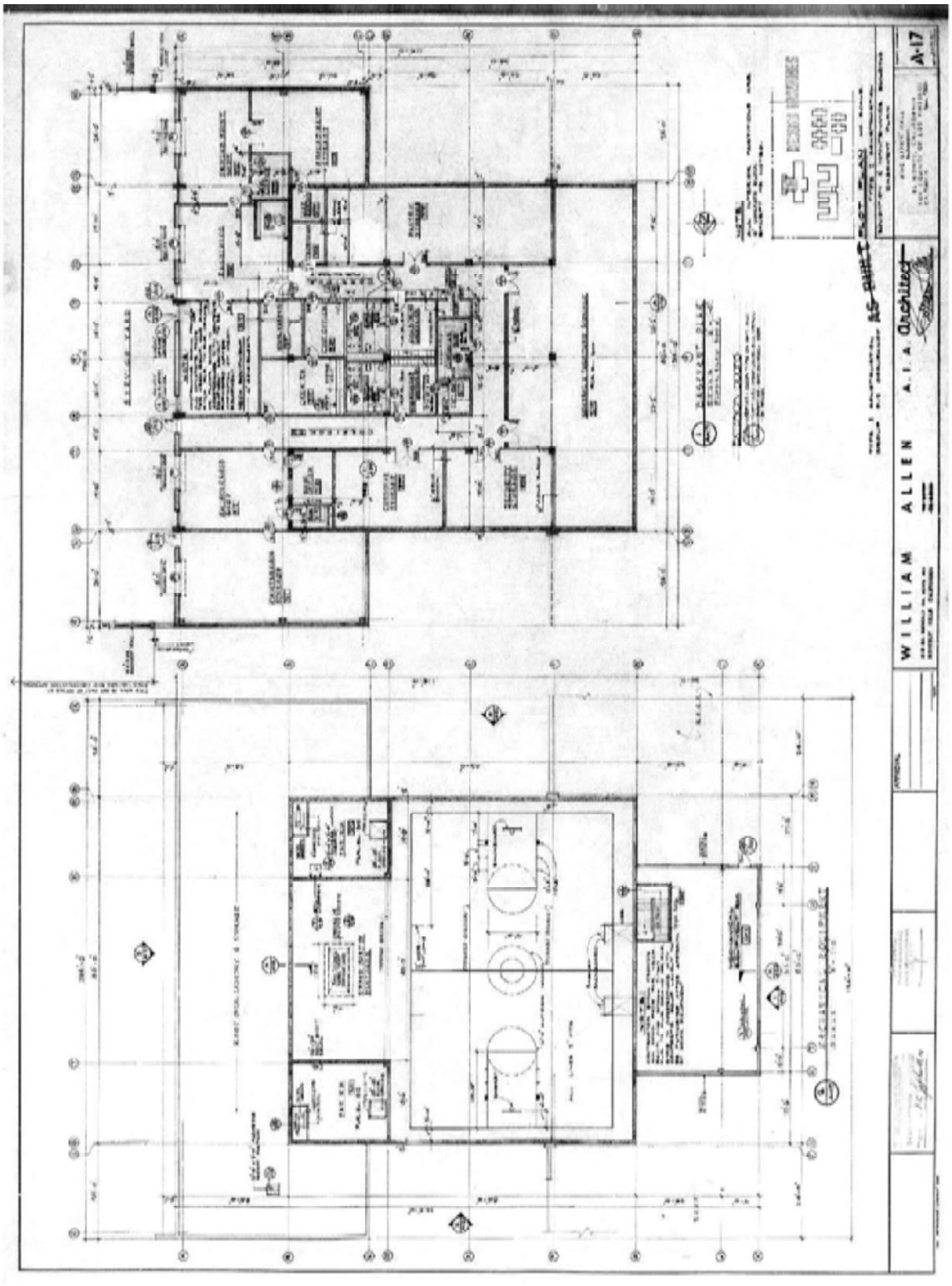

NORTH ELEVATION
EAST ELEVATION
SOUTH ELEVATION
PATIO #1 SOUTH ELEVATION
PATIO #1 NORTH ELEVATION
WINDOW TYPES
KEY PLAN
WILLIAM ALLEN A.I.A.
A-16

A-16



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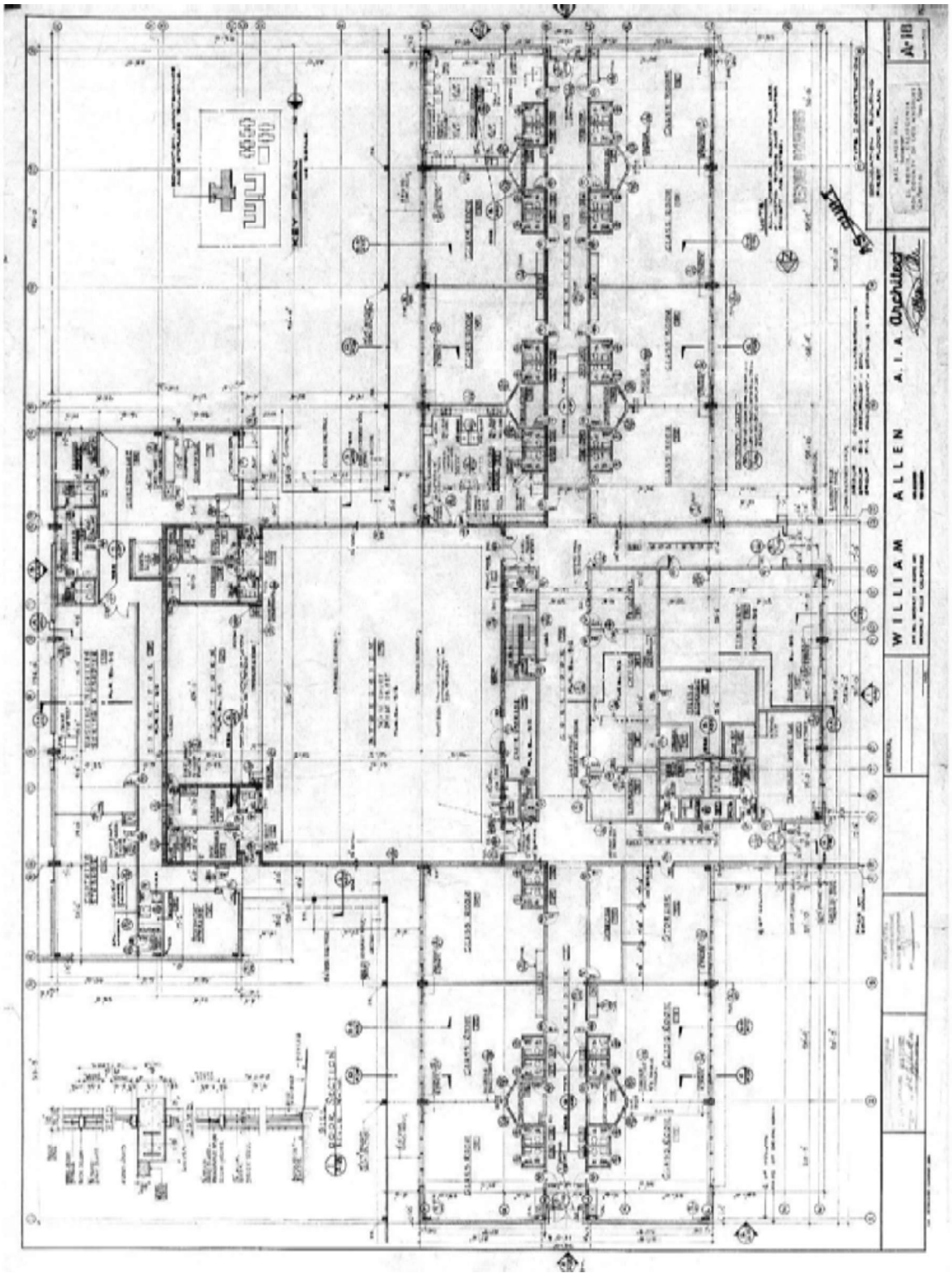

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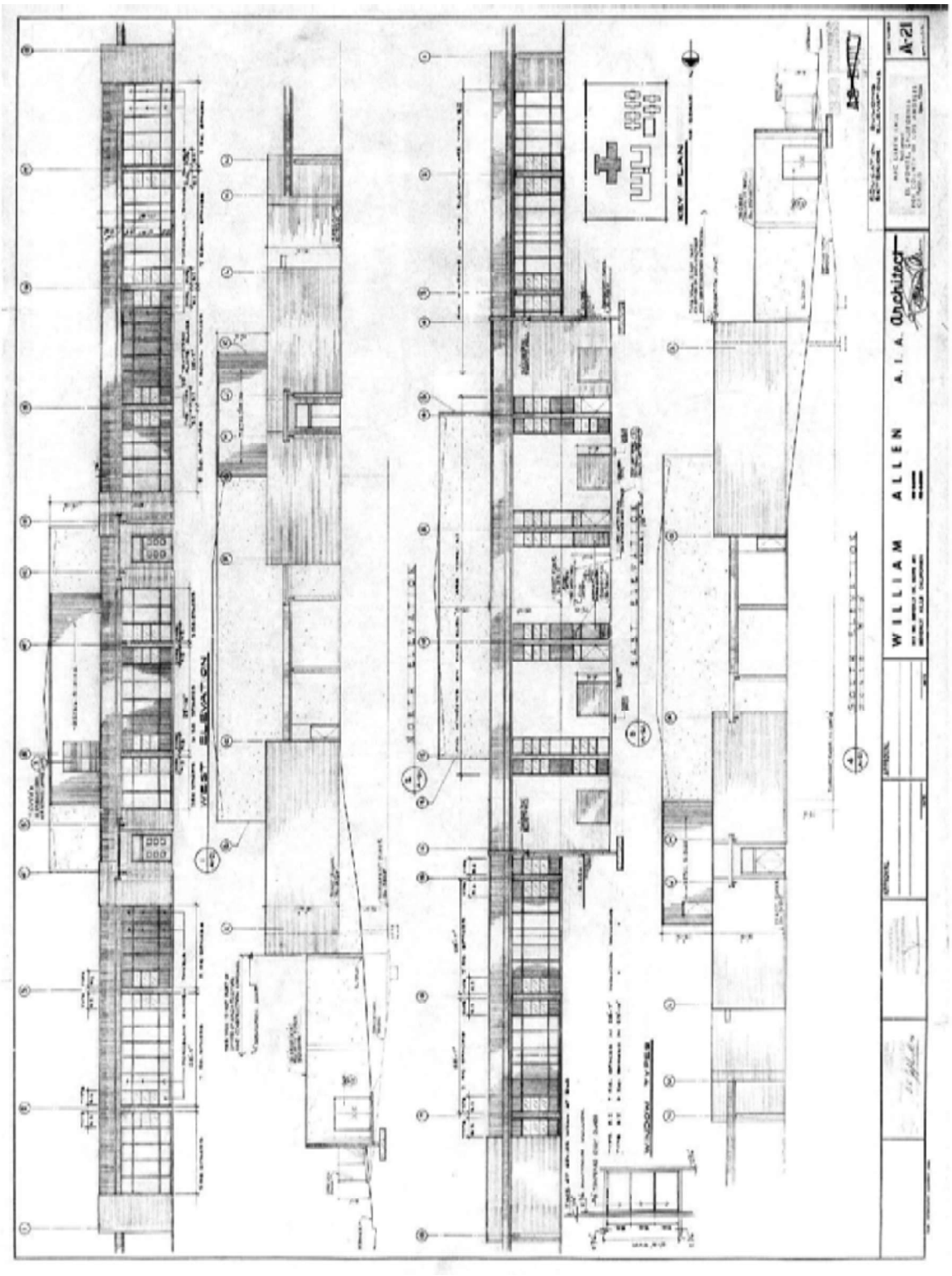
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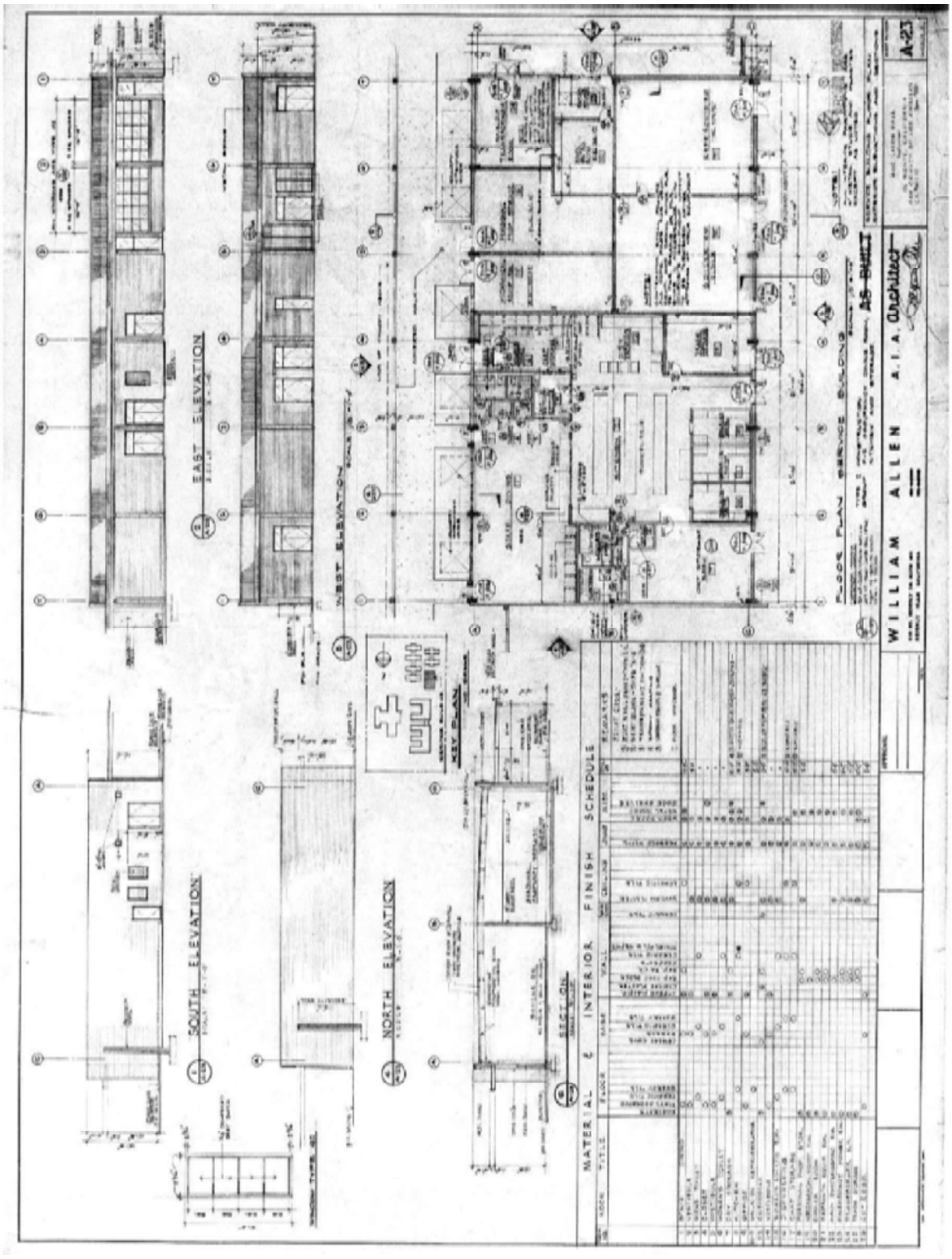
WILLIAM ALLEN A.I.A. Architect
KEY PLAN
WEST ELEVATION
NORTH ELEVATION
EAST ELEVATION
SOUTH ELEVATION

A-21


A-23
WILLIAM ALLEN A.I.A. Architect
FLOOR PLAN SERVICE BUILDING
EAST ELEVATION
WEST ELEVATION
SOUTH ELEVATION
NORTH ELEVATION
KEY PLAN
MATERIAL & INTERIOR FINISH SCHEDULE

A-23

W.H. Bonner Associates
Archaeofaunal Studies
Archaeological Surveys
Historical & Genealogical Research
RPA Register of Professional Archaeologists
15619 Ogram Avenu
Gardena, CA 90249-44
(310) 675-27
E-mail: whbonner@aol.cor

June 5, 2020

David Kaplan
KCK Architects
2526 18th Street
Santa Monica, CA 90405

Subject: Historic Records Search Results for 4024 Durfee Avenue, El Monte, Los Angeles County, CA

Dear Mr. Kaplan:

At your request, W. H. Bonner Associates has conducted a historic records search for your project located at 4024 Durfee Avenue, El Monte, California 91732. The records search was conducted on June 4, 2020, at the South Central Coastal Information Center (SCCIC), California State University, Fullerton.

To identify any historic properties, the rolls of the National Register of Historic Places (NRHP), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI) were examined. The California State Historic Resources Inventory (HRI), Historic Preservation was also reviewed to determine local resources previously evaluated for their historic significance. Built dates were determined from the website of the Los Angeles County Tax Assessor.

Record Search Results

4024 Durfee Avenue, El Monte, CA 91732, APN 8549-004-900
Government owned miscellaneous property
Built date not listed
Directory of Properties in the Historic Property Data File – Not Listed
National Register of Historic Places (NRHP) – Not listed
California Points of Historic Interest (CPHI) – Not listed
California Historic Landmarks (CHL) – Not listed

Please Note: Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have

historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

We appreciate this opportunity to assist you on your project. If we can be of any further assistance, or if you have any questions concerning this letter, please do not hesitate to contact our office at (310) 675-2745 or via e-mail, whbonner@aol.com.

Sincerely,

Wayne H. Bonner, M.A.
RPA Certified Archaeologist #10085

| | | |

W.H. Bonner Associates
Archaeofaunal Studies
Archaeological Surveys
Historical & Genealogical Research
RPA
Register of Professional Archaeologists
15619 Ogram Avenu
Gardena, CA 90249-44
(310) 675-27
E-mail: whbonner@aol.cor

April 26, 2021

Wendy Lockwood
Sirius Environmental
1478 N. Altadena Drive
Pasadena, CA 91107

Subject: Cultural Resources Records Search Results for the MacLaren Community Park Project, City of El Monte, Los Angeles County, CA

Dear Ms. Lockwood:

At your request, W. H. Bonner completed a cultural resources records search for the MacLaren Community Park Project, located at 4024 Durfee Avenue, City of El Monte, California 91732 (see Figure 1). The records search was conducted on April 26, 2021, by staff at the South Central Coastal Information Center (SCCIC), California State University, Fullerton (SCCIC No. 22260.8431).

The project site is a 5.6-acre portion of the County-owned 13.65 MacLaren Hall property at 4024 N. Durfee Avenue in the City of El Monte. The MacLaren Hall property borders the project site on the north, west and south. Seven single-family homes are located directly across Gilman Road from the project site to the east.

The MacLaren Community Park project is proposed to be located on approximately 5.3 acres of the northeast quadrant of the 13.65-acre MacLaren Hall property (4024 Durfee Avenue) in the City of El Monte in Los Angeles County (an additional 0.3 acres is included in the project site because demolition of buildings would occur in this area). The project site includes portions of existing buildings, paved areas, trees and a grassy area. The project would include the following: one regulation size soccer field with field netting and bleacher seating, with a superimposed softball field and decomposed granite walking path around the field; the football field would be sunk 48 inches below the present grade, in order to provide for storm water management including increased infiltration and improved water quality in the Central Groundwater Basin; a flex event lawn; a walking promenade; fitness area, tennis courts and basketball court; family gathering/barbeque area and book exchange/chess tables; two play areas (for pre-school and grade school) with rubber surfacing; water feature, children's discovery garden, play mound, native botanic garden, and bio swales; raised performance pavilion/gazebo; restrooms and storage; and walking path connection to Kerrwood Street.

The project would include demolition of 130,300 square feet of unused and underused buildings, some of the buildings to be demolished would not be within the proposed park boundary but would need to be demolished because portions of the buildings are within the park area. The project would remove portions of the existing 20-foot-tall perimeter wall (mainly along the eastern park boundary) and replace it with new fencing which would extend around the park perimeter. The project would include field/court lighting with shields to ensure minimal to no spillover lighting or glare at adjacent residences as well as security lighting. Access to the park would be

from Durfee Avenue, Kerrwood Street and Gilman Road. The community park project does not include parking because it is intended to primarily serve the local community. However, until the remainder of the MacLaren Hall property is redeveloped, the existing parking lot on Durfee Avenue (with approximately 138 spaces) would be available for use by park users. In the future this parking would also be available for other uses on the rest of the MacLaren Hall property.

Record Search Results

- No Cultural Resources have been recorded on the subject property.

- Two cultural resources have been recorded within the quarter-mile search radius, but not on the subject parcel (see Attachment 1):

  P-19-187085 – Historic Old Mohave Road (CHL-963) (approximately 1,000 feet northwest of the project location)

  P-19-192309: SCE's Rio Hondo-Amador-Jose-Narrows-Mesa 66kV Transmission Line (approximately 1,300 feet east of the project location)

- Five Cultural investigations have been performed within the quarter-mile radius. None of these assessed the project parcel (see Attachment 2):

  LA00637 – Did not assess the project location
  LA03834 - Did not assess the project location
  LA09242 - Did not assess the project location
  LA09705 - Did not assess the project location
  LA10175 - Did not assess the project location

To identify any historic properties, the rolls of the National Register of Historic Places (NRHP), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI) were examined. The California State Historic Resources Inventory (HRI), was also reviewed to determine local resources previously evaluated for their historic significance

- Directory of Properties in the Historic Property Data File – Not Listed
- National Register of Historic Places (NRHP) – Not listed
- California Points of Historic Interest (CPHI) – Not listed
- California Historic Landmarks (CHL) – The Mojave Road (CHL 963) is plotted within the search radius but not on the project parcel.

PALEONTOLOGY/GEOLOGY

The geological formation occurring directly beneath the subject parcel is composed of Recent Age alluvium (Qal) deposits, consisting of clays, silts, sands, and gravels. These soils are unconsolidated and poorly to well stratified. This alluvium generally forms along the base of mountains and stream deposits that follow the course of major streams and rivers across the valley floor. This young deposit reaches a depth of 100 feet in thickness. Upper Pleistocene alluvium deposits (Qc) occur below the Recent alluvium and consist of unsorted, angular to sub-rounded sedimentary deposits. Thickness can vary between 40 feet in the north of the San Gabriel Valley to some 4,100 feet in the central portion of the valley.

According to the Los Angeles County Natural History Museum, no known paleontological resources have been recorded within a quarter mile of the property.

Summary

The results of the records search indicate that although two cultural resources have been identified within the search radius, neither is located at the project location. Additionally, five previous cultural investigations have been reported within the search radius.

Guidelines

The entire ground surface within the project site has been previously disturbed; archaeological deposits located at or near the surface have long since been removed or destroyed by urbanization. Based upon the human occupation history of the region, excavation below previously disturbed levels may encounter buried resources. Excavation to a depth of about 48 inches (four feet) is proposed. If archaeological or paleontological resources are discovered during excavation activities such resources must be evaluated in accordance with federal, State, and local guidelines. Several federal and state laws regulate the treatment of cultural resources, as well as make it a criminal violation to destroy those resources. These include, but are not limited to:

California Penal Code Section 622.5 provides the following:

> *Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor.*

Public Resources Code Section 5097.5 (a) states, in part, that:

> *No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.*

California Health and Safety Code Section 7050.5(b) specifies the protocol for when human remains are discovered. The 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 PRC Section 5097.98.

Please Note: Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

We appreciate this opportunity to assist you on your project. If we can be of any further assistance, or if you have any questions concerning this letter, please do not hesitate to contact our office at (310) 675-2745 or via e-mail, whbonner@aol.com.

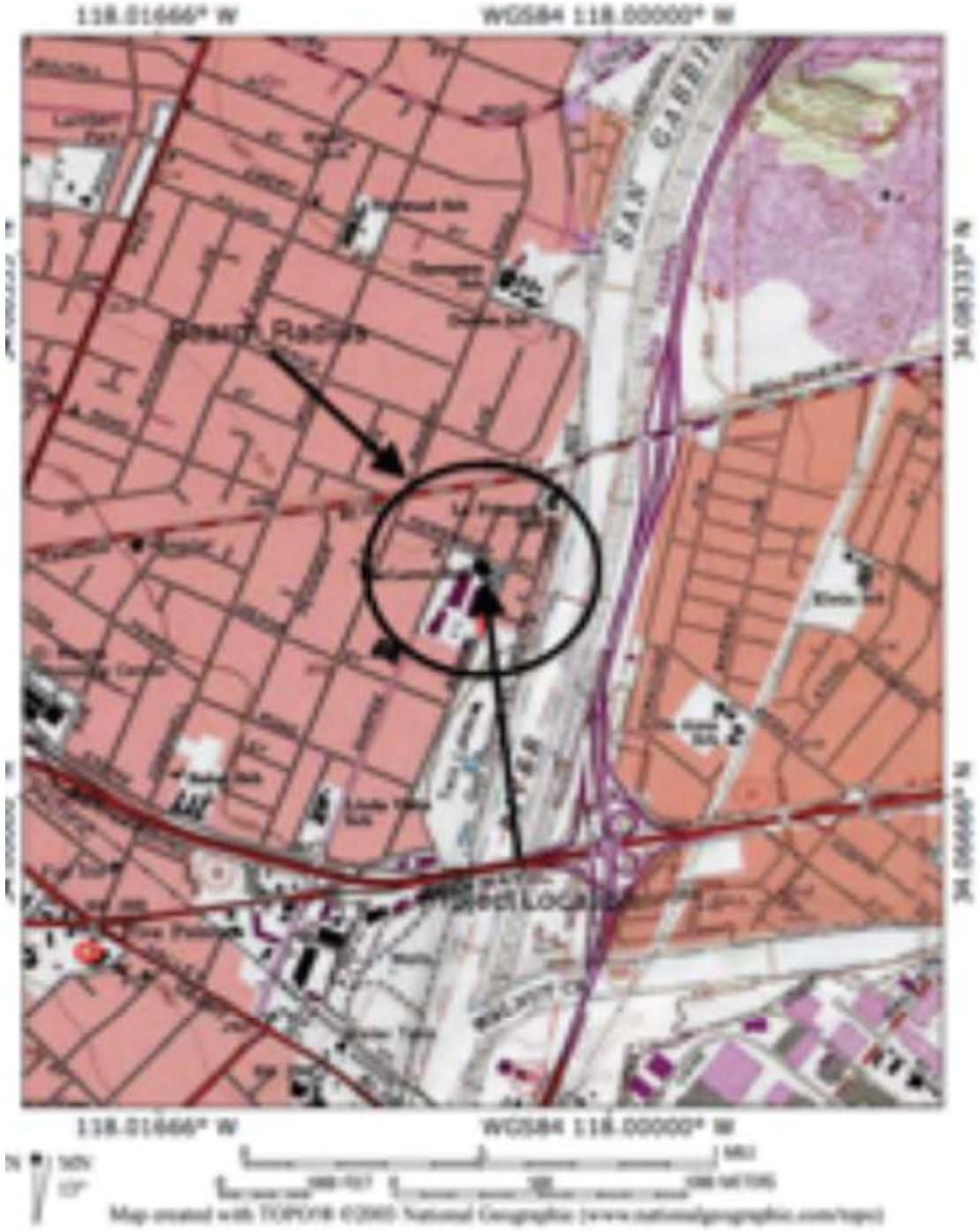
Sincerely,

Wayne H. Bonner, M.A.
RPA Certified Archaeologist #10085

ATTACHMENT 1-RESOURCES RECORDED WITHIN SEARCH RADIUS

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-187085		Resource Name - The Mojave Rd; CHL - 963	Structure, Other	Historic	HP37	1989 (S. Elder); 2014 (Marc Beherec, AECOM)	LA-12788, LA-12808, LA-13259
P-19-190504		Resource Name - SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line	Structure	Historic	HP09; HP11	2010 (Wendy L. Tinsley Becker, Urbana Preservation & Planning); 2018 (Audrey von Ahrens, GPA)	LA-12552, LA-13259


118.01666° W
WGS84 118.00000° W
34.08333° N
34.06666° N
Beach Radar
118.01666° W
WGS84 118.00000° W
MN
13°
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Appendix E

Noise Calculations

Noise and Vibration Calculations

Noise Formulas

Noise Distance Attenuation

Hard Site

Ni = No - 20 * LOG(Di/Do)

Di = distance to receptor (Di>Do)

Ni = attenuated noise level of interest
No = reference noise level

Do = reference distance

Source: (Bolt, Beranek, and Newman, 1971)

Summation of Noise Levels

Equation: Ns=10 x LOG10((10^(N1/10))+(10^(N2/10))+(10^(N3/10))+(10^(N4/10)))

Ns = Noise Level Sum
N1 = Noise Level 1
N2 = Noise Level 2
N3 = Noise Level 3
N4 = Noise Level 4

Source: California Department of Transportation, Technical Noise Supplement, 2013

Construction Noise Analysis

Phased Construction Noise Levels	
Construction Equipment	**Noise Level at 50 feet (dBA)**
Demolition	
Backhoe	73.6
Concrete Saw	82.6
Dozer	77.7
Excavator	76.7
Demolition Combined	**83.8**
Site Preparation	
Backhoe	73.6
Dozer	77.7
Site Preparation Combined	**79.1**
Grading	
Backhoe	73.6
Dozer	77.7
Excavator	76.7
Grader	81
Building Construction Combined	**80.2**
Building Construction	
Backhoe	73.6
Crane	72.6
Forklift	63.2
Paving Combined	**76.1**
Paving+Architectural Coating+Landscaping	
Air Compressor	73.7
Backhoe	73.6
Compactor	76.2
Concrete Mixer Truck	74.8
Paver	74.3
Paving+Architectural Coating+Landscaping Combined	**78.6**

Source: Federal Highway Administration, Roadway Construction Noise Model, 2008

Noise Monitoring Location	Sound Level (dBA, Leq)
[1] 3900 Gilman Rd.	60.5
[2] 12301 Deana Ave.	58.2
[3] 4024 Durfee Ave.	62.1
[4] 4003 Maxson Dr.	63.8
[5] 12210 Kerrwood St.	51.7

Unmitigated On-Site Construction: Resulting Noise Level					
Sensitive Receptor	**Distance (feet) /a/**	**Intervening Building /b/**	**Reference Noise Level (dBA) /c/**	**Equipment Noise Level at Receptor (dBA, Leq)**	**Existing Ambient (dBA, Leq)**
Residences to the North	80	0	83.8	79.7	51.7
Residences to the South	80	0	83.8	79.7	63.8
Residences to the East	85	0	83.8	79.2	63.8
Residences to the West and Truth Alliance Church	130	0	83.8	75.5	62.1
Twin Lakes Elementary School	170	0	83.8	73.2	60.5

/a/ Distance to nearest main area of constructions (e.g. buildings)
/b/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row
/c/ Construction reference noise level based on nearest construction area and activity that would occur.

Unmitigated Off-Site Construction: Resulting Noise Level					
Sensitive Receptor	Distance (feet)	Intervening Building /a/	Reference Noise Level (dBA) /b/	Equipment Noise Level at Receptor (dBA, Leq)	Existing Ambient (dBA, Leq)
OFF-SITE WATER IMPROVEMENTS ON DURFEE AVE.					
Residences and Truth Chinese Church along Durfee Ave.	60	0	64.3	62.7	62.1
UNDERGROUNDING OF UTILITY LINES ON DURFEE AVE. AND GILMAN RD.					
Residences along Gilman Rd.	55	0	64.3	63.5	60.5
Residences and Truth Chinese Church to along Durfee Ave.	95	0	64.3	58.7	62.1
Twin Lakes Elementary School	150	0	64.3	54.8	60.5
SEWER IMPROVEMENTS ON FERRIS RD.					
Residences along Ferris Rd.	50	0	64.3	64.3	58.2
TRAIL/PATH INSTALLATION SOUTH OF TWIN LAKES ELEMENTARY SCHOOL					
Residences to the south	20	0	64.3	72.3	58.2
Twin Lakes Elementary School Classroom	50	0	64.3	64.3	58.2

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row
/b/ Construction reference noise level based on reference noise level for a skid steer loader.

Vibration Formulas

Vibration PPV Attenuation

Equation: PPVequip = PPVref x (25/D)^1.5
PPV (equip) is the peak particle velocity in in/sec of the equipment adjusted for distance
PPV (ref) is the reference vibration level in in/sec at 25 feet from Table 12-2
D is the distance from the equipment to the receiver.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration Velocities for Construction Equipment		
Equipment	feet (Inches/Second)	(VdB) at 25 feet
Small Bulldozer	0.003	58
Excavator	0.04	80

SOURCE: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration Assessment On-Site			
Sensitive Receptor	Distance (feet)	Reference Vibration Level	Damage Assessment
Single-Family Residence to the South	10	0.04	0.158
Residences to the East	70	0.04	0.009
Residences to the North	70	0.04	0.009
Residences to the West and Truth Chinese Alliance Church	125	0.04	0.004
Twin Lakes Elementary School	160	0.04	0.002

Vibration Assessment Off-Site			
Sensitive Receptor	Distance (feet)	Reference Vibration Level	Damage Assessment
OFF-SITE WATER IMPROVEMENTS ON DURFEE AVE.			
Residences and Truth Chinese Church along Durfee Ave.	60	0.003	0.001
OUNDING OF UTILITY LINES ON DURFEE AVE. AND GILMAN RD.			
Residences along Gilman Rd.	55	0.003	0.001
Residences and Truth Chinese Church to along Durfee Ave.	95	0.003	0.000
Twin Lakes Elementary School	150	0.003	0.000
SEWER IMPROVEMENTS ON FERRIS RD.			
Residences along Ferris Rd.	50	0.003	0.001
I INSTALLATION SOUTH OF TWIN LAKES ELEMENTARY SCHOOL			
Residences to the south	20	0.003	0.004
Twin Lakes Elementary School Classroom	50	0.003	0.001

Noise Monitoring Data

Site 1: 3900 Gilman Rd.

Session Report

7/12/2022

Information Panel

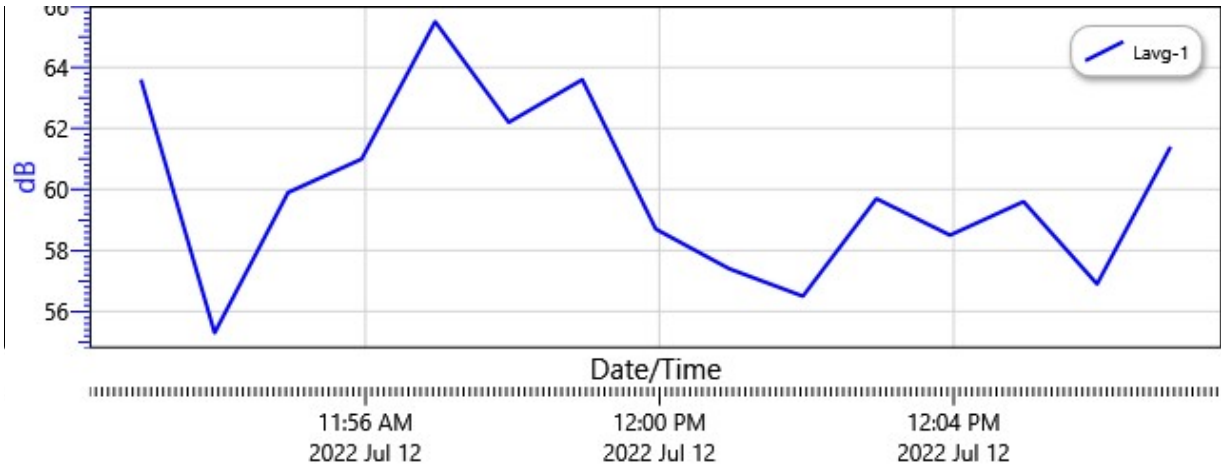
Name	Maclaren Hall_Site1
Start Time	7/12/2022 11:51:57 AM
Stop Time	7/12/2022 12:06:57 PM
Device Name	BJM120001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lmax	1	83.3 dB	Lmin	1	48.4 dB
Lavg	1	60.5 dB			
Exchange Rate	1	5 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	5 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

Maclaren Hall_Site1: Logged Data Chart



Logged Data Table

Date/Time	Lavg-1
7/12/2022 11:52:57 AM	63.6
11:53:57 AM	55.3
11:54:57 AM	59.9
11:55:57 AM	61
11:56:57 AM	65.5
11:57:57 AM	62.2
11:58:57 AM	63.6
11:59:57 AM	58.7
12:00:57 PM	57.4
12:01:57 PM	56.5
12:02:57 PM	59.7
12:03:57 PM	58.5
12:04:57 PM	59.6
12:05:57 PM	56.9
12:06:57 PM	61.4

Noise Measurement Report Form

Project: maclaren Contract No (s): N/A

Date: 7/12/22 Day of Week: thursday Time: 11:52 am

Monitoring Site Number: 13 Monitoring Site Address: 3900 Hilmar Rd

Measurement Taken By: Tina

Approximate Wind Speed: _____ mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 30 feet

Approximate distance of Sound Level Meter from Project Site: _____

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: _____ Serial Number: _____

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 minutes

Check the measurement purpose:

☐ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114	n/a	n/a
L_{eq}	60.5		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Elementary school and residential light traffic
2. children playing on playground
3. _____
4. _____

Site 2: 12301 Deana Ave.

Session Report

7/12/2022

Information Panel

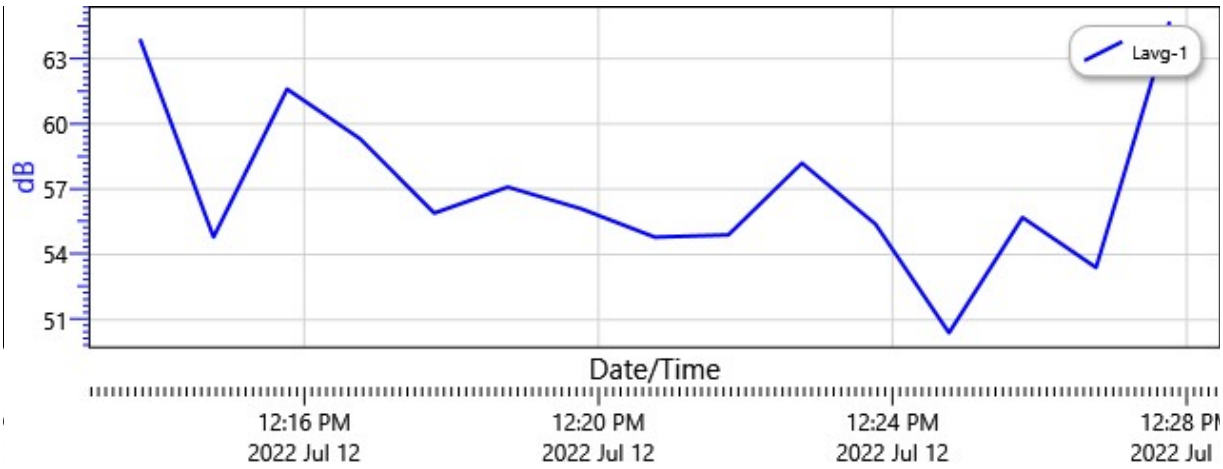
Name	Maclaren Hall_Site2
Start Time	7/12/2022 12:12:46 PM
Stop Time	7/12/2022 12:27:46 PM
Device Name	BJM120001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lmax	1	85.7 dB	Lmin	1	46.8 dB
Lavg	1	58.1 dB			
Exchange Rate	1	5 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	5 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

Maclaren Hall_Site2: Logged Data Chart



Logged Data Table

Date/Time	Lavg-1
7/12/2022 12:13:46 PM	63.9
12:14:46 PM	54.8
12:15:46 PM	61.6
12:16:46 PM	59.3
12:17:46 PM	55.9
12:18:46 PM	57.1
12:19:46 PM	56.1
12:20:46 PM	54.8
12:21:46 PM	54.9
12:22:46 PM	58.2
12:23:46 PM	55.4
12:24:46 PM	50.4
12:25:46 PM	55.7
12:26:46 PM	53.4
12:27:46 PM	64.7

Noise Measurement Report Form

Project: malibu Contract No (s): N/A

Date: 9/12/22 Day of Week: thursday Time: 12:12 PM

Monitoring Site Number: 2 Monitoring Site Address: 12301 Olympic Ave

Measurement Taken By: TMA

Approximate Wind Speed: _____ mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 20 feet

Approximate distance of Sound Level Meter from Project Site: _____

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: _____ Serial Number: _____

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 minutes

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114	n/a	n/a
L_{eq}	58.2		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. light residential traffic
2.
3.
4.

Site 3: 4024 Durfee Ave.

