



**U.S. Department of Housing and Urban
Development**
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov/espanol.hud.gov

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

Project Information

Project Name: Cartwright Family Apartments

Responsible Entity: **OC Housing & Community Development**

Grant Recipient
(if different than Responsible Entity):

State/Local Identifier: CA/059

Preparer: Jaclyn Canzone, OC Housing and Community
Development

Certifying Officer Name and Title: Julia Bidwell, Director
OC Housing & Community Development

Grant Recipient
(if different than Responsible Entity):

Consultant (if applicable): Jonathan Rigg, Dudek
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Project Location:

The Cartwright Family Apartments (referred to throughout this Environmental Assessment as the Multifamily Residential Project or proposed project) is located within Orange County, California (refer to Figure 1, Project Location). The proposed project is located at 17861 Cartwright Road in the City of Irvine, south of Main Street and west of Jamboree Road. The project site (refer to Attachment 1, Site Plan) is currently occupied by a vacant, one-story commercial office building that consists of only the bare concrete floor slab and building frame. Surrounding properties include commercial office buildings and residential apartment buildings. The project site is located on Assessor's Parcel Number 435-142-39 and is a planned multifamily residential land use.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The proposed project by C&C Development would involve replacing the currently vacant commercial office building with a 60-unit affordable housing community for families including 10 Permanent Supportive Housing (PSH) units designed to accommodate households who meet the Mental Health Services Act eligibility criteria whom are experiencing homelessness (in collaboration with the OC Health Care Agency) and eight Orange County Housing Authority (OCHA) Project-Based Vouchers will serve homeless individuals in OCHA's jurisdiction with referrals via the Orange County Coordinated Entry System (CES). In addition, the project would reserve five units for developmentally disabled residents and six units with a veterans preference. The apartment complex would be a four-story tucker-under building with contemporary design and elevator access. Leadership in Energy and Environmental Design (LEED) Environmental Design Standards would influence the design and orientation of the development. Of the 60 rental units, there would be 15 one-bedroom units, 17 two-bedroom units, and 28 three-bedroom units to provide housing for diverse family sizes. In addition to the residential units, the approximately 1.62-acre project site would include a leasing office, community room, fitness room, computer room, tot lot, pool, bike room, dog park, and barbeque pavilion for residents.

The proposed project would comply with the surrounding mixed commercial and residential community, which is zoned as 5.1 IBC Multi-Use and allows for residential development at a minimum density of 30 units per acre. The height of the building and contemporary style architecture are meant to complement the surrounding community and are compliant with the City of Irvine Design Guidelines. The residential units to the east of the project site are market-rate apartment communities for rent, while the areas to the north, west, and south are composed of commercial offices and hotels. Many amenities are located within a 10-minute walk of the project site, such as numerous restaurants, a local bank, medical facilities, and public transportation. A new parking lot would accommodate 104 parking stalls for residents (1.73:1 parking ratio), with open green spaces planned on the outskirts of the lot. Pedestrian walkways would be strategically located throughout the site to increase connectivity between the buildings and the parking lot.

The affordable housing complex is optimally located next to community businesses and support centers. The PSH units included in the proposed project would provide social services to individuals and families experiencing homelessness or at-risk of homelessness. These resources

would provide residents with employment and training resources to help individuals and families stabilize. Transforming a underutilized commercial lot into an affordable housing community supports housing priorities outlined in the Consolidated Plan by increasing accommodations for people of very-low, low-, and moderate- income levels.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

As demand increases for Orange County services, and the County’s population increases, the need for additional housing and access to government services has also increased.

The proposed project’s objectives are as follows:

- Create new affordable, safe, attractive, and service-enriched residences for low-income individuals and families.
- Create a community that fits into and improves the existing neighborhood in style, texture, scale, and relation to the street.
- Provide housing for low-income individuals and families.

Existing Conditions and Trends [24 CFR 58.40(a)]:

According to the Phase 1 Environmental Site Assessment (ESA) completed by Partner Engineering and Science Inc. on October 10, 2019, the proposed project site encompasses a vacant, one-story commercial office building. All interior finishes and construction materials have been removed from the building, leaving only the bare concrete floor slab and building frame. The remainder of the project site contains asphalt-paved vehicle parking areas with associated landscaping.

A mixture of commercial and residential buildings are adjacent to the project site. Adjacent parcel land uses consist of the following:

- North: Main Street, commercial (retail, hotels, offices)
- East: Cartwright Road, residential apartment buildings
- South: McCabe Way, commercial (retail, hotels, offices)
- West: Van Karman Avenue, commercial (urgent care, hotels, offices)

Funding Information

Grant Number	HUD Program	Funding Amount
	HOME	\$567,000 ¹
	8 OCHA Project-Based Vouchers	\$2,461,440 ¹ (estimated 20-year amount)
M-20-MC-06-0561	HOME	\$677,334 ²

¹ County of Orange

² City of Irvine

Estimated Total HUD Funded Amount: \$3,705,774

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: \$32,127,656

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 <input type="checkbox"/> <input checked="" type="checkbox"/>	The project site is not within 15,000 feet of a military airport or 2,500 feet of a municipal airport. The closest airport to the project site is John Wayne Airport, which lies 3,855 feet west (see Attachment 2; see Environmental Review Record [ERR] 1).
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes No <input type="checkbox"/> <input checked="" type="checkbox"/>	The Coastal Barrier Resources Act does not apply to this project since no coastal barrier resources protected under this policy occur in California (see Attachment 3).
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 <input type="checkbox"/> <input checked="" type="checkbox"/>	According to the Flood Insurance Rate Map (FIRM), the project site is not located on a floodplain. The project site occurs in an area of minimal flood hazard (see Attachment 4). FIRM Panel 06059 C0286J Effective December 2009 (see ERR 2).
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 <input checked="" type="checkbox"/> <input type="checkbox"/>	The proposed project falls under the jurisdiction of the South Coast Air Quality Management District (SCAQMD) within the South Coast Air Basin. According to the U.S. Environmental Protection Agency (EPA) Air Quality Green Book, the SCAQMD is in nonattainment for federal ozone (8-hour ozone) and particulate matter from greenhouse gasses (PM _{2.5}). The EPA classified federal ozone

	<p>in Orange County as extreme and PM_{2.5} as moderate. Since the project site is in a nonattainment zone for these pollutants, it must conform to the State Implementation Plan (SIP) to meet HUD air quality guidelines. To be compliant with the SIP, a comprehensive plan that describes how an area will meet national and ambient air quality standards, the proposed project must ensure its criteria pollutant emissions remain below the local air district's significance thresholds.</p> <p>The project site's location close to public transportation is consistent with regional efforts to improve transit availability and would reduce the amount of emissions (PM_{2.5}) associated with motor vehicle travel. By developing affordable housing consistent with the growth anticipated by the General Plan and existing zoning and land use designations, the proposed project is in compliance with Regional Air Quality Strategy (RAQS), the SIP, and the Air Quality Management Plan for this locality.</p> <p>Air quality at the project site could be negatively impacted by fugitive dust (PM₁₀) and other particulate air pollutants (PM_{2.5}) released during construction-related activities, such as land clearing or grading. Exhaust emissions (oxides of nitrogen [NO_x] and carbon monoxide [CO]) released by heavy construction vehicles could also temporarily impact air quality. Adverse impacts to air quality during construction would be managed by implementing mitigation measures for fugitive dust control in compliance with SCQAMD Rule 403. This guideline identifies measures to reduce fugitive dust that are required to be implemented at all construction sites within the South Coast Air Basin (Mitigation Measure 1).</p> <p>Daily emissions from the proposed project would not exceed the SCAQMD's regional construction or operation emissions thresholds (see Attachment 5). Because the proposed development is consistent with existing zoning</p>
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		and the General Plan, it is compliant with the SIP, RAQS, and the Clean Air Act (see ERR 3).
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes No <input type="checkbox"/> <input checked="" type="checkbox"/>	The project site is 6.34 miles from the Pacific Ocean and is not located within the California Coastal Zone, as defined by the California Coastal Act (Public Resources Code, Division 20, Section 3000 et. seq.). Therefore, no adverse coastal impacts would occur as a result of this project (see Attachments 6 and 7; see ERR 4).
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>A Phase 1 ESA completed by Partner did not find any recognized environmental conditions (RECs), historical recognized environmental conditions (HRECs), or controlled recognized environmental conditions (CRECs) at the project site. The presence of asbestos-containing construction materials (ACCMs) and lead-based paints (LBPs) was tested by Barr& Clark (see Attachments 8 and 9). Results found no evidence of LBPs, but did show the presence of ACCMs in the mastic and roofing mastic of the building on the project site. Of these materials, only the damaged roofing mastic needs to be removed before construction activities begin (SCAQMD Rule 1403 Procedure 5; Mitigation Measure 2). ACCMs in good condition, such as the building mastic at the project site, presents minimal risk for asbestos exposure (see ERR 5).</p> <p>A regulatory records review conducted as part of the Phase 1 ESA did not show any history of underground storage tanks (USTs) or environmental activity use limits (AULs) at the project site.</p> <p>Historically, the project site was used for agricultural purposes. Agriculture-related chemicals, including pesticides, herbicides, and fertilizers may have been used and stored on site. Even if such chemicals were used, exposure would be minimal since the project site is paved over and covered by building structures. Previous development activities would have mixed or covered contaminated surface soils with fill material, further</p>

		<p>minimizing potential exposure to any residual agricultural chemicals (if any).</p> <p>Reference: Phase 1 ESA.</p>
<p>Endangered Species</p> <p>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>No federally listed special-status plant or wildlife species are expected to be present within the project site due to the urban setting and the existing development of the site (concrete commercial building).</p> <p>The range of seven threatened or endangered species of flowering plants, mammals, and birds overlap with the project site. However, according to the U.S. Fish and Wildlife Service's IPaC database, the project site is situated outside of critical habitat areas for the endangered or threatened species that have these areas defined (see ERR 6 and Attachment 10).</p> <p>Current commercial and residential development surrounding the project site similarly prevent wildlife activity. Therefore, the proposed project would not have any impacts on wildlife movement, migration, or nursery sites.</p>
<p>Explosive and Flammable Hazards</p> <p>24 CFR Part 51 Subpart C</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Explosive and flammable hazards would not be present at the project site, which is designed for residential uses. The Phase 1 ESA did not identify the presence of explosive or flammable materials at the project site. Furthermore, the project site is not located near land uses capable of releasing explosive or flammable hazardous waste. As a result, the proposed project would not expose residents or the surrounding community to dangerous explosive or flammable hazards.</p> <p>Reference: Phase 1 ESA</p>
<p>Farmlands Protection</p> <p>Farmland Protection Policy Act of 1981, particularly sections</p>	<p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The proposed project is not located on or adjacent to farmland. Areas surrounding the project site are committed to urban use. The project site is located within the Urban</p>

<p>1504(b) and 1541; 7 CFR Part 658</p>		<p>Neighborhood overlay of Planning area 36 (Irvine Business Complex) and is zoned as 5.1 IBC Multi-Use. According to the Farmland Mapping and Monitoring Program database, Orange County primarily consists of urban and built-up land (see Attachment 11).</p> <p>The project site is situated on the Tustin Plain where soil is comprised of Quaternary alluvium. The alluvium consists of clay, silt, and sand.</p> <p>The project will not affect protected farmlands. This project does not include any activities that could potentially convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Protection Policy Act.</p>
<p>Floodplain Management</p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Floodplain management would not be adversely impacted by the proposed project. The project site is not situated on a floodplain or floodway and is classified as an Area of Minimal Flood Hazard by FIRM panel 06059 C0286J, effective December 2009. The project is located outside of the 100-year and 500-year floodplains (see Attachment 4).</p>
<p>Historic Preservation</p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p>Yes No <input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>In July 2020, the State Historic Preservation Office (SHPO) was consulted to determine the presence of historic properties and archaeological sites in the proposed project area. Pursuant to Section 800.4(d), the SHPO concludes that the Area of Potential Effect does not contain any historic resources that would be impacted by the proposed project (see Attachments 12 and 13. In the event that archaeological resources are discovered during implementation of the proposed project, Mitigation Measure 3 is included.</p> <p>Tribes that are traditionally and culturally affiliated with the proposed project site were consulted. The Kizh Nation requested that a Native American monitor be present during ground-disturbing activities, and this request is included as Mitigation Measure 4 (see ERR 7).</p>

<p>Noise Abatement and Control</p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>Construction noise. A temporary increase in noise levels would occur during the construction phase of the proposed project as a result of construction equipment and delivery of materials. Noise increases would be short-term and restricted to daytime hours. The increased noise during construction would not exceed applicable standards for construction noise.</p> <p>Operational noise. Increases in neighborhood noise levels would still comply with Orange County noise limits. Sources of operational noises include project-generated traffic and recreational open space areas.</p> <p>Noise level for the project site calculated using the HUD DNL Electronic Assessment Tool was lower than 65 decibels (dB), the acceptable HUD noise threshold. The combined noise level for the project site (from Main Street to the north, Von Karman Avenue to the west, and John Wayne Airport to the southwest) is 62 dBA (see Attachment 14). Therefore, this project would comply with the federal, state, and local standards for noise abatement and control (see ERR 8).</p>
<p>Sole Source Aquifers</p> <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project site is not located on or adjacent to any sole-source aquifers. There are no sole-source aquifers in Orange County.</p> <p>Environmental Policy Act Sole Source Aquifers Map (EPA 2018) (see Attachment 15).</p>
<p>Wetlands Protection</p> <p>Executive Order 11990, particularly sections 2 and 5</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The proposed project would not affect wetland resources as there are no wetlands on or adjacent to the project site. The closest wetland is the San Joaquin Mars located approximately 0.75 miles south of the project site (see Attachment 16; see ERR 9).</p> <p>National Wetlands Inventory. 2020. Surface Waters and Wetlands Map.</p>
<p>Wild and Scenic Rivers</p> <p>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p>Yes No <input type="checkbox"/> <input checked="" type="checkbox"/></p>	<p>The project site does not contain any rivers protected under the Wild and Scenic Rivers Act. The nearest Wild and Scenic waterway is South Fork Lytle Creek, which lies approximately 41 miles northeast of the proposed project (see Attachment 17; see ERR 10).</p>

ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes No <input type="checkbox"/> <input checked="" type="checkbox"/>	The proposed project would provide a positive impact on low-income residents by building affordable housing in an urban setting near public transportation (bus stops located on Von Karmen Avenue and Main Street). There are no environmental hazards on or adjacent to the project site other than what has already been described. Existing environmental impacts would be reduced or mitigated through incorporation of design features, compliance with applicable regulations and policies, and implementation of mitigation measures. As a result, the proposed project would not negatively impact the surrounding community, least of all low-income or minority populations. Since the proposed project would not expose anyone to adverse environmental conditions, it would not violate Executive Order 12898 (see ERR 11).

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	2	The project site encompasses 1.62 acres of land located within the Urban Neighborhood overlay of Planning Area 36 (Irvine

<p>Land Use and Zoning / Scale and Urban Design</p>		<p>Business Complex). This area is zoned as 5.1 IBC Multi-Use, which supports the development of residential housing at a minimum density of 30 units per acre. The proposed project would build 60 units over 1.62 acres; therefore, it complies with the City of Irvine General Plan.</p>
<p>Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff</p>	<p>3</p>	<p>Soil Stability. Soil stability would not be adversely impacted by the proposed project as the project site is in an area with low potential for liquefaction, landslides, or seismically induced settlement. Successful prior building development on the project site and on adjacent parcels indicate that the soils on the site are suitable for the proposed project.</p> <p>Slopes and Drainage. Excessive slopes that would impact the proposed project were not found on the project site. Existing drainage systems would remain intact. The project does not propose any substantial alterations to drainage conditions.</p> <p>Erosion and Stormwater Runoff. No evidence of erosion was found at the project site. There is minimal chance of erosion at the project site due to the flat topography of the area. In addition, the proposed project would comply with erosion control measures during the construction phase to minimize erosion and stormwater pollution. Best management practices (BMPs) adopted from the Stormwater Quality Management Plan will be incorporated during and after the construction phase of the project (Mitigation Measure 5). Other low-impact drainage BMPs include maintaining existing drainage pathways and impervious areas, and retaining natural areas where possible. Runoff from the project site is not anticipated to exceed the capacity of stormwater drainage systems or contribute to stormwater pollution.</p>
<p>Hazards and Nuisances including Site Safety and Noise</p>	<p>3</p>	<p>Hazardous Materials. A Phase 1 ESA completed by Partner did not find any existing RECs, HRECs, or CRECs at the project site. Residual hazardous chemicals associated with agriculture, a historical land use for the project site, is not a significant environmental concern as the project site is paved and likely covered by engineered fill material. Barr & Clark tested for the presence of LBPs and ACCMs, with only low levels (2%–3%) of ACCMs detected. Removal of damaged roofing mastic containing asbestos would be required before construction begins (Mitigation Measure 2). A review of regulatory records within the Phase 1 ESA did not find any records regarding hazardous substance use, storage, or releases. In addition, no records indicating the presence of USTs or AULs were found.</p> <p>As a residential development, the proposed project would not require the presence or use of hazardous materials except for</p>

		<p>common residential chemicals. The project would not require the ongoing use, storage, or routine transport of hazardous materials. Hazardous waste or emissions would not be released by the proposed project.</p> <p>Site Safety. The project would be constructed consistent with the current Orange County requirements for fencing, lighting, and other features related to site safety. No impacts related to hazards, nuisance, or site safety would occur.</p> <p>Noise. A temporary increase in noise would occur during the construction phase of the proposed project. Increased noise levels would adhere to limits set by Orange County for construction impacts on noise-sensitive land uses. Noise increases would occur during daylight hours, with no adverse impacts anticipated.</p> <p>Operational noise sources would include project-generated traffic and recreational spaces. However, based on the relatively small size of the proposed project, only minimal increases in noise should be expected. Operational noise would comply with Orange County Noise Control Ordinances.</p>
Energy Consumption	2	To obtain building permits, this project would be required to meet energy consumption standards as outlined in the California Building Code, Title 24, 2001 Energy Efficiency Standards. This project would be designed to be LEED certified.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	<p>The project has the potential to create temporary employment opportunities during the construction phase. Income patterns for the community would benefit from the construction of 60 affordable housing units in an area where low-income housing is in demand. In addition, the project would provide 10 housing units to accommodate the homeless, 5 units for the developmentally disabled, and 6 units with a veterans preference.</p> <p>In partnership with the Orange County Board of Supervisors, nearby businesses and the social services provided at the PSH units would support residents with comprehensive employment and training resources to help individuals and families stabilize.</p>
Demographic Character Changes, Displacement	1	Considering that the project site would be built in an area surrounded by commercial and residential land uses, the proposed project would not adversely affect community

		<p>character. The architectural design of the project would complement the surrounding modern community. Since the project site would replace a currently vacant commercial building, the proposed project would not displace existing residents or businesses in the area. Increasing affordable housing units supports the housing priorities detailed in the Orange County Consolidated Plan by building accommodations for people with very low to moderate incomes. Existing utilities and adjacent roadways would not be affected by the proposed project, which would utilize current infrastructure, such as water and sewage. The proposed project would have a beneficial impact on the community by developing an affordable housing project that is consistent with the land use designation and zoning for the site.</p>
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Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	<p>As 45 (26 3-bedroom units and 19 2-bedroom units) of the 60 residential units contain multiple bedrooms that could accommodate families with children, enrollment at nearby schools could potentially increase. Increased enrollment at any school in the community would be negligible given the small size of the development. Furthermore, children residing at these apartments would be distributed among different schools based on age.</p> <p>The project site is located near multiple educational facilities, including:</p> <ul style="list-style-type: none"> • University High School, approximately 3.6 miles from the project site • Lakeside Middle School, approximately 4 miles from the project site • Woodbridge High School, approximately 2.8 miles from the project site • Westpark Elementary School, approximately 1.4 miles from the project site • Saddleback High School, approximately 3.2 miles from the project site <p>Considering the relatively small size of this project and the availability of schools in the surrounding area, adverse impacts associated with exceeding the service population of local educational and cultural facilities are not anticipated.</p>
Commercial Facilities	2	<p>No adverse impacts to surrounding commercial facilities are anticipated. The project site is surrounded on three sides by</p>

		commercial/retail businesses ranging from restaurants and hotels to home appliance stores and an urgent care facility.
Health Care and Social Services	2	<p>The proposed project would add 60 residential units to the community, possibly increasing demand for health care and social services in the area.</p> <p>The project site is situated near numerous health care facilities, including:</p> <ul style="list-style-type: none"> • Concentra Urgent Care, approximately 0.5 miles from the project site at 2362 Morse Avenue, Irvine, California 92614 • Irvine Urgent Care, approximately 4 miles from the project site at 2500 Alton Parkway #101, Irvine, California 92606 • Irvine Woodbridge Walk-In Urgent Care, approximately 3.7 miles from the project site at 4950 Barranca Parkway #104, Irvine, California 92604 • Family Care Centers Irvine, approximately 5.2 miles from the project site at 4950 Barranca Parkway #103, Irvine, California 92604 • The Hoag Hospital Irvine, approximately 5.4 miles from the project site at 16200 Sand Canyon Avenue, Irvine, California 92618 <p>Negative impacts on health care and social service facilities are not anticipated considering the relatively small size of the project and availability of service providers in the area surrounding the proposed project.</p>
Solid Waste Disposal / Recycling	2	<p>The proposed project involves replacing an existing single story structure with a four-story residential building. Demolition of the existing structure would generate construction debris that could be separated on site into material-specific containers, expediting the reuse, recycling and waste reclamation process. Waste could also be collected by a contracted waste hauler and separated at a handling facility.</p> <p>The City of Irvine is divided into two solid waste collection areas: Exclusive Village Commercial, which must be serviced by Waste Management of Orange County, and Nonexclusive Commercial, which can be serviced by a range of approved solid waste and recycling haulers (see Attachments 18 and 19). Waste collected would then be sorted and taken to one of three Orange County Landfills: Olinda Alpha Landfill, Frank R. Bowerman Landfill, and Prima Deshecha Landfill. The amount of solid waste generated by the proposed project following construction would be a fraction of the throughput taken to Orange County landfills daily.</p>

		As a result, adverse impacts from solid waste disposal associated with the proposed project are not anticipated.
Waste Water / Sanitary Sewers	2	Wastewater from the project site would be treated at the Baker Water Treatment Plant, which treats 28.1 million gallons of drinking water per day. Wastewater at the proposed project would be collected utilizing existing sewage infrastructure. The proposed project would be subject to sewer service fees. Negative impacts to waste water and sanitary sewers associated with the project site are not foreseen.
Water Supply	2	Water would be supplied to the subject property by the Irvine Ranch Water District (IRWD), which obtains water from the Orange County Groundwater Basin and Metropolitan Water District. Water supplied to the proposed project is in compliance with all state and federal regulations for drinking water standards, lead, and copper according to the 2018 Annual Water Quality Report and City of Irvine. Water would be supplied using existing infrastructure, which has sufficient capacity to provide water to the project. The proposed project would need to pay a service fee to IRWD. No adverse impacts associated with the proposed project are anticipated.
Public Safety - Police, Fire and Emergency Medical	2	<p>The project site is in close proximity to public safety providers, including:</p> <ul style="list-style-type: none"> • Irvine Police Department, located 1.6 miles from the project site at 1 Civic Center Plaza, Irvine, California 92606 • Orange County Fire Authority (Station 28), located 0.6 miles away at 17862 Gillette Avenue, Irvine, California 92614 • Orange County Fire Authority (Station 6), located 2 miles from the project site at 3180 Barranca Parkway, Irvine, California 92606 • Hoag Hospital Irvine, approximately 5.4 miles from the project site at 16200 Sand Canyon Avenue, Irvine, California 92618 <p>Given the relatively small size of the proposed project, only a slight increase in demand for public safety services are anticipated. Additionally, since the project is located in an area adequately served by existing services, negative impacts to public safety services are not expected.</p>
Parks, Open Space and Recreation	2	<p>The proposed project is not anticipated to substantially increase demand for public recreational resources. Therefore, adverse impacts to parks, open spaces, or recreational amenities is not foreseen.</p> <p>Recreational spaces in close proximity to the project site include:</p>

