Draft Environmental Impact Report

Spieker Senior Continuing Care Community Project

CDGP20-00001, CDRZ20-03255, CDMS20-00007, CDDP20-03018, & CDLP20-02038
State Clearinghouse No. 2021070517

Prepared by

In Consultation with
DAVID J. POWERS
& ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS & PLANNERS

March 2022

TABLE OF CONTENTS

Figures

Photos

Tables

Appendices

SUMMARY

The County of Contra Costa, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the Spieker Senior Continuing Care Community project in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As the CEQA Lead Agency for this project, the County of Contra Costa is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

Summary of the Project Location and Description

The proposed project is located on a 30.6-acre site in the unincorporated Walnut Creek area in central Contra Costa County along Seven Hills Ranch Road, which runs between Walden Road/Cherry Lane and North San Carlos Drive. The proposed project would demolish the existing ranch house and outbuildings and construct a self-contained Continuing Care Retirement Community (CCRC). The CCRC would consist of two primary components: 1) a total of 354 independent living units and amenities for residents not needing daily assistance; and 2) a health care center for 100 residents requiring daily assistance or daily medical attention.

Summary of Significant Impacts and Mitigation Measures

The following is a summary of the significant impacts and mitigation measures addressed within this EIR. The project description and full discussion of impacts and mitigation measures can be found in Section 2.0 Project Description and Section 3.0 Environmental Setting, Impacts, and Mitigation.

Impact	Mitigation Measures
Aesthetics	
Impact AES-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **(Less than Significant Impact with Mitigation Incorporated)**	**MM AES-4.1:** A lighting plan for any proposed exterior lighting shall be submitted to the Contra Costa County Department of Conservation and Development, Community Development Division for review and approval and include the following: a) Exterior lighting must be directed downward and away from adjacent properties and public/private right-of way to prevent glare or excessive light spillover. Lighting bulbs must be limited to low intensity lights, including lighting for identification purposes. b) No free standing light poles (except those used within building interior courtyards and for internal roadway lighting) will be allowed within the project site. Landscaping lights must be limited to ground-level for walking/safety purposes.

	c) If any lighting is proposed for the construction staging area, lighting must also be directed downward and away from adjacent properties. Lighting intensity may not be greater than what is reasonably required to safely illuminate the staging area.
Air Quality	
Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. **(Less than Significant Impact with Mitigation Incorporated)**	**MM AIR-1.1:** <u>Enhanced BAAQMD Best Management Practices:</u> The project shall implement the Bay Area Air Quality Management District's (BAAQMD's) recommended best management practices (BMPs) and additional measures to reduce construction equipment exhaust emissions. These measures shall include the following: a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times a day and at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content shall be verified by lab samples or moisture probe. b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered. c) All visible mud or dirt track-out onto adjacent public roads shall be removed using a wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited. d) All vehicle speeds on unpaved roads shall be limited to 15 mph. e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. f) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. g) Use interior coatings with no more than 88 grams per liter volatile organic compounds (VOC) (i.e., ROG) and exterior coatings with no more than 132 grams per liter VOC (i.e., ROG) to reduce daily emissions by at least 12 percent. Coating must also meet or exceed BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). Alternatively, the project could submit a plan to demonstrate that overall VOC content of architectural coatings would be at least 12 percent below BAAQMD requirements. h) Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust

	complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. i) All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries. j) Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity. k) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. l) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. m) Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a six to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment prior to leaving the site. n) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. **MM AIR-1.2:** Selection of Construction Equipment: Prior to the issuance of any demolition, grading, and/or building permits, the project applicant shall retain a qualified consultant to develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average 72 percent reduction in diesel particulate matter (DPM) exhaust emissions or greater and a fleet-wide average 16 percent reduction in NO_X or greater. This is the minimum reduction required to reduce the project impacts (i.e., NO_X emissions and cancer risk) to a less than significant level. The feasible plan to achieve this reduction would include the following: a) All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 interim engines. Where Tier 4 equipment is not available, exceptions could be made for equipment that includes California Air Resources Board (CARB)-certified Level 3 Diesel Particulate Filters or equivalent. Equipment

	that is electrically powered or uses non-diesel fuels would also meet this requirement.
Biological Resources	
Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**	**MM BIO-1.1:** Pre-Construction Bat Surveys: A pre-activity survey for roosting bats shall be conducted at the two valley oaks (Quercus lobata) that support suitable roost habitat near the northeastern and southeastern corners of the project site within 30 days prior to the onset of ground-disturbing activities. A qualified biologist will conduct a survey to look for evidence of bat use within suitable habitat. If evidence of use is observed, or if high-quality roost sites are present in areas where evidence of bat use might not be detectable (such as a tree cavity), an evening visual survey combined with a nighttime acoustic survey shall be conducted to determine if roosting bats are present and to identify the specific location of such bats. If no roosting bats are located, project work can continue as planned. If a maternity roost is detected, a disturbance-free buffer zone (determined by a qualified biologist) shall be implemented during the maternity roost season (March 15–August 31). No project-related activities shall take place within the buffer during the maternity season. If an active non-breeding bat roost is located, project work shall be redesigned to avoid removal or disturbance of the occupied tree. No buffer from the roost shall be necessary during the nonmaternity season (September 1–March 14). If the roost tree itself must be removed, bats shall be passively excluded from roost habitat with one-way devices, or trees will be removed using a two-step tree removal process. The two-step process shall be initiated if exclusion with one-way devices is not feasible due to height of the roost. For the two-step process, trees shall be removed over a two-day period. On day 1, all non-suitable limbs shall be removed, and on day 2, the remainder of the tree shall be removed. Removing trees in this way creates disturbance that encourages bats to vacate the tree before the potential habitat is removed. Either method shall be monitored by a qualified biologist with knowledge of bat ecology and experience with bat exclusion methods. **MM BIO-1.2:** Burrowing Owl Surveys: Pre-construction surveys for western burrowing owl shall be conducted in accordance with the March 7, 2012 CDFW Staff Report on Burrowing Owl Mitigation. If preconstruction surveys find active nests avoidance and minimization guidelines must be developed prior to the start of construction in accordance with the March 7, 2012, CDFW memo, and through consultation with CDFW.

	MM BIO-1.3: Avoidance and Nesting Inhibition: To the extent feasible, construction activities (or at least the commencement of such activities) shall be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts on nesting birds protected under the MBTA and California Fish and Game Code shall be avoided. The nesting season for most birds in Contra Costa County extends from February 1 through August 31. If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project shall be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation, and prevent the potential delay of the project due to the presence of active nests in these substrates. **MM BIO-1.4:** Pre-Construction Bird Surveys: If not possible to schedule construction activities between September 1 and January 31, pre-construction nesting bird surveys shall be completed by a qualified biologist no more than seven days before construction begins. During this survey, the biologist or ornithologist shall inspect all trees and other possible nesting habitats in and within 250 feet of the project boundary. If an active nest is found in an area that would be disturbed by construction, the biologist shall designate an adequate buffer zone (typically 300 feet for raptors and 100 feet for other species) to be established around the nest, in consultation with the California Department of Fish and Wildlife (CDFW). The buffer would ensure that nests shall not be disturbed until the young have fledged (left the nest), the nest is vacated, and there is no evidence of second nesting attempts. The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of the County Department of Conservation and Development, prior to the removal of trees and issuance of a grading permit or demolition permit.
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the	**MM BIO-2.1:** Avoidance and Minimization: Prior to the start of construction the project shall clearly delineate riparian habitat to be avoided with fencing around the dripline of the riparian canopy. The project shall avoid further indirect impacts to riparian habitat by implementing the following measures during construction:

CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**	a) Existing native vegetation shall be retained by removing only as much vegetation as necessary to accommodate the new road. b) Temporary disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete the work. c) Exposed soil shall be controlled by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles). d) The project shall stabilize the site ingress/egress locations. **MM BIO-2.2:** Compensatory Mitigation for Permanent Loss of Riparian Habitat: For areas that are not able to be avoided, the project shall restore or enhance an equivalent area at a 2:1 (mitigation:impact) ratio, on an acreage basis (or as otherwise directed by a regulatory agency with regulatory authority over impacts to riparian habitat on the site). Prior to issuance of a grading permit, the applicant shall prepare a Riparian and Aquatic Habitat and Monitoring Plan (Riparian and Aquatic HMMP) for aquatic and riparian habitat creation as a means of compensatory mitigation. The Riparian and Aquatic HMMP shall be prepared by a qualified restoration ecologist and shall provide, at a minimum, the following items: a) Habitat impacts summary and proposed habitat mitigation actions. b) Goals of the restoration to achieve no net loss. c) The location of the mitigation sites and existing site conditions. d) Mitigation design including: o Proposed site construction schedule. o Description of existing and proposed soils, hydrology, geomorphology and geotechnical stability. o Site preparation and grading plan. o Invasive species eradication plan. o Soil amendments and other site preparation. o Planting plan (plant procurement/propagation/installation). o Maintenance plan. e) Monitoring measures, and performance and success criteria. At a minimum, success criteria shall include at least 70 percent cover by native, woody riparian vegetation by year five. f) Monitoring methods, duration, and schedule. g) Contingency measures and remedial actions. h) Reporting measures.

	The mitigation shall be deemed complete and the applicant released from further responsibilities when the final success criteria have been met, or when the mitigation is deemed complete as determined by applicable regulatory/resource agencies.
Impact BIO-3: The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(Less than Significant Impact with Mitigation Incorporated)**	**MM BIO-3.1:** Construction Best Management Practices: The central drainage and associated seasonal wetlands that are to be avoided by the project design will be protected from construction activities through implementation of best management practices (BMPs) such as installing silt fencing between jurisdictional waters and project related activities, locating staging and laydown areas away from potentially jurisdictional features, and isolating construction work areas from any identified jurisdictional features. In addition, site stormwater treatment features must be designed consistent with the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit as described above and shall be placed in locations to treat runoff from the developed portion of the site before entering avoided wetlands. To the extent feasible, existing site drainage patterns in the vicinity of avoided wetlands shall be preserved to prevent indirect alterations to surface hydrology that may contribute to supporting the wetlands. **MM BIO-3.2:** Compensatory Mitigation for Permanent Loss of Wetlands: To compensate for the perennial drainage and seasonal wetlands that will be permanently impacted by extension of Kinross Drive to the project site, the project proponent shall implement one of the following, in agreement with United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) as per permit requirements. a) Acquisition of equivalent wetlands and waters at a nearby site at a ratio of 2:1, on an acreage basis; b) Purchase of mitigation credits at a mitigation bank; c) Enhancement of seasonal wetlands and the perennial drainage to be preserved in the central portion of the site, as well as creation of seasonal wetland habitat in the bioretention facilities proposed on site, at a ratio of 2:1, on an acreage basis; d) An alternative to be agreed upon with the USACE and RWQCB.
Cultural Resources	
Impact CUL-2: The project would not cause a substantial adverse change in the	**MM CUL-2.1:** Construction Worker Training: Worker Awareness Training for cultural resources shall be provided to members of the construction excavation and grading team. Training shall consist of the

significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact with Mitigation Incorporated)**	preparation of an alert sheet that would provide guidance and procedures in the event of an unexpected discovery of cultural materials with photographs of typical artifact that shall be exposed coupled with a briefing of the construction crew. **MM CUL-2.2:** Undiscovered Archaeological Resources: If evidence of an archaeological site or other suspected cultural resource as defined by CEQA Guideline Section 15064.5, including darkened soil representing past human activity ("midden"), that could conceal material remains (e.g., worked stone, worked bone, fired clay vessels, faunal bone, hearths, storage pits, or burials) is discovered during construction related earth-moving activities, all ground-disturbing activity within 100 feet of the resources shall be halted and the County's Planning Manager shall be notified. The project sponsor shall hire a qualified archaeologist to conduct a field investigation. The County's Planning Manager shall consult with the archaeologist to assess the significance of the find. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A-J) form and filed with the NWIC. **MM CUL-2.3:** Report of Archaeological Resources: If archaeological resources are identified, a final report summarizing the discovery of cultural materials shall be submitted to the County's Planning Manager prior to issuance of certificate of occupancy. This report shall contain a description of the mitigation program that was implemented and its results, including a description of the monitoring and testing program, a list of the resources found and conclusion, and a description of the disposition/curation of the resources.
Impact CUL-3: The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact with Mitigation Incorporated)**	**MM CUL-3.1:** Human Remains: If human remains are discovered during project construction, all ground-disturbing activity within 100 feet of the resources shall be halted and the County's Planning Manager and the Contra Costa County coroner shall be notified immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project sponsor shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the

	excavation and removal of the human remains. Contra Costa County shall be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of State law, as set forth in CEQA Guidelines section 15064.5(e) and Public Resources Code section 5097.98. The project sponsor shall implement approved mitigation, to be verified by Contra Costa County, before the resumption of ground-disturbing activities within 100 feet of where the remains were discovered.
Geology and Soils	
Impact GEO-1: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. **(Less than Significant Impact with Mitigation Incorporated)**	**MM GEO-1.1:** Design-level Geotechnical Compliance: The applicant shall prepare a site-specific, design-level geotechnical investigation for the project. The design-level geotechnical report shall include, but not be limited to, the following considerations: a) The 2019 CBC classification of the site as being located in Site Class B or C shall be determined. Building foundations, retaining walls, and structural framing requirements will be impacted by the Site Classification. b) The central portion of the site is underlain by artificial fill and colluvial soils that are more than 17 feet deep. The liquefaction potential of these underlying soils shall be evaluated. c) More detailed evaluation of the excavation characteristics of the sandstone and claystone bedrock underlying the site shall be performed. The excavation characteristics of the bedrock will impact cut grading and excavations for underground utilities and foundations. d) Final recommendations for grading shall be provided, including permanent and temporary slope inclinations, differential fill thickness for building pads, fill construction, and the extent of colluvial and artificial soil removal. e) The impacts from the onsite expansive soils on proposed structures, pavements, and flatwork shall be addressed. f) The design and construction of valley drains and subdrains in fill keyways and benches shall be addressed. g) Potential water seepage through rock fractures, daylighting from cut slopes and into utility trenches shall be assessed. h) Pseudostatic seismic loads will need to be incorporated into the design of retaining walls which will be more than six feet tall, as specified in the CBC. All recommendations by the engineering geologist and/or geotechnical engineer shall be incorporated into the final design. Recommendations that are applicable to foundation design, earthwork, and site preparation that were prepared prior to or during the project design

	phase, shall be incorporated in the project, all foundations and other project structures must comply with the performance standards set forth in the California Building Code. The final seismic considerations for the site shall be submitted to and approved of by the Contra Costa Department of Conservation and Development prior to issuance of grading and building permits.
Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **(Less than Significant Impact with Mitigation Incorporated)**	See mitigation measure MM GEO-1.1 above.
Impact GEO-4: The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact with Mitigation Incorporated)**	See mitigation measure MM GEO-1.1 above.
Impact GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact with Mitigation Incorporated)**	**MM GEO-6.1:** Paleontological Monitoring. Construction activities involving excavation or other soil disturbance within the project site shall be required to retain a qualified Paleontological Monitor as defined by the Society for Vertebrate Paleontology (SVP) (2010) equipped with necessary tools and supplies to monitor all excavation, trenching, or other ground disturbance. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected. Prior to beginning construction activities, the Principal Paleontologist shall attend a preconstruction meeting to identify specific areas on the project site where paleontological monitoring will be required and shall provide training to construction personnel on how to identify potentially significant fossils. The Principal Paleontologist will periodically assess monitoring results and if no significant fossils have

	been exposed after fifty percent of excavation, the Principal Paleontologist may determine that monitoring is no longer necessary. **MM GEO-6.2:** Inadvertent Discovery of Fossils. If fossils are discovered during excavation, the Principal Paleontologist or his/her designated representative will make a preliminary taxonomic identification and determine if the find is significant. For significant/ potentially significant fossil finds, the Paleontologist shall provide a written recommendation to the Contra Costa Department of Conservation and Development if further action is required, and provide recommended measures for any further evaluation, fossil collection, or protection of the resource. Any subsequent paleontologic work shall be approved by the Contra Costa Department of Conservation and Development and completed as quickly as possible to avoid damage to the fossils and delays in construction schedules. At a minimum, for significant fossils, the paleontological staff will assign a unique field number to each specimen identified; photograph the specimen and its geographic and stratigraphic context along with a scale near the specimen and its field number clearly visible in close-ups; record the location using a global positioning system (GPS), record the field number and associated specimen data (identification by taxon and element, etc.) and corresponding geologic and geographic site data (location, elevation, etc.) in the field notes and in a daily monitoring report; stabilize and prepare all fossils for identification, and identify to lowest taxonomic level. Upon completion of fieldwork, all significant fossils collected shall be prepared to a point ready for curation. Preparation shall include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossil specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the project proponent. A report to be submitted to the repository museum documenting the results of the paleontological mitigation monitoring efforts associated with the project shall be prepared by the Principal Paleontologist. The report shall include a summary of the field and laboratory methods, an overview of the project site geology and paleontology, a list of taxa recovered, an analysis of fossils recovered and their scientific significance, and recommendations.
Hazards and Hazardous Materials	
Impact HAZ-2: The project would not create a significant hazard to the public or the	**MM HAZ-2.1:** Conduct Asbestos and Lead Surveys Prior to Demolition. Prior to the issuance of demolition permits for the two existing residences and associated structures, the applicant shall retain

environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **(Less than Significant Impact with Mitigation Incorporated)**	a licensed professional to conduct asbestos and lead paint surveys. These surveys shall be conducted prior to the disturbance or removal of any suspect asbestos-containing materials and lead-based paint, and these materials shall be characterized for asbestos and lead by a reliable method. All activities involving asbestos-containing materials and lead-based paint shall be conducted in accordance with governmental regulations, and all removal shall be conducted by properly licensed abatement contractors. **MM HAZ-2.2**: PCB Screening Assessment. Prior to the issuance of demolition permits for the existing residences and associated structures, the applicant shall submit a PCB Screening Assessment Form with their permit application. If on-site buildings do contain PCBs that exceed threshold limits, the project applicant shall follow applicable federal and state laws, which may include reporting to such agencies as the EPA, RWQCB, and DTSC, who may require additional sampling and abatement of PCBs consistent with state and federal requirements.
Hydrology and Water Quality	
Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. **(Less than Significant Impact with Mitigation Incorporated)**	**MM HYD-3.1:** In accordance with Division 914 of the Contra Costa County Ordinance Code, the project applicant shall collect and convey all stormwater entering and/or originating on this property, without diversion and within an adequate storm drainage facility, to a natural watercourse having definable bed and banks, or to an existing adequate public storm drainage system that conveys the stormwater to a natural watercourse. Any proposed diversions of the watershed shall be subject to hearing body approval. Prior to issuance of a grading permit, the applicant shall submit improvement plans for proposed drainage improvements, and a drainage report with hydrology and hydraulic calculations to the Engineering Services Division of the Public Works Department and the Contra Costa County Flood Control and Water Conservation District for review and approval that demonstrates the adequacy of the on-site drainage system and the downstream drainage system. The applicant shall verify the adequacy at any downstream drainage facility accepting stormwater from this project prior to discharging runoff. If the downstream system(s) is not adequate to handle the Existing Plus Project condition for the required design storm, improvements shall be constructed to make the system adequate. The applicant shall obtain access rights to make any necessary improvements to off-site facilities.

Noise	
Impact NOI-1: The project would result in generation of a substantial temporary increase in ambient noise levels and would not result in generation of a substantial permanent increase in ambient noise levels, with mitigation incorporated, in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. **(Less than Significant Impact with Mitigation Incorporated)**	**MM NOI-1.1:** A Construction Noise Management Plan shall be prepared by the construction contractor and implemented prior to the start of and throughout construction to reduce noise impacts on the nearby existing land uses. The plan shall establish the procedures the contractor will take to reasonably minimize construction noise at the nearby existing land uses. The plan shall include, but not be limited to, the following measures to reduce construction noise levels as low as practical: a) Restrict noise-generating activities including construction traffic at the construction site or in areas adjacent to the construction site to the hours of 8:00 a.m. to 5:30 p.m., Monday through Friday, with no construction allowed on Federal and State weekends and holidays. b) Potential contractors shall be requested to submit information on their noise management procedures and demonstrate a successful track record of construction noise management on prior projects. c) The selected contractor will equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. d) The selected contractor will prohibit unnecessary idling of internal combustion engines. e) The selected contractor will locate stationary noise generating equipment such as air compressors or portable power generators as far as practical from sensitive receptors. f) The selected contractor will utilize “quiet” air compressors and other stationary noise sources where technology exists. g) The selected contractor shall limit the allowable hours for the delivery of materials or equipment to the site and truck traffic coming to and from the site for any purpose to Monday through Friday between 8:00 a.m. and 5:30 p.m. h) The selected contractor will establish construction staging areas and material stockpiles at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction to a distance of at least 75 feet, as is feasible. i) The selected contractor will designate a project liaison that will be responsible for responding to noise complaints during the construction phase. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. This person will take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring will be presented at

	regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels to the extent feasible. j) The selected contractor will hold a preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, construction schedule, and noise coordinator) are completed. k) Prior to the initiating of each phase of the project (e.g. grading, construction) neighboring property owners within 300 feet of construction activity shall be notified in writing of the construction schedule and at least 2 weeks prior to loud noise-generating activities. Notification will include the nature and estimated duration of the activity. l) A qualified acoustical professional shall be retained to address noise concerns, and if needed, to determine if construction noise levels at adjacent property lines are consistent with the findings of the certified EIR. Corrective actions shall be taken to reduce construction noise if inconsistencies are identified. Temporary noise barriers could be considered during construction phases involving earth moving equipment (e.g., grading operations) where they would be effective in reducing the construction noise impact, when directly adjoining sensitive receptors, such as at the Seven Hills School. An eight-foot plywood noise barrier could reduce noise levels by at least 5 dBA. **MM NOI-1.2:** Prior to the issuance of building permits, mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet 50 dBA Leq during daytime hours and 40 dBA Leq during nighttime hours. A qualified acoustical consultant shall be retained by the project applicant to review mechanical noise as the equipment systems are selected in order to determine specific noise reduction measures necessary to reduce noise to comply with the noise limits at all adjacent noise sensitive land uses. Noise reduction measures could include, but are not limited to, locating equipment away from noise sensitive locations, selection of equipment that emits low noise levels and/or installation of noise barriers such as enclosures and parapet walls to block the line of sight between the noise source and the nearest receptors. If properly designed and controlled, the combined worst-case noise level due to the operation of on-site noise sources including the project parking lots, mechanical equipment, and maintenance building operations would not be substantially increased with the project and would remain below the 60 dBA Ldn noise and land use compatibility thresholds established for residential land uses by Contra Costa County and the City of Walnut Creek.

Impact NOI-2: The project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)**	**MM NOI-2.1:** The project shall implement the following measures to minimize vibration impacts from construction activities: a) Avoid the use of vibratory rollers and other heavy construction equipment within 20 feet of existing structures. b) Place operating equipment on the construction site as far as possible from vibration sensitive receptors. c) Use smaller equipment within 20 feet of the perimeter property lines adjoining off site structures to minimize vibration levels below the limits. d) Select demolition methods not involving impact tools within 100 feet of the perimeter property lines adjoining off-site structures. e) Avoid dropping heavy objects or materials near vibration sensitive locations. f) A list of all heavy construction equipment to be used for this project known to produce high vibration levels (tracked vehicles, vibratory compaction, jackhammers, hoe rams, etc.) shall be submitted to the County by the contractor. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring.
Tribal Cultural Resources	
Impact TCR-1: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(Less than Significant Impact with Mitigation Incorporated)**	See mitigation measures MM CUL-2.1 and MM CUL-3.1 above.
Impact TCR-2: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth	See mitigation measures MM CUL-2.1 and MM CUL-3.1 above.

in subdivision (c) of Public Resources Code Section 5024.1. **(Less than Significant Impact with Mitigation Incorporated)**	

Summary of Project Alternatives

The California Environmental Quality Act (CEQA) requires that an EIR identify alternatives to the project as proposed. The CEQA Guidelines state that an EIR must identify alternatives that would feasibly attain the most basic objectives of the project, but avoid or substantially lessen significant environmental effects, or further reduce impacts that are considered less than significant with the incorporation of mitigation. A summary of project alternatives follows. A full analysis of project alternatives is provided in Section 7.0 Alternatives.

No Project Alternative

The No Project Alternative is what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. The No Project Alternative assumes that the project site would remain as it is today with the existing buildings being reoccupied. All environmental impacts would be avoided.

Existing General Plan Development Alternative

The Existing General Plan Development Alternative would develop the project site consistent with its current General Plan designation. The project site is General Plan designated as SM (Single Family Residential - Medium). The General Plan defines the SM designation as allowing between 3.0 to 4.9 single-family units per net acre. With the addition of a 15 percent density bonus for mandatory inclusionary housing, this would result in approximately 166 single-family residential units on the project site.

The Existing General Plan Development Alternative would result in 188 fewer units; however, lessen the construction criteria pollutant and construction noise impacts; however, grading of the project site in order to develop the Existing General Plan Development Alternative would be similar to the proposed project due to the topography. Given that the grading is the most intense phase of construction and contributes the most towards air quality emissions and construction noise, the Existing General Plan Development Alternative would result in similar construction criteria pollutant and construction noise impacts. This alternative would result in the same or similar impacts to biology, cultural resources, geology and soils, and hazards and hazardous materials, hydrology and water quality, and tribal cultural resources. The Existing General Plan Development Alternative would result in a new vehicles miles traveled (VMT) impact. The Existing General Plan Development Alternative would not meet any of the project objectives.

Roadway Redesign Project Alternative

The Roadway Redesign Project Alternative would remove the proposed Kinross Drive extension to the project site and place the main entrance to the project at the existing project site entrance along Seven Hills Ranch Road. The Roadway Redesign Project Alternative assumes Seven Hills Ranch

Road would be improved to the same size and standards as the proposed project's Kinross Drive extension. Under this alternative, Seven Hills Ranch Road would require 50 feet of right-of-way (ROW) to accommodate a 33-foot curb to curb roadway and six-foot sidewalks on either side. In order to provide the necessary ROW, the project developer would need to acquire a portion of the adjacent land along Seven Hills Ranch Road or the County may take the land through eminent domain. All other aspects of the proposed project would remain the same.

The Roadway Redesign Project Alternative would reduce impacts to riparian and wetland habitats. This alternative would result in the same or similar impacts to air quality, cultural resources, geology and soils, and hazards and hazardous materials, hydrology and water quality, noise, and tribal cultural resources. The Roadway Redesign Project Alternative would meet all the project objectives.

Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. As described in Section 7.0 Alternatives, the environmentally superior alternative to the proposed project is the No Project Alternative because all of the project's significant environmental impacts would be avoided. In addition to the No Project, the Roadway Redesign Project Alternative would lessen the project's biological resources impact.

Areas of Public Controversy

Environmental concerns from local residents, property owners, organizations, and/or agencies about the project related to:

- EIR process
- Aesthetics
- Air quality (construction related)
- Biological resources
- Land use and General Plan consistency (i.e., total change in development numbers)
- Noise (construction related)
- Transportation/traffic congestion impacts
- Utilities (wastewater/stormwater systems)

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The County of Contra Costa, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the Spieker Senior Continuing Care Community Project in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121(a)). As the CEQA Lead Agency for this project, the County of Contra Costa is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Section 15082 of the CEQA Guidelines, the County of Contra Costa prepared a Notice of Preparation (NOP) for this EIR. The NOP was circulated to local, state, and federal agencies on July 23, 2021. The standard 30-day comment period concluded on August 23, 2021. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The County of Contra Costa also held a public scoping meeting on August 16, 2021, to solicit public input as to the scope and contents of this EIR. The meeting was held virtual via a video conference call due to the COVID-19 pandemic. Appendix A of this EIR includes the NOP and comments received on the NOP.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 60-day public review period. During this period, the Draft EIR will be available to the public and local, state, and federal agencies for review and comment. Notice of the availability and completion of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP, as well as the Office of Planning and Research. Written comments concerning the environmental review contained in this Draft EIR during the 60-day public review period should be sent to:

Sean Tully
Principal Planner
Contra Costa County
Department of Conservation and Development
30 Muir Road
Martinez, CA 94553
sean.tully@dcd.cccounty.us

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 60-day public review period, the County of Contra Costa will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary;
- List of individuals and agencies commenting on the Draft EIR;
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines (Section 15088);
- Copies of letters received on the Draft EIR.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the County of Contra Costa will file a Notice of Determination (NOD), which will be posted at the County Clerk's Office and available for public inspection for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094(g)).

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT LOCATION

The approximately 30.6-acre project site (APNs 172-150-012 and 172-080-007) is located in the unincorporated Walnut Creek area in central Contra Costa County along Seven Hills Ranch Road, which runs between Walden Road/Cherry Lane and North San Carlos Drive. The project site is bounded by The Seven Hills School to the north, Walnut Creek to the north and west, Seven Hills Ranch Road to the south, the Walnut Creek city limit and existing residential neighborhoods to the south and east, and Heather Farms Park to the east. Regional, vicinity, and aerial maps of the project site are provided in Figure 2.2-1, Figure 2.2-2, and Figure 2.2-3, respectively.

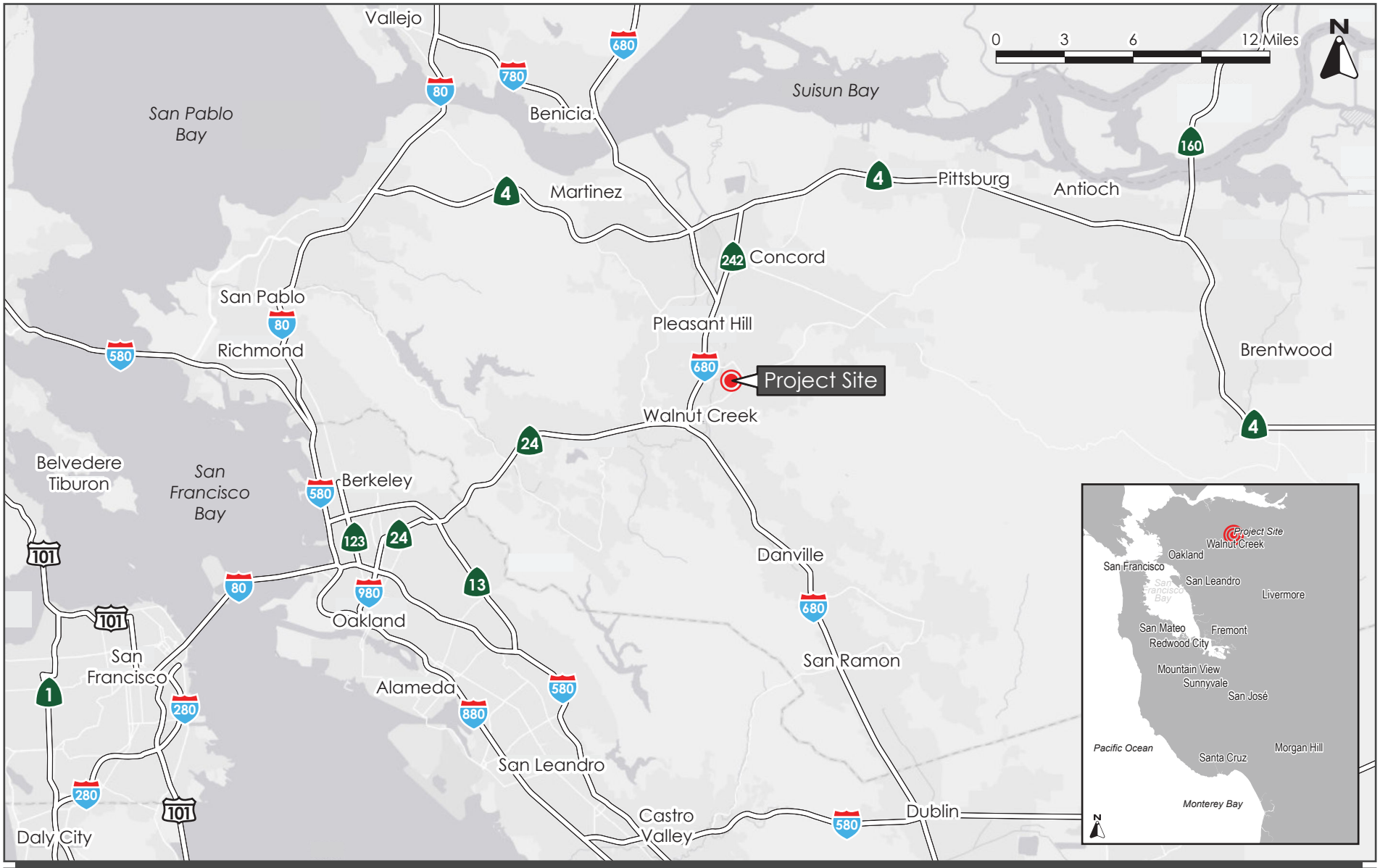
The project site is characterized by rolling topography that ranges from 100 to 190 feet in elevation and drains to the northwest towards Walnut Creek and to the west along Seven Hills Ranch Road. The project site is primarily undeveloped, with the exception of a ranch house and outbuildings in the south-central portion of the project site. The site is lightly wooded with mature trees, most of which occur along the property boundaries and the area surrounding the existing ranch house. There are seasonal wetlands and perennial drainage resources which traverse the site in an east-west direction in the central portion of the site.

2.2 PROJECT DESCRIPTION

The proposed project would demolish the existing ranch house and outbuildings and construct a self-contained Continuing Care Retirement Community (CCRC). The CCRC would consist of two primary components: 1) a total of 354 independent living units and amenities for residents not needing daily assistance; and 2) a health care center for 100 residents requiring daily assistance or daily medical attention. A site plan is provided in Figure 2.2-4. Given the sloped nature of the project site, the proposed building locations would be terraced and would step down towards Walnut Creek. Support staff for the entire CCRC is expected to represent a full-time equivalent of up to 225 employees. The project components are described in further detail below.