Session Report

7/12/2022

Information Panel

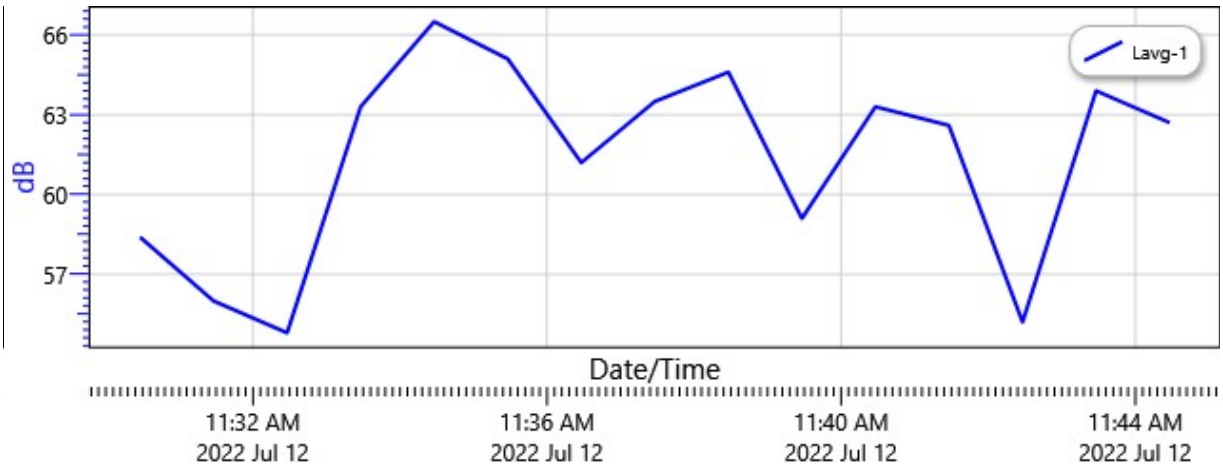
Name	Maclaren Hall_Site3
Start Time	7/12/2022 11:29:28 AM
Stop Time	7/12/2022 11:44:28 AM
Device Name	BJM120001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lmax	1	77.5 dB	Lmin	1	46.9 dB
Lavg	1	62.1 dB			
Exchange Rate	1	5 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	5 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

Maclaren Hall_Site3: Logged Data Chart



Logged Data Table

Date/Time	Lavg-1
7/12/2022 11:30:28 AM	58.4
11:31:28 AM	56
11:32:28 AM	54.8
11:33:28 AM	63.3
11:34:28 AM	66.5
11:35:28 AM	65.1
11:36:28 AM	61.2
11:37:28 AM	63.5
11:38:28 AM	64.6
11:39:28 AM	59.1
11:40:28 AM	63.3
11:41:28 AM	62.6
11:42:28 AM	55.2
11:43:28 AM	63.9
11:44:28 AM	62.7

Noise Measurement Report Form

Project: Mallorn Contract No (s): N/A

Date: 7/12/22 Day of Week: Tuesday Time: 11:30 am

Monitoring Site Number: 3 Monitoring Site Address: 1024 Diamond Avenue

Measurement Taken By: Tina

Approximate Wind Speed: _____ mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 30 feet

Approximate distance of Sound Level Meter from Project Site: _____

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: _____ Serial Number: _____

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 minutes

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114	n/a	n/a
L_{eq}	42.1		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. light traffic due to the ~~[illegible]~~ small surrounding residents
2. _____
3. _____
4. _____

Site 4: 4003 Maxson Dr.

Session Report

7/12/2022

Information Panel

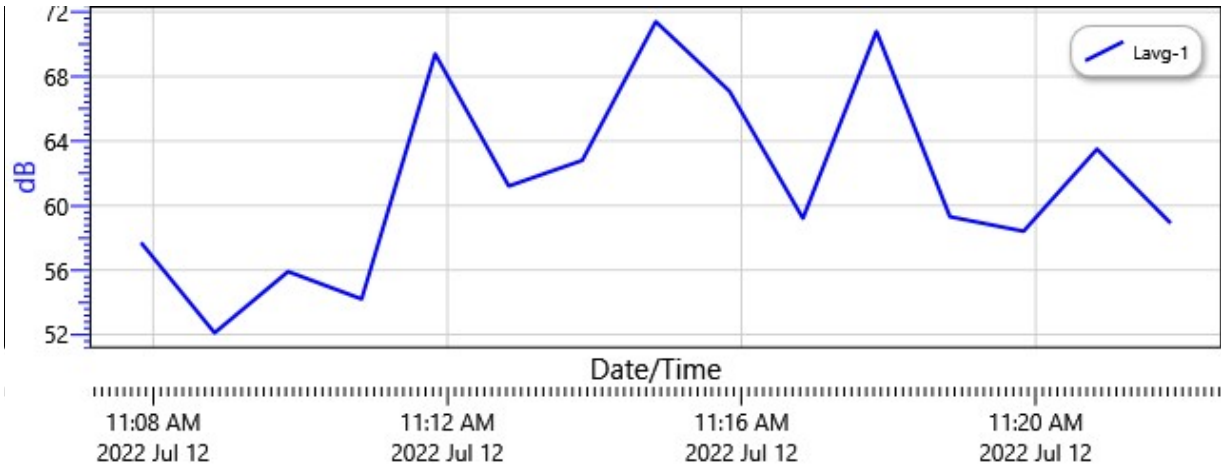
Name	Maclaren Hall_Site4
Start Time	7/12/2022 11:06:50 AM
Stop Time	7/12/2022 11:21:50 AM
Device Name	BJM120001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lmax	1	82.2 dB	Lmin	1	42.6 dB
Lavg	1	63.8 dB			
Exchange Rate	1	5 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	5 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

Maclaren Hall_Site4: Logged Data Chart



Logged Data Table

Date/Time	Lavg-1
7/12/2022 11:07:50 AM	57.7
11:08:50 AM	52.1
11:09:50 AM	55.9
11:10:50 AM	54.2
11:11:50 AM	69.4
11:12:50 AM	61.2
11:13:50 AM	62.8
11:14:50 AM	71.4
11:15:50 AM	67.1
11:16:50 AM	59.2
11:17:50 AM	70.8
11:18:50 AM	59.3
11:19:50 AM	58.4
11:20:50 AM	63.5
11:21:50 AM	58.9

Noise Measurement Report Form

Project: mullman Contract No (s): N/A

Date: 7/12/22 Day of Week: tuesday Time: 11:07 am

Monitoring Site Number: 4 Monitoring Site Address: 4003 maxson DR

Measurement Taken By: tina

Approximate Wind Speed: _____ mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 10 ft

Approximate distance of Sound Level Meter from Project Site: _____

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: _____ Serial Number: _____

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 minutes

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114	n/a	n/a
L_{eq}	63.8		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. light residential traffic
2. _____
3. _____
4. _____

Site 5: 12210 Kerrwood St.

Session Report

8/11/2022

Information Panel

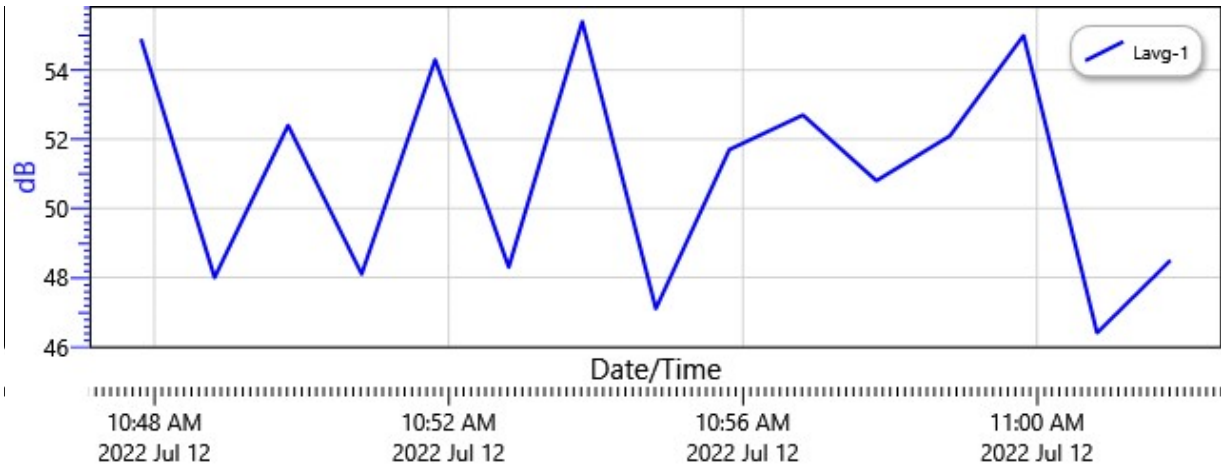
Name	Maclaren Hall_Site5
Start Time	7/12/2022 10:46:49 AM
Stop Time	7/12/2022 11:01:49 AM
Device Name	BJM120001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lmax	1	67.3 dB	Lmin	1	43.4 dB
Exchange Rate	1	5 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Lavg	2	51.6 dB			
Exchange Rate	2	5 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

Maclaren Hall_Site5: Logged Data Chart



Logged Data Table

Date/Time	Lavg-2
7/12/2022 10:47:49 AM	54.9
10:48:49 AM	48
10:49:49 AM	52.4
10:50:49 AM	48
10:51:49 AM	54.3
10:52:49 AM	48.3
10:53:49 AM	55.3
10:54:49 AM	47.1
10:55:49 AM	51.6
10:56:49 AM	52.7
10:57:49 AM	50.8
10:58:49 AM	52
10:59:49 AM	55
11:00:49 AM	46.3
11:01:49 AM	48.5

Noise Measurement Report Form

Project: Mallard Hill Contract No (s): N/A

Date: 7/12/22 Day of Week: tuesday Time: 10 : 50 am

Monitoring Site Number: 5 Monitoring Site Address: 12210 Kirkwood

Measurement Taken By: JHM

Approximate Wind Speed: _____ mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 30 FT

Approximate distance of Sound Level Meter from Project Site: _____

Receptor Land Use (Check One) ☑ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: _____ Serial Number: _____

Meter Setting ☑ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

During of Measurement: 15 minutes

Check the measurement purpose:

☑ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114	n/a	n/a
L_{eq}	51.7		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. residential hill; cars going 25 mph
2. landscaping
3. _____
4. _____

Traffic Noise Model Runs

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	26 July 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	7/26/2022 3:03:04 PM
CASE:	Maclaren Hall_Existing	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state	
PAVEMENT TYPE(S) USED:	Average	highway agency substantiates the use of a different	
		type with approval FHWA.	

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Ramona Blvd. Between Gilman Rd. and Durfee Ave.	1	1	---	66.3	0.0	---	---	Sound Level
Durfee Ave. Between Kerrwood St. and Ramona Blvd.	2	1	---	56.4	0.0	---	---	Sound Level
Durfee Ave. Between Kerwood St. and Deana St.	3	1	---	57.8	0.0	---	---	Sound Level
Deana St. Between Durfee Ave. and Gilman Rd.	4	1	---	54.9	0.0	---	---	Sound Level
Kerwood St. Between Durfee Ave. and Gilman Rd.	6	1	---	57.2	0.0	---	---	Sound Level
Gilman Rd. Between Kerrwood St. and Ramona Blvd.	7	1	---	56.1	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	26 July 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	7/26/2022 3:02:14 PM
CASE:	Maclaren Hall_FutureNoProject	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Ramona Blvd. Between Gilman Rd. and Durfee Ave.	1	1	---	66.6	0.0	---	---	Sound Level
Durfee Ave. Between Kerrwood St. and Ramona Blvd.	2	1	---	56.6	0.0	---	---	Sound Level
Durfee Ave. Between Kerwood St. and Deana St.	3	1	---	57.9	0.0	---	---	Sound Level
Deana St. Between Durfee Ave. and Gilman Rd.	4	1	---	55.2	0.0	---	---	Sound Level
Kerwood St. Between Durfee Ave. and Gilman Rd.	6	1	---	57.4	0.0	---	---	Sound Level
Gilman Rd. Between Kerrwood St. and Ramona Blvd.	7	1	---	56.2	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.1.7970.37608	REPORT DATE:	26 July 2022
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	7/26/2022 3:01:15 PM
CASE:	Maclaren Hall_FutureWithProject	ORGANIZATION:	
UNITS:	English	ANALYSIS BY:	Kieran
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Ramona Blvd. Between Gilman Rd. and Durfee Ave.	1	1	---	66.8	0.0	---	---	Sound Level
Durfee Ave. Between Kerrwood St. and Ramona Blvd.	2	1	---	57.6	0.0	---	---	Sound Level
Durfee Ave. Between Kerwood St. and Deana St.	3	1	---	58.8	0.0	---	---	Sound Level
Deana St. Between Durfee Ave. and Gilman Rd.	4	1	---	55.3	0.0	---	---	Sound Level
Kerwood St. Between Durfee Ave. and Gilman Rd.	6	1	---	57.9	0.0	---	---	Sound Level
Gilman Rd. Between Kerrwood St. and Ramona Blvd.	7	1	---	57.2	0.0	---	---	Sound Level

Appendix F

Traffic Impact Analysis

TRAFFIC STUDY

Esperanza Village Project

Traffic Impact Analysis

4024 Durfee Avenue
El Monte, CA

August 2022

Prepared For:
Sirius Environmental
1478 North Altadena Drive
Pasadena, California 91107

Prepared by:

1100 Corporate Center
Drive, Suite 201
Monterey Park, CA 91754
(323) 260-4703

JC11127
v.2d

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EXECUTIVE SUMMARY

This traffic study was prepared for Sirius Environmental by KOA for the proposed Esperanza Village Project. The following summarizes the traffic study results, conclusions, and recommendations:

- The project is the Esperanza Village project, proposed by Prima Development on the former MacLaren Hall property in the City of El Monte.

- The main objective of the project is to provide 340 affordable housing units to seniors and low-income families, as well as to provide new government space and other ancillary uses across six-buildings.

- The traffic impact analysis methodology and data sources were defined by a project scoping document, accepted by the City of El Monte on June 1, 2022.

- The project is anticipated to be completed and occupied within the year 2027.

CEQA and VMT Analysis

The project (California Environmental Quality Act) CEQA transportation impact determinations are as follows. There would be no significant project CEQA transportation impacts.

- The application of the project land uses to the San Gabriel Valley Council of Governments Vehicle Miles Traveled (VMT) Tool indicates that both the proposed residential and non-residential uses of the project can be screened from VMT analysis and be assumed to have a less than significant impact. The VMT impact standard of the City of El Monte is a threshold that is 15 percent below the local average.

- The project residential VMT value at 13.3 would be lower than the required 15 percent reduction from the area baseline value of 15.7 (with the maximum resulting threshold at 13.35). The project residential uses pass the low VMT screening.

- The project non-residential VMT value at 23.0 would be lower than the required 15 percent reduction from the area baseline value of 34.9 (with the maximum resulting threshold at 29.67). The project non-residential uses pass the low VMT screening.

- All of the proposed project uses can be screened from further analysis of VMT. A less than significant transportation impact under CEQA would occur due to the project.

Local Area Circulation Effects

- The project would generate a net total of 3,178 daily net trips, including 295 vehicle trips during the weekday a.m. peak hour and 265 vehicle trips during the weekday p.m. peak hour.

- The project has specific characteristics that are expected to reduce trips substantially from the totals analyzed, as a result of a highly transit-dependent population and an expected high usage of local

transit shuttle routes. The County Building 6 uses may have up to half its floor area (20,000 square feet) that are ancillary uses to the other project site uses and surrounding community, such as community meeting rooms, a café/snack bar, and childcare. The analysis of project trips is therefore very conservative, as it assumes all floor area would contain trip-generating uses.

- Local circulation effects were analyzed at four study intersections and four roadway segments.

- Most of the intersections would operate at good Level of Service (LOS) values of A or B. The Durfee Avenue/Ramona Boulevard intersection would worsen in operations from LOS D to E under existing conditions with the project, and within LOS E and LOS F under future conditions with the project. This delay occurs at the stop-sign controlled approach of Durfee Avenue at the intersection.

- A traffic signal warrant was conducted at the intersection of Durfee Avenue and Ramona Boulevard. This intersection meets the applied traffic signal warrant standards for peak-hour volumes, under future conditions both with and without the proposed project.

- The proposed project does not cause the signal warrant to be met at Durfee Avenue and Ramona Boulevard, but the LOS at this intersection is worsened to a value of F by the project. A fair-share financial contribution by the project toward future signalization of the intersection is recommended. The project volume share of volumes is 6.0 percent and 6.9 percent for the two peak hours.

- At the four study roadway segments, volume increases on the roadway segments would range from 27 percent to 47 percent (with this highest percent occurring on Gilman Road), but LOS values with the proposed project would be at LOS A or B based on the applied capacities and analyzed volumes. There would not be any significant circulation effects at the roadway segments due to the proposed project.

Parking Analysis

- Based on the proposed site uses and these requirements, the total required supply would be 526 spaces. The project site plan provides for 618 off-street parking spaces, providing a surplus over the County and City Code requirements, as applicable to the proposed site uses.

- Sharing of parking between uses will be defined as needed during final site plan review by the City, although reserved and/or gated parking is not planned to be established for any site uses.

- Hourly parking occupancy surveys were conducted on two roadways adjacent to the site on a weekday and a weekend day, during the 8:00 AM to 8:00 PM timeframes.

- The parking survey conducted at the roadway segments adjacent to the site in both the weekend and weekday periods, on-street parking on these roadway segment locations is half occupied or less during all daylight hours.

- In addition to parking supply proposed within the MacLaren Hall property, on-street diagonal parking spaces could be provided by the project along the Kerrwood Street and Gilman Road rights-of-way.

Circulation and Access Analysis

- The southern project driveway on Gilman Road, to the south of Building 2, could create conflicts with the pick-up/drop-off driveways of Twin Lakes Elementary School on the east side of the roadway. The entrance driveway for the school pick-up/drop-off area would be roughly aligned with this southern site driveway, and the exit driveway for the pick-up/drop-off area would be located to the north of this site driveway.

- The establishment of prohibited left-turn movements into and out of the southern site driveway at this location is recommended, thru installation of regulatory signage for site outbound traffic and northbound traffic on Gilman Road to indicate that these left-turn outbound movements are prohibited, which would remove most conflicts. This turning prohibition would be enforceable as part of Police traffic operations.

- Right turn movements from the southern project driveway on Gilman Road would take place to the north of the nearby mid-block crosswalk location. Drivers would have clear visibility of the crosswalk while making this turning movement.

- The mid-block crosswalk location on Gilman Road, adjacent to the project site and the Twin Lakes Elementary School, is signed and striped, and stop signs provide control for approaching vehicles in the northbound and southbound directions.

- The developer of the proposed project is pursuing with the school district an access route through the school campus to provide a link to the San Gabriel River Trail. It is recommended that the proposed project provide improvements at the current mid-block crosswalk, including restriping the crosswalk with high visibility striping and replacing the warning and stop signs with new signs to improve visibility. These improvements should be designed, approved, and implemented to the satisfaction of the City Engineer. Other improvements at this location may be defined by the separate neighborhood traffic management plan.

Study Roadway Segment Speeds

- Vehicle speeds were collected at the four study roadway segments by automatic measuring equipment, during collection of the 24-hour volume counts. This analysis was conducted as defined in the study scoping document, to determine if adjacent roadway speeds are high and if traffic calming measures might be necessary.

- On Kerrwood Street west of Bannister Avenue, excessive speeding is not observed at this location as the pace speed is 5 MPH above the speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

- On Durfee Avenue south of Kerrwood Street, excessive speeding is observed at this location, at 10 MPH over the posted speed. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

- On Gilman Road south of Woodville Drive, the critical speed on Gilman Road is 6 MPH higher than the posted speed limit. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

- On Gilman Road south of Ramona Boulevard, the critical speed on Gilman Road south of Ramona Boulevard is 5 MPH higher than the posted speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

- The higher identified speeds on Durfee Avenue and Gilman Road have defined the need for a neighborhood traffic management plan. The study would be funded by the proposed project, and any final recommended neighborhood roadway improvements would be funded by the proposed project.

- An agreement will be entered into with the City by the project applicant for the completion of the neighborhood traffic management plan, with a schedule for completion and implementation to be determined as part of the agreement.

1. INTRODUCTION

1.1 LEAD AND LOCAL AGENCY REVIEW

The analysis summarized in this report was completed based on the methodologies and procedures outlined in the *City of El Monte Transportation Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* dated October 2020. This report presents the conclusions of the evaluation of CEQA and non-CEQA transportation impacts of the project

The four study intersections and three roadways segments are located within the City of El Monte. A scoping document was submitted to the City and accepted on June 1, 2022. The scoping document is provided in Appendix A.

1.2 PROJECT DESCRIPTION

The Esperanza Village project is proposed on the MacLaren Hall property in the City of El Monte at 4024 Durfee Avenue. The planned opening year is 2027. The project site development area is an 8.13-acre area, within the overall 13.79-acre MacLaren Hall property. The project site is bordered by Durfee Avenue along its frontage to the west, Kerrwood Street to the north, Gilman Road to the east, and single and multifamily residential to the south.

The facility will be composed of six buildings that include 340 affordable dwelling units across four buildings. These units will have the following characteristics:

Units by Income
Extremely Low Income (ELI) -174 units or 51.2%
Low Income (LI) – 162 units or 47.6%
Managers – 4 units or 1.2%

Units by Occupancy
ELI Family/Senior - 82
LI Family/Senior- 86
168 Family units

The other two buildings will contain the following uses:

Building 5 will be composed of a County PACE Center (elderly healthcare) of 18,000 square feet, a vocational school linked to the other clinic uses of 5,000 square feet, and a community medical clinic of 13,000 square feet. All of this space, at a total of 36,000 square feet, was analyzed as medical clinic use, based on the overall characteristics of the uses.

Building 6 will have 20,000 square feet to 40,000 square feet of space. The size and mix of uses in this building have not yet been determined. The building could potentially include clinics, a snack bar/café, a childcare center, and County-related offices, including space for the Department of Health Services and Department of Children and Family Services. The snack bar/café and childcare center would be ancillary to the other building uses. For purposes of analysis in this report, 40,000 square feet government office use was assumed. However, it is anticipated that the building will be smaller than this and contain a mix of uses oriented towards providing services to the on-site and adjacent community.

The remaining 5.6-acre portion of the MacLaren Hall property is not part of the 8.19-acre proposed development area and would be developed as a community park (MacLaren Community Park) separately from the proposed project.

The proposed site access points will be on Durfee Avenue. Parking will be provided throughout the site, with vehicular access via seven proposed driveways along Durfee Avenue, Kerrwood Street, and Gilman Road. Diagonal parking spaces could potentially be provided along the Durfee Avenue, Kerrwood Street, and Gilman Road rights-of-way adjacent to the project site.

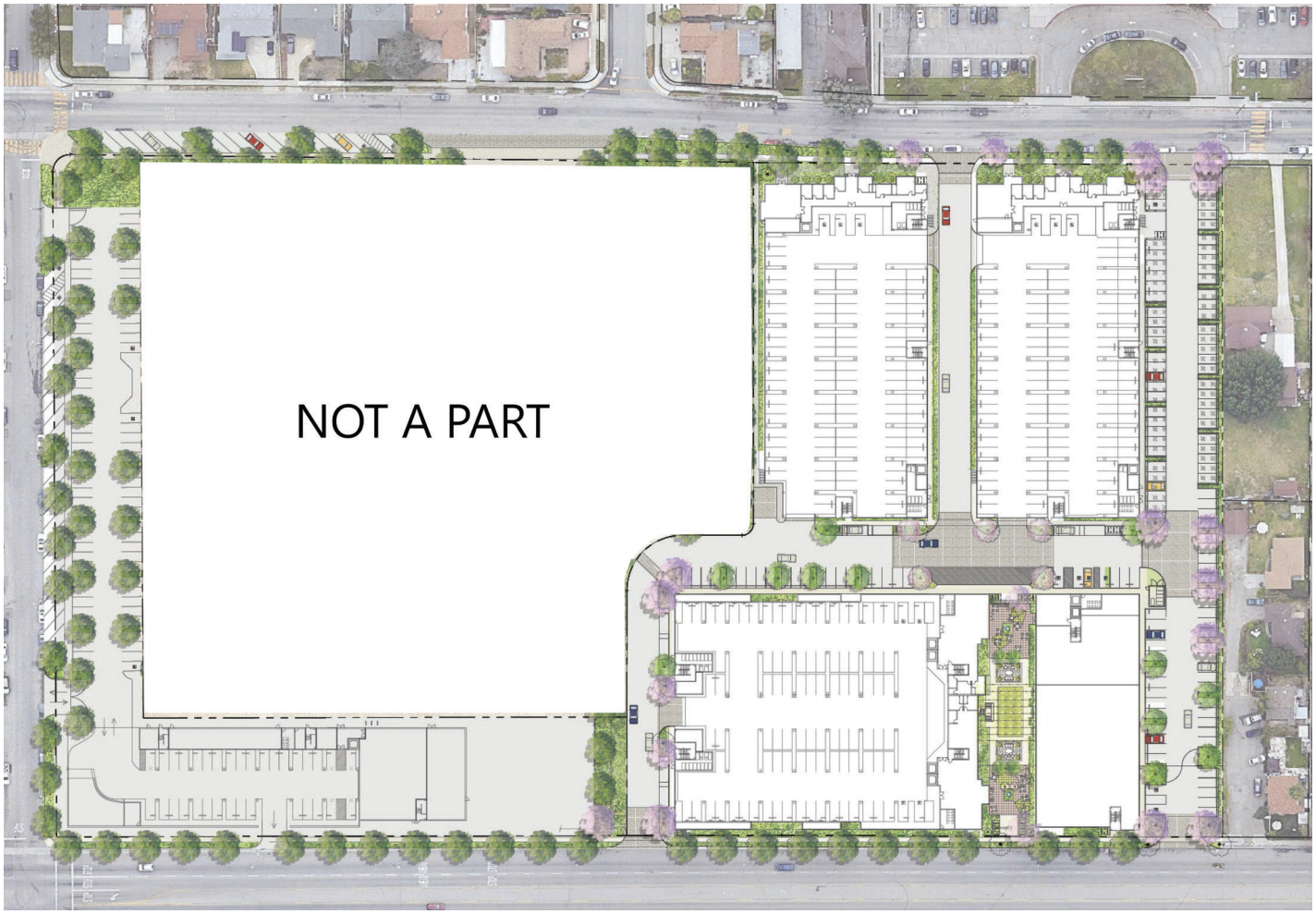
A recently approved 5.6-acre community park will also be built on the MacLaren property but it is not a part of the proposed project.

The proposed project site plan is provided on Figure 1.

FIGURE 1

MACLAREN HALL RESIDENTIAL PROJECT

Project Site Plan



2. CEQA TRANSPORTATION IMPACT ANALYSIS

The City of El Monte transportation guidelines for California Environmental Quality Act (CEQA) impacts are based on guidance from the State of California Office of Planning and Research for the assessment of vehicle miles traveled (VMT). City thresholds of significance and mitigation measure programs were considered for this analysis, as appropriate to the outcome of the VMT review for the project.

2.1 VMT ANALYSIS GUIDELINES

City guidelines for project VMT impacts are based on consistency with CEQA guidelines. Development projects are analyzed to determine if and how much each project would affect total VMT, unless they can be screened out from analysis requirements under specific categories. Guidance on screening and impact criteria was reviewed as part of the scoping process undertaken with the City for this project.

Screening Criteria Review

The following screening criteria were evaluated for the project, as they were deemed appropriate based on the project characteristics:

> *Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per employee, or per service population that is similar to the existing land uses in the low VMT area.*
>
> *1. If the proposed project is residential, the project is considered "screened out", if it is located within the Low VMT areas of the "PA/Residential Home-Based VMT per Capita". Alternatively, if the predominant land uses in the vicinity are nominally of the same type as the proposed project and the proposed project is reasonably expected to generate similar VMT as the existing land uses, the project is considered screened out if it is in the low VMT area for the "Total Daily VMT per Service Population".*
>
> *2. If the proposed project is office, commercial or industrial, the project is considered "screened out", if it is located within the Low VMT areas of the "PA/Daily Home-Based Work VMT per Employee". Alternatively, if the predominant land uses in the vicinity are nominally of the same type as the proposed project and the proposed project is reasonably expected to generate similar VMT as the existing land uses, the project is considered screened out if it is in the low VMT area for the "Total Daily VMT Service per Population".*

The proposed project residential use VMT analysis applied the Residential Home-Based VMT per Capita category, and is therefore appropriate.

The guidelines also state that if the analysis applies the Total VMT per Service Population metric, it must be verified that the project is consistent with the existing land use. This metric applies to the non-residential portion of the VMT analysis, and as the proposed project uses are services and government offices, they are consistent with former MacLaren Hall uses at the site.

2.2 VMT IMPACT REVIEW

The San Gabriel Valley COG Vehicle Miles Traveled Evaluation Tool was used to review the screening potential for the project. The Tool allows for a screening of impacts based on the presence of a project in a low VMT area.

The application of the project land uses to the Tool indicates that both the proposed residential and non-residential uses of the project can be screened from VMT analysis and be assumed to have a less than significant impact. The VMT impact standard of the City of El Monte is a threshold that is 15 percent below the local average. New projects under State greenhouse gas reduction laws and the State CEQA guidelines must have VMT generating characteristics that provide for a lowering of average regional VMT.

These are the results from the Tool, based on the data it applies for the local Transportation Analysis Zone (TAZ) that includes the project site:

- The project residential VMT value at 13.3 would be lower than the required 15 percent reduction from the area baseline value of 15.7 (with the maximum resulting threshold at 13.35). The project residential uses pass the low VMT screening.

- The project non-residential VMT value at 23.0 would be lower than the required 15 percent reduction from the area baseline value of 34.9 (with the maximum resulting threshold at 29.67). The project non-residential uses pass the low VMT screening.

All of the proposed project uses can be screened from further analysis of VMT. A less than significant transportation impact under CEQA would occur due to the project.

The VMT Tool output for the project residential units and the non-residential floor area is provided in Appendix B.

3. SITE ACCESS STUDY – OPERATIONAL ANALYSIS

In addition to the analysis of potential CEQA impacts, the City requires the analysis of potential local circulation impacts for proposed development projects. The determinations for this area of analysis are not tied to CEQA, and are focused on the City review of local effects of development projects.

Per the traffic analysis guidelines from the City of El Monte, a level of service analysis is required whenever a proposed development is expected to exceed 50 vehicle trips during the AM or PM peak hour period. The proposed development would generate between 295 trips in the AM peak hour period and 265 during the PM peak hour period.

This section provides a summary of the local circulation review conducted for the proposed project. A project completion year of 2027 has been applied.

3.1 STUDY METHODOLOGY

To determine the effects of the project on the operation of vehicular travel within the immediate project vicinity, an evaluation was made of the project contribution to delay and queuing at the study intersections under existing and future conditions.

KOA coordinated with City staff as the first step in the traffic analysis, and provided an initial and revised scoping document to the City, in order to define the study area and other major details.

The project study area includes the following four study intersections along the primary access routes to and from the site:

1. Gilman Road/Ramona Boulevard
2. Durfee Avenue/Ramona Boulevard
3. Durfee Avenue/Kerrwood Street
4. Durfee Avenue/Deana Street

The study roadway segments, where existing vehicle speeds and daily volumes were analyzed, are as follows:

- Kerrwood Street, east of Durfee Avenue
- Durfee Avenue, south of Kerrwood Street
- Gilman Road, south of Kerrwood Street
- Gilman Road, south of Ramona Boulevard

Figure 2 illustrates the locations of the study intersections and study roadway segments.

FIGURE 2

MACLAREN HALL RESIDENTIAL PROJECT

Study Area Map

Analysis Scenarios

The study included the analysis of the following traffic scenarios:

- Existing
- Existing with-Project
- Future without-Project
- Future with-Project

Project trip generation was based on land use intensities and trip rates defined by *Trip Generation, 11th edition,* published by the Institute of Transportation Engineers (ITE). Project trip distribution percentages were defined based on the expected local travel routes to and from the facility.

The existing with-project conditions scenario was included to analyze project impacts without cumulative projects and annual ambient growth.

In order to account for traffic growth in the study area through the Project opening year, an ambient/background traffic growth rate of one percent per year for five years (between existing year of 2022 and future project opening year of 2027) was applied to the traffic counts as well as a Peak Hour Factor (PHF) of 0.95 per the City of El Monte *Traffic Analysis Guidelines*.

Traffic from related projects (approved and pending developments) was also added to the study area. Based on the future without-project volumes plus traffic from the proposed project, the future with-project traffic volume conditions were determined and analyzed.

Level of Service Methodology

For analysis of Level of Service (LOS) at signalized intersections, the City of El Monte has designated the Highway Capacity Manual (HCM) methodology as the desired tool. A facility is at capacity (delay of 80 seconds or greater) when extreme congestion occurs. This total vehicle approach delay output of the HCM is a function of hourly volumes, signal phasing, and approach lane configuration, and green time for each leg of the intersection.

Level of service values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating capacity of a roadway. Table 1 defines the level of service criteria applied to the study intersections.

The City policy on LOS is to maintain a level of service (LOS) at most intersections outside of major roadway corridors, freeway interchanges, and commercial districts. Intersections in the City that do not meet these targets are considered deficient. If a Project increases total traffic at an intersection that is deficient based on LOS, improvements are to be considered.

Signalized intersections typically require improvements if the following conditions are met:

- The addition of project traffic to an intersection results in the degradation of intersection operations from operations from a level that meets the City's targets to a level that does not meet the City's target.

Unsignalized intersections typically require improvements if both of the following conditions are met:

- The addition of project traffic to an intersection results in the degradation of any individual movement at the intersection from operations from a level that meets the City's targets to a level that does not meet the City's target, and
- The intersection meets peak hour signal warrants either caused by project volumes, or project volumes are added at an intersection that meets peak hour signal warrants in the baseline scenario(s). Peak hour signal warrants should be determined based on one or more of the latest California Manual on Uniform Traffic Control Devices (CA MUTCD).

The fair share cost for the proposed improvements at unsignalized intersections in the cumulative condition are also to be calculated.

Table 1 –Intersection Level of Service Definitions

LOS	Definition	Signalized Intersection Average Stop Delay Per Vehicle (Sec/Veh) (HCM)	Stop-Controlled Intersection Average Stop Delay Per Vehicle (Sec/Veh) (HCM)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤10	≤10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 - 20	>10 - 15
C	Good operation. Occasionally backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 - 35	>15 - 25
D	Fair operation. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	>35 - 55	>25 - 35
E	Poor operation. Some long standing vehicular queues develop on critical approaches.	>55 - 80	>35 - 50
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	>80	>50

Source*: Highway Capacity Manual*

3.2 EXISTING MOBILITY SYSTEM

This section describes the existing conditions within the study area in terms of roadway facilities, transit service, and traffic operating conditions.

All the roadway classifications are based on the City's Circulation Element. The key roadways within the study area are described here. The discussion is limited to specific roadways that traverse the study

intersections and serve the project site.

Deana Street is classified as a Local Street. This east-west roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the street with the exception of Thursdays from 7 AM to 12 PM on the north side and 12-5PM on the south side of the street for street sweeping. The speed limit is 30 mph prima facie.

Durfee Avenue is classified as a Collector Street. This north-south roadway provides two travel lanes in each direction as well as a center left turn-lane. On-street parking is generally permitted on both sides of the roadway with the exception of Monday and Thursdays for street sweeping between 3AM-6AM. The posted speed limit is 35 miles per hour.

Gilman Road is classified as a Local Street. This north-south roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway with the exception of Thursdays between 7AM-12PM on the west side of the street and from 12PM-1PM on the east side of the street. The posted speed limit is 25 mph.

Kerrwood Street is classified as a Local Street. This east-west roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the street with the exception of Thursdays from 7 AM to 12 PM for street sweeping. The speed limit is 30 mph prima facie.

Ramona Boulevard is classified as a Secondary Arterial Street. This east-west roadway provides two travel lanes in each direction. On-street parking is generally prohibited on both sides of the roadway in the vicinity of the site. The posted speed limit is 35 miles per hour.

Figure 3 illustrates the existing traffic controls and approach lane configurations at the study intersections.

Transit service is provided within one-quarter mile radius from the proposed project site, which is operated by Foothill Transit. Table 2 summarizes the project study area transit service.

Table 2 – Existing Transit Service

Agency	Line	From	To	Via	Peak Frequency
Foothill Transit	488	El Monte Station	Glendora	Ramona Boulevard	30 Mins
Foothill Transit	190	El Monte Station	Cal Poly Pomona	Ramona Boulevard	15 Mins
City of El Monte	Blue	Trolley Station	Trolley Station	Peck Road, Ramona Boulevard	40 Mins

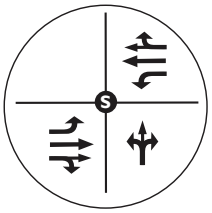
Source: *Foothilltransit.org*

FIGURE 3

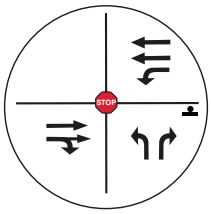
MACLAREN HALL RESIDENTIAL PROJECT

Existing Lane Configurations

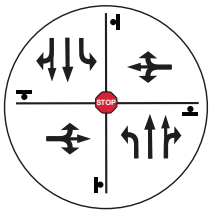
#1) Gilman Road & Ramona Boulevard



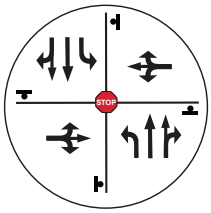
#2) Durfee Avenue & Ramona Boulevard



#3) Durfee Avenue & Kerrwood Street



#4) Durfee Avenue & Deana Street



LANE CONFIGURATION

- Signalized Intersection
- Stop Controlled Intersection
- Intersection Lane Geometry
- Stop Location

3.3 EXISTING CIRCULATION CONDITIONS

Traffic data was compiled from a combination of current year-2022 counts collected in the field by National Data and Surveying Services (NDS).

The traffic counts were conducted at the study intersections on Monday, June 06, 2022 during the peak timeframes of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The day was considered appropriate for counts, as no known atypical traffic conditions existed in the area and local schools were in session.

Fieldwork within the study area was undertaken to identify the condition of key study area roadways, including traffic control and approach lane configurations at each study intersection and on-street parking restrictions.

Based on the intersection lane configurations and the existing traffic volumes, average vehicle delay and corresponding levels of service (LOS) were determined for each of the study intersections during the weekday a.m. and p.m. peak hours for existing conditions. The existing with-project traffic volumes were derived by adding project trips to the existing traffic volumes.

Table 3 provides the operations analysis results for the existing conditions scenario, with vehicle delay in seconds and LOS values at the study intersections.

Table 3 – Existing Intersection Operations

Study Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Gilman Dr/ Ramona Blvd	17.1	B	18.6	B
2	Durfee Ave/ Ramona Blvd*	41.9	D	36.5	D
3	Durfee Ave/ Kerrwood St**	10.1	B	8.4	A
4	Durfee Ave/ Deana St**	10.50	B	9.0	A

LOS = Level of Service; HCM delay shown in X.X format.

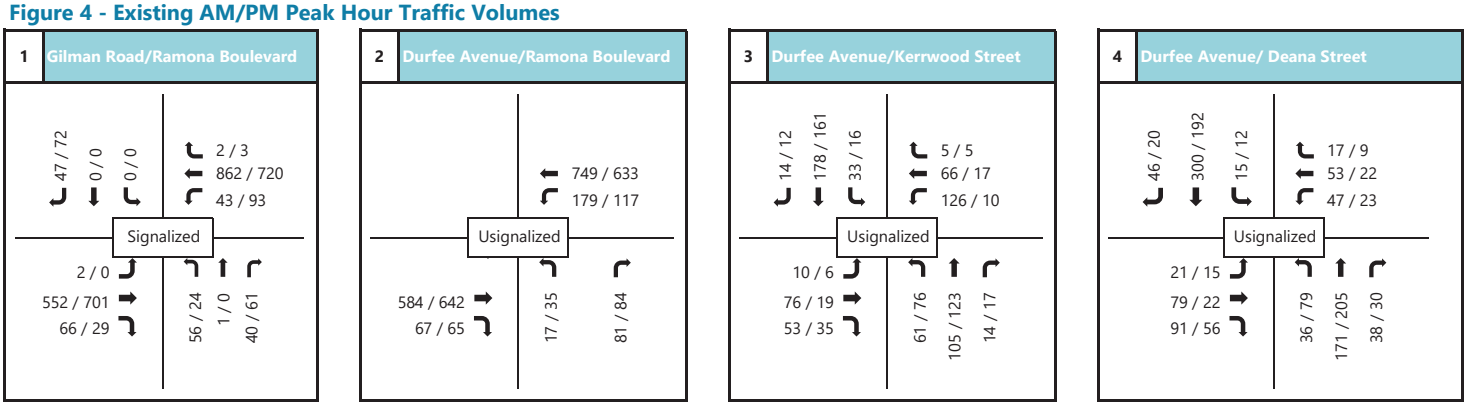
**Two-Way Stop Controlled Intersection- Delay is based on higher approach delay*

*** All-Way Stop Controlled Intersecton - Delay is based on overall intersection delay*

All study intersections currently operate at LOS D or better during the peak hours.