		<ul style="list-style-type: none"> • William R. Mason Regional park, approximately 3.4 miles from the project site at 18712 University Drive, Irvine, California 92612 • University Community Park located at 1 Beech Tree Lane, Irvine, California 92612, approximately 3.5 miles from the project site • San Marco Park is approximately 1.2 miles from the project site at 1 San Carlo, Irvine, California 92614 • City of Costa Mesa Skate Park located at 900 Arlington Drive, Costa Mesa, California 92626, approximately 4.7 miles from the project site
Transportation and Accessibility	2	<p>The proposed project is situated in close proximity to public transit stops along Von Karmen Avenue and Main Street. The nearest bus stop to the project site is about 300 feet north, at the corner of Cartwright Road and Main Street. This bus stop is serviced by lines 53, 86, and 213.</p> <p>The project site would incorporate the construction of a new parking lot consisting of 104 stalls accessible from Cartwright Road. Pre-existing urban development and readily available transit in the project's vicinity would reduce transportation and accessibility issues, such as limited parking and traffic. Therefore, the 60 new units are not expected to adversely impact transportation or accessibility in the area.</p>

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	3	<p>The project site does not encompass any unique natural features. Federally protected natural resources, such as rivers, wetlands, coastal zones, and endangered species, are not present on the project site or adjacent properties. Therefore, the proposed project would not result in the alteration of water resources that could potentially result in substantial erosion or siltation on or off site, or result in downstream flooding. Since the proposed project would be built on an existing commercial lot, it would not interfere substantially with current groundwater recharge. Open green spaces included in the project site plan could increase groundwater recharge by replacing existing paved areas. According to the EPA Map of Sole Source Aquifer Locations, there are no sole source aquifers in the City of Irvine.</p> <p>Mitigation measures employing BMPs would be required during and post-construction to minimize potential adverse</p>

		contributions to stormwater pollution (Mitigation Measures 5 and 6).
Vegetation, Wildlife	2	Existing vegetation on the project site is associated with parking areas and would be cleared prior to construction. Landscaping after construction is complete would revegetate outdoor spaces on the project site (see Project Narrative). While the proposed project is located within the ranges of endangered or threatened species of mammals, flowering plants, and birds, none of these species are found on the project site as it is developed and in an urbanized area. According to the U.S. Fish and Wildlife Service's IPaC database, the project site is situated outside of critical habitat areas for the endangered or threatened species that have these areas defined (see ERR 5).
Other Factors		

Additional Studies Performed:

- *Phase 1 Environmental Assessment*, Prepared by Partner Engineering and Science, Inc. October 2019.
- *Asbestos Inspection Report*, Prepared by Barr & Clark Independent Environmental Testing. October 2019.
- *Lead-Based Paint Inspection Report*, Prepared by Barr & Clark Independent Environmental Testing. October 2019.

Field Inspection (Date and completed by):

- *Phase 1 Environmental Assessment*, Prepared by Partner Engineering and Science, Inc. October 2019.

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

Barr & Clark Independent Environmental Testing. 2019. *Asbestos Inspection Report*.

Barr & Clark Independent Environmental Testing. 2019. *Lead-Based Paint Inspection Report*.

CARB (California Air Resources Board). 2014. "California Air Basin Map." Last reviewed March 14, 2014. Accessed August 2020. <https://ww3.arb.ca.gov/ei/maps/2017statemap/abmap.htm>.

CCC (California Coastal Commission). 2019. "Maps – Coastal Zone Boundary: Orange County." <https://coastal.ca.gov/maps/czb/>.

DOC (California Department of Conservation). 2016. California Important Farmland Finder. <https://maps.conservation.ca.gov/DLRP/CIFF/>.

- City of Irvine. 2020. Find a Waste Hauler, City of Irvine Commercial Solid Waste Collection Areas. Accessed August 2020. <https://www.cityofirvine.org/environmental-programs/find-waste-hauler>.
- EPA (U.S. Environmental Protection Agency). 2020. "Current Nonattainment Counties for all Criteria Pollutants." July 31, 2020. Accessed August 2020. <https://www3.epa.gov/airquality/greenbook/ancl.html>.
- EPA. 2020. "Sole Source Aquifers for Drinking Water." Last updated January 14, 2020. Accessed August 2020. <https://www.epa.gov/dwssa>.
- FEMA (Federal Emergency Management Agency). 2012. "FEMA Flood Map Service Center: Flood Insurance Rate Map for Irvine, California." <https://msc.fema.gov/portal/search#searchresultsanchor>.
- Orange County Waste and Recycling. 2020. "Landfills." <https://www.oilandfills.com/landfills>.
- Partner Engineering and Science, Inc. 2019. *Phase 1 Environmental Site Assessment Report*.
- SCAQMD (South Coast Air Quality Management District). 2005. "Rule 403: Fugitive Dust." As amended through June 3, 2005. <https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>.
- SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." April 2019. Accessed August 2020. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.
- USFWS (U.S. Fish & Wildlife Service). 2019. "Coastal Barrier Resources System Mapper." Updated July 31, 2019. Accessed August 2020. <https://www.fws.gov/cbra/maps/Mapper.html>.
- USFWS. 2020. "Information for Planning and Consultation (IPaC)." Accessed August 2020. <https://ecos.fws.gov/ipac/location/JACZBM6PXJE25B3BXOS33AMDBE/resources#endangered-species>.
- USFWS. 2020. "National Wetlands Inventory, Surface Waters and Wetlands Map." Accessed August 2020. <https://www.fws.gov/wetlands/data/mapper.html>.
- U.S. National Park Service. 2019. "Interactive map of NPS Wild and Scenic Rivers." <https://nps.maps.arcgis.com/apps/View/index.html?appid=ff42a57d0aae43c49a88daee0e353142>.

List of Permits Obtained:

Public Outreach [24 CFR 50.23 & 58.43]:

The Draft Environmental Assessment will be made available for public review and comment beginning on November 13, 2020 and conclude on November 30, 2020

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project is not expected to contribute to a significant cumulative impact under the National Environmental Policy Act because it would consist of an urban development project that would be consistent with the site's General Plan land use and zoning designations and would be located near existing transit services. State and local planning guidelines encourage the development of urban multifamily housing in areas served by transit and near commercial and cultural amenities because this type of development contributes less to cumulative effects on the environment in comparison to development of previously undisturbed sites in more remote locations with fewer transit connections, many of which contain native vegetation and wildlife species.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Site identification has proven to be a major obstacle in providing affordable housing units. Multifamily residential sites available at reasonable cost are extremely limited, and sites that do not meet cost and land use criteria are generally eliminated as alternatives. This project was chosen from several properties based on feasibility, location, and affordability. Physical and social constraints were also considered in identifying and rejecting alternatives. No other build alternatives are analyzed or included in this environmental document.

No Action Alternative [24 CFR 58.40(e)]:

The No Action Alternative would not build any additional housing at the project site. There are no benefits to the physical or human environment by not taking the federal action associated with this project. Physical impacts to the environment would occur in urban areas whether units are subsidized with federal funds or built at market rates. If an affordable project were not constructed on this site, the social benefits of providing new affordable housing opportunities on an urban infill parcel would not occur. Should the proposed project not advance, the site could potentially be used for market rate housing or office/retail.

The proposed project must acquire all required permits and approvals prior to construction; therefore, the proposed project would be consistent with all land use plans, policies, and regulations for the project site. Not building on this site could result in more housing constructed outside of the urban area in agricultural and undeveloped areas, contributing to urban sprawl, regional traffic congestion, and regional air quality issues.

Summary of Findings and Conclusions:

C&C Development is proposing the development of the Cartwright Family Apartments. The project consists of a 60-unit affordable housing community for families with 10 PSH units. The proposed project would contribute to the increased density and availability of mix-used development in an area that would encourage multi-modal activity. The proximity of existing

transit options to the project site would reduce long-term air emissions and energy use associated with motor vehicle travel.

The project is located within a developed urban area and would be adequately served by utilities and public services. The project would conform to all applicable federal, state, and regional regulations associated with land use compatibility, air emissions, water quality, geologic hazards, and related environmental resources addressed herein. Based on the analyses of environmental issues contained in this document, the proposed project is not expected to have significant environmental impacts.

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

Summarize below 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.

Air Quality – Fugitive Dust

Mitigation Measure 1: The project shall implement the following from the list below, as applicable to the project:

- **Backfilling:** Stabilize backfill material when not actively handling, stabilize backfill material during handling, and stabilize soil at completion of activity.
- **Clearing and Grubbing:** Maintain stability of soil through pre-watering of site prior to clearing and grubbing, stabilize soil during clearing and grubbing activities, and stabilize soil immediately after clearing and grubbing activities.
- **Clearing Forms:** Use water spray, sweeping and water spray, or a vacuum system to clear forms.
- **Crushing:** Stabilize surface soils prior to operation of support equipment and stabilize material after crushing.
- **Cut and Fill:** Pre-water soils prior to cut and fill activities, and stabilize soil during and after cut and fill activities.
- **Demolition – Mechanical/Manual:** Stabilize wind erodible surfaces to reduce dust, stabilize surface soil where support equipment and vehicles will operate, stabilize loose soil and demolition debris, and comply with Air Quality Management District Rule 1403.
- **Disturbed Soil:** Stabilize disturbed soil throughout the construction site, and stabilize disturbed soil between structures.
- **Earth-Moving Activities:** Pre-apply water to depth of proposed cuts, re-apply water as necessary to maintain soil in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction, and stabilize soil once earth-moving activities are complete.
- **Importing/Exporting of Bulk Materials:** Stabilize material while loading to reduce fugitive dust emissions, maintain at least 6 inches of freeboard on haul vehicles, stabilize material while transporting and unloading to reduce fugitive dust emissions, and comply with Vehicle Code Section 23114.

- **Landscaping:** Stabilize soils, materials, slopes.
- **Road Shoulder Maintenance:** Apply water to unpaved shoulders prior to clearing, and apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.
- **Screening:** Pre-water material prior to screening, limit fugitive dust emissions to opacity and plume length standards, and stabilize material immediately after screening.
- **Staging Areas:** Stabilize staging areas during use, and stabilize staging area soils at project completion.
- **Stockpiles/Bulk Material Handling:** Stabilize stockpiled materials. Stockpiles within 100 yards of off-site occupied buildings must not be greater than 8 feet in height, or must have a road bladed to the top to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage.
- **Traffic Areas for Construction Activities:** Stabilize all off-road traffic and parking areas, stabilize all haul routes, and direct construction traffic over established haul routes.
- **Trenching:** Stabilize surface soils where trencher or excavator and support equipment will operate, and stabilize soils at the completion of trenching activities.
- **Truck Loading:** Pre-water material prior to loading and ensure that freeboard exceeds 6 inches (CVC 23114).
- **Turf Overseeding:** Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards, and cover haul vehicles prior to exiting the site.
- **Unpaved Roads/Parking Lots:** Stabilize soils to meet the applicable performance standards and limit vehicular travel to established unpaved roads (haul routes) and parking lots.
- **Vacant Land:** In instances where vacant lots are 0.10 acres or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and off-road-vehicle trespassing, parking, and access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective control measures.

Hazards and Nuisances including Site Safety and Noise

Mitigation Measure 2: Prior to the beginning of the construction phase, damaged and/or significantly damaged asbestos-containing construction materials, which pose the greatest risk for asbestos exposure, shall be removed in compliance with South Coast Air Quality Management District Rule 1403 Procedure 5.

Historic Preservation (Cultural Resources)

Mitigation Measure 3: In the event that previously unidentified cultural resources are encountered during ground-disturbing activities associated with project construction, work in the immediate area must halt, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology shall be contacted immediately to evaluate the find. If the discovery proves to be

significant under the National Environmental Policy Act, additional work such as data recovery excavation may be warranted to mitigate potential adverse effects.

Mitigation Measure 4: The developer shall be required to retain the services of a qualified Native American monitor(s) during construction-related ground-disturbing activities. The tribal representative from the Gabrieleño Band of Mission Indians – Kizh Nation defines ground disturbance to include, but not limited to pavement removal, potholing, grubbing, weed abatement, boring, grading, excavation, or trenching within the project area. The monitor must be approved by the tribal representative and shall be present on-site during the construction phases that include ground-disturbing activities. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources. If archaeological or cultural resources are encountered, they shall be documented by the Native American monitor and collected for preservation.

Stormwater Runoff/Wastewater/Sanitary Sewer

Mitigation Measure 5: The proposed project shall include best management practices (BMPs) designed according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial (or other similar source as approved by Orange County). Construction (temporary) BMPs for the proposed project shall include hydroseeding, straw mulch, velocity dissipation devices, silt fencing, fiber rolls, storm drain inlet protection, wind erosion control, and stabilized construction entrances.

Mitigation Measure 6: Prior to construction commencing, the applicant shall provide evidence to Orange County of a Waste Discharge Identification number generated from the State Regional Water Quality Control Board's Stormwater Multiple Application & Reports Tracking System. This serves as the Regional Water Quality Control Board's approval or permit under the National Pollutant Discharge Elimination System construction stormwater quality permit.

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: Jaclyn Canzone Date: 11/13/2020

Name/Title/Organization: _____

Jaclyn Canzone / Staff Specialist / OC Housing & Community Development

Certifying Officer Signature: Julia Bidwell Date: 11/13/2020

Name/Title: Julia Bidwell / Director / Housing & Community Development

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).

ENVIRONMENTAL REVIEW RECORDS (ERRs)

ERR #1. Clear Zones (CZ) and Accident Potential Zones (APZ)



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Airport Hazards (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/airport-hazards>

1. To ensure compatible land use development, you must determine your site’s proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

Yes → *Continue to Question 2.*

2. Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?

Yes, project is in an APZ → *Continue to Question 3.*

Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

No, project is not within an APZ or RPZ/CZ → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

3. Is the project in conformance with DOD guidelines for APZ?

Yes, project is consistent with DOD guidelines without further action. → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ Work with the RE/HUD to develop mitigation measures. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- The project is located over 3,800 feet from the nearest civilian airport (John Wayne Airport), see Attachment 2.

Include all documentation supporting your findings in your submission to HUD.

ERR #2. Floodplain Management



This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Floodplain Management (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/floodplain-management>

1. Does 24 CFR 55.12(c) exempt this project from compliance with HUD’s floodplain management regulations in Part 55?

Yes

Provide the applicable citation at 24 CFR 55.12(c) here. If project is exempt under 55.12(c)(6) or (8), provide supporting documentation.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Continue to the Worksheet Summary.

No → Continue to Question 2.

2. Provide a FEMA/FIRM map showing the site.

The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs).

Does your project occur in a floodplain?

No → Continue to the Worksheet Summary below.

Yes

Select the applicable floodplain using the FEMA map or the best available information:

Floodway → Continue to Question 3, Floodways

Coastal High Hazard Area (V Zone) → Continue to Question 4, Coastal High Hazard Areas

500-year floodplain (B Zone or shaded X Zone) → Continue to Question 5, 500-year Floodplains

100-year floodplain (A Zone) → The 8-Step Process is required. Continue to Question 6, 8-Step Process

3. Floodways

Is this a functionally dependent use?

Yes

The 8-Step Process is required. Work with HUD or the RE to assist with the 8-Step Process.

→ Continue to Worksheet Summary.

- No → *Federal assistance may not be used at this location unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

4. Coastal High Hazard Area

Is this a critical action such as a hospital, nursing home, fire station, or police station?

- Yes → *Critical actions are prohibited in coastal high hazard areas unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

- No

Does this action include new construction that is not a functionally dependent use, existing construction (including improvements), or reconstruction following destruction caused by a disaster?

- Yes, there is new construction of something that is not a functionally dependent use. New construction must be designed to FEMA standards for V Zones at 44 CFR 60.3(e) (24 CFR 55.1(c)(3)(i)).
→ *Continue to Question 6, 8-Step Process*
- No, this action concerns only existing construction. Existing construction must have met FEMA elevation and construction standards for a coastal high hazard area or other standards applicable at the time of construction.
→ *Continue to Question 6, 8-Step Process*

5. 500-year Floodplain

Is this a critical action?

- No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

- Yes → *Continue to Question 6, 8-Step Process*

6. 8-Step Process.

Is this 8-Step Process required? Select one of the following options:

- 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD's elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

- 5-Step Process is applicable per 55.12(a)(1-3).

Provide the applicable citation at 24 CFR 55.12(a) here.

→ *Work with the RE/HUD to assist with the 5-Step Process. Continue to Worksheet Summary.*

- 8-Step Process is inapplicable per 55.12(b)(1-4).

Provide the applicable citation at 24 CFR 55.12(b) here.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- The project is not within a floodplain according to FEMA Floodplain Map 06059C0286J (effective 12/3/2009), see Attachment 4.

Include all documentation supporting your findings in your submission to HUD.

ERR #3. Air Quality



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Air Quality (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/air-quality>

- 1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

Yes → *Continue to Question 2.*

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide any documents used to make your determination.*

- 2. Is your project’s air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**

Follow the link below to determine compliance status of project county or air quality management district:

<https://www.epa.gov/green-book>

No, project’s county or air quality management district is in attainment status for all criteria pollutants → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

Yes, project’s management district or county is in non-attainment or maintenance status for one or more criteria pollutants. → *Continue to Question 3.*

- 3. Determine the estimated emissions levels of your project for each of those criteria pollutants that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis* or *threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

No, the project will not exceed *de minimis* or threshold emissions levels or screening levels → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

- Yes, the project exceeds *de minimis* emissions levels or screening levels. → *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

- 4. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Potential impacts to air quality from emissions generated by the construction and operation of the proposed project were modeled using CalEEMod. Emissions from the proposed project would not exceed SCAQMD's regional construction or operations emissions thresholds and would be compliant with the SIP, RAQS, and Clean Air Act air quality criteria. See Attachment 5.

Include all documentation supporting your findings in your submission to HUD.

ERR #4. Coastal Zone Management



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Coastal Zone Management Act (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/coastal-zone-managementth>

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samoa	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

Yes → Continue to Question 2.

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.

2. Does this project include activities that are subject to state review?

Yes → Continue to Question 3.

No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

3. Has this project been determined to be consistent with the State Coastal Management Program?

Yes, with mitigation. → The RE/HUD must work with the State Coastal Management Program to develop mitigation measures to mitigate the impact or effect of the project.

Yes, without mitigation. → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

No → Project cannot proceed at this location.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- The project area is located over 6 miles from the Pacific Ocean and is not located within the California Coastal Zone, as defined by the California Coastal Act. See Attachments 6 and 7.

Include all documentation supporting your findings in your submission to HUD.

ERR #5. Toxic Chemicals and Radioactive Materials



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Contamination and Toxic Substances (Multifamily and Non-Residential Properties) – PARTNER

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General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
https://www.hudexchange.info/programs/environmental-review/site-contamination		

1. How was site contamination evaluated?¹ Select all that apply.

- ASTM Phase I ESA
- ASTM Phase II ESA
- Remediation or clean-up plan
- ASTM Vapor Encroachment Screening
- None of the above

→ Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.

Continue to Question 2.

¹ HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD’s toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)

No

Explain: A Phase 1 ESA conducted by Partner Engineer and Science, Inc. did not find an RECs, HRECs (historical RECs), or CRECs (controlled RECs) at the project site. The ESA identified the presence of asbestos-containing material (ACM) and lead based paint (LBP) as possible environmental issues that do not qualify as RECs. Additional testing completed by Barr& Clark Independent Environmental Testing found no lead based paints at the project site. Low amounts of ACMs were found in the mastic and roofing mastic of the building.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Yes.

→ *Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

3. Mitigation

Work with the RE/HUD to identify the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental effects cannot be mitigated, then HUD assistance may not be used for the project at this site.

Can adverse environmental impacts be mitigated?

Adverse environmental impacts cannot feasibly be mitigated

→ Project cannot proceed at this location.

Yes, adverse environmental impacts can be eliminated through mitigation.

Prior to the beginning of the construction phase, damaged and/or significantly damaged asbestos-containing construction materials, which pose the greatest risk for asbestos exposure, shall be removed in compliance with South Coast Air Quality Management District Rule1403 Procedure 5.

→ *Provide all mitigation requirements² and documents. Continue to Question 4.*

² Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls³, or use of institutional controls⁴.

If a remediation plan or clean-up program was necessary, which standard does it follow?

Complete removal (See Mitigation Measure 2 in EA)

→ Continue to the Worksheet Summary.

Risk-based corrective action (RBCA)

→ Continue to the Worksheet Summary.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

A Phase 1 ESA completed by Partner Engineering and Science did not find any recognized environmental conditions (RECs), historical recognized environmental conditions (HRECs), or controlled recognized environmental conditions (CRECs) at the project site. The presence of asbestos-containing construction materials (ACCMs) and lead-based paints (LBPs) was tested by Barr & Clark (see Attachments 8 and 9). Results found no evidence of LBPs, but did show the presence of ACCMs in the mastic and roofing mastic of the building on the project site. Of these materials, only the damaged roofing mastic needs to be removed before construction activities begin (SCAQMD Rule 1403 Procedure⁵; Mitigation Measure 2). ACCMs in good condition, such as the building mastic at the project site, presents minimal risk for asbestos exposure.

A regulatory records review conducted as part of the Phase 1 ESA did not show any history of underground storage tanks (USTs) or environmental activity use limits (AULs) at the project site.

Are formal compliance steps or mitigation required?

Yes

No

³ Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

⁴ Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

ERR #6. Endangered Species Act (CEST and EA)



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Endangered Species Act (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/endangered-species>

1. Does the project involve any activities that have the potential to affect species or habitats?

No, the project will have No Effect due to the nature of the activities involved in the project.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

Yes, the activities involved in the project have the potential to affect species and/or habitats.

→ *Continue to Question 2.*

2. Are federally listed species or designated critical habitats present in the action area?

Obtain a list of protected species from the Services. This information is available on the FWS Website.

No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.*

Yes, there are federally listed species or designated critical habitats present in the action area.

→ *Continue to Question 3.*

3. Recommend one of the following effects that the project will have on federally listed species or designated critical habitat:

- No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

The project is currently developed within a fully urbanized area and no habitat for listed species is present.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

- May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ **Partner entities should not contact the Services directly.** *If the RE/HUD agrees with this recommendation, they will have to complete Informal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

- Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ **Partner entities should not contact the Services directly.** *If the RE/HUD agrees with this recommendation, they will have to complete Formal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

The range of seven threatened or endangered species of flowering plants, mammals, and birds overlap with the project site. However, according to the U.S. Fish and Wildlife Service's IPaC database, the project site is located outside of critical habitat areas for the endangered or threatened species that have these areas defined. Furthermore, the project site is currently developed and within a fully urbanized area; therefore no species or critical habitat occur at the site and there would be no impacts to listed species or critical habitat (see Attachment10).