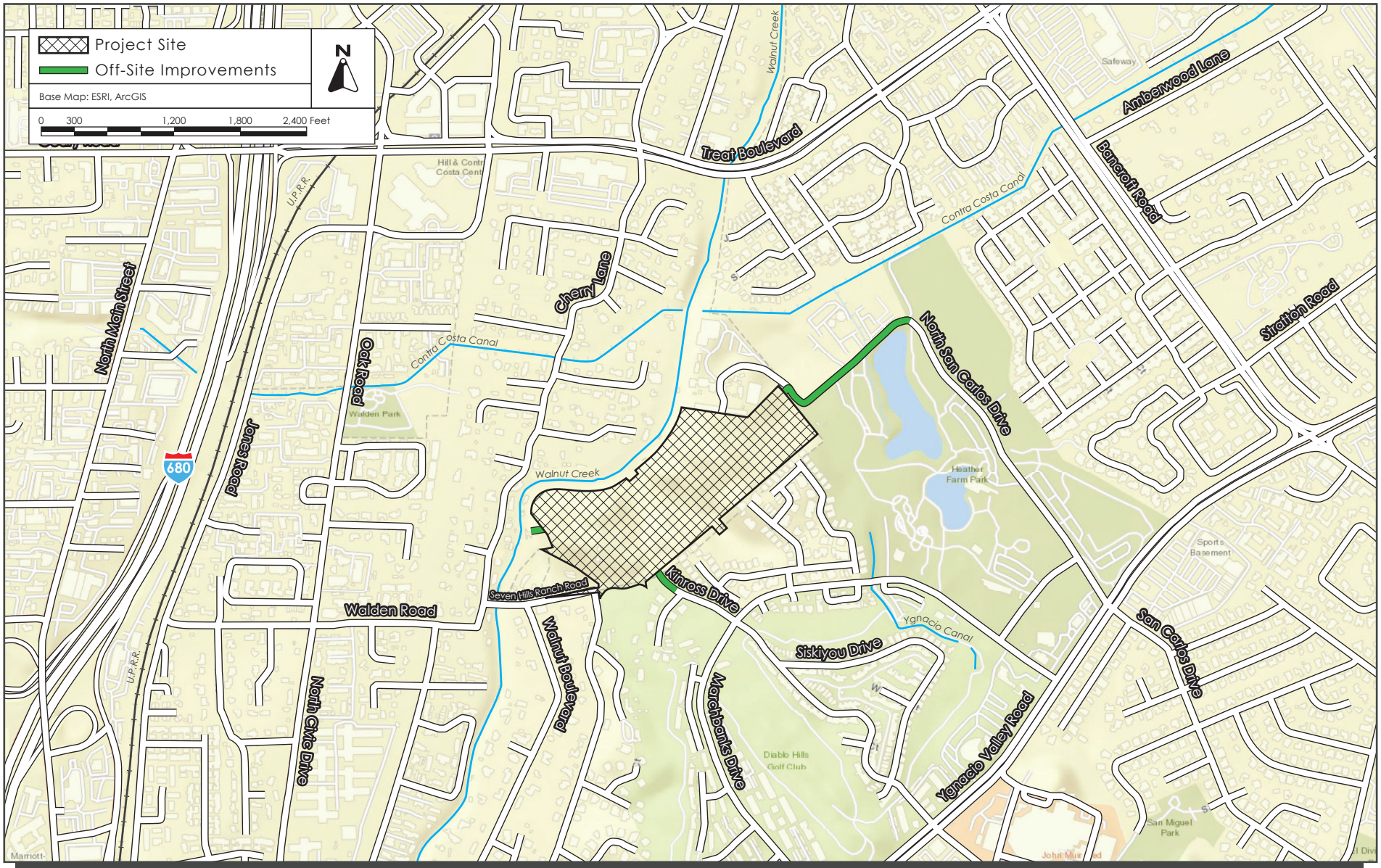
2.2.1 Operation of CCRC

The CCRC would be licensed through the State of California Department of Social Services (DSS) Continuing Care Contracts Branch as a Residential Care Facility for the Elderly (RCFE). The Health Care Center would also be licensed to provide skilled nursing by the California Department of Public Health. While the CCRC will provide residential units for senior citizens, the units themselves would not be owned or leased by the residents. Instead, residents would be provided a unit as part of their care contract with the CCRC. As such, the CCRC would be licensed by the State of California as a non-residential institutional use and the County has determined the project does not contain any residential component for the purposes of implementing State and local land use regulations and ordinances.



REGIONAL MAP

FIGURE 2.2-1



VICINITY MAP

FIGURE 2.2-2

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 2.2-3

Source: Gates + Associates, October, 2020.

SITE PLAN

FIGURE 2.2-4

The CCRC is intended to provide a community for senior citizens to limit travel and have immediate access to health care. Residents in the independent living units would be able to walk to all amenities (i.e., recreation building, club house, etc.) and neighbors within the CCRC, reducing vehicle travel to and from the project site. It is anticipated that as residents age and health concerns arise, they would transition to the health care center for daily assisted living. Since the health care center is located on the project site, residents in the CCRC would still be able to walk to the health care center to visit fellow residents.

2.2.2 General Plan Amendment and Rezoning

The project site currently has a General Plan land use designation of Single-Family Residential – Medium Density (SM) and is zoned A-2 (General Agricultural). The project proposes to amend the Land Use Element Map of the County General Plan by way of changing the land use designation from SM to Congregate Care/Senior Housing (CC) and rezone the site from A-2 to a site-specific Planned Unit (P-1) District in order to construct the proposed CCRC. The CC designation and P-1 zoning do not have density limits (i.e., floor-to-area ratio or dwelling units per acre).

2.2.3 Independent Living Units

The 354 independent living units would be split between an "apartment" style building and several single-story buildings. The apartment building would be located on the southwestern portion of the project site and the single-story residences would be located along two new internal cul-de-sacs and surrounding the apartment building (see Figure 2.2-4).

Apartment Building

The proposed apartment style building would include a total of 302 units, ranging from one to three bedrooms and approximately 835 to 1,580 square feet. The apartment building design would vary between one- and four-story elements. The four-story building elements would have a maximum height of 49 feet above grade and will consist of either three levels of living units over an above-grade 300-space parking garage or four stories of living units (see Figure 2.2-5 through Figure 2.2-10). The apartment building would also include clubhouse and recreation building elements with amenities such as two open courtyard areas, common dining areas, an auditorium, a barbecue patio, an indoor pool, a fitness center, theater, a card room, a billiards room, a lounge area, an art studio, and a salon. The apartment building would have a gross floor area of approximately 550,000 square feet.

Single-Story Buildings

The project would include 30 single-story buildings (including 22 duplexes) housing a total of 52 units. The single-story buildings would range in size from approximately 1,430 to 2,720 square feet. Half of these single-story buildings would be located along two new cul-de-sacs in the middle of the project site, while the other half would be located along the road surrounding the apartment building (see Figure 2.2-4). Each unit would contain two to three bedrooms and would have a maximum height of approximately 20 feet (see Figure 2.2-11 and Figure 2.2-12). Each unit would include a private driveway, a one-car garage, and solar collection (in accordance with Title 24 Part 11, Energy Code standards and County ordinances).

2.2.4 Health Care Center

The health care center would house a total of approximately 100 assisted living units, including 33 skilled nursing beds and 23 memory care units (see Figure 2.2-13). The health care center would be one- to two-stories tall with a maximum height of 29 feet (see Figure 2.2-14 and Figure 2.2-15) and a gross floor area of approximately 85,000 square feet. The health care center would be accessible to on-site residents as well as the general public. Services would be available to the CCRC residents on a priority basis, and to non-residents as space permits.

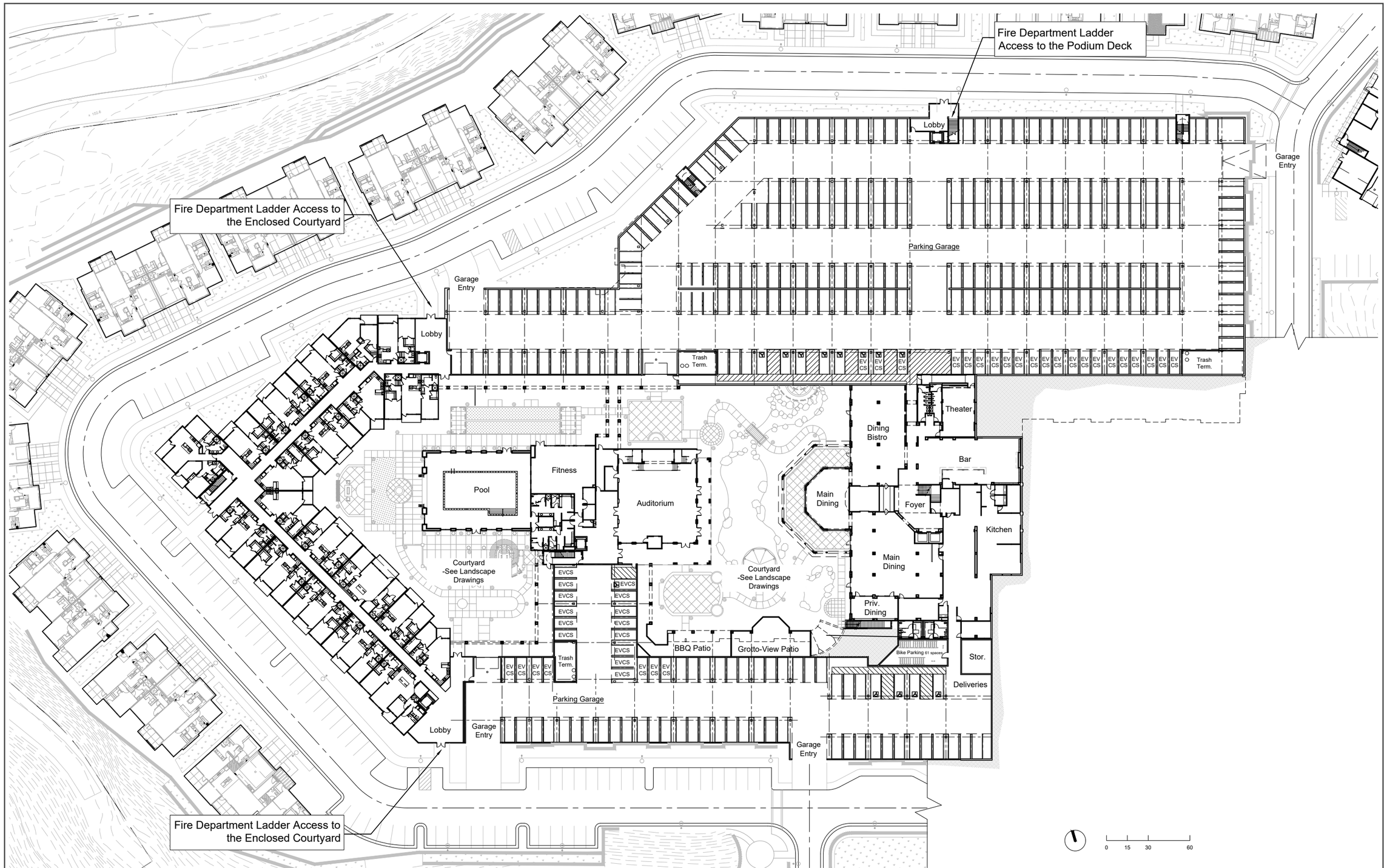
2.2.5 Maintenance Building

The approximately 20,000 square-foot maintenance building would be located just south of the central drainage swale opposite the independent living units (see Figure 2.2-4). It would house the community's maintenance department, a laundry, storage, workshop, golf cart maintenance, and a control center for the community's high-efficiency heating, ventilation, and air conditioning (HVAC) network and other utility systems (see Figure 2.2-16). The maintenance building would be two-stories tall with a maximum height of 35 feet (see Figure 2.2-17).

2.2.6 Landscaping and Open Space

Landscaping would be provided throughout the project site. Landscaping would include bioretention basins, native tree planting and riparian revegetation areas, courtyard ornamental landscaping and water features, and various plantings throughout the project site. Trees would be planted along the project boundary to provide screening from adjacent properties and roadways. The project would remove approximately 353 existing trees and plant 1,078 trees.

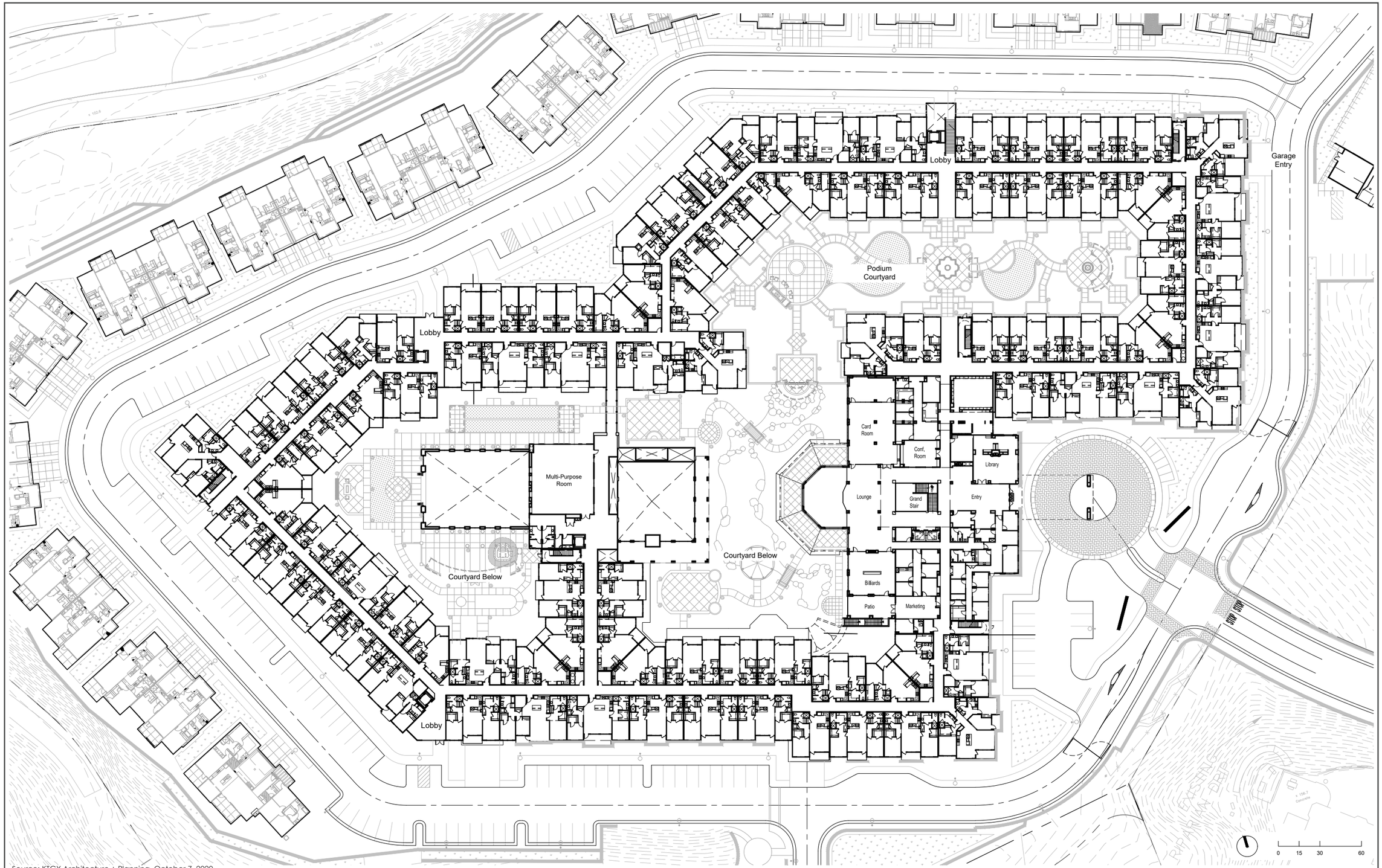
The project proposes to enhance the existing central drainage through the site with riparian plantings including willows and native oaks. Trails would be placed on the north and south sides of the central drainage to provide access to this open space. An existing knoll on the north-central portion of the site will be recontoured but remain as open space with a proposed trail allowing access to the top. A community garden and tennis court would be located on the north and south sides of the knoll, respectively.



Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING COURTYARD LEVEL PLAN

FIGURE 2.2-5



Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING 1ST FLOOR PLAN

FIGURE 2.2-6

OVERALL EAST ELEVATION

EAST ELEVATION 1

EAST ELEVATION 2

Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING - EAST ELEVATIONS

FIGURE 2.2-7

OVERALL SOUTH ELEVATION

SOUTH ELEVATION 1

SOUTH ELEVATION 2

SOUTH ELEVATION 3

Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING - SOUTH ELEVATIONS

FIGURE 2.2-8

OVERALL WEST ELEVATION

WEST ELEVATION 1

WEST ELEVATION 2

Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING - WEST ELEVATIONS

FIGURE 2.2-9

OVERALL NORTH ELEVATION

NORTH ELEVATION 1

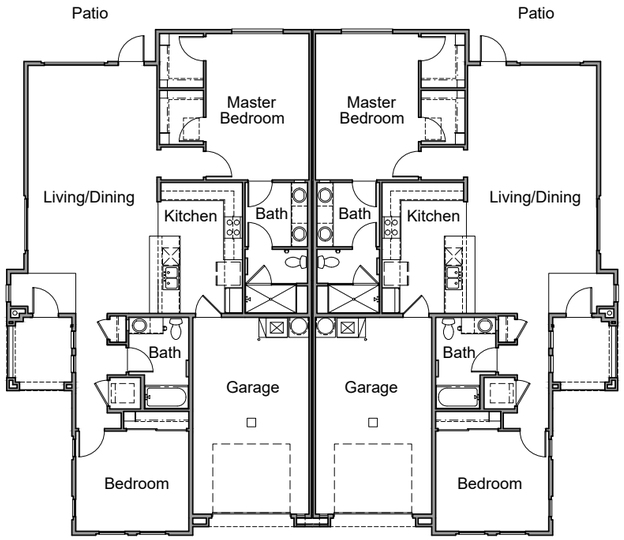
NORTH ELEVATION 2

NORTH ELEVATION 3

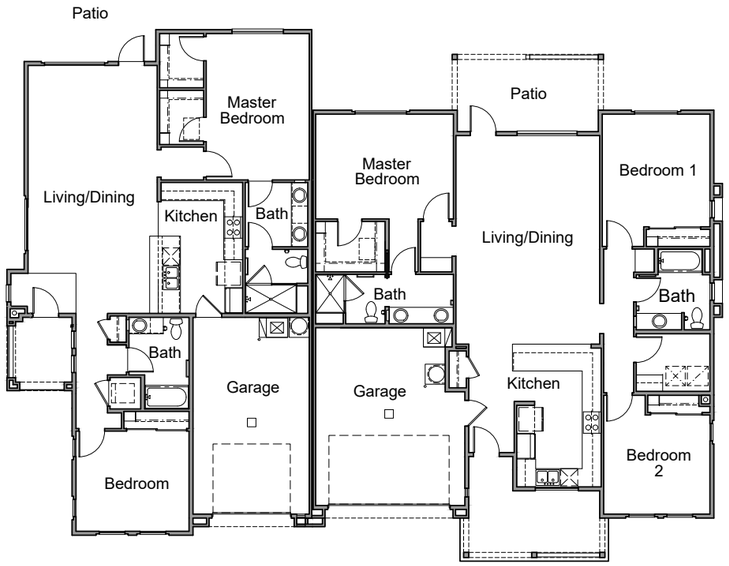
Source: KTGY Architecture + Planning, October 7, 2020.

APARTMENT BUILDING - NORTH ELEVATIONS

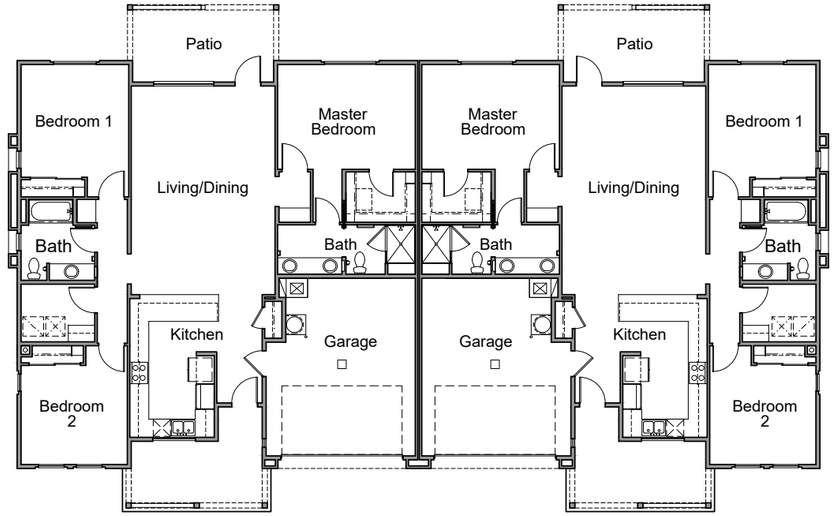
FIGURE 2.2-10



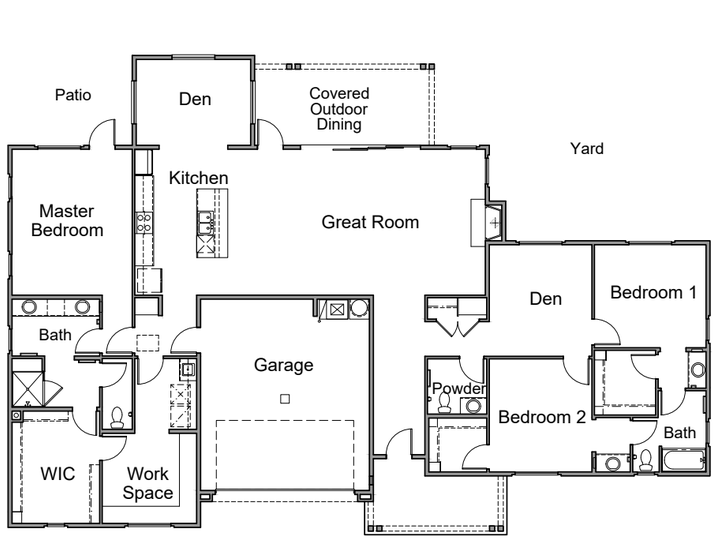
VILLA TYPE A



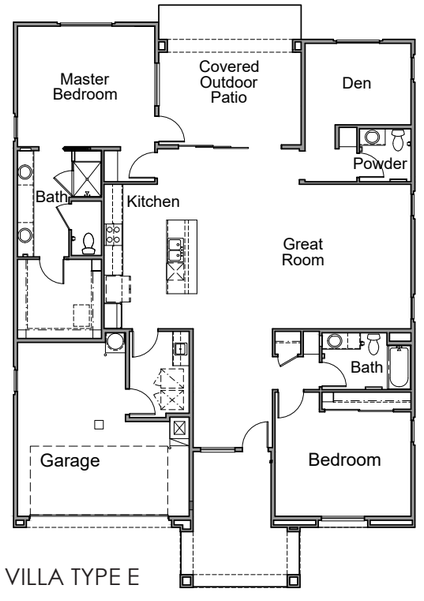
VILLA TYPE B



VILLA TYPE C



VILLA TYPE D



VILLA TYPE E

Source: KTGY Architecture + Planning, October 7, 2020.

SINGLE-STORY RESIDENCE BUILDING LAYOUTS

FIGURE 2.2-11

FRONT ELEVATION

RIGHT ELEVATION

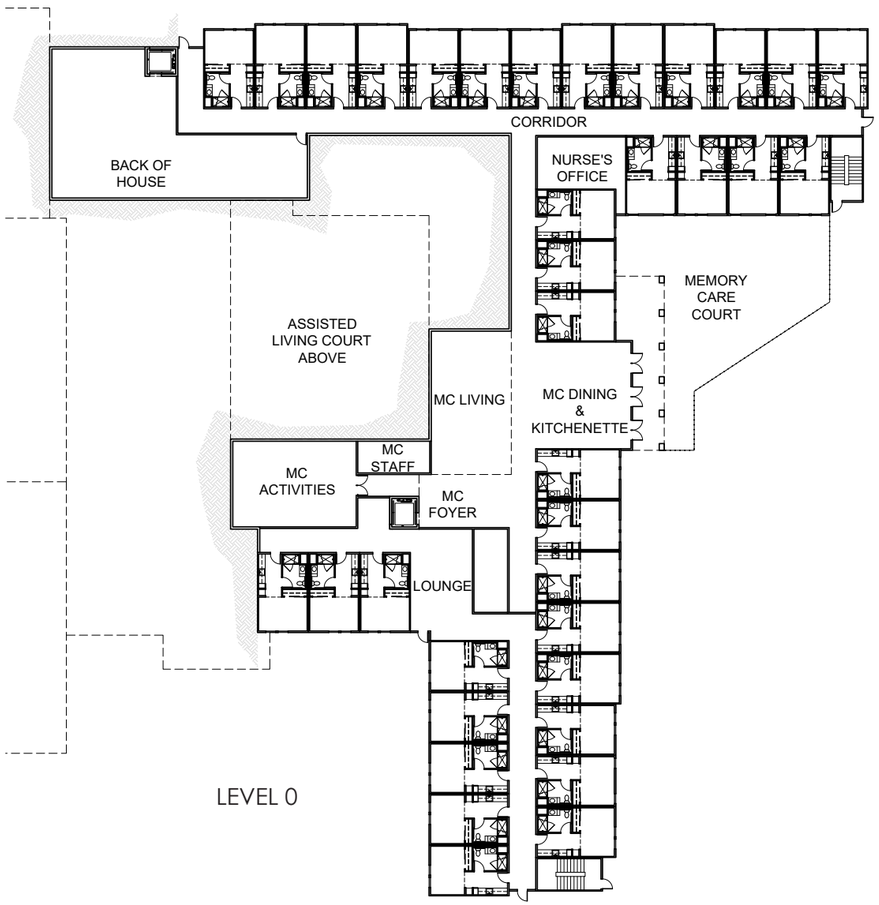
REAR ELEVATION

LEFT ELEVATION

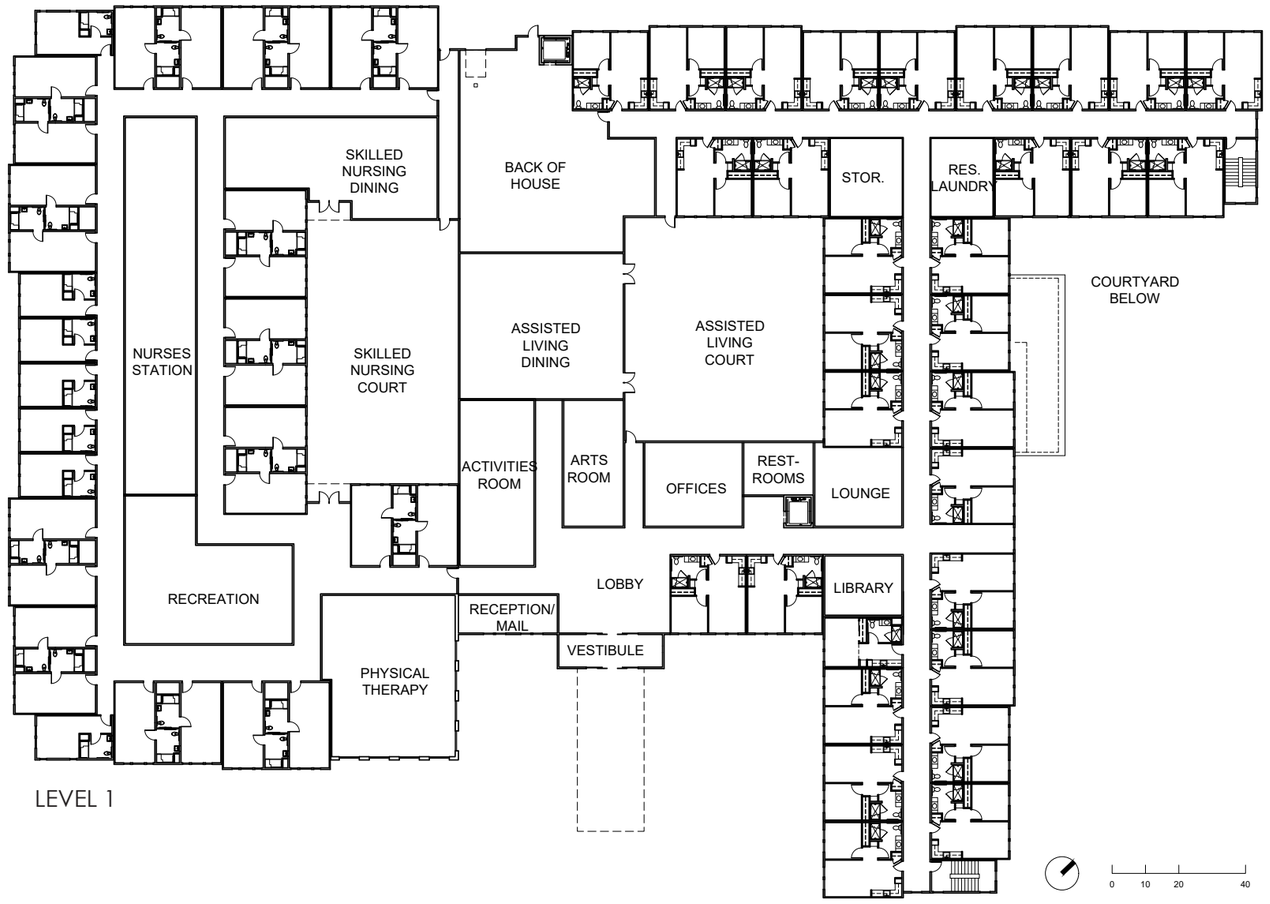
Source: KTGY Architecture + Planning, October 7, 2020.

SINGLE-STORY BUILDING ELEVATIONS

FIGURE 2.2-12



LEVEL 0



LEVEL 1

Source: KTGY Architecture + Planning, October 7, 2020.

HEALTH CARE CENTER BUILDING LAYOUT

FIGURE 2.2-13

OVERALL SOUTH ELEVATION

SOUTH ELEVATION 1

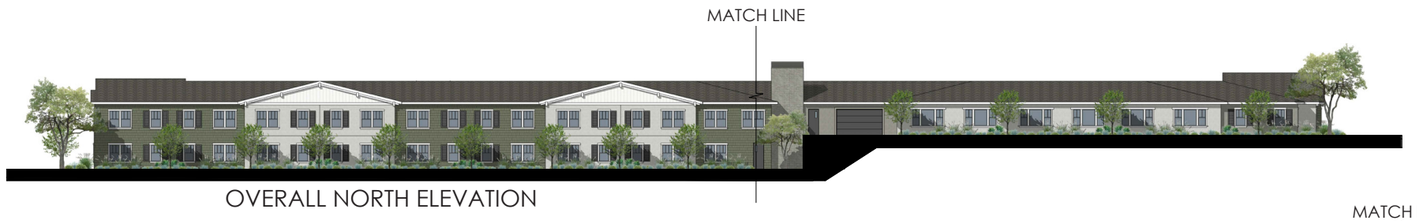
SOUTH ELEVATION 2

EAST ELEVATION

Source: KTGY Architecture + Planning, October 7, 2020.

HEALTH CARE CENTER - SOUTH AND EAST ELEVATIONS

FIGURE 2.2-14



OVERALL NORTH ELEVATION

NORTH ELEVATION 1

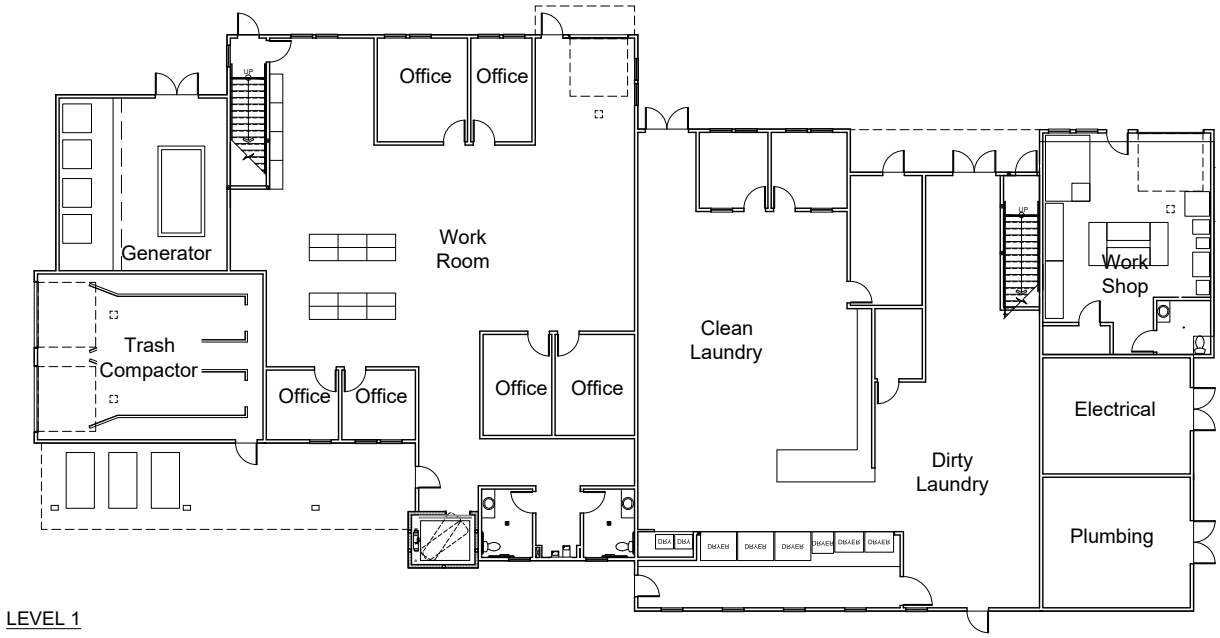
NORTH ELEVATION 2

WEST ELEVATION

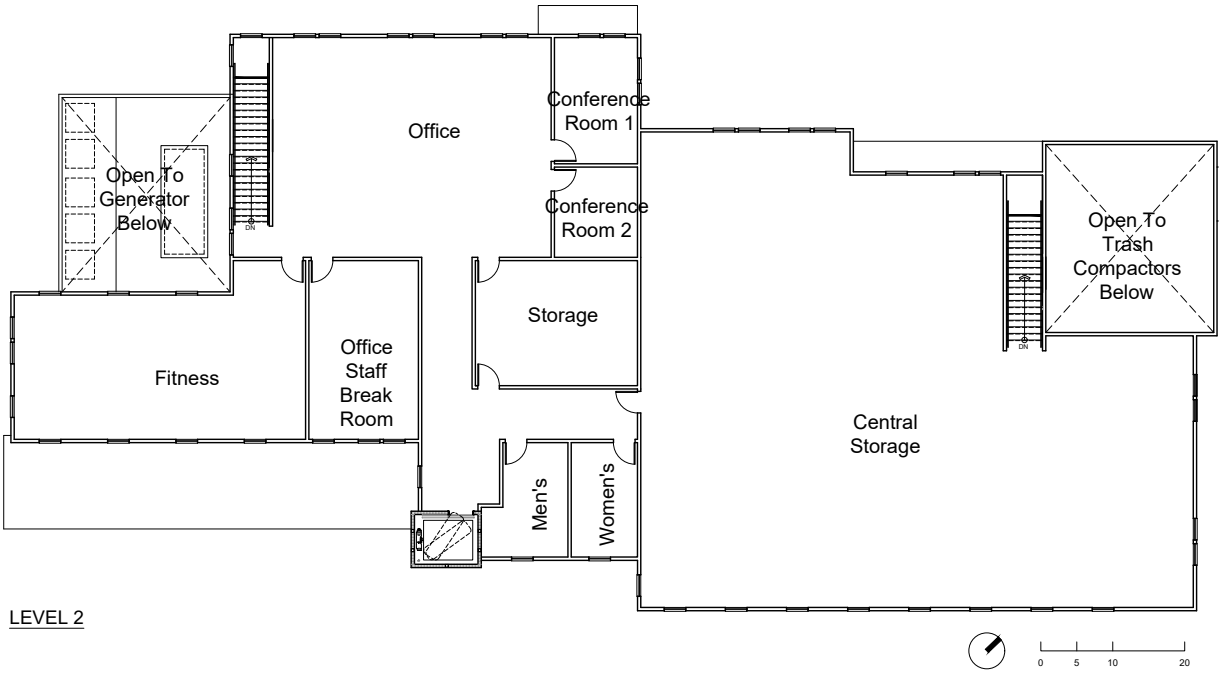
Source: KTGY Architecture + Planning, October 7, 2020.