The existing weekday a.m. peak-hour and p.m. peak-hour traffic turning movement volumes are illustrated on Figure 4. The traffic count data sheets are provided in Appendix C, and the existing traffic analysis scenario worksheets are provided in Appendix D.

Figure 4 - Existing AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes

3.4 PROJECT TRAFFIC

This section defines the traffic generated by the proposed project in a three-step process, including trip generation, trip distribution, and trip assignment.

The project land uses were analyzed as 36,000 square feet of medical clinic, 40,000 square feet of government office, 168 units of senior affordable housing and 168 units of family affordable housing, and four dwelling units for managers. Trip generation rates for each land use were applied from *Trip Generation, 11th edition*, published by the Institute of Transportation Engineers (ITE).

A trip generation credit was included for the previous MacLaren Hall site uses that would be replaced by the proposed project, based on the number of employees in those uses as defined by the County of Los Angeles. According to data from the County of Los Angeles Chief Executive Office and the County-wide eHR system, the number of employees that worked at the former uses at the project site within the proposed project footprint were a total of 90. Based on this number of employees, daily trips by employees are at least 180 per day, including inbound AM peak-hour trips and outbound PM peak-hour trips. Applying a conservative peak-hour commute ratio of 33 percent, it is estimated that there are 30 trips n each peak-hour. The totals conservatively do not include visitor trips.

The project has specific characteristics that are expected to reduce trips substantially from the totals analyzed, as a result of a highly transit-dependent population and an expected high usage of local transit shuttle routes. The County Building 6 uses may have up to half its floor area (20,000 square feet) that are ancillary uses to the other project site uses and surrounding community, such as community meeting rooms, a café/snack bar, and childcare. The analysis of project trips is therefore very conservative, as it considered all floor area as containing trip-generating uses.

The total estimated net weekday daily project vehicle trip total is 3,178, as calculated in Table 4. This includes 295 AM peak hour trips and 265 PM peak hour trips.

Table 4 – Project Trip Generation

MacLaren Park				Daily	AM Peak Hour			PM Peak Hour		
				Rates[1]						
ITE Code	Land Use	Intensity	Units	Total	Total	In	Out	Total	In	Out
220	Multifamily Housing (Low-Rise)	-	DU	6.74	0.4	0.24	0.76	0.51	0.63	0.37
223	Affordable Housing (Senior)	-	DU	-	0.18	0.58	0.42	0.09	0.61	0.39
223	Affordable Housing (Family)	-	DU	4.81	0.36	0.29	0.71	0.46	0.59	0.41
630	Medical Clinic	-	KSF	37.6	2.75	0.81	0.19	3.69	0.3	0.7
730	Government Office	-	KSF	22.59	3.34	0.75	0.25	1.71	0.25	0.75
				Proposed Uses						
220	Multifamily Housing (Low-Rise)	4	DU	27	2	0	2	2	1	1
223	Affordable Housing (Senior)[2]	168	DU	265	30	17	13	15	9	6
223	Affordable Housing (Family)	168	DU	808	60	17	43	77	45	32
630	Medical Clinic	36	KSF	1354	99	80	19	133	40	93
730	Government Office	40	KSF	904	134	101	34	68	17	51
				3358	325	215	111	295	112	183
Previous Use - Employee Trip Credit				(180)	(30)	(30)	0	(30)	0	(30)
			Total	**3178**	**295**	**185**	**111**	**265**	**112**	**153**

[1]Source: *ITE Trip Generation Manual 11th Edition*

[2] *Daily Trips for Senior Affordable Housing, for which rates are not defined by ITE, were calculated by applying a peak to daily ratio from the Family Affordable Housing category. The factor to define daily trips from peak hour trips in both the AM and PM is 5.898 (808/60+77), and this was applied to the 45 (30+15) senior affordable housing trips to define the 265 daily trips for that category.*

Project Trip Distribution

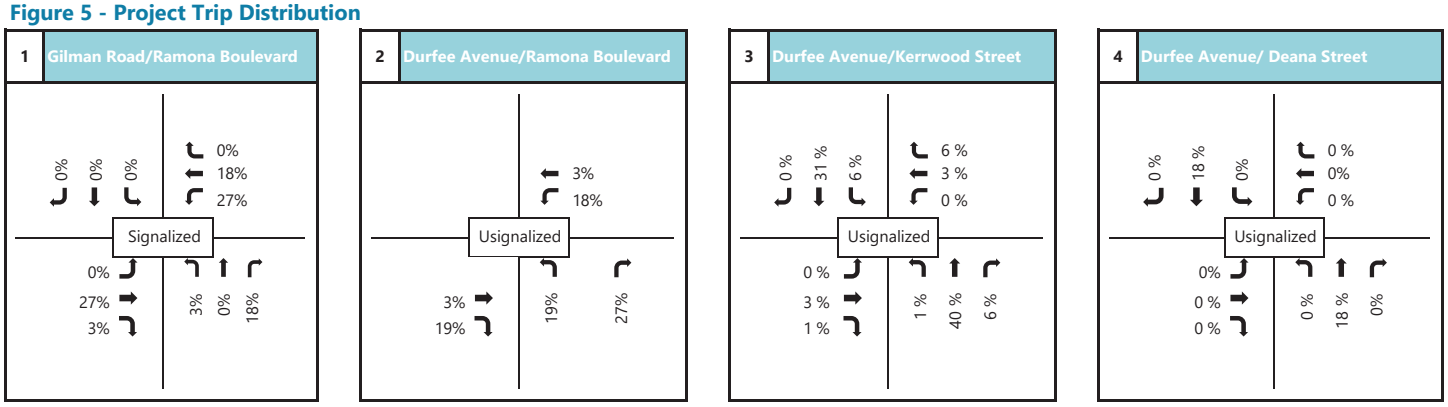
Trip distribution is the process of assigning the directions from which traffic will access the project site. Trip distribution is dependent upon the land use characteristics of the project, the local roadway network, and the general locations of other land uses to which project trips would originate or terminate.

Figure 5 illustrates the trip distribution percentages that were utilized for the project traffic.

Project Trip Assignment

Based on the trip generation and distribution assumptions described above, project traffic was assigned to the roadway system. The peak-hour project trip assignment is illustrated on Figure 6.

Figure 5 - Project Trip Distribution



XX% Project Trip Distribution

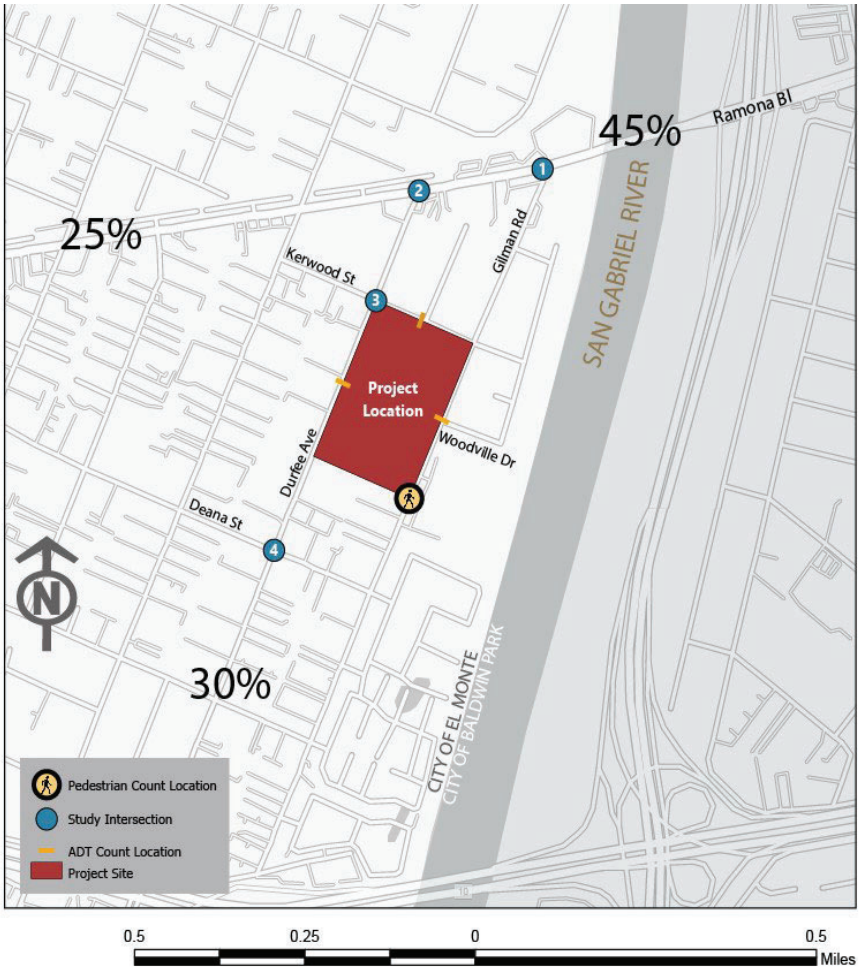
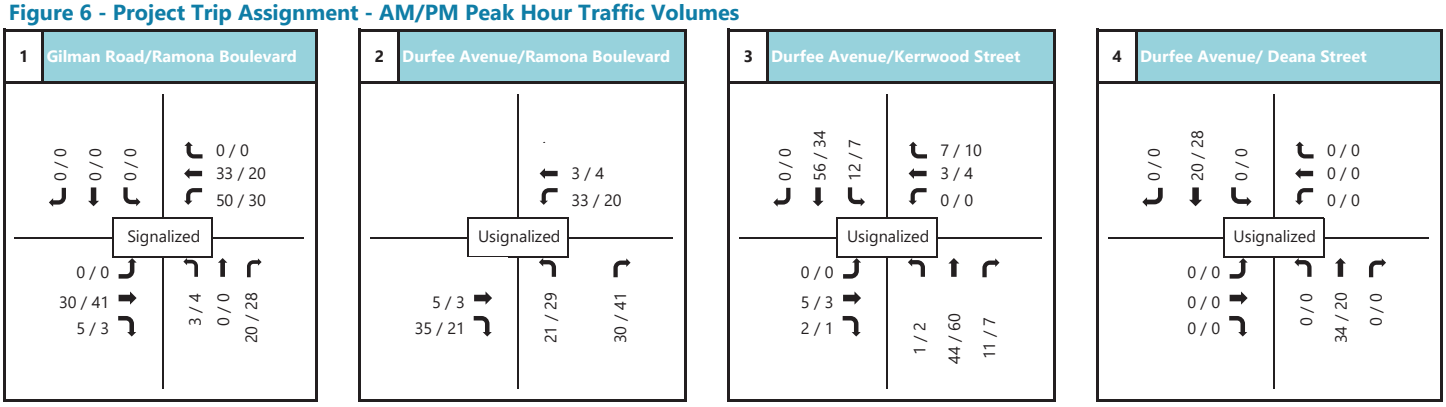
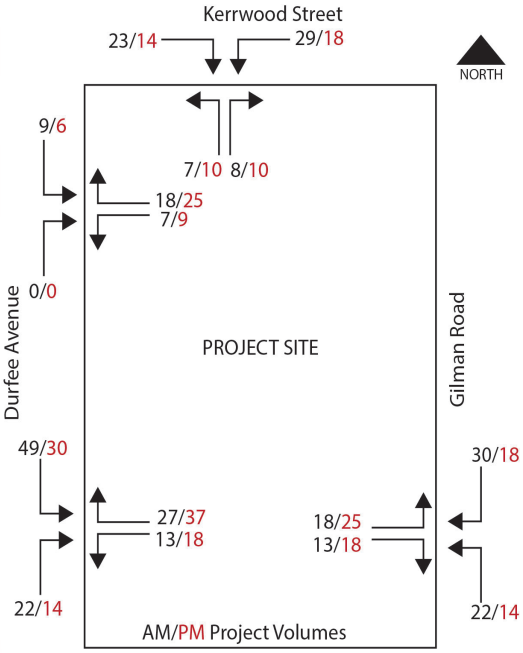


Figure 6 - Project Trip Assignment - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



3.5 EXISTING WITH -PROJECT CONDITIONS

The existing conditions scenario traffic volumes were analyzed with the addition of proposed project trips. Table 5 provides a summary of study intersection operations for existing with-project conditions.

Table 5 – Existing with-Project Intersection Delay and Performance

Study Intersections		Peak Hour	Existing Conditions (2022)		Existing with Project Conditions (2022)		Change in Delay
			Delay in Sec.	LOS	Delay in Sec.	LOS	
1	Gilman Dr/ Ramona Blvd	AM	17.1	B	18.0	B	0.9
		PM	18.6	B	19.8	B	1.2
2	Durfee Ave/ Ramona Blvd*	AM	41.9	D	66.7	**E**	24.8
		PM	36.5	D	55.2	**E**	18.7
3	Durfee Ave/ Kerrwood St**	AM	10.1	B	10.6	B	0.5
		PM	8.4	A	8.7	A	0.3
4	Durfee Ave/ Deana St**	AM	10.5	B	10.8	B	0.3
		PM	9.0	A	9.1	A	0.1

LOS = Level of Service; HCM delay shown in X.X format.

**Two-Way Stop Controlled Intersection- Delay is based on higher approach delay*

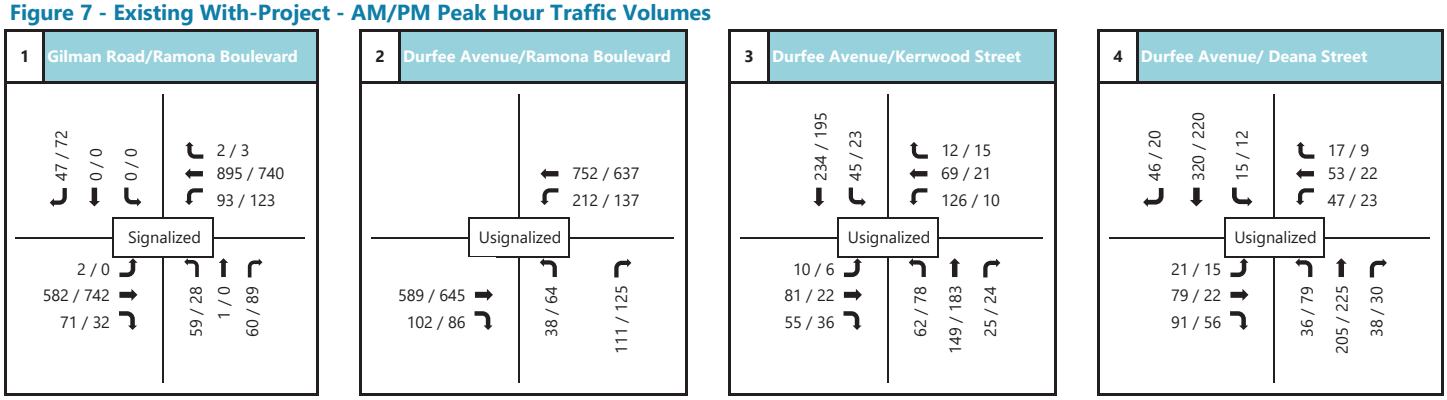
*** All-Way Stop Controlled Intersecton - Delay is based on overall intersection delay*

The addition of project traffic to the existing study area volumes causes the AM and PM peak LOS of the Durfee Avenue/Ramona Boulevard intersection to worsen from LOS D to E, with overall 24.8 and 18.7-second delay increases for each peak hour from the project. This delay occurs at the stop-sign controlled approach of Durfee Avenue at the intersection. The other intersection LOS values remain unchanged, with small delay increases due to project traffic.

The Durfee Avenue/Ramona Boulevard is deficient in terms of LOS with project traffic. Traffic signal warrants for this intersection are discussed in Section 3.6 of this report, along with improvement recommendations. The other three study intersections do not have deficient LOS under this analysis scenario.

The existing with-project volumes at the study intersections for the weekday a.m. peak-hour and p.m. peak-hour traffic turning movement volumes are illustrated on Figure 7. The analysis worksheets for this scenario are provided in Appendix E.

Figure 7 - Existing With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes

3.6 FUTURE CONDITIONS

This section provides an analysis of future traffic conditions in the study area with cumulative/area project trips and background growth added, but without project traffic. The proposed project is anticipated to be completed within the year 2027, and therefore this defined the future analysis year.

Ambient Growth

In order to acknowledge regional population and employment growth outside of the study area, an annual ambient traffic growth rate of one percent was applied to the existing scenario traffic volumes.

Area Projects

Traffic from cumulative area projects (approved and pending developments) was also included in the analysis. The projects were identified during coordination with the City of El Monte. A total of six pending projects within a one-mile radius of the project site were identified for inclusion in the analysis, including the adjacent and separate MacLaren Community Park.

Table 6 provides the trip generation estimates for the area projects. The last project in the list is the separate Community Park project adjacent to the proposed project site. That project has net negative trip totals in most timeframes, due to the credits taken in that project study for the removed MacLaren Hall uses and the former employment levels documented by the County.

The cumulative project locations are illustrated on Figure 8. The area project trip assignment volumes for the AM and PM peak hours are provided on Figure 9.

Table 6 – Area Projects Trip Generation

Cumulative Projects						Daily	AM Peak Hour			PM Peak Hour		
ID	Address	ITE Code	Land Use	Intensity	Units	Total	Total	In	Out	Total	In	Out
1	11730 Ramona Blvd	223	Affordable Housing	38	DU	183	14	4	10	17	10	7
		220	Multifamily Housing	1		7	0	0	0	1	1	0
2	11710-11720 Forest Grove St	220	Multifamily Housing	5	DU	34	2	0	2	3	2	1
3	3937 Peck Road	822	Retail	4	KSF	218	9	5	4	26	13	13
		712	Office	5		72	8	7	1	11	4	7
4	4123-4131 Peck Road	220	Multifamily Housing	14	DU	94	6	1	5	7	4	3
5	4336 Peck Road	822	Retail	9.406	KSF	512	22	13	9	62	31	31
6	4055 Gilman Road [1]	411 & 488	City Park	5.6	Acre	-179	-47	-54	8	-27	23	-50
Total						**941**	**14**	**-24**	**39**	**100**	**88**	**12**

[1] The Trip Generation for this project was defined by the *County of Los Angeles MacLaren Community Park Master Plan - Traffic Review* completed by KOA in September, 2021.

FIGURE 8

MACLAREN HALL RESIDENTIAL PROJECT

Location of Related Projects

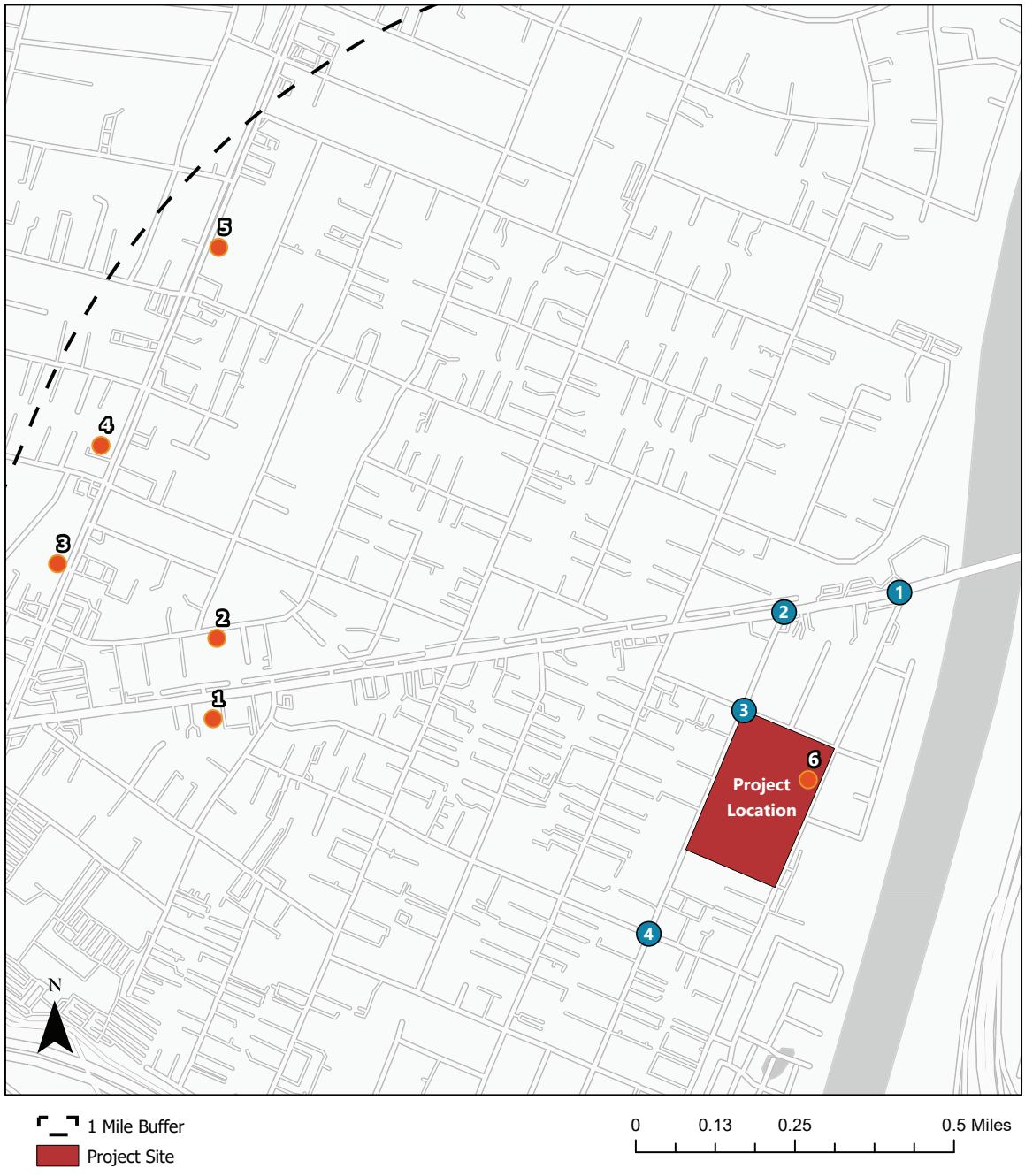
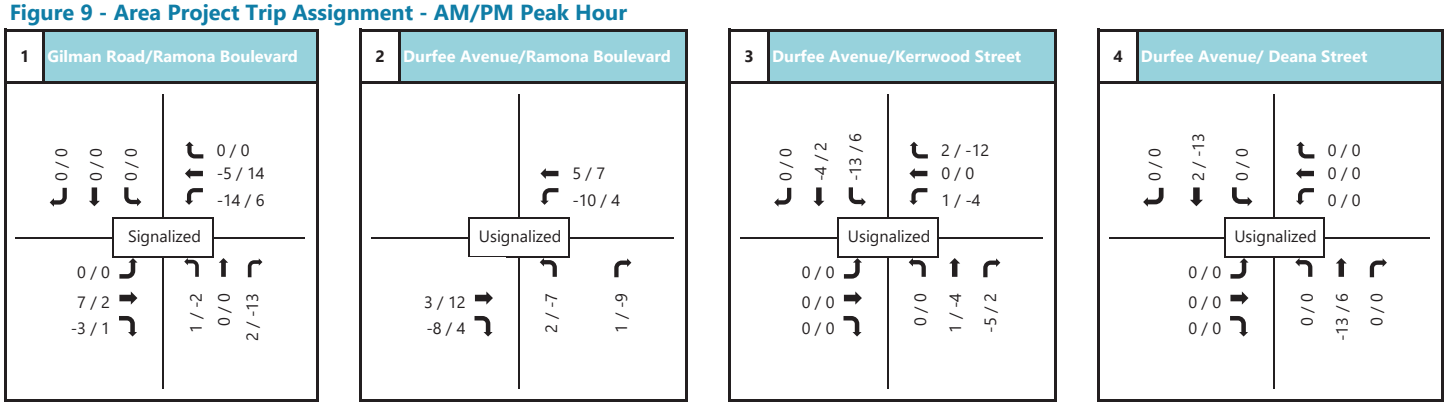


Figure 9 - Area Project Trip Assignment - AM/PM Peak Hour



XX/XX AM /PM Peak Hour Traffic Volumes

Future Conditions without and with Project Traffic

Future baseline traffic volumes for the without-project condition were determined by applying ambient traffic growth and area project traffic volumes to the existing traffic volumes. Under the future with-project scenario, the traffic volumes were derived by adding project trips to the future baseline traffic volumes.

Table 7 provides the results of the vehicle delay in seconds and LOS values at the study intersections for future without-project and future with-project conditions.

Table 7 – Future Intersection Delay and Performance

Study Intersections		Peak Hour	Future (2027) Without Project		Future (2027) with Project		Change in Delay
			Delay in Sec.	LOS	Delay in Sec.	LOS	
1	Gilman Dr/ Ramona Blvd	AM	17.7	B	18.6	B	0.9
		PM	18.7	B	19.9	B	1.2
2	Durfee Ave/ Ramona Blvd*	AM	54.7	**F**	103.8	**F**	49.1
		PM	49.0	**E**	86.3	**F**	37.3
3	Durfee Ave/ Kerrwood St**	AM	10.5	B	11.2	B	0.7
		PM	8.5	A	8.8	A	0.3
4	Durfee Ave/ Deana St**	AM	11.2	B	11.5	B	0.3
		PM	9.2	A	9.3	A	0.1

LOS = Level of Service; HCM delay shown in X.X format.

**Two-Way Stop Controlled Intersection- Delay is based on higher approach delay*

*** All-Way Stop Controlled Intersecton - Delay is based on overall intersection delay*

Most of the study intersections will continue to operate similarly to operations analyzed for the existing with-project conditions scenario.

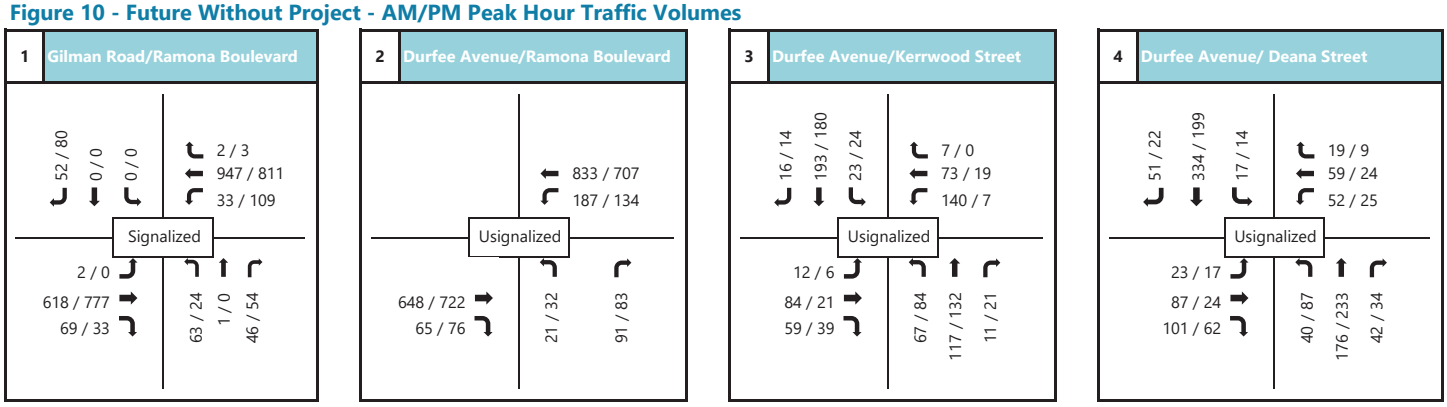
The intersection of Durfee Avenue and Ramona Boulevard is expected to worsen in level of service from E to F due to the project, with an increase in average approach delay to 103.8 seconds during the AM and to 86.3 seconds during the PM peak hour period. This increased delay is at the stop-sign controlled approach of Durfee Avenue at this location.

The Durfee Avenue/Ramona Boulevard is deficient in terms of LOS with project traffic. Traffic signal warrants for this intersection are discussed in Section 3.6 of this report, along with improvement recommendations. The other three study intersections do not have deficient LOS under this analysis scenario.

The Future without-project traffic volumes for the weekday a.m. and p.m. peak hours are illustrated on Figure 10. The Future without-project traffic analysis worksheets for this scenario are provided in Appendix E.

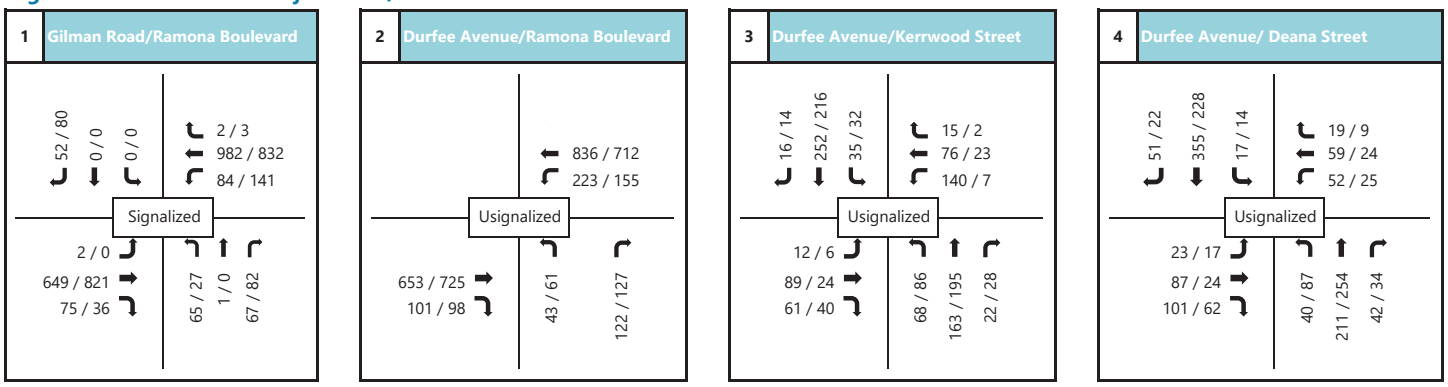
The Future with-project traffic volumes for the weekday a.m. and p.m. peak-hour volumes are illustrated in Figure 11. The analysis worksheets for this scenario are provided in Appendix F.

Figure 10 - Future Without Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes

Figure 11 – Future With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes

Traffic Signal Warrant

A traffic signal warrant was conducted at the intersection of Durfee Avenue and Ramona Boulevard. This intersection meets the applied Manual for Uniform Traffic Control Devices (MUTCD) traffic signal warrant standards for peak-hour volumes, based on the scenario volumes and number of approach lanes. The warrant is met under future conditions both with and without the proposed project.

The proposed project does not cause the signal warrant to be met, but the LOS at this intersection is worsened to a value of F by the project. A fair-share financial contribution by the project toward future signalization of the intersection is recommended. Table 8 provides the fair-share calculations based on vehicle volumes. The project volume share of volumes is 6.0 percent and 6.9 percent for the two peak hours.

Table 8 – Fair-Share Proportion of Project Traffic – Durfee Avenue and Ramona Boulevard Intersection

Volumes Basis	AM	PM
Future with-Project Volumes	1978	1878
Project Trips	119	129
Project Trips Proportion	6.0%	6.9%

The signal warrant analysis worksheets are provided in Appendix G.

3.7 PARKING ANALYSIS

Project Site Parking Supply

A total of 618 off-street vehicle parking spaces would be provided across the project site and the adjacent Community Park. The Esperanza Village site and the mixed-use Building 5 will have 490 spaces out of this total supply, and 115 parking spaces would be allocated to the County Building 6 and the adjacent Community Park, as follows:

- 388 spaces for the residential buildings (279 spaces for the affordable units and 109 spaces for the senior units)
- 115 spaces for mixed-use Building 5
- 87 spaces for Building 6 and Community Park
- 28 public spaces for Community Park

310 spaces would be located in the ground-level podium parking garages of the proposed residential buildings. The remaining 78 residential parking spaces would be provided at the surface parking areas adjacent to the four residential buildings.

At mixed-use Building 5, 115 surface parking spaces would be provided adjacent to the building.

At the County-related parcel, a total of 115 spaces would be provided as well. 33 parking spaces would be located within Building 6 either at-grade or above grade, and 82 parking spaces would be provided at the surface parking lot of the County-related parcel. The surface parking would be provided both for Building 6 and for park use.

Table 9 provides a summary of the parking requirements for the project site uses, based on the City of El

Monte Municipal Code and the County of Los Angeles Code for the County Building 6 assuming 40,000 square feet of office use. However, the size and mix of uses anticipated for Building 6 have not been finalized. Therefore, the City will work with the County to identify parking demand and supply for Building 6. Sharing of parking between uses will be defined as needed during final site plan review by the City, although reserved and/or gated parking is not planned to be established for any site uses.

Based on the proposed site uses and these requirements, the total maximum required supply would be 526 spaces. The project site plan provides for 618 parking spaces, providing a surplus over the Code requirements. Community Park use would peak outside of the daily operational hours for Building 6, and that parking is therefore shared between the two uses.

Table 9 – Project Parking Summary

Land Use	Size	Parking Requirement	Total Spaces Required
Affordable Housing - Extremely Low/Low Income	168 units	1 space/unit, 1 guest space for each 10 units	168 + 17 or 185
Affordable Housing - Senior	168 units	0.5 spaces/unit, 1 guest space for each 10 units	84 + 17 or 101
Manager Units	4 units	2 spaces/unit under 1,200 sq.ft. area	8
Building 5 / Medical Office	36 KSF	1 space/500 sq.ft	72
Building 6 / Government Office *	40 KSF	1 space/250 sq.ft	160
		Totals:	**526**
		Supply Provided:	**618**

** County parking requirements source: County of Los Angeles Title 22 - PLANNING AND ZONING Division 6 - DEVELOPMENT STANDARDS Chapter 22.112 – PARKING*

In addition to the parking supply proposed within the project site, diagonal parking spaces could potentially be provided along the Durfee Avenue, Kerrwood Street, and Gilman Road rights-of-way. The feasibility of providing this additional on-street parking adjacent to the project site is reviewed later within this report section.

On-Street Parking Existing Demand

Hourly parking occupancy surveys were conducted on two roadways adjacent to the site (west side of site and north side of site), on a weekday and a weekend day, during the 8:00 AM to 8:00 PM timeframes.

The locations were the following:

- Durfee Avenue, along the project frontage side of the street
- Kerrwood Street from Durfee Ave to Gilman Road (both sides of the street)

Table 10 provides a summary of parking demand at the analyzed locations for the weekend survey day of Saturday, June 4, 2022. The supply in number of spaces for each roadway segment is shown at the top of the table. The demand or occupancy in number of vehicles parked is shown by hour in the remaining rows of the table. The following are the highest periods of occupancy on the weekend:

- Durfee Avenue, east side – 7 percent occupied during the 11:00 AM and 12:00 PM hours
- Kerrwood Street, south side – 31 percent occupied during the 8:00 AM hour
- Kerrwood Street, south side – 57 percent occupied during the 8:00 AM, 9:00 AM, 12:00 PM, and 5:00 PM hours

The occupancy of the three corridors is highest on the north side of Kerrwood Street, which is directly adjacent to residential uses.

Table 10 – Weekend Parking Study Data

	Durfee Ave, East Side		Kerrwood St, South Side		Kerrwood St, North Side	
	From: *South End of Project Site*	***To:*** *Kerrwood St*	***From:*** *Durfee Ave*	***To:*** *Gilman Rd*	***From:*** *Gilman Rd*	***To:*** *Durfee Ave*
Restriction	**No Restriction**		**No Parking Thursday 12nn-5pm Street Sweeping**		**No Parking Thursday 7am-12nn Street Sweeping**	
Spaces	**46**		**26**		**16**	
8:00 AM	2		8		9	
9:00 AM	2		4		9	
10:00 AM	2		5		1	
11:00 AM	3		6		1	
12:00 PM	3		4		9	
1:00 PM	1		4		7	
2:00 PM	2		3		7	
3:00 PM	2		7		8	
4:00 PM	2		7		7	
5:00 PM	2		5		9	
6:00 PM	2		2		8	
7:00 PM	1		2		8	

Table 11 provides a summary of parking demand at the analyzed locations for the weekend survey day of Monday, June 6, 2022, in the same format as Table 9. The following are the highest periods of occupancy on the weekday:

- Durfee Avenue, east side – 2 percent occupied during the 8:00 AM, 10:00 AM., and 3:00 PM to 6:00 PM hours.
- Kerrwood Street, south side – 34 percent occupied during the 8:00 AM hour
- Kerrwood Street, south side – 43 percent occupied during the 8:00 AM, 9:00 AM, 11:00 AM, 2:00 PM, and 7:00 PM hours.

The occupancy of the three corridors remains highest on the north side of Kerrwood Street on weekdays, similar to weekend demand.

Table 11 – Weekday Parking Study Data

Restriction	Durfee Ave, East Side		Kerrwood St, South Side		Kerrwood St, North Side	
	From: *South End of Project Site*	***To:*** *Kerrwood St*	***From:*** *Durfee Ave*	***To:*** *Gilman Rd*	***From:*** *Gilman Rd*	***To:*** *Durfee Ave*
	No Restriction		**No Parking Thursday 12nn-5pm Street Sweeping**		**No Parking Thursday 7am-12nn Street Sweeping**	
Spaces	**46**		**26**		**16**	
8:00 AM	1		9		7	
9:00 AM	0		8		7	
10:00 AM	1		7		6	
11:00 AM	0		8		7	
12:00 PM	0		8		5	
1:00 PM	0		8		6	
2:00 PM	0		7		7	
3:00 PM	1		8		5	
4:00 PM	1		7		6	
5:00 PM	1		8		6	
6:00 PM	1		7		6	
7:00 PM	0		6		7	

In general, in both the weekend and weekday periods, on-street parking on these roadway segment locations is half-occupied or less during all daylight hours.

On-Street Parking Supply

The project developer is planning to provide diagonal parking on adjacent roadways, where feasible, to supplement the site parking supply. The parking is not needed based on Code requirements any lack of adequate off-street parking, but is being provided to supplement parking supply for both the project and adjacent but separate planned park use. The demand for typical park use and for sporting events at the park is not known, as it was not defined for this separate County project.

The on-site parking that is adjacent to Building 6 and County parking for that building would be shared between the County Park and the County office uses. Peak use of the park for organized sporting events would occur on weekday evenings or on the weekends, when the Building 6 government office use would not be active. The park use, therefore, would not create any additional parking demand burden on the site that cannot be accommodated by the site parking supply.

The curb-to-curb and sidewalk widths of the roadways adjacent to the site were reviewed to determine the feasibility of providing diagonal parking on the site side of each roadway, as the project applicant has the goal of providing additional on-street parking for the proposed site uses.

Diagonal on-street parking, depending on geometric configuration and with the best angle of spaces for minimal use of roadway width being 30 degrees or 45 degrees, requires 17 to 19 feet for the parking spaces

and 14 to 16 feet for the adjacent lane for backing maneuvers. Therefore, the half-width of the roadway (from the curb to the centerline) must be 31 feet to 35 feet in width. The City will work with the County to identify the appropriate off-site parking configuration adjacent to County uses (the park and County Building 6). Approval will be subject to review by the City during final design of the improvements.

The design of the diagonal parking areas considered sight visibility for vehicles exiting the project driveways. The diagonal parking design for Gilman Road considered school pick-up/drop-off activity to the south of the project site. On-street diagonal parking was not included on this roadway past the southern end of the Community Park area, avoiding any potential conflicts between vehicle movements into and out of the diagonal parking areas and movements into and out of the school. The final design of the on-street proposed diagonal parking will be completed to the satisfaction of the City Engineer.

The review of each adjacent roadway is provided below, and the diagonal parking concept plans are provided in Appendix H.

Durfee Avenue – East Curb Parking

The roadway has four travel lanes, a center two-way left-turn lanes, and bicycle lanes adjacent to on-street vehicle parking areas. No site dedications are required or planned along the site frontage at this roadway. The presence of the bicycle lanes would make the addition infeasible of an on-street diagonal parking area on this roadway adjacent to the project site. The roadway configuration and on-street parking provisions will not be modified with the proposed project.

Gilman Road – West Curb Parking

On Gilman Road, along the project site frontage, the roadway has a total half-width (from the centerline to the edge of the roadway at the site boundary) right-of-way that is 35.7 feet wide. The current physical half-roadway width including sidewalks is 25 feet. Therefore, a 10-foot easement exists along this project site frontage, and this can be used for roadway widening and on-street parking improvements.