Include all documentation supporting your findings in your submission to HUD.

ERR #7. Historic Preservation (CEST and EA)



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Historic Preservation (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/historic-preservation>

Threshold

Is Section 106 review required for your project?

- No, because a Programmatic Agreement states that all activities included in this project are exempt. (See the PA Database to find applicable PAs.)

Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:

→ *Continue to the Worksheet Summary.*

- No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

Either provide the memo itself or a link to it here. Explain and justify the other determination here:

→ *Continue to the Worksheet Summary.*

- Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process

After determining the need to do a Section 106 review, HUD or the RE will initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.

Step 1: Initiate consultation

Step 2: Identify and evaluate historic properties

Step 3: Assess effects of the project on historic properties

Step 4: Resolve any adverse effects

Only RE or HUD staff may initiate the Section 106 consultation process. Partner entities may gather information, including from SHPO records, identify and evaluate historic properties, and make initial assessments of effects of the project on properties listed in or eligible for the National Register of Historic Place. Partners should then provide their RE or HUD with all of their analysis and documentation so that they may initiate consultation.

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the When To Consult With Tribes checklist within Notice CPD-12-006: Process for Tribal Consultation to determine if the RE or HUD should invite tribes to consult on a particular project. Use the Tribal Directory Assessment Tool (TDAT) to identify tribes that may have an interest in the area where the project is located. Note that only HUD or the RE may initiate consultation with Tribes. Partner entities may prepare a draft letter for the RE or HUD to use to initiate consultation with tribes, but may not send the letter themselves.

List all organizations and individuals that you believe may have an interest in the project here:

- 1) State Historic Preservation Office (**complete, see Attachment 12**)
- 2) Indian Tribes, including Tribal Historic Preservation Officers
 - a. Juaneño Band of Mission Indians, Acjachemen Nation
 - b. Gabrieleno Band of Mission Indians, Kizh Nation

→ Continue to Step 2.

Step 2 - Identify and Evaluate Historic Properties

Provide a preliminary definition of the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.

17861 Cartwright Road
Irvine, CA 92614

See EA Figure 1.

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register. Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.

Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

No historic properties are present in the APE (SHPO concurrence, see Attachment 13).

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?

If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

Yes → Provide survey(s) and report(s) and continue to Step 3.

Additional notes:

[Click here to enter text.](#)

No → Continue to Step 3.

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5) Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below to recommend to the RE or HUD.

Please note: this is a recommendation only. It is **not** the official finding, which will be made by the RE or HUD, but only your suggestion as a Partner entity.

No Historic Properties Affected (State Historic Preservation Office concurrence August 17, 2020; see Attachment 12)

Document reason for finding:

No historic properties present.

Historic properties present, but project will have no effect upon them.

No Adverse Effect

Document reason for finding and provide any comments below.

Comments may include recommendations for mitigation, monitoring, a plan for unanticipated discoveries, etc.

[Click here to enter text.](#)

Adverse Effect

Document reason for finding:

Copy and paste applicable Criteria into text box with summary and justification.

Criteria of Adverse Effect: 36 CFR 800.5]

Provide any comments below:

Comments may include recommendations for avoidance, minimization, and/or mitigation.

The Gabrieleno Band of Mission Indians – Kizh Nation requested a mitigation measure to monitor grading activities in case cultural resources are unearthed. The following mitigation measure is carried forward in the EA as Mitigation Measure 4:

The applicant will be required to retain the services of a qualified Native American Monitor(s) during construction related ground disturbance activities. The Tribal Representative from the Gabrieleno Band of Mission Indians – Kizh Nation defines ground disturbance to include, but not limited to, pavement removal, potholing, grubbing, weed abatement, boring, grading, excavation, or trenching within the project area. The monitor must be approved by the Tribal Representative and will be present on-site during the construction phases that involve ground disturbance activities. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources. If archaeological or cultural resources are encountered, they will be documented by the Native American monitor and collected for preservation.

ERR #8. Noise Abatement and Control



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Noise (EA Level Reviews) – PARTNER

<https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control>

1. What activities does your project involve? Check all that apply:

- New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

→ Continue to Question 2.

- Rehabilitation of an existing residential property

NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.

→ Continue to Question 2.

- None of the above

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

2. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000’ from a major road, 3000’ from a railroad, or 15 miles from an airport).

Indicate the findings of the Preliminary Screening below:

- There are no noise generators found within the threshold distances above.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.

- Noise generators were found within the threshold distances.

→ Continue to Question 3.

3. Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:

Acceptable (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: 62 dB

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here:

If project is rehabilitation:

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

If project is new construction:

Is the project in a largely undeveloped area¹?

No

Yes → ***The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i).***

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

Unacceptable: (Above 75 decibels)

Indicate noise level here:

If project is rehabilitation:

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

If project is new construction:

The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). Work with HUD or the RE to either complete an EIS or obtain a waiver signed by the appropriate authority.

→ *Continue to Question 4.*

¹ A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses or does not have water and sewer capacity to serve the project.

4. HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Work with the RE/HUD on the development of the mitigation measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Mitigation as follows will be implemented:

→ Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures.

Continue to the Worksheet Summary.

No mitigation is necessary.

Explain why mitigation will not be made here:

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Noise levels were calculated using HUD DNL Electronic Assessment Tool and are estimated to be 62 dBA, which is below the acceptable HUD noise threshold of 65 dBA (see Attachment 14).

Include all documentation supporting your findings in your submission to HUD.

ERR #9. Wetlands



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Wetlands (CEST and EA) – Partner

<https://www.hudexchange.info/environmental-review/wetlands-protection>

1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building’s footprint, or ground disturbance?

The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any structures or facilities.

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Yes → *Continue to Question 2.*

2. Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

Yes → *Work with HUD or the RE to assist with the 8-Step Process.* *Continue to Question 3.*

3. Does Section 55.12 state that the 8-Step Process is not required?

No, the 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD’s elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

5-Step Process is applicable per 55.12(a).

Provide the applicable citation at 24 CFR 55.12(a) here.

→ *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

8-Step Process is inapplicable per 55.12(b).

Provide the applicable citation at 24 CFR 55.12(b) here.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.*

8-Step Process is inapplicable per 55.12(c).

Provide the applicable citation at 24 CFR 55.12(c) here.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- No wetlands are located on or adjacent to the project area, (see Attachment 16).

Include all documentation supporting your findings in your submission to HUD.

ERR #10. Wild and Scenic Rivers



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Wild and Scenic Rivers (CEST and EA) – PARTNER

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
References		
https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers		

1. Is your project within proximity of a NWSRS river as defined below?

Wild & Scenic Rivers: These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational

Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.*

Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River. → *Continue to Question 2.*

2. Could the project do *any* of the following?

- Have a direct and adverse effect within Wild and Scenic River Boundaries,
- Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
- Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.

Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

- No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS. → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*
- Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS. → *The RE/HUD must work with the Managing Agency to identify mitigation measures to mitigate the impact or effect of the project on the river.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- No wild and scenic rivers are located on or adjacent to the project area. The closest wild and scenic river is located 41 miles northeast of the project area (see Attachment 17).

Are formal compliance steps or mitigation required?

- Yes
 No

ERR #11. Environmental Justice.



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Environmental Justice (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/environmental-justice>

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. Were any adverse environmental impacts identified in any other compliance review portion of this project’s total environmental review?

Yes → *Continue to Question 2.*

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?

Yes

Explain:

→ *The RE/HUD must work with the affected low-income or minority community to decide what mitigation actions, if any, will be taken. Provide any supporting documentation.*

No

Explain:

Air Quality: With the implementation of mitigation measures required for the control of fugitive dust at construction sites, no disproportionate impacts to low income and/or minority communities would occur as a result of impacts to air quality.

Hazards Materials: With implementation of removing asbestos containing materials at the existing building during construction, no disproportionate impacts to low income and/or minority communities would occur as a result of hazardous materials.

Erosion and Storm Water Runoff: With the implementation of stormwater mitigation measures outlined in a Stormwater Management Plan, no disproportionate impacts to low income and/or minority communities would occur as a result of erosion, drainage, and stormwater runoff.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

Air Quality: Construction activities such as land clearing and grading may cause temporary adverse impacts to air quality from fugitive dust during construction of the residential community; however, with the implementation of air quality mitigation measures required for fugitive dust required by SCQAMD Rule 403 (see Mitigation Measure 1 in Environmental Assessment), impacts to air quality would be minimized or avoided. Therefore, no disproportionate impacts to low income and/or minority communities would occur as a result of fugitive dust.

Hazardous Materials: Asbestos-containing materials are present in the existing building; however, with the removal of the asbestos-containing material during construction (see Mitigation Measure 2 in Environmental Assessment), no impacts to future residents would occur and no disproportionate impacts to low income and/or minority communities would occur as a result of asbestos-containing materials.

Erosion/ Drainage/ Storm Water Runoff: Construction activities may temporarily increase impacts from erosion, drainage, and stormwater runoff. However, with the implementation of best management practices per the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial (or other similar source as approved by Orange County) and the requirements of the National Pollutant Discharge Elimination System construction stormwater quality permit (see Mitigation Measures 5 and 6 in Environmental Assessment), the potential temporary impacts would be minimized and kept on-site to the greatest extent possible. Therefore, no disproportionate impacts to low income and/or minority communities would occur as a result of erosion, drainage, and stormwater runoff.

Include all documentation supporting your findings in your submission to HUD.

Attachment 1. Site Plan and Design

EXHIBIT 4.02 Project Narrative

Project Name: Cartwright Family Apartments

Please attach a project narrative summary, no longer than one 8 ½ by 11 page, of the proposed project to this page.

NOTE: IF YOU PLAN TO RE-TYPE THIS EXHIBIT, PLEASE TYPE THE QUESTIONS IN BOLD PRINT, MAINTAIN SECTIONS IN THEIR ORIGINAL ORDER AND PUT THE DOCUMENT NAME IN THE HEADERS. YOU MAY ADD ADDITIONAL PAGES AS NEEDED.

In addition, provide information for the following:

1. General Information

- A. Provide a narrative of the purpose and the scope of your project.
The project is a new construction of a 60-unit family affordable community with 10 Permanent Supportive Housing (PSH) units, with a request for 8 project based vouchers. Please see attached for more details.
- B. Identify the neighborhood you will serve. Attach a map and identify boundaries.
The project site is located within the Irvine Business Complex (IBC) area within the City of Irvine. Please see attached map.
- C. Summarize the condition of the housing stock in the neighborhood.
The existing housing stock in the neighborhood to the East are market rate apartment communities for rent. To the North, West and South are mainly commercial offices and hotels.
- D. Document neighborhood services (public transportation, schools, shopping, etc.)
Cartwright Family Apartments is conveniently located next to OC One-Stop Center that helps provide comprehensive employment and training resources in partnership with the Orange County Board of Supervisors. In addition, it's within a 10-minute walking distance from a wide range of restaurants, a local bank, urgent care and public transportation.

A bus stop is conveniently located on the corner of Cartwright Road and Main Street (line 53, 86, 213), a 5-minute walk from the project site. Please refer to the attached map.

E. Discuss any other relevant issues regarding land use.

The project site was acquired by the Partnership in February 2020. The proposed project is compatible with both the Zoning Ordinance and General Plan of the City of Irvine. The project is located within the Urban Neighborhood overlay of Planning Area 36, the IBC, and is zoned 5.1 IBC Multi-Use, which allows for residential development (multifamily) at a minimum density of 30 units per acre. A density bonus or additive units will need to be processed to allow for additional parking. The design team is currently working on the initial entitlements package, with a May 2020 target submittal. Entitlement approvals are expected in the Fall of 2020.

2. Fair Housing

Explain how the project affirmatively promotes fair housing.

This project’s completion will facilitate the development of a vacant commercial building into an affordable apartment community. This would assist the County of Orange in its production efforts for new affordable housing.

Advanced Property Services Management, Inc. (APS), a wholly owned subsidiary of C&C Development, will be responsible for the ongoing management of the property. APS has been in business for over 30 years and actively involved in the management of affordable apartment communities throughout Southern California. They have thorough knowledge of Fair Housing Law and ensure that each property is in compliance with Fair Housing Law and provides a quality living environment for each resident.

3. Targeting

Indicate the number of units targeted for the categories indicated in the table below.

Population Served	Large Families (3 or more Bedrooms)	Elderly	Homeless	Single-room Occupancy	Handicapped
No. of Units	26		10		

NOTE: Total of units listed in categories above may exceed total units.

4. Neighborhood Revitalization

- A. Describe the appropriateness of the design, unit mix and any special features that meet the occupants' needs.

Cartwright Family Apartments will feature a contemporary style architecture and the elevations will complement the architecturally modern community in the Irvine Business Complex area. The design is compliant with the City's Design Guidelines. The height and scale of the buildings has been limited to four stories to help the buildings blend into the surrounding community. The project is designed with a mix of one-, two- and three-bedroom units to meet the needs of families who are expected to occupy the property.

Cartwright Family Apartments is conveniently located next to OC One-Stop Center that helps provide comprehensive employment and training resources in partnership with the Orange County Board of Supervisors. In addition, it's within a 10-minute walking distance from a wide range of restaurants, a local bank, urgent care and public transportation.

A bus stop is conveniently located on the corner of Cartwright Road and Main Street (line 53, 86, 213), a 5-minute walk from the project site. Please refer to the attached map.

- B. Describe how the project will address the identified housing priorities in the Consolidated Plan for the jurisdiction in which the project is located.

The proposed project will address the housing priorities in the Consolidated Plan by increasing the number of affordable housing units through deed restrictions for people of very-low, low-, and moderate-income levels. In addition, developing a vacant commercial building to improve the quality of housing and add to the affordable housing stock within the Northern and Central sectors of Orange County.

- C. Is the proposed project in an impacted census tract? How will the project positively impact the neighborhood?

The proposed project is not within an impacted census tract as defined by HUD.

The project will positively impact the neighborhood through the development of a vacant commercial building into an affordable apartment community. The property will be owned and professionally managed by a to-be-formed Limited Partnership owned by Cartwright CCR LLC. The partners of this organization have years of experience in providing affordable housing for low income individuals. The property will be professionally managed with occupancy restrictions. Rules and regulations will be strictly enforced.

5. Collaboration

Describe the extent to which the project will involve community organizations, other than the project sponsor(s). Attach letters of endorsement, if available.

The project sponsor will be coordinating local community outreach efforts in conjunction with the City of Irvine. The 10 set-aside PSH units will be in collaboration with the OC Health Care Agency.

6. Innovation

Describe the extent to which the project involves a new or innovative approach (either physical, financial, or managerial) to meet the housing needs for very low and low-income persons.

The project involves an innovative approach to the new development of a family affordable housing community by being located right next to an OC One-Stop Center. The project will coordinate its efforts together its social service provider, Families Forward, together with OC One-Stop Center to help its residents, including the homeless or at-risk of homeless residents, with employment and training resources to help individuals and families stabilize and better lives.

7. Other

State anything else that you would like OC Housing and Community Development to know that is pertinent to this application. Please limit comments to one page.

The project is a productive use of a vacant commercial building, that once completed, will result in the creation of new affordable housing units.

Certification

The undersigned certifies under penalty of perjury that all statements made in this proposal are true and correct to the best of the undersigned's knowledge.



Todd Cottle

Authorized Signature (Board Officer)

Typed Name

Member

March 19, 2020

Title

Date Signed

EXHIBIT 4.02 Project Narrative

#

1. General Information

A. Provide a narrative of the purpose and the scope of your project.

The project, Cartwright Family Apartments, is the new construction of a 60-unit family affordable community with 10 Permanent Supportive Housing (PSH) units. In addition, the project will set-aside 5 units for the developmentally disabled and 6 units with a veterans preference.

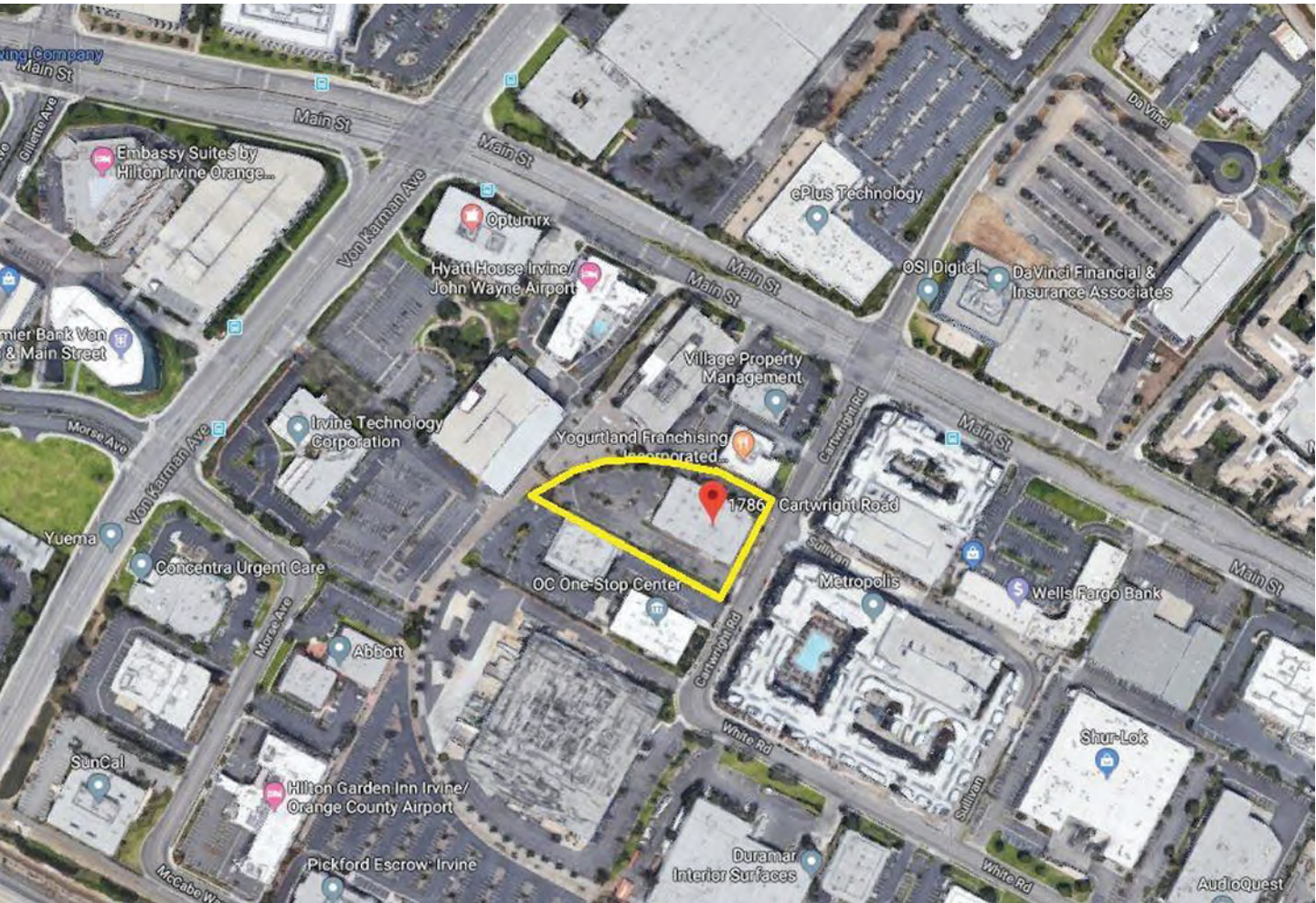
Cartwright Family Apartments is located on 1.62 acres of land at 17861 Cartwright Road in the City of Irvine. Our proposed development will include the following features:

- 100% affordable multifamily residential rental project.
- 60 Family Units:
 - 15 one-bedrooms
 - 19 two-bedrooms
 - 26 three-bedrooms
- Tenant income mix ranging from low to very-low income households.
 - 30% AMI: 10 units
 - 50% AMI: 10 units
 - 60% AMI: 18 units
 - 70% AMI: 8 units
 - 80% AMI: 13 units
- 10 Permanent Supportive Housing Units
- 10% veteran preference.
- 1.73:1 Parking Ratio (per code): 104 parking spaces.
- One (1) building with four-stories tuck-under building with contemporary style residential community with elevator access.
- Leasing office space for professional on-site management.
- Community room, fitness room, computer room, tot lot, pool, bike room, dog park and BBQ pavilion for residents.
- Active and passive green open space for families.
- Design and orient the project in a manner which will meet LEED Environmental Design Standards.

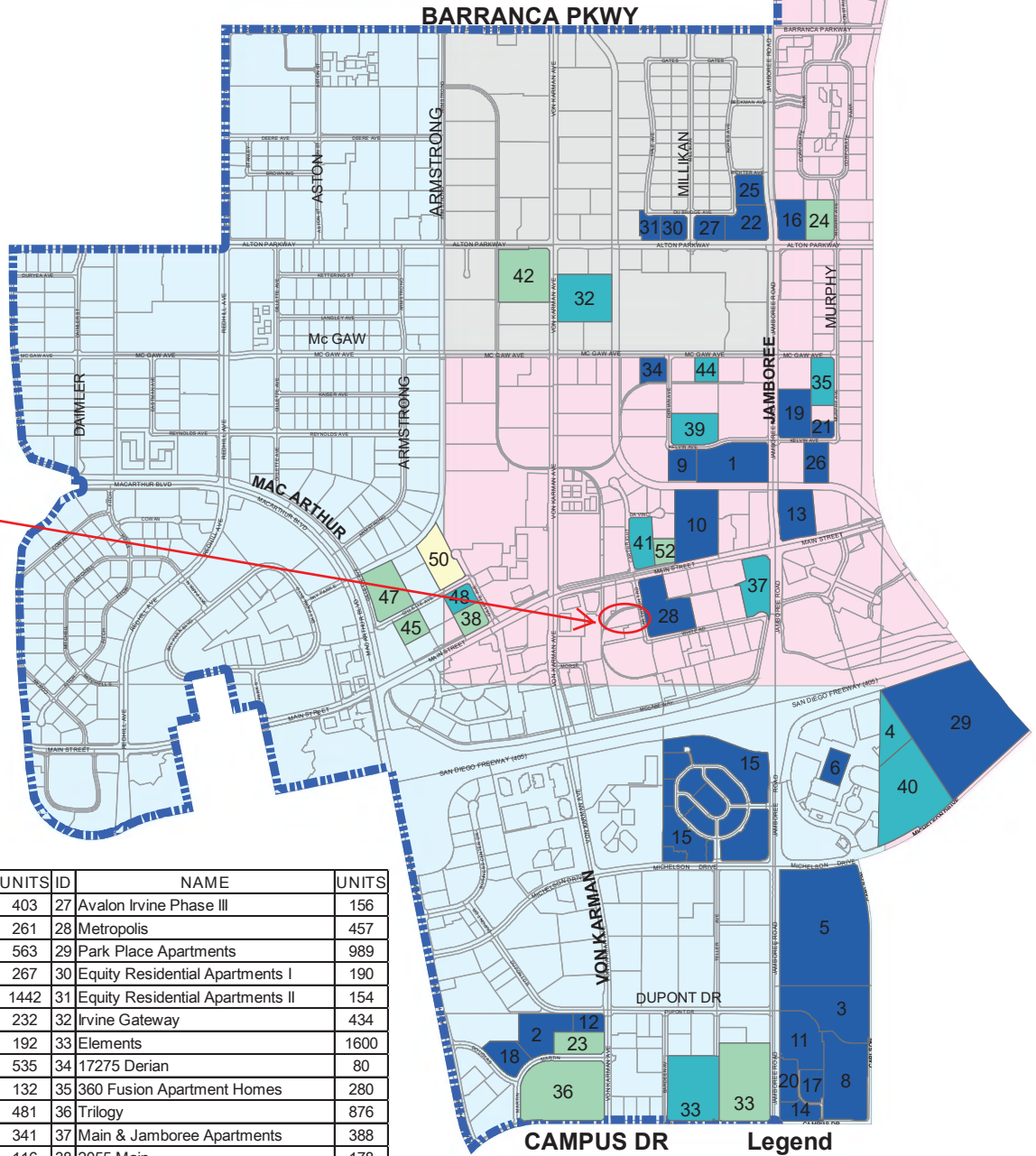
Cartwright Family Apartments will feature a contemporary style architecture and the elevations will complement the architecturally modern community in the Irvine Business Complex area. The height and scale of the buildings has been limited to four stories to help the buildings blend into the surrounding community.