HEALTH CARE CENTER - NORTH AND WEST ELEVATIONS

FIGURE 2.2-15



LEVEL 1



LEVEL 2

Source: ktgy Architecture + Planning, October 7, 2020.

MAINTENANCE BUILDING LAYOUT | FIGURE 2.2-16

NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

Source: ktgy Architecture + Planning, October 7, 2020.

MAINTENANCE BUILDING ELEVATIONS

FIGURE 2.2-17

2.2.7 Site Access, Circulation, and Parking

Access to the project site would primarily be provided via an extension of Kinross Drive, located along the southeasterly site boundary. Kinross Drive is a two-lane collector street located within the Walnut Creek city limits. The extension of Kinross Drive would be constructed within a 50-foot right-of-way that was previously dedicated to the City of Walnut Creek.

The extension from Kinross Drive would lead to a gated internal access road that would provide access to all project components. The internal access road would branch into a circle surrounding the apartment building, two cul-de-sacs giving access to a portion of the single-story buildings, and a road to the health care center (see Figure 2.2-4). Emergency vehicle access (EVA) would be provided via a gated, fire district compliant entrance extending from the health care center to North San Carlos Drive at the north end of the project site. The project would also improve North San Carlos Drive from the proposed EVA gate to the Heather Farm Dog Park to meet fire district standards. A supplemental gated EVA would also be provided from the internal access road to the extension of Seven Hills Ranch Road at the southwest end of the site.

Parking spaces would be provided throughout the project site. A total of approximately 594 parking spaces would be provided for the project, consisting of 300 spaces located in the apartment building parking garage, 110 uncovered spaces along the access road surrounding the apartment building, 104 spaces in the single-story residence driveways and garages, and 80 spaces in the health care center surface parking area.

2.2.8 Drainage and Utility Improvements

Stormwater on-site would be directed to new stormwater lines, bio-retention areas, and an existing outfall along Walnut Creek. The existing culverted crossing of Seven Hills Ranch Road over the drainage in the center of the project site would be replaced with a new crossing that would clear span the drainage area and the original drainage features in this area would be restored. An enhanced riparian corridor would be created along the entire drainage. Drainage and wetland enhancements would also be made within the area south of the Project Entry, opposite the Independent Living Building, to replace habitat disturbed within the existing Kinross Drive right-of-way. Bioretention areas are proposed throughout the landscaped areas of the site. Flow-through planters would be used within the courtyards of the apartment building. A detention basin is also proposed within the landscaped area adjacent to the health care center and North San Carlos Drive. An approximate 15-inch storm drainage line will be extended from the planned detention basin at the northerly end of the site, easterly within the existing North San Carlos Drive extension for approximately 1,100 feet before discharging to an existing drainage channel and flowing northwesterly to the Walnut Creek Channel (see Figure 2.2-3). Four outfalls are proposed to discharge to the existing drainage through the center of the site. Two of these outfalls would be located at the easterly end of the drainage and would discharge at the realigned internal access road. The two remaining outfalls would discharge at the westerly end of the drainage near the existing outfall to Walnut Creek. The southwestern portion of the site would drain to a new 36-inch storm drainage line that would connect off-site to a Contra Costa Flood Control and Water Conservation District (FC District) box culvert. Kinross Drive would drain to an interceptor channel along the south side of the internal access road and discharge to an existing drainage channel on the north side of Seven Hills Ranch Road.

The proposed project would connect to existing utility lines in Seven Hills Ranch Road and North San Carlos Drive. The apartment building and surrounding single-story units would connect to an existing eight-inch sanitary sewer line in Seven Hills Ranch Road, while the single-story units along the cul-de-sacs and the health care center would connect to an existing eight-inch sanitary sewer line in North San Carlos Drive. The proposed project would construct a new 16-inch water line, approximately 1,100 feet in length, within North San Carlos Drive to connect with an existing Contra Costa Water District line. Water service to the entire project site would be provided via the newly constructed water line.

2.2.9 Sustainability and Green Building Elements

The project would incorporate a number of Green Building elements:

- Free transportation shuttle services for on-site residents
- Water efficient landscaping
- "White" ultraviolet (UV) reflective roof on all multi-story buildings
- Energy Star appliances
- High-efficiency heating, ventilation, and air conditioning (HVAC) system
- Motion detector lights in all utilitarian rooms
- Solar heating for the indoor swimming pool
- Solar collection (in accordance with Title 24 Part 11, Energy Code standards and County ordinances)
- 50 percent diversion rate for all disposable materials
- Low emissivity windows on buildings containing living units
- High-efficiency water conservation measures

2.2.10 Grading and Construction

Site grading and construction of the proposed project would be completed in a single phase over a total period of up to three to four years. A total of approximately 225,000 cubic yards (cy) of soil would be cut and approximately 150,000 cy of soil would be used as fill, resulting in a net export of 75,000 cy of soil. Maximum cut depths in limited areas would be approximately 25 feet in the south central portion of the site. Tiered five-foot retaining walls would be located at various locations along the internal roadways and around the perimeter of the project site behind the single-story buildings. Additional retaining walls ranging in size from seven to 14 feet would be located on the southern portion of the project site, adjacent to the Kinross Drive extension, near North San Carlos Drive, and adjacent to a proposed single-story building and Seven Hills School. Abutments are proposed up to 24 feet for the internal access road bridge over the central drainage. Grading would be completed in the first 12 months, construction of the independent living units would be completed in the following 22 months, and construction of the health care center would be completed in the last 18 months.

2.3 PROJECT OBJECTIVES

The project seeks to achieve the following objectives:

- Approval of all licensing for the CCRC from the State of California Department of Social Services to provide lifetime occupancy and support services for project residents.
- Combine independent living, assisted living, and nursing services as a complete and sustainable living arrangement for lifetime occupancy by community residents.
- Provide progressive care services for CCRC residents from independent living units with associated amenities and dining options to assisted living, skilled nursing, and memory support.
- Create a high-quality CCRC living environment with a wide range of quality amenities and services for persons aged 60 years and over, with a sufficient number of Independent Living Units to support those amenities and services.
- Design, build, and operate a high-quality CCRC on an infill site, to be compatible with the surrounding community and consistent with State standards.
- Contribute to greater livability for senior citizens by incorporating the following design and planning principles: safety and security, recreation and cultural activities, walkability/ accessibility, on-site management and care, and transportation, including shuttle service to local restaurants, shopping, and health services.
- Offer a retirement community option not currently provided in Contra Costa County, which includes a comprehensive program and campus to allow potential residents and family members to plan for retirement.
- Provide an on-site Health Care Center licensed to provide assisted living, skilled nursing services, and memory support to residents of the CCRC, and to nonresidents as space permits.

2.4 USES OF THE EIR

This EIR provides decision makers in the County of Contra Costa (the Lead Agency), responsible agencies, and the general public with relevant environmental information to use in considering the proposed project. It is intended that this EIR be used for discretionary approvals necessary to implement the project, as proposed. These discretionary actions may include, but are not limited to, the following:

- General Plan Amendment
- Rezoning
- Preliminary Development Plan and Final Development Plan
- Land Use Permit
- Tentative Parcel Map
- Tree Removal Permit
- Building and Grading Permits
- City of Walnut Creek Encroachment Permit

- City of Walnut Creek Easement
- Contra Costa County Flood Control and Water Conservation District Encroachment Permit
- Contra Costa Water District Easement
- U.S. Bureau of Reclamation Easement
- Wetland Disturbance Permits

2.5 APPROVALS

The project applicant is seeking discretionary approval from the County and other responsible agencies for the following entitlements:

- General Plan Amendment: Adoption of a resolution to amend the Land Use Element Map by way of changing the land use designation of the project site from Single-Family Residential-Medium Density (SM) to Congregate Care/Senior Housing (CC).
- Rezone: Adoption of an ordinance to rezone the 30-acre project site from General Agricultural (A-2) District to a site-specific Planned Unit (P-1) District.
- Minor Subdivision: Approval of a tentative Parcel Map to reconfigure two existing parcels from approximately 13 and 17 acres in area to 25 and 5 acres in area with refined legal descriptions.
- Development Plan: Preliminary and Final Development Plan to allow construction of a continuing care retirement community (CCRC) consisting of the following primary components: 1) a total of 354 independent living units and amenities for residents not needing daily assistance, 2) a health care center for residents and the general public, 3) a maintenance building, 4) associated drainage, access, and utility improvements, and 5) approximately 225,000 cubic yards of soil would be cut and approximately 150,000 cubic yards of soil would be used as fill, resulting in a net export of 75,000 cubic yards of soil from the site.[1]
- Land Use Permit: Approval of a land use permit to allow the sale of alcoholic beverages within the proposed clubhouse.
- Tree Permit Removal: Approval of a tree permit to allow the removal of up to 353 trees.

[1] It is estimated that approximately 9,375 haul trips would occur during grading of the project site. Source: Illingworth & Rodkin, Inc. *Spieker CCRC Air Quality & Greenhouse Gas Emissions Assessment*. October 11, 2021.

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

3.1	Aesthetics	3.11	Land Use and Planning
3.2	Agriculture and Forestry Resources	3.12	Mineral Resources
3.3	Air Quality	3.13	Noise
3.4	Biological Resources	3.14	Population and Housing
3.5	Cultural Resources	3.15	Public Services
3.6	Energy	3.16	Recreation
3.7	Geology and Soils	3.17	Transportation
3.8	Greenhouse Gas Emissions	3.18	Tribal Cultural Resources
3.9	Hazards and Hazardous Materials	3.19	Utilities and Service Systems
3.10	Hydrology and Water Quality	3.20	Wildfire

The discussion for each environmental subject includes the following subsections:

Environmental Setting – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.

Impact Discussion – This subsection includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts.

- **Project Impacts** – This subsection discusses the project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.
- **Cumulative Impacts** – This subsection discusses the project's cumulative impact on the environmental subject. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively considerable." The discussion does not need to be in as great detail as is necessary for project impacts, but is to be "guided by the standards of practicality and reasonableness." The purpose of the cumulative analysis is to allow decision makers to better understand the

impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence (CEQA Guidelines Section 15130(b)). To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document (CEQA Guidelines Section 15130(b)(1)). This EIR uses the list of projects approach.

The analysis must determine whether the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3). The cumulative impacts discussion for each environmental issue accordingly addresses the following issues: 1) would the effects of all of past, present, and probable future (pending) development result in a significant cumulative impact on the resource in question; and, if that cumulative impact is likely to be significant, 2) would the contribution from the proposed project to that significant cumulative impact be cumulatively considerable?

Table 3.0-1 identifies the approved (but not yet constructed or occupied) and pending projects in the project vicinity that are evaluated in the cumulative analysis.

Table 3.0-1: Cumulative Projects List

Name and Location	Description	Distance to Proposed Project	Status
Envision Contra Costa 2040 General Plan Update (Countywide)	Contra Costa County is updating its General Plan to guide conservation and development in the unincorporated areas of the County through the year 2040. The General Plan Update will address the topics of land use, mobility, sustainability and resiliency, economy, housing, environmental justice, community health and well-being, hazards and safety, natural and cultural resources, and infrastructure and services.	Countywide	Pending
Oak Road Townhome Condominium Project (the project location includes 2740 Jones Road and several other parcels)	The project proposes to redevelop the site with 125 townhome condominium units spread across 19 three-story buildings. A total of 272 on-site parking spaces would be provided via attached, private garages.	0.4 miles	Under review

Table 3.0-1: Cumulative Projects List			
Name and Location	**Description**	**Distance to Proposed Project**	**Status**
Habitat for Humanity – Las Juntas (1250 Las Juntas Way)	The project proposes to construct 42 new multifamily residential units on a currently vacant site. The project would include a surface parking lot containing a total of 67 parking spaces.	0.7 miles	Approved
699 Ygnacio Valley Road Project	The project proposes to demolish all existing gas station structures on-site and construct a new five-story mixed-use building. The mixed-use building would include approximately 2,625 square-feet of ground floor commercial area and approximately 96, 100 percent affordable residential units. The project would include 41 on-site parking spaces in an enclosed garage located behind the proposed commercial space.	1 mile	Under review

For each resource area, cumulative impacts may occur over different geographic areas. For example, the project effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area. The geographic area that could be affected by the proposed project varies depending upon the type of environmental issue being considered. Section 15130(b)(3) of the CEQA Guidelines states that lead agencies should define the geographic scope of the area affected by the cumulative effect. Table 3.0-2 provides a summary of the different geographic areas used to evaluate cumulative impacts.

Table 3.0-2: Geographic Considerations in Cumulative Analysis	
Resource Area	**Geographic Area**
Aesthetics	Project site and adjacent parcels
Agriculture and Forestry Resources	Countywide
Air Quality	San Francisco Bay Area Air Basin
Biological Resources	Project site and adjacent parcels
Cultural Resources	Project site and adjacent parcels
Energy	Energy provider’s territory
Geology and Soils	Project site and adjacent parcels
GHGs	Planet-wide
Hazards and Hazardous Materials	Project site and adjacent parcels
Hydrology and Water Quality	Walnut Creek watershed

Table 3.0-2: Geographic Considerations in Cumulative Analysis	
Resource Area	**Geographic Area**
Land Use and Planning/Population and Housing	Countywide (unincorporated areas)
Minerals	Identified mineral recovery or resource area
Noise and Vibration	Project site and adjacent parcels
Public Services and Recreation	Countywide (unincorporated areas)
Transportation/Traffic	Countywide/adjacent area
Tribal Cultural Resources	Project site and adjacent parcels
Utilities and Service Systems	Service District Area
Wildfire	Within or adjacent to the wildfire hazard zone

3.1 AESTHETICS

The following discussion is based, in part, on an aesthetics analysis prepared for the project by Loewke Planning Associates, Inc., dated July 2020, a Lighting Plan prepared by Associated Lighting Representatives, dated August 2020, and an aesthetics analysis peer review prepared by Callander Associates, dated October 2021. A copy of these reports are included in Appendix B of this EIR.

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Senate Bill 743

Senate Bill (SB) 743 was adopted in 2013 and requires lead agencies to use alternatives to level of service (LOS) for evaluating transportation impacts, specifically vehicle miles traveled (VMT). SB 743 also included changes to CEQA that apply to transit-oriented developments, as related to aesthetics and parking impacts. Under SB 743, a project's aesthetic impacts will no longer be considered significant impacts on the environment if:

- The project is a residential, mixed-use residential, or employment center project, and
- The project is located on an infill site within a transit priority area.[2]

SB 743 also clarifies that local governments retain their ability to regulate a project's aesthetics impacts outside of the CEQA process.

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

[2] An "infill site" is defined as "a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." A "transit priority area" is defined as "an area within 0.5 mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." A "major transit stop" means "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Source: Office of Planning and Research. "Changes to CEQA for Transit Oriented Development – FAQ." October 14, 2014. Accessed August 16, 2021. http://www.opr.ca.gov/ceqa/updates/sb-743/transit-oriented.html.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to aesthetics and are applicable to the proposed project.

Policy	Description
Policy 9-11	High-quality engineering of slopes shall be required to avoid soil erosion, downstream flooding, slope failure, loss of vegetative cover, high maintenance costs, property damage, and damage to visual quality. Particularly vulnerable areas should be avoided for urban development. Slopes of 26 percent or more should generally be protected and are generally not desirable for conventional cut-and-fill pad development. Development on open hillsides and significant ridgelines shall be restricted.
Policy 9-12	In order to conserve the scenic beauty of the county, developers shall generally be required to restore the natural contours and vegetation of the land after grading and other land disturbances. Public and private projects shall be designed to minimize damage to significant trees and other visual landmarks.
Policy 9-14	Extreme topographic modification, such as filling in canyons or removing hilltops, shall be avoided. Clustering and planned unit development approaches to development shall be encouraged. All future development plans, whether large- or small scale, shall be based on identifying safe and suitable sites for buildings, roads, and driveways. Exemptions to this policy are appropriate for mining, landfill, and public projects in open space areas.
Policy 9-21	Any new development shall be encouraged to generally conform with natural contours to avoid excessive grading.

Contra Costa County Ordinance Code

The Public Nuisance Lighting Ordinance (Section 76-4.612 of the County's Ordinance Code) requires that lighting fixtures be installed, controlled, or directed so that the light will not glare or be blinding to pedestrians or vehicular traffic or on adjoining property.

3.1.1.2 *Existing Conditions*

Project Site

The 30.6-acre project site is largely undeveloped, with the exception of one single-family residence, its associated outbuildings, and Seven Hills Ranch Road (a private roadway), which runs through the property from the southwest corner, to the Seven Hills School property adjacent to the north end of the project site. The project site is characterized by hills, grass, a drainage running through the center of the site, and a total of 485 mature trees. Photos 1 through 4 show the existing conditions of various locations on-site. Views of the site from nearby roadways are partially obstructed by urban development and vegetation as shown in Photos 5 and 6.

Surrounding Area

The project site is generally surrounded by urban development. There are residential neighborhoods to the east, south, and west on the other side of Walnut Creek. The residences in these neighborhoods generally consist of one- to two-story houses and apartments with a variety of architectural styles. The Seven Hills School is adjacent to the northern boundary of the project site. The school campus consists of several buildings, a surface parking lot, soccer field, basketball court, and playgrounds.

Heather Farm Park is also located northeast of the project site. The Equestrian Center of Walnut Creek, within Heather Farm Park, is adjacent to the northeast corner of the project site. The Equestrian Center consists of a dirt and gravel surface parking lot and horse-riding ring. The remainder of Heather Farm Park is generally characterized by sports fields, playgrounds, ponds, open grass areas, a botanical garden, a swimming pool, and walking trails. Walnut Creek runs adjacent to the western boundary of the project site. Walnut Creek is a concrete-lined channel with generally shallow levels of water.

Scenic Highways, Ridges, and Waterways

The nearest designated scenic highways are Interstate 680 (I-680) and State Route (SR) 24.[3] The designated scenic segments of both these highways end where SR 24 merges into I-680, approximately 1.75 miles southwest of the project site. The project site is not visible from either highway due to the distance and surrounding urban development.

The County has designated scenic ridgeways and waterways in the Open Space Element of the General Plan. The nearest scenic ridgeways to the project site include those at Shell Ridge Open Space, Briones Regional Park, and Lime Ridge Open Space. These open spaces are approximately 1.3, 2.8, and 2.5 miles from the project site, respectively.

The County's designated scenic waterways include the San Francisco Bay, San Pablo Bay, Suisun Bay, Sacramento River, and San Joaquin River. The nearest scenic waterway to the project site is the Carquinez Strait, which runs between Suisun Bay and San Pablo Bay, approximately 8.8 miles northwest of the project site.

Light and Glare

There are minimal sources of lighting on the mostly undeveloped project site. Sources of light and glare, however, are abundant in the urban environment of the project area, including but not limited to streetlights, parking lot lights, security lights, vehicular headlights, internal building lights, and reflective building surfaces and windows.

[3] California Department of Transportation. "Scenic Highways." Accessed August 16, 2021. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

Photo 1: Seven Hills Ranch Road Site Entrance, Looking West

Photo 2: Central Drainage, Looking East

PHOTOS 1 & 2

Photo 3: Back of Seven Hills School (Left), Looking East

Photo 4: End of Kinross Drive, Looking Northwest, Proposed Site Entrance Location

Photo 5: Obstructed View of Project Site Over Home from Kings Oak Place

Photo 6: Partial View of West Edge of Project Site from Cherry Lane

Source: Loewke Planning Associates, July 8, 2020.

PHOTOS 5 & 6

3.1.2 Impact Discussion

For the purpose of determining the significance of the project's impact on aesthetics, except as provided in Public Resources Code Section 21099, would the project:

1) Have a substantial adverse effect on a scenic vista?
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?[4] If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.2.1 *Project Impacts*

Impact AES-1:	The project would not have a substantial adverse effect on a scenic vista. **(Less than Significant Impact)**

The nearest County-designated scenic ridgeways are over a mile from the project site. It is possible that portions of the project site are visible from these ridgeways. However, development of the proposed CCRC would not obstruct views of the San Francisco Bay, Mount Diablo, or other ridgeways. Additionally, development of the proposed CCRC would be consistent with the surrounding urban development and would not substantially alter the view from local scenic vistas. Figure 3.1-1 through Figure 3.1-4 below show the conceptual view of the project from public vantage points. Given that the nearest County-designated scenic waterway is over eight miles away, the project would have no impact on scenic waterways. Therefore, the project would not have a substantial adverse effect on a scenic vista. **(Less than Significant Impact)**

Impact AES-2:	The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. **(No Impact)**

The nearest state-designated scenic highways are SR 24 and I-680, approximately 1.75 miles southwest of the project site. The project site is not visible from either of these highways due to the distance and the surrounding urban development. Therefore, the project would not damage scenic resources within a state scenic highway. **(No Impact)**

[4] Public views are those that are experienced from publicly accessible vantage points.

Source: Loewke Planning Associates, Inc., February 14, 2022.

CONCEPTUAL PHOTO SIMULATION VIEWPOINTS

FIGURE 3.1-1

EXISTING

PROPOSED

Source: Loewke Planning Associates, Inc., February 14, 2022.

CONCEPTUAL PHOTO SIMULATION 1 | FIGURE 3.1-2

EXISTING

PROPOSED

Source: Loewke Planning Associates, Inc., February 14, 2022.

CONCEPTUAL PHOTO SIMULATION 2 | FIGURE 3.1-3

EXISTING

PROPOSED

Source: Loewke Planning Associates, Inc., February 14, 2022.

CONCEPTUAL PHOTO SIMULATION 3 | FIGURE 3.1-4

Impact AES-3:	The project would not conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

The project is located within an urbanized area. In order to construct the proposed CCRC the project proposes to rezone the project site from A-2 to P-1. The proposed P-1 zoning would include site-specific regulations to accommodate development of the proposed CCRC. Therefore, with the proposed rezoning, the project would not conflict with the site zoning.

Consistent with General Plan Policies 9-11, 9-14, and 9-21, the project would use tiered retaining walls at the edges of the proposed CCRC in order to limit grading and preserve the mature trees located along the perimeter of the project site and the central drainage. Development in areas with steep slopes (over 26 percent grade), which are primarily along the project site's perimeter and adjacent to Walnut Creek, would be avoided. Consistent with General Plan Policy 9-12, the project would plant over 1,000 trees on the site including native oaks along the site perimeter (see Figure 2.2-4). Planting of trees along the site perimeter would provide screening of the project from adjacent land uses and public vantage points (see Photos 5 & 6). Therefore, the project would not conflict with the applicable General Plan policies governing scenic quality. **(Less than Significant Impact)**

Impact AES-4:	The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **(Less than Significant Impact with Mitigation Incorporated)**

The project would introduce new sources of light to the area as there will be new independent living unit and healthcare buildings on the project site. However, as previously mentioned, the project site is surrounded by urban light and glare sources such as streetlights, parking lot lights, security lights, passing vehicular headlights, internal building lights, and reflective building surfaces and windows. New sources of light and glare from the proposed project would primarily result from new exterior building lights, internal roadway lighting, and vehicle headlights. While the project would add these sources into the existing environment, the project would comply with the aforementioned Public Nuisance Lighting Ordinance (Section 76-4.612 of the County's Ordinance Code) and direct all on-site lighting away from adjoining properties. A photometric study completed for the project to assess the potential for spillover light on adjacent properties concluded that light from the proposed project would range from 0.01 to 0.1 foot candles (fc) along the project site property lines and result in a minimal increase in light levels (see Appendix B).[5] In addition, the project would be required to implement the following mitigation measure.

Mitigation Measures: The project will be required to implement the following mitigation measures to reduce lighting impacts to a less than significant level:

[5] A foot candle is defined as the illuminance on a one square foot surface from a uniform source of light. For reference, one foot candle of light is approximately the amount of light experienced from one lit birthday cake candle when observed from the distance of one foot.

MM AES-4.1: A lighting plan for any proposed exterior lighting shall be submitted to the Contra Costa County Department of Conservation and Development, Community Development Division for review and approval and include the following:

a) Exterior lighting must be directed downward and away from adjacent properties and public/private right-of way to prevent glare or excessive light spillover. Lighting bulbs must be limited to low intensity lights, including lighting for identification purposes.
b) No free standing light poles (except those used within building interior courtyards and for internal roadway lighting) will be allowed within the project site. Landscaping lights must be limited to ground-level for walking/safety purposes.
c) If any lighting is proposed for the construction staging area, lighting must also be directed downward and away from adjacent properties. Lighting intensity may not be greater than what is reasonably required to safely illuminate the staging area.

With implementation of MM AES-4.1 and compliance with the County's Public Nuisance Lighting Ordinance, the proposed project would not significantly impact adjacent land uses with increased nighttime light levels or daytime glare from building materials. **(Less than Significant Impact)**

3.1.2.2 *Cumulative Impacts*

Impact AES-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant aesthetics impact. **(Less than Significant Cumulative Impact)**

The project would not result in impacts to scenic resources within a state scenic highway and, therefore, would not contribute to a cumulative impact to scenic resources within a state scenic highway. Similar to the projects listed in Table 3.0-1, the proposed project would be urban infill and would be consistent with the surrounding urban environment, would not substantially alter views from local scenic ridgeways, and would not obstruct views of scenic resources such as scenic waterways, Mount Diablo, and scenic ridgeways. Cumulative projects would also be subject to the County's Public Nuisance Lighting Ordinance and local lighting ordinances. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant aesthetics impact. **(Less than Significant Cumulative Impact)**

3.2 AGRICULTURE AND FORESTRY RESOURCES

The following discussion is based, in part, on an agricultural resource analysis prepared for the project by Loewke Planning Associates, Inc. dated July 2020. A copy of this report is included in Appendix C of this EIR.

3.2.1 Environmental Setting

3.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.[6]

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.[7]

Forest Land, Timberland, and Timberland Production

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.[8] Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.[9]

[6] California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed June 25, 2021. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.
[7] California Department of Conservation. "Williamson Act." http://www.conservation.ca.gov/dlrp/lca.
[8] Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).
[9] California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed June 25, 2021. http://frap.fire.ca.gov/.

Local

The 65/35 Contra Costa County Land Preservation Plan (Measure C-1990)

Measure C-1990's policies are intended to create an Urban Limit Line (ULL) to identify the outer boundaries of urban development in the County, protect and promote the economic viability or agricultural land, protect open hillsides and significant ridgelines, manage growth in the County, and more. Specifically, Measure C-1990 restricts urban development to 35 percent of the land in the County and preserve 65 percent of the land in the County for agriculture, open space, wetlands, parks and other non-urban uses. Measure C-1990 also requires a minimum parcel size of 40-acres for prime agricultural lands.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to agricultural resources and are applicable to the proposed project.

Policy	Description
Policy 3-12	Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy and competitive agricultural economy and assuring a balance of land uses. Preservation and conservation of open space, wetlands, parks, hillsides and ridgelines should be encouraged as it is crucial to preserve the continued availability of unique habitats for wildlife and plants, protect unique scenery, and provide a wide range of recreational opportunities for county residents.
Policy 3-13	Promote cooperation between the County and cities to preserve agricultural and open space land.
Policy 8-2	Areas that are highly suited to prime agricultural production shall be protected and preserved for agriculture and standards for protecting the viability of agricultural land shall be established.
Policy 8-4	Areas designated for open space/agricultural uses shall not be considered as a reserve for urban uses and the 65 percent standard for non-urban uses must not be violated.
Policy 8-32	Agriculture shall be protected to assure a balance in land use. The policies of Measure C - 1990 shall be enforced.
Policy 9-3	Areas designated for open space shall not be considered as a reserve for urban land uses. In accordance with Measure C-1990, at least 65 percent of all land in the county shall be preserved for agriculture, open space, wetlands, parks, and non-urban uses.

Contra Costa County Ordinance Code

Chapter 810-2 of the County's Ordinance Code establishes that in order for land to qualify for agricultural preservation, it must meet certain acreage requirements and be considered prime

agricultural land.[10] Agricultural preserves must be at least 100 continuous acres, unless they qualify for the following exceptions:

- Agricultural preserves of less than one hundred contiguous acres may be established if the Board finds that an agricultural preserve of less than one hundred acres is necessary due to the unique characteristics of the agricultural enterprise in that area and that the establishment of preserves of less than one hundred acres is consistent with the General Plan; or,
- Agricultural Preserves of thirty-five contiguous acres may be established in the areas of the East Contra Costa and Byron-Bethany Irrigation Districts, as previously established by the Board of Supervisors.

In addition, no parcel of land less than 40-acres of non-prime farmland and less than 10-acres of prime farmland can be included in an agricultural preserve.

3.2.1.2 *Existing Conditions*

The approximately 30.6-acre project site is primarily undeveloped, with the exception of a ranch house and outbuildings in the south-central portion of the project site. Historically, the project site has been used as grazing land for cattle and horses.[11] The project site currently has a General Plan land use designation of SM (Single Family Residential - Medium Density) and is zoned A-2 (General Agricultural). The A-2 zoning is inconsistent with the SM General Plan land use designation. As the General Plan is controlling, the site is considered residential. According to the State Department of Conservation, the project site is designated as and surrounded by Urban and Built-Up Land and does not meet the definition of prime agricultural farmland (see Appendix C).[12] The project site is not subject to a Williamson Act contract.

3.2.2 Impact Discussion

For the purpose of determining the significance of the project's impact on agriculture and forestry resources, would the project:

1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

[10] Prime farmland is defines as meeting any of the following criteria:(a)all land that qualifies for rating as class I or II in the Natural Resource Conservation Service land use capability classifications; (b)all land that qualifies for rating eighty through one hundred in the Stone Index Rating; (c)land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; (d)land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural production not less than two hundred dollars per acre; and, (e) land which has returned from the production of unprocessed agricultural plant products an annual gross of not less than two hundred dollars ($200) per acre for three of the previous five years.

[11] EMG. Phase I Environmental Site Assessment. EMG Project No. 139430.19R000-001.135. August 16, 2019. Page 28.

[12] California Department of Conservation. "California Important Farmland Finder." Accessed June 25, 2021. https://maps.conservation.ca.gov/DLRP/CIFF/

2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
4) Result in a loss of forest land or conversion of forest land to non-forest use?
5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

3.2.2.1 *Project Impacts*

Impact AG-1:	The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. **(No Impact)**

According to the Department of Conservation, the project site is designated as and surrounded by Urban and Built-Up Land[13]; thus, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. **(No Impact)**

Impact AG-2:	The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(Less than Significant Impact)**

The project site currently has a General Plan land use designation of SM (Single Family Residential - Medium) and is zoned A-2 (General Agriculture). While the project site is zoned for agricultural uses, it is located within the ULL established by Measure C-1990 and does not meet the definition of prime agricultural land, per Chapter 810-2 of the County's Ordinance Code. In addition, given that the project site has a current General Plan land use designation of SM, the County has accounted for future urban development of the project site. The project site is not subject to a Williamson Act contract. The surrounding land uses are all urban and not zoned for agriculture. For these reasons, the proposed project would not be in conflict with the existing agriculture zoning nor a Williamson Act contract. **(Less than Significant Impact)**

Impact AG-3:	The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

The proposed project would not result in the loss or conversion of forest land to non-forest use because the project site and the surrounding properties are not currently zoned for forest land, timberland, or timberland production. In addition, the project site does not qualify as forest land or timber land as defined by the California Public Resources Code. **(No Impact)**

[13] Ibid.

Impact AG-4:	The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

See response to Impact AG-3 above. **(No Impact)**

Impact AG-5:	The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

As previously discussed, the project site and the surrounding properties do not contain farmland or forest land. Therefore, the project would not result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

3.2.2.2 *Cumulative Impacts*

Impact AG-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant agricultural and forestry resources impact. **(No Cumulative Impact)**

The proposed project would not impact agricultural or forest resources or lands; therefore, it would not contribute to a cumulative agricultural or forest impact. **(No Cumulative Impact)**

3.3 AIR QUALITY

The following discussion is based, in part, on an Air Quality & Greenhouse Gas Emissions Assessment prepared for the project by Illingworth & Rodkin, Inc., dated October 2021, and a peer review prepared by Atmospheric Dynamics, Inc., dated October 2021. A copy of these reports are included in Appendix D of this EIR.

3.3.1 Environmental Setting

3.3.1.1 *Background Information*

Criteria Pollutants

Air quality in the Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level ozone (O_3), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO_x), and lead.[14] Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health effects are summarized in Table 3.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

Table 3.3-1: Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Cardiopulmonary function impairment
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility
Fine Particulate Matter ($PM_{2.5}$) and Coarse Particulate Matter (PM_{10})	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	• Reduced lung function, especially in children • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Reduced visibility
Toxic Air Contaminants (TACs)	Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders

[14] The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.

High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO_x. These precursor pollutants react under certain meteorological conditions to form high O_3 levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O_3 levels. The highest O_3 levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide emissions and localized emissions.

Toxic Air Contaminants

TACs are a broad class of compounds known to have health effects. They include, but are not limited to, criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).[15] Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

[15] California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed October 6, 2021. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

3.3.1.2 *Regulatory Framework*

Federal and State

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously), including PM, O_3, CO, SO_x, NO_x, and lead.

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in addition to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel-fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_X.

Regional and Local

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards will be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan. The 2017 Clean Air Plan focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 Clean Air Plan describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.[16]

[16] BAAQMD. *Final 2017 Clean Air Plan.* April 19, 2017. http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to air quality and are applicable to the proposed project.

Policy/Implementation Measure	Description
Policy 8-103	When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.
Policy 8-104	Proposed projects shall be reviewed for their potential to generate hazardous air pollutants.
Policy 8-105	Land uses which are sensitive to air pollution shall be separated from sources of air pollution.
Implementation Measure 8-dl	Review major development applications for consistency with regional air quality plan assumptions.
Implementation Measure 8-dm	Review major development applications to ensure that buffer zones are provided between major air pollution sources (freeways, industry, etc.) or sources of hazardous pollutants and sensitive receptors such as hospitals, convalescent homes and residences.

3.3.1.3 *Existing Conditions*

The project is located in Contra Costa County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the state and federal level. The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for PM_{10} under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3 and PM_{10}, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$, and apply to both construction period and operational period impacts.

The majority of the project site is undeveloped, except for a ranch house and outbuildings in the southwest corner. The main sources of air pollution are from vehicle trips to and from the project

site. The nearest sensitive receptors are single-family homes adjacent to the eastern property line of the project site, and the Seven Hills School directly north of the project site.

3.3.2 Impact Discussion

For the purpose of determining the significance of the project's impact on air quality, would the project:

1) Conflict with or obstruct implementation of the applicable air quality plan?
2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
3) Expose sensitive receptors to substantial pollutant concentrations?
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Note: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations.

3.3.2.1 *Thresholds of Significance*

Impacts from the Project

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based, to the extent possible, on scientific and factual data. The County of Contra Costa has considered the air quality thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 3.3-2 below.