The existing curb-to-curb width of the roadway is 40 feet wide, with two 20-foot travel lane and on-street parking areas. The roadway has five-foot sidewalks. The 25-foot roadway half-width can be increased to 35 feet through the use of this easement and the implementation of roadway improvements by the project. A diagonal parking area of 17 feet in width can be provided, with a 14-foot adjacent travel lane for backing.

A five-foot sidewalk along the west side of the roadway, to be relocated and replaced with a planned site widening, plus the 31 feet for the diagonal parking and the adjacent travel lane, would provide for a total roadway width of 57 feet. This would allow for on-street diagonal parking adjacent to the site frontage.

This would provide 15 on-street public parking spaces and two disabled-access spaces, a change to 17 spaces from the current estimated supply in the same area of 13 spaces. As noted above the City will work with the County to identify the appropriate off-site parking configuration adjacent to Building 6 taking in to account safety concerns.

Kerrwood Street – South Curb Parking

On Kerrwood Street, the roadway has a 40-foot curb-to-curb width and five-foot sidewalks. The roadway half-width adjacent to the project site is 45 feet, with a 20-foot travel lane with parking and a five-foot

sidewalk. An existing five-foot easement at the project site frontage can be used to increase the roadway half-width from 25 feet to 30 feet, an increase of 5 feet.

The 31-foot to 35-foot width that is required for an on-street diagonal parking area and adjacent travel lane would be provided on this roadway via project dedications and roadway widening that would provide for a 53-foot total roadway width. This would allow for on-street diagonal parking adjacent to the site frontage.

This would provide 22 on-street public parking spaces and two disabled-access spaces, a change to 24 spaces from the current estimated supply in the same area of 26 spaces. The reduction in parking is due to modifications to driveway locations, clear areas for visibility at driveways, and corner treatments. As noted above the City will work with the County to identify the appropriate off-site parking configuration along Kerrwood Street.

3.8 ACCESS AND CIRCULATION ANALYSIS

The project site will be accessed by vehicles via seven proposed driveways. Pedestrians will be able to access the site via multiple access points on all site frontages. Three driveways including one outbound only driveway at the County Building 6 on Durfee Avenue, two driveways on Kerrwood Street adjacent to the park use, and two driveways on Gilman Road.

The residential use parking areas will be accessible via the Durfee Avenue and Gilman Road driveways, and internal roadways will provide access to surface parking areas and the parking areas within the four residential buildings. Building 5 will share access with the residential buildings. Building 6 and the separate Community Park will share a separate circulation route and access points on Kerrwood Street and an exit point on Durfee Avenue. Signage within the residential parking areas and the parking area for Building 5 will define designations of the parking areas by use, and use by park patrons will be prohibited via signage in these areas as well.

One of the three driveways on Durfee Avenue will be solely for egress purposes; this would help alleviate potential traffic queues, as this driveway is closer to the intersection of Durfee Avenue and Kerrwood Street. This exit-only driveway will be adjacent to Building 6, which would function as county office space. Access to the government office building would be through Kerrwood Street just north of Building 6. Kerrwood Street would also provide parking for park access while the remaining driveways on Gilman Road and Durfee Avenue would serve the project residential uses.

Driveways are adequately spaced along the site and there are no congestion issues that are expected to occur due to site vehicular ingress and egress activity. The southern project driveway on Gilman Road, to the south of Building 2, could create conflicts with the pick-up/drop-off driveways of Twin Lakes Elementary School on the east side of the roadway. The entrance driveway for the school pick-up/drop-off area would be roughly aligned with this southern site driveway, and the exit driveway for the pick-up/drop-off area would be located to the north of this site driveway. The establishment of prohibited left-turn movements into and out of the southern site driveway at this location is recommended, thru installation of regulatory signage for site outbound traffic and northbound traffic on Gilman Road to indicate that these left-turn outbound movements are prohibited, which would remove most conflicts.

This turning prohibition would be enforceable as part of Police traffic operations. Other potential measures may be considered during final review with the City, including potential physical designs of the driveway to restrict the related turning movements.

Right turn movements from the southern project driveway on Gilman Road would take place to the north of the nearby mid-block crosswalk location. Drivers would have clear visibility of the crosswalk while making this turning movement.

A pick-up/drop-off area for the separate but adjacent park use has been designated within the Project site, in the parking to the west of Building 6. Pick-up/drop-off operations would not conflict with adjacent roadway travel lanes, as this designated area is located within the development site. Access to this drop-off area would be possible through driveways on either Durfee Avenue or Gilman Road. This area would allow for loading and unloading of park users adjacent to the park without the use of parking spaces.

Pedestrian access to the site from Gilman Road and Durfee Avenue would be provided through proposed sidewalks that continue to the site residential buildings. Access to the park would also be provided via the on-site sidewalks.

Mid-Block Crosswalk Analysis

A pedestrian volume analysis was conducted at the Gilman Road mid-block crosswalk, located between the south end of the project site frontage and the frontage of Twin Lakes Elementary School. Pedestrian and bicycle volume counts were conducted on Monday June 6, 2022, during peak hours that overlapped the elementary school ingress and egress times.

The volumes are summarized in Table 12, in 15-minute increments by direction for the AM and PM peak hours when data was collected. The highest periods of pedestrian volumes are in the 8:00 AM to 8:15 PM period when 66 pedestrians crossed in an eastbound direction towards the school, and in the 2:45 PM to 3:00 PM period when 142 pedestrians crossed in a westbound direction away from the school. No bicyclists used this crossing location.

Table 12 – Gilman Road Mid-Block Crosswalk Pedestrian Volumes

TIME	Crosswalk Peds		TOTAL
	Going East	Going West	
7:30 AM	4	2	***6***
7:45 AM	52	3	***55***
8:00 AM	66	5	***71***
8:15 AM	24	1	***25***
2:40 PM	0	19	***19***
2:45 PM	2	142	***144***
3:00 PM	0	4	***4***
3:15 PM	0	0	***0***
3:30 PM	0	5	***5***
Totals	***148***	***181***	***329***

The mid-block crosswalk location on Gilman Road, adjacent to the project site and the Twin Lakes Elementary School, is signed and striped, and stop signs provide control for approaching vehicles in the northbound and southbound directions.

The developer of the proposed project is pursuing with the school district an access route through the school campus to provide a link to the San Gabriel River Trail. It is recommended that the proposed project provide improvements at the current mid-block crosswalk, including restriping the crosswalk with high visibility striping and replacing the warning and stop signs with new signs to improve visibility. These improvements should be designed, approved, and implemented to the satisfaction of the City Engineer. Other potential future improvements will be evaluated with the City before implementation of these improvements. The location will also be evaluated as part of the separate neighborhood traffic management plan.

Local Roadway Volumes Analysis

Gilman Road, a local roadway, will provide access between the project site and Ramona Boulevard to the north, the nearest arterial to the project site. Gilman Road borders the Project site on the east. Other roadways including Durfee Avenue and Kerrwood Street would provide access to other regional routes in other directions. The project is not expected to add a level of vehicle trips to the analyzed roadway segments that would cause deterioration to poor levels of service.

A volume and level of service analysis was completed for the study roadway segments, including project trip generation effects, as summarized in Table 13. The 24-hour traffic counts were conducted at the study roadway segments on Monday, June 6, 2022. Volume increases on the roadway segments would range from 34 percent to 69 percent (with this highest percent occurring on Durfee Avenue), but LOS values with the proposed project would be at LOS A or B based on the applied capacities and analyzed volumes. The project would not reduce the number of travel lanes on any of the analyzed roadways.

There would not be any significant circulation effects at the roadway segments due to the proposed project, based on this analysis.

Table 13 – Study Roadway Segment Analysis

ID	Segment	Classification	Lanes	Existing ADT	Capacity Per Lane	Total Capacity	Existing V/C Ratio	Existing LOS	With Project Trips Added	With Project ADT	With Project V/C Ratio	With Project LOS	% increase
1	Kerrwood Street	Local	2	1,864	2,500	5,000	0.373	A	731	2,595	0.519	A	39%
2	Durfee Avenue	Collector	4	6,033	5,000	20,000	0.302	A	1,628	7,661	0.383	A	27%
3	Gilman Road (S/O Woodville Dr)	Local	2	1,891	2,500	5,000	0.378	A	898	2,789	0.558	A	47%
4	Gilman Road (S/O Ramona Blvd)	Local	2	2,335	2,500	5,000	0.467	A	795	3,130	0.626	B	34%

Local Roadway Speeds Analysis

Vehicle speeds were collected at the four study roadway segments by automatic measuring equipment, during collection of the 24-hour volume counts. This analysis was conducted as defined in the study scoping document, to determine if adjacent roadway speeds are high and if traffic calming measures might be necessary. Speed measurements were made during periods of free-flowing traffic on normal weekdays with

dry pavement conditions on one weekday. The following speed data was calculated from the collected data:

- Average Speed – This speed represents the arithmetic average of all speeds recorded at the location.

- Critical Speed – This speed, also known as the 85th percentile speed, is the speed at or below which 85 percent of the traffic was observed. This value is the primary guide in establishing the speed limit as this value represents the top speed of most safe and reasonable motorists. In the absence of other factors such as a high collision rate, speed limits are usually established within a range of 5 miles per hour less than this speed.

- Pace – This is the 10 mile per hour speed range that contains the largest number of vehicles that were observed. The pace provides a measure of the dispersion of speeds within the sample surveyed. In the absence of other factors such as a high collision rate, speed limits are usually established within the 10 miles per hour speed range in the pace.

Posted speed guidelines established by the State of California were reviewed to determine if the posted speed limits are appropriate and if average vehicle speeds are in compliance. The following are the analysis summaries for each of the locations.

Kerrwood Street West of Bannister Avenue

Kerrwood Street is a two-lane residential roadway at the north frontage of the project site. Parking is permitted on both sides of the roadway. There is no posted speed limit, and therefore, the 25 MPH prima facie speed applies.

Speeds measured include an average speed of 24 MPH, a 10 MPH pace from 20 through 29, and a critical speed of 30 MPH. The speed limit on Kerrwood Street is consistent with California Vehicle Code guidelines. Excessive speeding is not observed at this location as the pace speed is 5 MPH above the speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

Durfee Avenue South of Kerrwood Street

This segment of Durfee Avenue is a four-lane north-south roadway on the west side of the project site. The posted speed limit is 35 MPH. This segment of roadway has few driveways or access points.

Speeds measured include an average of 39 MPH, a 10 MPH pace from 35 through 44, and a critical speed of 45 MPH.

The speed limit on Durfee Avenue is not consistent with California Vehicle Code guidelines. Excessive speeding is observed at this location by 10 MPH. This major roadway is adjacent to residential uses and the west side of the project site. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

Gilman Road South of Woodville Drive

This segment of Gilman Road is a two-lane north-south local roadway, located at the east frontage of the project site. Parking is permitted on both sides of the roadway with the exception of Thursdays for street

sweeping from 7:00AM to 12:00PM on the west side of the street and on Thursdays from 12:00PM to 5:00PM on the east side of the street. There is a posted speed limit of 25 MPH.

Speeds measured include an average of 24 MPH, a 10 MPH pace from 20 through 29, and a critical speed of 31 MPH.

The critical speed on Gilman Road is 6 MPH higher than the posted speed limit. As this location has a pace speed that exceeds the posted speed limit. This local roadway is adjacent to the east frontage of the project site and is adjacent to Twin Lake Elementary School. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

Gilman Road South of Ramona Boulevard

This segment of Gilman Road is a two-lane north-south local roadway on the east frontage of the project site. Parking is permitted on the west side of the roadway and on the east side it is generally prohibited during school days from 7:30AM to 8:00AM, from 1:00PM to 3:00PM, and from 12:00PM to 1:00PM for street sweeping on Thursdays. There is a posted speed limit of 25MPH.

Speeds measured include an average of 23 MPH, a 10 MPH pace from 20 through 29, and a critical speed of 30 MPH.

The critical speed on Gilman Road south of Ramona Boulevard is 5 MPH higher than the posted speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

The higher identified speeds on Durfee Avenue and Gilman Road have defined the need for a neighborhood traffic management plan. The study would be funded by the proposed project, and any final recommended neighborhood roadway improvements would be funded by the proposed project. Development of the plan will include the following efforts.

- A review of conditions on the two impacted roadways in the vicinity of the project site
- Development of potential solutions to high vehicle speeds in a toolbox or menu of improvements
- Conduct a first public meeting of local neighborhood residents to discuss the plan framework, issues, roadway characteristics, and the range of potential solutions.
- Generate recommended solutions, including options for each roadway
- Conduct a second public meeting to review solutions and options, and receive input on preferred solutions
- Provide a method for voting for the desired option amongst residents – through a mailer or in-meeting voting if feasible
- Conduct a third public meeting to discuss the final chosen options and implementation

An agreement will be entered into with the City by the project applicant for the completion of the neighborhood traffic management plan, with a schedule for completion and implementation to be determined as part of the agreement.

4. IMPACTS AND EFFECTS CONCLUSIONS

The project impact determinations are as follows, based on the analysis conducted and the application of the City of El Monte traffic impact guidelines:

CEQA and VMT Analysis

The project (California Environmental Quality Act) CEQA transportation impact determinations are as follows:

- The application of the project land uses to the San Gabriel Valley Council of Governments Vehicle Miles Traveled (VMT) Tool indicates that both the proposed residential and non-residential uses of the project can be screened from VMT analysis and be assumed to have a less than significant impact. The VMT impact standard of the City of El Monte is a threshold that is 15 percent below the local average.

- The project residential VMT value at 13.3 would be lower than the required 15 percent reduction from the area baseline value of 15.7 (with the maximum resulting threshold at 13.35). The project residential uses pass the low VMT screening.

- The project non-residential VMT value at 23.0 would be lower than the required 15 percent reduction from the area baseline value of 34.9 (with the maximum resulting threshold at 29.67). The project non-residential uses pass the low VMT screening.

- All of the proposed project uses can be screened from further analysis of VMT. A less than significant transportation impact under CEQA would occur due to the project.

Local Area Circulation Effects

- The project would generate a net total of 3,178 daily net trips, including 295 vehicle trips during the weekday a.m. peak hour and 265 vehicle trips during the weekday p.m. peak hour.

- The project has specific characteristics that are expected to reduce trips substantially from the totals analyzed, as a result of a highly transit-dependent population and an expected high usage of local transit shuttle routes. The County Building 6 uses may have up to half its floor area (20,000 square feet) that are ancillary uses to the other project site uses and surrounding community, such as community meeting rooms, a café/snack bar, and childcare. The analysis of project trips is therefore very conservative, as it considered all floor area as containing trip-generating uses.

- Local circulation effects were analyzed at four study intersections and four roadway segments.

- Most of the intersections would operate at good Level of Service (LOS) values of A or B. The Durfee Avenue/Ramona Boulevard intersection would worsen in operations from LOS D to E under existing conditions with the project, and within LOS E and LOS F under future conditions with the project. This delay occurs at the stop-sign controlled approach of Durfee Avenue at the intersection.

- A traffic signal warrant was conducted at the intersection of Durfee Avenue and Ramona Boulevard. This intersection meets the applied traffic signal warrant standards for peak-hour volumes, under future conditions both with and without the proposed project.

- The proposed project does not cause the signal warrant to be met at Durfee Avenue and Ramona Boulevard, but the LOS at this intersection is worsened to a value of F by the project. A fair-share financial contribution by the project toward future signalization of the intersection is recommended. The project volume share of volumes is 6.0 percent and 6.9 percent for the two peak hours.

- At the four study roadway segments, volume increases on the roadway segments would range from 27 percent to 47 percent (with this highest percent occurring on Gilman Road), but LOS values with the proposed project would be at LOS A or B based on the applied capacities and analyzed volumes. There would not be any significant circulation effects at the roadway segments due to the proposed project.

Parking Analysis

- Based on the proposed site uses and these requirements, the total required supply would be 526 spaces. The project site plan provides for 581 parking spaces, providing a surplus over Code requirements. Sharing of parking between uses will be defined as needed during final site plan review by the City, although reserved and/or gated parking is not planned to be established for any site uses.

- Hourly parking occupancy surveys were conducted on two roadways adjacent to the site on a weekday and a weekend day, during the 8:00 AM to 8:00 PM timeframes.

- The parking survey conducted at the roadway segments adjacent to the site in both the weekend and weekday periods, on-street parking on these roadway segment locations is half-occupied or less during all daylight hours.

- In addition to the parking supply proposed within the project site, diagonal parking spaces could potentially be provided along the Kerrwood Street and Gilman Road rights-of-way.

Circulation and Access Analysis

- The southern project driveway on Gilman Road, to the south of Building 2, could create conflicts with the pick-up/drop-off driveways of Twin Lakes Elementary School on the east side of the roadway. The entrance driveway for the school pick-up/drop-off area would be roughly aligned with this southern site driveway, and the exit driveway for the pick-up/drop-off area would be located to the north of this site driveway.

- The establishment of prohibited left-turn movements into and out of the southern site driveway at this location is recommended, thru installation of regulatory signage for site outbound traffic and northbound traffic on Gilman Road to indicate that these left-turn outbound movements are prohibited, which would remove most conflicts.

- The mid-block crosswalk location on Gilman Road, adjacent to the project site and the Twin Lakes Elementary School, is signed and striped and stop signs provide control for approaching vehicles in the northbound and southbound directions.

- The developer of the proposed project is interested in pursuing an access route through the school campus to provide a link to the San Gabriel River Trail. It is recommended that the proposed project provide improvements at the current mid-block crosswalk, including upgrading the crosswalk striping and warning and stop signs to improve visibility. These improvements should be designed, approved, and implemented to the satisfaction of the City Engineer. Other improvements at this location may be defined by the separate neighborhood traffic management plan.

Study Roadway Segment Speeds

- Vehicle speeds were collected at the four study roadway segments by automatic measuring equipment, during collection of the 24-hour volume counts. This analysis was conducted as defined in the study scoping document, to determine if adjacent roadway speeds are high and if traffic calming measures might be necessary.

- On Kerrwood Street west of Bannister Avenue, excessive speeding is not observed at this location as the pace speed is 5 MPH above the speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

- On Durfee Avenue south of Kerrwood Street, excessive speeding is observed at this location, at 10 MPH over the posted speed. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

- On Gilman Road south of Woodville Drive, the critical speed on Gilman Road is 6 MPH higher than the posted speed limit. It is recommended that the project fund a local neighborhood study including public outreach to define traffic-calming measures to be implemented at this location by project opening.

- On Gilman Road south of Ramona Boulevard, the critical speed on Gilman Road south of Ramona Boulevard is 5 MPH higher than the posted speed limit, within the acceptable range of critical speed value as compared to the posted speed. No changes to the roadway, roadway striping or speed limits are recommended within this roadway segment.

- The higher identified speeds on Durfee Avenue and Gilman Road have defined the need for a neighborhood traffic management plan. The study would be funded by the proposed project, and any final recommended neighborhood roadway improvements would be funded by the proposed project. An agreement will be entered into with the City by the project applicant for the completion of the neighborhood traffic management plan, with a schedule for completion and implementation to be determined as part of the agreement.

APPENDIX A
Scoping Document

1100 Corporate Center Drive, Suite 201, Monterey Park, CA 91754
T: (323) 260-4703 | F: (323) 260-4705 | www.koacorp.com
MONTEREY PARK ORANGE ONTARIO SAN DIEGO LA QUINTA

MEMORANDUM

Date: May 31, 2022

To: Jana Robbins – TransTech / City of El Monte

Cc: Betty Donavanik – City of El Monte
Kevin Ko – City of El Monte
Wendy Lockwood – Sirius Environmental

From: Brian Marchetti, AICP

Subject: Revised Traffic Scoping Document for MacLaren Project, El Monte

This document provides the proposed project details and traffic study methodology for consideration and comment by the City of El Monte, with updates based on City comments of 5/23.

Project Description

The El Monte MacLaren Hall Project is proposed for the site at 4024 Durfee Avenue in the City of El Monte. The planned opening year is 2024. The project site is bordered by Durfee Avenue along its frontage to the west, Kerrwood Street to the north, Gillman Road to the east, and single and multi-family residential to the south.

The facility will be composed of six buildings that include 340 affordable dwelling units across four buildings. These units will have the following characteristics:

Broken down by Income

- Extremely Low income (ELI) — 174 units or 51.2%
- Low Income (LI) — 162 units or 47.6%
- Managers — 4 units or 1.2%

Broken Down by Occupancy and Income

- ELI Family/Senior — 82
- LI Family/Senior — 86
- 168 Family units

The other two buildings will contain the following:

Building 5 will be composed of a County PACE Center (elderly healthcare) of 18,000 square feet, a vocational school linked to the other clinic uses of 5,000 square feet, and a community medical clinic of 13,000 square feet. All of this space, at a total of 36,000 square feet, will be analyzed as medical clinic use, based on the overall characteristics of the uses.

Building 6 will have 20,000 to 40,000 square feet of space, and will predominantly be used for government office space with a majority of the space being used as government offices and the remaining 4,000 square feet as a child care center that is ancillary to the other site uses. All of this space, at a total size of up to 40,000 square feet, will be analyzed as government office use.

The project is adjacent to a separate County/City site of 5.6 acres, which is being used for public park, recreation, and open space uses.

The proposed the site plan is provided in Attachment A.

The proposed site access points will be on Durfee Avenue. Parking will be provided throughout the site, with vehicular access via seven proposed driveways along Durfee Avenue, Kerrwood Street, and Gillman Road.

Vehicle Miles Traveled (VMT) Analysis

The San Gabriel Valley COG Vehicle Miles Traveled Evaluation Tool was used to review the screening potential for the project. The Tool allows for a screening of impacts based on the presence of a project in a low VMT area. The application of the project land used to the Tool indicates that the project can be screened from VMT analysis and be assumed to have a less than significant impact for both the proposed residential and non-residential uses.

The VMT Tool output for the project residential units and the non-residential floor area is provided in Attachment B.

Project Trip Generation

The trip generation land use inputs included the following:

- 168 affordable housing units for seniors
- 168 affordable housing units for families.
- Four manager residential units
- 36,000 square feet of medical clinic space
- 40,000 square feet of government office space.

According to data from the County of Los Angeles Chief Executive Office and the County-wide eHR system, there are 90 employees that work at the current uses within the project site that would be removed as a result of the project.

Based on this data, existing daily trips by employees are at least 180 per day, including outbound AM trips and inbound PM trips. Applying a conservative peak-hour commute ratio of 33 percent, out of the total number of 90 employees, it is estimated that there are 30 peak-hour employee trips.

The application of Institute of Transportation Engineers (ITE) rates from *Trip Generation, 11th edition* to these land uses results in estimated daily trips of 3,178, including 295 AM peak hour trips and 265 PM peak hour trips.

PROJECT TRIP GENERATION

MacLaren Park				Daily	AM Peak Hour			PM Peak Hour		
				Rates[1]						
ITE Code	Land Use	Intensity	Units	Total	Total	In	Out	Total	In	Out
220	Multifamily Housing (Low-Rise)	-	DU	6.74	0.4	0.24	0.76	0.51	0.63	0.37
223	Affordable Housing (Senior)	-	DU	-	0.18	0.58	0.42	0.09	0.61	0.39
223	Affordable Housing (Family)	-	DU	4.81	0.36	0.29	0.71	0.46	0.59	0.41
630	Medical Clinic	-	KSF	37.6	2.75	0.81	0.19	3.69	0.3	0.7
730	Government Office	-	KSF	22.59	3.34	0.75	0.25	1.71	0.25	0.75
				Proposed Uses						
220	Multifamily Housing (Low-Rise)	4	DU	27	2	0	2	2	1	1
223	Affordable Housing (Senior)[2]	168	DU	265	30	17	13	15	9	6
223	Affordable Housing (Family)	168	DU	808	60	17	43	77	45	32
630	Medical Clinic	36	KSF	1354	99	80	19	133	40	93
730	Government Office	40	KSF	904	134	101	34	68	17	51
				3358	325	215	111	295	112	183
Previous Use - Employee Trip Credit				(180)	(30)	(30)	0	(30)	0	(30)
			Total	**3178**	**295**	**185**	**111**	**265**	**112**	**153**

[1]Source: *ITE Trip Generation Manual 11th Edition*

[2] *Daily Trips for Senior Affodable Housing, for which rates are not defined by ITE, were calculated by applying a peak to daily ratio from the Family Affordable Housing category.*

Operational Analysis

The quantitative evaluation of the expected access and circulation operations will include a level of service and queuing analysis. Queuing will be evaluated for pre-project and post-project conditions at turn pockets, at the project study intersections and the major site driveway access point. It will be determined if the project would cause queuing to block nearby intersections and other site driveways.

The traffic study will examine four study intersections in the local area for analysis of local project circulation effects. The intersection traffic counts will be conducted on a weekday during the 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM time periods.

The study intersection locations are as follows, and are shown on the figure in Attachment C:

1. Gilman Road/Ramona Boulevard
2. Durfee Avenue/Ramona Boulevard
3. Durfee Avenue/ Kerwood Street
4. Durfee Avenue/Deana Street

The overall area project trip distribution percentages are included on the Attachment C figure. The percentages at the study intersections, totaling 100 percent for inbound and 100 percent for outbound trips, are provided on the figure in Attachment D.

The study roadway segments, where existing vehicle speeds and daily volumes will be analyzed, are as follows:

- Kerwood Street, east of Durfee Avenue
- Durfee Avenue, south of Kerwood Street
- Gilman Road, south of Kerwood Street
- Gilman Road, south of Ramona Boulevard

Hourly parking occupancy surveys will be conducted on two roadways, on a weekday and a Saturday, between 8AM to 8PM each day on:

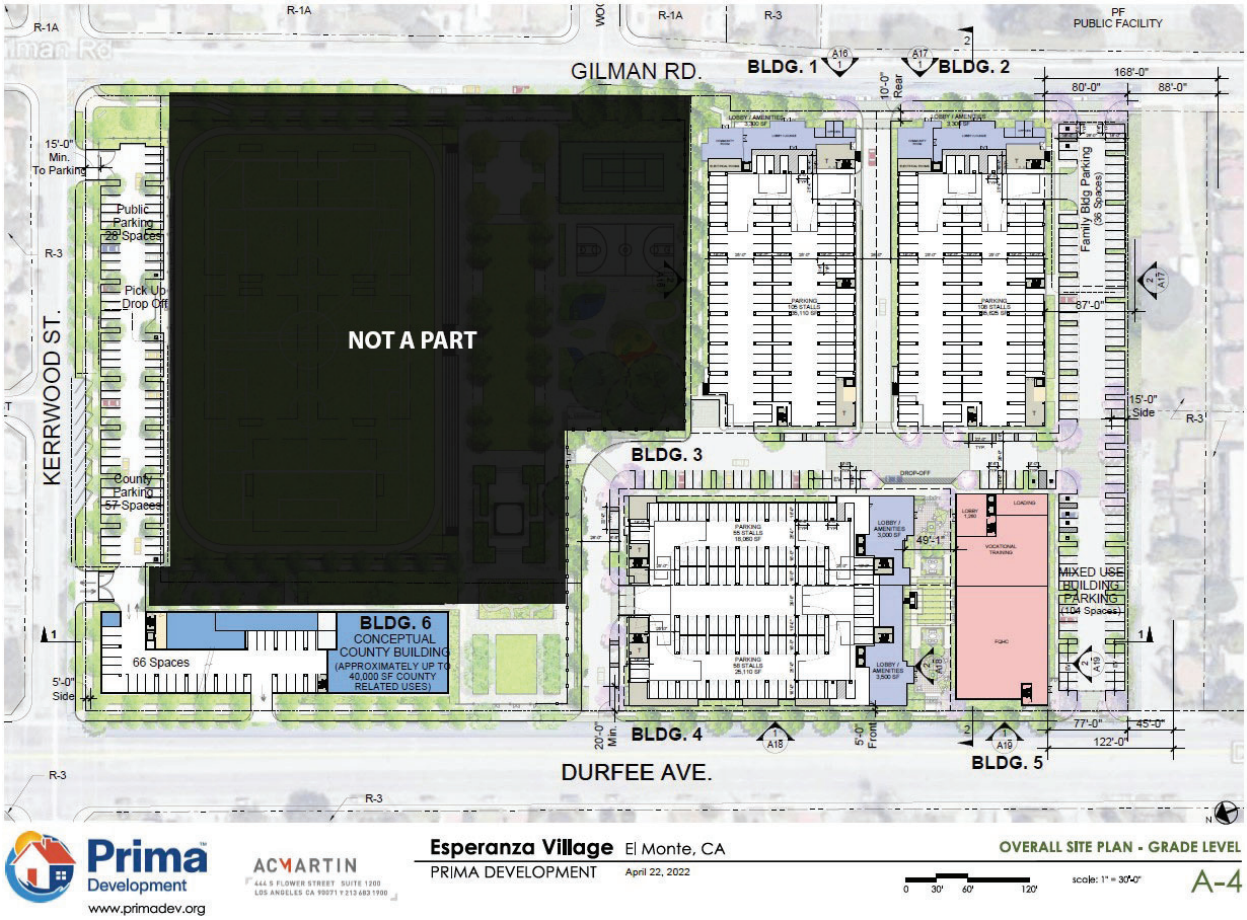
- Durfee Avenue, along the project frontage side of the street
- Kerwood Street from Durfee Ave to Gilman Road (both sides of the street)

Based on the results of the speed data analysis, potential solutions of traffic calming will be recommended as part of the study, as appropriate to the analysis results. The potential for diagonal parking on Durfee Avenue, based on final proposed off-site parking designs separate from this study, will be evaluated in terms of potential effects on operations.

Pedestrian counts will also be conducted during the peak egress and ingress hours of the Twin Lakes Elementary School, for the existing mid-block crosswalk on Gilman Road near the southeast corner of the project site between 7:30 AM and 8:30 AM and 2:40 PM and 3:40 PM during a weekday either Tuesday, Wednesday, or Thursday.

The report will evaluate potential queuing at the inbound left-turn of the project on driveways on Durfee Avenue, Gilman Road, and Kerwood Street. A Highway Capacity Manual analysis will be conducted based on the project trip generation and the volumes analyzed at the nearby study intersection. Cumulative/area projects as defined by City planning staff will be included to define future pre-project conditions. The change in projected operations between future pre-project and future post-project conditions will be analyzed to determine effects at the study intersections and study roadway segments.

ATTACHMENT A –
PROJECT SITE PLAN



Prima Development
www.primadev.org

ACMARTIN
444 S FLOWER STREET SUITE 1200
LOS ANGELES CA 90071 T 213 683 1900

Esperanza Village El Monte, CA
PRIMA DEVELOPMENT April 22, 2022

OVERALL SITE PLAN - GRADE LEVEL
0 30' 60' 120'
scale: 1" = 30'-0"
A-4

ATTACHMENT B –
CEQA ANALYSIS - VMT TOOL OUTPUT

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: May 13, 2022, 11:24:34 AM

Project Name: El Monte Esperanza Village

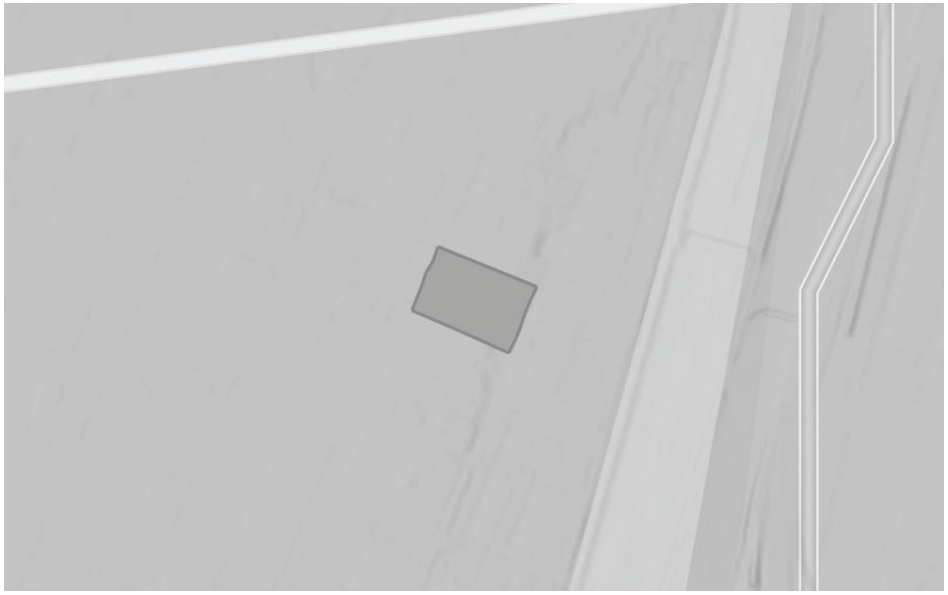
Project Description: County Office (Building 6) - Up to 40 ksfMixed-Use Building (Building 5) - Clinic 36ksfResidential units: 340Extremely Low income 51.2%, Low Income 47.6%, Managers 1.2% (4 units)168 Family units, 168 senior units

Project Location

jurisdiction:
El Monte

apn	TAZ
8549-005-900	22242100

Inside a TPA?
No (Fail)



Analysis Details

Data Version: SCAG Regional Travel Demand Model 2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2023

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	340
Total DUs:	340

Non-Residential:

Office KSF:	76
Local Serving Retail KSF:	
Industrial KSF:	

Residential Affordability (percent of all units):

Extremely Low Income:	51 %
Very Low Income:	0 %
Low Income:	48 %

Parking:

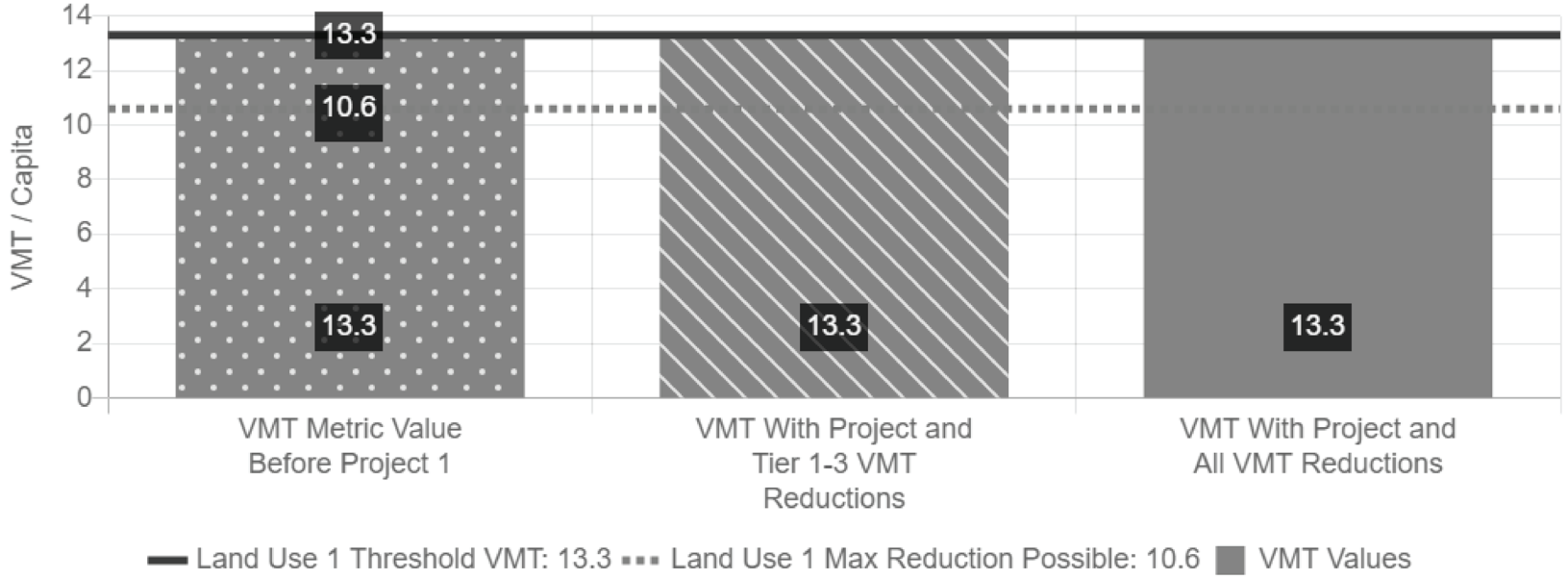
Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-based VMT per Capita
VMT Baseline Description 1:	SGVCOG Average
VMT Baseline Value 1:	15.65
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

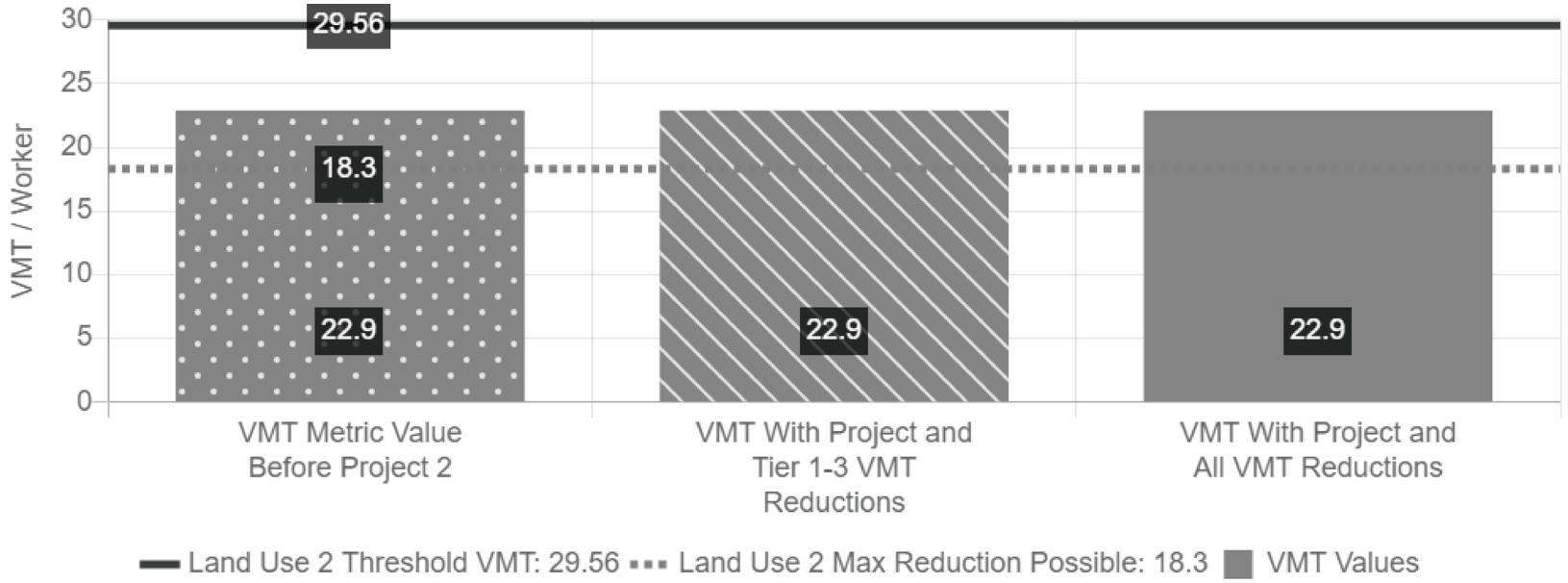
	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	13.3	13.3	13.3
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