The site plan allows for additional green space to aesthetically enhance the street frontage on Cartwright Road, including a small dog park area in the back of the building to compliment the parking area. Vehicle circulation is improved with access taken from Cartwright Road. With a curved shaped parking lot, vehicles will utilize the main drive aisle to access their individual parking space in the back of the building. Pedestrian walkways are strategically located throughout the site to increase connectivity between the buildings and to the parking lot.

Cartwright Family Apartments
Address: 17861 Cartwright Road, Irvine, CA



IBC RESIDENTIAL PROJECTS WITH SCHOOL DISTRICTS



Cartwright Family Apartments

ID	NAME	UNITS	ID	NAME	UNITS
1	Sofi Apts	403	27	Avalon Irvine Phase III	156
2	Metropolitan Condos	261	28	Metropolis	457
3	Toscana Apartments	563	29	Park Place Apartments	989
4	Park Place Irvine	267	30	Equity Residential Apartments I	190
5	Villa Siena Apartments	1442	31	Equity Residential Apartments II	154
6	Marquee at Park Place	232	32	Irvine Gateway	434
7	Irvine Inn	192	33	Elements	1600
8	Watermarke Condominiums	535	34	17275 Derian	80
9	Kelvin Court *	132	35	360 Fusion Apartment Homes	280
10	Main Street Village Apartments	481	36	Trilogy	876
11	Campus Center Apartments	341	37	Main & Jamboree Apartments	388
12	Axis 2300	116	38	2055 Main	178
13	Camden Apartments	290	39	Pistoia Apts.	371
14	The Plaza-Irvine: Condominiums (Phase I & II)	202	40	Vireo at Park Place	520
15	Central Park	1275	41	2525 Main	272
16	Calypso Apartments and Lofts	179	42	2152-82 Alton	357
17	Campus Center Apartments Expansion	61	43	Reserved	
18	Carlyle @ Colton Plaza	156	44	2602 McGaw	120
19	The Residences on Jamboree	381	45	17811 Gillette	44
20	The Plaza Irvine: Condominiums (Phase III & IV)	105	46	Reserved	
21	Granite Court Apartments	71	47	17822 Gillette	137
22	Avalon Irvine	280	48	17821 Gillette	39
23	Milani Apartments 18831 Von Karman	287	49	Reserved	
24	2851 Alton Parkway	170	50	17832 Gillette **	326
25	Avalon Irvine, Phase II	179	51	Reserved	
26	Modera Apts.	194	52	2535 Main	150

Legend

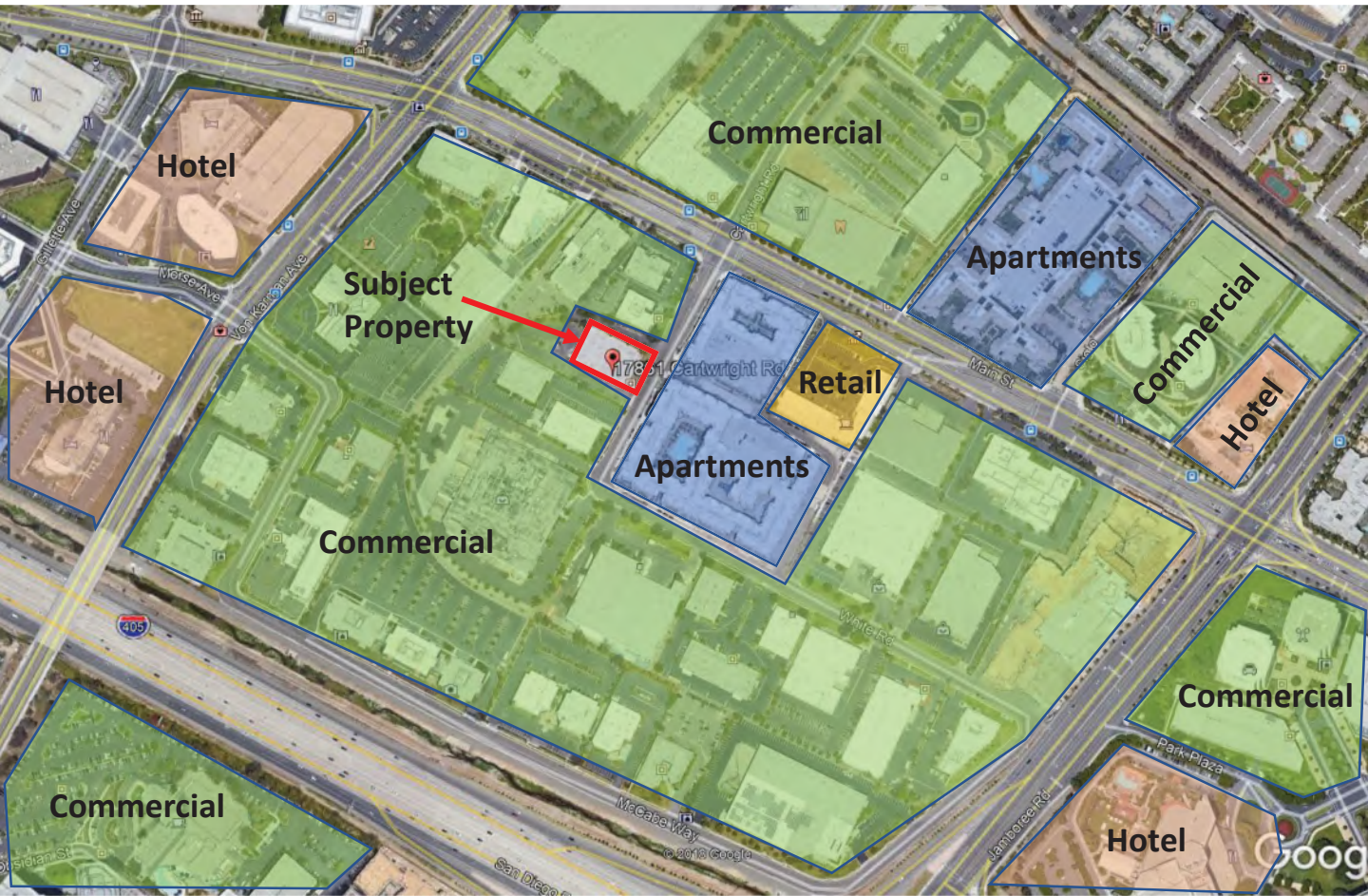
- City Boundary
- Application Under Review
- Approved
- Under Construction
- Existing
- Irvine Unified School District
- Santa Ana Unified School District
- Tustin Unified School District

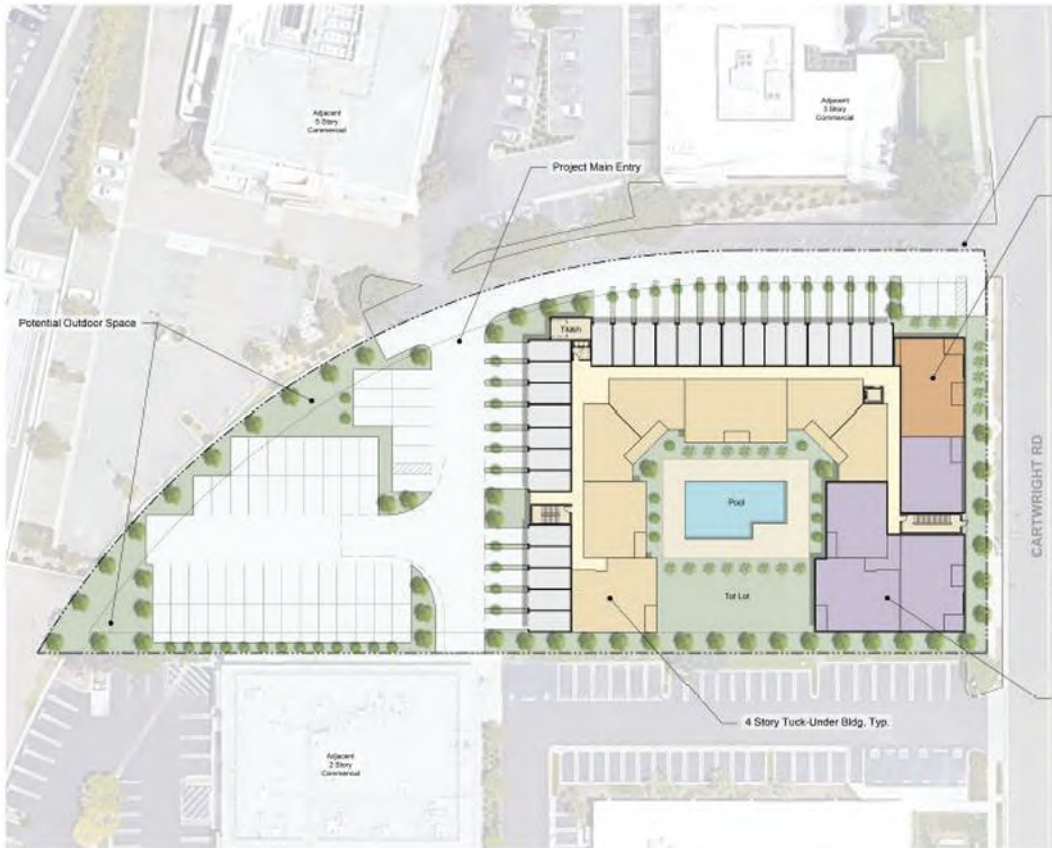
Although every effort has been made to develop the completeness of the information displayed on this map and it has been verified to the best of our abilities, no warranty, expressed or implied, is made regarding accuracy, adequacy, completeness, legality, reliability, or usefulness of the information.

The City of Irvine provides this information on an "as is" basis. All warranties of any kind express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination by computer viruses and non-infringement of proprietary rights, ARE DISCLAIMED.

* Kelvin Court was approved for 138 units, but only 132 were constructed.

Cartwright Family Apartments: Surrounding Land Uses and Community





Project Summary

Total Site Area =	±1.62 AC
Total Units =	±60 DU
Total Density =	±37.1 DU/AC

Unit Summary

Unit Type	# DU	%
1-Bd/1-Ba	15	25%
2-Bd/1-Ba	19	32%
3-Bd/2-Ba	26	43%
Total	±60 DU	100%

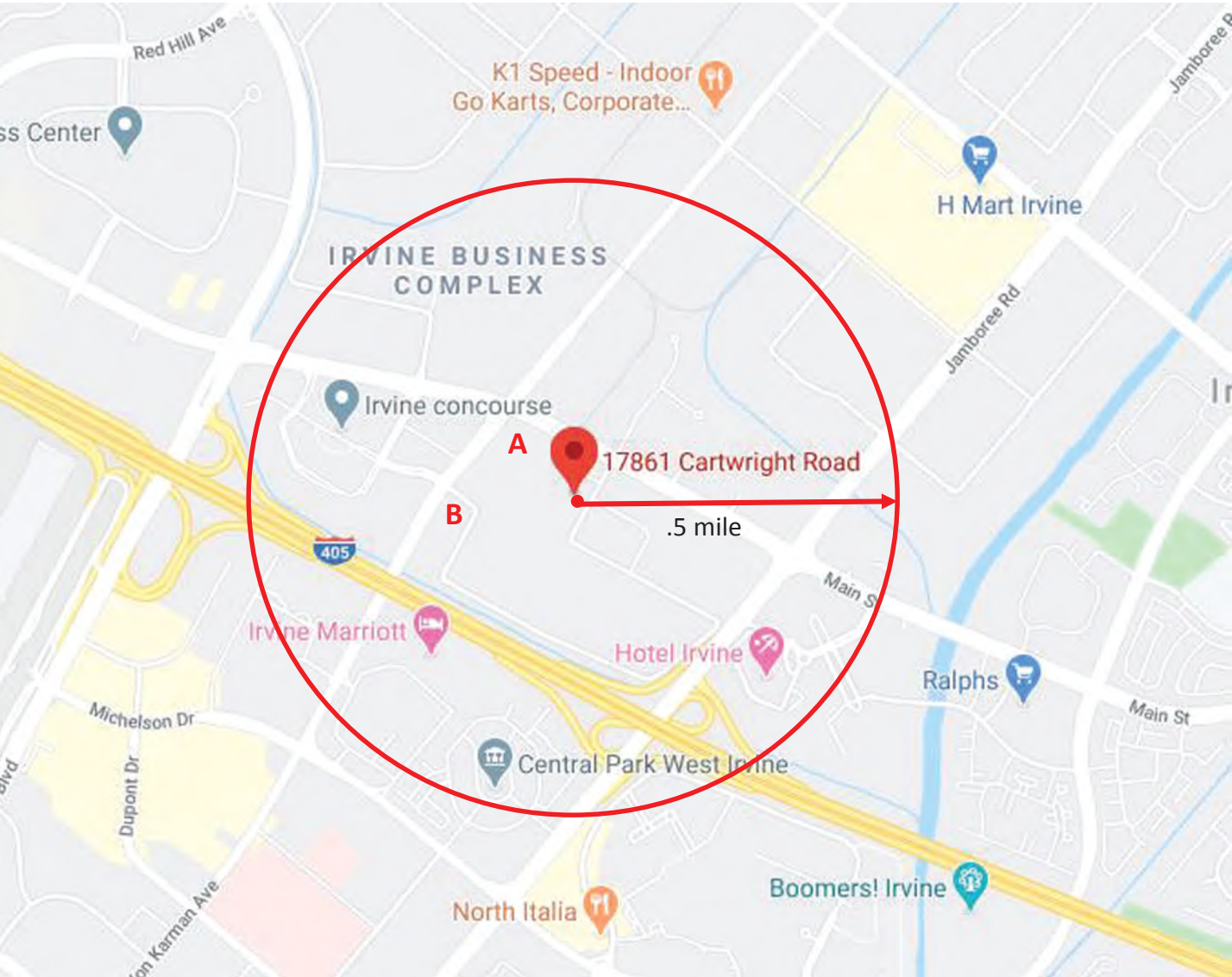
Parking Summary

Unit Type	Req'd. Ratio	Req'd Parking
1-Bd	1.0 Sp./DU	15 Sp.
2-Bd	2.0 Sp./DU	38 Sp.
3-Bd	2.0 Sp./DU	52 Sp.
Total		105 Spaces Required

Parking Provided:

Garages =	26 Garage Spaces
Open =	81 Open Spaces
Total	107 Spaces Provided

Cartwright Family Apartments: Vicinity Map



Amenity

Distance

- A. Bus Stop
- B. Concentra Urgent Care


.09 miles
.20 miles

Attachment 2. Airport Hazards Map

17861 Cartwright Road, Irvine, CA

ext 1600 Pennsylvania Ave, 20500

[Get Directions](#) [History](#)

 17861 Cartwright Rd



[Places](#)

[Layers](#)

- Primary Database
- Announcements
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Weather
- Gallery
- More
- Terrain



Ruler

Line Path Polygon Circle 3D path 3D poly

Measure the distance between two points on the ground

Map Length:	3,855.89	Feet
Ground Length:	3,855.90	
Heading:	272.86	degrees

Mouse Navigation

17861 Cartwright Rd

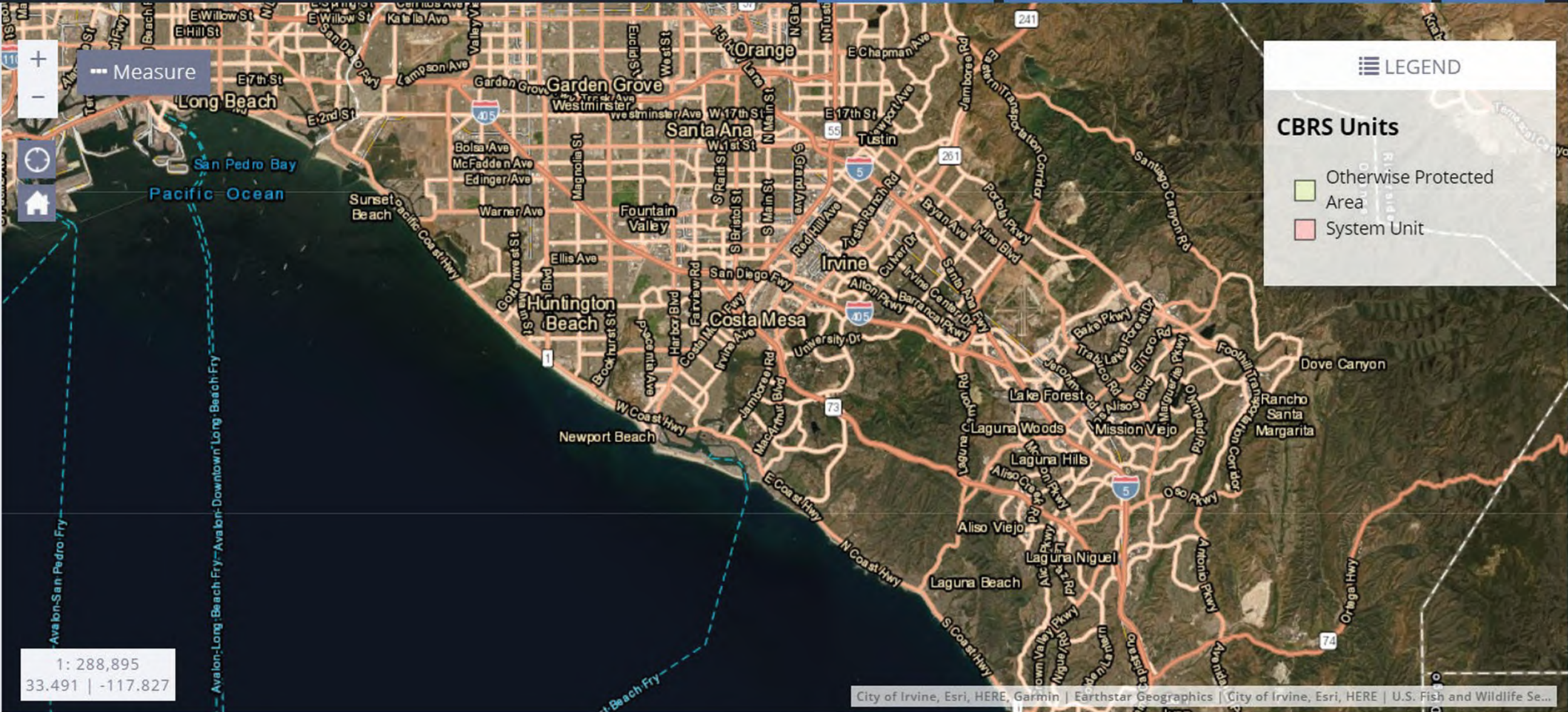
Attachment 3. Coastal Barrier Resources Map

BASEMAPS >

MAP LAYERS >

- CBRS Units

[Click here to learn more about CBRS Units.](#)



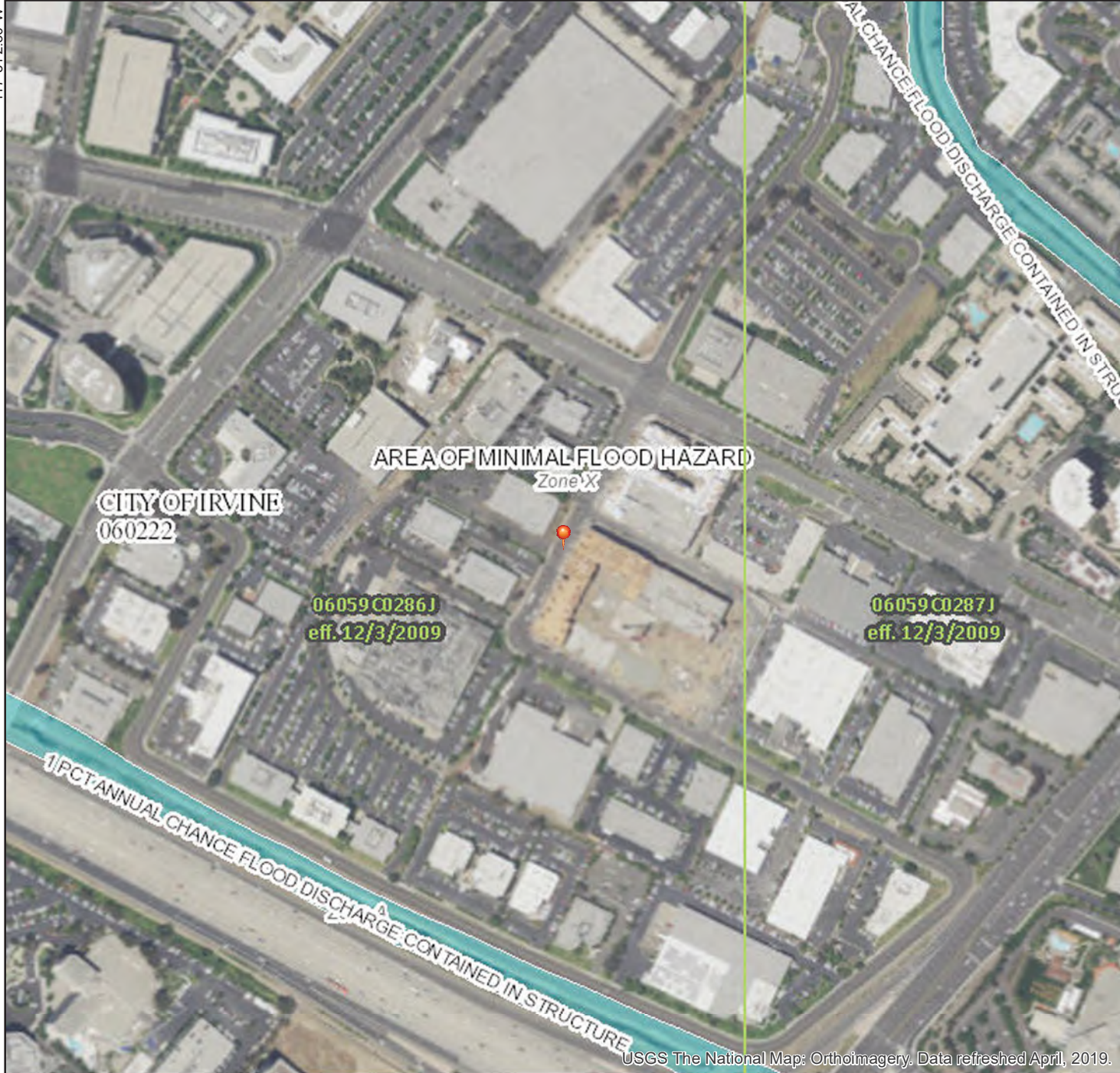
1: 288,895
33.491 | -117.827

Attachment 4. Flood Insurance Map

National Flood Hazard Layer FIRMette



33°41'9.61"N



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 |
| GENERAL STRUCTURES | Area of Undetermined Flood Hazard Zone D |
| | Channel, Culvert, or Storm Sewer |
| | Levee, Dike, or Floodwall |
| OTHER FEATURES | Cross Sections with 1% Annual Chance Water Surface Elevation |
| | Cross Sections with 1% Annual Chance 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 |