Table 3.3-2: BAAQMD Air Quality Significance Thresholds			
Pollutant	**Construction Thresholds**	**Operation Thresholds**	
	Average Daily Emissions (pounds/day)	**Average Daily Emissions (pounds/day)**	**Annual Average Emissions (tons/year)**
Criteria Air Pollutants			
ROG, NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)			
Health Hazard	**Single Source**	**Combined Cumulative Sources**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental Annual $PM_{2.5}$	0.3 µg/m^3	0.8 µg/m^3 (average)	

3.3.2.2 *Project Impacts*

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan**. (Less than Significant Impact with Mitigation Incorporated)**

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin. As previously stated, BAAQMD's most recently adopted plan is the 2017 Clean Air Plan. The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The proposed project would not conflict with the latest Clean Air planning efforts

because the project would have operational emissions below the BAAQMD thresholds and would be an urban infill development.

Compliance with the County's Climate Action Plan is discussed in Section 3.8 Greenhouse Gas Emissions.

Regional Criteria Pollutant Emissions

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod along with construction and operational inputs can be found in Appendix D.

Construction Period Emissions

CalEEMod provided annual emissions for construction including both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The project construction schedule and equipment usage assume the project would be constructed over a period of four years (844 workdays). Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 3.3-3 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project.

Table 3.3-3: Average Daily Construction Period Emissions - Unmitigated

Year	ROG (lbs./day)	NO_X (lbs./day)	PM_{10} (lbs./day)	$PM_{2.5}$ (lbs./day)
Year 1[1]	6.52	**66.02**	3.30	2.75
Year 2	3.61	31.67	1.83	1.40
Year 3	45.27	22.84	1.39	1.00
Year 4[1]	**59.72**	20.65	1.25	0.87
Average	29.78	31.95	1.80	1.38
BAAQMD Thresholds (lbs./day)	**54**	**54**	**82**	**54**
Exceed Threshold?	**Yes**	**Yes**	No	No

[1]At the time of modeling, 132 workdays were assumed in 2021 (Year 1) and 192 workdays were assumed in 2024 (Year 4).

As shown in Table 3.3-3, above, the project would generate significant levels of average daily ROG and NO_X emissions in Year 4 and Year 1 of construction, respectively. Additionally, construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles

leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices (BMPs) are implemented to reduce these emissions.

Mitigation Measures: The project will be required to implement the following mitigation measures to reduce reactive organic gas (ROG), nitrous oxide ($NO_{X)}$ emissions, and fugitive dust generation to a less than significant level:

MM AIR-1.1: Enhanced BAAQMD Best Management Practices: The project shall implement the Bay Area Air Quality Management District's (BAAQMD's) recommended best management practices (BMPs) and additional measures to reduce construction equipment exhaust emissions. These measures shall include the following:

a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered three times a day and at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content shall be verified by lab samples or moisture probe.

b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c) All visible mud or dirt track-out onto adjacent public roads shall be removed using a wet power vacuum street sweeper at least once per day. The use of dry power sweeping shall be prohibited.

d) All vehicle speeds on unpaved roads shall be limited to 15 mph.

e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g) Use interior coatings with no more than 88 grams per liter volatile organic compounds (VOC) (i.e., ROG) and exterior coatings with no more than 132 grams per liter VOC (i.e., ROG) to reduce daily emissions by at least 12 percent. Coating must also meet or exceed BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). Alternatively, the project could submit a plan to demonstrate that overall VOC content of architectural coatings would be at least 12 percent below BAAQMD requirements.

h) Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

i) All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph and visible dust extends beyond site boundaries.

j) Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.

k) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

l) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

m) Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) Site accesses to a distance of 100 feet from public paved roads shall be treated with a six to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment prior to leaving the site.

n) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

MM AIR-1.2: Selection of Construction Equipment: Prior to the issuance of any demolition, grading, and/or building permits, the project applicant shall retain a qualified consultant to develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 72 percent reduction in diesel particulate matter (DPM) exhaust emissions or greater and a fleet-wide average 16 percent reduction in NO_X or greater. This is the minimum reduction required to reduce the project impacts (i.e., NO_X emissions and cancer risk) to a less than significant level. The feasible plan to achieve this reduction would include the following:

a) All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 interim engines. Where Tier 4 equipment is not available, exceptions could be made for equipment that includes California Air Resources Board (CARB)-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that is electrically powered or uses non-diesel fuels would also meet this requirement.

MM AIR-1.1 would achieve greater than an 80 percent reduction in on-site fugitive PM_{10} and $PM_{2.5}$ emissions and would reduce ROG emissions to below the BAAQMD threshold. With implementation of MM AIR-1.2, NO_X emissions from construction would be reduced by as much as 54 percent in Year 1 of construction resulting in emissions below the BAAQMD threshold.

Therefore, with implementation of MM-AIR-1.1 and MM-AIR-1.2, project construction would not exceed BAAQMD's thresholds of significance.

Operational Period Emissions

Operational period emissions from the project would be generated primarily from vehicles driven by future residents, employees, and guests. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are also typical emissions from these types of uses. The proposed CCRC also would include a 500-kilowatt (kW) diesel-fueled emergency generator. The emergency generator would be tested periodically and would power the proposed CCRC in the event of a power failure. For modeling purposes, it was assumed that the generators would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit these engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour. CalEEMod was used to estimate emissions from operation of the proposed project. A summary of the calculated annual operational emissions is provided in Table 3.3-4, below. It was assumed that the earliest year of project operation would occur in 2025.

Table 3.3-4: Operational Period Emissions

Scenario	ROG	NO_X	PM_{10}	$PM_{2.5}$
2025 Project Operational Emissions (tons/year)	4.08	1.15	1.03	0.32
BAAQMD Thresholds (tons/year)	**10**	**10**	**15**	**10**
Exceed Threshold?	No	No	No	No
2025 Project Operational Emissions (lbs./day)	22.4	6.3	5.6	1.8
BAAQMD Thresholds (lbs./day)[1]	**54**	**54**	**82**	**54**
Exceed Threshold?	No	No	No	No
[1]Assumes 365-day operation				

As shown in Table 3.3-4, above, the project would not exceed annual or daily BAAQMD significance thresholds during project operation. Additionally, project emissions would decrease over time as vehicle fuel efficiency is increased, greater numbers of electric vehicles are used, and more green technologies are incorporated. Therefore, the project would not conflict with or obstruct implementation of the 2017 CAP. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-2:	The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Less than Significant Impact with Mitigation Incorporated)**

As stated in the BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. If a project exceeds the identified significance thresholds, its emissions

would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As described in Section 3.3.1.3 Existing Conditions, the Bay Area is considered a nonattainment area for ground-level O_3, $PM_{2.5}$, and PM_{10} under the federal Clean Air Act and/or the California Clean Air Act. As part of an effort to attain and maintain ambient air quality standards for O_3 and PM_{10}, BAAQMD has established thresholds of significance for these air pollutants and their precursors. As described under Impact AIR-1, with implementation of mitigation measures MM AIR-1.1 and MM AIR-1.2, the project would not exceed BAAQMD thresholds for these air pollutants during construction or operation. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-3:	The project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact with Mitigation Incorporated)**

This project would introduce new sources of TACs during construction (i.e., on-site construction activity and truck hauling emissions) and operation (i.e., emergency diesel generators). Sensitive receptors within the project vicinity include residences to the south, west, and east of the project site and the Seven Hills School adjacent to the northern boundary of the project site.

Construction Toxic Air Contaminants

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The maximally exposed individual (MEI) for construction cancer risk was determined to be located at a single-family residence adjacent to the southeastern boundary of the project site near Adirondack Way (see Figure 3.3-1). The maximum annual $PM_{2.5}$ concentration from construction was shown to occur at the Seven Hills School, adjacent to the northern boundary of the project (as seen in Figure 3.3-1) and was estimated to be 0.18 $\mu g/m^3$ occurring during Year 1 of construction. Table 3.3-5 summarizes the community health risk impacts associated with project construction.

Table 3.3-5: Construction Risk Impacts at the Off-Site Residential MEI

Source		Cancer Risk (per million)[2]	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction	Unmitigated	**14.2**	0.18	0.01
	Mitigated[1]	1.6	0.07	<0.01
BAAQMD Single-Source Threshold		**>10.0**	**>0.3**	**>1.0**
Exceed Threshold?	Unmitigated	**Yes**	No	No
	Mitigated[1]	No	No	No

[1] Mitigation Measures include construction equipment engines with Tier 4 Interim emissions limits, as described in MM AIR-1.2.

[2] Assumes 3rd trimester infant to adulthood.

As shown in Table 3.3-5, unmitigated project construction would exceed the BAAQMD single-source threshold for cancer risk at the MEI. However, implementation of MM AIR-1.2 would reduce the project's cancer risk impacts to less than significant levels. Both the unmitigated and mitigated maximum annual $PM_{2.5}$ concentration and HI value from project construction would not exceed their respective BAAQMD single-source thresholds.

The annual DPM at the Seven Hills School was also evaluated as part of this analysis. The maximum unmitigated cancer risks at the school would be 4.6 in a million, which is below the BAAQMD single-source threshold. Implementation of MM AIR-1.2 would further reduce the maximum cancer risk to 0.59 in a million. **(Less than Significant Impact with Mitigation Incorporated)**

Operational Toxic Air Contaminants

As previously stated, operation of the project would have long-term emissions from the proposed emergency generator. Operation of a diesel generator would be a source of TAC emissions. Figure 3.3-1 shows the proposed location of the generator. The MEI for project operation was determined to be in a single-family residence adjacent to the construction MEI. CalEEMod was used to calculate the health risk impacts of the proposed diesel generator at the MEI and the results are summarized in Table 3.3-6.

Table 3.3-6: Emergency Generator Operation Risk Impacts at Off-Site MEI

Source	Cancer Risk (per million)[1]	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Emergency Generator	1.03	<0.01	<0.01
BAAQMD Single-Source Threshold	**>10.0**	**>0.3**	**>1.0**
Exceed Threshold?	No	No	No

[1]Assumes 3rd trimester infant to adulthood.

As shown in Table 3.3-6, the proposed emergency generator would not exceed BAAQMD single-source thresholds at the location of the MEI. Additionally, diesel engines are subject to CARB's Stationary Diesel Airborne Toxics Control Measure and the proposed generator would require permits from the BAAQMD since it would be larger than 50 horsepower. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions will have to meet Best Available Control Technology for Toxics and pass the toxic risk screening level of less than ten in a million. The risk assessment would be prepared by the BAAQMD. Depending on results, the BAAQMD would set limits for DPM emissions (e.g., more restrictive engine operation periods). Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality community risk impact. **(Less than Significant Impact)**

Source: Illingworth & Rodkin, Inc., September 17, 2021.

LOCATIONS OF OFF-SITE RECEPTORS, MEIS, AND PROPOSED EMERGENCY GENERATOR | FIGURE 3.3-1

Combined Project Toxic Air Contaminants

The sensitive receptor identified as the construction MEI (single-family residence along southeast property line) is the overall project MEI, as the combined health impacts from both construction and operation of the emergency generator at this location are the greatest. The project MEI would be exposed to approximately five years of construction emissions and 25 years of operational (emergency backup generator) emissions. The cancer risks, annual $PM_{2.5}$ concentrations, and HI values associated with construction and operation of generator are provided in Table 3.3-7.

Table 3.3-7: Construction and Operation Risk Impacts at the Off-Site Project MEI

Source		Cancer Risk (per million)[1]	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Unmitigated Project Construction (Years 0-4)		**14.18**	0.15	0.01
Mitigated Project Construction (Years 0-4)		1.61	0.05	<0.01
Project Generator (Years 5-30)		0.41	<0.01	<0.01
Unmitigated Total/Maximum Project (Years 0-30)		**14.59**	0.15	0.01
Mitigated Total/Maximum Project (Years 0-30)		2.02	0.05	<0.01
BAAQMD Single-Source Threshold		**>10.0**	**>0.3**	**>1.0**
Exceed Threshold?	Unmitigated	**Yes**	No	No
	Mitigated	No	No	No

[1]Assumes 3rd trimester infant to adulthood.

The project's unmitigated maximum cancer risks from construction and operation activities would exceed the single-source significance threshold. However, implementation of MM AIR-1.1 and MM AIR-1.2 would reduce the cancer risk to less than significant levels. Both the unmitigated and mitigated annual $PM_{2.5}$ concentration and HI value from construction and operation activities would not exceed the single-source significance thresholds. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)**

The project would generate localized emissions of diesel exhaust during construction equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off-site by resulting in confirmed odor complaints. The project would not include any sources of significant odors that would cause complaints from surrounding uses. The project includes a trash compactor within the maintenance building, however, since the compactor would be located inside the building,

odors are not likely to affect people off-site. For these reasons, the proposed project would have a less than significant odor impact. **(Less than Significant Impact)**

3.3.2.3 *Cumulative Impacts*

Impact AIR-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant air quality impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Cumulative Exposure of Sensitive Receptors

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of the project site (i.e., influence area). These sources include railroads, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicated there are no roadways within the influence area that have an average daily traffic (ADT) over 10,000 vehicles. Additionally, a review of the BAAQMD's Permitted Stationary Sources 2018 GIS website map indicates there are no existing stationary sources of TACs within the site's 1,000-foot influence area. Therefore, there are no existing nearby TAC sources that would combine with the proposed project and result in a cumulative health risk impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

As discussed above, the proposed project would not, by itself, result in any air pollutant emissions exceeding the BAAQMD's significance thresholds with implementation of MM AIR-1.1 and MM AIR-1.2. As a result, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.3.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 *(BIA v. BAAQMD)*, effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because the County of Contra Costa has policies that address existing air quality conditions affecting a proposed project.

On-Site Community Health Risk – New Project Residents

A health risk assessment was completed to analyze the impact the new TAC source (i.e., emergency diesel generator) would have on the new proposed sensitive receptors (i.e. senior residents) that the project would introduce to the site. New sensitive receptors would be located in the proposed apartment building, proposed single-story buildings, and the proposed health care center. The on-site MEI was determined to be located in one of the proposed single-story buildings located between the proposed apartment building and the proposed health care center. The same emergency generator discussed under Impact AIR-3 was used in this health risk assessment. Given that there are no existing TAC sources within the project influence area, no additional sources were considered. A summary of this assessment is shown in Table 3.3-8.

Table 3.3-8: On-Site Impacts from Operation of Proposed Emergency Generator			
Location	**Cancer Risk (per million)[1]**	**Annual $PM_{2.5}$ ($\mu g/m^3$)**	**Hazard Index**
On-Site MEI (Single-Story Residential Building)	0.37	<0.01	<0.001
Health Care Center – Floor 2 Maximum	0.12	<0.01	<0.001
Apartment – Floor 3 Maximum	0.07	<0.01	<0.001
BAAQMD Single-Source Threshold	**>10.0**	**>0.3**	**>1.0**
Exceed Threshold?	No	No	No

The proposed emergency generator would not exceed BAAQMD single-source thresholds for cancer risk, annual $PM_{2.5}$ concentrations, or the HI at the on-site MEI. Therefore, the project would not expose new sensitive receptors on-site to substantial pollutant concentrations.

3.4 BIOLOGICAL RESOURCES

The following discussion was based, in part, on a Biological Resources Report prepared by LSA in February 2020, plant survey and wetland delineation prepared by Olberding Environmental, Inc. in 2020, an Arborist Report prepared in July 2020, a United States Army Corp of Engineers Wetland Jurisdictional Determination in August 2021, and (a peer review prepared by H.T. Harvey & Associates in September 2021. Copies of these reports are included as Appendix E of this EIR.

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and the CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To "take" a listed species, as defined by the State of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.[17] Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

[17] United States Department of the Interior. "Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take." Accessed August 26, 2021. https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

Regional and Local

Contra Costa County Tree Ordinance

The Contra Costa County Tree Ordinance (Ordinance Code Chapter 816.6) serves to protect trees as valuable assets that are economically, environmentally, and aesthetically important to the community. This tree ordinance provides for the preservation of certain protected trees in unincorporated areas of Contra Costa County by controlling tree removal in the interest of public health, safety and welfare, and to preserve scenic beauty. For any 'undeveloped property' within any district, Contra Costa County Tree Protection and Preservation Ordinance 816-6 defines 'protected trees' as any of the following:

- Any tree measuring twenty inches or larger in circumference (approximately six and one-half inches diameter), measured at diameter breast height (dbh) (4.5 feet from ground level) including the oak trees listed above;
- Any multi-stemmed tree with the sum of the circumferences measuring 40 inches or larger, measured at dbh;
- Any significant grouping of trees, including groves of four or more trees;
- Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval;
- Any tree required to be planted as a replacement for an unlawfully removed tree.

A permit is required for any person proposing to trench, grade or fill within the dripline of any protected tree, or to cut down, destroy, trim by topping or remove any protected tree. The request to remove/impact trees is being considered with this environmental document and it will be considered as part of the proposed land use entitlement of the project.

Contra Costa County Creek Structure Setback

Title 9, Division 914 (Sections 914-14.010, .012, .014) of the Contra Costa County Ordinance Code, in codifying conservation goals and policies of the Contra Costa County General Plan, discusses policies related to water resources within Contra Costa County. These sections define creek structure setback requirements and defines restrictions for development adjacent to natural watercourses. The

creek structure setback area shall be a minimum of 100 feet, 50 feet on each side of the centerline of the creek, and shall be of a width adequate to allow maintenance and to prevent damage to adjacent structures, the natural channel, and associated riparian vegetation. Any grading, filling, and construction activity that occurs adjacent to natural watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution, and on-site water control shall be required of major new developments so that no increase in peak flows occurs relative to the site's pre-development condition, unless the Planning Agency determines that off-site measures can be employed which are equally effective in preventing adverse downstream impacts. New development which modifies or destroys riparian habitat because of needed flood control is responsible for restoring and enhancing an equivalent amount of habitat within or in close proximity to the project area. Contra Costa County requires that revegetation of watercourses shall employ native vegetation, providing the type of vegetation is compatible with the watercourse's maintenance program, and does not have a negative impact or alter channel capacity.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to biological resources and are applicable to the proposed project.

Policy	Description
Policy 8-6	Significant trees, natural vegetation, and wildlife populations generally shall be preserved.
Policy 8-7	Important wildlife habitats which would be disturbed by major development shall be preserved, and corridors for wildlife migration between undeveloped lands shall be retained.
Policy 8-8	Significant ecological resource areas in the County shall be identified and designated for compatible low-intensity land uses. Setback zones shall be established around the resource areas to assist in their protection.
Policy 8-10	Any development located or proposed within significant ecological resource areas shall ensure that the resource is protected.
Policy 8-14	Development on hillsides shall be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion. Development on open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions.
Policy 8-17	The ecological value of wetland areas, especially the salt marshes and tidelands of the bay and delta, shall be recognized. Existing wetlands in the County shall be identified and regulated. Restoration of degraded wetland areas shall be encouraged and supported whenever possible.
Policy 8-21	The planting of native trees and shrubs shall be encouraged in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are sustained in urban areas.

Policy 8-24	The County shall strive to identify and conserve remaining upland habitat areas which are adjacent to wetlands and are critical to the survival and nesting of wetland species.
Policy 8-27	Seasonal wetlands in grassland areas of the County shall be identified and protected.
Policy 8-28	Efforts shall be made to identify and protect the County's mature native oak, bay, and buckeye trees.
Policy 8-80	Wherever possible, remaining natural watercourses and their riparian zones shall be restored to improve their function as habitats.
Policy 8-82	Riparian habitat shall be protected by providing for channel cross-sections adequate to carry 100-year flows, as per policies contained in the Public Facilities/Services Element. If it is not possible to provide a channel cross section sufficient to carry the 100-year flow, then detention basins should be developed.
Policy 8-86	Existing native riparian habitat shall be preserved and enhanced by new development unless public safety concerns require removal of habitat for flood control or other public purposes.
Policy 8-89	Setback areas shall be provided along natural creeks and streams in areas planned for urbanization. The setback areas shall be of a width adequate to allow maintenance and to prevent damage to adjacent structures, the natural channel and associated riparian vegetation. The setback area shall be a minimum of 100 feet; 50 feet on each side of the centerline of the creek.

3.4.1.2 *Existing Conditions*

Habitat Types On-Site

Several types of habitats exist on-site. These habitats include annual grassland, developed land, oak woodland, ornamental woodland, perennial drainage, riparian woodland, and seasonal wetlands. A map of the existing habitats is included in Figure 3.4-1.

Annual Grassland

The grassland habitat on-site is the most dominant habitat type, occurring throughout the majority of the project site. Dominant plant species within this habitat include wild oats (*Avena sp*.), ripgut brome (*Bromus diandrus*), Harding grass (*Phalaris aquatica*), Italian thistle (*Carduus pycnocephalus),* and red-stemmed filaree (*Erodium cicutarium*). Dominance of the annual grassland species shifted based on the topography of the project site. Low-lying, swale-like areas were typically dominated by Harding grass, Italian rye grass (*Lolium perenne*), and yellow star thistle (*Centaurea solstitialis*). Topographically higher portions of the annual grassland contained bare patches associated with small, rocky outcrops. These areas within the annual grassland were still dominated by ruderal grasses.

Developed

The developed habitat on-site includes the existing single-family residence and its associated landscaping, outbuildings, and paved roads and driveways. This habitat typically lacks vegetation.

Source: H.T. Harvey & Associates, July 2021.

EXISTING HABITATS ON-SITE

FIGURE 3.4-1

Oaks

Individual oak trees and groups of oak trees occur throughout the matrix of annual grassland habitat. The groups of oaks are typically small and consist of one to a few valley oaks (*Quercus lobata*), and other species such as California bay (*Umbellularia californica*), black walnut (*Juglans nigra*), and almond (*Prunus dulcis*) would also occasionally occur.

Ornamental Woodland

The ornamental woodland habitat type occurs throughout the center of the project site, and primarily in the area immediately around the house. The habitat is characterized by stands of non-native species including Arizona cypress (*Cupressus arizonica*), Peruvian pepper tree (*Schinus mole*), almond, privet (*Ligustrum japonicum*), and river red gum (*Eucalyptus camaldulensis*).

Perennial Drainage

Two perennial drainages exist on-site. The perennial drainage in the center of the property bisects the site, flowing south to north. Before exiting the site, the perennial drainage flows through a small section of concrete lined channel, then into a metal culvert at the northernmost boundary of the property, which discharges into Walnut Creek off site. The channel of the central perennial drainage is relatively shallow and contained water at the time of a June 2021 survey conducted by H.T. Harvey & Associates. Bank heights vary along the stream but are typically quite low, and in general were on the order of one to two feet up from the ordinary high-water mark (OHWM) of the drainage. The channel bed itself is heavily vegetated, dominated by a monoculture of broad-leaved cattail (*Typha latifolia*) at the south end, and a combination of California bulrush (*Schoenoplectus californicus*), Harding grass, Italian rye grass, rabbitsfoot grass (*Polypogon monspeliensis*), Baltic rush (*Juncus balticus*), tall flatsedge (*Cyperus eragrostis*), and salt grass (*Distichlis spicata*) in the northern portion of the drainage.

The other perennial drainage is located at the southern end of the project and runs along Seven Hills Ranch Road at the current entrance to the project site. This drainage enters the site from a culverted section of the drainage at the terminus of Kinross Drive (identified in Figure 3.4-1 as “culverted perennial drainage). The drainage is a constructed ditch, approximately two feet wide, with shallow (primarily less than one foot tall) banks. The ditch flows along the southern boundary of the property to the west where it flows into a roadside ditch along Seven Hills Ranch Road and continues off-site, eventually flowing into Walnut Creek through a storm drain. This drainage was dry at the time of the June 2021 survey, and there were no indicators of recent flow. The drainage appears to have been constructed in uplands, and its primary purpose is to convey storm water runoff during and following precipitation events in the winter months. The bed of this drainage includes a combination of upland and some hydrophytic ruderal species, including wild oats, Harding grass, Italian rye grass, though extensive or continuous wetland habitat is lacking. The banks of this perennial drainage are lined with ruderal grass species, including ripgut brome and wild oats, with some patches of Himalayan blackberry (*Rubus armeniacus*). The overstory canopy along the length of the drainage in the project site is ornamental woodland as described above.

Both perennial drainages on-site were verified by the USACE to be under federal jurisdiction in March 2021. However, the constructed ditch and concrete-lined channel segments are considered

Non-Jurisdictional Waters and are exempt from federal regulation. A map of all federally protected waters and wetlands on-site is provided in Figure 3.4-2.

Riparian Woodland

One small area of riparian woodland exists in the southern portion of the site, where it occurs on either side of the perennial drainage. The dominant tree species in this habitat are arroyo willow (*Salix lasiolepis*) and valley oak. The occurrence of willows in this area could be attributed to this being a low spot in the landscape where run-off from the surrounding areas, including the development to the south and southeast, collects in winter months, before the water is then drained off by the constructed ditch (perennial drainage) flowing to the west from this patch of riparian habitat.

Seasonal Wetland

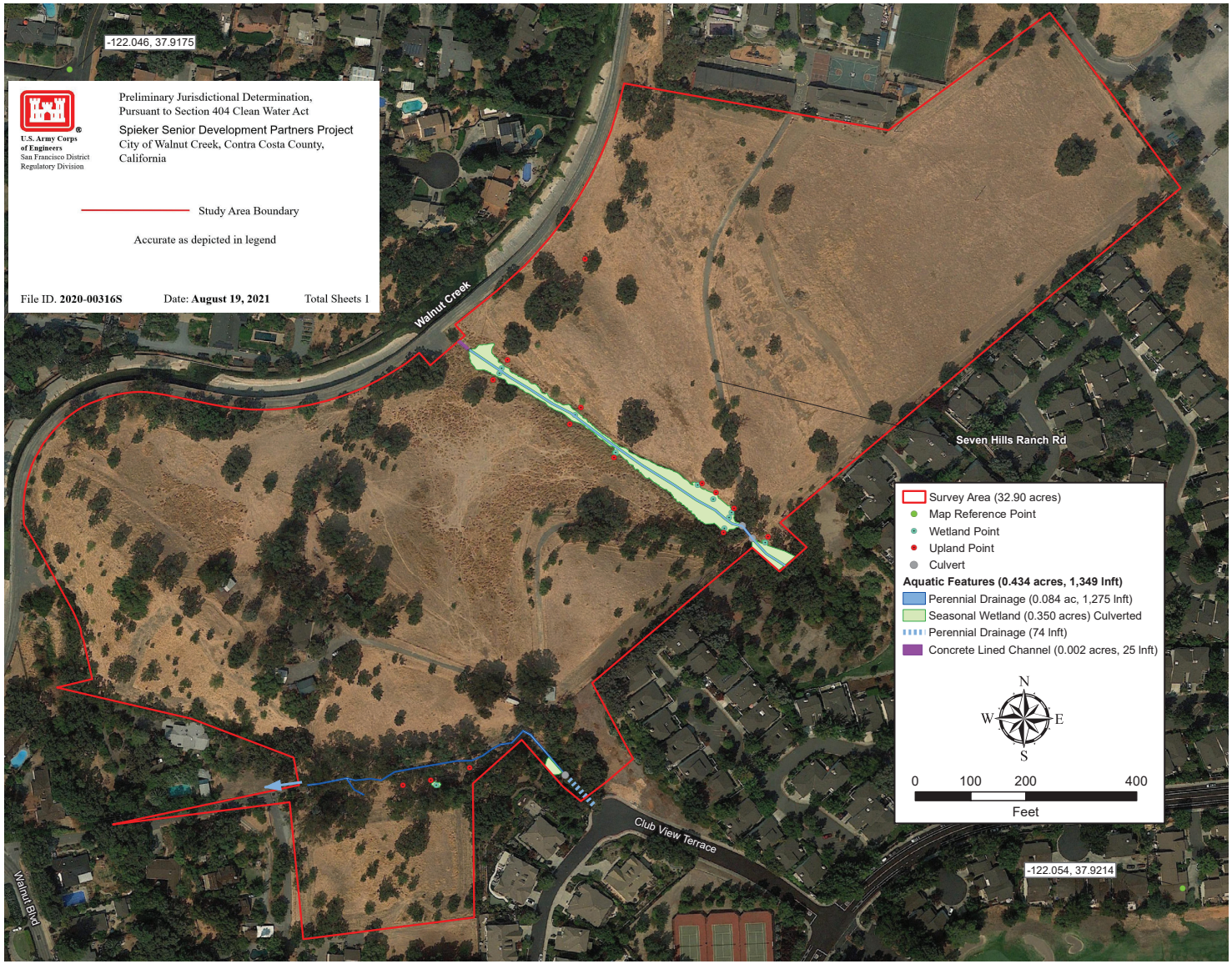
Four seasonal wetlands totaling 0.35 acres exist within the project site. The two largest seasonal wetlands occur in association with the perennial drainage in the central portion of the project site. These wetlands are dominated by Harding grass, Baltic rush, tall flatsedge, spike-rush (*Eleocharis palustris*), and creeping wildrye (*Elymus triticoides*) at the northern end of the drainage. At the southern end, the wetlands are dominated by cattails, as well as a number of other hydrophytic grass and herb species, including salt grass, and Italian rye grass. These larger, more well-established seasonal wetlands in the center of the site did not contain standing water at the time of the June 2021 survey.

At the southern boundary of the project site, there are two additional, very small seasonal wetlands. A 128 square-foot (0.003 acres) seasonal wetland was mapped in a shallow depression to the south of the perennial drainage, approximately 40 feet away from the edge of the drainage. This seasonal wetland was dominated by creeping wild rye, Baltic rush, cattails, and Italian rye grass. The second seasonal wetland in this portion of the project site is slightly larger (492 square feet; 0.01 acres), and is situation directly adjacent to the drainage and surrounded by the riparian woodland habitat described above. This wetland is dominated by Harding grass and Italian rye grass. Neither of the seasonal wetlands in the southern portion of the project site contained water at the time of the June 2021 survey.

Three out of four of the on-site wetlands were verified by the USACE to be under federal jurisdiction in August 2021. The smallest seasonal wetland was determined to be an isolated wetland and is therefore, not subject to federal regulation.

Special Status Plant Species

Background research identified the potential for 24 special-status plant species to occur in the project vicinity; however, after field surveys of the project site, it was determined that only five special-status plant species have the potential to occur on-site. Other listed species do not have the potential to occur on-site due to a lack of suitable habitat. A summary of the potential special-status plants within the project vicinity is provided in Table 3.4-1.



Source: Olberding Environmental, Inc.

FEDERALLY PROTECTED WATERS AND WETLANDS ON-SITE

FIGURE 3.4-2

Table 3.4-1: Special-Status Plant Species Potentially Occurring within the Project Area		
Species	**Status[1]**	**Suitable Habitat On-Site?**
Antioch Dunes evening-primrose (*Oenothera deltoides ssp. Howellii*)	FE/SE/1B	No
Bent-flowered fiddleneck (*Amsinckia lunaris*)	1B	Yes
Big tarplant (*Blepharizonia plumosa*)	1B	No
Brewer's western flax (*Hesperolinon breweri*)	1B	No
Congdon's tarplant (*Centromadia parryi subsp. Congdonii*)	1B	No
Contra Costa goldfields (*Lasthenia conjugens*)	FE/1B, no-take	No
Contra Costa manzanita (*Arctostaphylos manzanita ssp. laevigata*)	1B	No
Delta tule pea (*Lathyrus jepsonii var. jepsonii*)	1B	No
Diablo helianthella (*Helianthella castanea*)	1B	Yes
Fragrant fritillary (*Fritillaria liliacea*)	1B	Yes
Hall's bush-mallow (*Malacothamnus hallii*)	1B	No
Hospital Canyon larkspur (*Delphinium californicum ssp. Interius*)	1B	No
Jepson's coyote thistle (*Eryngium jepsonii*)	1B	No
Lime Ridge Eriastrum (*Eriastrum ertterae*)	1B	No
Lime Ridge Navarretia (*Navarretia gowenii*)	1B	No
Most beautiful jewel flower (*Streptanthus albidus ssp. Peramoenus*)	1B	No
Mt. Diablo buckwheat (*Eriogonum truncatum*)	1B	No
Mt. Diablo fairy-lantern (*Calochortus pulchellus*)	1B	Yes
Mt. Diablo jewel flower (*Streptanthus hispidus*)	1B	No
Mt. Diablo manzanita (*Arctostaphylos auriculata*)	1B	No
Oakland star tulip (*Calochortus umbellatus*)	CRPR 4.2	No
Oval-leaved Viburnum (*Viburnum ellipticum*)	2B	No
San Joaquin spearscale (*Extriplex joaquinana*)	1B	No
Slender-leaved pond weed (*Stuckenia filiformis spp. Alpina*)	2B	No
Woodland woollythreads (*Monolopia gracilens*)	1B	Yes
[1]Status: FE = Federally listed as endangered SE = State listed as endangered		

Table 3.4-1: Special-Status Plant Species Potentially Occurring within the Project Area		
Species	**Status[1]**	**Suitable Habitat On-Site?**
1B = California Rare Plant Rank 1B: species considered rare or endangered in California and elsewhere 2B= California Rare Plant Rank 2B: rare, threatened, or endangered in California, but more common elsewhere CRPR 4.2 =California Rare Plan Rank 4.2: moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat) Source: LSA. Biological Resources Report – Senior Residential Development Project in Walnut Creek, Contra Cosa County, California. February 2020.		

As shown in Table 3.4-1, above, there is potential suitable habitat for bent-flowered fiddleneck, Diablo helianthella, fragrant fritillary, Mt. Diablo fairy-lantern, and woodland woollythreads on-site. However, Olberding Environmental, Inc. conducted four separate special-status plant surveys in the spring and summer of 2020 during the blooming season and did not detect any of these five special-status plants on-site. The remaining 19 plant species occur within habitats or at elevations not found within the project site.

Special Status Wildlife Species

Background research identified the potential for 20 special-status wildlife species to occur in the project vicinity. A summary of the potential special-status wildlife species within the project vicinity and their potential to occur on-site is provided in Table 3.4-2. Species that would find suitable habitat on-site are discussed further below.

Table 3.4-2: Special-Status Wildlife Species Potentially Occurring within the Project Area		
Species	**Status[1]**	**Suitable Habitat On-Site?**
Invertebrates		
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	No
San Bruno elfin butterfly (*Callophrys mossii bayensis*)	FE	No
Callippe silverspot butterfly (*Speyeria callippe callippe*)	FE	No
Western bumblebee (*Bombus occidentalis*)	SC	Yes
Fish		
Delta smelt (*Hypomesus transpacificus*)	FT/SE	No
Amphibians		
California red-legged frog (*Rana draytonii*)	FT/SSC	No
Foothill yellow-legged frog (*Rana boylii*)	SE/SSC	No
California tiger salamander – Central Valley DPS (*Ambystoma californiense*)	FT/ST	No

Table 3.4-2: Special-Status Wildlife Species Potentially Occurring within the Project Area		
Species	**Status[1]**	**Suitable Habitat On-Site?**
Reptiles		
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT/ST	No
Giant garter snake (*Thamnophis gigas*)	FT/ST	No
Northern California legless lizard (*Anniella pulchra*)	SSC	No
Coast horned lizard (*Phrynosoma coronatum*)	SSC	No
Western pond turtle (*Actinemys marmorata*)	SSC	No
Birds		
Peregrine falcon (*Falco peregrinus anatum*)	FP	No
California ridgeway rail (*Rallus obsoletus obsoletus)*	FE/SE/FP	No
California least tern (*Sternula antillarum browni*)	FE/SE/FP	No
Burrowing owl (*Athene cunicularia*)	SSC	No
Loggerhead shrike (*Lanius ludovicianus*)	SSC	No
Northern harrier (*Circus cyaneus*)	SSC	No
Bald eagle (*Haliaeetus leucocephalus*)	SE/FP	No
Golden eagle (*Aquila chrysaetos*)	FP	No
White-tailed kite (*Elanus leucurus*)	FP	Yes
Mammals		
Pallid bat (*Antrozous pallidus*)	SSC	Yes
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC	No
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	SSC	No
Western red bat (*Lasiurus blossevillii*)	SSC	Yes
American badger (*Taxidea taxus*)	SSC	Yes

[1]Status:

FE = Federally listed as endangered

FT = Federally listed as threatened

FP = CDFW fully protected

SE = State listed as endangered

ST = State listed as threatened

SC = State Candidate

SSC = California Species of Special Concern

Source: LSA. Biological Resources Report – Senior Residential Development Project in Walnut Creek, Contra Cosa County, California. February 2020.