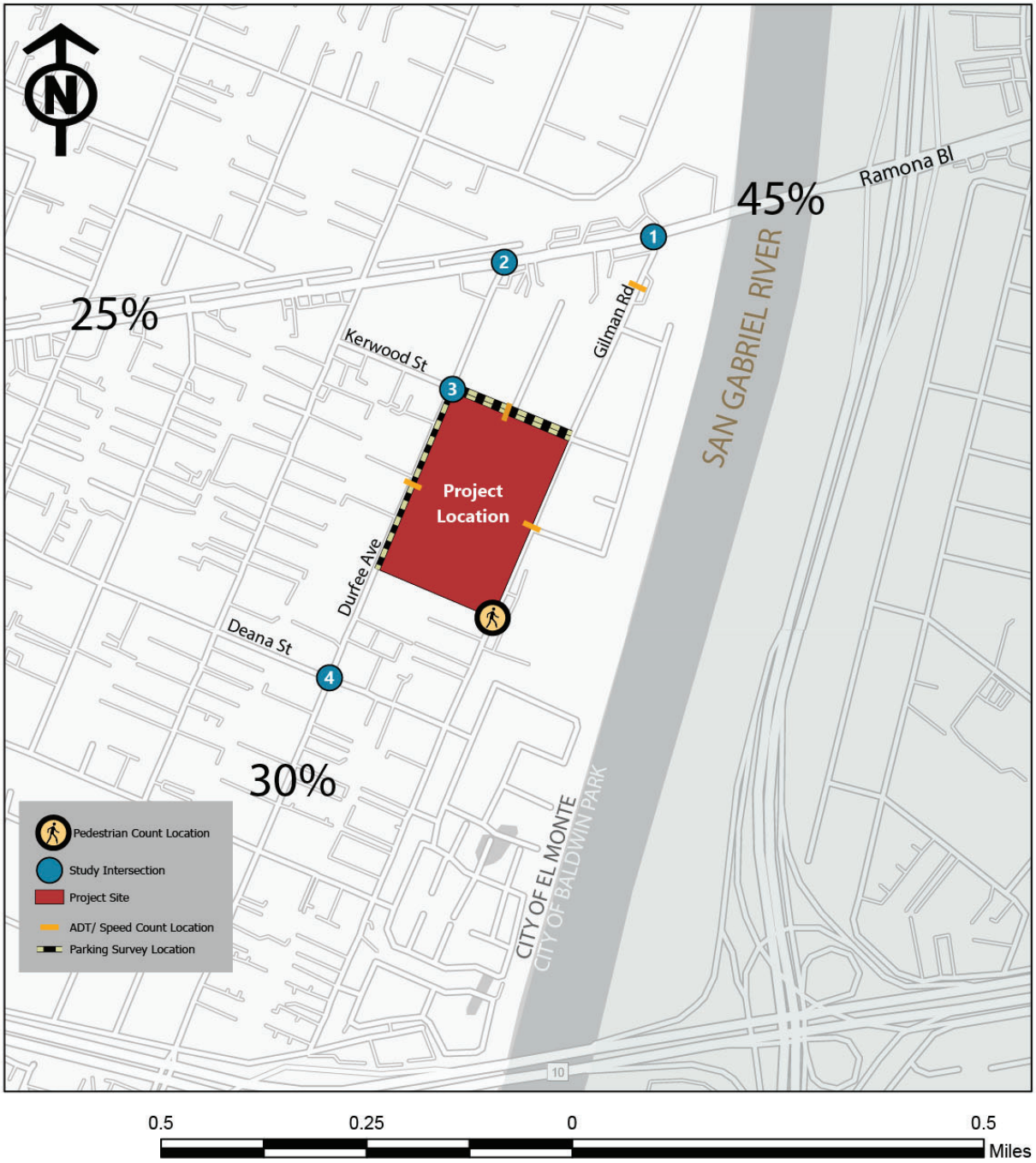
Office Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 2:	Office
VMT Without Project 2:	Total VMT per Service Population
VMT Baseline Description 2:	SGVCOG Average
VMT Baseline Value 2:	34.78
VMT Threshold Description 2:	-15%
Land Use 2 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	22.9	22.9	22.9
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



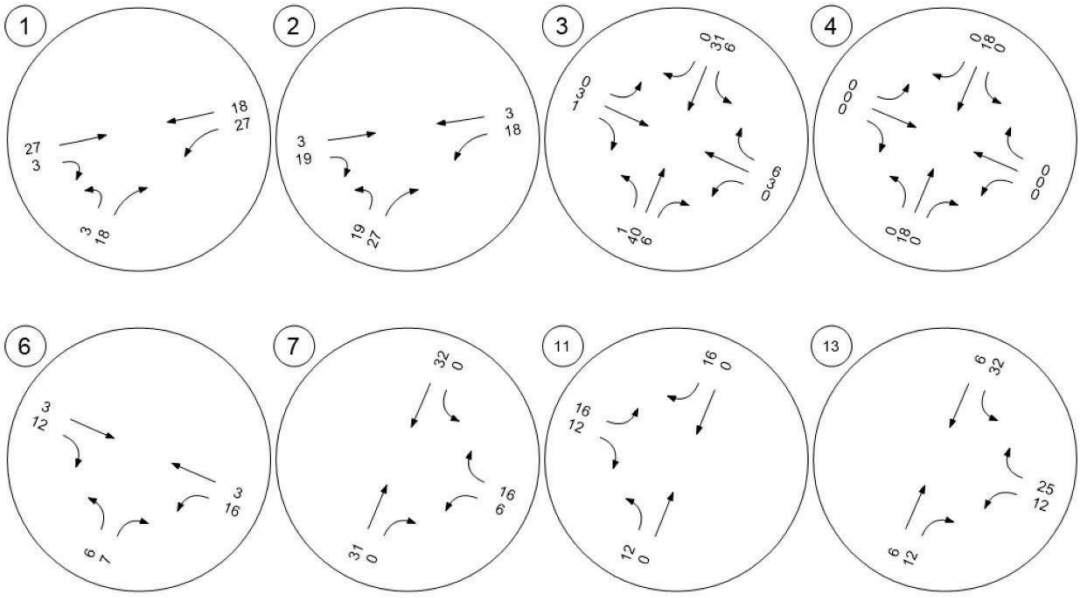
ATTACHMENT C –
LOCAL TRAFFIC ANALYSIS – MAP OF STUDY LOCATIONS
AND OVERALL TRIP DISTRIBUTION



ATTACHMENT D –
PROJECT TRIP DISTRIBUTION PERCENTAGES -
STUDY INTERSECTIONS

Generated with PTV VISTRO
Version 2021 (SP 0-6)

Traffic Volume - Net New Site Trips


1
18
27
27
3
3
18
2
3
18
3
19
19
27
3
0
0
0

APPENDIX B
VMT Calculations Output

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: August 10, 2022, 12:48:35 PM

Project Name: Esperanza Village

Project Description: 340 units multi-family, senior and affordable familymixed-se building of 36,000 sq.ft., County-related uses in 40,000 sq.ft. building

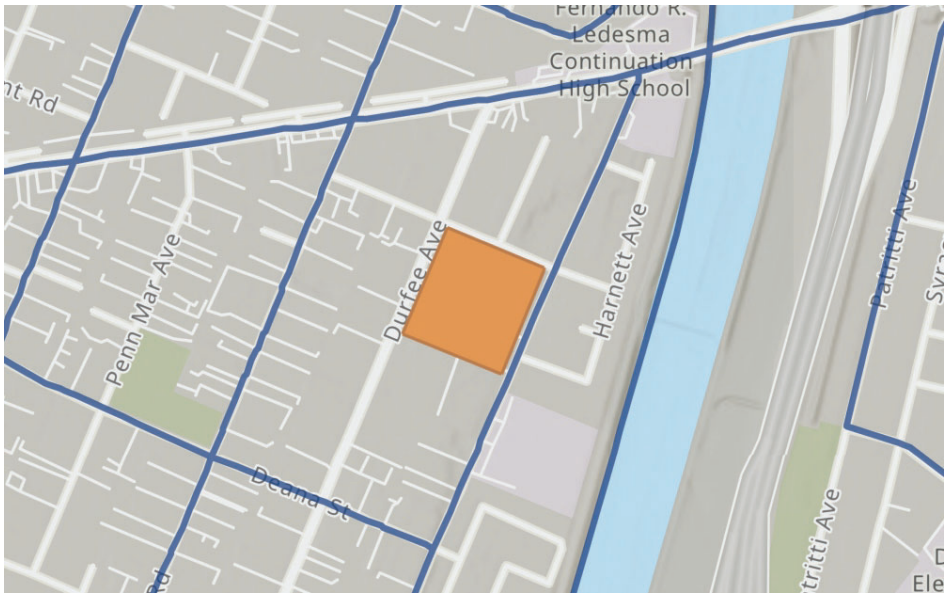
Project Location

jurisdiction:
El Monte

apn	TAZ
8549-004-900	22242100

Inside a TPA?

No (Fail)



Analysis Details

Data Version: SCAG Regional Travel Demand Model
2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2022

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	340
Total DUs:	340

Non-Residential:

Office KSF:	76
Local Serving Retail KSF:	
Industrial KSF:	

Residential Affordability (percent of all units):

Extremely Low Income:	51 %
Very Low Income:	0 %
Low Income:	48 %

Parking:

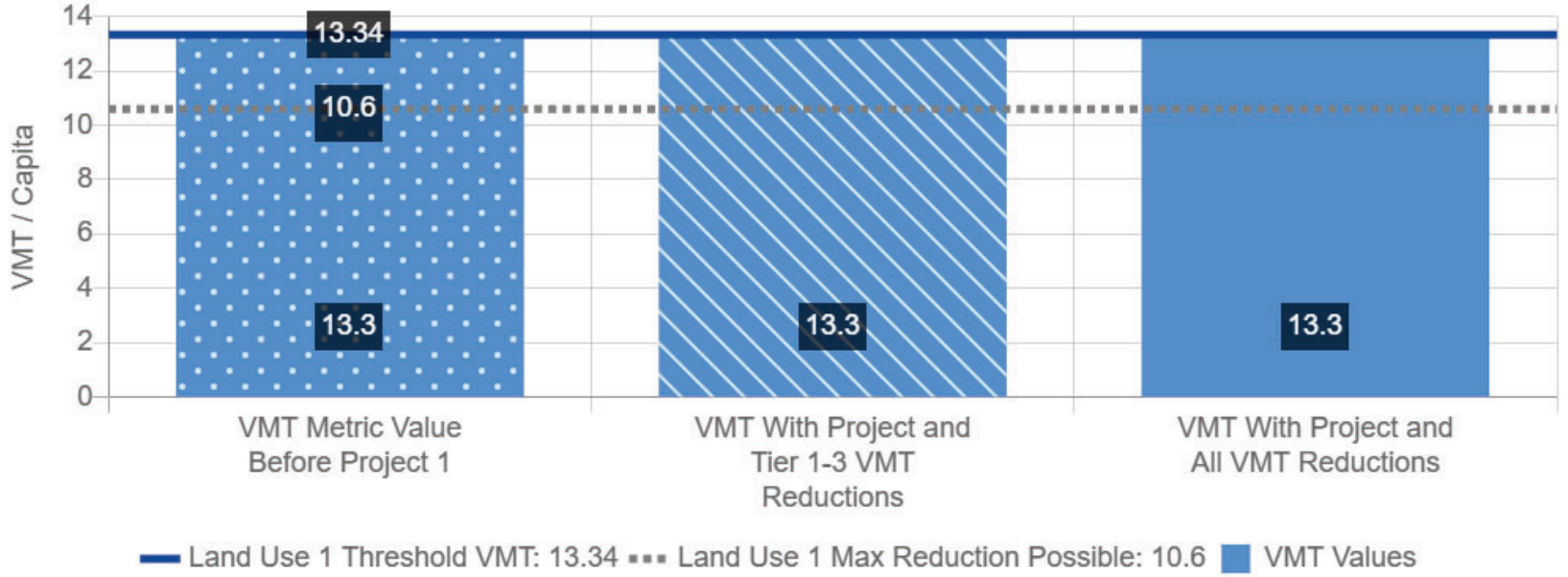
Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-based VMT per Capita
VMT Baseline Description 1:	SGVCOG Average
VMT Baseline Value 1:	15.7
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

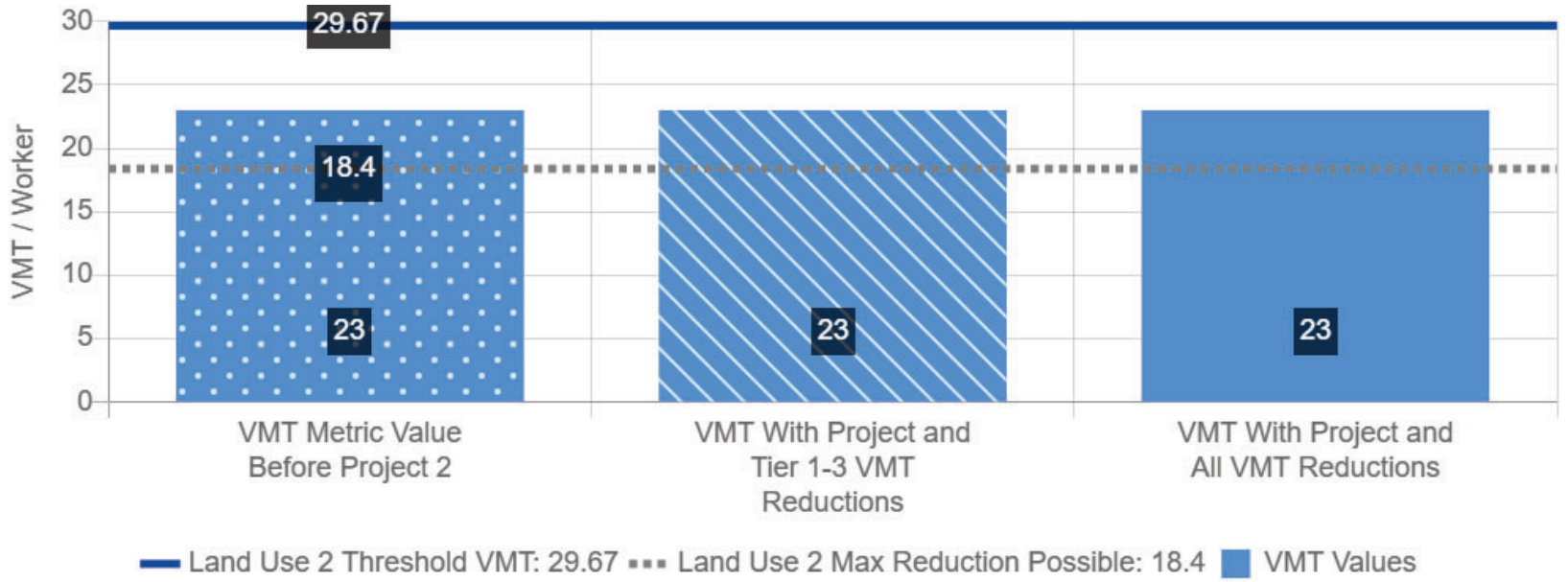
	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	13.3	13.3	13.3
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



Office Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 2:	Office
VMT Without Project 2:	Total VMT per Service Population
VMT Baseline Description 2:	SGVCOG Average
VMT Baseline Value 2:	34.9
VMT Threshold Description 2:	-15%
Land Use 2 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	23	23	23
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



APPENDIX C
Traffic Count Summaries

Prepared by National Data & Surveying Services

SPEED

Kerrwood St W/O Bannister Ave

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_001

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	3	2	0	0	0	0	0	0	0	0	0	5
1:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2
2:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	2	1	1	2	0	0	0	0	0	0	0	0	0	6
5:00	6	3	3	6	0	0	0	0	0	0	0	0	0	18
6:00	4	5	9	5	2	0	0	0	0	0	0	0	0	25
7:00	9	17	55	82	15	2	0	0	0	0	0	0	0	180
8:00	13	22	90	92	33	1	0	0	0	0	0	0	0	251
9:00	15	15	28	40	15	0	0	0	0	0	0	0	0	113
10:00	14	9	26	46	14	2	0	0	0	0	0	0	0	111
11:00	16	13	34	39	13	1	0	0	0	0	0	0	0	116
12:00 PM	17	17	22	41	15	0	0	0	0	0	0	0	0	112
13:00	11	11	49	52	24	2	0	0	0	0	0	0	0	149
14:00	13	25	100	99	24	1	0	0	0	0	0	0	0	262
15:00	10	16	44	32	15	1	0	0	0	0	0	0	0	118
16:00	12	6	28	39	11	1	0	0	0	0	0	0	0	97
17:00	10	14	30	23	7	4	0	0	0	0	0	0	0	88
18:00	6	8	20	28	7	0	0	0	0	0	0	0	0	69
19:00	6	5	18	12	2	1	0	0	0	0	0	0	0	44
20:00	4	7	16	6	4	0	0	0	0	0	0	0	0	37
21:00	3	9	8	10	1	0	0	0	0	0	0	0	0	31
22:00	1	2	1	7	1	0	0	0	0	0	0	0	0	12
23:00	5	2	3	3	1	0	0	0	0	0	0	0	0	14
Totals	178	209	590	667	204	16								1864
% of Totals	10%	11%	32%	36%	11%	1%								100%

AM Volumes	80	87	251	315	92	6	0	0	0	0	0	0	0	831
% AM	4%	5%	13%	17%	5%	0%								45%
AM Peak Hour	11:00	8:00	8:00	8:00	8:00	7:00								8:00
Volume	16	22	90	92	33	2								251
PM Volumes	98	122	339	352	112	10	0	0	0	0	0	0	0	1033
% PM	5%	7%	18%	19%	6%	1%								55%
PM Peak Hour	12:00	14:00	14:00	14:00	13:00	17:00								14:00
Volume	17	25	100	99	24	4								262

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	431	↔	23%	261	↔	14%	185	↔	10%	987	↔	53%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Kerrwood St	Summary	17	25	24	30	33	1864

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Kerrwood St W/O Bannister Ave

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	907	957	1,864

AM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0		0		1		1	
0:15	0		0		0		1		1	
0:30	0		0		0		2		2	
0:45	0		0		1	1	0	4	1	5
1:00	0		0		0		1		1	
1:15	0		0		0		0			
1:30	0		0		0		1		1	
1:45	0		0		0		0	2		2
2:00	0		0		1		0		1	
2:15	0		0		0		0			
2:30	0		0		0		1		1	
2:45	0		0		0	1	0	1		2
3:00	0		0		0		0			
3:15	0		0		0		0			
3:30	0		0		0		0			
3:45	0		0		2	2	0		2	2
4:00	0		0		1		0		1	
4:15	0		0		0		1		1	
4:30	0		0		1		3		4	
4:45	0		0		0	2	0	4		6
5:00	0		0		1		4		5	
5:15	0		0		1		5		6	
5:30	0		0		1		3		4	
5:45	0		0		0	3	3	15	3	18
6:00	0		0		0		2		2	
6:15	0		0		2		4		6	
6:30	0		0		1		3		4	
6:45	0		0		3	6	10	19	13	25
7:00	0		0		2		3		5	
7:15	0		0		12		16		28	
7:30	0		0		23		17		40	
7:45	0		0		61	98	46	82	107	180
8:00	0		0		50		75		125	
8:15	0		0		26		54		80	
8:30	0		0		13		12		25	
8:45	0		0		7	96	14	155	21	251
9:00	0		0		10		33		43	
9:15	0		0		8		15		23	
9:30	0		0		13		11		24	
9:45	0		0		9	40	14	73	23	113
10:00	0		0		7		12		19	
10:15	0		0		26		7		33	
10:30	0		0		21		8		29	
10:45	0		0		19	73	11	38	30	111
11:00	0		0		13		11		24	
11:15	0		0		14		13		27	
11:30	0		0		10		32		42	
11:45	0		0		14	51	9	65	23	116
TOTALS				373		458			831	
SPLIT %				44.9%		55.1%			44.6%	

PM Period	NB		SB		EB		WB		TOTAL	
12:00	0		0		13		20		33	
12:15	0		0		11		11		22	
12:30	0		0		19		9		28	
12:45	0		0		18	61	11	51	29	112
13:00	0		0		23		10		33	
13:15	0		0		22		10		32	
13:30	0		0		22		18		40	
13:45	0		0		27	94	17	55	44	149
14:00	0		0		24		45		69	
14:15	0		0		17		35		52	
14:30	0		0		20		18		38	
14:45	0		0		28	89	75	173	103	262
15:00	0		0		19		11		30	
15:15	0		0		11		17		28	
15:30	0		0		16		14		30	
15:45	0		0		17	63	13	55	30	118
16:00	0		0		16		11		27	
16:15	0		0		15		9		24	
16:30	0		0		10		10		20	
16:45	0		0		14	55	12	42	26	97
17:00	0		0		19		6		25	
17:15	0		0		14		5		19	
17:30	0		0		7		10		17	
17:45	0		0		15	55	12	33	27	88
18:00	0		0		15		9		24	
18:15	0		0		11		7		18	
18:30	0		0		7		7		14	
18:45	0		0		4	37	9	32	13	69
19:00	0		0		5		4		9	
19:15	0		0		9		1		10	
19:30	0		0		8		4		12	
19:45	0		0		6	28	7	16	13	44
20:00	0		0		4		5		9	
20:15	0		0		2		5		7	
20:30	0		0		9		4		13	
20:45	0		0		4	19	4	18	8	37
21:00	0		0		7		3		10	
21:15	0		0		4		6		10	
21:30	0		0		2		1		3	
21:45	0		0		6	19	2	12	8	31
22:00	0		0		1		1		2	
22:15	0		0		1		4		5	
22:30	0		0		2		2		4	
22:45	0		0		1	5	0	7	1	12
23:00	0		0		2		1		3	
23:15	0		0		4		1		5	
23:30	0		0		2		2		4	
23:45	0		0		1	9	1	5	2	14
TOTALS				534		499			1033	
SPLIT %				51.7%		48.3%			55.4%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	907	957	1,864

AM Peak Hour			7:30	7:30	7:30
AM Pk Volume			160	192	352
Pk Hr Factor			0.656	0.640	0.704
7 - 9 Volume	0	0	194	237	431
7 - 9 Peak Hour			7:30	7:30	7:30
7 - 9 Pk Volume	0	0	160	192	352
Pk Hr Factor	0.000	0.000	0.656	0.640	0.704

PM Peak Hour			13:15	14:00	14:00
PM Pk Volume			95	173	262
Pk Hr Factor			0.880	0.577	0.636
4 - 6 Volume	0	0	110	75	185
4 - 6 Peak Hour			16:15	16:00	16:00
4 - 6 Pk Volume	0	0	58	42	97
Pk Hr Factor	0.000	0.000	0.763	0.875	0.898

Prepared by National Data & Surveying Services

SPEED

Durfee Ave S/O Kerrwood St

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_002

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	3	5	9	11	5	3	1	1	1	0	0	39
1:00	0	0	0	0	9	6	5	1	1	0	1	0	0	23
2:00	0	0	1	1	6	7	0	1	0	1	0	0	0	17
3:00	0	0	1	2	3	8	7	3	1	0	0	0	0	25
4:00	0	0	0	5	11	12	16	7	0	1	0	0	0	52
5:00	0	1	5	7	18	32	23	13	4	1	0	0	0	104
6:00	2	4	4	7	33	70	49	18	7	1	0	0	0	195
7:00	1	2	6	21	92	164	138	54	16	2	0	0	0	496
8:00	3	7	8	22	96	171	104	41	10	2	0	0	0	464
9:00	0	3	11	13	50	94	65	34	6	1	0	0	0	277
10:00	3	4	3	15	43	80	69	26	4	1	0	0	0	248
11:00	1	2	16	16	48	102	88	42	9	1	1	0	0	326
12:00 PM	2	6	12	15	59	96	93	35	7	0	1	0	0	326
13:00	1	3	11	28	65	120	103	56	13	1	1	0	0	402
14:00	2	1	5	22	78	153	149	54	10	0	0	0	0	474
15:00	0	0	5	13	62	150	133	35	18	6	0	0	0	422
16:00	4	0	4	12	43	148	131	51	17	5	0	0	0	415
17:00	0	3	4	18	42	142	155	52	15	2	2	0	0	435
18:00	1	2	6	8	57	128	92	40	7	2	0	0	0	343
19:00	4	2	8	24	61	84	68	28	11	2	1	0	0	293
20:00	0	1	6	14	69	97	66	20	3	0	0	0	0	276
21:00	0	1	5	9	32	61	47	12	5	2	0	0	0	174
22:00	2	6	4	6	29	29	33	8	4	1	1	0	0	123
23:00	1	0	1	10	18	27	20	5	0	1	1	0	0	84
Totals	27	48	129	293	1033	1992	1659	639	169	34	10			6033
% of Totals	0%	1%	2%	5%	17%	33%	27%	11%	3%	1%	0%			100%

AM Volumes	10	23	58	114	418	757	569	243	59	12	3	0	0	2266
% AM	0%	0%	1%	2%	7%	13%	9%	4%	1%	0%	0%			38%
AM Peak Hour	8:00	8:00	11:00	8:00	8:00	8:00	7:00	7:00	7:00	7:00				7:00
Volume	3	7	16	22	96	171	138	54	16	2	1			496
PM Volumes	17	25	71	179	615	1235	1090	396	110	22	7	0	0	3767
% PM	0%	0%	1%	3%	10%	20%	18%	7%	2%	0%	0%			62%
PM Peak Hour	16:00	12:00	12:00	13:00	14:00	14:00	17:00	13:00	15:00	15:00	17:00			14:00
Volume	4	6	12	28	78	153	155	56	18	6	2			474

Directional Peak Periods All Speeds	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	960 ⟷	16%	728 ⟷	12%	850 ⟷	14%	3495 ⟷	58%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Durfee Ave	Summary	32	39	39	45	49	6033

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Durfee Ave S/O Kerrwood St

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_002

DAILY TOTALS	NB	SB	EB	WB	Total
	2,815	3,218	0	0	6,033

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	4		8		0	0	12		12:00	43		41		0	0	84	
0:15	6		5		0	0	11		12:15	36		42		0	0	78	
0:30	3		5		0	0	8		12:30	48		43		0	0	91	
0:45	5	18	3	21	0	0	8	39	12:45	30	157	43	169	0	0	73	326
1:00	1		6		0	0	7		13:00	51		41		0	0	92	
1:15	2		2		0	0	4		13:15	47		47		0	0	94	
1:30	2		6		0	0	8		13:30	39		53		0	0	92	
1:45	1	6	3	17	0	0	4	23	13:45	64	201	60	201	0	0	124	402
2:00	2		2		0	0	4		14:00	57		75		0	0	132	
2:15	3		3		0	0	6		14:15	55		65		0	0	120	
2:30	1		3		0	0	4		14:30	52		50		0	0	102	
2:45	0	6	3	11	0	0	3	17	14:45	57	221	63	253	0	0	120	474
3:00	2		3		0	0	5		15:00	45		58		0	0	103	
3:15	3		1		0	0	4		15:15	59		51		0	0	110	
3:30	6		3		0	0	9		15:30	41		54		0	0	95	
3:45	4	15	3	10	0	0	7	25	15:45	66	211	48	211	0	0	114	422
4:00	5		8		0	0	13		16:00	44		51		0	0	95	
4:15	6		5		0	0	11		16:15	52		48		0	0	100	
4:30	4		9		0	0	13		16:30	57		53		0	0	110	
4:45	9	24	6	28	0	0	15	52	16:45	57	210	53	205	0	0	110	415
5:00	9		11		0	0	20		17:00	57		46		0	0	103	
5:15	11		11		0	0	22		17:15	57		50		0	0	107	
5:30	20		14		0	0	34		17:30	54		61		0	0	115	
5:45	12	52	16	52	0	0	28	104	17:45	60	228	50	207	0	0	110	435
6:00	18		19		0	0	37		18:00	46		56		0	0	102	
6:15	20		25		0	0	45		18:15	51		43		0	0	94	
6:30	24		26		0	0	50		18:30	47		33		0	0	80	
6:45	20	82	43	113	0	0	63	195	18:45	36	180	31	163	0	0	67	343
7:00	26		61		0	0	87		19:00	28		33		0	0	61	
7:15	35		76		0	0	111		19:15	33		49		0	0	82	
7:30	42		85		0	0	127		19:30	37		35		0	0	72	
7:45	62	165	109	331	0	0	171	496	19:45	32	130	46	163	0	0	78	293
8:00	61		115		0	0	176		20:00	39		56		0	0	95	
8:15	32		77		0	0	109		20:15	33		28		0	0	61	
8:30	44		52		0	0	96		20:30	30		28		0	0	58	
8:45	44	181	39	283	0	0	83	464	20:45	32	134	30	142	0	0	62	276
9:00	28		44		0	0	72		21:00	28		20		0	0	48	
9:15	28		50		0	0	78		21:15	24		18		0	0	42	
9:30	27		32		0	0	59		21:30	24		17		0	0	41	
9:45	30	113	38	164	0	0	68	277	21:45	26	102	17	72	0	0	43	174
10:00	34		38		0	0	72		22:00	15		20		0	0	35	
10:15	26		23		0	0	49		22:15	10		19		0	0	29	
10:30	28		28		0	0	56		22:30	13		15		0	0	28	
10:45	35	123	36	125	0	0	71	248	22:45	12	50	19	73	0	0	31	123
11:00	37		27		0	0	64		23:00	11		8		0	0	19	
11:15	40		43		0	0	83		23:15	13		15		0	0	28	
11:30	37		46		0	0	83		23:30	9		11		0	0	20	
11:45	51	165	45	161	0	0	96	326	23:45	8	41	9	43	0	0	17	84
TOTALS		950		1316				2266	TOTALS		1865		1902				3767
SPLIT %		41.9%		58.1%				37.6%	SPLIT %		49.5%		50.5%				62.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,815	3,218	0	0	6,033

AM Peak Hour	7:15	7:30					7:15		PM Peak Hour	13:45	13:30					13:45		
AM Pk Volume	200	386					585		PM Pk Volume	228	253					478		
Pk Hr Factor	0.806	0.839					0.831		Pk Hr Factor	0.891	0.843					0.905		
7 - 9 Volume	346	614	0	0			960		4 - 6 Volume	438	412	0	0			850		
7 - 9 Peak Hour	7:15	7:30					7:15		4 - 6 Peak Hour	16:30	16:45					16:45		
7 - 9 Pk Volume	200	386	0	0			585		4 - 6 Pk Volume	228	210	0	0			435		
Pk Hr Factor	0.806	0.839	0.000	0.000			0.831		Pk Hr Factor	1.000	0.861	0.000	0.000			0.946		

Prepared by National Data & Surveying Services

SPEED

Gilman Rd S/O Woodville Dr

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_003

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	4	4	4	0	0	0	0	0	0	0	0	12
1:00	0	0	1	4	3	1	0	0	0	0	0	0	0	9
2:00	1	0	4	1	1	0	0	0	0	0	0	0	0	7
3:00	2	1	2	1	1	1	0	0	0	0	0	0	0	8
4:00	2	0	3	4	1	0	0	0	0	0	0	0	0	10
5:00	7	2	8	12	6	2	1	0	0	0	0	0	0	38
6:00	4	4	10	14	9	11	1	0	0	0	0	0	0	53
7:00	9	42	64	54	17	2	0	0	0	0	0	0	0	188
8:00	16	67	92	59	12	4	2	0	0	0	0	0	0	252
9:00	7	8	27	23	17	5	1	0	0	0	0	0	0	88
10:00	5	4	22	39	20	2	2	0	0	0	0	0	0	94
11:00	11	6	29	22	11	2	0	0	0	0	0	0	0	81
12:00 PM	7	6	18	34	16	6	0	0	0	0	0	0	0	87
13:00	7	13	29	41	24	4	1	0	0	0	0	0	0	119
14:00	41	66	82	43	6	2	0	0	0	0	0	0	0	240
15:00	16	26	30	24	11	0	2	0	0	0	0	0	0	109
16:00	8	18	26	24	9	1	0	0	0	0	0	0	0	86
17:00	17	8	13	14	12	3	0	0	0	0	0	0	0	67
18:00	19	6	12	7	9	2	0	0	0	0	0	0	0	55
19:00	13	11	13	28	9	3	3	0	0	0	0	0	0	80
20:00	10	7	19	30	11	6	1	0	0	0	0	0	0	84
21:00	14	9	11	16	14	3	0	0	0	0	0	0	0	67
22:00	1	4	10	3	12	6	0	0	0	0	0	0	0	36
23:00	3	2	6	5	3	1	1	0	0	0	0	0	0	21
Totals	220	310	535	506	238	67	15							1891
% of Totals	12%	16%	28%	27%	13%	4%	1%							100%

AM Volumes	64	134	266	237	102	30	7	0	0	0	0	0	0	840
% AM	3%	7%	14%	13%	5%	2%	0%							44%
AM Peak Hour	8:00	8:00	8:00	8:00	10:00	6:00	8:00							8:00
Volume	16	67	92	59	20	11	2							252
PM Volumes	156	176	269	269	136	37	8	0	0	0	0	0	0	1051
% PM	8%	9%	14%	14%	7%	2%	0%							56%
PM Peak Hour	14:00	14:00	14:00	14:00	13:00	12:00	19:00							14:00
Volume	41	66	82	43	24	6	3							240

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	440	↔	23%	206	↔	11%	153	↔	8%	1092	↔	58%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Gilman Rd	Summary	16	24	24	31	35	1891

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Gilman Rd S/O Woodville Dr

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_003

DAILY TOTALS	NB	SB	EB	WB	Total
	1,152	739	0	0	1,891

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	2		1		0	0	3		12:00	16		8		0	0	24	
0:15	2		2		0	0	4		12:15	10		10		0	0	20	
0:30	0		0		0	0			12:30	11		10		0	0	21	
0:45	3	7	2	5	0	0	5	12	12:45	14	51	8	36	0	0	22	87
1:00	1		2		0	0	3		13:00	11		11		0	0	22	
1:15	0		1		0	0	1		13:15	17		12		0	0	29	
1:30	2		3		0	0	5		13:30	21		15		0	0	36	
1:45	0	3	0	6	0	0		9	13:45	19	68	13	51	0	0	32	119
2:00	0		2		0	0	2		14:00	28		31		0	0	59	
2:15	0		1		0	0	1		14:15	44		25		0	0	69	
2:30	0		2		0	0	2		14:30	28		17		0	0	45	
2:45	1	1	1	6	0	0	2	7	14:45	58	158	9	82	0	0	67	240
3:00	1		3		0	0	4		15:00	24		9		0	0	33	
3:15	1		0		0	0	1		15:15	20		6		0	0	26	
3:30	2		0		0	0	2		15:30	11		6		0	0	17	
3:45	1	5	0	3	0	0	1	8	15:45	26	81	7	28	0	0	33	109
4:00	2		2		0	0	4		16:00	21		10		0	0	31	
4:15	2		1		0	0	3		16:15	11		7		0	0	18	
4:30	2		1		0	0	3		16:30	15		8		0	0	23	
4:45	0	6	0	4	0	0		10	16:45	13	60	1	26	0	0	14	86
5:00	6		4		0	0	10		17:00	14		3		0	0	17	
5:15	6		1		0	0	7		17:15	11		3		0	0	14	
5:30	5		3		0	0	8		17:30	16		2		0	0	18	
5:45	9	26	4	12	0	0	13	38	17:45	14	55	4	12	0	0	18	67
6:00	8		1		0	0	9		18:00	17		1		0	0	18	
6:15	8		6		0	0	14		18:15	10		3		0	0	13	
6:30	9		6		0	0	15		18:30	9		2		0	0	11	
6:45	8	33	7	20	0	0	15	53	18:45	11	47	2	8	0	0	13	55
7:00	10		8		0	0	18		19:00	11		3		0	0	14	
7:15	7		12		0	0	19		19:15	11		5		0	0	16	
7:30	28		21		0	0	49		19:30	9		16		0	0	25	
7:45	59	104	43	84	0	0	102	188	19:45	11	42	14	38	0	0	25	80
8:00	75		56		0	0	131		20:00	8		14		0	0	22	
8:15	60		17		0	0	77		20:15	4		13		0	0	17	
8:30	18		6		0	0	24		20:30	7		15		0	0	22	
8:45	11	164	9	88	0	0	20	252	20:45	9	28	14	56	0	0	23	84
9:00	11		16		0	0	27		21:00	6		7		0	0	13	
9:15	15		9		0	0	24		21:15	10		8		0	0	18	
9:30	10		10		0	0	20		21:30	5		5		0	0	10	
9:45	15	51	2	37	0	0	17	88	21:45	13	34	13	33	0	0	26	67
10:00	10		7		0	0	17		22:00	7		6		0	0	13	
10:15	14		6		0	0	20		22:15	4		9		0	0	13	
10:30	18		12		0	0	30		22:30	3		4		0	0	7	
10:45	19	61	8	33	0	0	27	94	22:45	2	16	1	20	0	0	3	36
11:00	13		10		0	0	23		23:00	2		2		0	0	4	
11:15	9		9		0	0	18		23:15	2		4		0	0	6	
11:30	5		15		0	0	20		23:30	5		3		0	0	8	
11:45	14	41	6	40	0	0	20	81	23:45	1	10	2	11	0	0	3	21
TOTALS		502		338				**840**	**TOTALS**		650		401				**1051**
SPLIT %		59.8%		40.2%				**44.4%**	**SPLIT %**		61.8%		38.2%				**55.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,152	739	0	0	1,891

AM Peak Hour	7:30		7:30					**7:30**	**PM Peak Hour**	14:00		13:45					**14:00**
AM Pk Volume	222		137					**359**	**PM Pk Volume**	158		86					**240**
Pk Hr Factor	0.740		0.612					**0.685**	**Pk Hr Factor**	0.681		0.694					**0.870**
7 - 9 Volume	268		172		0	0		**440**	**4 - 6 Volume**	115		38		0	0		**153**
7 - 9 Peak Hour	7:30		7:30					**7:30**	**4 - 6 Peak Hour**	16:00		16:00					**16:00**
7 - 9 Pk Volume	222		137		0	0		**359**	**4 - 6 Pk Volume**	60		26		0	0		**86**
Pk Hr Factor	0.740		0.612		0.000	0.000		**0.685**	**Pk Hr Factor**	0.714		0.650		0.000	0.000		**0.694**

Prepared by National Data & Surveying Services

SPEED

Gilman Rd S/O Ramona Blvd

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_004

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	1	5	13	7	0	0	0	0	0	0	0	0	26
1:00	0	2	3	6	3	1	0	0	0	0	0	0	0	15
2:00	1	0	1	2	1	0	0	0	0	0	0	0	0	5
3:00	0	0	4	1	1	3	0	0	0	0	0	0	0	9
4:00	0	2	3	7	0	4	0	0	0	0	0	0	0	16
5:00	0	1	9	15	20	3	0	0	0	0	0	0	0	48
6:00	6	4	15	31	14	5	0	0	1	0	0	0	0	76
7:00	55	25	36	37	8	2	0	1	0	0	0	0	0	164
8:00	32	28	36	24	6	1	0	0	0	0	0	0	0	127
9:00	21	26	43	40	3	0	0	0	0	0	0	0	0	133
10:00	21	38	51	23	5	0	0	0	0	0	0	0	0	138
11:00	19	33	52	15	10	1	0	0	0	0	0	0	0	130
12:00 PM	10	17	37	45	14	0	0	0	0	0	0	0	0	123
13:00	29	31	42	15	5	0	0	0	0	0	0	0	0	122
14:00	29	28	41	34	9	2	1	0	0	0	0	0	0	144
15:00	10	19	41	47	12	2	0	0	0	0	0	0	0	131
16:00	10	20	63	66	22	3	0	0	0	0	0	0	0	184
17:00	11	25	56	55	29	2	0	0	0	0	0	0	0	178
18:00	6	14	57	62	35	6	1	0	0	0	0	0	0	181
19:00	2	7	32	56	22	2	0	0	0	0	0	0	0	121
20:00	0	3	30	54	20	2	0	0	0	0	0	0	0	109
21:00	0	6	19	24	21	2	0	0	0	0	0	0	0	72
22:00	1	6	9	17	12	4	0	0	0	0	0	0	0	49
23:00	0	4	11	11	7	1	0	0	0	0	0	0	0	34
Totals	263	340	696	700	286	46	2	1	1					2335
% of Totals	11%	15%	30%	30%	12%	2%	0%	0%	0%					100%

AM Volumes	155	160	258	214	78	20	0	1	1	0	0	0	0	887
% AM	7%	7%	11%	9%	3%	1%		0%	0%					38%
AM Peak Hour	7:00	10:00	11:00	9:00	5:00	6:00		7:00	6:00					7:00
Volume	55	38	52	40	20	5		1	1					164
PM Volumes	108	180	438	486	208	26	2	0	0	0	0	0	0	1448
% PM	5%	8%	19%	21%	9%	1%	0%							62%
PM Peak Hour	13:00	13:00	16:00	16:00	18:00	18:00	14:00							16:00
Volume	29	31	63	66	35	6	1							184

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	291	↔	12%	245	↔	10%	362	↔	16%	1437	↔	62%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Gilman Rd	Summary	16	24	23	30	34	2335