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 5/27/2020 at 5:21:49 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.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

33°40'39.67"N

117°50'24.84"W

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

Attachment 5. Air Quality CalEEMod Model

HUD Cartwright Apartments - Orange County, Annual

**HUD Cartwright Apartments
Orange County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	104.00	Space	0.94	41,600.00	0
Recreational Swimming Pool	2.00	1000sqft	0.05	2,000.00	0
Apartments Mid Rise	60.00	Dwelling Unit	0.63	60,000.00	172
General Office Building	2.60	1000sqft	0.00	2,600.00	0
Health Club	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - HUD development in Irvine, Orange County
 Land Use - 60 unit apartment building with leasing office and other amenities and 104 space parking lot
 Construction Phase - Default schedule
 Off-road Equipment - Default equipment
 Trips and VMT - Default trips
 On-road Fugitive Dust - Default

Demolition - Tons of debris based on total building demolition of 21,411 SF and parking lot demolition of 41,600 SF

Grading - No soil import/export assumed

Architectural Coating - Default

Vehicle Trips - Default trips for apartments and zeroed out trips for office and amenities

Woodstoves - No fireplaces assumed

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	51.00	0.00
tblFireplaces	NumberNoFireplace	6.00	60.00
tblFireplaces	NumberWood	3.00	0.00
tblGrading	AcresOfGrading	1.50	1.62
tblGrading	AcresOfGrading	1.00	1.62
tblLandUse	LotAcreage	1.58	0.63
tblLandUse	LotAcreage	0.06	0.00
tblLandUse	LotAcreage	0.09	0.00
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	33.82	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblWoodstoves	NumberCatalytic	3.00	0.00

tblWoodstoves	NumberNoncatalytic	3.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2278	1.7448	1.6448	3.5000e-003	0.1171	0.0797	0.1967	0.0328	0.0765	0.1092	0.0000	301.8037	301.8037	0.0430	0.0000	302.8778
2022	0.2360	0.0832	0.1011	1.9000e-004	3.8200e-003	3.9400e-003	7.7600e-003	1.0200e-003	3.7500e-003	4.7700e-003	0.0000	16.5280	16.5280	3.0400e-003	0.0000	16.6040
Maximum	0.2360	1.7448	1.6448	3.5000e-003	0.1171	0.0797	0.1967	0.0328	0.0765	0.1092	0.0000	301.8037	301.8037	0.0430	0.0000	302.8778

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2278	1.7448	1.6448	3.5000e-003	0.1171	0.0797	0.1967	0.0328	0.0765	0.1092	0.0000	301.8035	301.8035	0.0430	0.0000	302.8776
2022	0.2360	0.0832	0.1011	1.9000e-004	3.8200e-003	3.9400e-003	7.7600e-003	1.0200e-003	3.7500e-003	4.7700e-003	0.0000	16.5280	16.5280	3.0400e-003	0.0000	16.6040
Maximum	0.2360	1.7448	1.6448	3.5000e-003	0.1171	0.0797	0.1967	0.0328	0.0765	0.1092	0.0000	301.8035	301.8035	0.0430	0.0000	302.8776

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2021	5-31-2021	0.6315	0.6315
2	6-1-2021	8-31-2021	0.5673	0.5673
3	9-1-2021	11-30-2021	0.5621	0.5621
4	12-1-2021	2-28-2022	0.5199	0.5199

		Highest	0.6315	0.6315
--	--	---------	--------	--------

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381
Energy	4.2800e-003	0.0369	0.0179	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	145.3131	145.3131	5.0600e-003	1.6600e-003	145.9331
Mobile	0.1003	0.4412	1.3914	5.4500e-003	0.5055	4.0000e-003	0.5095	0.1354	3.7200e-003	0.1391	0.0000	502.4357	502.4357	0.0204	0.0000	502.9464
Waste						0.0000	0.0000		0.0000	0.0000	13.0361	0.0000	13.0361	0.7704	0.0000	32.2963
Water						0.0000	0.0000		0.0000	0.0000	1.4994	30.1046	31.6040	0.1553	3.8900e-003	36.6454
Total	0.3892	0.4852	2.0301	5.7100e-003	0.5055	0.0104	0.5159	0.1354	0.0101	0.1455	14.5355	678.8670	693.4024	0.9521	5.5500e-003	718.8593

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381
Energy	4.2800e-003	0.0369	0.0179	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	145.3131	145.3131	5.0600e-003	1.6600e-003	145.9331
Mobile	0.1003	0.4412	1.3914	5.4500e-003	0.5055	4.0000e-003	0.5095	0.1354	3.7200e-003	0.1391	0.0000	502.4357	502.4357	0.0204	0.0000	502.9464
Waste						0.0000	0.0000		0.0000	0.0000	13.0361	0.0000	13.0361	0.7704	0.0000	32.2963
Water						0.0000	0.0000		0.0000	0.0000	1.4994	30.1046	31.6040	0.1553	3.8900e-003	36.6454
Total	0.3892	0.4852	2.0301	5.7100e-003	0.5055	0.0104	0.5159	0.1354	0.0101	0.1455	14.5355	678.8670	693.4024	0.9521	5.5500e-003	718.8593

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	3/30/2021	5	2	
3	Grading	Grading	3/31/2021	4/5/2021	5	4	
4	Building Construction	Building Construction	4/6/2021	1/10/2022	5	200	
5	Paving	Paving	1/11/2022	1/24/2022	5	10	
6	Architectural Coating	Architectural Coating	1/25/2022	2/7/2022	5	10	

Acres of Grading (Site Preparation Phase): 1.62

Acres of Grading (Grading Phase): 1.62

Acres of Paving: 0.94

Residential Indoor: 121,500; Residential Outdoor: 40,500; Non-Residential Indoor: 9,900; Non-Residential Outdoor: 3,300; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	189.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	64.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	3.0900e-003	0.0000	3.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

Total	0.0199	0.1970	0.1449	2.4000e-004	0.0204	0.0104	0.0308	3.0900e-003	9.7100e-003	0.0128	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.9000e-004	0.0248	6.7400e-003	7.0000e-005	1.6200e-003	8.0000e-005	1.7000e-003	4.4000e-004	7.0000e-005	5.2000e-004	0.0000	7.1777	7.1777	7.6000e-004	0.0000	7.1966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1924	1.1924	3.0000e-005	0.0000	1.1930
Total	1.1700e-003	0.0251	0.0105	8.0000e-005	3.0500e-003	9.0000e-005	3.1400e-003	8.2000e-004	8.0000e-005	9.1000e-004	0.0000	8.3701	8.3701	7.9000e-004	0.0000	8.3896

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	3.0900e-003	0.0000	3.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	0.0199	0.1970	0.1449	2.4000e-004	0.0204	0.0104	0.0308	3.0900e-003	9.7100e-003	0.0128	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.9000e-004	0.0248	6.7400e-003	7.0000e-005	1.6200e-003	8.0000e-005	1.7000e-003	4.4000e-004	7.0000e-005	5.2000e-004	0.0000	7.1777	7.1777	7.6000e-004	0.0000	7.1966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.2000e-004	3.7300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1924	1.1924	3.0000e-005	0.0000	1.1930
Total	1.1700e-003	0.0251	0.0105	8.0000e-005	3.0500e-003	9.0000e-005	3.1400e-003	8.2000e-004	8.0000e-005	9.1000e-004	0.0000	8.3701	8.3701	7.9000e-004	0.0000	8.3896

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1300e-003	0.0000	6.1300e-003	2.9900e-003	0.0000	2.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	1.5600e-003	0.0174	7.5600e-003	2.0000e-005	6.1300e-003	7.7000e-004	6.9000e-003	2.9900e-003	7.0000e-004	3.6900e-003	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0734	0.0734	0.0000	0.0000	0.0734
Total	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0734	0.0734	0.0000	0.0000	0.0734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1300e-003	0.0000	6.1300e-003	2.9900e-003	0.0000	2.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	1.5600e-003	0.0174	7.5600e-003	2.0000e-005	6.1300e-003	7.7000e-004	6.9000e-003	2.9900e-003	7.0000e-004	3.6900e-003	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0734	0.0734	0.0000	0.0000	0.0734
Total	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0734	0.0734	0.0000	0.0000	0.0734

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8900e-003	0.0000	9.8900e-003	5.0600e-003	0.0000	5.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	2.5800e-003	0.0287	0.0127	3.0000e-005	9.8900e-003	1.2800e-003	0.0112	5.0600e-003	1.1700e-003	6.2300e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1468	0.1468	0.0000	0.0000	0.1468
Total	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1468	0.1468	0.0000	0.0000	0.1468

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8900e-003	0.0000	9.8900e-003	5.0600e-003	0.0000	5.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	2.5800e-003	0.0287	0.0127	3.0000e-005		1.2800e-003	1.2800e-003		1.1700e-003	1.1700e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total	2.5800e-003	0.0287	0.0127	3.0000e-005	9.8900e-003	1.2800e-003	0.0112	5.0600e-003	1.1700e-003	6.2300e-003	0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1468	0.1468	0.0000	0.0000	0.1468
Total	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1468	0.1468	0.0000	0.0000	0.1468

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1758	1.3227	1.2512	2.1400e-003		0.0664	0.0664		0.0641	0.0641	0.0000	176.1012	176.1012	0.0314	0.0000	176.8872
Total	0.1758	1.3227	1.2512	2.1400e-003		0.0664	0.0664		0.0641	0.0641	0.0000	176.1012	176.1012	0.0314	0.0000	176.8872

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9700e-003	0.1386	0.0389	3.6000e-004	9.1600e-003	2.9000e-004	9.4500e-003	2.6400e-003	2.8000e-004	2.9200e-003	0.0000	35.1133	35.1133	2.8400e-003	0.0000	35.1844
Worker	0.0228	0.0153	0.1783	6.3000e-004	0.0682	4.5000e-004	0.0686	0.0181	4.1000e-004	0.0185	0.0000	56.9391	56.9391	1.2200e-003	0.0000	56.9696
Total	0.0267	0.1539	0.2172	9.9000e-004	0.0773	7.4000e-004	0.0781	0.0207	6.9000e-004	0.0214	0.0000	92.0524	92.0524	4.0600e-003	0.0000	92.1540

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1758	1.3227	1.2512	2.1400e-003		0.0664	0.0664		0.0641	0.0641	0.0000	176.1010	176.1010	0.0314	0.0000	176.8870
Total	0.1758	1.3227	1.2512	2.1400e-003		0.0664	0.0664		0.0641	0.0641	0.0000	176.1010	176.1010	0.0314	0.0000	176.8870

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	3.9700e-003	0.1386	0.0389	3.6000e-004	9.1600e-003	2.9000e-004	9.4500e-003	2.6400e-003	2.8000e-004	2.9200e-003	0.0000	35.1133	35.1133	2.8400e-003	0.0000	35.1844
Worker	0.0228	0.0153	0.1783	6.3000e-004	0.0682	4.5000e-004	0.0686	0.0181	4.1000e-004	0.0185	0.0000	56.9391	56.9391	1.2200e-003	0.0000	56.9696
Total	0.0267	0.1539	0.2172	9.9000e-004	0.0773	7.4000e-004	0.0781	0.0207	6.9000e-004	0.0214	0.0000	92.0524	92.0524	4.0600e-003	0.0000	92.1540

3.5 Building Construction - 2022
Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9500e-003	0.0375	0.0382	7.0000e-005		1.7700e-003	1.7700e-003		1.7100e-003	1.7100e-003	0.0000	5.4473	5.4473	9.5000e-004	0.0000	5.4710
Total	4.9500e-003	0.0375	0.0382	7.0000e-005		1.7700e-003	1.7700e-003		1.7100e-003	1.7100e-003	0.0000	5.4473	5.4473	9.5000e-004	0.0000	5.4710

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.0500e-003	1.1600e-003	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0753	1.0753	9.0000e-005	0.0000	1.0774
Worker	6.7000e-004	4.3000e-004	5.1400e-003	2.0000e-005	2.1100e-003	1.0000e-005	2.1200e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6958	1.6958	3.0000e-005	0.0000	1.6967
Total	7.9000e-004	4.4800e-003	6.3000e-003	3.0000e-005	2.3900e-003	2.0000e-005	2.4100e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.7711	2.7711	1.2000e-004	0.0000	2.7741

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9500e-003	0.0375	0.0382	7.0000e-005		1.7700e-003	1.7700e-003		1.7100e-003	1.7100e-003	0.0000	5.4473	5.4473	9.5000e-004	0.0000	5.4710
Total	4.9500e-003	0.0375	0.0382	7.0000e-005		1.7700e-003	1.7700e-003		1.7100e-003	1.7100e-003	0.0000	5.4473	5.4473	9.5000e-004	0.0000	5.4710

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.0500e-003	1.1600e-003	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0753	1.0753	9.0000e-005	0.0000	1.0774
Worker	6.7000e-004	4.3000e-004	5.1400e-003	2.0000e-005	2.1100e-003	1.0000e-005	2.1200e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6958	1.6958	3.0000e-005	0.0000	1.6967
Total	7.9000e-004	4.4800e-003	6.3000e-003	3.0000e-005	2.3900e-003	2.0000e-005	2.4100e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.7711	2.7711	1.2000e-004	0.0000	2.7741

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	1.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.6700e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744
Total	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	1.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.6700e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744
Total	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2241					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	0.2251	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744
Total	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2241					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	0.2251	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744
Total	2.3000e-004	1.5000e-004	1.7400e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5741	0.5741	1.0000e-005	0.0000	0.5744

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1003	0.4412	1.3914	5.4500e-003	0.5055	4.0000e-003	0.5095	0.1354	3.7200e-003	0.1391	0.0000	502.4357	502.4357	0.0204	0.0000	502.9464
Unmitigated	0.1003	0.4412	1.3914	5.4500e-003	0.5055	4.0000e-003	0.5095	0.1354	3.7200e-003	0.1391	0.0000	502.4357	502.4357	0.0204	0.0000	502.9464

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	399.00	383.40	351.60	1,332,689	1,332,689
Parking Lot	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Total	399.00	383.40	351.60	1,332,689	1,332,689

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Parking Lot	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Recreational Swimming Pool	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
General Office Building	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934
Health Club	0.561378	0.043284	0.209473	0.111826	0.015545	0.005795	0.025829	0.017125	0.001747	0.001542	0.004926	0.000594	0.000934

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.9950	102.9950	4.2500e-003	8.8000e-004	103.3635
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.9950	102.9950	4.2500e-003	8.8000e-004	103.3635
NaturalGas Mitigated	4.2800e-003	0.0369	0.0179	2.3000e-004	2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003		0.0000	42.3181	42.3181	8.1000e-004	7.8000e-004	42.5696
NaturalGas Unmitigated	4.2800e-003	0.0369	0.0179	2.3000e-004	2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003		0.0000	42.3181	42.3181	8.1000e-004	7.8000e-004	42.5696

5.2 Energy by Land Use - NaturalGas

Unmitigated

NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	685648	3.7000e-003	0.0316	0.0134	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	36.5888	36.5888	7.0000e-004	6.7000e-004	36.8062
General Office Building	23764	1.3000e-004	1.1600e-003	9.8000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2681	1.2681	2.0000e-005	2.0000e-005	1.2757
Health Club	83600	4.5000e-004	4.1000e-003	3.4400e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4612	4.4612	9.0000e-005	8.0000e-005	4.4877
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.2800e-003	0.0369	0.0179	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	42.3181	42.3181	8.1000e-004	7.7000e-004	42.5696

Mitigated

Land Use	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	MT/yr					
												Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Apartments Mid Rise	685648	3.7000e-003	0.0316	0.0134	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	36.5888	36.5888	7.0000e-004	6.7000e-004	36.8062
General Office Building	23764	1.3000e-004	1.1600e-003	9.8000e-004	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2681	1.2681	2.0000e-005	2.0000e-005	1.2757
Health Club	83600	4.5000e-004	4.1000e-003	3.4400e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4612	4.4612	9.0000e-005	8.0000e-005	4.4877
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.2800e-003	0.0369	0.0179	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003	0.0000	42.3181	42.3181	8.1000e-004	7.7000e-004	42.5696

5.3 Energy by Land Use - Electricity

Unmitigated

Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	238518	75.9969	3.1400e-003	6.5000e-004	76.2688
General Office Building	36374	11.5895	4.8000e-004	1.0000e-004	11.6310
Health Club	33800	10.7694	4.4000e-004	9.0000e-005	10.8079
Parking Lot	14560	4.6391	1.9000e-004	4.0000e-005	4.6557
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		102.9950	4.2500e-003	8.8000e-004	103.3635

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	238518	75.9969	3.1400e-003	6.5000e-004	76.2688
General Office Building	36374	11.5895	4.8000e-004	1.0000e-004	11.6310
Health Club	33800	10.7694	4.4000e-004	9.0000e-005	10.8079
Parking Lot	14560	4.6391	1.9000e-004	4.0000e-005	4.6557
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		102.9950	4.2500e-003	8.8000e-004	103.3635

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381
Unmitigated	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0188	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381
Total	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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SubCategory	tons/yr								MT/yr							
	Architectural Coating	0.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	0.0188	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381
Total	0.2846	7.1600e-003	0.6209	3.0000e-005		3.4300e-003	3.4300e-003		3.4300e-003	3.4300e-003	0.0000	1.0135	1.0135	9.8000e-004	0.0000	1.0381

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	31.6040	0.1553	3.8900e-003	36.6454
Unmitigated	31.6040	0.1553	3.8900e-003	36.6454

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Mid Rise	3.90924 / 2.46452	26.1829	0.1284	3.2200e-003	30.3530
General Office Building	0.462108 / 0.283227	3.0664	0.0152	3.8000e-004	3.5592
Health Club	0.236573 / 0.144996	1.5698	7.7700e-003	1.9000e-004	1.8221
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.118286 /	0.7849	3.8900e-003	1.0000e-004	0.9111
Total		31.6040	0.1553	3.8900e-003	36.6454

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.90924 / 2.46452	26.1829	0.1284	3.2200e-003	30.3530
General Office Building	0.462108 / 0.283227	3.0664	0.0152	3.8000e-004	3.5592
Health Club	0.236573 / 0.144996	1.5698	7.7700e-003	1.9000e-004	1.8221
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.118286 /	0.7849	3.8900e-003	1.0000e-004	0.9111
Total		31.6040	0.1553	3.8900e-003	36.6454

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.0361	0.7704	0.0000	32.2963
Unmitigated	13.0361	0.7704	0.0000	32.2963

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	27.6	5.6026	0.3311	0.0000	13.8801
General Office Building	2.42	0.4912	0.0290	0.0000	1.2170
Health Club	22.8	4.6282	0.2735	0.0000	11.4662
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	11.4	2.3141	0.1368	0.0000	5.7331
Total		13.0361	0.7704	0.0000	32.2963

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
--	----------------	-----------	-----	-----	------

Land Use	tons	MT/yr			
Apartments Mid Rise	27.6	5.6026	0.3311	0.0000	13.8801
General Office Building	2.42	0.4912	0.0290	0.0000	1.2170
Health Club	22.8	4.6282	0.2735	0.0000	11.4662
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	11.4	2.3141	0.1368	0.0000	5.7331
Total		13.0361	0.7704	0.0000	32.2963

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Attachment 6. CA Coastal Commission Coastal Zone Boundary Map

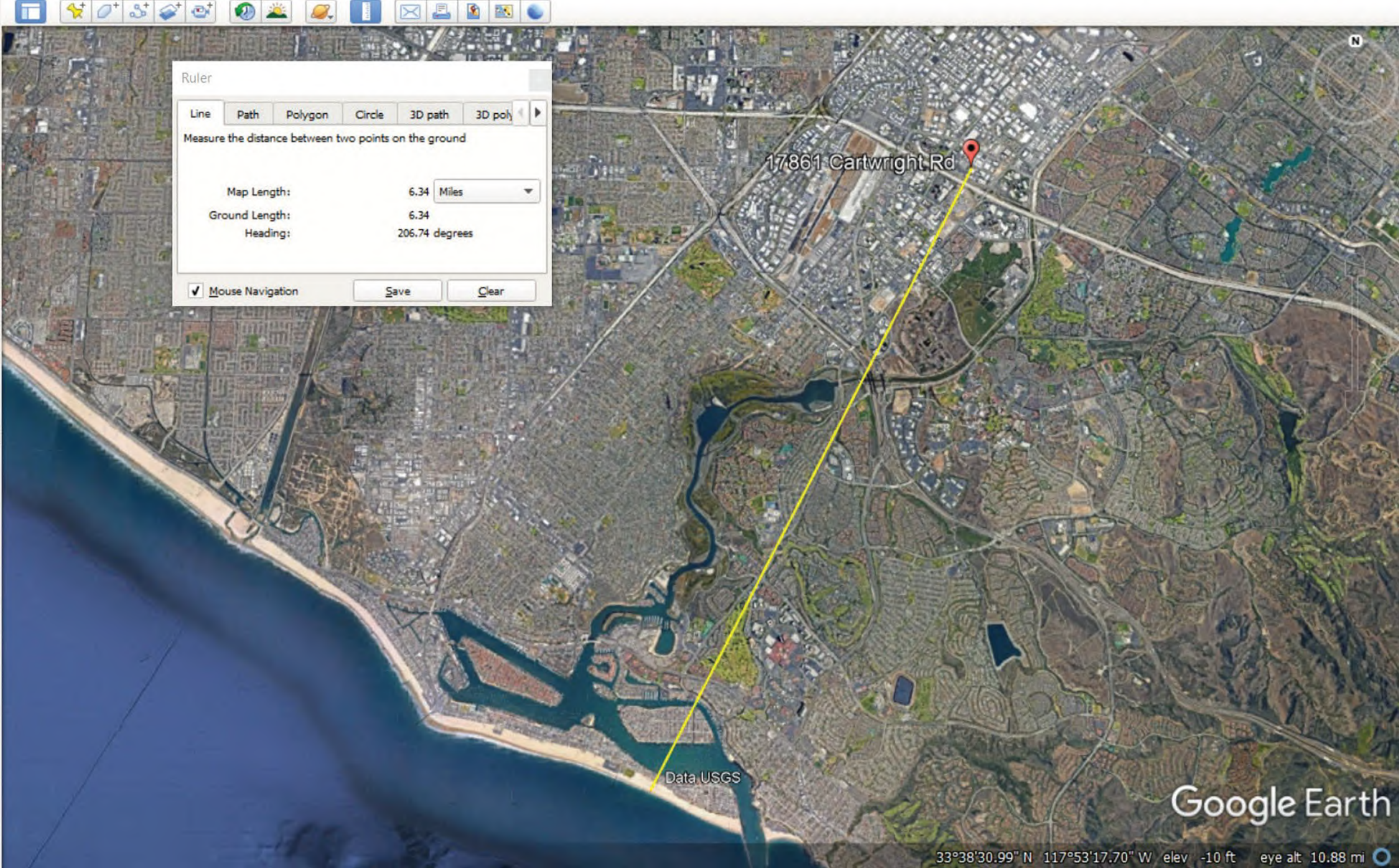
Attachment 7. Project Site Distance to Coast

17861 Cartwright Rd

My Places
Temporary Places

- My Places
- Temporary Places

- Primary Database
- Announcements
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Weather
- Gallery
- More
- Terrain



Attachment 8. Asbestos Test Results



BARR & CLARK

Independent Environmental Testing
Asbestos • Lead • Mold • Phase I

ASBESTOS INSPECTION REPORT

OF

COMMERCIAL BUILDING
17861 CARTWRIGHT ROAD
IRVINE, CA 92614

PROJECT NO. 3014946

OCTOBER 10, 2019



Prepared For:
C&C Development
14211 Yorba Street
Tustin, CA 92780

Inspected & Prepared By:

Matt Crochet
State of California
Certified Asbestos Consultant

Reviewed By:

Keith Piner
State of California
Certified Asbestos Consultant

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2.0 SCOPE OF WORK.....	3
3.0 PROPERTY DESCRIPTION	3
4.0 INSPECTOR’S QUALIFICATIONS.....	3
5.0 SAMPLING PROTOCOL / SAMPLE ANALYSIS	3
6.0 SUMMARY OF RESULTS	4
7.0 RECOMMENDATIONS.....	4
8.0 INSPECTION LIMITATIONS	5

APPENDICES

APPENDIX A	LABORATORY RESULTS
APPENDIX B	INSPECTOR’S CERTIFICATE(S)
APPENDIX C	INSURANCE CERTIFICATE

ASBESTOS INSPECTION REPORT

1.0 INTRODUCTION

This report presents the results of Barr & Clark's asbestos inspection of the Commercial Building located at 17861 Cartwright Road, Irvine, California (Subject Property). This document is prepared for the sole use of C&C Development, and any regulatory agencies that are directly involved in this project. No other party should rely on the information contained herein without prior written consent of C&C Development. The scope of services, inspection methodology, and results are presented below.