Western Bumblebees

While the project site may contain potentially suitable habitat for the western bumblebee, the species has experienced a recent range contraction and is now considered to be confined to higher elevation sites in the Sierra Nevada range and portions of the Northern California coast. Additionally, the western bumblebee has not been observed in the project vicinity since 1972. Therefore, this species does not have potential to occur on-site. [18]

White-Tailed Kites

The white-tailed kite has potential to nest on-site due to the presence of a number of moderately sized trees for nesting and grassland habitat for foraging. Due to the size of the project site, it is expected that one pair of white-tailed kites may nest on-site, at most.

Pallid Bats and Western Red Bats

Two mature valley oaks near the northeastern and southeastern corners of the site contain several suitable cavities that could potentially support day-roosting bats, and the grassland habitat itself provides suitable foraging habitat. Historically, pallid bats were likely present in a number of locations throughout the project region, but their populations have declined in recent decades. Although pallid bats have likely been extirpated as a breeder from urban areas such as the project region, this species has been detected in less developed areas near Mount Diablo in recent years,[19] and non-breeding individuals may infrequently forage over open grassland on the site, or roost on the site in rare occasions.

Western red bats roost individually in tree foliage and primarily breed in mature riparian forests. The project site does not support mature riparian forest habitat, therefore, breeding western red bats are not expected to occur on-site. However, it is possible that individual non-breeding western red bats may occasionally roost on-site.

American Badgers

American badgers are known to burrow in grassland habitats. However, no badger burrows were observed during on-site field surveys. Therefore, American badgers were determined to be absent from the project site.

3.4.2 Impact Discussion

For the purpose of determining the significance of the project's impact on biological resources, would the project:

1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans,

[18] H.T. Harvey & Associates. Spieker Senior Continuing Care Community Project – Biological Resources Report Peer Review. Revised September 17, 2021.

[19] Ibid.

policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.2.1 *Project Impacts*

Impact BIO-1:	The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**

Special-Status Plant Species

While the project site does appear to have some potentially suitable habitat for five special-status plant species (see Table 3.4-1), none of these species were detected on-site during surveys conducted by Olberding Environmental, Inc. in 2020. Therefore, it can be assumed that no special-status plant species exist on-site and the project would not result in an impact to special-status plant species. **(Less than Significant Impact)**

Special-Status Wildlife Species

The project site generally does not provide suitable habitat for local special-status wildlife species. However, there is potential for pallid bats to occur on-site. Given the number of trees on-site, there is also potential for birds to nest on-site. The potential impacts to local special-status wildlife species are described below.

Pallid Bats, Western Red Bats, and Non-Special Status Roosting Bats

Direct impacts to individual pallid bats and western red bats could occur when trees containing roosting individuals are removed. Individuals or small numbers of bats could be physically injured or killed, could be subjected to physiological stress from being disturbed during torpor, or could face increased predation because of exposure during daylight.

A small number of oak trees suitable for roosting that are proposed for removal, provide potentially suitable roosting and breeding habitat for non-special-status bats, including the big brown bat (*Eptesicus fuscus*) and California myotis (*Myotis californicus*). Removal of such trees could result in the loss of individual bats or maternity colonies if they are occupied, cause physiological stress to bats from being disturbed during turpor, or cause increased predation because of exposure during daylight.[20] Bats, and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered "take" by the CDFW.

Mitigation Measures: Tree removal and demolition activities during project construction could result in direct impacts to individual roosting pallid bats and western red bats and could result in the "take" of non-special status bat species individuals or colonies.

MM BIO-1.1: Pre-Construction Bat Surveys: A pre-activity survey for roosting bats shall be conducted at the two valley oaks (*Quercus lobata*) that support suitable roost habitat near the northeastern and southeastern corners of the project site within 14 days prior to the onset of ground-disturbing activities. A qualified biologist will conduct a survey to look for evidence of bat use within suitable habitat. If evidence of use is observed, or if high-quality roost sites (e.g., a tree with a large cavity) are present in areas where evidence of bat use might not be detectable, an evening visual survey combined with a nighttime acoustic survey shall be conducted to determine if roosting bats are present and to identify the specific location of such bats. If no roosting bats are located, project work can continue as planned.

If a maternity roost is detected, a disturbance-free buffer zone (determined by a qualified biologist) shall be implemented during the maternity roost season (March 15–August 31). No project-related activities shall take place within the buffer during the maternity season.

If an active non-breeding bat roost is located, project work shall be redesigned to avoid removal or disturbance of the occupied tree. No buffer from the roost shall be necessary during the nonmaternity season (September 1–March 14). If the roost tree itself must be removed, bats shall be passively excluded from roost habitat with one-way devices, or trees will be removed using a two-step tree removal process. The two-step process shall be initiated if exclusion with one-way devices is not feasible due to height of the roost. For the two-step process, trees shall be removed over a two-day period. On day 1, all non-suitable limbs shall be removed, and on day 2, the remainder of the tree shall be removed. Removing trees in this way creates disturbance that encourages bats to vacate the

[20] Torpor is a state of decreased physiological activity in an animal, usually marked by a reduced body temperature and metabolic rate.

tree before the potential habitat is removed. Either method shall be monitored by a qualified biologist with knowledge of bat ecology and experience with bat exclusion methods.

With implementation of MM BIO-1.1, impacts to individual pallid bats and non-special status individuals and colonies of bats would be avoided during project construction. **(Less than Significant Impact with Mitigation Incorporated)**

Western Burrowing Owl

As discussed above, the project site contains annual grasslands and field observations did identify a number of ground burrows on-site; however, they did not appear to be currently active nor recent. Given the paucity of suitable burrows and the lack of any recent breeding records from areas in the site vicinity, there is no valuable habitat for burrowing owls, and it is unlikely that burrowing owls would use the site regularly. While unlikely, given the possibility for burrowing owls to visit the site, a small potential exists for project construction to impact visiting owls, which would constitute a significant impact.

Mitigation Measure: The project will be required to implement the following mitigation measures to reduce impacts to western burrowing owls to a less than significant level:

MM BIO-1.2: Pre-construction surveys for western burrowing owl shall be conducted in accordance with the March 7, 2012, CDFW Staff Report on Burrowing Owl Mitigation. If preconstruction surveys find active nests avoidance and minimization guidelines (such as site surveillance, buffers, translocation, artificial burrows, or habitat replacement) must be developed prior to the start of construction in accordance with the March 7, 2012, CDFW memo, and through consultation with CDFW.

With implementation of MM BIO-1.2, impacts to western burrowing owls would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

White-Tailed Kites and Other Nesting Birds

The mature trees on the project site could provide nesting habitat for birds, including migratory birds and raptors such as the white-tailed kite. Nesting birds are among the species protected under provisions of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 2800.

Construction of the project during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute an impact. Construction activities such as tree removal and site grading that disturb a nesting bird or raptor on-site or immediately adjacent to the construction zone would also constitute an impact.

Mitigation Measure: The project will be required to implement the following mitigation measures to reduce impacts to raptors and nesting birds to a less than significant level:

MM BIO-1.3: Avoidance and Nesting Inhibition: To the extent feasible, construction activities (or at least the commencement of such activities) shall be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts on nesting birds protected under the MBTA and California Fish and Game Code shall be avoided. The nesting season for most birds in Contra Costa County extends from February 1 through August 31.

If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project shall be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation, and prevent the potential delay of the project due to the presence of active nests in these substrates.

MM BIO-1.4: Pre-Construction Bird Surveys: If not possible to schedule construction activities between September 1 and January 31, pre-construction nesting bird surveys shall be completed by a qualified biologist no more than seven days before construction begins. During this survey, the biologist or ornithologist shall inspect all trees and other possible nesting habitats in and within 250 feet of the project boundary.

If an active nest is found in an area that would be disturbed by construction, the biologist shall designate an adequate buffer zone (typically 300 feet for raptors and 100 feet for other species) to be established around the nest, in consultation with the California Department of Fish and Wildlife (CDFW). The buffer would ensure that nests shall not be disturbed until the young have fledged (left the nest), the nest is vacated, and there is no evidence of second nesting attempts.

The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the Department of Conservation and Development, prior to the removal of trees and issuance of a grading permit or demolition permit.

Conformance to state and federal law protecting nesting birds through implementation of mitigation measures MM BIO-1.3 through MM BIO-1.4 would reduce potential impacts to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-2:	The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**

As previously discussed, a limited amount of riparian habitat occurs in the southernmost portion of the project site, and is associated with the perennial drainage in between the end of Kinross Drive and Seven Hills Ranch Road. The tree species associated with this riparian woodland habitat include predominantly arroyo willow and valley oak individuals. The project, as proposed, would permanently impact approximately 0.16 acres of riparian woodland habitat and will result in the removal or damage of up to 13 riparian trees due to partial clearing for the extension of Kinross Drive.

Mitigation Measures: Impacts to riparian woodland habitat would be considered a significant impact due to the importance of this habitat type to regional biodiversity. The project shall implement the following mitigation measures to reduce this impact to a less than significant level.

MM BIO-2.1: Avoidance and Minimization: Prior to the start of construction the property owner or project sponsor shall clearly delineate riparian habitat to be avoided with fencing around the dripline of the riparian canopy. Further indirect impacts to riparian habitat shall be avoided by implementing the following measures during construction:

a) Existing native vegetation shall be retained by removing only as much vegetation as necessary to accommodate the new road. Any vegetation removed shall be replaced per MM BIO-2.2 below.
b) Temporary disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete the work. Any vegetation removed shall be replaced per MM BIO-2.2 below.
c) Exposed soil shall be controlled by stabilizing slopes (e.g., with erosion control blankets) and protecting channels (e.g., using silt fences or straw wattles).
d) Site ingress/egress locations shall be stabilized (e.g., with erosion control blankets).

MM BIO-2.2: Compensatory Mitigation for Permanent Loss of Riparian Habitat: For areas that are not able to be avoided, the property owner or project sponsor shall restore or enhance an equivalent area at a 2:1 (mitigation:impact) ratio, on an acreage basis (or as otherwise directed by a regulatory agency with regulatory authority over impacts to riparian habitat on the site). Prior to issuance of a grading permit, the applicant shall prepare a Riparian and Aquatic Habitat and Monitoring Plan (Riparian and Aquatic HMMP) for aquatic and riparian habitat creation as a means of compensatory mitigation. The Riparian and Aquatic HMMP shall be prepared by a qualified restoration ecologist and shall provide, at a minimum, the following items:

a) Habitat impacts summary and proposed habitat mitigation actions.
b) Goals of the restoration to achieve no net loss.
c) The location of the mitigation sites and existing site conditions.
d) Mitigation design including:

    - Proposed site construction schedule.
    - Description of existing and proposed soils, hydrology, geomorphology and geotechnical stability.
    - Site preparation and grading plan.
    - Invasive species eradication plan.
    - Soil amendments and other site preparation.
    - Planting plan (plant procurement/propagation/installation).
    - Maintenance plan.

e) Monitoring measures, and performance and success criteria. At a minimum, success criteria shall include at least 70 percent cover by native, woody riparian vegetation by year five.
f) Monitoring methods, duration, and schedule.
g) Contingency measures and remedial actions.
h) Reporting measures.

The mitigation shall be deemed complete and the applicant released from further responsibilities when the final success criteria have been met, or when the mitigation is deemed complete as determined by applicable regulatory/resource agencies.

The project proposes to enhance the riparian corridor along the central drainage as part of the project design. Implementation of MM BIO-2.1 and MM BIO-2.2 will ensure that adverse impacts to existing riparian habitat is kept to a minimum and the project's riparian enhancement design is subject to a regulatory agency-approved Riparian and Aquatic HMMP. Therefore, the project's impacts to existing riparian habitat would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-3:	The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(Less than Significant Impact with Mitigation Incorporated)**

The project site contains approximately 0.43 acres of USACE-verified federally protected wetlands and waters. These include two perennial drainages and seasonal wetlands. The perennial drainage in the center of the property represents a semi-natural watercourse that would have been historically present, prior to the surrounding development, whereas the perennial drainage along the southern edge of the property in between Kinross Drive and Seven Hills Ranch Road is a narrow, constructed ditch, which appears to primarily convey storm water runoff from the development upslope of the project site to the south and southeast, along Seven Hills Ranch Road into the concrete-lined channel

of Walnut Creek. The majority of the seasonal wetland habitat (0.33 of the 0.35 acres) is present on either side of the central drainage. Two smaller seasonal wetlands, totaling 0.003 and 0.01 acres, are present in the southern portion of the property, near the constructed ditch. These wetlands occur in subtle depressions and are predominantly occupied by non-native, invasive species such as Harding grass and Italian rye grass.

Consistent with the County's Creek Structure Setback requirements, the project proposes to establish a 50-foot buffer from the centerline of the perennial drainage in the center of the project site. This design would avoid direct impacts to the central perennial drainage and associated seasonal wetlands, and would establish a buffer to avoid indirect impacts. In addition, as described above in the impact discussion for riparian habitat, the project will enhance the areas outside of the seasonal wetlands by planting with native riparian trees and shrubs. In this manner, the project would avoid and minimize direct impacts on the majority of federally protected wetlands on the site.

As described further in Section 3.10 Hydrology and Water Quality, the project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit and the Municipal Regional Stormwater NPDES Permit (MRP) to prevent post-construction changes in runoff carrying sediment or chemicals that could degrade water quality from entering the existing drainages and wetlands. The project would install bioretention areas to collect site run-off and direct it into the local storm drain system, rather than into the seasonal wetlands and perennial drainage on the site.

Development in the southeast portion of property, namely the extension of Kinross Drive and the creation of a new road to connect with Seven Hills Ranch Road, will permanently impact one of the perennial drainages and the two small seasonal wetlands in this corner of the property through fill for the new road. The existing culverted crossing of Seven Hills Ranch Road over the perennial drainage in the center of the project site would be replaced with a new crossing that would clear span the drainage area and the original drainage features in this area would be restored.

Mitigation Measures: Wetlands are relatively scarce regionally, and even small wetland areas make disproportionate contributions to water quality, groundwater recharge, watershed function, and wildlife habitat in the region. Thus, any permanent loss or temporary disturbance of wetland habitat because of the project would be considered significant under CEQA.

MM BIO-3.1: Construction Best Management Practices: The central drainage and associated seasonal wetlands that are to be avoided by the project design will be protected from construction activities through implementation of best management practices (BMPs) such as installing silt fencing between jurisdictional waters and project related activities, locating staging and laydown areas away from potentially jurisdictional features, and isolating construction work areas from any identified jurisdictional features. In addition, site stormwater treatment features must be designed consistent with the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit as described above, and shall be placed in locations to treat runoff from the developed portion of the site before entering avoided wetlands. To the extent feasible, existing site drainage patterns

in the vicinity of avoided wetlands shall be preserved to prevent indirect alterations to surface hydrology that may contribute to supporting the wetlands.

MM BIO-3.2: Compensatory Mitigation for Permanent Loss of Wetlands: To compensate for the perennial drainage and seasonal wetlands that will be permanently impacted by extension of Kinross Drive to the project site, the project proponent shall implement one of the following, in agreement with United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) as per permit requirements.

a) Acquisition of equivalent wetlands and waters at a nearby site at a ratio of 2:1, on an acreage basis;
b) Purchase of mitigation credits at a mitigation bank;
c) Enhancement of seasonal wetlands and the perennial drainage to be preserved in the central portion of the site, as well as creation of seasonal wetland habitat in the bioretention facilities proposed on site, at a ratio of 2:1, on an acreage basis;
d) An alternative to be agreed upon with the USACE and RWQCB.

It is possible that some mitigation credit may be received for enhancement of the seasonal wetlands along the perennial drainage in the central portion of the property, as is described and discussed above in the impact discussion for riparian habitats. Any on-site restoration or enhancement activities shall be described in detail in the Aquatic and Riparian HMMP, as described under MM BIO-2.2. With implementation of MM BIO-3.1 and MM BIO-3.2, the project would avoid adversely affecting the wetlands proposed to remain on-site during project construction and would pay compensatory mitigation for the permanent loss of wetlands. Therefore, the project would reduce its impacts on federally protected wetlands to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. **(Less than Significant Impact with Mitigation Incorporated)**

The project site is bounded by The Seven Hills School to the north, Walnut Creek to the north and west, Seven Hills Ranch Road to the south, existing residential neighborhoods to the south and east, and Heather Farms Park to the east. While creeks often provide movement corridors for wildlife, it is unlikely that many wildlife access the site via Walnut Creek due to its lack of riparian habitat and cover. Additionally, Walnut Creek has vertical concrete walls that preclude any non-flying wildlife from accessing the project site.

Heather Farm Park, an approximately 100-acre community park, is located directly northeast of the project site. Though much of the park lacks high quality habitat, the park lake, surrounding upland habitat patches, and landscaping attract moderate numbers of locally common, urban-adapted birds, occasional migratory birds, and other wildlife such as raccoons and striped skunks.

Development of the project site would alter the existing habitat on the project site, and any movement of wildlife between these two areas would be permanently impacted by the project. However, the project site does not currently function as a high-quality wildlife corridor. Local species that are adapted to the urban environment would continue to occasionally traverse the project site after construction. Additionally, the proposed buildings would be constructed without the use of extensive glass facades and, therefore, would limit the potential for birds traversing the site to collide with the proposed buildings. Although birds may occasionally collide with windows on the proposed independent living unit structures, the frequency and overall number of such collisions would be low due to the very limited extent of glazing. The birds that would be impacted are expected to consist primarily of locally resident species that are regionally abundant. Therefore, the project would not have a substantial adverse effect on a wildlife corridor or result in significant bird collisions with the proposed buildings.

Impacts to wildlife nursery sites, such as bat roosts and bird nests, are discussed under Impact BIO-1. Impacts to these nursey sites would be less than significant with incorporation of MM BIO-1.1 through MM BIO-1.3. Therefore, the project would not interfere substantially with the movement of native wildlife species or impede the use of native wildlife nursery sites. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-5:	The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact)**

Contra Costa County Tree Ordinance

Per the Contra Costa County Tree Ordinance, permits from the Conservation and Development Department are required for the removal of any trees which meet the definition of "protected tree", as previously described. The project proposes the removal of approximately 353 existing protected trees. An additional 81 suitable protected trees are to be preserved, including all of the major valley oaks. The project herein incorporates the request to remove the above mentioned trees. Should the project be approved, conditions will be imposed as part of the proposed entitlement's conditions of approval. Conditions may include tree restitution, protective measures identified by the arborist report, and assurance bonds to ensure that all conditions will be successfully met. In order to avoid further impacts on trees identified to be saved, conditions may also incorporate Best Management Practices, which include, but are not limited to the following:

- Prior to the start of any clearing, stockpiling, trenching, grading, compaction, paving or change in ground elevation on a site with trees to be preserved, the applicant shall install fencing at the dripline or other area as determined by an arborist report of all trees adjacent to or in the area to be altered. Prior to grading or issuance of any permits, the fences may be inspected and the location thereof approved by appropriate county staff.
- No grading, compaction, stockpiling, trenching, paving or change in ground elevation shall be permitted within the dripline unless indicated on the grading plans approved by the county and addressed in any required report prepared by an arborist. If grading or construction is approved within the dripline, an arborist may be required to be present during grading operations. The arborist shall have the authority to require protective measures to protect the

roots. Upon completion of grading and construction, an involved arborist shall prepare a report outlining further methods required for tree protection if any are required. All arborist expense shall be borne by the developer and applicant unless otherwise provided by the development's conditions of approval.

- No parking or storing of vehicles, equipment, machinery or construction materials, construction trailers and no dumping of oils or chemicals shall be permitted within the dripline of any tree to be saved.

With the incorporation of the above measures, the project would be in compliance with the Contra County Tree Protection and Preservation Ordinance. **(Less than Significant Impact)**

Contra Costa County Creek Structure Setback Requirements

The goals and policies laid out in the General Plan Conservation Element to protect watercourses in the County is administered through the establishment of requirements in the County Code for setbacks from the centerline of watercourses, and restrictions on development within those corridors. The perennial drainage in the center of the project would qualify as a "natural watercourse" as defined in the General Plan Conservation Element and associated County Code regulations. The project has been designed to incorporate a 50-foot setback from the centerline of the central drainage and proposes restoration and enhancement of wetland and riparian habitat within this preserved corridor. The maximum width of the drainage and buffer zone is up to 300 feet wide in some locations. While the project will propose some new trails within this corridor, trails would be considered an allowable use within the creek setback limits, as per the County Code, which primarily restricts the building of permanent structures with the setback area. Because the project does not include any new development within this corridor, and the project proposes enhancement of riparian and wetland habitat within this corridor, the project would be in compliance with the County's creek structure setback regulations.

Therefore, the project would not conflict with local policies or ordinances protecting biological resources. **(Less than Significant Impact)**

Impact BIO-6:	The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

The project site is not located within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such documents. **(No Impact)**

3.4.2.2 *Cumulative Impacts*

Impact BIO-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant biological resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The specific projects identified in Table 3.0-1 are located in urban infill sites that do not serve as high-quality wildlife corridors, do not contain wetlands or riparian habitat, and likely do not provide suitable habitat for special-status plant or wildlife species. While the General Plan Update would include expanded potential for development in unincorporated areas of Contra Costa County, it would also include measures that conserve biological resources. All projects developed within Contra Costa County would be required to comply with the Contra Costa County Tree Ordinance and the Contra Costa County Creek Structure Setback Requirements. Cumulative projects would also likely include preconstruction bird surveys similar to MM BIO-1.1 and MM BIO-1.4 in order to comply with the MBTA and California Fish and Game Code. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant biological resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.5 CULTURAL RESOURCES

The following discussion is based, in part, on an Archaeological Resources Assessment Report prepared by Basin Research Associates (Basin) dated July 2020 and a Historic Resources Evaluation Report prepared by Archaeological/Historical Consultants (A/HC) dated October 2020. A copy of the Historic Resources Evaluation Report is included as Appendix F of this EIR. A copy of the Archaeological Resources Assessment Report is on file with the County.

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.[21]

Historical resources eligible for listing in the CRHR must meet applicable significance criteria due to association with historic events, persons, architectural character, and/or potential to yield important archaeological information regarding prehistory or history. Historical resources must also retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity

[21] California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed August 31, 2020. http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

that are used to evaluate a resource's eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

Senate Bill 18

The intent of SB 18 is to aid in the protection of traditional tribal cultural places through local land use planning by requiring local governments to consult with California Native American tribes on projects which include adoption or amendment of general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.). SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process.

Assembly Bill 52

Assembly Bill (AB) 52 requires that tribal cultural resources be considered under CEQA. A tribal cultural resource can be a site, feature, place, object, or cultural landscape with value to a California Native American tribe that is also eligible for listing on the CRHR. AB 52 includes a broad definition of what may be considered to be a tribal cultural resource, and includes a list of recommended mitigation measures for potential impacts. AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Local

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to cultural resources and are applicable to the proposed project.

Policy/Implementation Measure	Description
Policy 9-28	Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.
Policy 9-29	Buildings or structures that have visual merit and historic value shall be protected.
Implementation Measure 9-i	Develop an archaeological sensitivity map to be used by staff in the environmental review process for discretionary permits to determine potential impacts upon cultural resources.
Implementation Measure 9-j	As a condition of approval of discretionary permits, include a procedure to be followed in the event that archaeological resources are encountered during development or construction.
Implementation Measure 9-m	Promote the use of the State of California Historic Building Code to protect historic sites in the county.

3.5.1.2 *Existing Conditions*

Archaeological Context

Prehistoric and Ethnographic Context

It is estimated that Native Americans inhabited the Bay Area for several thousand years before the area was discovered by Spanish expeditions. The project area would have been an environmentally advantageous area for Native Americans given the year-round sources of water provided by local creeks, ease of travel to and from the bay shoreline, and abundance of food sources. The project site appears to be located within the Saklan (alternatively Saclan, Sacalanes, Saklanes, or Chaclanes) territory of the Bay Miwok tribe. Each Bay Miwok tribelet occupied a specific territory with several more or less permanent settlements with a large number of seasonal campsites used for the annual round of subsistence activities. The Saklan village was centered in Rossmoor and their territory extended roughly from Lafayette to Walnut Creek and Danville.

Prehistoric site types in the general project area include habitation sites ranging from villages to temporary campsites, stone tool and other manufacturing areas, quarries for tool stone procurement, cemeteries usually associated with large villages, isolated burial sites, rock art locations, bedrock mortars or other milling feature sites and trails. No Native American villages or known trails are within or near the project site.

Archaeological Records Search Results

An archival review was completed for the project by the California Historical Resources Information System/Northwest Information Center. The records search included a 500-foot radius of the project site. The review found no records of previous cultural resource studies and no recorded/reported prehistoric and/or historic era archaeological sites within the project site. Five cultural resources reports were listed within the 500-foot radius outside of the project site, one of which was conducted adjacent to the northern boundary. This report on the Seven Hills School Rehabilitation indicated negative results for cultural resources.

Archaeological Sensitivity

The project site has not been assigned a sensitivity rating by the County General Plan due to the existing surrounding urban development. The City of Walnut Creek Map of Archaeologically Sensitive Areas shows the general project area as highly sensitive to archaeological resources. This estimate of sensitivity is likely based on the site's proximity to the channelized Walnut Creek, along which previously recorded prehistoric archaeological resources have been found.

Historical Context

Regional Setting - Walnut Creek

During the Spanish period, the Walnut Creek area was used by Mission San José for sheep and cattle grazing. Founded in 1799, Mission San José is located approximately 27 miles south of the project area in what is now the City of Fremont. After Mexico seceded from Spain in 1822, grants of land to private citizens began. After the secularization of the missions began in 1833, the number of land grants increased substantially.

The project site lies east of downtown Walnut Creek, which was primarily ranch land until the town began development in the 1850s and 1860s. The completion of the transcontinental railroad in 1869 opened a tremendous market for California fruit, resulting in many big grain ranches being subdivided into smaller fruit orchards and vineyards. Many new buildings and businesses were constructed in the town after construction of the first tunnel through the East Bay Hills to Oakland by 1900. However, Walnut Creek remained a primarily agricultural economy and a small, rural town until the post-World War II population boom and new regional infrastructure (such as the completion of the Caldecott tunnel and the Contra Costa Canal) transformed the town into a major suburban commercial and residential center.

Project Setting - 850 Seven Hills Ranch Road

The 850 Seven Hills Ranch Road property has been in the Hale family since 1928 and the existing single-family residence was built circa 1947 by the family of Idolene Hooper Hale. Idolene Hooper Hale (1883-1968) was daughter of Charles Appleton Hooper and Idella Geneva Snow. Charles Hooper was a lumber baron and capitalist best known as the founder of Pittsburg and developer of industry on the Contra Costa shoreline.

Idolene Hooper gave or sold the Seven Hills Ranch property to her son Sheridan in 1950. Sheridan Winfield Hale (1921-2015) lived on the property from childhood until his death.

On-Site Structures

The existing residence at 850 Seven Hills Ranch Road is a ranch house constructed of adobe brick. Ranch houses constructed of adobe were an outgrowth of the Pueblo Revival and Spanish Colonial styles of the late 19th to mid-20th century. These styles are diverse but share several common architectural elements: construction of adobe bricks, concrete blocks, or balloon frame; stucco wall surfaces, usually earth-colored, that imitate the hand finish of Native American prototypes; exposed roof beams, called "vigas"; covered porches that form a portico; tile roofs; rounded wall corners and roof edges; and wooden beams for lintels.

The structure at 850 Seven Hills Road is an example of an adobe Ranch house with Spanish Colonial and Pueblo elements: it is built of adobe bricks, it has been painted in an earth tone, and uses wooden beams as interior and exterior lintels (see Photos 7 & 8). However, it lacks the flat roof, vigas, rounded corners, and additive massing typical of the Pueblo Revival, nor does it feature the tile roofs of Spanish Colonial homes. The gable roof, large windows, interior wood details, and horizontal orientation, places it closer to the Ranch style than either of the two period styles.

The property also contains several outbuildings including a garage, cottage, two stables, and a barn. The garage is a frame building on a concrete slab foundation. The north side of the garage features painted wooden boards set horizontally and a central sliding barn door, while the other three sides of the garage are covered in vertical redwood boards. While the exterior redwood boards appear to be over 100 years old, they are fastened with modern wire nails, suggesting that the building was constructed in the last 50 years using recycled material.

The cottage appears to have been built in the 1920s with a later garage addition and a small outhouse or toilet addition. The cottage has wood siding and a corrugated metal roof. The two stables are built of redwood, are open on two sides, and are in dilapidated condition. The barn is of frame construction set on a perimeter concrete foundation and clad in corrugated metal on the sides and roof.

A wood water tank and an electric water pump also existed within the project site. The water tank was located east of Seven Hills Ranch Road. The wood tank was installed on a circular concrete base pad and has since collapsed in on itself. Two steel upright pipes are located nearby; it is possible that these were the fill and distribution/service pipes for the tank although there is no evidence of water piping running to the tank. The electric water pump is located near the southeast corner of the property, along the southern property line. The water pump is remnants of a Mast, Foos & Co Model T921 and is constructed of cast iron/sheet steel on top of a redwood plank adjacent to a concrete pad that likely covers a well bore.

Photo 7: Front of Single-Family Home/East Facade

Photo 8: Rear of Single-Family Home/West Facade

Source: Archaeological/Historical Consultants, October 2020.

PHOTOS 7 & 8

3.5.2 Impact Discussion

For the purpose of determining the significance of the project's impact on cultural resources, would the project:

1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
3) Disturb any human remains, including those interred outside of dedicated cemeteries?

3.5.2.1 *Project Impacts*

Impact CUL-1:	The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(No Impact)**

A "historical resource" is a building, structure, or site that has been determined eligible for the NRHP, the CRHR, or a local register of historic resources. The project site does not contain any registered historical resources. A/HC evaluated the eligibility of the existing structures on-site for listing on the CRHR. The evaluation criteria used by the CRHR for determining eligibility are closely based on those used for the NRHP. In order for a property to be eligible for listing in the CRHR, it must be found significant under one or more of the following criteria:

- Criterion 1 (Events): Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Criterion 2 (Persons): Resources that are associated with the lives of persons important to local, California, or national history.
- Criterion 3 (Architecture): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
- Criterion 4 (Archaeology): Resources that have yielded, or have the potential to yield, information important to prehistory or history of the local area, California, or the nation.

The project site is not associated with any important historical events. While Idolene Hooper Hale came from a prominent Contra Costa County family, she herself does not appear to have played an important role in local history. Idolene and her family are not linked to any events, groups, or locations in Walnut Creek or Contra Costa County, that would make them significant pursuant to Criterion 2. Therefore, the property at 850 Seven Hills Ranch Road is not associated with any historically significant events or persons.

The existing residence on-site is an adobe Ranch-style house constructed circa 1947. While the residence also has some architectural elements relating to the Pueblo or Spanish Colonial styles, the

residence is predominantly a conventional Ranch house. Adobe construction is somewhat common in parts of California, but uncommon in the Bay Area. A/HC determined that the residence on-site is not as architecturally distinguished as other adobe Ranch houses in central Contra Costa County and the Bay Area. The outbuildings on-site are of ordinary construction. Therefore, the residence on-site and associated outbuildings do not have architectural significance.

As discussed under Section 3.5.1.2, while the Saklan people lived in the project vicinity, no prehistoric sites or archaeological resources are known to exist in or near the project site. For these reasons, the demolition of the existing buildings on-site and other site clearing activities would not impact historic resources. **(No Impact)**

Impact CUL-2:	The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact with Mitigation Incorporated)**

As previously described, there are no known archaeological resources present on-site. However, the project area is considered to be highly sensitive to archaeological resources pursuant to the City of Walnut Creek's Map of Archaeologically Sensitive Areas and it is possible that previously undiscovered archaeological resources could be encountered during project-related grading during construction. The following mitigation measure would ensure that the proper precautions are taken during an inadvertent archaeological discovery.

Mitigation Measures: The project will be required to implement the following mitigation measures to reduce potential impacts to archaeological resources to a less than significant level:

MM CUL-2.1: Construction Worker Training: Worker Awareness Training for cultural resources shall be provided to members of the construction excavation and grading team. Training shall consist of the preparation of an alert sheet that would provide guidance and procedures in the event of an unexpected discovery of cultural materials with photographs of typical artifact that shall be exposed coupled with a briefing of the construction crew.

MM CUL-2.2: Undiscovered Archaeological Resources: If evidence of an archaeological site or other suspected cultural resource as defined by CEQA Guideline Section 15064.5, including darkened soil representing past human activity ("midden"), that could conceal material remains (e.g., worked stone, worked bone, fired clay vessels, faunal bone, hearths, storage pits, or burials) is discovered during construction related earth-moving activities, all ground-disturbing activity within 50 feet of the resources shall be halted and the County Department of Conservation and Development be notified. The project sponsor shall hire a qualified archaeologist to conduct a field investigation. The County shall consult with the archaeologist to assess the significance of the find. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for

Archaeological documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A-J) form and filed with the NWIC.

MM CUL-2.3: Report of Archaeological Resources: If archaeological resources are identified, a final report summarizing the discovery of cultural materials shall be submitted to the County Department of Conservation and Development prior to issuance of certificate of occupancy. This report shall contain a description of the mitigation program that was implemented and its results, including a description of the monitoring and testing program, a list of the resources found and conclusion, and a description of the disposition/curation of the resources.

With implementation of MM CUL-2.1 through MM CUL-2.3, impacts to any previously undiscovered archaeological resources would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-3:	The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact with Mitigation Incorporated)**

As described above, the site has no known archaeological resources, including human remains. In the unlikely event human remains are unearthed during project construction, damage to or destruction of significant archaeological remains would be a potentially significant impact.

Mitigation Measures: The project will be required to implement the following mitigation measure to reduce potential impacts to buried human remains to a less than significant level:

MM CUL-3.1: Human Remains: If human remains are discovered during project construction, all ground-disturbing activity within 100 feet of the resources shall be halted and the County Department of Conservation and Development and the Contra Costa County coroner shall be notified immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project sponsor shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. Contra Costa County shall be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of State law, as set forth in CEQA Guidelines section 15064.5(e) and Public Resources Code section 5097.98. The project sponsor shall implement approved mitigation, to be verified by Contra Costa County and as determined appropriate by the NAHC, before the resumption of

ground-disturbing activities within 100 feet of where the remains were discovered.