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Gilman Rd S/O Ramona Blvd

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_004

DAILY TOTALS	NB	SB	EB	WB	Total
	1,324	1,011	0	0	2,335

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	3		4		0	0	7		12:00	19		14		0	0	33	
0:15	2		5		0	0	7		12:15	20		12		0	0	32	
0:30	1		4		0	0	5		12:30	17		12		0	0	29	
0:45	4	10	3	16	0	0	7	26	12:45	15	71	14	52	0	0	29	123
1:00	2		5		0	0	7		13:00	19		15		0	0	34	
1:15	0		1		0	0	1		13:15	15		10		0	0	25	
1:30	3		4		0	0	7		13:30	20		14		0	0	34	
1:45	0	5	0	10	0	0		15	13:45	13	67	16	55	0	0	29	122
2:00	0		1		0	0	1		14:00	23		19		0	0	42	
2:15	0		1		0	0	1		14:15	25		9		0	0	34	
2:30	0		1		0	0	1		14:30	13		13		0	0	26	
2:45	1	1	1	4	0	0	2	5	14:45	29	90	13	54	0	0	42	144
3:00	1		0		0	0	1		15:00	26		7		0	0	33	
3:15	0		0		0	0			15:15	28		12		0	0	40	
3:30	4		0		0	0	4		15:30	18		6		0	0	24	
3:45	3	8	1	1	0	0	4	9	15:45	26	98	8	33	0	0	34	131
4:00	2		2		0	0	4		16:00	23		19		0	0	42	
4:15	2		1		0	0	3		16:15	25		18		0	0	43	
4:30	8		0		0	0	8		16:30	22		28		0	0	50	
4:45	1	13	0	3	0	0	1	16	16:45	20	90	29	94	0	0	49	184
5:00	6		1		0	0	7		17:00	24		25		0	0	49	
5:15	9		3		0	0	12		17:15	26		22		0	0	48	
5:30	11		1		0	0	12		17:30	21		11		0	0	32	
5:45	13	39	4	9	0	0	17	48	17:45	25	96	24	82	0	0	49	178
6:00	13		0		0	0	13		18:00	26		18		0	0	44	
6:15	7		6		0	0	13		18:15	16		24		0	0	40	
6:30	13		9		0	0	22		18:30	21		31		0	0	52	
6:45	21	54	7	22	0	0	28	76	18:45	21	84	24	97	0	0	45	181
7:00	22		9		0	0	31		19:00	17		16		0	0	33	
7:15	16		16		0	0	32		19:15	14		7		0	0	21	
7:30	30		14		0	0	44		19:30	14		12		0	0	26	
7:45	43	111	14	53	0	0	57	164	19:45	13	58	28	63	0	0	41	121
8:00	19		22		0	0	41		20:00	13		16		0	0	29	
8:15	22		10		0	0	32		20:15	7		18		0	0	25	
8:30	23		7		0	0	30		20:30	7		19		0	0	26	
8:45	15	79	9	48	0	0	24	127	20:45	10	37	19	72	0	0	29	109
9:00	21		13		0	0	34		21:00	8		10		0	0	18	
9:15	20		11		0	0	31		21:15	7		9		0	0	16	
9:30	21		10		0	0	31		21:30	8		7		0	0	15	
9:45	25	87	12	46	0	0	37	133	21:45	9	32	14	40	0	0	23	72
10:00	15		7		0	0	22		22:00	7		11		0	0	18	
10:15	24		13		0	0	37		22:15	4		14		0	0	18	
10:30	20		17		0	0	37		22:30	4		4		0	0	8	
10:45	30	89	12	49	0	0	42	138	22:45	3	18	2	31	0	0	5	49
11:00	19		14		0	0	33		23:00	2		4		0	0	6	
11:15	18		16		0	0	34		23:15	3		3		0	0	6	
11:30	21		20		0	0	41		23:30	9		6		0	0	15	
11:45	12	70	10	60	0	0	22	130	23:45	3	17	4	17	0	0	7	34
TOTALS		566		321				887	TOTALS		758		690				1448
SPLIT %		63.8%		36.2%				38.0%	SPLIT %		52.3%		47.7%				62.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,324	1,011	0	0	2,335

AM Peak Hour	7:30	7:15					7:15		PM Peak Hour	14:45	16:30					16:30		
AM Pk Volume	114	66					174		PM Pk Volume	101	104					196		
Pk Hr Factor	0.663	0.750					0.763		Pk Hr Factor	0.871	0.897					0.980		
7 - 9 Volume	190	101	0	0			291		4 - 6 Volume	186	176	0	0			362		
7 - 9 Peak Hour	7:30	7:15					7:15		4 - 6 Peak Hour	17:00	16:30					16:30		
7 - 9 Pk Volume	114	66	0	0			174		4 - 6 Pk Volume	96	104	0	0			196		
Pk Hr Factor	0.663	0.750	0.000	0.000			0.763		Pk Hr Factor	0.923	0.897	0.000	0.000			0.980		

National Data & Surveying Services Intersection Turning Movement Count

Location: Gilman Rd & Ramona Blvd
City: El Monte
Control: Signalized

Project ID: 22-020196-001
Date: 6/6/2022

Data - Totals

NS/EW Streets:	Gilman Rd				Gilman Rd				Ramona Blvd				Ramona Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	0	14	0	0	0	7	0	2	106	1	0	12	142	0	0	286
7:15 AM	3	1	9	0	0	0	15	0	1	100	9	0	14	212	0	0	364
7:30 AM	10	0	13	0	0	0	14	0	1	141	4	0	15	217	1	1	417
7:45 AM	26	0	10	0	0	0	10	0	0	165	30	0	6	234	1	0	482
8:00 AM	17	0	8	0	0	0	8	0	0	146	23	0	7	199	0	0	408
8:15 AM	3	0	10	0	0	0	18	0	1	142	8	0	5	138	0	0	325
8:30 AM	2	0	15	1	0	0	8	0	1	145	4	0	1	171	0	0	348
8:45 AM	0	1	6	1	0	0	8	0	0	125	5	0	2	154	0	0	302
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	2	85	2	0	0	88	0	6	1070	84	0	62	1467	2	1	2932
APPROACH %'s :	41.45%	1.32%	55.92%	1.32%	0.00%	0.00%	100.00%	0.00%	0.52%	92.24%	7.24%	0.00%	4.05%	95.76%	0.13%	0.07%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	56	1	40	0	0	0	47	0	2	552	66	0	42	862	2	1	1671
PEAK HR FACTOR :	0.538	0.250	0.769	0.000	0.000	0.000	0.783	0.000	0.500	0.836	0.550	0.000	0.700	0.921	0.500	0.250	0.867
	0.674				0.783				0.795				0.941				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	15	0	0	0	30	0	0	175	9	0	5	186	1	0	423
4:15 PM	9	0	12	0	0	1	9	1	0	149	15	0	9	160	1	0	366
4:30 PM	3	0	12	0	0	0	10	0	0	186	10	0	22	154	0	0	397
4:45 PM	8	0	12	0	0	0	11	0	0	153	8	0	23	181	3	0	399
5:00 PM	7	0	16	0	0	0	20	0	0	184	4	0	27	196	0	1	455
5:15 PM	6	0	21	0	0	0	31	0	0	178	7	0	20	189	0	0	452
5:30 PM	4	0	9	0	0	0	27	0	0	150	5	1	9	177	0	0	382
5:45 PM	5	0	12	0	0	0	22	0	1	167	10	0	18	167	0	0	402
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	44	0	109	0	0	1	160	1	1	1342	68	1	133	1410	5	1	3276
APPROACH %'s :	28.76%	0.00%	71.24%	0.00%	0.00%	0.62%	98.77%	0.62%	0.07%	95.04%	4.82%	0.07%	8.59%	91.03%	0.32%	0.06%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	24	0	61	0	0	0	72	0	0	701	29	0	92	720	3	1	1703
PEAK HR FACTOR :	0.750	0.000	0.726	0.000	0.000	0.000	0.581	0.000	0.000	0.942	0.725	0.000	0.852	0.918	0.250	0.250	0.936
	0.787				0.581				0.931				0.911				

Prepared by National Data & Surveying Services

Gilman Rd & Ramona Blvd

Peak Hour Turning Movement Count

ID: 22-020196-001
City: El Monte

Day: Monday
Date: 6/6/2022

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Gilman Rd)

	L	T	R	U		
AM	47	0	0	0	5	AM
NOON	0	0	0	0	0	NOON
PM	72	0	0	0	3	PM

EASTBOUND (Ramona Blvd)

	L	T	R	U		
AM	0	0	0	0	965	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	816	PM

0	0	0	0
2	0	0	1
552	0	701	2
66	0	29	0

WESTBOUND (Ramona Blvd)

	L	T	R	U		
PM	3	0	2	0	0	PM
NOON	720	0	862	0	2	NOON
AM	92	0	42	0	1	AM
PM	1	0	1	0	0	PM
NOON	763	0	593	0	0	NOON
AM	0	0	1	0	0	AM

NORTHBOUND (Gilman Rd)

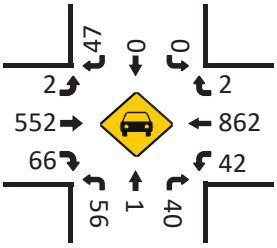
	L	T	R	U		
PM	121	0	24	0	61	PM
NOON	0	0	0	0	0	NOON
AM	108	0	56	1	40	AM

CONTROL

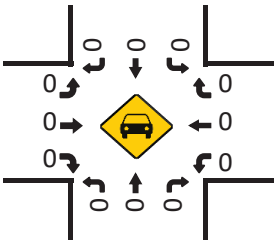
Signalized

TEV	1671 AM	0 NOON	1703 PM
PHF	0.87		0.94

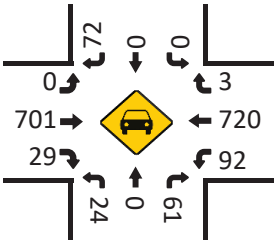
Total (AM)



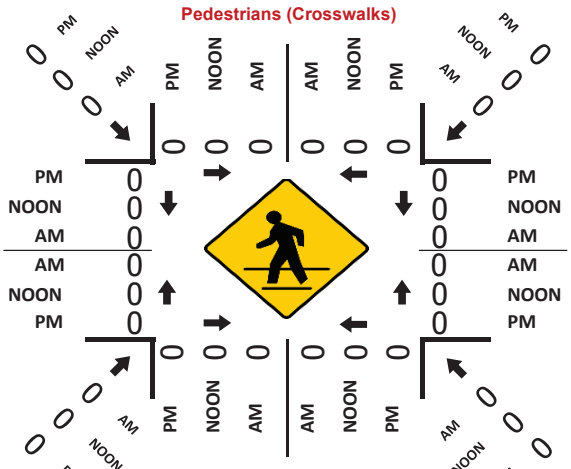
Total (NOON)



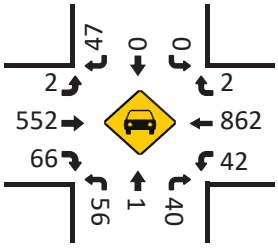
Total (PM)



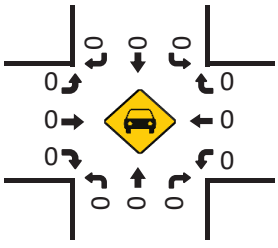
Pedestrians (Crosswalks)



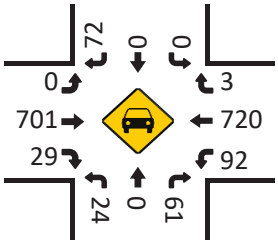
Total (AM)



Total (NOON)



Total (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Durfee Ave & Ramona Blvd
City: El Monte
Control: 1-Way Stop (NB)

Project ID: 22-020196-002
Date: 6/6/2022

Data - Totals

NS/EW Streets:	Durfee Ave				Durfee Ave				Ramona Blvd				Ramona Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	0	18	0	0	0	0	0	0	104	7	0	25	117	0	0	276
7:15 AM	3	0	15	0	0	0	0	0	0	105	11	1	42	178	0	0	355
7:30 AM	6	0	14	0	0	0	0	0	0	144	13	0	47	177	0	0	401
7:45 AM	5	0	32	0	0	0	0	0	0	175	18	0	62	197	0	1	490
8:00 AM	3	0	20	0	0	0	0	0	0	160	25	1	23	197	0	4	433
8:15 AM	3	0	25	0	0	0	0	0	0	133	17	0	8	137	0	0	323
8:30 AM	6	0	20	0	0	0	0	0	0	129	7	0	10	161	0	0	333
8:45 AM	10	0	27	0	0	0	0	0	0	107	13	0	16	141	0	1	315
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	41	0	171	0	0	0	0	0	0	1057	111	2	233	1305	0	6	2926
APPROACH %'s :	19.34%	0.00%	80.66%	0.00%					0.00%	90.34%	9.49%	0.17%	15.09%	84.52%	0.00%	0.39%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	17	0	81	0	0	0	0	0	0	584	67	2	174	749	0	5	1679
PEAK HR FACTOR :	0.708	0.000	0.633	0.000	0.000	0.000	0.000	0.000	0.000	0.834	0.670	0.500	0.702	0.951	0.000	0.313	0.857
	0.662				0.846								0.892				

	Mjaor	Minor
	1581	98

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	0	27	0	0	0	0	0	0	168	17	0	12	176	0	0	408
4:15 PM	7	0	20	0	0	0	0	0	0	145	13	0	24	149	0	0	358
4:30 PM	12	0	22	0	0	0	0	0	0	177	16	0	18	139	0	0	384
4:45 PM	9	0	19	0	0	0	0	0	0	143	13	0	27	163	0	0	374
5:00 PM	4	0	20	0	0	0	0	0	0	164	14	0	42	167	0	0	411
5:15 PM	10	0	23	0	0	0	0	0	0	158	22	0	30	164	0	0	407
5:30 PM	10	0	18	0	0	0	0	0	0	142	11	0	24	163	0	0	368
5:45 PM	10	0	21	0	0	0	0	0	0	164	11	0	22	145	0	0	373
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	70	0	170	0	0	0	0	0	0	1261	117	0	199	1266	0	0	3083
APPROACH %'s :	29.17%	0.00%	70.83%	0.00%					0.00%	91.51%	8.49%	0.00%	13.58%	86.42%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	35	0	84	0	0	0	0	0	0	642	65	0	117	633	0	0	1576
PEAK HR FACTOR :	0.729	0.000	0.913	0.000	0.000	0.000	0.000	0.000	0.000	0.907	0.739	0.000	0.696	0.948	0.000	0.000	0.959
	0.875				0.916								0.897				

	Mjaor	Minor
	1457	119

Prepared by National Data & Surveying Services

Durfee Ave & Ramona Blvd

Peak Hour Turning Movement Count

ID: 22-020196-002
City: El Monte

Day: Monday
Date: 6/6/2022

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Durfee Ave)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Ramona Blvd)

AM	NOON	PM		
768	0	668	⇦	
2	0	0	↶	0
0	0	0	↱	0
584	0	642	→	2
67	0	65	↴	0
AM	NOON	PM		

WESTBOUND (Ramona Blvd)

PM	NOON	AM		
0	0	0	↰	0
633	0	749	←	2
117	0	174	↰	1
0	0	5	↰	0
726	0	670	⇨	
PM	NOON	AM		

NORTHBOUND (Durfee Ave)

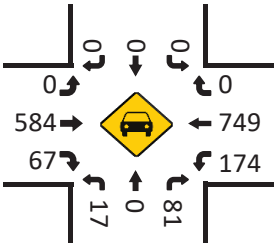
PM	182	0	35	0	84	PM
NOON	0	0	0	0	0	NOON
AM	241	0	17	0	81	AM

CONTROL

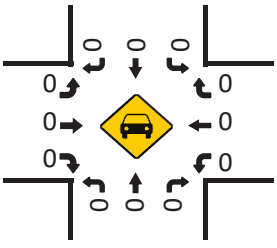
1-Way Stop (NB)

TEV	1679 AM	0 NOON	1576 PM
PHF	0.86		0.96

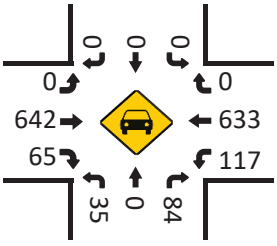
Total (AM)



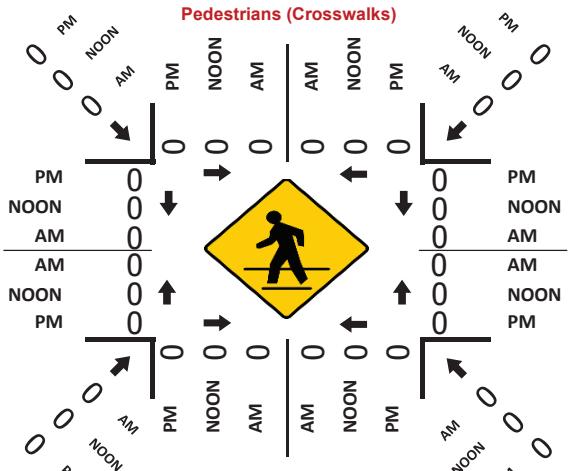
Total (NOON)



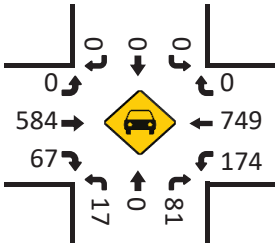
Total (PM)



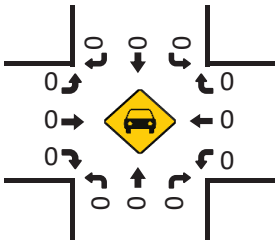
Pedestrians (Crosswalks)



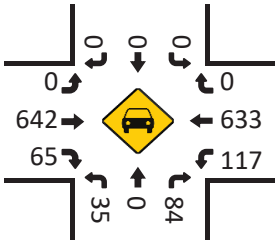
Total (AM)



Total (NOON)



Total (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Durfee Ave & Kerrwood St
City: El Monte
Control: 4-Way Stop

Project ID: 22-020196-003
Date: 6/6/2022

Data - Totals

NS/EW Streets:	Durfee Ave				Durfee Ave				Kerrwood St				Kerrwood St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	19	1	0	1	29	1	0	2	1	2	0	1	1	0	0	67
7:15 AM	10	12	3	0	4	45	3	0	2	3	6	0	8	4	2	0	102
7:30 AM	17	14	1	0	0	59	1	0	4	10	18	0	8	13	1	0	146
7:45 AM	20	35	4	0	12	67	4	0	3	27	14	0	29	16	0	0	231
8:00 AM	12	23	5	0	15	32	5	0	2	22	13	0	49	23	0	0	201
8:15 AM	12	33	4	0	6	20	4	0	1	17	8	0	40	14	4	0	163
8:30 AM	10	26	3	0	2	12	3	0	2	9	15	0	5	6	1	0	94
8:45 AM	15	25	3	0	3	22	3	0	3	4	11	0	6	3	3	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	105	187	24	0	43	286	24	0	19	93	87	0	146	80	11	0	1105
APPROACH %'s :	33.23%	59.18%	7.59%	0.00%	12.18%	81.02%	6.80%	0.00%	9.55%	46.73%	43.72%	0.00%	61.60%	33.76%	4.64%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	61	105	14	0	33	178	14	0	10	76	53	0	126	66	5	0	741
PEAK HR FACTOR :	0.763	0.750	0.700	0.000	0.550	0.664	0.700	0.000	0.625	0.704	0.736	0.000	0.643	0.717	0.313	0.000	0.802
	0.763				0.678				0.790				0.684				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	15	32	2	0	4	25	2	0	2	9	12	0	3	7	2	0	115
4:15 PM	8	28	2	0	4	34	1	0	3	6	10	0	5	4	1	0	106
4:30 PM	15	34	3	0	3	33	1	0	1	5	9	0	4	6	2	0	116
4:45 PM	23	29	4	0	2	43	3	0	1	6	10	0	4	4	2	0	131
5:00 PM	18	23	6	0	6	41	5	0	3	4	12	0	1	3	1	0	123
5:15 PM	20	37	4	0	5	44	3	0	1	4	4	0	1	4	0	0	127
5:30 PM	18	24	3	0	0	32	3	0	2	3	10	0	6	5	0	0	106
5:45 PM	18	27	3	0	1	31	2	0	3	6	10	0	4	3	4	0	112
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	135	234	27	0	25	283	20	0	16	43	77	0	28	36	12	0	936
APPROACH %'s :	34.09%	59.09%	6.82%	0.00%	7.62%	86.28%	6.10%	0.00%	11.76%	31.62%	56.62%	0.00%	36.84%	47.37%	15.79%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	76	123	17	0	16	161	12	0	6	19	35	0	10	17	5	0	497
PEAK HR FACTOR :	0.826	0.831	0.708	0.000	0.667	0.915	0.600	0.000	0.500	0.792	0.729	0.000	0.625	0.708	0.625	0.000	0.948
	0.885				0.909				0.789				0.667				

Prepared by National Data & Surveying Services

Durfee Ave & Kerrwood St

Peak Hour Turning Movement Count

ID: 22-020196-003
City: El Monte

Day: Monday
Date: 6/6/2022

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	7:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Durfee Ave)

AM	14	178	33	0	120	AM
NOON	0	0	0	0	0	NOON
PM	12	161	16	0	134	PM
	0	2	1	0		

EASTBOUND (Kerrwood St)

AM	NOON	PM	
141	0	105	
0	0	0	0
10	0	6	0
76	0	19	1
53	0	35	0
AM	NOON	PM	

WESTBOUND (Kerrwood St)

PM	NOON	AM	
5	0	5	0
17	0	66	1
10	0	126	0
0	0	0	0
52	0	123	
PM	NOON	AM	

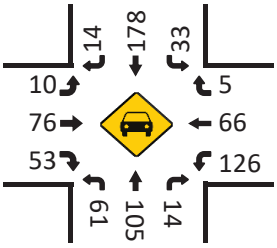
CONTROL: 4-Way Stop

TEV	741 AM	0 NOON	497 PM
PHF	0.80		0.95

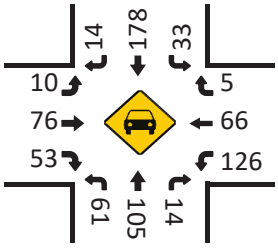
NORTHBOUND (Durfee Ave)

PM	206	0	76	123	17	PM
NOON	0	0	0	0	0	NOON
AM	357	0	61	105	14	AM
		0	1	2	0	

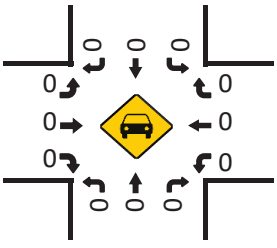
Total (AM)



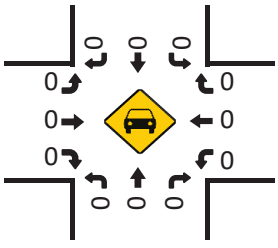
Total (AM)



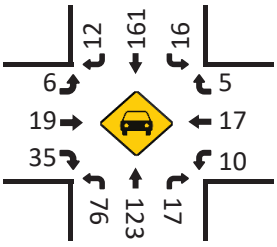
Total (NOON)



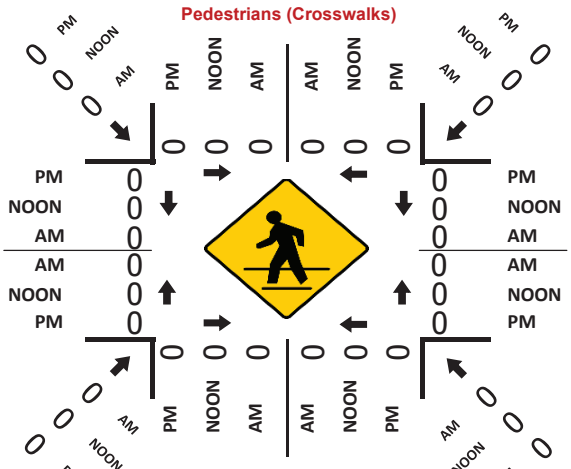
Total (NOON)



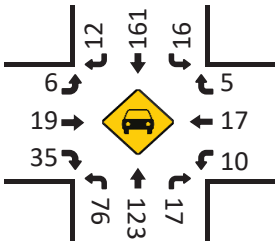
Total (PM)



Pedestrians (Crosswalks)



Total (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Durfee Ave & Deana St
City: El Monte
Control: 4-Way Stop

Project ID: 22-020196-004
Date: 6/6/2022

Data - Total

NS/EW Streets:	Durfee Ave				Durfee Ave				Deana St				Deana St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	7	24	3	0	0	23	2	0	5	0	11	0	4	2	0	0	81
7:15 AM	13	28	9	0	1	55	6	0	2	4	16	0	8	3	2	0	147
7:30 AM	8	35	8	0	3	79	5	0	4	11	20	0	13	6	1	0	193
7:45 AM	6	59	10	0	5	89	10	0	6	19	19	0	11	12	6	0	252
8:00 AM	14	41	15	0	4	77	17	0	7	27	35	0	12	17	6	0	272
8:15 AM	8	36	5	0	3	55	14	0	4	22	17	0	11	18	4	0	197
8:30 AM	6	38	4	0	1	28	1	0	3	1	15	0	7	5	3	0	112
8:45 AM	4	31	3	0	3	32	5	0	4	4	20	0	6	4	1	0	117
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	66	292	57	0	20	438	60	0	35	88	153	0	72	67	23	0	1371
APPROACH %'s :	15.90%	70.36%	13.73%	0.00%	3.86%	84.56%	11.58%	0.00%	12.68%	31.88%	55.43%	0.00%	44.44%	41.36%	14.20%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	36	171	38	0	15	300	46	0	21	79	91	0	47	53	17	0	914
PEAK HR FACTOR :	0.643	0.725	0.633	0.000	0.750	0.843	0.676	0.000	0.750	0.731	0.650	0.000	0.904	0.736	0.708	0.000	0.840
	0.817				0.868				0.692				0.836				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	15	47	5	0	4	34	2	0	5	6	16	0	7	8	3	0	152
4:15 PM	14	38	8	0	3	54	3	0	1	5	12	0	8	6	1	0	153
4:30 PM	18	53	9	0	3	43	3	0	2	6	19	0	7	4	0	0	167
4:45 PM	24	52	7	0	5	50	3	0	2	7	12	0	4	11	4	0	181
5:00 PM	18	44	5	0	1	56	7	0	7	6	15	0	4	4	2	1	170
5:15 PM	19	56	9	0	3	43	7	0	4	3	10	0	7	3	3	0	167
5:30 PM	27	42	5	0	2	49	5	0	2	4	15	0	5	4	1	0	161
5:45 PM	19	53	9	0	1	42	2	0	0	6	16	0	3	2	1	0	154
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	154	385	57	0	22	371	32	0	23	43	115	0	45	42	15	1	1305
APPROACH %'s :	25.84%	64.60%	9.56%	0.00%	5.18%	87.29%	7.53%	0.00%	12.71%	23.76%	63.54%	0.00%	43.69%	40.78%	14.56%	0.97%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	79	205	30	0	12	192	20	0	15	22	56	0	22	22	9	1	685
PEAK HR FACTOR :	0.823	0.915	0.833	0.000	0.600	0.857	0.714	0.000	0.536	0.786	0.737	0.000	0.786	0.500	0.563	0.250	0.946
	0.935				0.875				0.830				0.711				

National Data & Surveying Services Intersection Turning Movement Count

Location: Durfee Ave & Deana St
City: El Monte
Control: 4-Way Stop

Project ID: 22-020196-004
Date: 6/6/2022

Data - Totals

NS/EW Streets:	Durfee Ave				Durfee Ave				Deana St				Deana St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	7	24	3	0	0	23	2	0	5	0	11	0	4	2	0	0	81
7:15 AM	13	28	9	0	1	55	6	0	2	4	16	0	8	3	2	0	147
7:30 AM	8	35	8	0	3	79	5	0	4	11	20	0	13	6	1	0	193
7:45 AM	6	59	10	0	5	89	10	0	6	19	19	0	11	12	6	0	252
8:00 AM	14	41	15	0	4	77	17	0	7	27	35	0	12	17	6	0	272
8:15 AM	8	36	5	0	3	55	14	0	4	22	17	0	11	18	4	0	197
8:30 AM	6	38	4	0	1	28	1	0	3	1	15	0	7	5	3	0	112
8:45 AM	4	31	3	0	3	32	5	0	4	4	20	0	6	4	1	0	117
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	66	292	57	0	20	438	60	0	35	88	153	0	72	67	23	0	1371
APPROACH %'s :	15.90%	70.36%	13.73%	0.00%	3.86%	84.56%	11.58%	0.00%	12.68%	31.88%	55.43%	0.00%	44.44%	41.36%	14.20%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	36	171	38	0	15	300	46	0	21	79	91	0	47	53	17	0	914
PEAK HR FACTOR :	0.643	0.725	0.633	0.000	0.750	0.843	0.676	0.000	0.750	0.731	0.650	0.000	0.904	0.736	0.708	0.000	0.840
	0.817				0.868				0.692				0.836				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	15	47	5	0	4	34	2	0	5	6	16	0	7	8	3	0	152
4:15 PM	14	38	8	0	3	54	3	0	1	5	12	0	8	6	1	0	153
4:30 PM	18	53	9	0	3	43	3	0	2	6	19	0	7	4	0	0	167
4:45 PM	24	52	7	0	5	50	3	0	2	7	12	0	4	11	4	0	181
5:00 PM	18	44	5	0	1	56	7	0	7	6	15	0	4	4	2	1	170
5:15 PM	19	56	9	0	3	43	7	0	4	3	10	0	7	3	3	0	167
5:30 PM	27	42	5	0	2	49	5	0	2	4	15	0	5	4	1	0	161
5:45 PM	19	53	9	0	1	42	2	0	0	6	16	0	3	2	1	0	154
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	154	385	57	0	22	371	32	0	23	43	115	0	45	42	15	1	1305
APPROACH %'s :	25.84%	64.60%	9.56%	0.00%	5.18%	87.29%	7.53%	0.00%	12.71%	23.76%	63.54%	0.00%	43.69%	40.78%	14.56%	0.97%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	79	205	30	0	12	192	20	0	15	22	56	0	22	22	9	1	685
PEAK HR FACTOR :	0.823	0.915	0.833	0.000	0.600	0.857	0.714	0.000	0.536	0.786	0.737	0.000	0.786	0.500	0.563	0.250	0.946
	0.935				0.875				0.830				0.711				

Prepared by National Data & Surveying Services

Durfee Ave & Deana St

Peak Hour Turning Movement Count

ID: 22-020196-004
City: El Monte

Day: Monday
Date: 6/6/2022

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Durfee Ave)

AM	46	300	15	0	209	AM
NOON	0	0	0	0	0	NOON
PM	20	192	12	0	229	PM
	0	2	1	0		

EASTBOUND (Deana St)

AM	NOON	PM	
135	0	121	
0	0	0	0
21	0	15	0
79	0	22	1
91	0	56	0
AM	NOON	PM	

WESTBOUND (Deana St)

	PM	NOON	AM
0	9	0	17
1	22	0	53
0	22	0	47
0	1	0	0
	65	0	132
	PM	NOON	AM

CONTROL

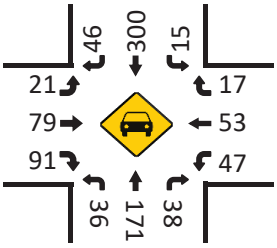
4-Way Stop

TEV	914 AM	0 NOON	685 PM
PHF	0.84		0.95

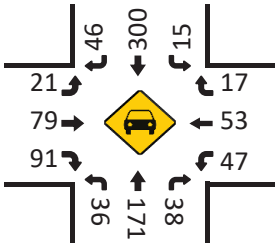
NORTHBOUND (Durfee Ave)

PM	270	0	79	205	30	PM
NOON	0	0	0	0	0	NOON
AM	438	0	36	171	38	AM
		0	1	2	0	

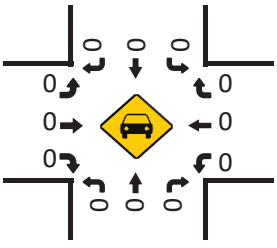
Total (AM)



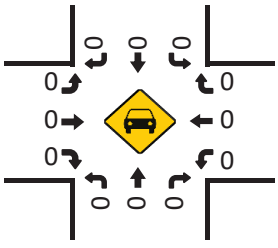
Total (AM)



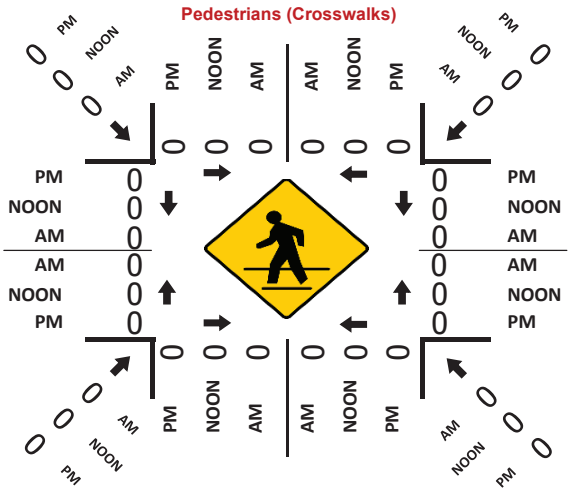
Total (NOON)



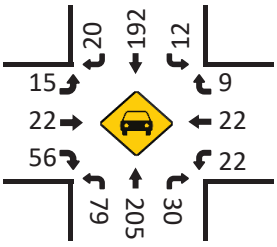
Total (NOON)



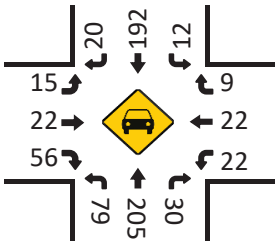
Pedestrians (Crosswalks)



Total (PM)



Total (PM)



SPEED

Kerrwood St W/O Bannister Ave

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_001

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	3	2	0	0	0	0	0	0	0	0	0	5
1:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2
2:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	2	1	1	2	0	0	0	0	0	0	0	0	0	6
5:00	6	3	3	6	0	0	0	0	0	0	0	0	0	18
6:00	4	5	9	5	2	0	0	0	0	0	0	0	0	25
7:00	9	17	55	82	15	2	0	0	0	0	0	0	0	180
8:00	13	22	90	92	33	1	0	0	0	0	0	0	0	251
9:00	15	15	28	40	15	0	0	0	0	0	0	0	0	113
10:00	14	9	26	46	14	2	0	0	0	0	0	0	0	111
11:00	16	13	34	39	13	1	0	0	0	0	0	0	0	116
12:00 PM	17	17	22	41	15	0	0	0	0	0	0	0	0	112
13:00	11	11	49	52	24	2	0	0	0	0	0	0	0	149
14:00	13	25	100	99	24	1	0	0	0	0	0	0	0	262
15:00	10	16	44	32	15	1	0	0	0	0	0	0	0	118
16:00	12	6	28	39	11	1	0	0	0	0	0	0	0	97
17:00	10	14	30	23	7	4	0	0	0	0	0	0	0	88
18:00	6	8	20	28	7	0	0	0	0	0	0	0	0	69
19:00	6	5	18	12	2	1	0	0	0	0	0	0	0	44
20:00	4	7	16	6	4	0	0	0	0	0	0	0	0	37
21:00	3	9	8	10	1	0	0	0	0	0	0	0	0	31
22:00	1	2	1	7	1	0	0	0	0	0	0	0	0	12
23:00	5	2	3	3	1	0	0	0	0	0	0	0	0	14
Totals	178	209	590	667	204	16								1864
% of Totals	10%	11%	32%	36%	11%	1%								100%

AM Volumes	80	87	251	315	92	6	0	0	0	0	0	0	0	831
% AM	4%	5%	13%	17%	5%	0%								45%
AM Peak Hour	11:00	8:00	8:00	8:00	8:00	7:00								8:00
Volume	16	22	90	92	33	2								251
PM Volumes	98	122	339	352	112	10	0	0	0	0	0	0	0	1033
% PM	5%	7%	18%	19%	6%	1%								55%
PM Peak Hour	12:00	14:00	14:00	14:00	13:00	17:00								14:00
Volume	17	25	100	99	24	4								262

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	431	↔	23%	261	↔	14%	185	↔	10%	987	↔	53%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Kerrwood St	Summary	17	25	24	30	33	1864

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Kerrwood St W/O Bannister Ave

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	907	957	1,864

AM Period	NB		SB		EB		WB		TOTAL	
0:00	0		0		0		1		1	
0:15	0		0		0		1		1	
0:30	0		0		0		2		2	
0:45	0		0		1	1	0	4	1	5
1:00	0		0		0		1		1	
1:15	0		0		0		0			
1:30	0		0		0		1		1	
1:45	0		0		0		0	2		2
2:00	0		0		1		0		1	
2:15	0		0		0		0			
2:30	0		0		0		1		1	
2:45	0		0		0	1	0	1		2
3:00	0		0		0		0			
3:15	0		0		0		0			
3:30	0		0		0		0			
3:45	0		0		2	2	0		2	2
4:00	0		0		1		0		1	
4:15	0		0		0		1		1	
4:30	0		0		1		3		4	
4:45	0		0		0	2	0	4		6
5:00	0		0		1		4		5	
5:15	0		0		1		5		6	
5:30	0		0		1		3		4	
5:45	0		0		0	3	3	15	3	18
6:00	0		0		0		2		2	
6:15	0		0		2		4		6	
6:30	0		0		1		3		4	
6:45	0		0		3	6	10	19	13	25
7:00	0		0		2		3		5	
7:15	0		0		12		16		28	
7:30	0		0		23		17		40	
7:45	0		0		61	98	46	82	107	180
8:00	0		0		50		75		125	
8:15	0		0		26		54		80	
8:30	0		0		13		12		25	
8:45	0		0		7	96	14	155	21	251
9:00	0		0		10		33		43	
9:15	0		0		8		15		23	
9:30	0		0		13		11		24	
9:45	0		0		9	40	14	73	23	113
10:00	0		0		7		12		19	
10:15	0		0		26		7		33	
10:30	0		0		21		8		29	
10:45	0		0		19	73	11	38	30	111
11:00	0		0		13		11		24	
11:15	0		0		14		13		27	
11:30	0		0		10		32		42	
11:45	0		0		14	51	9	65	23	116
TOTALS				373		458			831	
SPLIT %				44.9%		55.1%			44.6%	

PM Period	NB		SB		EB		WB		TOTAL	
12:00	0		0		13		20		33	
12:15	0		0		11		11		22	
12:30	0		0		19		9		28	
12:45	0		0		18	61	11	51	29	112
13:00	0		0		23		10		33	
13:15	0		0		22		10		32	
13:30	0		0		22		18		40	
13:45	0		0		27	94	17	55	44	149
14:00	0		0		24		45		69	
14:15	0		0		17		35		52	
14:30	0		0		20		18		38	
14:45	0		0		28	89	75	173	103	262
15:00	0		0		19		11		30	
15:15	0		0		11		17		28	
15:30	0		0		16		14		30	
15:45	0		0		17	63	13	55	30	118
16:00	0		0		16		11		27	
16:15	0		0		15		9		24	
16:30	0		0		10		10		20	
16:45	0		0		14	55	12	42	26	97
17:00	0		0		19		6		25	
17:15	0		0		14		5		19	
17:30	0		0		7		10		17	
17:45	0		0		15	55	12	33	27	88
18:00	0		0		15		9		24	
18:15	0		0		11		7		18	
18:30	0		0		7		7		14	
18:45	0		0		4	37	9	32	13	69
19:00	0		0		5		4		9	
19:15	0		0		9		1		10	
19:30	0		0		8		4		12	
19:45	0		0		6	28	7	16	13	44
20:00	0		0		4		5		9	
20:15	0		0		2		5		7	
20:30	0		0		9		4		13	
20:45	0		0		4	19	4	18	8	37
21:00	0		0		7		3		10	
21:15	0		0		4		6		10	
21:30	0		0		2		1		3	
21:45	0		0		6	19	2	12	8	31
22:00	0		0		1		1		2	
22:15	0		0		1		4		5	
22:30	0		0		2		2		4	
22:45	0		0		1	5	0	7	1	12
23:00	0		0		2		1		3	
23:15	0		0		4		1		5	
23:30	0		0		2		2		4	
23:45	0		0		1	9	1	5	2	14
TOTALS				534		499			1033	
SPLIT %				51.7%		48.3%			55.4%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	907	957	1,864

AM Peak Hour			7:30	7:30	7:30
AM Pk Volume			160	192	352
Pk Hr Factor			0.656	0.640	0.704
7 - 9 Volume	0	0	194	237	431
7 - 9 Peak Hour			7:30	7:30	7:30
7 - 9 Pk Volume	0	0	160	192	352
Pk Hr Factor	0.000	0.000	0.656	0.640	0.704

PM Peak Hour			13:15	14:00	14:00
PM Pk Volume			95	173	262
Pk Hr Factor			0.880	0.577	0.636
4 - 6 Volume	0	0	110	75	185
4 - 6 Peak Hour			16:15	16:00	16:00
4 - 6 Pk Volume	0	0	58	42	97
Pk Hr Factor	0.000	0.000	0.763	0.875	0.898