2.0 SCOPE OF WORK

The purpose of this inspection is to identify and assess certain accessible Asbestos Containing Construction Materials (ACCM) at the subject property.

On October 07, 2019, Barr & Clark performed an inspection for asbestos at the subject property in Irvine, California. Physical bulk samples were collected of suspect materials from representative locations and submitted to an independent laboratory for analysis. If asbestos was detected at any concentration within a sample of a construction material, it was concluded that the material contains asbestos. Suspect materials were also visually inspected to assess their condition.

3.0 PROPERTY DESCRIPTION

The subject property is a commercial structure that was built circa 1975. It is a one story building that is constructed over a slab foundation. The exterior walls are covered with concrete.

4.0 INSPECTOR'S QUALIFICATIONS

Matt Crochet of Barr & Clark performed the inspection at the site. Personnel certificate(s) have been provided in *Appendix B*.

5.0 SAMPLING PROTOCOL / SAMPLE ANALYSIS

Sampling Protocol: Sampling was patterned after the Asbestos School Hazard Emergency Response Act (40 CFR 763 Subpart E) as mandated by Cal/OSHA (Title 8 Section 1529) and South Coast Air Quality Management District (Rule 1403).

Sample Analysis: Physical bulk samples were collected from this property and analyzed for asbestos content by an independent environmental laboratory which is accredited by the National Voluntary Laboratory Accreditation Program (Lab Code 200358-0). The method of analysis was Polarized Light Microscopy (EPA 600/M4-82-020). Additional laboratory information can be found on the last page of the laboratory results (*Appendix A*).

6.0 SUMMARY OF RESULTS

Asbestos Containing Construction Materials: Asbestos was detected in samples of several construction materials. The following summary identifies these materials, their location within the property, the condition in which they were observed at the time of inspection, approximate quantity of material and percentage of asbestos contained in the material as reported by laboratory analysis.

Material	Sample #	Location	Condition	Quantity*	% Asbestos
Mastic	6-12	Main Room and All Like Flooring Mastic Throughout	Good	15000 S.F.	2%
Roofing Mastic	20-22	Roof at Penetrations and All Like Roofing Mastic Throughout	Damaged	75 S.F.	2%
Roofing Mastic	23-25	Roof at HVAC Systems and All Like Roofing Mastic Throughout	Damaged	75 S.F.	3%

**NOTE: All quantification estimates are approximate and based on information and materials that were accessible at the time of inspection. The chosen contractor is solely responsible for verifying all final ACCM quantities for bidding, abatement, and disposal purposes.*

7.0 RECOMMENDATIONS

The analysis and recommendations submitted in this survey are based in part on the data obtained from specific and discrete sampling locations. However, the nature and extent of variations between the sampling locations may not become evident until renovation or demolition procedures commence. If potential variations (i.e. different building materials) are identified during renovation or demolition activities, it will be necessary to conduct additional bulk sampling.

ACCM in Damaged or Significantly Damaged Condition: These materials present the greatest risk for asbestos exposure. **It is recommended that all *damaged and/or significantly damaged* asbestos containing construction materials be removed following SCAQMD Rule 1403 Procedure 5.** An asbestos abatement contractor registered with the Division of Occupational Safety and Health must perform any work that disturbs these materials.

ACCM in Good Condition: No action is recommended for these materials. Asbestos containing materials that are maintained in good condition present minimal risk for asbestos exposure.

Note: If renovation or demolition activities are to affect these materials, an asbestos abatement contractor registered with the Division of Occupational Safety and Health should be contracted to perform all portions of the work affecting these materials.

8.0 INSPECTION LIMITATIONS

This inspection was planned, developed, and implemented based on Barr & Clark's previous experience in performing asbestos inspections. Barr & Clark utilized state-of-the-art-practices and techniques in accordance with regulatory standards while performing this inspection. Barr & Clark's evaluation of the relative risk of exposure to asbestos identified during this inspection is based on conditions observed at the time of the inspection. Barr & Clark cannot be responsible for changing conditions that may alter the relative exposure risk or for future changes in accepted methodology.

This inspection did not evaluate hidden, buried or unseen building or other materials. When future renovation or demolition activities are undertaken, Barr & Clark should be contacted if such are encountered for further evaluation. Any materials that were not sampled during the inspection must be presumed to contain asbestos until proven otherwise. Access and inspection of attics or crawl spaces could be limited due to visibility, obstructions, health and safety hazards or structural issues. All undocumented materials should be presumed to contain asbestos until sampled and analyzed.

Enclosed are the actual test results and all relevant certifications and licenses.

APPENDIX

A

(LABORATORY RESULTS)



LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@latestesting.com

LA Testing Order: 331921297

Customer ID: 32BACA26

Customer PO: 3014946

Project ID:

Attention: Barr & Clark, Inc.
16531 Bolsa Chica Street
Suite 205
Huntington Beach, CA 92649

Phone: (714) 894-5700

Fax:

Received Date: 10/07/2019 11:55 AM

Analysis Date: 10/08/2019 - 10/09/2019

Collected Date: 10/07/2019

Project: Commercial Building - 17861 Cartwright Road, Irvine, CA 92614

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-Joint Compound 331921297-0001	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-Drywall 331921297-0001A	Main room - DW + JC	Brown/White Fibrous Heterogeneous	10% Cellulose 3% Glass	87% Non-fibrous (Other)	None Detected
2-Joint Compound 1 331921297-0002	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-Joint Compound 2 331921297-0002A	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-Drywall 331921297-0002B	Main room - DW + JC	Brown/White Fibrous Heterogeneous	10% Cellulose 3% Glass	87% Non-fibrous (Other)	None Detected
3-Joint Compound 1 331921297-0003	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-Joint Compound 2 331921297-0003A	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-Drywall 331921297-0003B	Main room - DW + JC	Brown/White Fibrous Heterogeneous	10% Cellulose 3% Glass	87% Non-fibrous (Other)	None Detected
4-Joint Compound 1 331921297-0004	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-Joint Compound 2 331921297-0004A	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-Drywall 331921297-0004B	Main room - DW + JC	Brown/White Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-Joint Compound 1 331921297-0005	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-Joint Compound 2 331921297-0005A	Main room - DW + JC	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-Drywall 331921297-0005B	Main room - DW + JC	Brown/White Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
6-Mastic 331921297-0006	Main room - Leveling compound	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
6-Leveler 331921297-0006A	Main room - Leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 10/09/2019 13:15:59



LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@latestesting.com

LA Testing Order: 331921297

Customer ID: 32BACA26

Customer PO: 3014946

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7 331921297-0007	Main room - Leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-Mastic 331921297-0008	Main room - Leveling compound	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8-Leveler 331921297-0008A	Main room - Leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-Mastic 331921297-0009	Main room - Leveling compound				Positive Stop (Not Analyzed)
9-Leveler 331921297-0009A	Main room - Leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9-Backing 331921297-0009B	Main room - Leveling compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10-Mastic 331921297-0010	Main room - Leveling compound				Positive Stop (Not Analyzed)
10-Leveler 331921297-0010A	Main room - Leveling compound	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11 331921297-0011	Main room - Leveling compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12 331921297-0012	Main room - Leveling compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Mastic 1 331921297-0013	Main room - Flooring	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Floor Tile 331921297-0013A	Main room - Flooring	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-Mastic 2 331921297-0013B	Main room - Flooring	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Flooring 331921297-0014	Main room - Flooring mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14-Mastic 331921297-0014A	Main room - Flooring mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15-Flooring 331921297-0015	Main room - Flooring mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15-Mastic 331921297-0015A	Main room - Flooring mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-Flooring 331921297-0016	Main room - Flooring mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16-Mastic 331921297-0016A	Main room - Flooring mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 10/09/2019 13:15:59



LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@latestesting.com

LA Testing Order: 331921297

Customer ID: 32BACA26

Customer PO: 3014946

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
17-Shingle 331921297-0017	Roof - Roofing	Gray/Various/Black Fibrous Heterogeneous	6% Glass	94% Non-fibrous (Other)	None Detected
17-Roofing 1 331921297-0017A	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
17-Roofing 2 331921297-0017B	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18-Shingle 331921297-0018	Roof - Roofing	Gray/Various/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
18-Roofing 1 331921297-0018A	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18-Roofing 2 331921297-0018B	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Shingle 331921297-0019	Roof - Roofing	Gray/Various/Black Fibrous Heterogeneous	6% Glass	94% Non-fibrous (Other)	None Detected
19-Roofing 1 331921297-0019A	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-Roofing 2 331921297-0019B	Roof - Roofing	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
20 331921297-0020	Roof @ penetrations - Mastic	Gray/Black Non-Fibrous Heterogeneous		98% Non-fibrous (Other)	2% Chrysotile
21 331921297-0021	Roof @ penetrations - Mastic				Positive Stop (Not Analyzed)
22 331921297-0022	Roof @ penetrations - Mastic				Positive Stop (Not Analyzed)
23 331921297-0023	Roof @ HVAC - Mastic	Gray/Black Non-Fibrous Heterogeneous		97% Non-fibrous (Other)	3% Chrysotile
24 331921297-0024	Roof @ HVAC - Mastic				Positive Stop (Not Analyzed)
25 331921297-0025	Roof @ HVAC - Mastic				Positive Stop (Not Analyzed)
26 331921297-0026	Parapet wall - Roofing	Gray/Various/Black Fibrous Heterogeneous	6% Glass	94% Non-fibrous (Other)	None Detected
27 331921297-0027	Parapet wall - Roofing	Gray/Various/Black Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
28 331921297-0028	Parapet wall - Roofing	Gray/Various/Black Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
29 331921297-0029	Exterior walls - Coating	Brown/Black Fibrous Heterogeneous	5% Synthetic	95% Non-fibrous (Other)	None Detected

Initial report from: 10/09/2019 13:15:59



LA Testing

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Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@latestesting.com

LA Testing Order: 331921297

Customer ID: 32BACA26

Customer PO: 3014946

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
30 331921297-0030	Exterior walls - Coating	Brown/Black Fibrous Heterogeneous	6% Synthetic	94% Non-fibrous (Other)	None Detected
31 331921297-0031	Exterior walls - Coating	Brown/Black Fibrous Heterogeneous	6% Synthetic	94% Non-fibrous (Other)	None Detected
32 331921297-0032	Exterior walls - Coating	Brown Fibrous Heterogeneous	5% Synthetic	95% Non-fibrous (Other)	None Detected
33 331921297-0033	Exterior walls - Coating	Brown/Black Fibrous Heterogeneous	5% Synthetic	95% Non-fibrous (Other)	None Detected

Analyst(s)

David Garcia (44)

Sophia Nguyen (8)

Michael DeCavallas, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by LA Testing Huntington Beach, CA NVLAP Lab Code 101384-0, CA ELAP 1406

Initial report from: 10/09/2019 13:15:59

BARR & CLARK ENVIRONMENTAL #331921297

Project No. 3014946
 Date: 10/07/19
 Inspector: Matt Crochet

Project Name: Commercial Building
 Address: 17861 Cartwright Road, Irvine, CA 92614

Sample #	Lab #	Location	Material	Condition (G/D/S)	Stop at 1st Positive
1		MAIN ROOM	DW & JC	G	Y
2					
3					
4					
5					
6		MAIN ROOM	LEVELINK COMPOUND	G	Y
7					
8					
9					
10					
11					
12					

Relinquished by: M. Crochet Date: 10/7/19 Turnaround: 24 HR 48HR 72HR RUSH
 Received by: SLW Date: 10/17/19 Time: 11:55 Analysis: PLM

#331921297

BARR & CLARK ENVIRONMENTAL

Project Name: Commercial Building
 Address: 17861 Cartwright Road, Irvine, CA 92614

Project No. 3014946
 Date: 10/07/19
 Inspector: Matt Crochet

Sample #	Lab #	Location	Material	Condition (G/D/S)	Stop at 1 st Positive
13		MAIN ROOM	FLOORING	D	Y
14		MAIN ROOM	FLOORING MASTIC	D	Y
15					
16					
17		ROOF	ROOFING	D	Y
18					
19					
20		ROOF @ PENETRATIONS	MASTIC	D	Y
21					
22					
23		ROOF @ HVAC	MASTIC	D	Y
24					

Relinquished by: M. Crochet Date: 10/7/19 Turnaround: 24 HR 48HR 72HR RUSH
 Received by: _____ Date: _____ Time: _____

BARR & CLARK ENVIRONMENTAL #331921297

Project No. 3014946
 Date: 10/07/19
 Inspector: Matt Crochet

Project Name: Commercial Building
 Address: 17861 Cartwright Road, Irvine, CA 92614

Sample #	Lab #	Location	Material	Condition (G/D/S)	Stop at 1 st Positive
25		ROOF @ HVAC	MASTIC	D	Y
26		PARAPET WALL	ROOFING	G	Y
27					
28					
29		EXTERIOR WALLS	COATING	D	Y
30					
31					
32					
33					
34					
35					
36					

Relinquished by: M. Crochet Date: 10/7/19 Turnaround: 24 HR 48HR 72HR RUSH
 Received by: _____ Date: _____ Time: _____

APPENDIX

B

(INSPECTOR'S CERTIFICATES)

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Matthew P Crochet
Name



Certification No. **14-5176**

Expires on **03/12/20**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Keith A Piner
Name



Certification No. **01-4021**

Expires on **11/16/19**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jeremy Nguyen
Name



Certification No. **17-6140**

Expires on **01/17/20**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Dana E Williams
Name



Certification No. **93-1168**

Expires on **11/19/19**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

APPENDIX

C

(INSURANCE CERTIFICATE)



CERTIFICATE OF INSURANCE

This certificate is issued for informational purposes only. It certifies that the policies listed in this document have been issued to the Named Insured. It does not grant any rights to any party nor can it be used, in any way, to modify coverage provided by such policies. Alteration of this certificate does not change the terms, exclusions or conditions of such policies. Coverage is subject to the provisions of the policies, including any exclusions or conditions, regardless of the provisions of any other contract, such as between the certificate holder and the Named Insured. The limits shown below are the limits provided at the policy inception. Subsequent paid claims may reduce these limits.

Certificate Holder: This is a copy of our general auto insurance. Your company or city's specific insurance is on file.	Named Insured: BARR & CLARK, INC. 16531 BOLSA CHICA ST STE 205 HUNTINGTON BEACH CA 92649-3595
---	---

Automobile Liability			
Insurer Name: Allstate Insurance Company			
Policy Number: 648761551			
1 - Any Auto	2 - Owned Autos Only	3 - Owned Priv. Pass. Autos Only	
4 - Owned Autos Other Than Priv. Pass. Autos Only	5 - Owned Autos Subject to No Fault	6 - Owned Autos Subject to a Compulsory UM Law	
<input checked="" type="checkbox"/> 7 - Specifically Described Autos	<input checked="" type="checkbox"/> 8 - Hired Autos Only	<input checked="" type="checkbox"/>	9 - Nonowned Autos Only
Policy Effective Date :		Policy Expiration Date:	
Limits of Insurance:	\$1,000,000	Combined Single Limit (each accident)	
	BI Per Person	BI Per Accident	PD Per Accident
Description of Operations/Locations/Vehicles/Endorsements/Special Provisions			
Interested Party Type: Additional Insured - All Other			
THIS CERTIFICATE DOES NOT GRANT ANY COVERAGE OR RIGHTS TO THE CERTIFICATE HOLDER. IF THIS CERTIFICATE INDICATES THAT THE CERTIFICATE HOLDER IS AN ADDITIONAL INSURED, THE POLICY(IES) MUST EITHER BE ENDORSED OR CONTAIN SPECIFIC LANGUAGE PROVIDING THE CERTIFICATE HOLDER WITH ADDITIONAL INSURED STATUS. THE CERTIFICATE HOLDER IS AN ADDITIONAL INSURED ONLY TO THE EXTENT INDICATED IN SUCH POLICY LANGUAGE OR ENDORSEMENT.			

Producer: SMART MONEY SOL INC	
Authorized Representative:	
	Date:



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P.O. BOX 8192, PLEASANTON, CA 94588

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

GROUP:
POLICY NUMBER: 1917813
CERTIFICATE ID: 243

This is a copy of our general worker's compensation insurance. Your company or city's specific insurance is on file.

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon 30 days advance written notice to the employer.

We will also give you 30 days advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policy listed herein. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate of insurance may be issued or to which it may pertain, the insurance afforded by the policy described herein is subject to all the terms, exclusions, and conditions, of such policy.

Authorized Representative

President and CEO

EMPLOYER'S LIABILITY LIMIT INCLUDING DEFENSE COSTS: \$1,000,000 PER OCCURRENCE.

ENDORSEMENT #0015 ENTITLED ADDITIONAL INSURED EMPLOYER EFFECTIVE IS
ATTACHED TO AND FORMS A PART OF THIS POLICY. NAME OF ADDITIONAL INSURED:

ENDORSEMENT #2065 ENTITLED CERTIFICATE HOLDERS' NOTICE EFFECTIVE IS
ATTACHED TO AND FORMS A PART OF THIS POLICY.

EMPLOYER

BARR & CLARK, INC
16531 BOLSA CHICA ST STE 205
HUNTINGTON BEACH CA 92649

SP

[P14,SP]

Attachment 9. Lead-Based Paint Test Results



BARR & CLARK

Independent Environmental Testing
Asbestos • Lead • Mold • Phase I

LEAD-BASED PAINT INSPECTION REPORT

OF

COMMERCIAL BUILDING
17861 CARTWRIGHT ROAD
IRVINE, CA

PROJECT NO. 3014946

OCTOBER 10, 2019



Prepared For:
C&C Development
14211 Yorba Street
Tustin, CA 92780

Prepared By:

Jeremy Nguyen
State of California Certified
Lead Inspector / Risk Assessor

Reviewed By:

Matt Crochet
State of California Certified
Lead Inspector / Risk Assessor

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APPENDIX B	CDPH 8552 INSPECTOR’S CERTIFICATE(S) INSURANCE CERTIFICATE

LEAD-BASED PAINT INSPECTION REPORT

1.0 INTRODUCTION

This report presents the results of Barr & Clark Environmental's lead-based paint (LBP) inspection of the Commercial Building located at 17861 Cartwright Road, Irvine, California (Subject Property). This document is prepared for the sole use of the C&C Development, and any regulatory agencies that are directly involved in this project. No other party should rely on the information contained herein without prior written consent of the C&C Development. The scope of services, inspection methodology, and results are presented below.

2.0 SCOPE OF WORK

The purpose of this inspection is to identify and assess the Lead-Based Paint (LBP) present on painted components at the subject property.

On October 07, 2019, Barr & Clark performed an inspection for lead-based paint at the subject property in Irvine, California. To comply with EPA and HUD guidelines, painted and varnished surfaces in every accessible "room equivalent" were sampled for the presence of LBP. The intent was to ascertain the presence of lead-based paint above the federal action level. If LBP was found, the inspection would identify individual architectural components and their respective concentrations of lead in such a manner that this report would be used to characterize the presence of LBP at this property.

3.0 PROPERTY DESCRIPTION

The subject property is a commercial structure that was built circa 1975. It is a one-story building that is constructed over a slab foundation. The exterior walls are covered with concrete and all of the windows are fixed types. At the time of this inspection, most of the painted surfaces were in fair condition.

4.0 INSPECTOR'S QUALIFICATIONS

Matt Crochet of Barr & Clark performed the inspection at the site using an RMD LPA-1 XRF spectrum analyzer instrument. He has attended the radiation safety course for handling the instrument, and completed an EPA approved curriculum in Lead in Construction Inspector / Risk Assessor Training.

At the time of this report, the California Department of Health Services, Childhood Lead Poisoning Branch, has implemented a State Certification Model Accreditation Plan adopted from the EPA. Matt Crochet has received certification. Personnel certificate(s) have been provided in *Appendix B*.

5.0 TESTING PROTOCOL

XRF Testing: Testing of the painted surfaces was patterned after the inspection protocol in Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing¹. In every "room equivalent" within the tested property, one representative surface of each "testing combination" was tested. Multiple readings were collected to resolve inconsistencies in the test results.