With implementation of MM CUL-3.1, any potential impacts from incidental discoveries of human remains would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

3.5.2.2 *Cumulative Impacts*

Impact CUL-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Most development projects in Contra Costa County would require a level of excavation and grading or other activities that may affect archaeological resources, including human remains. Each project is to complete its own literature review, as applicable, to determine the level of archeological and cultural sensitivity of its project site. However, all projects occurring in Contra Costa County would be required to implement mitigation measures, as applicable, that would avoid impacts and/or reduce them to a less than significant level, consistent with CEQA requirements. Such measures consist of preliminary investigation prior to full excavation, avoidance measures during ground disturbance activities, and/or monitor during ground disturbance activities. Collection and evaluation of finds are also part of these mitigation measures. These projects would also be subject to federal, state, and county laws regulating cultural resources such as protocols of handling human remains, if found on the project site. For these reasons, the proposed project in combination with the cumulative scenario projects would not result a significant cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.6 ENERGY

The following discussion is based, in part, on an Air Quality & Greenhouse Gas Emissions Assessment prepared for the project by Illingworth & Rodkin, Inc., dated October 2021, and a peer review prepared by Atmospheric Dynamics, Inc., dated October 2021. A copy of these reports are included in Appendix D of this EIR.

3.6.1 Environmental Setting

3.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2 from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately

every three years.[22] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.[23]

California Green Building Standards Code

CALGreen establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.[24]

Local

Contra Costa County Climate Action Plan

The Contra Costa County Board of Supervisors adopted the County's current Climate Action Plan (CAP) on December 15, 2015.[25] The Climate Action Plan is a qualified plan and demonstrates the County's commitment to addressing the challenges of climate change. The CAP outlines the County's overall strategies for reducing greenhouse gas emissions in response to state regulations to address climate change. The CAP outlines ways in which the County can prepare for and adapt to the consequences of climate change, and provides energy use, transportation, land use, and solid waste strategies to reduce Contra Costa's GHG emissions.

Construction and Demolition Debris Recovery Ordinance

The intent of Contra Costa County Ordinance 2004-16 is to reduce the quantity of construction and demolition debris disposed in landfills as required by State law. Ordinance 2004-16 requires owners of all construction or demolition projects that are 5,000 sf in size or greater to demonstrate that at least 50 percent of the construction and demolition debris generated on the jobsite are reused, recycled, or otherwise diverted (unless a diversion adjustment is granted).

[22] California Building Standards Commission. "California Building Standards Code." Accessed October 11, 2021. https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo.
[23] California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed October 11, 2021. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.
[24] California Air Resources Board. "The Advanced Clean Cars Program." Accessed October 11, 2021. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about
[25] Contra Costa County. December 15, 2015.Climate Action Plan. https://www.contracosta.ca.gov/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan

3.6.1.2 *Existing Conditions*

Total energy usage in California was approximately 7,802 trillion British thermal units (Btu) in the year 2019, the most recent year for which this data was available.[26] Out of the 50 states, California is ranked second in total energy consumption and 46th in energy consumption per capita. The breakdown by sector was approximately 19 percent (1,456 trillion Btu) for residential uses, 19 percent (1,468 trillion Btu) for commercial uses, 23 percent (1,805 trillion Btu) for industrial uses, and 39 percent (3,073 trillion Btu) for transportation.[27] This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power. For purposes of this analysis, since the project site is mostly undeveloped, it is assumed the project site currently uses a limited amount of energy.

Electricity

The Pacific Gas and Electric Company (PG&E) provides electricity services within Contra Costa County. While PG&E provides all electricity delivery and power line maintenance, MCE is the default electricity generation provider for Unincorporated Contra Costa County.[28] MCE has three service options for customers to choose from; 1) Light Green, which provides 60 percent renewable electricity, 2) Deep Green, which provides 100 percent California-produced renewable electricity, and 3) Local Sol, which provides 100 percent locally produced solar-generated electricity.[29] As of April 2018, the majority of Contra Costa residents buy electricity from MCE.[30]

Electricity in Contra Costa County in 2019 was consumed primarily by the commercial sector (70 percent), followed by the residential sector consuming 30 percent. In 2019, a total of approximately 9,639 gigawatt hours (GWh) of electricity was consumed in Contra Costa County.[31]

Natural Gas

PG&E provides natural gas services within Contra Costa County. In 2018, approximately one percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.[32] In 2019, Contra Costa County used approximately 1,205 million therms of natural gas,[33] or approximately 120,475 billion Btu (GBtu).[34] This equates to approximately nine percent of the state's total consumption of natural gas in 2019.[35]

---

[26] United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed October 11, 2021. https://www.eia.gov/state/?sid=CA#tabs-2.
[27] Ibid.
[28] MCE.
[29] MCE. "Where Does your MCE Service Come From?" Accessed October 11, 2021. https://www.mcecleanenergy.org/#
[30] Contra Costa County. "Energy and Water". Accessed October 11, 2021. https://www.contracosta.ca.gov/6859/Energy-and-Water
[31] California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed October 11, 2021. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[32] California Gas and Electric Utilities. 2019 *California Gas Report.* Accessed October 11, 2021. https://www.socalgas.com/regulatory/documents/cgr/2019_CGR_Supplement_7-1-19.pdf.
[33] California Energy Commission. "Natural Gas Consumption by County." Accessed October 11, 2021. http://ecdms.energy.ca.gov/gasbycounty.aspx.
[34] One therm = 99,976 Btu. 1205 million therms x 99,976 = 120,475 billion Btu
[35] California Energy Commission. "Natural Gas Consumption by County." Accessed October 11, 2021. http://ecdms.energy.ca.gov/gasbycounty.aspx.

Fuel for Motor Vehicles

In 2019, 15.4 billion gallons of gasoline were sold in California.[36] The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2020.[37] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in March 2020 to require all cars and light duty trucks achieve an overall industry average fuel economy of 40.4 mpg by model year 2026.[38,39]

3.6.2 Impact Discussion

For the purpose of determining the significance of the project's impact on energy, would the project:

1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

3.6.2.1 *Project Impacts*

Impact EN-1:	The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **(Less than Significant Impact)**

Construction

The anticipated construction schedule assumes that the project will be built over a period of 39 months. The construction phase would require energy for the manufacture and transportation of building materials, site preparation, grading and excavation, trenching, paving, and building construction and interior finishing. Petroleum-based fuels such as diesel fuel and gasoline would be the primary sources of energy during construction. Construction processes are generally designed to be efficient in order to avoid excess monetary costs. In addition, energy would not be wasted or used inefficiently by construction equipment, as the proposed project would include several measures to improve efficiency of the construction (e.g., limiting idling time, using U.S. EPA tiered equipment as described in MM AIR-1.1 and MM AIR-1.2). Further, construction waste management methods and processes will be employed to reduce the amount of construction waste consistent with CALGreen requirements and County Ordinance 2004-16. For these reasons, construction of the project would not use energy in a wasteful manner. **(Less than Significant Impact)**

[36] California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed October 11, 2021. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.
[37] United States Environmental Protection Agency. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf
[38] United States Department of Energy. *Energy Independence & Security Act of 2007.* Accessed October 11, 2021. http://www.afdc.energy.gov/laws/eisa.
[39] Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007.* Accessed October 11, 2021. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

Estimated Energy Use of Project Operation

The proposed CCRC would consume energy, in the form of electricity and natural gas, primarily from building heating and cooling, lighting, appliances, electronics, and water heating. The proposed CCRC would consume a total of approximately 2.87 million kilowatt hours (kWh) of electricity per year and approximately 8.63 million kBtu of natural gas per year.[40] Operational energy would also be consumed during each vehicle trip generated by future residents, employees, and visitors. The project would result in approximately 2,585,935 total VMT per year.[41] Assuming the EPA average fuel economy estimate of 25.4 miles per gallon, the project would consume approximately 101,808 gallons of gasoline per year.

To ensure energy is not wasted or unnecessarily consumed, the project would comply with Title 24 and CALGreen energy efficiency measures, as well as the County's Construction and Demolition Debris Recovery Ordinance (Contra Costa County Ordinance 2004-16). The project would also include green building measures such as:

- Free transportation shuttle services for on-site residents
- "White" ultraviolet (UV) reflective roofs on all multi-story buildings
- Energy Star appliances
- High-efficiency heating, ventilation, and air conditioning (HVAC) system
- Motion detector lights in all utilitarian rooms
- Solar heating for the indoor swimming pool

Solar collection (in accordance with Title 24 Part 11, Energy Code standards and County ordinances) For these reasons, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. **(Less than Significant Impact)**

Impact EN-2:	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

The project would conform to state policies and County requirements, which promote energy efficiency. By conforming to these policies and requirements, as well as consistency with CalGreen and Title 24, the project would not preclude the County or state from meeting renewable energy or energy efficiency goals. The project, therefore, would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact is less than significant. **(Less than Significant Impact)**

[40] Illingworth & Rodkin, Inc. *Spieker CCRC Air Quality & Greenhouse Gas Emissions Assessment – Attachment 2: CalEEMod Modeling Output.* Revised September 17, 2021.
[41] Ibid.

3.6.2.2 *Cumulative Impacts*

Impact EN-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant energy impact. **(Less than Significant Cumulative Impact)**

By its nature, energy is a cumulative resource. Past, present, and future development projects contribute to the state's energy impacts. If the project is determined to have a significant energy impact, it is concluded that the impact is cumulatively considerable. As discussed under Impact EN-1 and Impact EN-2 above, the project itself would not result in significant energy impacts. Further, all projects in Contra Costa County and adjacent counties and cities are required to meet CalGreen and Title 24 energy efficiency requirements, thus lessening overall energy demand. Therefore, the project would not result in a considerable contribution to a significant cumulative energy impact. **(Less than Significant Cumulative Impact)**

3.7 GEOLOGY AND SOILS

The following discussion is based, in part, on a geotechnical and geologic investigation prepared for the project by Baez Geotechnical Group (Baez) dated March 2020 and an Evaluation of Paleontological Impacts prepared for the project by Professional Geologist James P. Walker, dated April 2020. Copies of these reports are included as Appendix G and Appendix H, respectively, of this EIR.

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted by the California Legislature in the aftermath of the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo Earthquake Fault Zone maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was enacted by the California Legislature in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas susceptible to earthquake-induced ground failure (liquefaction and landslides).. The CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. Currently the CGS is preparing seismic hazard zone (SHZ) maps of Contra Costa County. The SHMA requires that agencies only approve projects in SHZs following site-specific geotechnical investigations to determine if the seismic hazard is present. Where the potential for earthquake-triggered liquefaction or landslide displacement is confirmed to be present on the project site, the consulting professional must provide effective recommendations to mitigate the damage potential.

California Building Standards Code

The California Building Standards Code (CBC) prescribes standards for constructing safe buildings. With regard to safety, the seismic design provisions of the CBC prescribe minimum lateral forces applied statistically to the structure(s), combined with the gravity forces and dead and live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than comparable forces that would be associated with a major earthquake. The intent of the code is to enable structures to (a) resist earthquakes without damage, (b) resist moderate earthquakes without structural damage but with some non-structural damage, and (c) resist major earthquakes without collapse but with some structural as well as non-structural damage. Therefore, even if a structure complies with the CBC and is conservatively designed, there is a risk of earthquake damage that must be accepted by the developer / owner of the project.

The CBC contains provisions aimed at controlling/ mitigating the potential for earthquake damage based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for a broad range of land development projects and an even broader range of seismic and geologic conditions, including surface fault rupture, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to geology and soils and are applicable to the proposed project.

Policy/Implementation Measure	Description
Policy 10-2	Significant land use decisions (General Plan amendment, rezoning, etc.) shall be based on a thorough evaluation of geologic-seismic and soils conditions and risk.
Policy 10-3	Because the region is seismically active, structures for human occupancy shall be designed to perform satisfactorily under earthquake conditions.
Policy 10-5	Staff review of applications for development permits and other entitlements, and review of applications to other agencies which are referred to the County, shall include appropriate recommendations for seismic strengthening and detailing to meet the latest adopted seismic design criteria.

Policy 10-8	Ground conditions shall be a primary consideration in the selection of land use and in the design of development projects.
Policy 10-22	Slope stability shall be a primary consideration in the ability of land to be developed or designated for urban uses.
Policy 10-23	Slope stability shall be given careful scrutiny in the design of developments and structures, and in the adoption of conditions of approval and required mitigation measures.
Policy 10-27	Soil and geological reports shall be subject to the review and approval of the County Planning Geologist.
Implementation Measure 10-d	Through the environmental review process, require geologic, seismic, and/or soils studies as necessary to evaluate proposed development in areas subject to groundshaking, fault displacement, or liquefaction.

Contra Costa County Ordinance Code

Division 716 of the County Ordinance Code provides the County Grading Ordinance which sets forth regulations for the control of excavating, grading, earthwork construction including fills or embankments, and related work. The following requirements are found within Chapter 716-8 of the Code:

- Cuts shall not be steeper in slope than one vertical to two horizontal unless the applicant furnishes a soil engineering or an engineering geology report, or both, certifying that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property. The county building official may require the excavation to be made with a cut face flatter in slope than one vertical to two horizontal if he finds it necessary for stability and safety.
- Cut slopes exceeding forty feet in vertical height shall have drainage terraces not less than five feet (1.524 meters) in width, measured from the outer edge of the terrace to the invert of the drain, at vertical intervals not exceeding thirty feet (9.144 meters) except that where only one such terrace is required it shall be located at mid-height. For cut slopes exceeding one hundred feet (30.48 meters) in vertical height, the drainage terrace near mid-height shall be not less than twelve feet (3.657 meters) in width. Design and construction of drainage terraces shall conform to the requirements of Sections 716-8.602 to 716-8.614.
- Cut slopes shall be rounded off at the top and toe to blend and conform to existing terrain.
- Variations from the regulations in Sections 716-8.202 to 716-8.206 may be allowed by the county building official if they will provide equivalent safety, stability, and protection against erosion, as recommended by a soil engineer or engineering geologist.
- Where fill is to be placed above the top of an existing or proposed cut or natural slope steeper than one vertical to three horizontal, the toe of the fill shall be set back from the top edge of the slope a minimum distance of six feet, (1.829 meters) measured horizontally or such other distance as may be specifically recommended by a soil engineer or engineering geologist and approved by the county building official. Fills shall not toe out on slopes steeper than one vertical to three horizontal.

- Fill slopes shall be tapered into the existing terrain at the toe and shall be rounded off at the top.
- Variations from the regulations in Sections 716-8.402 to 716-8.422 may be allowed by the county building official if they will provide equivalent safety, stability, and protection against erosion, as recommended by soil engineer or engineering geologist.

3.7.1.2 *Existing Conditions*

Site Geology

The project site is located within the San Francisco Bay portion of the Coast Ranges geomorphic province of California, a region characterized by northwest-southeast trending ridges and intervening valleys influenced by the strike of the San Andreas and related major faults. The site is at the northwest end of a series of prominent subparallel ridges collectively known as Shell Ridge.

Soils

According to the U.S. Department of Agriculture (USDA) Conservation Services Web Soil Survey, the majority of the project site is characterized by the Lodo soil series. These native soils are reported to be low expansive clays with bedrock near the ground surface. However, laboratory testing of on-site soils confirmed the presence of soils that were moderately expansive.[42] Expansive soils shrink upon drying and swell upon wetting. Expansive soils in hillside areas create a potential for slope creep (i.e., a slow process where the downslope movement includes both lateral and vertical components, typically only a fraction of an inch per year. However, this movement accumulates over the years and can result in several inches of displacement over the life of a project.).

There are also three areas within the project site that are underlain by artificial fill. The smallest fill consists of a stream crossing near the center of the site for the paved Seven Hills Ranch Road. The second largest fill area is located at the south end of the site along Seven Hills Ranch Road. The largest fill area is located along the southwest side of the perennial drainage area. The artificial fill generally consists of blue gray silty to clayey sands with cobbles and boulders. The maximum depth of the fill is not known.

Accumulations of native soils or colluvial soils exist along the base of slopes and in the swales and hollows along the slopes on-site. Most of the colluvial soils consist of silty to clayey sands of low plasticity. Samples of clayey soils on-site were found to be highly expansive.

Bedrock

The project site and surrounding slopes are underlain by sedimentary bedrock. Bedrock encountered on-site consisted of well-cemented, fine to coarse grained sandstone with variable amounts of silt and gravel.

[42] Baez Geotechnical Group. Due Diligence Geotechnical and Geologic Investigation – Seven Hills Ranch Senior Living Center. March 24, 2020.

Groundwater

Groundwater levels within the project site are likely similar to the elevation of the bottom of Walnut Creek adjacent to the western boundary. Standing water was observed on-site within the large artificial fill area at approximately 17 feet below ground surface (bgs).

Geologic Hazards

Faults

The nearest seismically active fault is the Concord Fault, located approximately 2.3 miles east of the of the project site. The project site is not included within or adjacent to a State of California Earthquake Fault Zone.

Liquefaction

Liquefaction is a result of seismic activity characterized by the transformation of loose water-saturated soils from a solid state to a liquid state during ground shaking. The majority of the site consists of bedrock ridges and slopes where bedrock is at or near the ground surface. Thicker unconsolidated deposits such as alluvial materials can be prone to liquefaction during earthquake shaking. These liquefaction prone deposits are associated with the Walnut Creek channel along the west boundary of the property. Native sediments, possibly including alluvial deposits, may be present along the perennial drainage that bisects the project site. The project site is in an area mapped as having generally moderate to low liquefaction potential in the County's General Plan[43].

Landslides and Slope Stability

No landslides have been mapped or observed within the project site or surrounding vicinity. Steep slopes exist throughout the project site and near-vertical rock slopes exist adjacent to the channelized Walnut Creek. The slopes on the western boundary and portions of the northern boundary of the project site have been mapped as rock fall hazard areas.

Paleontological Resources

Bedrock within the project site is considered to be formations of the Miocene age San Pablo Group composed of the Cierbo "sand and gravel member" and Cierbo Sandstone. The Cierbo "sand and gravel" and Cierbo Sandstone units tend to contain coquina.[44] A review of the University of California Museum of Paleontology and the California Academy of Sciences databases revealed that 18 vertebrate fossil discoveries and six plant fossil discoveries have been documented in the relevant Miocene unit in Contra Costa County alone. The most relevant of these finds are two Shell Ridge locations containing elements of a whale skull and a pig-like animal. Additionally, 9,951 vertebrate specimens have been discovered in Contra Costa County in Pleistocene units. The project site is considered to have a relatively high potential for paleontological resources.

[43] Contra Costa County. General Plan 2005-2020. Page 10-15, Figure 10-5: Estimated Liquefaction Potential.
[44] Coquina are sedimentary rocks composed either wholly or almost entirely of shell fragments.

3.7.2 Impact Discussion

For the purpose of determining the significance of the project's impact on geology and soils, would the project:

1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?
- Strong seismic ground shaking?
- Seismic-related ground failure, including liquefaction?
- Landslides?

2) Result in substantial soil erosion or the loss of topsoil?
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

3.7.2.1 *Project Impacts*

Impact GEO-1:	The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides**. (Less than Significant Impact with Mitigation Incorporated)**

Ground Shaking

The project site is not located within an Alquist-Priolo Fault Zone.[45] However, an earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site.

[45] California Department of Conservation. Earthquake Zones of Required Investigation. Accessed June 30, 2021. https://maps.conservation.ca.gov/cgs/EQZApp/app/

Mitigation Measures: The project will be required to implement the following mitigation measure to reduce potential impacts from seismic ground shaking to a less than significant level:

MM GEO-1.1: Design-level Geotechnical Compliance: The applicant shall prepare a site-specific, design-level geotechnical investigation for the project. The design-level geotechnical report shall include, but not be limited to, the following considerations:

a) The 2019 CBC classification of the site as being located in Site Class B or C shall be determined. Building foundations, retaining walls, and structural framing requirements will be impacted by the Site Classification.
b) The central portion of the site is underlain by artificial fill and colluvial soils that are more than 17 feet deep. The liquefaction potential of these underlying soils shall be evaluated.
c) More detailed evaluation of the excavation characteristics of the sandstone and claystone bedrock underlying the site shall be performed. The excavation characteristics of the bedrock will impact cut grading and excavations for underground utilities and foundations.
d) Final recommendations for grading shall be provided, including permanent and temporary slope inclinations, differential fill thickness for building pads, fill construction, and the extent of colluvial and artificial soil removal.
e) The impacts from the on-site expansive soils on proposed structures, pavements, and flatwork shall be addressed.
f) The design and construction of valley drains and subdrains in fill keyways and benches shall be addressed.
g) Potential water seepage through rock fractures, daylighting from cut slopes and into utility trenches shall be assessed.
h) Pseudostatic seismic loads will need to be incorporated into the design of retaining walls which will be more than six feet tall, as specified in the CBC.

All recommendations by the engineering geologist and/or geotechnical engineer shall be incorporated into the final design. Recommendations that are applicable to foundation design, earthwork, and site preparation that were prepared prior to or during the project design phase, shall be incorporated in the project. All foundations and other project structures that require building permits must be compliant with the provisions of the California Building Code. Construction drawings for the project, including seismic design factors, shall be subject to technical review and approval by the Contra Costa Department of Conservation and Development prior to issuance of construction permits.

In summary, the project shall be designed and constructed in accordance with the CBC requirements, and the design of the project shall incorporate the recommendations presented in the site-specific geotechnical report. Adherence to the CBC would ensure the project resists minor earthquakes without damage and major earthquakes without collapse and would not exacerbate existing geologic conditions on adjacent sites.

With implementation of MM GEO-1.1 and adherence to the CBC, impacts related to potential ground shaking hazards would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Liquefaction

Soils within the project site may be susceptible to liquefaction. Specifically, the central portion of the project site, which is underlain by artificial fill and colluvial soils at least 17 feet deep, has potential to contain alluvial deposits that are susceptible to liquefaction. As discussed above, the project would implement MM GEO-1.1 and prepare a site-specific, design-level geotechnical investigation to address liquefaction and other geologic hazards. In addition, the project would be built in accordance with CBC requirements. As a result, impacts related to liquefaction would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Landslides

Although no landslides have been documented within the project site or the surrounding vicinity, the natural and graded slopes on-site could potentially be susceptible to landslides or other types of ground failure. The slopes on the western boundary and portions of the northern boundary of the project site have been mapped as rock fall hazard areas. As proposed, the engineered slopes and retaining walls shall stabilize slopes and minimize landslide risks. As discussed above, the project would implement MM GEO-1.1 and prepare a site-specific, design-level geotechnical investigation that will evaluate the proposed project's final grading plans and retaining walls. In addition, the project would be built in accordance with CBC requirements. As a result, impacts related to landslides would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact GEO-2:	The project would not result in substantial soil erosion or the loss of topsoil. **(Less than Significant Impact)**

The majority of the project site is undeveloped and covered with vegetation. Ground disturbance would be required for demolition of the existing buildings, grading, and construction of the proposed CCRC. Ground disturbance would expose soils and increase the potential for wind or water related erosion and sedimentation at the project site until construction is completed.

During construction, the project shall comply with the County's Grading Ordinance (Division 716 of the County Ordinance Code) and the National Pollution Discharge Elimination System (NPDES) General Construction Permit requirements, including the development and implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP will identify Best Management Practices for implementation during construction to control erosion (see Section 3.10 Hydrology and Water Quality). With implementation of the County's Grading Ordinance and compliance with the NPDES General Construction Permit, construction of the proposed project would have a less than significant soil erosion impact. **(Less than Significant Impact)**

Impact GEO-3:	The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **(Less than Significant Impact with Mitigation Incorporated)**

The project site has moderate potential for liquefaction and the slopes on the western boundary and portions of the northern boundary of the project site have been mapped as rock fall hazard areas. As discussed in Impact GEO-1, the proposed project would be constructed in compliance with the CBC and site-specific, design level geotechnical investigation (see MM GEO-1.1). These construction requirements would address risks for on- or off-site soils stability. For these reasons, the proposed project would not change or exacerbate the geologic conditions and any impact would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

Impact GEO-4:	The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact with Mitigation Incorporated)**

The project site is underlain by clay soils with moderate to high expansion potential. However, the design level geotechnical report shall provide specific measures to avoid/control damage associated with expansive soils. In summary, the project would be required to comply with MM GEO-1.1 and implement recommendations from the project site-specific, design level geotechnical investigation. As a result, the project would not create substantial direct or indirect risks to life or property. **(Less than Significant Impact with Mitigation Incorporated)**

Impact GEO-5:	The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. **(No Impact)**

The proposed project would be served by existing municipal sanitary sewers and water supply mains. There would be no need for alternative wastewater disposal systems, such as septic tanks, on-site. Therefore, there would be no impact due to soils incapable of supporting alternative wastewater disposal systems. **(No Impact)**

Impact GEO-6:	The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact with Mitigation Incorporated)**

Given the presence of vertebrate fossils in similar geologic units in Contra Costa County, the project site has a relatively high potential for containing significant paleontological resources. Grading of the project site could result in the disturbance of previously undiscovered paleontological resources.

Mitigation Measure: The project will be required to implement the following mitigation measures to reduce potential impacts to paleontological resources to a less than significant level:

MM GEO-6.1: Paleontological Monitoring. Construction activities involving excavation or other soil disturbance within the project site shall be required to retain a qualified Paleontological Monitor as defined by the Society for Vertebrate Paleontology (SVP) (2010) equipped with necessary tools and supplies to monitor all excavation, trenching, or other ground disturbance. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected.

Prior to beginning construction activities, the Principal Paleontologist shall attend a preconstruction meeting to identify specific areas on the project site where paleontological monitoring will be required and shall provide training to construction personnel on how to identify potentially significant fossils. The Principal Paleontologist will periodically assess monitoring results and if no significant fossils have been exposed after fifty percent of excavation, the Principal Paleontologist may determine that monitoring is no longer necessary.

MM GEO-6.2: Inadvertent Discovery of Fossils. If fossils are discovered during excavation, the Principal Paleontologist or his/her designated representative will make a preliminary taxonomic identification and determine if the find is significant. For significant/ potentially significant fossil finds, the Paleontologist shall provide a written recommendation to the Contra Costa Department of Conservation and Development if further action is required, and provide recommended measures for any further evaluation, fossil collection, or protection of the resource. Any subsequent paleontologic work shall be approved by the Contra Costa Department of Conservation and Development and completed as quickly as possible to avoid damage to the fossils and delays in construction schedules. At a minimum, for significant fossils, the paleontological staff will assign a unique field number to each specimen identified; photograph the specimen and its geographic and stratigraphic context along with a scale near the specimen and its field number clearly visible in close-ups; record the location using a global positioning system (GPS), record the field number and associated specimen data (identification by taxon and element, etc.) and corresponding geologic and geographic site data (location, elevation, etc.) in the field notes and in a daily monitoring report; stabilize and prepare all fossils for identification, and identify to lowest taxonomic level.

Upon completion of fieldwork, all significant fossils collected shall be prepared to a point ready for curation. Preparation shall include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary. Following laboratory work, all fossil specimens will be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage. The cost of curation is assessed by the repository and is the responsibility of the project proponent.

A report to be submitted to the repository museum documenting the results of the paleontological mitigation monitoring efforts associated with the project shall be prepared by the Principal Paleontologist. The report shall include a summary of the field and laboratory methods, an overview of the project site geology and paleontology, a list of taxa recovered, an analysis of fossils recovered and their scientific significance, and recommendations.

With implementation of MM GEO-6.1 and MM GEO-6.2, impacts to undiscovered paleontological resources would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

3.7.2.2 *Cumulative Impacts*

Impact GEO-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant geology and soils impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The projects listed in Table 3.0-1 would be subject to similar geologic conditions, given their proximity to the proposed CCRC. These projects would also require site-specific, design-level geotechnical reports, as described under Impact GEO-1, and would be constructed consistent with the CBC in order to avoid impacts from seismicity and geology and soils hazards, and/or reduce them to a less than significant level. Projects in the cumulative scenario would also be required to implement similar mitigation as the measures described under Impact GEO-6 with regards to avoidance and lessening of paleontological impacts. Therefore, geology and soils impacts from other projects would also be kept to a less than significant level and therefore would not be a cumulatively significant impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**.

3.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on an Air Quality & Greenhouse Gas Emissions Assessment prepared for the project by Illingworth & Rodkin, Inc., dated September 2021. A copy of this report is included in Appendix D of this EIR.

3.8.1 Environmental Setting

3.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, greenhouse gasses (GHGs), regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO_2 equivalents (CO_2e). The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF_6 emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

3.8.1.2 *Regulatory Framework*

State

Assembly Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO_2e ($MMTCO_2e$). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 $MMTCO_2e$.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2040. Plan Bay Area 2040 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).

Regional and Local

2017 Clean Air Plan

To protect the climate, the 2017 Clean Air Plan (prepared by BAAQMD) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The

guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Contra Costa County Climate Action Plan

The Contra Costa County Board of Supervisors adopted the County's current Climate Action Plan (CAP) on December 15, 2015.[46] The Climate Action Plan is a qualified plan and demonstrates the County's commitment to addressing the challenges of climate change. The CAP outlines the County's overall strategies for reducing greenhouse gas emissions in response to state regulations to address climate change. The CAP outlines ways in which the County can prepare for and adapt to the consequences of climate change, and provides energy use, transportation, land use, and solid waste strategies to reduce Contra Costa's GHG emissions. The CAP has a GHG reduction target of 15 percent from 2005 levels by the year 2020. In addition, the CAP forecasts the potential GHG emissions and estimated GHG reductions from proposed measures through 2035 to the level specified in EO B-30-15. Such a goal is equal to 50 percent below 1990 levels, or approximately 57 percent below baseline levels. The County is currently in the process of updating its CAP to set GHG reduction goals beyond 2020. The updated CAP is expected to be complete in late 2022.[47]

As part of the CAP, the County developed a development checklist (Appendix E to the CAP) to help both project applicants and County staff determine where a proposed new development project is consistent with Contra Costa County's CAP. The checklist should be completed for each project subject to discretionary review. The criterion in the checklist clarifies implementation of the CAP and explain how a project can comply.

3.8.1.3 *Existing Conditions*

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns. For the purposes of this analysis, the project site is assumed to generate a limited amount of GHG emissions.

3.8.2 Impact Discussion

For the purpose of determining the significance of the project's impact on greenhouse gas emissions, would the project:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

[46] Contra Costa County. December 15, 2015.Climate Action Plan. https://www.contracosta.ca.gov/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan
[47] Contra Costa County. "Sustainability". Accessed October 7, 2021. https://www.contracosta.ca.gov/6780/Sustainability

3.8.2.1 *Significance Thresholds*

Neither the County nor the BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though the BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. The BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

For quantified operational emissions, the BAAQMD's CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per service population. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although the BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold.

3.8.2.2 *Project Impacts*

Impact GHG-1:	The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact)**

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

Construction Emission

GHG emissions associated with project construction were computed using CalEEMod to be 3,062 MT of CO_2e for the total construction period, with the highest annual estimate being 975 MT of CO_2e for Year 2 of construction. As previously stated, neither the County nor the BAAQMD have an adopted threshold of significance for construction related GHG emissions. Implementation of MM AIR-1.1 and MM AIR-1.2 would reduce GHG emissions during construction where feasible and applicable. **(Less than Significant Impact)**

Operational Emissions

The project service population efficiency rate is based on the number of future residents and fulltime employees. The project's GHG emissions were conservatively estimated based on construction of approximately 454 total units with approximately 1.23 persons per unit. Therefore, it is estimated that the proposed CCRC would accommodate approximately 560 residents. The number of future

employees is estimated to be 225, thus, the total service population for the project is estimated to be 785 individuals. CalEEMod, along with the project vehicle trip generation rates (see Section 3.17 Transportation), was used to estimate daily emissions associated with operation of the proposed project. The estimated daily emissions are summarized in Table 3.8-1, below.

Table 3.8-1: Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project	
	2025	**2030**
Area	25	25
Energy Consumption	742	742
Mobile	870	784
Solid Waste Generation	133	133
Water Usage	42	42
Total (MT CO_2e/year)	1,811 MT CO_2e/year	1,726 MT CO_2e/year
Bright-Line Significance Threshold	**660 MT CO_2e/year**	
Service Population Emissions (MT CO_2e/year/service population)	2.3	2.2
Per Capita Significance Threshold	**2.8 MT of CO_2e/year/service population in 2030**	
Exceed Both Thresholds?	No	No

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. As shown in Table 3.8-1 above, the project would exceed the 660 MT CO_2e/year bright-line threshold in 2025 and 2030; however, it would not exceed the threshold of 2.8 MT CO_2e/year/service population. Therefore, the project would not result in a significant GHG emissions impact. **(Less than Significant Impact)**

Impact GHG-2: The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less than Significant Impact)**

2017 Clean Air Plan

As discussed in Section 3.3 Air Quality, the project is consistent with the 2017 Clean Air Plan because it supports the primary goals of the 2017 Clean Air Plan (by providing urban infill development), does not exceed thresholds for criteria pollutants, and mitigation measures have been included in this EIR to address TACs. **(Less than Significant Impact)**

Contra Costa County Climate Action Plan

The project applicant has completed the County's CAP Development Checklist (see Appendix I), demonstrating that the project would comply with the County's CAP and applicable GHG emissions

reduction goals. Consistent with the County's CAP, the project would install high-efficiency appliances and insulation, meet the California Building Standards Code for solar readiness, install solar collection (in accordance with Title 24 Part 11, Energy Code standards and County ordinances), and include EV charging stations. Therefore, the project would not conflict with the applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. **(Less than Significant Impact)**

3.8.2.3 *Cumulative Impacts*

Impact GHG-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant GHG emissions impact. **(Less than Significant Cumulative Impact)**

GHG emissions have a broader, global impact; therefore, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable. As discussed in Impact GHG-1, the project would not result in significant GHG impacts. Therefore, the project would not have a cumulatively considerable contribution to a significant cumulative GHG emissions impact. **(Less than Significant Cumulative Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based, in part, on a Phase I Environmental Site Assessment (ESA) prepared for the project by EMG, dated August 2019. A copy of this report is included in Appendix J of this EIR.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

Overview

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.[48]

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.[49]

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous

[48] United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed May 11, 2020. https://www.epa.gov/superfund/superfund-cercla-overview.
[49] United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).[50]

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The Contra Costa Health Services Hazardous Materials Programs (CCHSHMP) reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

California Well Standards

The California Department of Water Resources (CDWR) Bulletin Number 74 sets the minimum standards for wells, with the purpose of protecting California's groundwater quality. Local

[50] California Environmental Protection Agency. "Cortese List Data Resources." Accessed June 28, 2021. https://calepa.ca.gov/sitecleanup/corteselist/.

jurisdictions have the authority to adopt standards which meet or exceed the Bulletin 74 standards. Well standards are administered and enforced at the local level.

Local

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to hazards and hazardous materials and are applicable to the proposed project.

Policy	Description
Policy 10-62	Storage of hazardous materials and wastes shall be strictly regulated.
Policy 10-65	Industries which store and process hazardous materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the County Planning Agency.