Prepared by National Data & Surveying Services

SPEED

Durfee Ave S/O Kerrwood St

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_002

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	3	5	9	11	5	3	1	1	1	0	0	39
1:00	0	0	0	0	9	6	5	1	1	0	1	0	0	23
2:00	0	0	1	1	6	7	0	1	0	1	0	0	0	17
3:00	0	0	1	2	3	8	7	3	1	0	0	0	0	25
4:00	0	0	0	5	11	12	16	7	0	1	0	0	0	52
5:00	0	1	5	7	18	32	23	13	4	1	0	0	0	104
6:00	2	4	4	7	33	70	49	18	7	1	0	0	0	195
7:00	1	2	6	21	92	164	138	54	16	2	0	0	0	496
8:00	3	7	8	22	96	171	104	41	10	2	0	0	0	464
9:00	0	3	11	13	50	94	65	34	6	1	0	0	0	277
10:00	3	4	3	15	43	80	69	26	4	1	0	0	0	248
11:00	1	2	16	16	48	102	88	42	9	1	1	0	0	326
12:00 PM	2	6	12	15	59	96	93	35	7	0	1	0	0	326
13:00	1	3	11	28	65	120	103	56	13	1	1	0	0	402
14:00	2	1	5	22	78	153	149	54	10	0	0	0	0	474
15:00	0	0	5	13	62	150	133	35	18	6	0	0	0	422
16:00	4	0	4	12	43	148	131	51	17	5	0	0	0	415
17:00	0	3	4	18	42	142	155	52	15	2	2	0	0	435
18:00	1	2	6	8	57	128	92	40	7	2	0	0	0	343
19:00	4	2	8	24	61	84	68	28	11	2	1	0	0	293
20:00	0	1	6	14	69	97	66	20	3	0	0	0	0	276
21:00	0	1	5	9	32	61	47	12	5	2	0	0	0	174
22:00	2	6	4	6	29	29	33	8	4	1	1	0	0	123
23:00	1	0	1	10	18	27	20	5	0	1	1	0	0	84
Totals	27	48	129	293	1033	1992	1659	639	169	34	10			6033
% of Totals	0%	1%	2%	5%	17%	33%	27%	11%	3%	1%	0%			100%

AM Volumes	10	23	58	114	418	757	569	243	59	12	3	0	0	2266
% AM	0%	0%	1%	2%	7%	13%	9%	4%	1%	0%	0%			38%
AM Peak Hour	8:00	8:00	11:00	8:00	8:00	8:00	7:00	7:00	7:00	7:00				7:00
Volume	3	7	16	22	96	171	138	54	16	2	1			496
PM Volumes	17	25	71	179	615	1235	1090	396	110	22	7	0	0	3767
% PM	0%	0%	1%	3%	10%	20%	18%	7%	2%	0%	0%			62%
PM Peak Hour	16:00	12:00	12:00	13:00	14:00	14:00	17:00	13:00	15:00	15:00	17:00			14:00
Volume	4	6	12	28	78	153	155	56	18	6	2			474

Directional Peak Periods All Speeds	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	960 ⟷	16%	728 ⟷	12%	850 ⟷	14%	3495 ⟷	58%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Durfee Ave	Summary	32	39	39	45	49	6033

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Durfee Ave S/O Kerrwood St

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_002

DAILY TOTALS	NB	SB	EB	WB	Total
	2,815	3,218	0	0	6,033

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	4		8		0	0	12		12:00	43		41		0	0	84	
0:15	6		5		0	0	11		12:15	36		42		0	0	78	
0:30	3		5		0	0	8		12:30	48		43		0	0	91	
0:45	5	18	3	21	0	0	8	39	12:45	30	157	43	169	0	0	73	326
1:00	1		6		0	0	7		13:00	51		41		0	0	92	
1:15	2		2		0	0	4		13:15	47		47		0	0	94	
1:30	2		6		0	0	8		13:30	39		53		0	0	92	
1:45	1	6	3	17	0	0	4	23	13:45	64	201	60	201	0	0	124	402
2:00	2		2		0	0	4		14:00	57		75		0	0	132	
2:15	3		3		0	0	6		14:15	55		65		0	0	120	
2:30	1		3		0	0	4		14:30	52		50		0	0	102	
2:45	0	6	3	11	0	0	3	17	14:45	57	221	63	253	0	0	120	474
3:00	2		3		0	0	5		15:00	45		58		0	0	103	
3:15	3		1		0	0	4		15:15	59		51		0	0	110	
3:30	6		3		0	0	9		15:30	41		54		0	0	95	
3:45	4	15	3	10	0	0	7	25	15:45	66	211	48	211	0	0	114	422
4:00	5		8		0	0	13		16:00	44		51		0	0	95	
4:15	6		5		0	0	11		16:15	52		48		0	0	100	
4:30	4		9		0	0	13		16:30	57		53		0	0	110	
4:45	9	24	6	28	0	0	15	52	16:45	57	210	53	205	0	0	110	415
5:00	9		11		0	0	20		17:00	57		46		0	0	103	
5:15	11		11		0	0	22		17:15	57		50		0	0	107	
5:30	20		14		0	0	34		17:30	54		61		0	0	115	
5:45	12	52	16	52	0	0	28	104	17:45	60	228	50	207	0	0	110	435
6:00	18		19		0	0	37		18:00	46		56		0	0	102	
6:15	20		25		0	0	45		18:15	51		43		0	0	94	
6:30	24		26		0	0	50		18:30	47		33		0	0	80	
6:45	20	82	43	113	0	0	63	195	18:45	36	180	31	163	0	0	67	343
7:00	26		61		0	0	87		19:00	28		33		0	0	61	
7:15	35		76		0	0	111		19:15	33		49		0	0	82	
7:30	42		85		0	0	127		19:30	37		35		0	0	72	
7:45	62	165	109	331	0	0	171	496	19:45	32	130	46	163	0	0	78	293
8:00	61		115		0	0	176		20:00	39		56		0	0	95	
8:15	32		77		0	0	109		20:15	33		28		0	0	61	
8:30	44		52		0	0	96		20:30	30		28		0	0	58	
8:45	44	181	39	283	0	0	83	464	20:45	32	134	30	142	0	0	62	276
9:00	28		44		0	0	72		21:00	28		20		0	0	48	
9:15	28		50		0	0	78		21:15	24		18		0	0	42	
9:30	27		32		0	0	59		21:30	24		17		0	0	41	
9:45	30	113	38	164	0	0	68	277	21:45	26	102	17	72	0	0	43	174
10:00	34		38		0	0	72		22:00	15		20		0	0	35	
10:15	26		23		0	0	49		22:15	10		19		0	0	29	
10:30	28		28		0	0	56		22:30	13		15		0	0	28	
10:45	35	123	36	125	0	0	71	248	22:45	12	50	19	73	0	0	31	123
11:00	37		27		0	0	64		23:00	11		8		0	0	19	
11:15	40		43		0	0	83		23:15	13		15		0	0	28	
11:30	37		46		0	0	83		23:30	9		11		0	0	20	
11:45	51	165	45	161	0	0	96	326	23:45	8	41	9	43	0	0	17	84
TOTALS		950		1316				2266	TOTALS		1865		1902				3767
SPLIT %		41.9%		58.1%				37.6%	SPLIT %		49.5%		50.5%				62.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,815	3,218	0	0	6,033

AM Peak Hour	7:15	7:30					7:15		PM Peak Hour	13:45	13:30					13:45		
AM Pk Volume	200	386					585		PM Pk Volume	228	253					478		
Pk Hr Factor	0.806	0.839					0.831		Pk Hr Factor	0.891	0.843					0.905		
7 - 9 Volume	346	614	0	0			960		4 - 6 Volume	438	412	0	0			850		
7 - 9 Peak Hour	7:15	7:30					7:15		4 - 6 Peak Hour	16:30	16:45					16:45		
7 - 9 Pk Volume	200	386	0	0			585		4 - 6 Pk Volume	228	210	0	0			435		
Pk Hr Factor	0.806	0.839	0.000	0.000			0.831		Pk Hr Factor	1.000	0.861	0.000	0.000			0.946		

Prepared by National Data & Surveying Services

SPEED

Gilman Rd S/O Woodville Dr

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_003

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	0	4	4	4	0	0	0	0	0	0	0	0	12
1:00	0	0	1	4	3	1	0	0	0	0	0	0	0	9
2:00	1	0	4	1	1	0	0	0	0	0	0	0	0	7
3:00	2	1	2	1	1	1	0	0	0	0	0	0	0	8
4:00	2	0	3	4	1	0	0	0	0	0	0	0	0	10
5:00	7	2	8	12	6	2	1	0	0	0	0	0	0	38
6:00	4	4	10	14	9	11	1	0	0	0	0	0	0	53
7:00	9	42	64	54	17	2	0	0	0	0	0	0	0	188
8:00	16	67	92	59	12	4	2	0	0	0	0	0	0	252
9:00	7	8	27	23	17	5	1	0	0	0	0	0	0	88
10:00	5	4	22	39	20	2	2	0	0	0	0	0	0	94
11:00	11	6	29	22	11	2	0	0	0	0	0	0	0	81
12:00 PM	7	6	18	34	16	6	0	0	0	0	0	0	0	87
13:00	7	13	29	41	24	4	1	0	0	0	0	0	0	119
14:00	41	66	82	43	6	2	0	0	0	0	0	0	0	240
15:00	16	26	30	24	11	0	2	0	0	0	0	0	0	109
16:00	8	18	26	24	9	1	0	0	0	0	0	0	0	86
17:00	17	8	13	14	12	3	0	0	0	0	0	0	0	67
18:00	19	6	12	7	9	2	0	0	0	0	0	0	0	55
19:00	13	11	13	28	9	3	3	0	0	0	0	0	0	80
20:00	10	7	19	30	11	6	1	0	0	0	0	0	0	84
21:00	14	9	11	16	14	3	0	0	0	0	0	0	0	67
22:00	1	4	10	3	12	6	0	0	0	0	0	0	0	36
23:00	3	2	6	5	3	1	1	0	0	0	0	0	0	21
Totals	220	310	535	506	238	67	15							1891
% of Totals	12%	16%	28%	27%	13%	4%	1%							100%

AM Volumes	64	134	266	237	102	30	7	0	0	0	0	0	0	840
% AM	3%	7%	14%	13%	5%	2%	0%							44%
AM Peak Hour	8:00	8:00	8:00	8:00	10:00	6:00	8:00							8:00
Volume	16	67	92	59	20	11	2							252
PM Volumes	156	176	269	269	136	37	8	0	0	0	0	0	0	1051
% PM	8%	9%	14%	14%	7%	2%	0%							56%
PM Peak Hour	14:00	14:00	14:00	14:00	13:00	12:00	19:00							14:00
Volume	41	66	82	43	24	6	3							240

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	440	↔	23%	206	↔	11%	153	↔	8%	1092	↔	58%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Gilman Rd	Summary	16	24	24	31	35	1891

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Gilman Rd S/O Woodville Dr

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_003

DAILY TOTALS	NB	SB	EB	WB	Total
	1,152	739	0	0	1,891

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	2		1		0	0	3		12:00	16		8		0	0	24	
0:15	2		2		0	0	4		12:15	10		10		0	0	20	
0:30	0		0		0	0			12:30	11		10		0	0	21	
0:45	3	7	2	5	0	0	5	12	12:45	14	51	8	36	0	0	22	87
1:00	1		2		0	0	3		13:00	11		11		0	0	22	
1:15	0		1		0	0	1		13:15	17		12		0	0	29	
1:30	2		3		0	0	5		13:30	21		15		0	0	36	
1:45	0	3	0	6	0	0		9	13:45	19	68	13	51	0	0	32	119
2:00	0		2		0	0	2		14:00	28		31		0	0	59	
2:15	0		1		0	0	1		14:15	44		25		0	0	69	
2:30	0		2		0	0	2		14:30	28		17		0	0	45	
2:45	1	1	1	6	0	0	2	7	14:45	58	158	9	82	0	0	67	240
3:00	1		3		0	0	4		15:00	24		9		0	0	33	
3:15	1		0		0	0	1		15:15	20		6		0	0	26	
3:30	2		0		0	0	2		15:30	11		6		0	0	17	
3:45	1	5	0	3	0	0	1	8	15:45	26	81	7	28	0	0	33	109
4:00	2		2		0	0	4		16:00	21		10		0	0	31	
4:15	2		1		0	0	3		16:15	11		7		0	0	18	
4:30	2		1		0	0	3		16:30	15		8		0	0	23	
4:45	0	6	0	4	0	0		10	16:45	13	60	1	26	0	0	14	86
5:00	6		4		0	0	10		17:00	14		3		0	0	17	
5:15	6		1		0	0	7		17:15	11		3		0	0	14	
5:30	5		3		0	0	8		17:30	16		2		0	0	18	
5:45	9	26	4	12	0	0	13	38	17:45	14	55	4	12	0	0	18	67
6:00	8		1		0	0	9		18:00	17		1		0	0	18	
6:15	8		6		0	0	14		18:15	10		3		0	0	13	
6:30	9		6		0	0	15		18:30	9		2		0	0	11	
6:45	8	33	7	20	0	0	15	53	18:45	11	47	2	8	0	0	13	55
7:00	10		8		0	0	18		19:00	11		3		0	0	14	
7:15	7		12		0	0	19		19:15	11		5		0	0	16	
7:30	28		21		0	0	49		19:30	9		16		0	0	25	
7:45	59	104	43	84	0	0	102	188	19:45	11	42	14	38	0	0	25	80
8:00	75		56		0	0	131		20:00	8		14		0	0	22	
8:15	60		17		0	0	77		20:15	4		13		0	0	17	
8:30	18		6		0	0	24		20:30	7		15		0	0	22	
8:45	11	164	9	88	0	0	20	252	20:45	9	28	14	56	0	0	23	84
9:00	11		16		0	0	27		21:00	6		7		0	0	13	
9:15	15		9		0	0	24		21:15	10		8		0	0	18	
9:30	10		10		0	0	20		21:30	5		5		0	0	10	
9:45	15	51	2	37	0	0	17	88	21:45	13	34	13	33	0	0	26	67
10:00	10		7		0	0	17		22:00	7		6		0	0	13	
10:15	14		6		0	0	20		22:15	4		9		0	0	13	
10:30	18		12		0	0	30		22:30	3		4		0	0	7	
10:45	19	61	8	33	0	0	27	94	22:45	2	16	1	20	0	0	3	36
11:00	13		10		0	0	23		23:00	2		2		0	0	4	
11:15	9		9		0	0	18		23:15	2		4		0	0	6	
11:30	5		15		0	0	20		23:30	5		3		0	0	8	
11:45	14	41	6	40	0	0	20	81	23:45	1	10	2	11	0	0	3	21
TOTALS		502		338				**840**	**TOTALS**		650		401				**1051**
SPLIT %		59.8%		40.2%				**44.4%**	**SPLIT %**		61.8%		38.2%				**55.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,152	739	0	0	1,891

AM Peak Hour	7:30		7:30					**7:30**	**PM Peak Hour**	14:00		13:45					**14:00**
AM Pk Volume	222		137					**359**	**PM Pk Volume**	158		86					**240**
Pk Hr Factor	0.740		0.612					**0.685**	**Pk Hr Factor**	0.681		0.694					**0.870**
7 - 9 Volume	268		172		0	0		**440**	**4 - 6 Volume**	115		38		0	0		**153**
7 - 9 Peak Hour	7:30		7:30					**7:30**	**4 - 6 Peak Hour**	16:00		16:00					**16:00**
7 - 9 Pk Volume	222		137		0	0		**359**	**4 - 6 Pk Volume**	60		26		0	0		**86**
Pk Hr Factor	0.740		0.612		0.000	0.000		**0.685**	**Pk Hr Factor**	0.714		0.650		0.000	0.000		**0.694**

Prepared by National Data & Surveying Services

SPEED

Gilman Rd S/O Ramona Blvd

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_004

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
0:00 AM	0	1	5	13	7	0	0	0	0	0	0	0	0	26
1:00	0	2	3	6	3	1	0	0	0	0	0	0	0	15
2:00	1	0	1	2	1	0	0	0	0	0	0	0	0	5
3:00	0	0	4	1	1	3	0	0	0	0	0	0	0	9
4:00	0	2	3	7	0	4	0	0	0	0	0	0	0	16
5:00	0	1	9	15	20	3	0	0	0	0	0	0	0	48
6:00	6	4	15	31	14	5	0	0	1	0	0	0	0	76
7:00	55	25	36	37	8	2	0	1	0	0	0	0	0	164
8:00	32	28	36	24	6	1	0	0	0	0	0	0	0	127
9:00	21	26	43	40	3	0	0	0	0	0	0	0	0	133
10:00	21	38	51	23	5	0	0	0	0	0	0	0	0	138
11:00	19	33	52	15	10	1	0	0	0	0	0	0	0	130
12:00 PM	10	17	37	45	14	0	0	0	0	0	0	0	0	123
13:00	29	31	42	15	5	0	0	0	0	0	0	0	0	122
14:00	29	28	41	34	9	2	1	0	0	0	0	0	0	144
15:00	10	19	41	47	12	2	0	0	0	0	0	0	0	131
16:00	10	20	63	66	22	3	0	0	0	0	0	0	0	184
17:00	11	25	56	55	29	2	0	0	0	0	0	0	0	178
18:00	6	14	57	62	35	6	1	0	0	0	0	0	0	181
19:00	2	7	32	56	22	2	0	0	0	0	0	0	0	121
20:00	0	3	30	54	20	2	0	0	0	0	0	0	0	109
21:00	0	6	19	24	21	2	0	0	0	0	0	0	0	72
22:00	1	6	9	17	12	4	0	0	0	0	0	0	0	49
23:00	0	4	11	11	7	1	0	0	0	0	0	0	0	34
Totals	263	340	696	700	286	46	2	1	1					2335
% of Totals	11%	15%	30%	30%	12%	2%	0%	0%	0%					100%

AM Volumes	155	160	258	214	78	20	0	1	1	0	0	0	0	887
% AM	7%	7%	11%	9%	3%	1%		0%	0%					38%
AM Peak Hour	7:00	10:00	11:00	9:00	5:00	6:00		7:00	6:00					7:00
Volume	55	38	52	40	20	5		1	1					164
PM Volumes	108	180	438	486	208	26	2	0	0	0	0	0	0	1448
% PM	5%	8%	19%	21%	9%	1%	0%							62%
PM Peak Hour	13:00	13:00	16:00	16:00	18:00	18:00	14:00							16:00
Volume	29	31	63	66	35	6	1							184

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	291	↔	12%	245	↔	10%	362	↔	16%	1437	↔	62%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Gilman Rd	Summary	16	24	23	30	34	2335

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Gilman Rd S/O Ramona Blvd

Day: Monday
Date: 6/6/2022

City: El Monte
Project #: CA22_020197_004

DAILY TOTALS	NB	SB	EB	WB	Total
	1,324	1,011	0	0	2,335

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	3		4		0	0	7		12:00	19		14		0	0	33	
0:15	2		5		0	0	7		12:15	20		12		0	0	32	
0:30	1		4		0	0	5		12:30	17		12		0	0	29	
0:45	4	10	3	16	0	0	7	26	12:45	15	71	14	52	0	0	29	123
1:00	2		5		0	0	7		13:00	19		15		0	0	34	
1:15	0		1		0	0	1		13:15	15		10		0	0	25	
1:30	3		4		0	0	7		13:30	20		14		0	0	34	
1:45	0	5	0	10	0	0		15	13:45	13	67	16	55	0	0	29	122
2:00	0		1		0	0	1		14:00	23		19		0	0	42	
2:15	0		1		0	0	1		14:15	25		9		0	0	34	
2:30	0		1		0	0	1		14:30	13		13		0	0	26	
2:45	1	1	1	4	0	0	2	5	14:45	29	90	13	54	0	0	42	144
3:00	1		0		0	0	1		15:00	26		7		0	0	33	
3:15	0		0		0	0			15:15	28		12		0	0	40	
3:30	4		0		0	0	4		15:30	18		6		0	0	24	
3:45	3	8	1	1	0	0	4	9	15:45	26	98	8	33	0	0	34	131
4:00	2		2		0	0	4		16:00	23		19		0	0	42	
4:15	2		1		0	0	3		16:15	25		18		0	0	43	
4:30	8		0		0	0	8		16:30	22		28		0	0	50	
4:45	1	13	0	3	0	0	1	16	16:45	20	90	29	94	0	0	49	184
5:00	6		1		0	0	7		17:00	24		25		0	0	49	
5:15	9		3		0	0	12		17:15	26		22		0	0	48	
5:30	11		1		0	0	12		17:30	21		11		0	0	32	
5:45	13	39	4	9	0	0	17	48	17:45	25	96	24	82	0	0	49	178
6:00	13		0		0	0	13		18:00	26		18		0	0	44	
6:15	7		6		0	0	13		18:15	16		24		0	0	40	
6:30	13		9		0	0	22		18:30	21		31		0	0	52	
6:45	21	54	7	22	0	0	28	76	18:45	21	84	24	97	0	0	45	181
7:00	22		9		0	0	31		19:00	17		16		0	0	33	
7:15	16		16		0	0	32		19:15	14		7		0	0	21	
7:30	30		14		0	0	44		19:30	14		12		0	0	26	
7:45	43	111	14	53	0	0	57	164	19:45	13	58	28	63	0	0	41	121
8:00	19		22		0	0	41		20:00	13		16		0	0	29	
8:15	22		10		0	0	32		20:15	7		18		0	0	25	
8:30	23		7		0	0	30		20:30	7		19		0	0	26	
8:45	15	79	9	48	0	0	24	127	20:45	10	37	19	72	0	0	29	109
9:00	21		13		0	0	34		21:00	8		10		0	0	18	
9:15	20		11		0	0	31		21:15	7		9		0	0	16	
9:30	21		10		0	0	31		21:30	8		7		0	0	15	
9:45	25	87	12	46	0	0	37	133	21:45	9	32	14	40	0	0	23	72
10:00	15		7		0	0	22		22:00	7		11		0	0	18	
10:15	24		13		0	0	37		22:15	4		14		0	0	18	
10:30	20		17		0	0	37		22:30	4		4		0	0	8	
10:45	30	89	12	49	0	0	42	138	22:45	3	18	2	31	0	0	5	49
11:00	19		14		0	0	33		23:00	2		4		0	0	6	
11:15	18		16		0	0	34		23:15	3		3		0	0	6	
11:30	21		20		0	0	41		23:30	9		6		0	0	15	
11:45	12	70	10	60	0	0	22	130	23:45	3	17	4	17	0	0	7	34
TOTALS		566		321				887	TOTALS		758		690				1448
SPLIT %		63.8%		36.2%				38.0%	SPLIT %		52.3%		47.7%				62.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,324	1,011	0	0	2,335

AM Peak Hour	7:30	7:15					7:15		PM Peak Hour	14:45	16:30					16:30		
AM Pk Volume	114	66					174		PM Pk Volume	101	104					196		
Pk Hr Factor	0.663	0.750					0.763		Pk Hr Factor	0.871	0.897					0.980		
7 - 9 Volume	190	101	0	0			291		4 - 6 Volume	186	176	0	0			362		
7 - 9 Peak Hour	7:30	7:15					7:15		4 - 6 Peak Hour	17:00	16:30					16:30		
7 - 9 Pk Volume	114	66	0	0			174		4 - 6 Pk Volume	96	104	0	0			196		
Pk Hr Factor	0.663	0.750	0.000	0.000			0.763		Pk Hr Factor	0.923	0.897	0.000	0.000			0.980		

APPENDIX D
Existing LOS Worksheets

Vistro File: J:\...\MacLaren_TIS.vistro
Report File: J:\...\EXAM.pdf

Scenario 1 EXAM
6/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Left	0.340	17.1	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.149	41.9	E
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	WB Left	0.315	10.1	B
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.308	10.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	10	0	0	12	1	138	17	11	216	1
Total Analysis Volume [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	59	0	0	59	0	0	181	0	0	181	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	177	177	177	177	177	177
g / C, Green / Cycle	0.23	0.23	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.00	0.19	0.19	0.06	0.26	0.26
s, saturation flow rate [veh/h]	1353	1431	576	1683	1621	725	1683	1682
c, Capacity [veh/h]	334	343	398	1241	1195	514	1241	1240
d1, Uniform Delay [s]	75.95	73.72	15.74	10.17	10.18	14.01	11.13	11.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	0.83	0.02	0.49	0.51	0.32	0.77	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.14	0.01	0.25	0.25	0.08	0.35	0.35
d, Delay for Lane Group [s/veh]	78.15	74.56	15.76	10.66	10.69	14.33	11.90	11.90
Lane Group LOS	E	E	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.23	2.44	0.05	5.81	5.64	0.92	8.77	8.76
50th-Percentile Queue Length [ft/ln]	130.69	60.91	1.13	145.31	140.95	23.09	219.14	218.96
95th-Percentile Queue Length [veh/ln]	8.98	4.39	0.08	9.77	9.53	1.66	13.62	13.61
95th-Percentile Queue Length [ft/ln]	224.43	109.64	2.03	244.16	238.30	41.57	340.52	340.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.15	78.15	78.15	74.56	74.56	74.56	15.76	10.67	10.69	14.33	11.90	11.90
Movement LOS	E	E	E	E	E	E	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	78.15			74.56			10.69			12.01		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	17.12											
Intersection LOS	B											
Intersection V/C	0.340											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.923	0.000	2.836	0.000
Crosswalk LOS	A	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	458	458	1475	1475
d_b, Bicycle Delay [s]	71.30	71.30	8.27	8.27
I_b,int, Bicycle LOS Score for Intersection	1.720	1.637	2.071	2.308
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	41.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	17	81	584	67	179	749
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	81	584	67	179	749
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	146	17	45	187
Total Analysis Volume [veh/h]	17	81	584	67	179	749
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.12	0.01	0.00	0.19	0.01
d_M, Delay for Movement [s/veh]	41.87	11.11	0.00	0.00	9.78	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.50	0.41	0.00	0.00	0.71	0.00
95th-Percentile Queue Length [ft/ln]	12.57	10.25	0.00	0.00	17.71	0.00
d_A, Approach Delay [s/veh]	16.44		0.00		1.89	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.01					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.315

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	26	4	8	45	4	3	19	13	32	17	1
Total Analysis Volume [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	565	613	632	569	620	631	651	625
Degree of Utilization, x	0.11	0.10	0.09	0.06	0.16	0.15	0.21	0.32

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.36	0.32	0.31	0.18	0.55	0.53	0.80	1.35
95th-Percentile Queue Length [ft]	9.03	8.02	7.77	4.60	13.65	13.37	20.11	33.66
Approach Delay [s/veh]	9.35			9.49			10.03	11.39
Approach LOS	A			A			B	B
Intersection Delay [s/veh]	10.06							
Intersection LOS	B							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.308

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	43	10	4	75	12	5	20	23	12	13	4
Total Analysis Volume [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	553	601	627	566	614	636	621	584
Degree of Utilization, x	0.07	0.17	0.17	0.03	0.28	0.27	0.31	0.20

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.21	0.63	0.59	0.08	1.15	1.10	1.30	0.74
95th-Percentile Queue Length [ft]	5.20	15.65	14.85	2.04	28.77	27.54	32.52	18.56
Approach Delay [s/veh]	9.75			10.59			11.35	10.71
Approach LOS	A			B			B	B
Intersection Delay [s/veh]	10.54							
Intersection LOS	B							

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Report File: J:\...\EXPM.pdf

Scenario 2 EXPM
6/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Right	0.289	18.6	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.236	36.5	E
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	NB Left	0.120	8.4	A
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	WB Left	0.169	9.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.289

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	15	0	0	18	0	175	7	23	180	1
Total Analysis Volume [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	63	0	0	63	0	0	177	0	0	177	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	173	173	173	173	173	173
g / C, Green / Cycle	0.25	0.25	0.72	0.72	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.00	0.22	0.22	0.14	0.21	0.21
s, saturation flow rate [veh/h]	1401	1431	657	1683	1660	653	1683	1681
c, Capacity [veh/h]	364	367	448	1213	1196	444	1213	1211
d1, Uniform Delay [s]	72.25	71.87	0.00	11.96	11.97	18.70	11.91	11.91
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.50	1.20	0.00	0.64	0.65	1.07	0.63	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.20	0.00	0.30	0.30	0.21	0.30	0.30
d, Delay for Lane Group [s/veh]	73.75	73.06	0.00	12.61	12.62	19.77	12.54	12.54
Lane Group LOS	E	E	A	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.41	3.71	0.00	7.61	7.51	2.46	7.46	7.45
50th-Percentile Queue Length [ft/ln]	110.26	92.87	0.00	190.21	187.85	61.55	186.48	186.22
95th-Percentile Queue Length [veh/ln]	7.85	6.69	0.00	12.13	12.01	4.43	11.94	11.92
95th-Percentile Queue Length [ft/ln]	196.37	167.17	0.00	303.30	300.24	110.79	298.46	298.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.75	73.75	73.75	73.06	73.06	73.06	0.00	12.61	12.62	19.77	12.54	12.54
Movement LOS	E	E	E	E	E	E	A	B	B	B	B	B
d_A, Approach Delay [s/veh]	73.75			73.06			12.61			13.37		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	18.58											
Intersection LOS	B											
Intersection V/C	0.289											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.994	0.000	2.784	0.000
Crosswalk LOS	A	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	492	492	1442	1442
d_b, Bicycle Delay [s]	68.25	68.25	9.35	9.35
I_b,int, Bicycle LOS Score for Intersection	1.700	1.678	2.162	2.233
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	36.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.236

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	35	84	642	65	117	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	84	642	65	117	633
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	21	161	16	29	158
Total Analysis Volume [veh/h]	35	84	642	65	117	633
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.13	0.01	0.00	0.13	0.01
d_M, Delay for Movement [s/veh]	36.54	11.44	0.00	0.00	9.67	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.87	0.45	0.00	0.00	0.45	0.00
95th-Percentile Queue Length [ft/ln]	21.78	11.20	0.00	0.00	11.34	0.00
d_A, Approach Delay [s/veh]	18.82		0.00		1.51	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.14					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.120

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	31	4	4	40	3	2	5	9	3	4	1
Total Analysis Volume [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	661	728	753	657	724	738	712	669
Degree of Utilization, x	0.12	0.10	0.09	0.02	0.12	0.12	0.08	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.39	0.32	0.31	0.07	0.41	0.40	0.28	0.15
95th-Percentile Queue Length [ft]	9.70	7.95	7.65	1.87	10.13	9.91	6.88	3.76
Approach Delay [s/veh]	8.35			8.29			8.52	8.66
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	8.37							
Intersection LOS	A							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.169

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	51	8	3	48	5	4	6	14	6	6	2
Total Analysis Volume [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	633	694	719	623	683	701	671	630
Degree of Utilization, x	0.12	0.17	0.16	0.02	0.16	0.15	0.14	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.43	0.61	0.58	0.06	0.55	0.53	0.48	0.28
95th-Percentile Queue Length [ft]	10.63	15.15	14.54	1.47	13.68	13.28	11.99	7.02
Approach Delay [s/veh]	8.91			8.83			9.23	9.26
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	8.96							
Intersection LOS	A							

APPENDIX E
Existing with-Project LOS Worksheets

Vistro File: J:\...\MacLaren_TIS.vistro
Report File: J:\...\EXWPROJAM.pdf

Scenario 1 EXAM
6/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Right	0.367	18.0	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.402	66.7	F
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	WB Left	0.346	10.6	B
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.314	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.367

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	20	0	0	0	0	30	5	50	33	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	1	60	0	0	47	2	582	71	93	895	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	0	15	0	0	12	1	146	18	23	224	1
Total Analysis Volume [veh/h]	59	1	60	0	0	47	2	582	71	93	895	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	59	0	0	59	0	0	181	0	0	181	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	177	177	177	177	177	177
g / C, Green / Cycle	0.23	0.23	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.00	0.20	0.20	0.13	0.27	0.27
s, saturation flow rate [veh/h]	1366	1431	558	1683	1620	701	1683	1682
c, Capacity [veh/h]	335	343	384	1241	1195	496	1241	1240
d1, Uniform Delay [s]	77.31	73.72	16.15	10.30	10.31	15.59	11.27	11.27
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.96	0.83	0.02	0.53	0.55	0.84	0.82	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.14	0.01	0.27	0.27	0.19	0.36	0.36
d, Delay for Lane Group [s/veh]	80.26	74.56	16.18	10.83	10.86	16.43	12.09	12.09
Lane Group LOS	F	E	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.61	2.44	0.05	6.23	6.03	2.21	9.22	9.22
50th-Percentile Queue Length [ft/ln]	165.23	60.91	1.15	155.74	150.81	55.13	230.60	230.42
95th-Percentile Queue Length [veh/ln]	10.83	4.39	0.08	10.32	10.06	3.97	14.20	14.20
95th-Percentile Queue Length [ft/ln]	270.63	109.64	2.06	258.07	251.51	99.24	355.12	354.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	80.26	80.26	80.26	74.56	74.56	74.56	16.18	10.84	10.86	16.43	12.09	12.09
Movement LOS	F	F	F	E	E	E	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	80.26			74.56			10.86			12.50		
Approach LOS	F			E			B			B		
d_I, Intersection Delay [s/veh]	18.01											
Intersection LOS	B											
Intersection V/C	0.367											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.032	0.000	2.852	0.000
Crosswalk LOS	B	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	458	458	1475	1475
d_b, Bicycle Delay [s]	71.30	71.30	8.27	8.27
l_b,int, Bicycle LOS Score for Intersection	1.758	1.637	2.100	2.376
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	66.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	17	81	584	67	179	749
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	30	5	35	33	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	111	589	102	212	752
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	28	147	26	53	188
Total Analysis Volume [veh/h]	38	111	589	102	212	752
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.40	0.17	0.01	0.00	0.24	0.01
d_M, Delay for Movement [s/veh]	66.70	11.67	0.00	0.00	10.23	0.00
Movement LOS	F	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.64	0.61	0.00	0.00	0.92	0.00
95th-Percentile Queue Length [ft/ln]	40.97	15.29	0.00	0.00	22.88	0.00
d_A, Approach Delay [s/veh]	25.70		0.00		2.25	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	3.33					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.346

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	44	11	12	56	0	0	5	2	0	3	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	149	25	45	234	14	10	81	55	126	69	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	37	6	11	59	4	3	20	14	32	17	3
Total Analysis Volume [veh/h]	62	149	25	45	234	14	10	81	55	126	69	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	546	592	613	552	599	608	618	599
Degree of Utilization, x	0.11	0.15	0.14	0.08	0.21	0.20	0.24	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.38	0.51	0.49	0.26	0.77	0.76	0.92	1.54
95th-Percentile Queue Length [ft]	9.55	12.82	12.33	6.62	19.32	19.00	22.89	38.44
Approach Delay [s/veh]	9.81			10.14			10.63	12.16
Approach LOS	A			B			B	B
Intersection Delay [s/veh]	10.61							
Intersection LOS	B							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.314

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	20	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	205	38	15	320	46	21	79	91	47	53	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	51	10	4	80	12	5	20	23	12	13	4
Total Analysis Volume [veh/h]	36	205	38	15	320	46	21	79	91	47	53	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	549	595	618	560	608	626	609	573
Degree of Utilization, x	0.07	0.20	0.20	0.03	0.30	0.29	0.31	0.20

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.21	0.76	0.73	0.08	1.26	1.21	1.34	0.76
95th-Percentile Queue Length [ft]	5.25	19.00	18.15	2.06	31.57	30.28	33.45	19.02
Approach Delay [s/veh]	10.07			10.91			11.60	10.90
Approach LOS	B			B			B	B
Intersection Delay [s/veh]	10.80							
Intersection LOS	B							

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Report File: J:\...\EXWPROJPM.pdf

Scenario 2 EXPM
6/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Right	0.326	19.8	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.483	55.2	F
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	NB Left	0.147	8.7	A
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	WB Left	0.185	9.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.326

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	28	0	0	0	0	41	3	30	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	0	89	0	0	72	0	742	32	123	740	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	22	0	0	18	0	186	8	31	185	1
Total Analysis Volume [veh/h]	28	0	89	0	0	72	0	742	32	123	740	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	63	0	0	63	0	0	177	0	0	177	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	173	173	173	173	173	173
g / C, Green / Cycle	0.25	0.25	0.72	0.72	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.00	0.23	0.23	0.20	0.22	0.22
s, saturation flow rate [veh/h]	1405	1431	645	1683	1659	627	1683	1681
c, Capacity [veh/h]	364	367	439	1213	1196	424	1213	1211
d1, Uniform Delay [s]	73.91	71.87	0.00	12.17	12.17	20.63	12.00	12.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.32	1.20	0.00	0.70	0.71	1.73	0.65	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.20	0.00	0.32	0.32	0.29	0.31	0.31
d, Delay for Lane Group [s/veh]	76.24	73.06	0.00	12.87	12.88	22.36	12.66	12.66
Lane Group LOS	E	E	A	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	6.24	3.71	0.00	8.21	8.10	3.55	7.72	7.71
50th-Percentile Queue Length [ft/ln]	155.99	92.87	0.00	205.29	202.57	88.86	193.12	192.86
95th-Percentile Queue Length [veh/ln]	10.34	6.69	0.00	12.91	12.77	6.40	12.28	12.27
95th-Percentile Queue Length [ft/ln]	258.40	167.17	0.00	322.78	319.27	159.94	307.07	306.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.24	76.24	76.24	73.06	73.06	73.06	0.00	12.88	12.88	22.36	12.66	12.66
Movement LOS	E	E	E	E	E	E	A	B	B	C	B	B
d_A, Approach Delay [s/veh]	76.24			73.06			12.88			14.04		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	19.85											
Intersection LOS	B											
Intersection V/C	0.326											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.069	0.000	2.801	0.000
Crosswalk LOS	B	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	492	492	1442	1442
d_b, Bicycle Delay [s]	68.25	68.25	9.35	9.35
l_b,int, Bicycle LOS Score for Intersection	1.753	1.678	2.198	2.274
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	55.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	35	84	642	65	117	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	41	3	21	20	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	125	645	86	137	637
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	31	161	22	34	159
Total Analysis Volume [veh/h]	64	125	645	86	137	637
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.20	0.01	0.00	0.16	0.01
d_M, Delay for Movement [s/veh]	55.20	12.10	0.00	0.00	9.92	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.22	0.73	0.00	0.00	0.56	0.00
95th-Percentile Queue Length [ft/ln]	55.57	18.30	0.00	0.00	13.95	0.00
d_A, Approach Delay [s/veh]	26.70		0.00		1.76	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	3.78					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.147

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	60	7	7	34	0	0	3	1	0	4	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	183	24	23	195	12	6	22	36	10	21	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	46	6	6	49	3	2	6	9	3	5	4
Total Analysis Volume [veh/h]	78	183	24	23	195	12	6	22	36	10	21	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	648	712	736	642	705	717	681	658
Degree of Utilization, x	0.12	0.15	0.14	0.04	0.15	0.14	0.09	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.41	0.51	0.49	0.11	0.51	0.50	0.31	0.22
95th-Percentile Queue Length [ft]	10.21	12.67	12.20	2.78	12.82	12.58	7.75	5.62
Approach Delay [s/veh]	8.64			8.62			8.84	8.88
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	8.67							
Intersection LOS	A							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.185

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	0	28	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	225	30	12	220	20	15	22	56	23	22	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	56	8	3	55	5	4	6	14	6	6	2
Total Analysis Volume [veh/h]	79	225	30	12	220	20	15	22	56	23	22	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	629	689	712	620	679	694	660	619
Degree of Utilization, x	0.13	0.18	0.18	0.02	0.18	0.17	0.14	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.43	0.67	0.65	0.06	0.64	0.62	0.49	0.29
95th-Percentile Queue Length [ft]	10.71	16.86	16.22	1.48	15.96	15.54	12.22	7.14
Approach Delay [s/veh]	9.04			9.03			9.35	9.37
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	9.10							
Intersection LOS	A							

APPENDIX F
Future Pre-Project LOS Worksheets

Vistro File: J:\...\MacLaren_TIS_v3.vistro
Report File: J:\...\Future_Without_Project_AM_PHF_v2.pdf