¹ 2012 Revision

Regulatory Compliance: Several public (government) agencies have a published “regulatory action level” to classify LBP. To further complicate matters, some of the established “levels” are quantified in different units of measurement. Listed below are the current regulatory agencies that have defined LBP, along with the respective action level:

<u>Agency</u>	<u>Ordinance #</u>	<u>Action level (mg / cm²)</u>	<u>Action level (ppm²)</u>
HUD / EPA	24 CFR 35.86 & 40 CFR 745.103	1.0 mg / cm ²	5,000 ppm
OSHA / CAL OSHA	29 CFR 1926.62 & Title 8, 1532.1	<i>Not Specified</i>	600 ppm ³

HUD / EPA have recently issued the following guidance regarding units of measurement for paint samples:

“Report lead paint amounts in mg/cm² because this unit of measurement does not depend on the number of layers of non-lead-based paint and can usually be obtained without damaging the painted surface. All measurements of lead in paint should be in mg/cm², unless the surface area cannot be measured or if all paint cannot be removed from the measured surface area. In such cases, concentrations may be reported in weight percent (%) or parts per million by weight (ppm).”⁴

Furthermore, EPA has previously issued guidance on lead content classification as follows:

“... The rule, at 24 CFR 35.86 and 40 CFR 745.103 states that a lead-based paint free finding must demonstrate that the building is free of ‘paint or other surface coatings that contain lead in excess of 1.0 milligrams per square centimeter (1.0 mg / cm²) or 0.5 percent by weight (5000 ppm).’ The State standards are not applicable, whether more or less stringent, since a State cannot amend Federal requirements.”⁵

In recognition of the various action levels the testing results are classified as follows for this report:

- Painted surfaces with readings at or above 1.0 mg / cm² are considered - Positive
- Painted surfaces with readings at or below 0.9 mg / cm² are considered - Negative

The individual readings have been provided on all field data sheets. Any future change in action levels by one of the regulating agencies may affect the classification of results.

6.0 METHOD OF TESTING

Paint Testing: The method employed was X-ray fluorescence (XRF) using a Radiation Monitoring Device Lead Paint Analyzer (RMD LPA-1). The instrument was operated in “Quick Mode,” where the duration for each test result is determined by a combination of:

- the actual reading relative to the designated action level;
- the age of the radioactive source; and
- the substrate on which the test was taken.

The instrument’s calibration was verified according to the manufacturer's specifications in compliance with the Performance Characteristic Sheet (PCS) developed for this instrument.

The readings from this instrument produce a 95% confidence level that the “lead” reading accurately reflects the actual level of lead in the tested surfaces, relative to the federal action level.

2 Parts per million
3 Applies to construction related activities
4 Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Revision).
5 Office of Pollution Prevention and Toxics, (August 20, 1996)

7.0 SUMMARY OF RESULTS

Paint Sampling: Throughout the subject property, none of the tested painted surfaces indicated the presence of lead based paint (LBP) at or above the respective action level.

Sampling for this inspection was representative. The field data and results for paint sampling may be found in *Appendices A - B*.

8.0 RECOMMENDATIONS

Since none of the tested painted surfaces indicated the presence of lead based paint (LBP) at or above the federal action level, ***no further testing is required at this time.***

9.0 TITLE X REQUIREMENTS

The results of this inspection indicate that no lead in amounts greater than or equal to 1.0 mg/cm² in paint was found on any building components, using the inspection protocol in Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Revision)*. **Therefore, this dwelling qualifies for the exemption in 24 CFR part 35 and 40 CFR part 745 for target housing being leased that is free of lead-based paint, as defined in the rule.** *However, some painted surfaces may contain levels of lead below 1.0 mg/cm², which could create lead dust or lead-contaminated soil hazards if the paint is turned into dust by abrasion, scraping, or sanding.* This report should be maintained as a permanent maintenance record for this property.

10.0 INSPECTION LIMITATIONS

This inspection was planned, developed, and implemented based on Barr & Clark's previous experience in performing lead-based paint inspections. This inspection was patterned after Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Revision)*. Barr & Clark utilized state-of-the-art-practices and techniques in accordance with regulatory standards while performing this inspection. Barr & Clark's evaluation of the relative risk of exposure to lead identified during this inspection is based on conditions observed at the time of the inspection. Barr & Clark cannot be responsible for changing conditions that may alter the relative exposure risk or for future changes in accepted methodology. Enclosed are the diagram(s), actual test results, and all relevant certifications and licenses.

APPENDIX

A

XRF FIELD DATA

SUMMARY OF INTERIOR

Project Name:Commercial Building
Address:17861 Cartwright Road
Irvine CA, 92614

Project Number:3014946

Component	Number Tested	Number Positive	Percent Positive	Number Negative	Percent Negative
Concrete Wall	4	0		4	100.00%
Gypsum Wall	4	0		4	100.00%
Metal Column	6	0		6	100.00%
Metal Door	3	0		3	100.00%
Metal Door Frame	3	0		3	100.00%
Metal Electric Utility Box	1	0		1	100.00%
Metal Pipe	1	0		1	100.00%
Metal Window Frame	4	0		4	100.00%
Metal Window Sill	4	0		4	100.00%
Wood Beam	4	0		4	100.00%
Wood Ceiling	1	0		1	100.00%
Totals:	35	0		35	

Testing done in compliance with current HUD guidelines for XRF.

SUMMARY OF EXTERIOR

Project Name:Commercial Building
Address:17861 Cartwright Road
Irvine CA, 92614

Project Number:3014946

Component	Number Tested	Number Positive	Percent Positive	Number Negative	Percent Negative
Concrete Wall	15	0		15	100.00%
Gypsum Ceiling	1	0		1	100.00%
Metal Door	3	0		3	100.00%
Metal Door Frame	3	0		3	100.00%
Metal Garage Door	1	0		1	100.00%
Metal Ladder	1	0		1	100.00%
Metal Pipe	1	0		1	100.00%
Metal Window Frame	16	0		16	100.00%
Metal Window Well	16	0		16	100.00%
Wood Soffit	8	0		8	100.00%
Wood Wall	1	0		1	100.00%
Totals:	66	0		66	

Testing done in compliance with current HUD guidelines for XRF.

SUMMARY OF COMMON

Project Name:Commercial Building
Address:17861 Cartwright Road
Irvine CA, 92614

Project Number:3014946

Component	Number Tested	Number Positive	Percent Positive	Number Negative	Percent Negative
Wood 0.0 mg/cm2 Standard	6	0		6	100.00%
Wood 1.0 mg/cm2 Standard	6	6	100.00%	0	
Totals:	12	6		6	

Testing done in compliance with current HUD guidelines for XRF.

Common Lead Containing Components List

Project Name: Commercial Building
Address: 17861 Cartwright Road
Irvine, CA 92614

Project Number:3014946
Protocol:HUD

Sample	Side	Testing Combination	Room Equivalent	Lead	Results	Condition	Comments
4		Wood 1.0 mg/cm2 Standard	Calibration Common Start of Job	1.0	POSITIVE	Intact	
5		Wood 1.0 mg/cm2 Standard	Calibration Common Start of Job	1.1	POSITIVE	Intact	
6		Wood 1.0 mg/cm2 Standard	Calibration Common Start of Job	1.1	POSITIVE	Intact	
111		Wood 1.0 mg/cm2 Standard	Calibration Common End of Job	1.0	POSITIVE	Intact	
112		Wood 1.0 mg/cm2 Standard	Calibration Common End of Job	1.0	POSITIVE	Intact	
113		Wood 1.0 mg/cm2 Standard	Calibration Common End of Job	1.0	POSITIVE	Intact	

The HUD action level for lead-based paint is 1.0 mg/cm2.
Positive is defined as XRF sampling with levels at or above 1.0 mg/cm2.

FIELD DATA

FIELD DATA REPORT

Project Name: Commercial Building
Address: 17861 Cartwright Road
 Irvine, CA 92614

Project Number: 3014946
Protocol: HUD

Sample	Unit ID / Location	Room Equivalent	Side	Component	Substrate	Condition	Lead	Results	Comments
1	Calibration	Common	Start of Job	0.0 mg/cm ² Standard	Wood	Intact	0.0	Negative	
2	Calibration	Common	Start of Job	0.0 mg/cm ² Standard	Wood	Intact	0.1	Negative	
3	Calibration	Common	Start of Job	0.0 mg/cm ² Standard	Wood	Intact	0.0	Negative	
4	Calibration	Common	Start of Job	1.0 mg/cm ² Standard	Wood	Intact	1.0	POSITIVE	
5	Calibration	Common	Start of Job	1.0 mg/cm ² Standard	Wood	Intact	1.1	POSITIVE	
6	Calibration	Common	Start of Job	1.0 mg/cm ² Standard	Wood	Intact	1.1	POSITIVE	
7		Exterior	Main Room	B	Door	Metal	Intact	0.0	Negative
8		Exterior	Main Room	B	Door Frame	Metal	Intact	0.0	Negative
9		Interior	Main Room	B	Door	Metal	Intact	0.0	Negative
10		Interior	Main Room	B	Door Frame	Metal	Intact	0.1	Negative
11		Exterior	Main Room	C	Door	Metal	Intact	0.2	Negative
12		Exterior	Main Room	C	Door Frame	Metal	Intact	0.2	Negative
13		Interior	Main Room	C	Door	Metal	Intact	0.1	Negative
14		Interior	Main Room	C	Door Frame	Metal	Intact	0.3	Negative
15		Interior	Main Room	A	Window Sill	Metal	Intact	0.2	Negative Fixed
16		Interior	Main Room	A	Window Frame	Metal	Intact	0.1	Negative Fixed
17		Interior	Main Room	B	Window Sill	Metal	Intact	0.0	Negative Fixed
18		Interior	Main Room	B	Window Frame	Metal	Intact	0.1	Negative Fixed
19		Interior	Main Room	C	Window Sill	Metal	Intact	0.0	Negative Fixed
20		Interior	Main Room	C	Window Frame	Metal	Intact	0.0	Negative Fixed
21		Interior	Main Room	D	Window Sill	Metal	Intact	0.2	Negative Fixed
22		Interior	Main Room	D	Window Frame	Metal	Intact	0.2	Negative Fixed
23		Interior	Main Room	A	Wall	Gypsum	Intact	0.1	Negative
24		Interior	Main Room	B	Wall	Gypsum	Intact	0.3	Negative
25		Interior	Main Room	C	Wall	Gypsum	Intact	0.0	Negative
26		Interior	Main Room	D	Wall	Gypsum	Intact	0.1	Negative
27		Interior	Main Room	A	Wall	Concrete	Intact	0.0	Negative
28		Interior	Main Room	B	Wall	Concrete	Intact	0.0	Negative
29		Interior	Main Room	C	Wall	Concrete	Intact	0.2	Negative

The HUD action level for lead-based paint is 1.0 mg/cm².
 Positive is defined as XRF sampling with levels at or above 1.0 mg/cm².

FIELD DATA REPORT

Project Name: Commercial Building
Address: 17861 Cartwright Road
 Irvine, CA 92614

Project Number: 3014946
Protocol: HUD

Sample	Unit ID / Location	Room Equivalent	Side	Component	Substrate	Condition	Lead	Results	Comments
30		Interior Main Room	D	Wall	Concrete	Intact	0.1	Negative	
31		Interior Main Room		Ceiling	Wood	Intact	0.0	Negative	
32		Interior Main Room		Beam	Wood	Intact	0.0	Negative	
33		Interior Main Room		Beam	Wood	Intact	0.0	Negative	
34		Interior Main Room	B	Pipe	Metal	Intact	0.4	Negative	
35		Interior Main Room		Column	Metal	DETERIORATED	0.2	Negative	
36		Interior Main Room		Column	Metal	DETERIORATED	0.4	Negative	
37		Interior Main Room		Column	Metal	DETERIORATED	0.3	Negative	
38		Interior Main Room		Column	Metal	DETERIORATED	0.3	Negative	
39		Exterior Main Room	C	Door	Metal	Intact	0.0	Negative	
40		Exterior Main Room	C	Door Frame	Metal	Intact	0.2	Negative	
41		Interior Main Room	C	Door	Metal	Intact	0.1	Negative	
42		Interior Main Room	C	Door Frame	Metal	Intact	0.2	Negative	
43		Interior Main Room		Electric Utility Box	Metal	Intact	0.0	Negative	
44		Interior Main Room		Beam	Wood	Intact	0.2	Negative	
45		Interior Main Room		Beam	Wood	Intact	0.0	Negative	
46		Interior Main Room		Column	Metal	Intact	0.1	Negative	
47		Interior Main Room		Column	Metal	Intact	0.1	Negative	
48	Perimeter	Exterior East Side	A	Window Well	Metal	Intact	0.0	Negative	Fixed
49	Perimeter	Exterior East Side	A	Window Frame	Metal	Intact	0.1	Negative	Fixed
50	Perimeter	Exterior East Side	A	Window Well	Metal	Intact	0.0	Negative	Fixed
51	Perimeter	Exterior East Side	A	Window Frame	Metal	Intact	0.0	Negative	Fixed
52	Perimeter	Exterior East Side	A	Window Well	Metal	Intact	0.2	Negative	Fixed
53	Perimeter	Exterior East Side	A	Window Frame	Metal	Intact	0.1	Negative	Fixed
54	Perimeter	Exterior East Side	A	Window Well	Metal	Intact	0.1	Negative	Fixed
55	Perimeter	Exterior East Side	A	Window Frame	Metal	Intact	0.2	Negative	Fixed
56	Perimeter	Exterior East Side	A	Wall	Concrete	Intact	0.1	Negative	
57	Perimeter	Exterior East Side	A	Wall	Concrete	Intact	0.3	Negative	
58	Perimeter	Exterior East Side	A	Wall	Concrete	Intact	0.0	Negative	

The HUD action level for lead-based paint is 1.0 mg/cm².
 Positive is defined as XRF sampling with levels at or above 1.0 mg/cm².

FIELD DATA REPORT

Project Name: Commercial Building
Address: 17861 Cartwright Road
 Irvine, CA 92614

Project Number: 3014946
Protocol: HUD

Sample	Unit ID / Location	Room Equivalent	Side	Component	Substrate	Condition	Lead	Results	Comments
59	Perimeter	Exterior East Side	A	Wall	Concrete	Intact	0.1	Negative	
60	Perimeter	Exterior East Side	A	Soffit	Wood	Intact	0.0	Negative	
61	Perimeter	Exterior East Side	A	Soffit	Wood	Intact	0.1	Negative	
62	Perimeter	Exterior South Side	B	Window Well	Metal	Intact	0.1	Negative	Fixed
63	Perimeter	Exterior South Side	B	Window Frame	Metal	Intact	0.3	Negative	Fixed
64	Perimeter	Exterior South Side	B	Window Well	Metal	Intact	0.1	Negative	Fixed
65	Perimeter	Exterior South Side	B	Window Frame	Metal	Intact	0.4	Negative	Fixed
66	Perimeter	Exterior South Side	B	Window Well	Metal	Intact	0.0	Negative	Fixed
67	Perimeter	Exterior South Side	B	Window Frame	Metal	Intact	0.0	Negative	Fixed
68	Perimeter	Exterior South Side	B	Window Well	Metal	Intact	0.1	Negative	Fixed
69	Perimeter	Exterior South Side	B	Window Frame	Metal	Intact	0.1	Negative	Fixed
70	Perimeter	Exterior South Side	B	Wall	Concrete	Intact	0.1	Negative	
71	Perimeter	Exterior South Side	B	Wall	Concrete	Intact	0.3	Negative	
72	Perimeter	Exterior South Side	B	Wall	Concrete	Intact	0.0	Negative	
73	Perimeter	Exterior South Side	B	Wall	Concrete	Intact	0.0	Negative	
74	Perimeter	Exterior South Side	B	Soffit	Wood	Intact	0.0	Negative	
75	Perimeter	Exterior South Side	B	Soffit	Wood	Intact	0.2	Negative	
76	Perimeter	Exterior South Side	B	Ceiling	Gypsum	Intact	0.2	Negative	
77	Perimeter	Exterior West Side	C	Window Well	Metal	Intact	0.0	Negative	Fixed
78	Perimeter	Exterior West Side	C	Window Frame	Metal	Intact	0.2	Negative	Fixed
79	Perimeter	Exterior West Side	C	Window Well	Metal	Intact	0.1	Negative	Fixed
80	Perimeter	Exterior West Side	C	Window Frame	Metal	Intact	0.1	Negative	Fixed
81	Perimeter	Exterior West Side	C	Window Well	Metal	Intact	0.0	Negative	Fixed
82	Perimeter	Exterior West Side	C	Window Frame	Metal	Intact	0.1	Negative	Fixed
83	Perimeter	Exterior West Side	C	Window Well	Metal	Intact	0.1	Negative	Fixed
84	Perimeter	Exterior West Side	C	Window Frame	Metal	Intact	0.3	Negative	Fixed
85	Perimeter	Exterior West Side	C	Wall	Concrete	Intact	0.1	Negative	
86	Perimeter	Exterior West Side	C	Wall	Concrete	Intact	0.4	Negative	
87	Perimeter	Exterior West Side	C	Wall	Concrete	Intact	0.0	Negative	

The HUD action level for lead-based paint is 1.0 mg/cm².
 Positive is defined as XRF sampling with levels at or above 1.0 mg/cm².

FIELD DATA REPORT

Project Name: Commercial Building
Address: 17861 Cartwright Road
 Irvine, CA 92614

Project Number: 3014946
Protocol: HUD

Sample	Unit ID / Location	Room Equivalent	Side	Component	Substrate	Condition	Lead	Results	Comments
88	Perimeter	Exterior West Side	C	Wall	Wood	Intact	0.0	Negative	
89	Perimeter	Exterior West Side	C	Soffit	Wood	Intact	0.0	Negative	
90	Perimeter	Exterior West Side	C	Soffit	Wood	Intact	0.1	Negative	
91	Perimeter	Exterior West Side	C	Garage Door	Metal	Intact	0.2	Negative	
92	Perimeter	Exterior West Side	C	Ladder	Metal	Intact	0.5	Negative	
93	Perimeter	Exterior West Side	C	Pipe	Metal	Intact	0.5	Negative	Green- Under Ladder
94	Perimeter	Exterior North Side	D	Window Well	Metal	Intact	0.0	Negative	Fixed
95	Perimeter	Exterior North Side	D	Window Frame	Metal	Intact	0.0	Negative	Fixed
96	Perimeter	Exterior North Side	D	Window Well	Metal	Intact	0.2	Negative	Fixed
97	Perimeter	Exterior North Side	D	Window Frame	Metal	Intact	0.0	Negative	Fixed
98	Perimeter	Exterior North Side	D	Window Well	Metal	Intact	0.1	Negative	Fixed
99	Perimeter	Exterior North Side	D	Window Frame	Metal	Intact	0.2	Negative	Fixed
100	Perimeter	Exterior North Side	D	Window Well	Metal	Intact	0.0	Negative	Fixed
101	Perimeter	Exterior North Side	D	Window Frame	Metal	Intact	0.1	Negative	Fixed
102	Perimeter	Exterior North Side	D	Wall	Concrete	Intact	0.2	Negative	
103	Perimeter	Exterior North Side	D	Wall	Concrete	Intact	0.0	Negative	
104	Perimeter	Exterior North Side	D	Wall	Concrete	Intact	0.3	Negative	
105	Perimeter	Exterior North Side	D	Wall	Concrete	Intact	0.1	Negative	
106	Perimeter	Exterior North Side	D	Soffit	Wood	Intact	0.0	Negative	
107	Perimeter	Exterior North Side	D	Soffit	Wood	Intact	0.2	Negative	
108	Calibration	Common End of Job		0.0 mg/cm2 Standard	Wood	Intact	0.1	Negative	
109	Calibration	Common End of Job		0.0 mg/cm2 Standard	Wood	Intact	0.0	Negative	
110	Calibration	Common End of Job		0.0 mg/cm2 Standard	Wood	Intact	0.0	Negative	
111	Calibration	Common End of Job		1.0 mg/cm2 Standard	Wood	Intact	1.0	POSITIVE	
112	Calibration	Common End of Job		1.0 mg/cm2 Standard	Wood	Intact	1.0	POSITIVE	
113	Calibration	Common End of Job		1.0 mg/cm2 Standard	Wood	Intact	1.0	POSITIVE	

The HUD action level for lead-based paint is 1.0 mg/cm².
 Positive is defined as XRF sampling with levels at or above 1.0 mg/cm².

APPENDIX

B

CDPH 8552
INSPECTOR'S CERTIFICATES
INSURANCE CERTIFICATE

LEAD HAZARD EVALUATION REPORT

Section 1-Date of Lead Hazard Evaluation 10-07-2019

Section 2-Type of Lead Hazard Evaluation (Check one box only)

Lead inspection Risk assessment Clearance inspection Other (specify)

Section 3-Structure Where Lead Hazard Evaluation Was Conducted

Address (number, street, apartment (if applicable)) 17861 Cartwright Road		City Irvine	County Orange	ZIP code 92614
Construction date (year) of structure 1975	Type of structure (check one box only) <input type="checkbox"/> Multi-unit building <input type="checkbox"/> School or Daycare <input type="checkbox"/> Single Family Dwelling <input checked="" type="checkbox"/> Other (Commercial Structure)		Children Living in Structure? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

Section 4-Owner of Structure (If business/agency, list contact person)

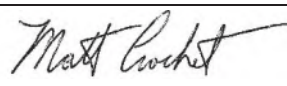
Name Scott Bering		Telephone number (714) 714-0630		
Address [number, street, apartment (if applicable)] 17861 Cartwright Road		City Irvine	State CA	ZIP code 92614

Section 5-Results of Lead Hazard Evaluation (Check all that apply)

No lead-based paint detected Intact Lead-based paint detected Deteriorated Lead-based paint detected

No lead hazards detected Lead Contaminated Dust Found Lead Contaminated Soil Found Other (specify)

Section 6-Individual Conducting Lead Hazard Evaluation

Name Matt Crochet		Telephone number 714-894-5700		
Address (number, street, apartment (if applicable)) 16531 Bolsa Chica, Suite 205		City Huntington Beach	State CA	ZIP code 92649
CDPH certification number 12	Signature 			Date 10/10/2019

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7-Attachments

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Maria Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403 Fax (510) 620-5656

Lead Inspector/Risk Assessor/Project Designer Certifications





BARR&CL-01

LUELFA

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
03/13/2019

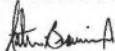
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PRODUCER License # 0E67768 Legends Environmental Ins. Services 130 Vantis Suite 250 Aliso Viejo, CA 92656	CONTACT NAME: Margarite Leon PHONE (A/C, No, Ext): (925) 918-4524 E-MAIL ADDRESS: Margarite.Leon@ioausa.com FAX (A/C, No):
INSURER(S) AFFORDING COVERAGE	
INSURER A : Westchester Surplus Lines Insurance Company 10172	
INSURED	
Barr & Clark 16531 Bolsa Chica Street, Suite 205 Huntington Beach, CA 92649	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

COVERAGES		CERTIFICATE NUMBER:		REVISION NUMBER:		LIMITS	
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.							
INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)		
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:		G46606954002	03/09/2019	03/09/2021	EACH OCCURRENCE	\$ 2,000,000
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 50,000
						MED EXP (Any one person)	\$ 10,000
						PERSONAL & ADV INJURY	\$ 2,000,000
						GENERAL AGGREGATE	\$ 2,000,000
						PRODUCTS - COMP/OP AGG	\$ 2,000,000
							\$
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY					COMBINED SINGLE LIMIT (Ea accident)	\$
						BODILY INJURY (Per person)	\$
						BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
							\$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$					EACH OCCURRENCE	\$
						AGGREGATE	\$
							\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / N If yes, describe under DESCRIPTION OF OPERATIONS below					PER STATUTE	OTH-ER
						E.L. EACH ACCIDENT	\$
						E.L. DISEASE - EA EMPLOYEE	\$
						E.L. DISEASE - POLICY LIMIT	\$
A	Contractor Pollution		G46606954002	03/09/2019	03/09/2021	Each Claim	2,000,000
A	Professional Liabil		G46606954002	03/09/2019	03/09/2021		2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
*Professional Liability is written on a Claims Made basis.