Municipal Regional Permit Provision C.12.f

Polychlorinated biphenyls (PCBs) were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, Provision C.12.f requires that permittees develop an assessment protocol methodology for managing materials with PCBs in applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.[51]

Contra Costa County Emergency Operations Plan

The Contra Costa County Operational Area Emergency Operations Plan (EOP) addresses the response to incidents associated with emergencies affecting Contra Costa County. The Contra Costa operational area consists of the cities/towns, special districts, reclamation districts, municipal improvement districts and the unincorporated areas within the County. This plan is based on the functions and principles of the California Standardized Emergency Management System, the National Incident Management System, and the Incident Command System. It identifies how the Contra Costa County emergency operational system fits into the overall California and national risk-based, all-hazard emergency response and recovery operations plans.

[51] California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.* November 2015.

3.9.1.2 *Existing Conditions*

Project Site Conditions

Hazardous Materials and Petroleum Products

Hazardous materials and petroleum products observed on-site included retail-size containers of janitorial and maintenance supplies, five-gallon plastic fuel containers of gasoline, five-gallon buckets of kerosene, five -gallon buckets of equipment grease, and cylinders of propane. No spills or leaks were observed in any of these containers and all containers were stored indoors. One pole-mounted transformer was observed on-site, which appears to have been installed after 1979 and therefore, is unlikely to be a source of polychlorinated biphenyls (PCBs).

According to the key site manager, an above-ground storage tank (AST) of gasoline existed on-site from approximately 1950 to 1965. The AST had a capacity of approximately 100 gallons of fuel. The AST is no longer present on the project site and no evidence of a chemical release was observed on-site.

ACMs, Lead-Based Paint, and PCBs

The structures on-site are suspected to contain non-friable ACMs such as roofing materials, vinyl composition tile, mastic, vinyl sheet flooring, wallboard/joint compounds, and asphalt tile used as building siding. Given the age of the existing structures, it is likely that the paint on all the structures is lead-based paint (LBP) and that certain building materials could contain PCBs.

Domestic Water Wells

Two well heads and associated pressure tanks are located in the garage adjacent to the residence on-site. A third well head is located in the northeast portion of the project site.

Regulatory Database Review

The project site is not on the Cortese List[52] and was not identified on any other databases. No significant database listings of properties in the project vicinity exist.

Other Hazards

Airports

The nearest airport to the project site is the Buchanan Field Airport, located approximately 4.2 miles north of the project site. The project site is outside of the airport influence area (AIA).[53]

[52] Ibid.
[53] Contra Costa County. Airport Land Use Compatibility Plan – Buchanan Field Airport Policies. December 2000.

Wildland Fire Hazards

The project site is not located in a Very High Fire Hazard Severity Zone for wildland fires.[54]

3.9.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hazards and hazardous materials, would the project:

1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

3.9.2.1 *Project Impacts*

Impact HAZ-1:	The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

Operation of the proposed CCRC would include the use and storage of cleaning supplies, maintenance chemicals, and pool chemicals in small quantities on-site. In addition, the proposed health center would store and use medical supplies and generate medical waste such as surgical gloves, syringes, and bandages. The cleaning supplies and maintenance/pool chemicals used on-site would be comparable to the operations of adjacent land uses and would not pose a significant hazard. Medical supplies and waste in the proposed health care center would not generate substantial hazardous emissions or accidental chemical releases that would pose a risk to site users or adjacent residential land uses. Compliance with applicable federal, state and local handling, storage, and

[54] California Board of Forestry and Fire Protection. *Fire Hazard Severity Zones Maps*. Accessed June 25, 2021. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

disposal requirements would ensure that no significant hazards to adjacent residences are created by the routine transport, use, or disposal of hazardous substances. **(Less than Significant Impact)**

Impact HAZ-2:	The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **(Less than Significant Impact with Mitigation Incorporated)**

There is no record of spills or leaks of hazardous materials within the project site or the surrounding vicinity. Therefore, no other contamination exists on-site and the project would not release hazardous materials into the environment that would create a significant hazard to the public or the environment.

ACMs and LBP

The project proposes to demolish the existing buildings on-site which could release asbestos particles into the environment and expose construction workers and nearby residents to harmful levels of asbestos. Suspected ACMs would be required to be properly assessed and removed prior to demolition consistent NESHAP guidelines. Additionally, if lead-based paint is still bonded to the building materials, its removal is not required prior to demolition.

Mitigation Measure: The project will be required to implement the following mitigation measure to reduce potential impacts from ACMs and LBP to a less than significant level:

MM HAZ-2.1: Conduct Asbestos and Lead Surveys Prior to Demolition. Prior to the issuance of demolition permits for the two existing residences and associated structures, the applicant shall retain a licensed professional to conduct asbestos and lead paint surveys. These surveys shall be conducted prior to the disturbance or removal of any suspect asbestos-containing materials and lead-based paint, and these materials shall be characterized for asbestos and lead by a reliable method. All activities involving asbestos-containing materials and lead-based paint shall be conducted in accordance with governmental regulations, and all removal shall be conducted by properly licensed abatement contractors.

With implementation of MM HAZ-2.1 and conformance with federal, state, and local regulatory requirements, the project would result in a less than significant impact from ACMs and lead. **(Less Than Significant Impact with Mitigation Incorporated)**

PCBs in Demolition Materials

The project proposes to demolish the on-site buildings, which may have materials that contain PCBs. During demolition, PCBs in building materials could be released and thereby exposed to stormwater runoff from the project site during rain events.

Mitigation Measure: The project will be required to implement the following mitigation measure to reduce potential impacts from PCBs to a less than significant level:

MM HAZ-2.2: PCB Screening Assessment. Prior to the issuance of demolition permits for the existing residences and associated structures, the applicant shall submit a PCB Screening Assessment Form with their permit application.[55] If on-site buildings do contain PCBs that exceed threshold limits, the project applicant shall follow applicable federal and state laws, which may include reporting to such agencies as the EPA, RWQCB, and DTSC, who may require additional sampling and abatement of PCBs consistent with state and federal requirements.

With implementation of MM HAZ-2.2 and conformance with relevant regulatory requirements, the project will result in a less than significant impact as related to PCBs. **(Less than Significant Impact)**

Well Abandonment

There are three existing domestic water wells on-site. The project will be connecting to the municipal water system and would not utilize the existing water wells. Therefore, in order to prevent the contamination of groundwater on-site, the existing wells must be properly abandoned in conformance with CDWR Bulletin Number 74. The project would also be required to follow the Contra Costa Health Services' (CCHS) Well Destruction Guidelines. The project would obtain a well destruction permit from the CCHS and all well destruction work would be performed by a licensed well contractor. **(Less than Significant Impact)**

Impact HAZ-3:	The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Less than Significant Impact)**

The nearest school is the Seven Hills School, located at 975 North San Carlos Drive, adjacent to the northern boundary of the project site. The project would not introduce any new acutely hazardous materials, substances, or wastes to the project site and hazardous substances would be handled consistent with applicable federal, state, and local handling, storage, and disposal requirements (see Impact HAZ-1). For these reasons, the project would have a less than significant hazardous materials impact near schools. **(Less than Significant Impact)**

Impact HAZ-4:	The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. **(No Impact)**

The project site is not included on a list of hazardous materials sites pursuant to Government Code Section 65962.5.[56] **(No Impact)**

[55] Contra Costa County, Conservation and Development Department. "Building Permit Forms and Information". Accessed November 8, 2021. https://www.contracosta.ca.gov/4781/Building-Permit-Forms.
[56] CalEPA. Cortese List Data Resources. Accessed December 1, 2020. https://calepa.ca.gov/sitecleanup/corteselist/

Impact HAZ-5:	The project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. **(Less than Significant Impact)**

The project site is located outside of the AIA of the Buchanan Field Airport, the nearest airport to the project site. **(No Impact)**

Impact HAZ-6:	The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(Less than Significant Impact)**

The proposed project would not impair or physically interfere with any adopted emergency response or evacuation plan and would be constructed to comply with all applicable building and fire codes. During construction and operation of the project, roadways would not be blocked such that emergency vehicles would be unable to access the site or surrounding properties. During operation, emergency ingress and egress to the project site would be provided by the surrounding roadways. The alignments of the drive aisles on-site and the radii of the corners and curbs would be adequate to accommodate the circulation of emergency vehicles. **(Less than Significant Impact)**

Impact HAZ-7:	The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(Less than Significant Impact)**

The project vicinity is entirely urbanized and is not located within a wildlands hazard area.[57] Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. **(Less than Significant Impact)**

3.9.2.2 *Cumulative Impacts*

Impact HAZ-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant hazards and hazardous materials impact. **(Less than Significant Cumulative Impact)**

Projects in the cumulative scenario could be located on properties where hazardous materials may have been stored, used, and/or transported. These hazardous materials (such as gasoline, oil, propane, and various chemicals in manufacturing) may have been stored on these sites in aboveground or underground tanks. Storage tanks can leak, often resulting in soil and/or groundwater contamination. If groundwater is affected, it can impact properties downgradient of the spill.

Cumulative scenario projects could also be located on sites that were used for agricultural purposes in the past and chemicals such as pesticides and fertilizers may have been used. The use of these

[57] California Board of Forestry and Fire Protection. *Fire Hazard Severity Zones Maps*. Accessed June 25, 2021. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

chemicals on agricultural properties can result in widespread residual soil contamination. In addition, development of some of the sites would require demolition of existing buildings that may contain ACMs and/or lead-based paint. Demolition of these structures could expose construction workers or other persons in the vicinity to harmful levels of asbestos or lead.

Based on these conditions, which are present on most cumulative project sites to varying degrees, impacts could occur in the cumulative scenario as a result of exposure of residents and/or workers to substances that have been shown to adversely affect health. For all cumulative scenario projects, mitigation measures will be implemented as a condition of approval to lessen risks associated with exposure to hazardous materials. Further, adherence to applicable existing local, state, and federal laws and regulations related to hazardous materials would lessen the potential for cumulative impacts.

If chemical releases have occurred in the cumulative scenario, and depending upon the extent of the release, contaminated soils could be excavated and transported to appropriate landfills or treated on-site. If groundwater is affected, remediation and ongoing groundwater sampling both on the site and on surrounding downgradient properties could be warranted. Finally, determining the extent of asbestos and lead-based paint contamination would also be required prior to building demolition and site grading and, if present, such substances would be handled and disposed of in a manner that minimizes human exposure. Therefore, cumulative projects, including the proposed project, would not result in significant cumulative hazardous materials impacts. **(Less than Significant Cumulative Impact)**

3.10 HYDROLOGY AND WATER QUALITY

The following discussion is based, in part, on a preliminary hydrology and water quality report and a preliminary stormwater control plan, both of which were prepared for the project by BKF Engineers, dated February 2021, a drainage feasibility study, prepared by BKF Engineers, dated October 2020, and a peer review of the preliminary stormwater control plan by Schaaf & Wheeler dated September 27, 2021. Copies of these reports are included in Appendix K, Appendix L, and Appendix M of this EIR, respectively.

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs). The project site is within the jurisdiction of the San Francisco Bay RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The SWRCB has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City/County's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Permit Provision C.3

The San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP) in 2015 to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.[58] Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g. rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimized size threshold, drain into tidally influenced areas or directly into the Bay, rain into hardened channels, or if they are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious.

Dam Safety

Since August 14, 1929, the State of California has regulated dams to prevent failure, safeguard life, and protect property. The California Water Code entrusts dam safety regulatory power to the California Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD provide oversight to the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California.[59]

[58] MRP Number CAS612008

[59] California Department of Water Resources, Division of Safety of Dams. https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD). Accessed June 9, 2020.

As part of its dam safety program, the Contra Costa Water District (CCWD) routinely monitors and studies the condition of each of its six dams. These regulatory inspection programs reduce the potential for dam failure.

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to hydrology and water quality and are applicable to the proposed project.

Policy	Description
Policy 7-45	On-site water control shall be required of major new developments so that no significant increase in peak flows occurs compared to the site's pre-development condition, unless the Planning Agency determines that off-site measures can be employed which are equally effective in preventing adverse downstream impacts expected from the development or the project is implementing an adopted drainage plan.
Policy 7-55	As appropriate and to the extent allowed by law, assess all new development projects at least $0.35 per square foot of impervious surface created. This drainage fee is to be collected through existing County Flood Control drainage area fee ordinances, newly adopted drainage area fee ordinances, existing and new assessment districts, or other financial entities. The fee may be applied to the cost of any developer-sponsored regional flood control improvements on- or off-site which mitigate the project's flooding impacts. Regional facilities are defined as systems sized to handle at least 15 cubic feet per second and suitable for public agency maintenance, i.e., 24-inch diameter and larger storm drains.
Policy 8-91	Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.

Contra Costa County Ordinance Code

Section 914-2.002 requires that all portions of a subdivision shall be protected from flood hazards and storm drainage facilities within the subdivision shall be designed and constructed in compliance with current specifications and design standards of the Public Works Department. Division 1014, Stormwater Management and Discharge carries out the conditions in the County's NPDES permit issued by the San Francisco Bay RWQCB that require implementation of appropriate source control and site design measures and stormwater treatment measures for projects that create or replace one acre or more of impervious surface.

Division 1014 under Title 10 discusses stormwater management and discharge control in compliance with the C.3 requirements in the NPDES permit (discussed above) that would apply to the Project.

The ordinance requires preparation, review and approval of a Stormwater Control Plan in compliance with the Stormwater C.3 Guidebook.

3.10.1.2 *Existing Conditions*

Regional Setting

The project site is located within the Walnut Creek Watershed of the Walnut Creek Valley. The Walnut Creek Watershed drains the central region of the County flowing north and emptying into Pacheco Creek, Suisun Bay, Carquinez Strait, and the San Francisco Bay. Within the Walnut Creek watershed are the Grayson, Pine, San Ramon and Las Trampas sub-watersheds, through which flow the Walnut, Pine, San Ramon, Tice and Las Trampas Creeks. The project site is located within the Pine Creek sub-watershed.

Groundwater

The project site is located within the Ygnacio Valley Groundwater Basin which occupies a structural depression between the Berkeley Hills and the Mt. Diablo Range. The basin is underlain by thick alluvial deposits that cover a faulted and folded complex of consolidated rocks. Groundwater on-site generally exists at a depth of approximately 17 feet bgs.[60]

Stormwater Drainage

According to the project's preliminary stormwater control plan (SWCP), the project site currently consists of 0.3 acres (one percent) of impervious surface area and 30.3 acres (99 percent) of pervious surface area. The existing drainage system on-site is made up of natural channels, pipe culverts, and hillside sheet flow. The project site contains approximately eight watersheds with a total of six outfall locations. These outfall locations are described below:

- In the western portion of the project site, runoff drains to a natural channel that feeds to a large concrete inlet structure within FC District right of way that feeds into the Walnut Creek by way of a dual-box concrete culvert.
- Along the northern portion of the project site, runoff flows down the hills into the lands of the Contra Costa County Flood Control District, where the maintenance road's roadside ditch collects the runoff and directs it into the channel with outfalls within the wall of the channel structure.
- In the center of the project site a natural drainage collects water from a large area of the project site.
- In the eastern portion of the project site, a stormwater drains towards the Seven Hills School in two different locations.
- Also in the eastern portion of the project site is a shed of 6.28 acres that flows onto North San Carlos Road and the Equestrian Center parking lot.

[60] Baez Geotechnical Group. *Due Diligence Geotechnical and Geologic Investigation. BGG Project No. G147.01*. March 24, 2020.

Flooding Hazards

The project site is designated as Flood Zone X, an area of minimal flood hazard.[61]

Tsunami and Seiches

The project site is approximately 14 miles inland from the San Francisco Bay and is not within a tsunami hazard zone.[62] There are no lakes or other large, open bodies of water that would be subject to seiches within the project area.

3.10.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hydrology and water quality, would the project:

1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - result in substantial erosion or siltation on- or off-site;
    - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - impede or redirect flood flows?
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

[61] FEMA. *Flood Insurance Rate Map No. 06013C0291F*. Effective on June 16, 2009.
[62] Contra Costa County. *Hazard Mitigation Plan, Volume 1. Figure 12-2: Tsunami Inundation Zones*. January 2018.

3.10.2.1 *Project Impacts*

Impact HYD-1:	The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

Construction Water Quality Impacts

Construction of the proposed project, including grading and excavation activities, may result in temporary impacts to surface water quality. When disturbance to underlying soils occurs, surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system. Consistent with Division 1014 of the County Ordinance Code and the NPDES Construction General Permit and Provision C.3 requirements, the project applicant has submitted a SWCP with the development application. Given that the project will disturb over one-acre of land, the project will be required to submit a SWPPP prior to approval of grading permits. The SWPPP shall document what construction best management practices (BMPs) the project will implement in order to prevent erosion and to minimize discharge of sediment and chemicals into the storm drain system. In addition, the project would comply with the County's Grading Ordinance (see Section 3.7 Geology and Soils) to reduce potential erosion and surface runoff. Compliance with the above state and local regulations would ensure that project construction would not substantially degrade surface water or ground water quality. **(Less than Significant Impact)**

Post-Construction Water Quality Impacts

Stormwater on-site would be directed to new stormwater lines, bio-retention areas, and an existing outfall along Walnut Creek. According to the SWCP, the project would increase impervious surface area on-site by approximately 16.7 acres, for a total of 17 acres (56 percent) of impervious surface area on-site. Therefore, the project would create over 10,000 square feet of impervious surface area and would be required to implement site design, source control, and LID-based stormwater treatment controls to treat post-construction stormwater runoff pursuant to Provision C.3 of the MRP. The project proposes to meet these requirements by preserving the existing natural drainage, incorporating permeable pavers into 66 percent of the total proposed parking areas, and using raised flow-through planters and bioretention areas as on-site stormwater treatment. Compliance with Provision C.3 of the MRP and implementation of the proposed SWCP would ensure that project operation would not substantially degrade surface water or ground water quality. **(Less than Significant Impact)**

Impact HYD-2:	The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

Groundwater on-site exists at approximately 17 feet bgs.[63] The project does not propose any below-grade parking garages or other subterranean levels. Thus, groundwater pumping is not anticipated for project construction.

Water is supplied to the project site by the CCWD. The CCWD's primary water source is the Sacramento-San Joaquin Delta. The CCWD does not manage groundwater, nor does it use groundwater to meet any demands.[64] Therefore, project operation would not result in the use of groundwater. The project would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

Impact HYD-3:	The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. **(Less than Significant Impact with Mitigation Incorporated)**

The project does not propose to alter the course of Walnut Creek or the existing drainage running through the middle of the project site. The project would result in a net increase of impervious surfaces on-site. Substantial erosion and siltation would be prevented through development and implementation of a SWPPP, as described under Impact HYD-1. The project would implement runoff-reducing measures as described in the SWCP and consistent with Provision C.3 of the MRP. Given that the project would drain into City of Walnut Creek and FC District stormwater facilities, the project would be required to comply with both the City of Walnut Creek's Minimum Drainage Design Standards and Contra Costa County's design standards. BKF Engineers concluded that the impacts of the project's outfall would be minimal to the existing stormwater drainage infrastructure.[65]

Mitigation Measure: The project will be required to implement the following mitigation measure to reduce potential impacts to stormwater drainage systems to a less than significant level:

[63] Baez Geotechnical Group. *Due Diligence Geotechnical and Geologic Investigation. BGG Project No. G147.01*. March 24, 2020.
[64] Contra Costa Water District. *2020 Urban Water Management Plan.* Page 6-1.
[65] BKF Engineers. *Spieker Senior Continuing Care Community Drainage Feasibility.* December 2, 2020.

MM HYD-3.1: In accordance with Division 914 of the Contra Costa County Ordinance Code, the project applicant shall collect and convey all stormwater entering and/or originating on this property, without diversion and within an adequate storm drainage facility, to a natural watercourse having definable bed and banks, or to an existing adequate public storm drainage system that conveys the stormwater to a natural watercourse. Any proposed diversions of the watershed shall be subject to hearing body approval. Prior to issuance of a grading permit, the applicant shall submit improvement plans for proposed drainage improvements, and a drainage report with hydrology and hydraulic calculations to the Engineering Services Division of the Public Works Department and the Contra Costa County Flood Control and Water Conservation District for review and approval that demonstrates the adequacy of the on-site drainage system and the downstream drainage system. The applicant shall verify the adequacy at any downstream drainage facility accepting stormwater from this project prior to discharging runoff. If the downstream system(s) is not adequate to handle the Existing Plus Project condition for the required design storm, improvements shall be constructed to make the system adequate. The applicant shall obtain access rights to make any necessary improvements to off-site facilities.

With implementation of MM HYD-3.1 and compliance with Provision C.3 of the MRP, the project would have a less than significant impact on stormwater drainage facilities. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact HYD-4:	The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

The project site is designated as Flood Zone X, an area of minimal flood hazard.[66] The project site is not subject to tsunamis or seiches. Therefore, the project would not risk release of pollutants due to project inundation. **(Less than Significant Impact)**

Impact HYD-5:	The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

Through compliance with the NPDES and MRP, implementation of the SWCP and SWPPP, the project would not conflict with the Basin Plan, or other applicable water quality control plans. The CCWD does not manage groundwater, nor does it use groundwater to meet any demands.[67] There is no sustainable groundwater management plan for the Ygnacio Valley Groundwater Basin as it has been designated as very low priority by the CDWR.[68] Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

[66] FEMA. *Flood Insurance Rate Map No. 06013C0291F*. Effective on June 16, 2009.
[67] Contra Costa Water District. *2020 Urban Water Management Plan.* Page 6-1.
[68] Ibid.

3.10.2.2 *Cumulative Impacts*

Impact HYD-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant hydrology and water quality impact. **(Less than Significant Cumulative Impact)**

Cumulative projects would also be required to comply with the NPDES and the MRP. Projects creating or replacing over 10,000 sf of impervious surfaces would also be subject to Provision C.3 of the MRP. Therefore, the projects listed in Table 3.0-1 would be required to implement similar erosion-control BMPs during project construction and stormwater treatment measures for post-construction water quality impacts.

Cumulative projects would also be within the Ygnacio Valley Groundwater Basin and would be within the CCWD's service area. Therefore, cumulative projects would also have less than significant impacts to groundwater resources because the CCWD does not utilize groundwater supplies and the CDWR has designated the Ygnacio Valley Groundwater Basin as very low priority. Cumulative projects would also similarly have minimal risks of releasing pollutants due to flooding, tsunamis, and seiches because they would have similar geographic conditions as the proposed CCRC. Therefore, the project would not contribute to cumulatively significant hydrology and water quality impact. **(Less than Significant Cumulative Impact)**

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

65/35 Contra Costa County Land Preservation Plan (Measure C-1990, Measure L-2006)

The 65/35 Land Preservation Plan was established by Contra Costa County voters through adoption of Measure C-1990 and reaffirmed through adoption of Measure L-2006. Under the 65/35 Plan, no more than 35 percent of the land in the county may be developed with urban uses and at least 65 percent must be preserved for non-urban uses such as agriculture, open space, parks, and wetlands. A component of the 65/35 Plan is the Urban Limit Line (ULL). Land outside the ULL is generally considered unsuitable for urban development. The County is prohibited from redesignating land outside the ULL to an urban designation, as defined in the County General Plan. The 65/35 Plan also includes provisions related to agriculture and hillside protection, annexations and incorporations, and housing.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to land use and planning and are applicable to the proposed project.

Policy	Description
Policy 3-5	New development within unincorporated areas of the county may be approved, providing growth management standards and criteria are met or can be assured of being met prior to issuance of building permits in accordance with the Growth Management Program.
Policy 3-6	Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water, and flood control.
Policy 3-8	Infilling of already developed areas shall be encouraged. Proposals that would prematurely extend development into areas lacking requisite services, facilities, and infrastructure shall be opposed. In accommodating new development, preference shall generally be given to vacant or underused sites within urbanized areas, which have necessary utilities installed with available remaining capacity, before undeveloped suburban lands are utilized.
Policy 3-12	Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy and competitive agricultural economy and assuring a balance of land uses. Preservation and conservation of open space, wetlands, parks, hillsides and ridgelines should be encouraged as it is crucial to preserve the continued availability of unique habitats for wildlife and plants, protect unique scenery, and provide a wide range of recreational opportunities for county residents.
Policy 3-23	A diversity of living options shall be permitted while ensuring community compatibility and quality residential development.

Policy 3-28	New residential development shall be accommodated only in areas where it will avoid creating severe unmitigated adverse impacts upon the environment and upon the existing community.

Contra Costa County Zoning Ordinance

The Contra Costa Zoning Ordinance (Zoning Code) regulates land use and development of land within the County. Among other things, the Zoning Code identifies permitted land uses and establishes development standards (e.g., lot size, building height, setbacks, parking requirements, signage standards), construction requirements (e.g., Grading Ordinance), and environmental protection requirements (e.g., Tree Ordinance). The Zoning Code is the primary tool for implementing the policies of the General Plan.

3.11.1.2 *Existing Conditions*

The project site currently has a General Plan land use designation of Single-Family Residential – Medium Density (SM) and is zoned A-2 General Agricultural District. The SM designation allows 3.0 to 4.9 single-family units per net acre. Sites can range up to 14,519 square feet. With an average of 2.5 persons per household, population densities would normally range from about 7.5 to about 12.5 persons per acre. Primary land uses permitted in this designation include detached single-family homes and accessory buildings and structures. Secondary uses generally considered to be compatible with low density homes may be allowed, including home occupations, small residential care and childcare facilities, churches and other similar places of worship, accessory dwelling units, and other uses and structures incidental to the primary uses.

All types of agriculture are permitted uses in the A-2 zoning district. One detached single-family dwelling per parcel is allowed in the A-2 zoning district.

The A-2 zoning is inconsistent with the SM General Plan land use designation. As the General Plan is controlling, the site is considered residential.
Surrounding land uses include the Seven Hills School and the Heather Farms Equestrian Center adjacent to the project's northeastern boundary and single-family residential neighborhoods on all other sides of the project site.

3.11.2 Impact Discussion

For the purpose of determining the significance of the project's impact on land use and planning, would the project:

1) Physically divide an established community?
2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.11.2.1 *Project Impacts*

Impact LU-1:	The project would not physically divide an established community. **(No Impact)**

Examples of projects that have the potential to physically divide an established community include new freeways and highways, major arterial streets, and railroad lines. The project proposes to develop a CCRC on a 30.6-acre site that is largely vacant, with the exception of one single-family residence on-site. The project would not result in the construction of dividing infrastructure such as highways, expressways, or major arterial streets. Additionally, the project would not sever or obstruct any existing roads or connections between the surrounding residential neighborhoods, the Seven Hills School, or Heather Farms Park. The proposed CCRC would be a compatible use with the surrounding community. For these reasons, the project would not physically divide an established community. **(No Impact)**

Impact LU-2:	The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

The project proposes to amend the Land Use Element Map of the County General Plan by way of changing the land use designation from SM to Congregate Care/Senior Housing (CC). The CC designation allows for the development of clustered residential units for the location of senior citizen congregate care housing projects. The CC General Plan land use designation is adopted with unique criteria for each site to which it is applied. The criteria of the CC General Plan land use designation would be designed to accommodate the proposed CCRC and thus, the project would not conflict with the General Plan land use designation. Consistent with General Plan policy 3-5, the project site is within the County's Urban Limit Line and has been designated for future urban uses and development. The project is considered urban infill, given the surrounding development, and would diversify senior citizen housing options, consistent with General Plan policies 3-8 and 3-23. The project proposes to preserve the existing drainage through the middle of the project site, consistent with General Plan policy 3-12, and, as discussed throughout this EIR, the project would not result in an unmitigated adverse environmental impact, consistent with General Plan policy 3-28.

The project proposes to rezone the site from A-2 to a site-specific Planned Unit District (P-1) in order to construct the proposed CCRC. The P-1 zoning district is intended to allow diversification in the relationship of various uses, buildings, structures, lot sizes, and open space while ensuring substantial compliance with the General Plan and the intent of the County Code in requiring adequate standards necessary to satisfy the requirements of the public health, safety and general welfare. The P-1 zoning district applied to the project site would be adopted with unique criteria designed to accommodate the proposed CCRC.

The proposed project is within the County's ULL and would not violate the 65/35 Land Preservation Plan.

In addition, the proposed project would be consistent with General Plan policies adopted to avoid or mitigate environmental effects as described in the individual resource sections of this EIR. For these reasons, the project would not conflict with the General Plan, Zoning Code, or other land use plans, policies, or regulations. **(Less than Significant Impact)**

3.11.2.2 *Cumulative Impacts*

Impact LU-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant land use and planning impact. **(Less than Significant Cumulative Impact)**

Cumulative scenario projects in the County are subject to General Plan goals, policies, and action statements that require appropriate buffers, edges, and transition areas between land uses. In addition, the project site and other cumulative projects identified in Table 3.0-1 would not physically divide a community. Thus, the project would not contribute to a cumulative physically dividing impact.

Cumulative scenario projects in Contra Costa County and City of Walnut Creek would go through the County/City development review processes. In addition, projects would be analyzed for conformance with applicable policies adopted for the purpose of avoiding or mitigating an environmental impact through the CEQA review process. The project, therefore, in combination with cumulative development, would not result in significant policy conflict impacts and would not contribute to a significant cumulative land use impact as a result of conflict with policies to avoid a significant environmental impact. **(Less than Significant Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

3.12.1.2 *Existing Conditions*

The County has identified several important mineral resource mining areas in the General Plan. These include crushed rock near Mt. Zion, on the north side of Mt. Diablo, in the Concord area. Shale in the Port Costa area, and sand and sandstone deposits from several locations focused primarily in the Byron area of southeast Contra Costa County.

3.12.2 Impact Discussion

For the purpose of determining the significance of the project's impact on mineral resources, would the project:

1) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
2) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

3.12.2.1 *Project Impacts*

Impact MIN-1:	The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

There are no known mineral resources on-site. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

Impact MIN-2:	The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **(No Impact)**

The project site is not within or near a mineral resource recovery site delineated in the General Plan or other land use plan. **(No Impact)**

3.12.2.2 *Cumulative Impacts*

Impact MIN-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant mineral resources impact. **(No Impact)**

The project would not have any impacts on mineral resources and therefore, would not have potential to contribute to a cumulatively significant mineral resources impact. **(No Impact)**

3.13 NOISE

The following discussion is based, in part, on an Environmental Noise Assessment prepared for the project by Illingworth & Rodkin, Inc., dated January 31, 2022, and a peer review prepared by RGD Acoustics dated November 10, 2021. A copy of these reports is included in Appendix O of this EIR.

3.13.1 Environmental Setting

3.13.1.1 *Background Information*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq}, L_{dn}, or CNEL.[69] These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV. The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Table 3.13-1 shows the general reactions of people and the effects on buildings that continuous vibration levels produce. As with noise, the effects of vibration on individuals is subjective due to varying tolerances.

[69] L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (L_{dn}) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and L_{dn} are typically within two dBA of the peak-hour L_{eq}.

Table 3.13-1: Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels		
Velocity Level PPV (in/sec)	**Human Reaction**	**Effects on Buildings**
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe – vibration considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures
Source: California Department of Transportation. *Transportation and Construction Vibration Guidance Manual.* September 2013.		

3.13.1.2 *Regulatory Framework*

State and Local

California Building Standards Code

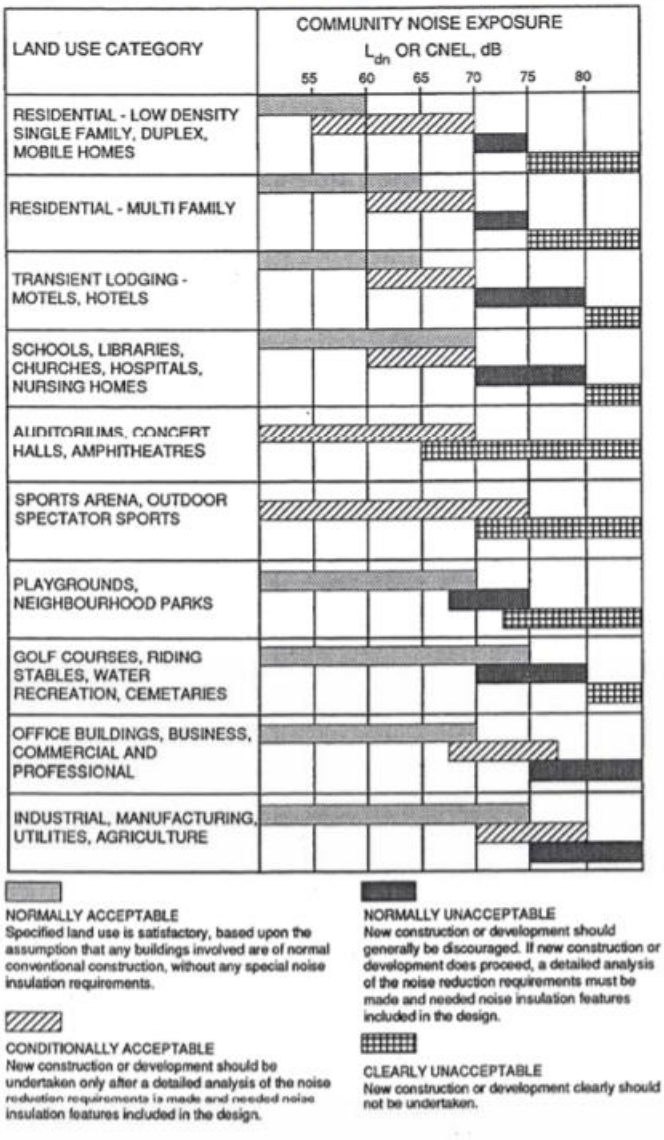
The CBC establishes uniform minimum noise insulation performance standards to protect persons within new buildings housing people, including hotels, motels, dormitories, apartments, and dwellings other than single-family residences. Title 24 mandates that interior noise levels attributable to exterior sources not exceed 45 L_{dn}/CNEL in any habitable room. Exterior windows must have a minimum Sound Transmission Class (STC) of 40 or Outdoor-Indoor Transmission Class (OITC) of 30 when the property falls within the 65 dBA DNL noise contour for a freeway or expressway, railroad, or industrial source.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to noise and vibration and are applicable to the proposed project.

Policy	Description
Policy 11-1	New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines contained in Figure 11-6. These guidelines, along with the future noise levels shown in the future noise contours maps, should be used by the county as a guide for evaluating the compatibility of "noise sensitive" projects in potentially noisy areas.

Figure 11-6 Land Use Compatibility for Community Noise Environments



Policy 11-2	The standard for outdoor noise levels in residential areas is an L_{dn} of 60 dB. However, an L_{dn} of 60 dB or less may not be achievable in all residential areas due to economic or aesthetic constraints. One example is small balconies associated with multi-family housing. In this case, second- and third-story balconies may be difficult to control to the goal. A common outdoor use area that meets the goal can be provided as an alternative.