Scenario 5 Future_Without_Project_AM
8/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Left	0.376	17.7	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.226	54.7	F
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	WB Left	0.358	10.5	B
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.349	11.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	2	0	0	0	0	7	-3	-14	-5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1	44	0	0	49	2	587	66	31	900	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	12	0	0	13	1	154	17	8	237	1
Total Analysis Volume [veh/h]	63	1	46	0	0	52	2	618	69	33	947	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	59	0	0	59	0	0	181	0	0	181	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	177	177	177	177	177	177
g / C, Green / Cycle	0.23	0.23	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.08	0.04	0.00	0.21	0.21	0.05	0.28	0.28
s, saturation flow rate [veh/h]	1354	1431	532	1683	1624	680	1683	1682
c, Capacity [veh/h]	334	343	363	1241	1198	479	1241	1240
d1, Uniform Delay [s]	76.65	73.99	16.84	10.43	10.44	14.56	11.52	11.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.62	0.94	0.03	0.57	0.59	0.28	0.90	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.15	0.01	0.28	0.28	0.07	0.38	0.38
d, Delay for Lane Group [s/veh]	79.27	74.93	16.87	11.00	11.03	14.84	12.41	12.41
Lane Group LOS	E	E	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.00	2.71	0.05	6.63	6.43	0.72	9.97	9.96
50th-Percentile Queue Length [ft/ln]	149.93	67.66	1.18	165.81	160.81	18.07	249.30	249.12
95th-Percentile Queue Length [veh/ln]	10.01	4.87	0.08	10.86	10.59	1.30	15.15	15.14
95th-Percentile Queue Length [ft/ln]	250.33	121.80	2.12	271.40	264.80	32.52	378.77	378.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.27	79.27	79.27	74.93	74.93	74.93	16.87	11.01	11.03	14.84	12.41	12.41
Movement LOS	E	E	E	E	E	E	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	79.27			74.93			11.03			12.49		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	17.72											
Intersection LOS	B											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	1.911	0.000	2.873	0.000
Crosswalk LOS	A	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	458	458	1475	1475
d_b, Bicycle Delay [s]	71.30	71.30	8.27	8.27
l_b,int, Bicycle LOS Score for Intersection	1.741	1.645	2.128	2.370
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	54.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.226

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	17	81	584	67	179	749
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	3	-8	-10	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	86	616	62	178	791
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	23	162	16	47	208
Total Analysis Volume [veh/h]	21	91	648	65	187	833
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.23	0.14	0.01	0.00	0.21	0.01
d_M, Delay for Movement [s/veh]	54.72	11.56	0.00	0.00	10.17	0.00
Movement LOS	F	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.80	0.49	0.00	0.00	0.80	0.00
95th-Percentile Queue Length [ft/ln]	20.11	12.34	0.00	0.00	19.97	0.00
d_A, Approach Delay [s/veh]	19.65		0.00		1.86	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.22					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	-5	-13	-4	0	0	0	0	1	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	111	10	22	183	15	11	80	56	133	69	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	29	3	6	48	4	3	21	15	35	18	2
Total Analysis Volume [veh/h]	67	117	11	23	193	16	12	84	59	140	73	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	549	596	608	554	601	612	637	615
Degree of Utilization, x	0.12	0.11	0.11	0.04	0.17	0.17	0.24	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.41	0.36	0.35	0.13	0.63	0.61	0.95	1.62
95th-Percentile Queue Length [ft]	10.34	8.97	8.77	3.24	15.63	15.30	23.77	40.49
Approach Delay [s/veh]	9.65			9.83			10.47	12.09
Approach LOS	A			A			B	B
Intersection Delay [s/veh]	10.53							
Intersection LOS	B							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.349

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	-13	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	167	40	16	317	48	22	83	96	49	56	18
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	44	11	4	83	13	6	22	25	13	15	5
Total Analysis Volume [veh/h]	40	176	42	17	334	51	23	87	101	52	59	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	536	579	606	550	597	617	605	568
Degree of Utilization, x	0.07	0.19	0.18	0.03	0.32	0.31	0.35	0.23

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.24	0.69	0.65	0.10	1.39	1.33	1.56	0.88
95th-Percentile Queue Length [ft]	6.04	17.19	16.29	2.39	34.75	33.24	39.00	21.94
Approach Delay [s/veh]	10.12			11.29			12.12	11.22
Approach LOS	B			B			B	B
Intersection Delay [s/veh]	11.16							
Intersection LOS	B							

Vistro File: J:\...\MacLaren_TIS_v3.vistro
Report File: J:\...\Future_Without_Project_PM_PHF_v2.pdf

Scenario 6 Future_Without_Project_PM
8/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	SB Right	0.309	18.7	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.283	49.0	E
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	NB Left	0.135	8.5	A
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.195	9.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.309

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	-2	0	-13	0	0	0	0	2	1	6	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	0	51	0	0	76	0	738	31	104	770	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	13	0	0	20	0	194	8	27	203	1
Total Analysis Volume [veh/h]	24	0	54	0	0	80	0	777	33	109	811	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	63	0	0	63	0	0	177	0	0	177	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	173	173	173	173	173	173
g / C, Green / Cycle	0.25	0.25	0.72	0.72	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.00	0.24	0.24	0.18	0.24	0.24
s, saturation flow rate [veh/h]	1401	1431	604	1683	1659	606	1683	1681
c, Capacity [veh/h]	364	367	406	1213	1196	408	1213	1212
d1, Uniform Delay [s]	71.88	72.30	0.00	12.34	12.34	20.78	12.34	12.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.34	1.36	0.00	0.75	0.76	1.60	0.75	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.22	0.00	0.34	0.34	0.27	0.34	0.34
d, Delay for Lane Group [s/veh]	73.23	73.66	0.00	13.09	13.11	22.38	13.09	13.09
Lane Group LOS	E	E	A	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.02	4.16	0.00	8.72	8.60	3.14	8.70	8.69
50th-Percentile Queue Length [ft/ln]	100.62	103.88	0.00	217.95	215.04	78.43	217.55	217.27
95th-Percentile Queue Length [veh/ln]	7.24	7.48	0.00	13.56	13.41	5.65	13.54	13.53
95th-Percentile Queue Length [ft/ln]	181.12	186.98	0.00	339.00	335.29	141.18	338.49	338.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.23	73.23	73.23	73.66	73.66	73.66	0.00	13.10	13.11	22.38	13.09	13.09
Movement LOS	E	E	E	E	E	E	A	B	B	C	B	B
d_A, Approach Delay [s/veh]	73.23			73.66			13.10			14.18		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	18.67											
Intersection LOS	B											
Intersection V/C	0.309											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.023	0.000	2.814	0.000
Crosswalk LOS	B	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	492	492	1442	1442
d_b, Bicycle Delay [s]	68.25	68.25	9.35	9.35
l_b,int, Bicycle LOS Score for Intersection	1.688	1.692	2.228	2.321
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	49.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	35	84	642	65	117	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	-7	-9	12	4	4	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	79	686	72	127	672
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	21	181	19	33	177
Total Analysis Volume [veh/h]	32	83	722	76	134	707
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.28	0.14	0.01	0.00	0.16	0.01
d_M, Delay for Movement [s/veh]	48.98	11.95	0.00	0.00	10.24	0.00
Movement LOS	E	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.07	0.48	0.00	0.00	0.58	0.00
95th-Percentile Queue Length [ft/ln]	26.79	11.94	0.00	0.00	14.55	0.00
d_A, Approach Delay [s/veh]	22.26		0.00		1.63	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.24					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.135

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	-4	2	6	2	0	0	0	0	-4	0	-12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	125	20	23	171	13	6	20	37	7	18	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	33	5	6	45	3	2	5	10	2	5	0
Total Analysis Volume [veh/h]	84	132	21	24	180	14	6	21	39	7	19	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	658	724	753	655	720	735	701	648
Degree of Utilization, x	0.13	0.11	0.10	0.04	0.13	0.13	0.09	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.44	0.35	0.34	0.11	0.46	0.45	0.31	0.13
95th-Percentile Queue Length [ft]	10.93	8.83	8.46	2.85	11.60	11.34	7.76	3.13
Approach Delay [s/veh]	8.44			8.41			8.67	8.80
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	8.47							
Intersection LOS	A							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.195

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	0	-13	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	221	32	13	189	21	16	23	59	24	23	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	58	8	3	50	6	4	6	16	6	6	2
Total Analysis Volume [veh/h]	87	233	34	14	199	22	17	24	62	25	24	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	625	685	709	612	670	688	658	616
Degree of Utilization, x	0.14	0.19	0.19	0.02	0.16	0.16	0.16	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.48	0.72	0.69	0.07	0.59	0.57	0.55	0.31
95th-Percentile Queue Length [ft]	12.04	17.97	17.23	1.75	14.70	14.25	13.80	7.76
Approach Delay [s/veh]	9.16			9.02			9.48	9.45
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	9.18							
Intersection LOS	A							

APPENDIX G
Future Post-Project LOS Worksheets

Vistro File: J:\...\MacLaren_TIS_v3.vistro
Report File: J:\...\Future_With_Project_AM_PHF_v2.pdf

Scenario 7 Future_With_Project_AM
8/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Right	0.403	18.6	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.573	103.8	F
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	WB Left	0.393	11.2	B
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.356	11.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	56	1	40	0	0	47	2	552	66	43	862	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	22	0	0	0	0	37	2	35	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	1	64	0	0	49	2	617	71	80	933	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	17	0	0	13	1	162	19	21	246	1
Total Analysis Volume [veh/h]	65	1	67	0	0	52	2	649	75	84	982	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	59	0	0	59	0	0	181	0	0	181	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	177	177	177	177	177	177
g / C, Green / Cycle	0.23	0.23	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.04	0.00	0.22	0.22	0.13	0.29	0.29
s, saturation flow rate [veh/h]	1368	1431	515	1683	1623	657	1683	1682
c, Capacity [veh/h]	336	343	349	1241	1197	460	1241	1240
d1, Uniform Delay [s]	78.04	73.99	17.33	10.58	10.59	16.34	11.69	11.69
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.47	0.94	0.03	0.61	0.64	0.87	0.95	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.15	0.01	0.30	0.30	0.18	0.40	0.40
d, Delay for Lane Group [s/veh]	81.51	74.93	17.36	11.19	11.23	17.21	12.64	12.64
Lane Group LOS	F	E	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.41	2.71	0.05	7.10	6.87	2.05	10.49	10.49
50th-Percentile Queue Length [ft/ln]	185.35	67.66	1.20	177.47	171.81	51.15	262.35	262.17
95th-Percentile Queue Length [veh/ln]	11.88	4.87	0.09	11.47	11.17	3.68	15.81	15.80
95th-Percentile Queue Length [ft/ln]	296.99	121.80	2.15	286.71	279.29	92.08	395.17	394.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.51	81.51	81.51	74.93	74.93	74.93	17.36	11.21	11.23	17.21	12.64	12.64
Movement LOS	F	F	F	E	E	E	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	81.51			74.93			11.23			13.00		
Approach LOS	F			E			B			B		
d_I, Intersection Delay [s/veh]	18.58											
Intersection LOS	B											
Intersection V/C	0.403											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.023	0.000	2.888	0.000
Crosswalk LOS	B	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	458	458	1475	1475
d_b, Bicycle Delay [s]	71.30	71.30	8.27	8.27
l_b,int, Bicycle LOS Score for Intersection	1.779	1.645	2.159	2.441
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	103.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	17	81	584	67	179	749
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	31	7	26	24	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	116	620	96	212	794
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	31	163	25	56	209
Total Analysis Volume [veh/h]	43	122	653	101	223	836
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.57	0.20	0.01	0.00	0.26	0.01
d_M, Delay for Movement [s/veh]	103.76	12.21	0.00	0.00	10.72	0.00
Movement LOS	F	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	2.48	0.73	0.00	0.00	1.05	0.00
95th-Percentile Queue Length [ft/ln]	62.07	18.14	0.00	0.00	26.24	0.00
d_A, Approach Delay [s/veh]	36.07		0.00		2.26	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	4.22					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	61	105	14	33	178	14	10	76	53	126	66	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	45	6	-2	52	0	0	5	2	1	3	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	155	21	33	239	15	11	85	58	133	72	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	41	6	9	63	4	3	22	15	35	19	4
Total Analysis Volume [veh/h]	68	163	22	35	252	16	12	89	61	140	76	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	531	574	589	536	580	588	603	587
Degree of Utilization, x	0.13	0.16	0.16	0.07	0.23	0.23	0.27	0.39

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.44	0.57	0.55	0.21	0.89	0.87	1.08	1.87
95th-Percentile Queue Length [ft]	10.95	14.29	13.84	5.22	22.19	21.80	27.05	46.64
Approach Delay [s/veh]	10.18			10.60			11.16	13.04
Approach LOS	B			B			B	B
Intersection Delay [s/veh]	11.18							
Intersection LOS	B							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.356

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	36	171	38	15	300	46	21	79	91	47	53	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	0	0	22	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	200	40	16	337	48	22	83	96	49	56	18
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	53	11	4	89	13	6	22	25	13	15	5
Total Analysis Volume [veh/h]	40	211	42	17	355	51	23	87	101	52	59	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	530	573	596	543	589	607	592	556
Degree of Utilization, x	0.08	0.22	0.21	0.03	0.34	0.33	0.36	0.23

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.24	0.84	0.80	0.10	1.53	1.46	1.61	0.90
95th-Percentile Queue Length [ft]	6.09	20.92	19.94	2.42	38.21	36.62	40.18	22.51
Approach Delay [s/veh]	10.48			11.69			12.41	11.44
Approach LOS	B			B			B	B
Intersection Delay [s/veh]	11.47							
Intersection LOS	B							

Vistro File: J:\...\MacLaren_TIS_v3.vistro
Report File: J:\...\Future_With_Project_PM_PHF_v2.pdf

Scenario 8 Future_With_Project_PM
8/8/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Gilman Rd/ Ramona Blvd	Signalized	HCM 6th Edition	NB Right	0.345	19.9	B
2	Durfee Ave/ Ramona Blvd	Two-way stop	HCM 6th Edition	NB Left	0.612	86.3	F
3	Durfee Ave/ Kerwood St	All-way stop	HCM 6th Edition	NB Left	0.163	8.8	A
4	Durfee Ave/ Deana St	All-way stop	HCM 6th Edition	EB Right	0.212	9.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Gilman Rd/ Ramona Blvd

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	70.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	0	61	0	0	72	0	701	29	93	720	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	14	0	0	0	0	44	4	36	34	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	0	78	0	0	76	0	780	34	134	790	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	21	0	0	20	0	205	9	35	208	1
Total Analysis Volume [veh/h]	27	0	82	0	0	80	0	821	36	141	832	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	63	0	0	63	0	0	177	0	0	177	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	21	0	0	7	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	240	240	240	240	240	240	240	240
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59	173	173	173	173	173	173
g / C, Green / Cycle	0.25	0.25	0.72	0.72	0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.08	0.06	0.00	0.26	0.26	0.24	0.25	0.25
s, saturation flow rate [veh/h]	1408	1431	592	1683	1658	580	1683	1681
c, Capacity [veh/h]	365	367	397	1213	1195	387	1213	1212
d1, Uniform Delay [s]	73.45	72.30	0.00	12.58	12.58	23.36	12.44	12.44
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.09	1.36	0.00	0.82	0.83	2.64	0.78	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.22	0.00	0.36	0.36	0.36	0.34	0.34
d, Delay for Lane Group [s/veh]	75.54	73.66	0.00	13.40	13.41	26.00	13.22	13.22
Lane Group LOS	E	E	A	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	5.76	4.16	0.00	9.41	9.27	4.51	9.00	8.99
50th-Percentile Queue Length [ft/ln]	144.02	103.88	0.00	235.13	231.83	112.84	225.04	224.76
95th-Percentile Queue Length [veh/ln]	9.70	7.48	0.00	14.43	14.27	8.00	13.92	13.91
95th-Percentile Queue Length [ft/ln]	242.43	186.98	0.00	360.86	356.69	199.94	348.05	347.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.54	75.54	75.54	73.66	73.66	73.66	0.00	13.40	13.41	26.00	13.22	13.22
Movement LOS	E	E	E	E	E	E	A	B	B	C	B	B
d_A, Approach Delay [s/veh]	75.54			73.66			13.40			15.06		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	19.94											
Intersection LOS	B											
Intersection V/C	0.345											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	0.00	111.17	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.101	0.000	2.829	0.000
Crosswalk LOS	B	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	492	492	1442	1442
d_b, Bicycle Delay [s]	68.25	68.25	9.35	9.35
l_b,int, Bicycle LOS Score for Intersection	1.739	1.692	2.267	2.365
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Durfee Ave/ Ramona Blvd

Control Type:	Two-way stop	Delay (sec / veh):	86.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	35	84	642	65	117	633
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	33	15	25	24	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	121	689	93	147	676
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	32	181	24	39	178
Total Analysis Volume [veh/h]	61	127	725	98	155	712
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.61	0.22	0.01	0.00	0.19	0.01
d_M, Delay for Movement [s/veh]	86.30	12.78	0.00	0.00	10.56	0.00
Movement LOS	F	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	2.94	0.81	0.00	0.00	0.71	0.00
95th-Percentile Queue Length [ft/ln]	73.51	20.31	0.00	0.00	17.80	0.00
d_A, Approach Delay [s/veh]	36.63		0.00		1.89	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	4.54					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Durfee Ave/ Kerwood St

Control Type:	All-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	123	17	16	161	12	6	19	35	10	17	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	56	9	13	36	0	0	3	1	-4	4	-3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	185	27	30	205	13	6	23	38	7	22	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	49	7	8	54	3	2	6	10	2	6	1
Total Analysis Volume [veh/h]	86	195	28	32	216	14	6	24	40	7	23	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	647	711	736	642	704	717	672	629
Degree of Utilization, x	0.13	0.16	0.15	0.05	0.16	0.16	0.10	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.46	0.55	0.53	0.16	0.58	0.57	0.35	0.16
95th-Percentile Queue Length [ft]	11.43	13.85	13.29	3.93	14.52	14.23	8.67	4.01
Approach Delay [s/veh]	8.73			8.73			8.97	9.03
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	8.77							
Intersection LOS	A							

Intersection Level Of Service Report
Intersection 4: Durfee Ave/ Deana St

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.212

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	79	205	30	12	192	20	15	22	56	23	22	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	0	0	15	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	241	32	13	217	21	16	23	59	24	23	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	63	8	3	57	6	4	6	16	6	6	2
Total Analysis Volume [veh/h]	87	254	34	14	228	22	17	24	62	25	24	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	621	680	702	609	666	682	647	606
Degree of Utilization, x	0.14	0.21	0.21	0.02	0.19	0.18	0.16	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.49	0.80	0.77	0.07	0.69	0.67	0.56	0.32
95th-Percentile Queue Length [ft]	12.13	19.92	19.15	1.76	17.16	16.69	14.08	7.90
Approach Delay [s/veh]	9.32			9.23			9.61	9.57
Approach LOS	A			A			A	A
Intersection Delay [s/veh]	9.35							
Intersection LOS	A							

APPENDIX H
Traffic Signal Warrant Analysis Worksheets

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street:	Ramona Boulevard
Minor Street:	Durfee Avenue
Scenario:	Future + Project

SUMMARY OF RESULTS

		Warrant Satisfy?
Warrant 1	Eight-Hour Vehicle Volume	No
Warrant 2	Four-Hour Vehicle Volume	No
Warrant 3	Peak Hour	**YES**
Warrant 4	Pedestrian Volume	No
Warrant 5	School Crossing	N/A
Warrant 6	Coordinated Signal System	N/A
Warrant 7	Crash Experience	N/A
Warrant 8	Roadway Network	N/A
Warrant 9	Intersection Near a Grade Crossing	N/A

INTERSECTION: Ramona Boulevard & Durfee Avenue

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* **YES** ☐ **NO** ☒

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	2pm - 3pm	3pm - 4pm	4pm - 5pm	5pm - 6pm	Hour
Both Approaches - Major Street		x					
Higher Approach - Minor Street		x					

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES ☐	NO ☒
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES ☐	NO ☒

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED **YES** ☒ **NO** ☐

PART A

SATISFIED **YES** ☐ **NO** ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	YES ☐ NO ☒ *2 vehicle-hours of delay*
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☒ NO ☐
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☒ NO ☐

PART B

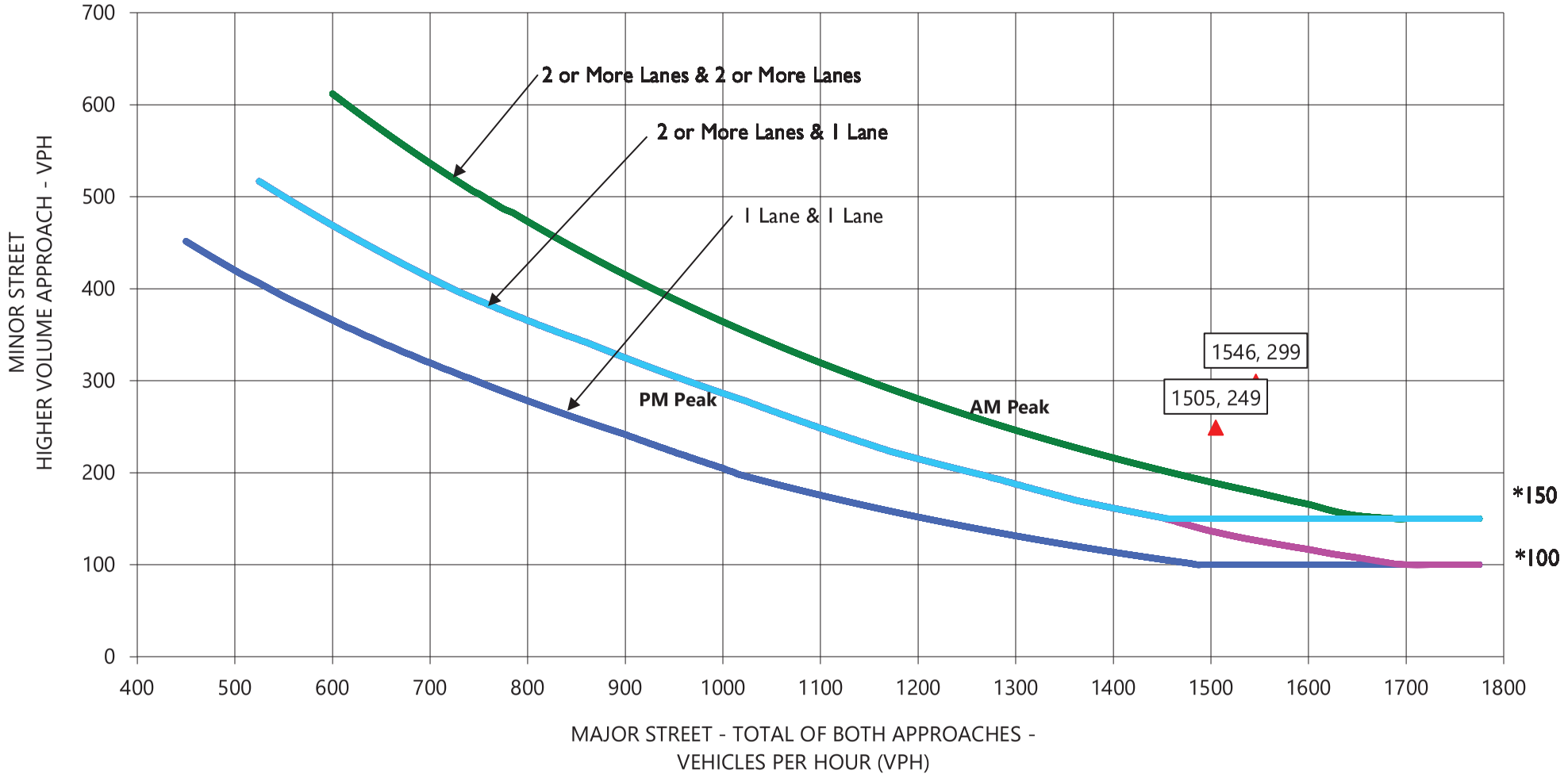
SATISFIED **YES** ☒ **NO** ☐

APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	1,546	1,505
Higher Approach - Minor Street		x	299	249

The plotted point falls above the curve in Figure 4C-3.	YES ☒	NO ☐
OR, The plotted point falls above the curve in Figure 4C-4.	YES ☐	NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3 Warrant 3
Ramona Boulevard & Durfee Avenue
AM (PM) Peak hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Future with-Project



*Note: 150 vph applies as the lower threshold volume for a mjinor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
▲ Major approaches combined: VPH
Minor street: VPH

Peak Hour Volumes Satify Warrants? YES

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street:	Ramona Boulevard
Minor Street:	Durfee Avenue
Scenario:	Future + Project

SUMMARY OF RESULTS

		Warrant Satisfy?
Warrant 1	Eight-Hour Vehicle Volume	No
Warrant 2	Four-Hour Vehicle Volume	No
Warrant 3	Peak Hour	**YES**
Warrant 4	Pedestrian Volume	No
Warrant 5	School Crossing	N/A
Warrant 6	Coordinated Signal System	N/A
Warrant 7	Crash Experience	N/A
Warrant 8	Roadway Network	N/A
Warrant 9	Intersection Near a Grade Crossing	N/A

INTERSECTION: Ramona Boulevard & Durfee Avenue

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* **YES** ☐ **NO** ☒

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	2pm - 3pm	3pm - 4pm	4pm - 5pm	5pm - 6pm	Hour
Both Approaches - Major Street		x					
Higher Approach - Minor Street		x					

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES ☐	NO ☒
OR, All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES ☐	NO ☒

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED **YES** ☒ **NO** ☐

PART A

SATISFIED **YES** ☐ **NO** ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	YES ☐ NO ☒ *4 vehicle-hours of delay*
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☒ NO ☐
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☒ NO ☐

PART B

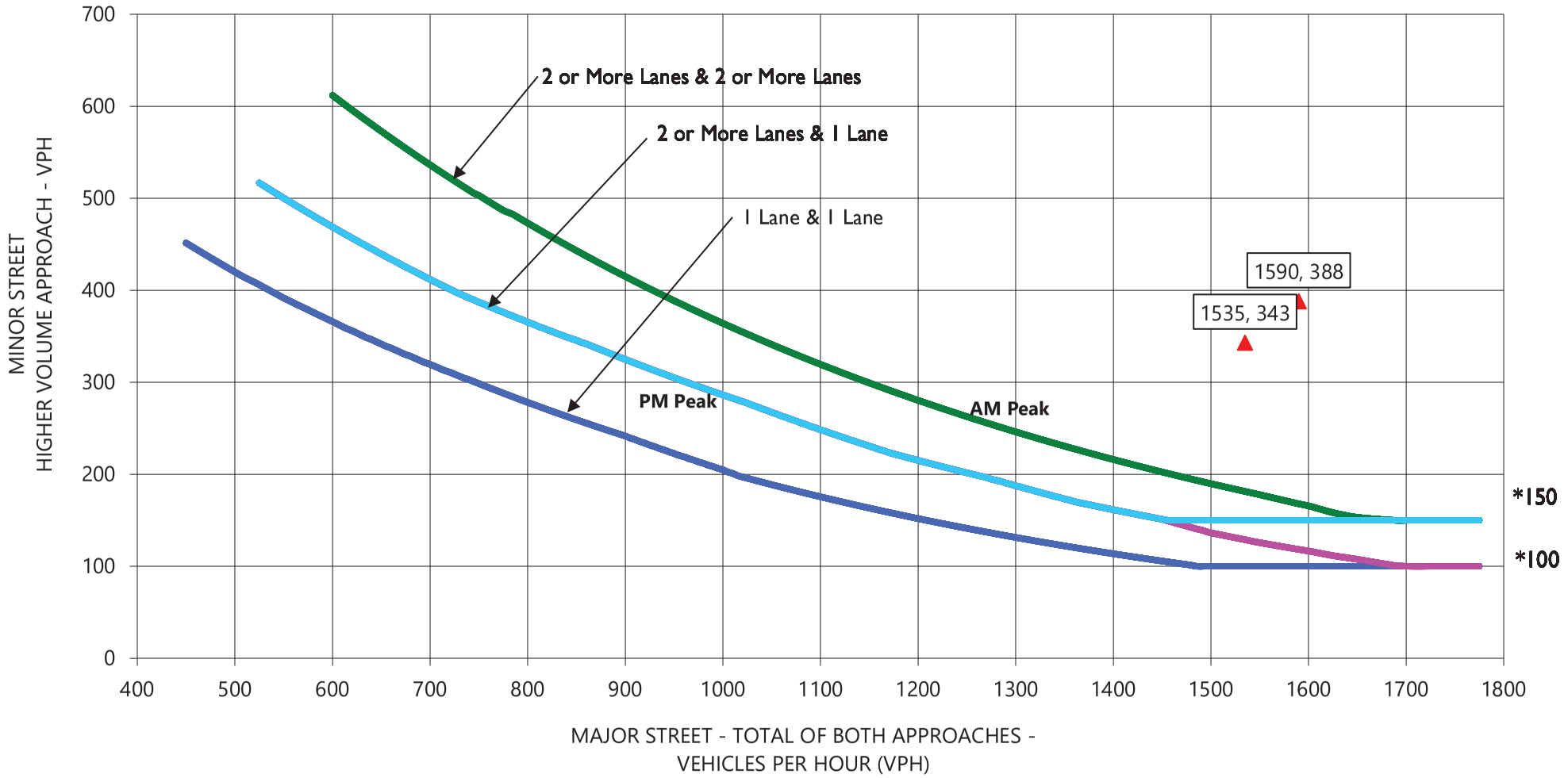
SATISFIED **YES** ☒ **NO** ☐

APPROACH LANES	One	2 or More	am peak	pm peak
Both Approaches - Major Street		x	1,590	1,535
Higher Approach - Minor Street		x	388	343

The plotted point falls above the curve in Figure 4C-3.	YES ☒	NO ☐
OR, The plotted point falls above the curve in Figure 4C-4.	YES ☐	NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3 Warrant 3
Ramona Boulevard & Durfee Avenue
AM (PM) Peak hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Future with-Project



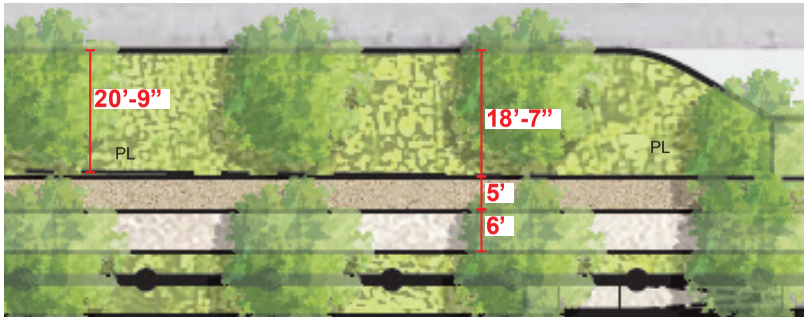
*Note: 150 vph applies as the lower threshold volume for a mjinor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
▲ Major approaches combined: VPH
Minor street: VPH

Peak Hour Volumes Satify Warrants? YES

APPENDIX I
On-Street Diagonal Parking Concept Plans

KEYMAP
NTS



PLAN A:
GILMAN ROAD

EXISTING CONDITION A:
GILMAN ROAD

PLAN B:
KERRWOOD STREET

EXISTING CONDITION B:
KERRWOOD STREET

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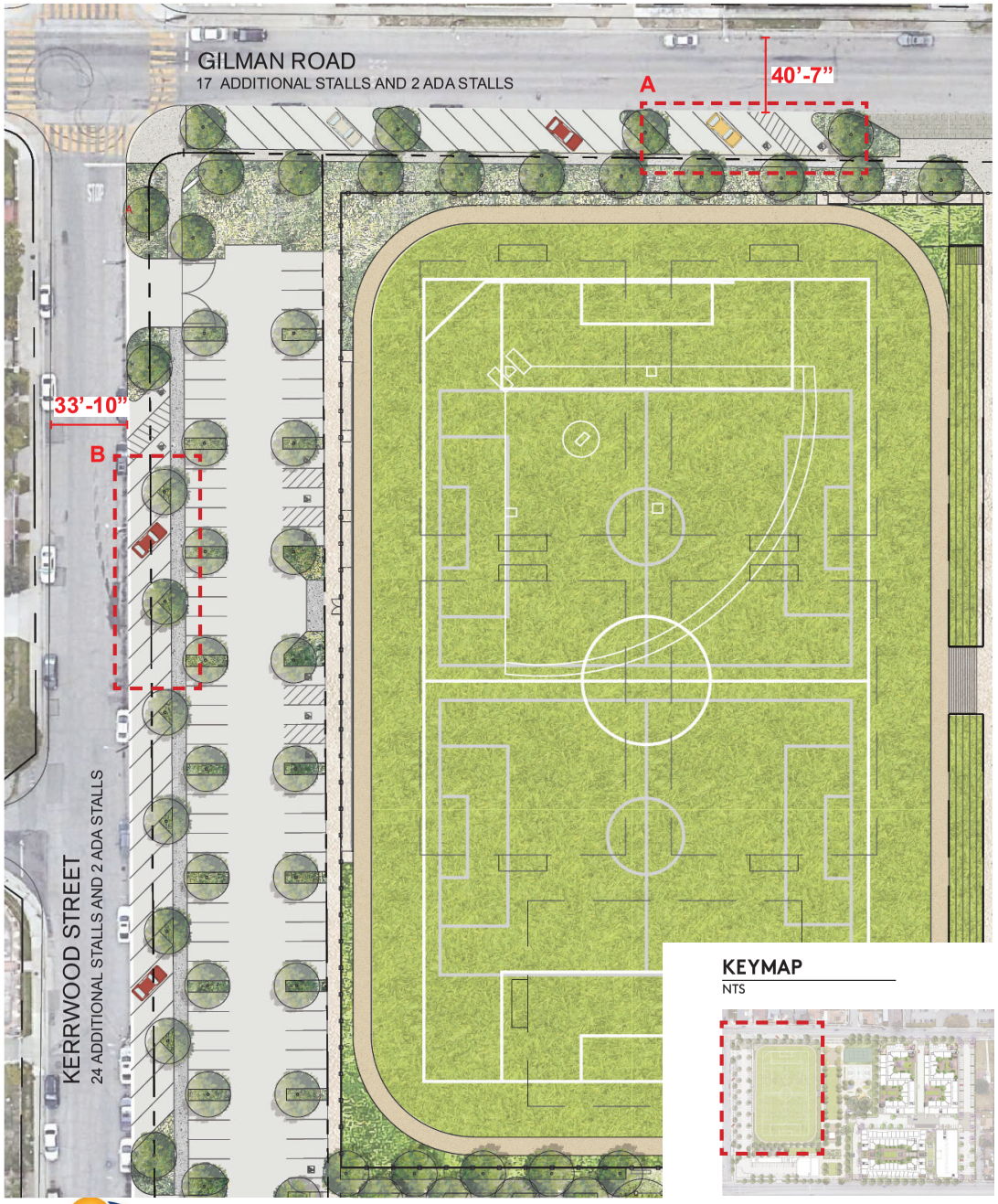
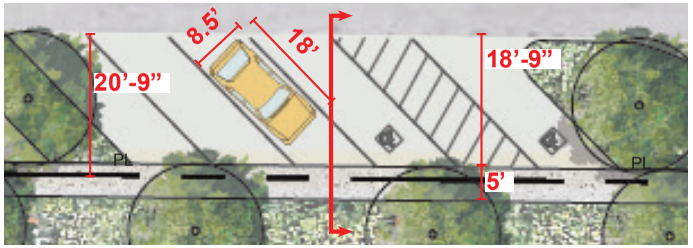
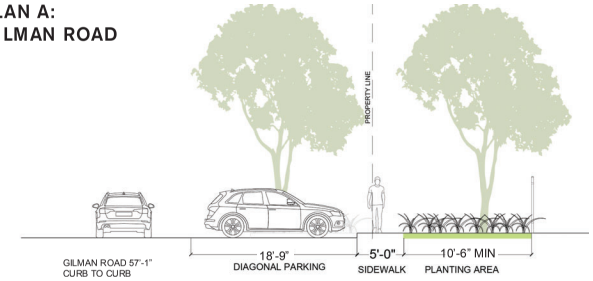
Existing On-Street Parking



KEYMAP
NTS

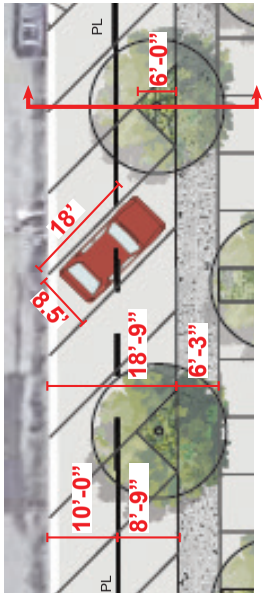


PLAN A:
GILMAN ROAD



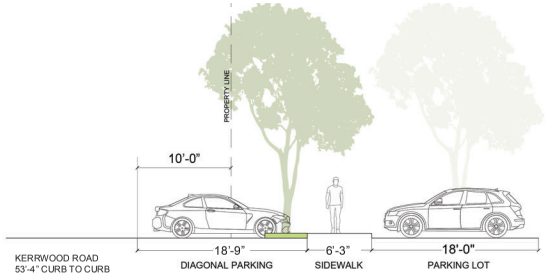
SECTION A:
GILMAN ROAD

SCALE : 1/8"=1'-0"



PLAN B:
KERRWOOD STREET

Triangular Planter Reference Image



SCALE : 1/8"=1'-0"

SECTION B:
KERRWOOD STREET

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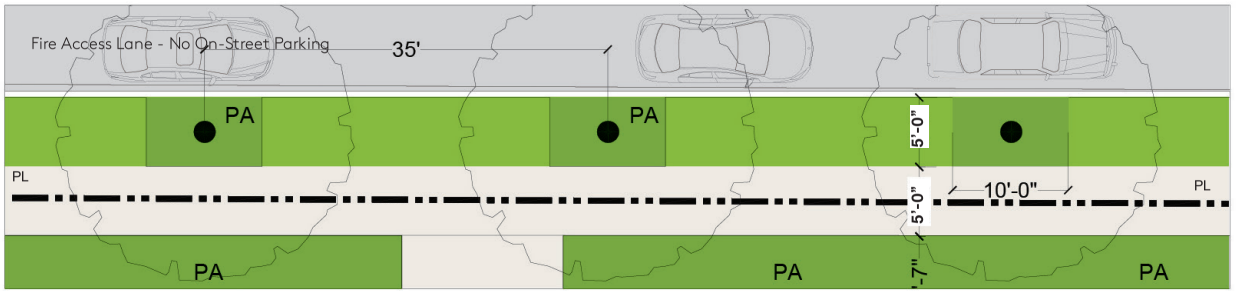
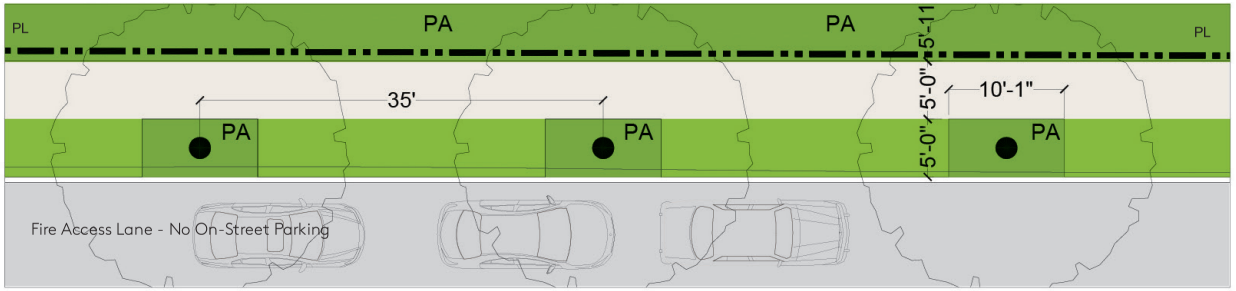
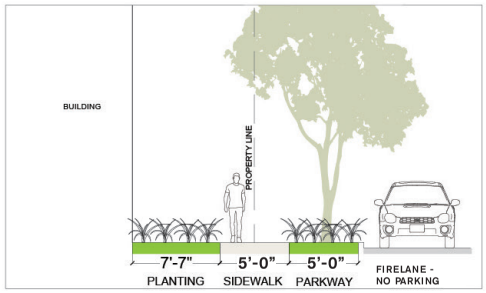
Proposed On-Street Parking



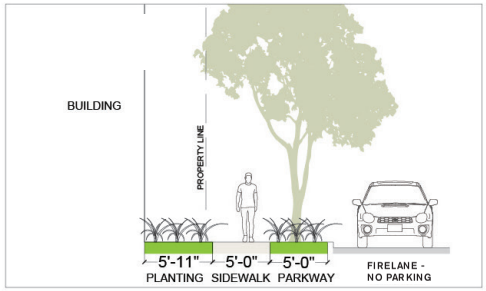
A Gilman Rd - Sidewalk with continuous parkway



B Durfee Ave - Sidewalk with continuous parkway

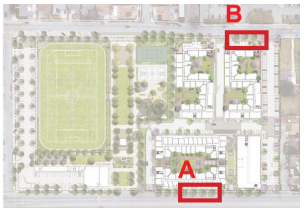


A Gilman Rd - Section



B Durfee Ave - Section

KEYMAP
NTS



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Sidewalk Study

SCALE : 1/4"=1'-0"

L40