CERTIFICATE HOLDER NOTE: This is a copy of our general and professional liability insurance. Your city or company's specific insurance is on file.	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
--	---

ACORD 25 (2016/03)

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This certificate is issued for informational purposes only. It certifies that the policies listed in this document have been issued to the Named Insured. It does not grant any rights to any party nor can it be used, in any way, to modify coverage provided by such policies. Alteration of this certificate does not change the terms, exclusions or conditions of such policies. Coverage is subject to the provisions of the policies, including any exclusions or conditions, regardless of the provisions of any other contract, such as between the certificate holder and the Named Insured. The limits shown below are the limits provided at the policy inception. Subsequent paid claims may reduce these limits.

Certificate Holder: This is a copy of our general auto insurance. Your company or city's specific insurance is on file.	Named Insured: BARR & CLARK, INC. 16531 BOLSA CHICA ST STE 205 HUNTINGTON BEACH CA 92649-3595
---	---

Automobile Liability			
Insurer Name: Allstate Insurance Company			
Policy Number: 648761551			
<input type="checkbox"/> 1 -- Any Auto	<input type="checkbox"/> 2 - Owned Autos Only	<input type="checkbox"/> 3 - Owned Priv. Pass. Autos Only	
<input type="checkbox"/> 4 -- Owned Autos Other Than Priv. Pass. Autos Only	<input type="checkbox"/> 5 - Owned Autos Subject to No Fault	<input type="checkbox"/> 6 - Owned Autos Subject to a Compulsory UM Law	
<input checked="" type="checkbox"/> 7 -- Specifically Described Autos	<input checked="" type="checkbox"/> 8 - Hired Autos Only	<input checked="" type="checkbox"/> 9 - Nonowned Autos Only	
Policy Effective Date :		Policy Expiration Date:	
Limits of Insurance:	\$1,000,000	Combined Single Limit (each accident)	
	BI Per Person	BI Per Accident	PD Per Accident
Description of Operations/Locations/Vehicles/Endorsements/Special Provisions			
Interested Party Type: Additional Insured - All Other			
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Producer: SMART MONEY SOL INC	
Authorized Representative:	
Date:	



BU114R-3

CI CW A02 10 11

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Allstate Insurance Company

Page 1 of 1

Insured Full Copy



P.O. BOX 8192, PLEASANTON, CA 94588

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

GROUP:
POLICY NUMBER: 1917813
CERTIFICATE ID: 243

This is a copy of our general worker's compensation insurance. Your company or city's specific insurance is on file.

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon 30 days advance written notice to the employer.

We will also give you 30 days advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policy listed herein. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate of insurance may be issued or to which it may pertain, the insurance afforded by the policy described herein is subject to all the terms, exclusions, and conditions, of such policy.

Authorized Representative

President and CEO

EMPLOYER'S LIABILITY LIMIT INCLUDING DEFENSE COSTS: \$1,000,000 PER OCCURRENCE.

ENDORSEMENT #0015 ENTITLED ADDITIONAL INSURED EMPLOYER EFFECTIVE IS
ATTACHED TO AND FORMS A PART OF THIS POLICY. NAME OF ADDITIONAL INSURED:

ENDORSEMENT #2065 ENTITLED CERTIFICATE HOLDERS' NOTICE EFFECTIVE IS
ATTACHED TO AND FORMS A PART OF THIS POLICY.

EMPLOYER

BARR & CLARK, INC
16531 BOLSA CHICA ST STE 205
HUNTINGTON BEACH CA 92649

SP

[P14,SP]

Attachment 10. USFWS IPaC Species List

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Orange County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

<http://www.fws.gov/carlsbad/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Pacific Pocket Mouse *Perognathus longimembris pacificus* Endangered
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/8080>

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Light-footed Clapper Rail <i>Rallus longirostris levipes</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6035	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Flowering Plants

NAME	STATUS
Big-leaved Crownbeard <i>Verbesina dissita</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8049	Threatened
Laguna Beach Liveforever <i>Dudleya stolonifera</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7919	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment 11. California Important Farmland Finder



▼ 17861 Cartwright Rd, Irvine, X 🔍

Show search results for 17861 ...

Search result
1 of 1

-  Unique Farmland
-  Grazing Land
-  Farmland of Local Importance
-  Farmland of Local Potential
-  Other Land
-  Confined Animal Agriculture
-  Nonagricultural or Natural Vegetation
-  Vacant or Disturbed Land
-  Rural Residential Land
-  Semi-agricultural and Rural Commercial Land
-  Urban and Built-Up Land
-  Water Area
-  Irrigated Farmland
-  Nonirrigated Farmland

2km
204,105.841 -478,859.229 Meters

Attachment 12. SCCIC Historic Resources

South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395

California Historical Resources Information System
Los Angeles, Orange, Ventura and San Bernardino Counties
sccic@fullerton.edu

7/17/2020

SCCIC File #: 21437.7561

Liza Santos
OC Housing & Community Development
1501 E. St. Andrew Place, First Floor
Santa Ana, CA 92705

Re: Records Search Results for the Cartwright Family Apartments Project

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Tustin, CA USGS 7.5' quadrangle. The following summary reflects the results of the records search for the project area and a ½-mile radius. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), and the California State Built Environment Resources Directory (BERD) listings were reviewed for the above referenced project site and a ¼-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

RECORDS SEARCH RESULTS SUMMARY

Archaeological Resources* (*see Recommendations section)	Within project area: 0 Within project radius: 1
Built-Environment Resources	Within project area: 0 Within project radius: 0
Reports and Studies	Within project area: 5 Within project radius: 17
OHP Built Environment Resources Directory (BERD) 2019	Within project area: 0 Within ¼-mile radius: 0
California Points of Historical Interest (SPHI) 2019	Within project area: 0 Within ¼-mile radius: 0
California Historical Landmarks (SHL) 2019	Within project area: 0 Within ¼-mile radius: 0
California Register of Historical Resources (CAL REG) 2019	Within project area: 0 Within ¼-mile radius: 0
National Register of Historic Places (NRHP) 2019	Within project area: 0 Within ¼-mile radius: 0

Archaeological Determinations of Eligibility (ADOE): 2012	Within project area: 0 Within project radius: 0
--	--

HISTORIC MAP REVIEW - Santa Ana, CA (1896, 1901) 15' USGS Historic maps indicated that in 1896 there were two improved roads present as well as marshes to the Northwest. These features were still present in 1901.

RECOMMENDATIONS

*When we report that no archaeological resources are recorded in your project area or within a specified radius around the project area; that does not necessarily mean that nothing is there. It may simply mean that the area has not been studied and/or that no information regarding the archaeological sensitivity of the property has been filed at this office. The reported records search result does not preclude the possibility that surface or buried artifacts might be found during a survey of the property or ground-disturbing activities.

While there are currently no recorded archaeological sites within the project area, buried resources could potentially be unearthed during project activities. Therefore, customary caution and a halt-work condition should be in place for all ground-disturbing activities. In the event that any evidence of cultural resources is discovered, all work within the vicinity of the find should stop until a qualified archaeological consultant can assess the find and make recommendations. Excavation of potential cultural resources should not be attempted by project personnel. It is also recommended that the Native American Heritage Commission be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area. The NAHC may also refer you to local tribes with particular knowledge of potential sensitivity. The NAHC and local tribes may offer additional recommendations to what is provided here and may request an archaeological monitor. Finally, if the built-environment resources on the property are 45 years or older, a qualified architectural historian should be retained to study the property and make recommendations regarding those structures.

For your convenience, you may find a professional consultant**at www.chrisinfo.org. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

**The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California Historical Resources Information System](#),

Stacy St. James
Michelle Galaz
Assistant Coordinator

Digitally signed by
Stacy St. James
Date: 2020.07.17
17:53:04 -07'00'

Enclosures:

(X) Invoice # 21437.7561

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 California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Attachment 13. State Historic Preservation Office Letter



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

August 17, 2020

Refer to HUD_2020_0720_002

Ms. Liza Santos
Housing Development Compliance Administrator
Housing & Community Development
County of Orange
1501 St. Andrews Place, First Floor
Santa Ana, CA 92705

Re: Cartwright Family Apartments Affordable Multifamily Residential Development Project at 17861 Cartwright Road, Irvine, CA

Dear Ms. Santos:

The California State Historic Preservation Officer received the consultation submittal for the above referenced undertaking for our review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800. The regulations and advisory materials are located at www.achp.gov.

Pursuant to 36 CFR §800.4(d) we do not object to the County of Orange's finding that no historic properties will be affected by the proposed Cartwright Family Apartments multifamily affordable housing development project located at 17861 Cartwright Road in Irvine, CA. However, the County may have additional Section 106 responsibilities under certain circumstances set forth at 36 CFR Part 800. For example, in the event that historic properties are discovered during implementation of the undertaking, your agency is required to consult further pursuant to §800.13(b).

We appreciate the County of Orange's consideration of historic properties in the project planning process. If you have questions please contact Shannon Lauchner Pries, Historian II, with the Local Government & Environmental Compliance Unit at (916)445-7013 or by email at shannon.pries@parks.ca.gov.

Note that we are only sending this letter in electronic format. Please confirm receipt of this letter. If you would like a hard copy mailed to you, respond to this email to request a hard copy be mailed.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

Attachment 14. DNL Ambient Noise Calculator

[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > DNL Calculator

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](#).

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Cartwright Apartment
Record Date	07/22/2020
User's Name	M Greene

Road # 1 Name:

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="400"/>	<input type="text" value="400"/>	<input type="text" value="400"/>
Distance to Stop Sign	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Average Speed	<input type="text" value="50"/>	<input type="text" value="45"/>	<input type="text" value="45"/>
Average Daily Trips (ADT)	<input type="text" value="22310"/>	<input type="text" value="460"/>	<input type="text" value="230"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="57"/>	<input type="text" value="49"/>	<input type="text" value="53"/>
<input type="button" value="Calculate Road #1 DNL"/>	<input type="text" value="59"/>	<input type="button" value="Reset"/>	

Road # 2 Name:

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="000"/>	<input type="text" value="000"/>	<input type="text" value="000"/>

Effective Distance	820	820	820
Distance to Stop Sign	0	0	0
Average Speed	50	45	45
Average Daily Trips (ADT)	21340	440	220
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	52	44	48
Calculate Road #2 DNL	54	Reset	

Airport Noise Level

Loud Impulse Sounds?

 Yes No

 Combined DNL for all
Road and Rail sources

Combined DNL including Airport

Site DNL with Loud Impulse Sound

Calculate

Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

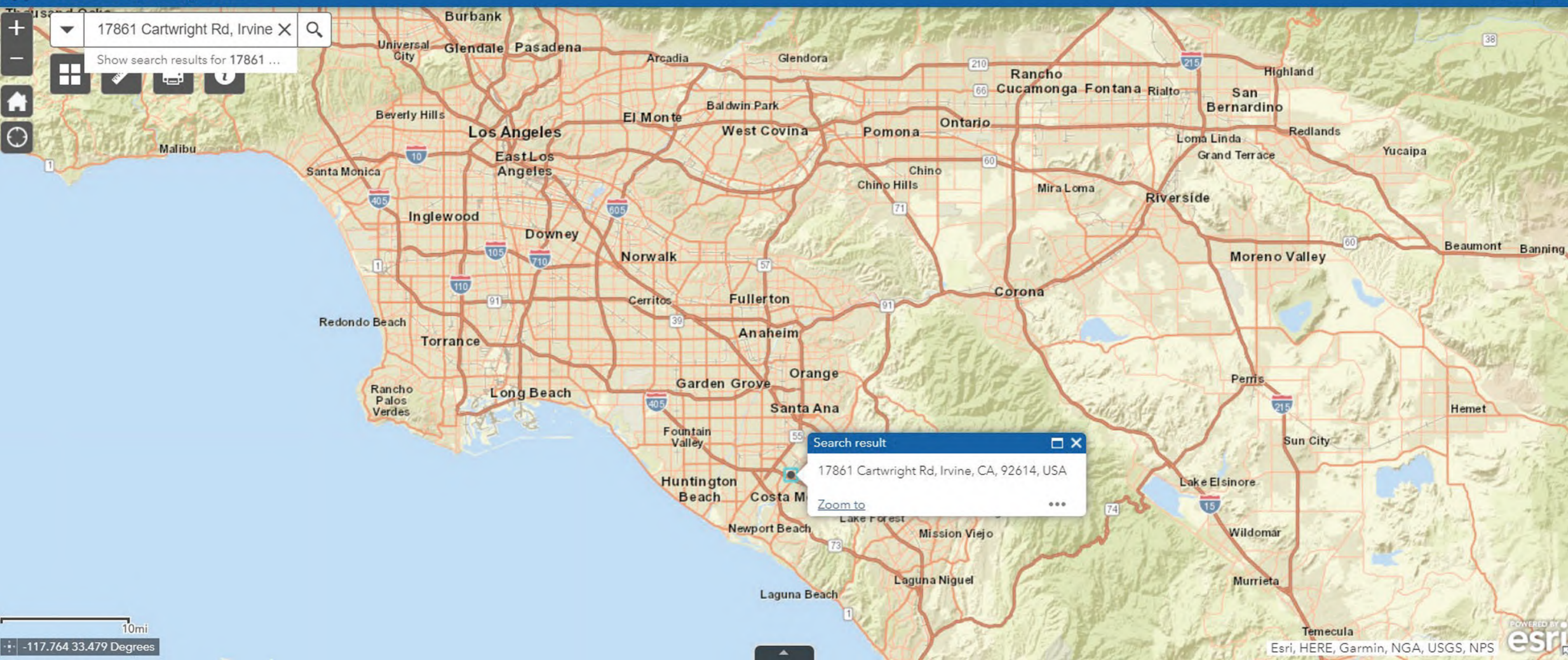
- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
 - Contact your **Field or Regional Environmental Officer** (</programs/environmental-review/hud-environmental-staff-contacts/>)
 - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
 - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
 - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
 - Construct noise barrier. See the **Barrier Performance Module** (</programs/environmental-review/bpm-calculator/>)

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)

Day/Night Noise Level Assessment Tool Flowcharts (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

Attachment 15. Sole Source Aquifer Map



17861 Cartwright Rd, Irvine X

Show search results for 17861 ...

Search result

17861 Cartwright Rd, Irvine, CA, 92614, USA

[Zoom to](#)

10mi

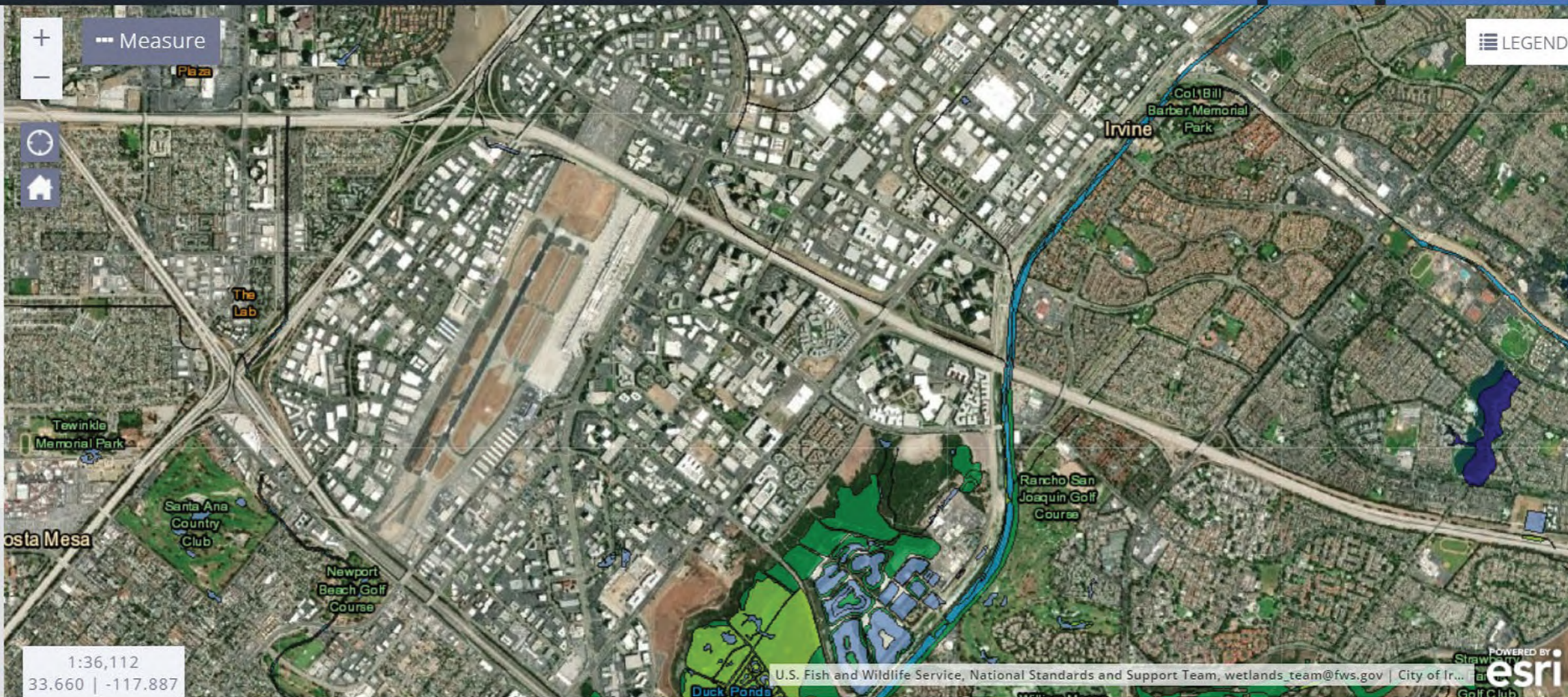
-117.764 33.479 Degrees

Attachment 16. NWI Surface Waters and Wetlands Map

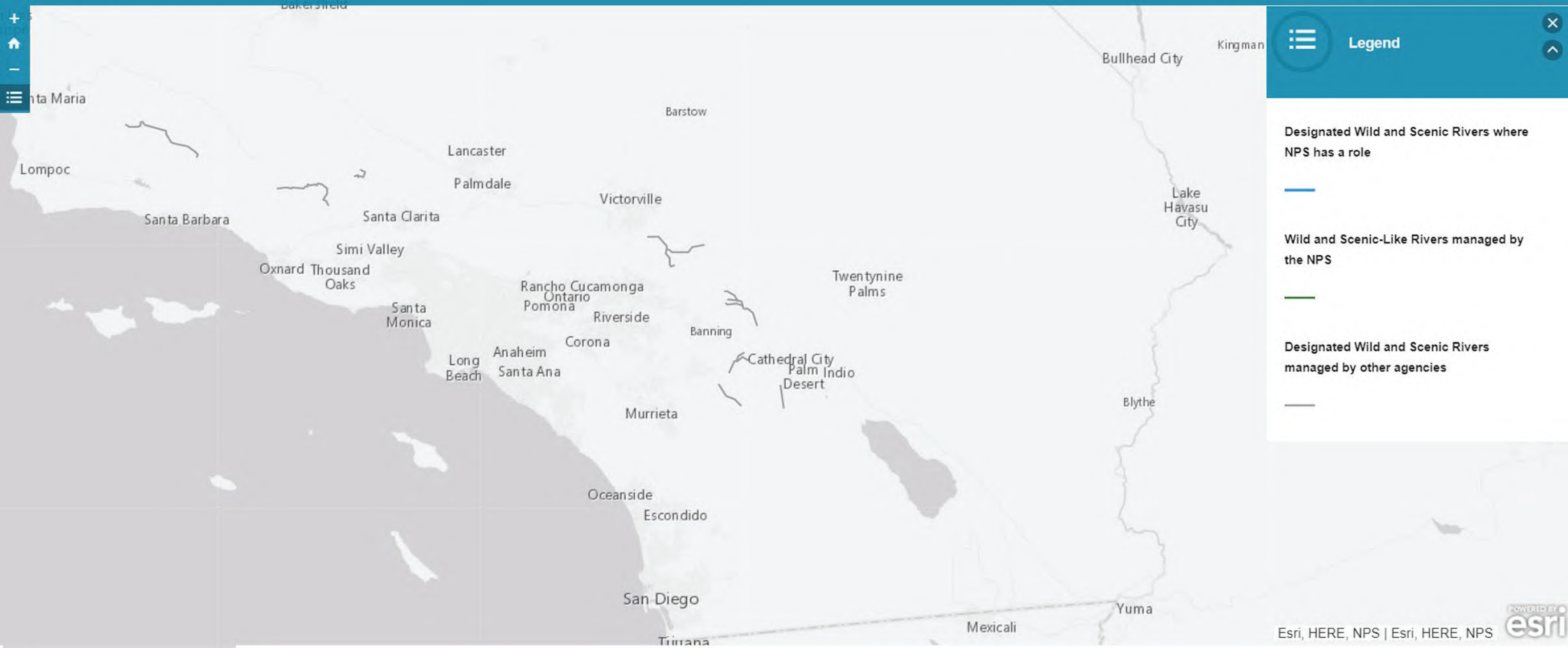
BASEMAPS >

MAP LAYERS >

- Wetlands
- Riparian
- Riparian Mapping Areas
- Data Source
 - Source Type
 - Image Scale
 - Image Year
- Areas of Interest
- FWS Managed Lands
- Historic Wetland Data



Attachment 17. NPS Nationwide Rivers Inventory Map Data



Legend

- Designated Wild and Scenic Rivers where NPS has a role
- Wild and Scenic-Like Rivers managed by the NPS
- Designated Wild and Scenic Rivers managed by other agencies

Designated Wild and Scenic Rivers where NPS has a role



Wild and Scenic-Like Rivers managed by the NPS



Designated Wild and Scenic Rivers managed by other agencies



Attachment 18. City of Irvine Waste Haulers Map

Legend Layers Basemap gallery Measure Print

Scale: 0.15 0.3mi

Legend

Waste Haulers

- City Boundary
- Waste
 - NONEXCLUSIVE COMMERCIAL
 - EXCLUSIVE VILLAGE COMMERCIAL

Search result

17861 CARTWRIGHT RD

[Show more results](#)

Zoom to

Attachment 19. City of Irvine Public Works Solid Waste & Recycling Haulers List



Public Works / Environmental Programs

City Franchise Solid Waste & Recycling Haulers

Arrow Services	626 336-2255
A-2-Z Construction Services	949 788-9227; 949 677-0322
California Waste Services	800 839-5550; 310 538-5998
CR&R	877 728-0446
Direct Disposal	888 551-7797
GB Services, Inc.	800 572-0086
In-and-Out Removal	909 397-9000
Interior Removal Services (IRS) Demolition	323 357-6900
JPA Construction Clean-Up	714 953-6705
Key Disposal	323 721-5441
NASA Services	888 888-0388
New Green Day	626 483-1080
Pacific Line Cleanup	949 348-0245
Rainbow Disposal Co., Inc. / Republic Services	714 847-3581
Robert's Waste & Recycling	714 557-2533; 877 484-3045
Southern California Environmental	949 770-1768; 888-75-TRASH
Tierra Verde Industries	949 551-0363
Universal Waste Systems	800 631-7016; 562 941-4900
Ware Disposal	714 834-0234; 877 714-9273
Waste Management of Orange County	949 642-1191
WM -Construction/Demolition	949 383-8516