Policy 11-4	Title 24, Part 2, of the California Code of Regulations requires that new multifamily housing projects, hotels, and motels exposed to an L_{dn} of 60 dB or greater have a detailed acoustical analysis describing how the project will provide an interior L_{dn} of 45 dB or less. The County also shall require new single-family housing projects to provide for an interior L_{dn} of 45 dB or less.
Policy 11-6	If an area is currently below the maximum "normally acceptable" noise level, an increase in noise up to the maximum should not be allowed necessarily.
Policy 11-8	Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning hours.
Policy 11-9	Sensitive land use shall be encouraged to be located away from noise areas, or the impacts of noise on these uses shall be mitigated. If residential areas are planned adjacent to industrial noise sources, then a noise study shall be performed to determine the extent of any noise impacts and recommend appropriate noise mitigation measures.

Contra Costa County Ordinance Code

Contra Costa County Ordinance Code Section 716-8.1004 regulates grading work hours. It states, if operations under the permit are within five hundred feet of residential or commercial occupancies, except as otherwise provided by conditions of approval for the project, grading operations shall be limited to weekdays and to the hours, between 7:30 a.m. and 5:30 p.m., except that maintenance and service work on equipment may be performed at any time. The allowed hours, however, are subject to modification by the County Zoning Administrator based upon a project's application.

City of Walnut Creek 2025 General Plan

While the project site is located within unincorporated territory of Contra Costa County, the project has potential to result in noise impacts to surrounding properties within the jurisdiction of the City of Walnut Creek. The Safety and Noise Chapter of Walnut Creek's 2025 General Plan sets forth the policies and actions to assess and control environmental noise. The pertinent policies and associated actions are summarized below.

Policies and Actions	**Description**
Policy 8.1	Apply the noise and land use compatibility table and standards to all residential, commercial, and mixed-use proposals, including condominium conversions. The noise and land use compatibility table includes quantitative standards for exterior noise levels at various land uses. Single family residential and hospital care facilities would be considered "normally acceptable" in noise environments characterized by an L_{dn} of 60 dBA or below, "conditionally acceptable" in noise environments characterized by an L_{dn} of 60 to 75 dBA or "unacceptable" in noise environments characterized by an L_{dn} of greater than 75 dBA. Multifamily residences would be considered "normally acceptable" in noise environments characterized by an L_{dn} of 65 dBA or below, "conditionally acceptable" in noise

	environments characterized by an L_{dn} of 65 to 75 dBA or "unacceptable" in noise environments characterized by an L_{dn} of greater than 75 dBA.
Policy 8.2	Address the issue of residences affected by intermittent urban noise from sources such as heating, ventilating, and air-conditioning equipment, and by outdoor maintenance activities such as parking lot sweeping and early morning garbage collection.
Action 8.2.1	For new single-family residential projects, use a standard of 60 L_{dn} for exterior noise in private use areas.
Action 8.2.2	For new multi-family residential projects and for residential component of mixed-use development, use a standard of 65 L_{dn} in outdoor areas, excluding balconies.
Action 8.2.3	Strive for a maximum interior noise level of 45 L_{dn} in all new residential units.
Policy 9.1	Control all residential and commercial noise sources to protect the existing noise environment.
Action 9.1.1	Require the evaluation of noise mitigation measures for projects that would cause a substantial increase in noise.

City of Walnut Creek Municipal Code

The City's Municipal Code sets forth policies "to control and, in some instances, prohibit noise and vibration which may impact the health, safety or welfare of the citizens of Walnut Creek." The City limits construction to within the hours of 7:00 a.m. and 6:00 p.m. on weekdays, which are not holidays, or to those hours specified in individual building and grading permits, as authorized by the Chief of Code Enforcement or City Engineer. Since the project is under Contra Costa County jurisdiction, the County, as lead agency, could modify the allowed construction hours as appropriate.

3.13.1.3 *Existing Conditions*

Four short-term (ST-) and four long-term (LT-) noise measurements were taken on-site from October 5, 2021, to October 7, 2021. Noise measurements were made along the proposed future project driveway at Kinross Drive (ST-1, LT-4), in front of the residence at 89 Kings Oak Place (ST-2), the southeast boundary of the project site adjacent to Pyrenees Place townhomes (LT-1), adjacent to Seven Hills School (LT-2), the northwest boundary of the project site adjacent to Cherry Lanes residences (LT-3), the southwest boundary of the project site (ST-4), and adjacent to the equestrian center at Heather Farms Park (ST-3) (see Figure 3.13-1). Short-term noise levels at these locations ranged from 48 to 50 dBA L_{eq}, primarily resulting from distant traffic noise, occasional aircraft overflights, and natural noise (e.g., birds). Long-term noise levels at these locations ranged from 47 to 54 DNL. The results of the short-term noise measurements are shown in Table 3.13-2.

Source: Illingworth & Rodkin, Inc., November 12, 2021.

NOISE MONITORING LOCATIONS | FIGURE 3.13-1

Table 3.13-2: Summary of Short-Term Noise Measurement Data					
Measurement Locations	**Measured Noise Levels (dBA)**				**Primary Noise Source**
	L_{10}	**L_{50}**	**L_{90}**	**L_{eq}**	
ST-1: Future Project Driveway, Kinross Drive (10/5/2021, 10:30 to 10:40 am)	50	46	45	48	Distant traffic, BART
ST-2: Front of Residence at 89 Kings Oak Place (10/5/2021, 10:10 to 10:20 am)	51	47	45	49	Distant traffic, occasional aircraft, BART
ST-3: Equestrian Center at Heather Farms Park (10/5/2021, 9:40 to 9:50 am)	51	46	44	50	Local traffic on North San Carlos Drive, distant noise at Heather Farm Corp Yard
ST-4: South Side of Project Site Near Residence (10/5/2021, 10:30 to 10:40 am)	51	46	44	48	Distant traffic, occasional aircraft, BART

Initial short-term measurements were taken in June 2020 and adjusted upward by 2 dBA to conservatively reflect typical (pre-COVID 19) noise levels with normal vehicular traffic on surrounding streets. A supplemental set of both short- and long-term measurements were then taken at the locations noted above in October 2021. These current short-term measurements are included in Table 3.13-2, confirming the validity of the assumptions made originally. The Walnut Creek General Plan specifies a noise level of 75 dBA L_{dn} at a distance of 250 feet from Interstate 680 (I-680) and noise levels of 72 to 75 dBA L_{dn} at the roadside adjacent to local roads of significance (Treat Boulevard and Ygnacio Valley Road). At a distance of approximately 2,400 feet, I-680 traffic is calculated to generate an unshielded noise level of 60 dBA L_{dn}. Treat Boulevard would generate unshielded traffic noise levels of 50 to 53 dBA L_{dn} at a distance of 1,500 feet and Ygnacio Valley Road would generate unshielded traffic noise levels of 47 to 50 dBA L_{dn} at a distance of 2,500 feet. Shielding is estimated to provide an additional 15 to 20 dBA of noise reduction for all these traffic noise sources, resulting in distant traffic noise levels below 45 dBA L_{dn} at the project site.

In addition to traffic noise, the site would be exposed to noise generated by activities at Seven Hills School, located to the north. The Seven Hills School serves approximately 400 students in preschool through eighth grade. The most significant noise events associated with schools are typically large spectator activities (less than 300 spectators), such as football games. Given the small size of the school (approximately 400 students), the fact that the school does not serve high school students, and that the school does not include any large capacity outdoor bleacher facilities, significant noise events are unlikely to occur. Noise levels from athletic field events are typically 57 to 60 dBA L_{eq} at a distance of 100 feet from the center of the field, including spectator and on-field noise. Average noise levels generated during hardscape activities typically range from 59 to 67 dBA L_{eq} at 50 feet.

3.13.2 Impact Discussion

For the purpose of determining the significance of the project's impact on noise, would the project result in:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2) Generation of excessive groundborne vibration or groundborne noise levels?
3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

3.13.2.1 *Thresholds of Signifiance*

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

1. **Temporary or Permanent Noise Increases in Excess of Established Standards:** A significant impact would be identified in the following cases:

    a. Operational Noise in Excess of Standards. A significant noise impact would be identified if the project operations would generate noise levels that would exceed applicable noise standards presented in the General Plan or Ordinance Code.

    b. Permanent Noise Increase. A significant permanent noise increase would occur if a) the noise level increase is five dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is three dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

    c. Temporary Noise Increase. A significant temporary noise impact would be identified if construction-related noise would substantially exceed existing conditions and conflict with the identified mitigations measures, including but not limited to, construction-related noise occurring outside of the allowed hours, or construction activities conducted without the inclusion of best management practices.

2. **Generation of Excessive Groundborne Vibration:** A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to buildings.

3.13.2.2 *Project Impacts*

Impact NOI-1:	The project could result in generation of a substantial temporary increase in ambient noise levels and would not result in generation of a substantial permanent increase in ambient noise levels, with mitigation incorporated, in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. **(Less than Significant Impact with Mitigation Incorporated)**

Temporary Construction Noise

Construction activities would be carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Project construction would involve site preparation, grading and excavation, trenching and foundation work, new building framing and finishing, and paving. Pile driving is not proposed as a method of construction. Site work is anticipated to last approximately 12 months, followed by construction of the independent living units for approximately 22 months, and construction of the health care center for approximately 18 months. Overall, project construction is anticipated to last for approximately three to four years. Contra Costa County Ordinance Code 716-8.1004 establishes that grading construction operations within 500 feet of residential or commercial occupancies shall be limited to weekdays and to the hours between 7:30 a.m. and 5:30 p.m., unless modified by the County Zoning Administrator. The City of Walnut Creek limits construction to within the hours of 7:00 a.m. and 6:00 p.m. on non-holiday weekdays. Neither Contra Costa County, nor the City of Walnut Creek provide quantitative noise limits for construction.

Noise modeling for the project (refer to Appendix O) assumed worst-case conditions, in that all equipment per phase of construction would be operating simultaneously. For construction noise, the use of multiple pieces of equipment simultaneously would add together as a collective noise source. While every piece of equipment per phase would likely be scattered throughout the site, the noise-sensitive receptors surrounding the site would be subject to the collective noise source generated by all equipment operating at once. Therefore, to assess construction noise impacts at the receiving property lines of noise-sensitive receptors, the worst-case hourly average noise level for each phase was centered on the site and extrapolated to the nearest property line of the surrounding land uses.

The Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) was used to calculate the hourly average noise levels anticipated for the worst-case scenario for each construction phase, based on an equipment list provided by the applicant. RCNM calculated construction noise levels ranging from 74 to 88 dBA L_{eq} at a distance of 50 feet from the source. Noise levels would be lower as construction moves away from shared property lines or into shielded areas. Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors. Table 3.13-3 and Table 3.13-4 summarize the results of the RCNM calculations for construction noise estimated for construction of the independent living units and the health care center, respectively, at the noise source and at the various surrounding sensitive receptors.

Table 3.13-3: Estimated Construction Noise Levels (Independent Living Units) at Nearby Land Uses							
Phase	**Time Duration**	**Construction Equipment (Quantity)**	**Calculated Hourly Average L_{eq}, dBA**				
			Source Noise Level (50 feet)	**Seven Hills School (830 feet)**	**Adirondack Way Residences (430 feet)**	**Homestead Avenue Residences (590 feet)**	**Kings Oak Place Residences (300 feet)**
Demolition	2 months	Concrete/Industrial Saw (1), Excavators (3), Rubber Tired Dozers (2)	86	62	68	65	71
Site Preparation	1.5 months	Rubber Tired Dozers (3), Tractors/Loaders/Backhoes (4)	86	61	67	64	70
Grading/Excavation	3.5 months	Scrapers (2), Excavators (2), Grader (1), Rubber Tired Dozer (1), Tractors/ Loaders/Backhoes (2)	88	63	69	66	72
Trenching/Foundation (concurrent with grading/excavation)	3.5 months	Tractors/Loaders/Backhoes (2), Excavators (2), Scrapers (2), Grader (1), Rubber Tired Dozer (1)	88	63	69	66	72
Building – Exterior (Independent Living Units)	20 months	Crane (1), Forklifts (3), Generator Set (1), Tractors/Loaders/Backhoes (3), Welders (1)	84	60	65	63	69
Architectural Coating (Independent Living Units)	1.5 months	Air Compressor (1)	74	49	55	52	58
Paving	2.5 months	Pavers (2), Paving Equipment (2), Rollers (2)	85	60	66	63	69

Table 3.13-4: Estimated Construction Noise Levels (Health Care Center) at Nearby Land Uses							
Phase	**Time Duration**	**Construction Equipment (Quantity)**	**Calculated Hourly Average L_{eq}, dBA**				
			Source Noise Level (50 feet)	**Seven Hills School (190 feet)**	**Pyrenees Place Residences (240 feet)**	**Adirondack Way Residences (880 feet)**	**Kings Oak Place Residences (720 feet)**
Demolition	1 month	Concrete/Industrial Saw (1), Excavators (3), Rubber Tired Dozers (2)	86	75	73	61	63
Site Preparation	1.5 months	Rubber Tired Dozers (3), Tractors/Loaders/Backhoes (4)	86	74	72	61	62
Grading/Excavation	3.5 months	Scrapers (2), Excavators (2), Grader (1), Rubber Tired Dozer (1), Tractors/Loaders/ Backhoes (2)	88	76	74	63	65
Trenching/Foundation (concurrent with grading/excavation)	3.5 months	Tractors/Loaders/Backhoes (2), Excavators (2), Scrapers (2), Grader (1), Rubber Tired Dozer (1)	88	76	74	63	65
Building – Exterior (Independent Living Units)	10.5 months	Crane (1), Forklifts (3), Generator Set (1), Tractors/ Loaders/ Backhoes (3), Welders (1)	84	73	70	59	61
Architectural Coating (Independent Living Units)	1 month	Air Compressor (1)	74	62	60	49	51
Paving	2.5 months	Pavers (2), Paving Equipment (2), Rollers (2)	85	73	71	60	62

Ambient daytime noise levels at the sensitive receptors identified in the tables above are in the range of 45 to 55 dBA L_{eq}. Construction noise levels are anticipated to be as much as 30 to 40 dBA above ambient noise levels when heavy construction is located adjacent to sensitive land uses. During the construction of the Independent Living Units, noise levels at the Seven Hills School would generally range from 60 to 63 dBA L_{eq}. The Care Center would be constructed closer to the school, yielding construction noise levels generally in the range of 73 to 76 dBA L_{eq}. Construction noise levels exceeding 60 dBA L_{eq} would have the potential to result in speech and activity interference outdoors and within buildings assuming that windows/doors are open for ventilation.

The anticipated increase in temporary construction noise at off-site noise sensitive locations is considered a potentially significant impact due to the duration of construction and the proximity of construction to noise sensitive receptors.

Mitigation Measure: The project will be required to implement the following mitigation measure to reduce the level of noise generated during project construction.

MM NOI-1.1: A Construction Noise Management Plan shall be prepared by the construction contractor and implemented prior to the start of and throughout construction to reduce noise impacts on the nearby existing land uses. The plan shall establish the procedures the contractor will take to reasonably minimize construction noise at the nearby existing land uses. The plan shall include, but not be limited to, the following measures to reduce construction noise levels as low as practical:

a) Restrict noise-generating activities including construction traffic at the construction site or in areas adjacent to the construction site to the hours of 8:00 a.m. to 5:30 p.m., Monday through Friday, with no construction allowed on federal and State weekends and holidays.
b) Potential contractors shall be requested to submit information on their noise management procedures and demonstrate a successful track record of construction noise management on prior projects.
c) The selected contractor will equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
d) The selected contractor will prohibit unnecessary idling of internal combustion engines.
e) The selected contractor will locate stationary noise generating equipment such as air compressors or portable power generators as far as practical from sensitive receptors.
f) The selected contractor will utilize “quiet” air compressors and other stationary noise sources where technology exists.
g) The selected contractor shall limit the allowable hours for the delivery of materials or equipment to the site and truck traffic coming to and from the site for any purpose to Monday through Friday between 8:00 a.m. and 5:30 p.m.
h) The selected contractor will establish construction staging areas and material stockpiles at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the

project site during all project construction to a distance of at least 75 feet, as is feasible.

i) The selected contractor will designate a project liaison that will be responsible for responding to noise complaints during the construction phase. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. This person will take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring will be presented at regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels to the extent feasible.

j) The selected contractor will hold a preconstruction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, construction schedule, and noise coordinator) are completed.

k) Prior to the initiating of each phase of the project (e.g. grading, construction) neighboring property owners within 300 feet of construction activity shall be notified in writing of the construction schedule and at least 2 weeks prior to loud noise-generating activities. Notification will include the nature and estimated duration of the activity.

l) A qualified acoustical professional shall be retained to address noise concerns, and if needed, to determine if construction noise levels at adjacent property lines are consistent with the findings of the certified EIR. Corrective actions shall be taken to reduce construction noise if inconsistencies are identified. Temporary noise barriers could be considered during construction phases involving earth moving equipment (e.g., grading operations) where they would be effective in reducing the construction noise impact, when directly adjoining sensitive receptors, such as at the Seven Hills School. An eight-foot plywood noise barrier could reduce noise levels by at least 5 dBA.

With implementation of the above requirements of MM NOI-1.1, the proposed project would limit construction hours and reduce construction noise levels at noise sensitive locations, consistent with Contra Costa County and City of Walnut Creek construction noise policies and guidelines. Even though construction will be taking place during different phases and for several months, construction activities and the equipment used would not be located at the same location, but rather moving along different angles/locations of the project site. For these reasons, the project would result in a less than significant temporary construction noise impact. **(Less than Significant Impact with Mitigation Incorporated)**

Permanent Operational Noise

On-site components of the project that would produce noise would include parking lots, mechanical equipment, and maintenance building operations. Contra Costa County does not define a quantitative noise level limit for operational noise sources. Noise levels in the surrounding neighborhoods are generally in the range of 50 to 55 dBA L_{dn}. Therefore, for consistency with the County General Plan guidelines (60 dBA L_{dn}), and to ensure noise levels are not substantially increased in the surrounding

areas, operational noise would be limited to 50 dBA L_{eq} during daytime hours and 40 dBA L_{eq} during nighttime hours.

Parking Lots

The project would include several surface parking lots and one below-grade parking garage. Parking activities in the below-grade parking garage would not be anticipated to be audible outside of the parking garage. Noise levels generated by typical parking activities would include vehicular circulation, louder engines, car alarms, squealing tires, door slams, and human voices. The hourly average noise level resulting from all these noise-generating activities in a busy small parking lot would reach 40 dBA L_{eq} at a distance of 50 feet from the parking area. Operational noise associated with parking lots would be below 50 dBA L_{eq} during daytime hours and 40 dBA L_{eq} during nighttime hours, and below 45 dBA L_{dn} over the entire day; therefore, noise generated by the proposed parking lots would have a less than significant impact.

Mechanical Equipment

The proposed project would include mechanical equipment such as heating, ventilation, and air conditioning systems (HVAC). Assuming that HVAC and other mechanical equipment would be located on the rooftops of the proposed structures, the nearest noise sensitive land use is approximately 50 feet from the "worst case" location where a rooftop HVAC unit is likely to be placed. At an unshielded distance of 50 feet, HVAC units would be anticipated to generate a noise level of 50 to 60 dBA L_{eq}. Assuming 24-hour operations, this would result in a day-night average noise level of 56 to 66 dBA L_{dn}. Shielding from equipment enclosures and surrounding structures would provide 10 to 15 dBA of noise reduction. Under a worst-case scenario, unshielded mechanical equipment noise could exceed the City of Walnut Creek's compatibility threshold by as much as six dBA, the nighttime noise limit by as much as 15 dBA, and ambient noise levels by as much as 10 dBA.

Mitigation Measure: The project will be required to implement the following mitigation measure to ensure that permanent operational noise generated by the project does not exceed noise and land use compatibility thresholds established for residential land uses by Contra Costa County and the City of Walnut Creek.

MM NOI-1.2: Prior to the issuance of building permits, mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet 50 dBA L_{eq} during daytime hours and 40 dBA L_{eq} during nighttime hours. A qualified acoustical consultant shall be retained by the project applicant to review mechanical noise as the equipment systems are selected in order to determine specific noise reduction measures necessary to reduce noise to comply with the noise limits at all adjacent noise sensitive land uses. Noise reduction measures could include, but are not limited to, locating equipment away from noise sensitive locations, selection of equipment that emits low noise levels and/or installation of noise barriers such as enclosures and parapet walls to block the line of sight between the noise source and the nearest receptors. If properly designed and controlled, the combined worst-case noise level due to the operation of on-site noise sources including the project parking lots, mechanical equipment, and maintenance building operations

would not be substantially increased with the project and would remain below the 60 dBA L_{dn} noise and land use compatibility thresholds established for residential land uses by Contra Costa County and the City of Walnut Creek.

With implementation of MM NOI-1.2, the project's mechanical equipment would have a less than significant noise impact. **(Less than Significant Impact with Mitigation Incorporated)**

Maintenance Building Operations

The maintenance building is to be located in the southern portion of the property and will house offices, a shop to repair golf carts, a generator, a laundry facility, and a trash compactor. Equipment and activities located inside the building, with doors and windows in the closed position, are unlikely to generate substantial noise levels outside of the structure.

The emergency diesel generator would be located at the southwest corner of the maintenance building, approximately 80 feet from the nearest residential property line to the east. The generator would be located in an outdoor mechanical yard and shielded by an approximate 10-foot masonry noise barrier and would be fitted with an acoustical enclosure. The generator would be tested periodically and used for emergency power in the event of a power failure. Generator noise levels would range from 66 to 71 dBA at 23 feet and from 60 to 65 dBA at 80 feet when accounting for intervening acoustical shielding from structures. Such noise levels would not be considered significant given the infrequent testing schedule and the fact that extended operation would only occur during emergencies.

Trash compactors typically generate maximum noise levels of 50 to 60 dBA L_{max} at 50 feet, depending on the power rating and enclosure characteristics. Assuming it is located in the "worst-case" location to the southeast of the maintenance building, it would be allocated about 30 feet horizontally from the nearest residence and depressed about 30 feet below the pad elevation of the residence. It is anticipated that use of the trash compactors would be during daytime hours only. Noise from the trash compactor could exceed 50 dBA L_{eq} during daytime hours at the nearest noise sensitive receptor; however, with implementation of MM NOI-1.2, the project would include designs and controls to reduce noise from the trash compactor to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Project Traffic

Based on traffic data prepared for the project (see Section 3.17 Transportation), the largest traffic noise increase attributable to the project would be along Kinross Drive north of Marchbanks Drive, which would serve as the main project entrance. Traffic noise levels at a distance of 50 feet from the center of this roadway would increase from 50 dBA L_{dn} under existing conditions to 53 dBA L_{dn} under existing plus project and cumulative plus project conditions. Since the resulting traffic noise level along this roadway segment would be below 60 dBA L_{dn}, the five dBA noise increase threshold would apply. The traffic noise increase attributable to the project on the other surrounding roadways would be less than three dBA L_{eq} on all analyzed roadway segments. Traffic noise increases would be below the three dBA and five dBA L_{dn} thresholds of significance. As a result, the traffic noise generated by the proposed project would have a less than significant impact. **(Less than Significant Impact)**

Impact NOI-2: The project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)**

Neither Contra Costa County nor the City of Walnut Creek specify a construction vibration limit. The California Department of Transportation (see Table 3.13-1) establishes a construction limit of 0.25 in/sec PPV for historic and old buildings, 0.3 in/sec PPV for older residential structures, and 0.5 in/sec PPV for new residential and modern commercial/industrial structures. The 0.3 in/sec PPV threshold would apply to structures in the vicinity of the project site.

The closest structures to the project site are a school building, located about 10 feet northeast of the property line and about 30 feet from the closest proposed building, a single-family residence, located about 10 feet west of the property line and 70 feet from the nearest proposed building, and a townhome, located about 20 feet south of the property line and 50 feet from the maintenance building.

Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Table 3.13-5 presents typical vibration levels from construction equipment at a reference distance of 25 feet and at a variety of distances representative of the nearest surrounding structures. Vibration levels are highest close to the source and decrease as distance from the source increases.

Table 3.13-5: Vibration Levels for Construction Equipment at Various Distances

Equipment		PPV at 10 ft. (in/sec)	PPV at 20 ft. (in/sec)	PPV at 25 ft. (in/sec)	PPV at 30 ft. (in/sec)	PPV at 100 ft. (in/sec)
Clam shovel drop		0.553	0.258	0.202	0.165	0.044
Hydromill (slurry wall)	In soil	0.022	0.010	0.008	0.007	0.002
	In rock	0.047	0.022	0.017	0.014	0.004
Vibratory Roller		0.575	0.268	0.210	0.172	0.046
Hoe Ram		0.244	0.114	0.089	0.073	0.019
Large bulldozer		0.244	0.114	0.089	0.073	0.019
Caisson drilling		0.244	0.114	0.089	0.073	0.019
Loaded trucks		0.208	0.097	0.076	0.062	0.017
Jackhammer		0.096	0.045	0.035	0.029	0.008
Small bulldozer		0.008	0.004	0.003	0.002	0.001

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, September 2019 as modified by Illingworth & Rodkin, Inc., June 2020.

As shown in Table 3.13-5, project construction would be anticipated to produce vibration levels greater than the 0.3 in/sec PPV threshold within 20 feet. The single-family home to the west,

townhomes to the south, and school buildings to the east are all located within 20 feet of the property line of the site.

Mitigation Measure: The project will be required to implement the following mitigation measure to ensure that construction vibration does not exceed the 0.3 in/sec PPV threshold at surrounding structures.

MM NOI-2.1: The project shall implement the following measures to minimize vibration impacts from construction activities:

a) Avoid the use of vibratory rollers and other heavy construction equipment within 20 feet of existing structures.
b) Place operating equipment on the construction site as far as possible from vibration sensitive receptors.
c) Use smaller equipment within 20 feet of the perimeter property lines adjoining off site structures to minimize vibration levels below the limits.
d) Select demolition methods not involving impact tools within 100 feet of the perimeter property lines adjoining off-site structures.
e) Avoid dropping heavy objects or materials near vibration sensitive locations.
f) A list of all heavy construction equipment to be used for this project known to produce high vibration levels (tracked vehicles, vibratory compaction, jackhammers, hoe rams, etc.) shall be submitted to the County by the contractor. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring.

With implementation of MM NOI-2.1, vibration levels from construction of the proposed project would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Impact NOI-3: The project would not be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The project would not expose people residing or working in the project area to excessive noise levels. **(Less than Significant Impact)**

The nearest airport to the project site is the Buchanan Field Airport, located approximately 4.2 miles north of the project site. The project site is outside of the airport's mapped noise contours.[70] Therefore, the project would not expose people residing or working in the project area to excessive airport noise levels. **(Less than Significant Impact)**

[70] Contra Costa County. Airport Land Use Compatibility Plan – Buchanan Field Airport Policies. December 2000. Figure 3B "Composite Noise Contours".

3.13.2.3 *Cumulative Impacts*

Impact NOI-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant noise impact. **(Less than Significant Cumulative Impact)**

Construction

While cumulative projects could be constructed at the same time as the proposed project and result in a temporary construction noise increase, all projects in the County and near the City of Walnut Creek limits would be required to comply with their construction work hours, as well as similar measures as those identified under Impact NOI-1 and Impact NOI-2 (should a noise or vibration impact occur). Nevertheless, if the proposed project's construction schedule were to overlap one or more of the cumulative projects' construction schedules for a consecutive 12 months or more and if the same sensitive receptors were impacted, the project would have a cumulatively considerable contribution to a cumulative construction noise impact.

This would not occur, however, as the nearest cumulative project is located at 2740 Jones Road, 0.4-miles northwest of the project site. This project would have a different nearest sensitive receptor and, therefore, a significant noise and vibration impact would not occur. **(Less than Significant Cumulative Impact)**

Operation

As discussed in Impact NOI-1, cumulative plus project traffic conditions would be below 60 dBA L_{dn}, and the noise increase from cumulative traffic volumes would not exceed the 5 dBA noise increase threshold. Once operational, project noise would be minimal with implementation of MM NOI-1.2. Thus, the proposed project, in combination with cumulative projects, would not result in a significant temporary or permanent cumulative noise impact. **(Less than Significant Cumulative Impact)**

3.13.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 *(BIA v. BAAQMD),* effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because the County of Contra Costa has policies that address existing noise conditions affecting a proposed project.

Future Exterior Noise Environment

The General Plan does not contain specific noise standards for the proposed CCRC; however, for the purposes of this analysis, the single-family residence threshold will be used as the closest approximation to the CCRC land use. The General Plan specifies a "normally acceptable" exterior noise level of 60 dBA L_{dn} for single-family residences. The County uses the same 60 dBA L_{dn} threshold for multifamily residences, hospitals, and nursing homes, with exceptions for small balconies. With no major transportation noise sources within 1,500 feet of the site, future exterior noise levels would continue to result primarily from local and distant traffic. As described in Section

3.13.1.3 Existing Conditions, the noise environment at the site is anticipated to range from 48 to 50 dBA L_{dn} under existing conditions, with noise levels calculated to reach 53 dBA L_{dn} under the cumulative plus project scenario at the roadside of Kinross Drive west of Marchbanks Drive along its alignment extending into the project site. Noise levels are not anticipated to exceed 60 dBA L_{dn} at any proposed exterior use areas and would be considered "normally acceptable" throughout the site.

Future Interior Noise Environment

Exterior noise levels throughout the site are anticipated to be 53 dBA L_{dn} or less. Standard residential construction provides approximately 15 dBA of exterior-to-interior noise reduction, assuming the windows are partially open for ventilation. Therefore, interior noise levels would achieve the 45 dBA L_{dn} interior threshold with standard construction only. No additional noise insulation features would be required.

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.[71] The Contra Costa County Housing Element and related land use policies were last updated in 2014.

Regional and Local

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area 2040 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).[72]

ABAG allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population, and Housing, which is an integrated land use and transportation plan through the year 2040 (upon which Plan Bay Area 2040 is based).

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to population and housing are applicable to the proposed project.

[71] California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed Jul 13, 2021. http://hcd.ca.gov/community-development/housing-element/index.shtml.
[72] Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." http://projectmapper.planbayarea.org/. Accessed July 13, 2021.

Policies	Description
Policy 6.2	Provide adequate sites to meet the housing needs of special needs groups, including seniors, disabled persons, large households, single parents, persons with HIV/AIDS, persons with mental illness, farmworkers, and the homeless.
Policy 8.3	Enhance the opportunity for seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, and farmworkers to have access to housing of their choice.

3.14.1.2 *Existing Conditions*

The project site is located within unincorporated Contra Costa County. According to a May 2020 estimate by the California Department of Finance, Contra Costa County has a total population of 1,153,854 persons, including 174,423 residents within unincorporated areas of the County. [73] According to ABAG projections, the population in unincorporated Contra Costa County will grow to a total of 199,105 persons by 2040.[74]

3.14.2 Impact Discussion

For the purpose of determining the significance of the project's impact on population and housing, would the project:

1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.14.2.1 *Project Impacts*

Impact POP-1:	The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). **(Less than Significant Impact)**

A project can induce substantial population growth by: 1) proposing new housing beyond projected or planned development levels, 2) generating demand for housing as a result of new businesses, 3) extending roads or other infrastructure to previously undeveloped areas, or 4) removing obstacles to population growth (e.g., expanding capacity of a wastewater treatment plant beyond that necessary to serve planned growth).

[73] California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State 2011-2020 with 2010 Census Benchmark.* Accessed on July 13, 2021. Available at: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.
[74] Association of Bay Area Governments. "Projections 2040." Accessed July 13, 2021. Available at: http://projections.planbayarea.org/.

Under the existing General Plan land use designation of SM, approximately 166 single-family residential units would be allowed on the project site. Contra Costa County has an estimated 2.9 persons per household; thus, the 166 residential units would house approximately 482 residents under the current General Plan designation.[75] The proposed CCRC would include a total of 354 independent living units and a health care center for 100 residents requiring daily assistance or daily medical attention. It is anticipated that the proposed CCRC would have approximately 1.23 persons per household. Therefore, it is estimated that the proposed CCRC would house approximately 560 residents, resulting in a net increase of 78 planned residents. This would represent a less than 0.1 percent increase in population in unincorporated Contra Costa County.

The population growth generated on-site by the project would not be considered unplanned given that the project has an existing residential General Plan land use designation. Additionally, the project would support General Plan Policies 6.2 and 8.3 by providing new housing opportunities for seniors within the County. It is unlikely that the project would represent a large overall change in the County's population. Given the nature of the project, it is likely that future residents of the proposed CCRC would primarily consist of existing senior residents within the County. Therefore, the project would not induce substantial unplanned population growth. **(Less than Significant Impact)**

Impact POP-2:	The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(Less than Significant Impact)**

The project would demolish the existing single-family residence on-site in order to construct the proposed CCRC. However, the existing single-family residence does not represent a substantial number of existing people. Therefore, the project would not necessitate the construction of replacement housing elsewhere. **(Less than Significant Impact)**

3.14.2.2 *Cumulative Impacts*

Impact POP-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant population and housing impact. **(Less than Significant Cumulative Impact)**

The projects listed in Table 3.0-1 would result in population growth by constructing new residences. However, this growth in population would be consistent with the County's projected population increase in the General Plan and General Plan policies related to senior housing. The project would not induce substantial population growth in an area not planned for development and would not displace substantial numbers of existing housing or people. As a result, it would not contribute considerably to a cumulative population and housing impact. **(Less than Significant Cumulative Impact)**

[75] California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark". Accessed November 17, 2021. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

3.15 PUBLIC SERVICES

The following discussion is based, in part, on a Child Care Needs Assessment prepared for the project by Brion Economics, Inc., dated November 2021. A copy of this report can be found in Appendix N of this EIR.

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by residential development. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Local

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to public services and are applicable to the proposed project.

Policy/Implementation Measure	Description
Policy 3-6	Development of all urban uses shall be coordinated with provision of essential Community Services or facilities including, but not limited to,

	roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water and flood control.
Policy 7-1	New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based upon the demand for these facilities which can be attributed to new development.
Policy 7-57	A sheriff facility standard of 155 square feet of station per 1,000 population shall be maintained within the unincorporated area of the County.
Policy 7-59	A maximum response time goal for priority 1 or 2 calls of five minutes for 90 percent of all emergency responses in central business district, urban and suburban areas, shall be strived for by the sheriff when making staffing and beat configuration decisions.
Policy 7-62	The County shall strive to reach a maximum running time of 3 minutes and/or 1.5 miles from the first-due station, and a minimum of 3 firefighters to be maintained in all central business district (CBD), urban and suburban areas.
Policy 7-63	The County shall strive to achieve a total response time (dispatch plus running and set-up time) of five minutes in CBD, urban, and suburban areas for 90 percent of all emergency responses.
Policy 7-64	New development shall pay its fair share of costs for new fire protection facilities and services.
Policy 7-70	The effectiveness of existing and proposed fire protection facilities shall be maximized by incorporating analysis of optimum fire and emergency service access into circulation system design.
Policy 7-150	Proposed commercial and residential projects which do not directly provide child care or preschool facilities shall be required to comply with the provisions of the adopted child care ordinance.
Implementation Measure 9-r	Require that new development meet the park standards and criteria included in the Growth Management Program and set forth in Table 9-1. Ensure that credit for the park dedication ordinance requirements be given for private recreation facilities only after a finding has been adopted that the facilities will be open to and serve the public.

Contra Costa County Ordinance Code

Chapter 82-22 (Child Care Facilities) of the County's Ordinance Code requires a survey or assessment of the estimated child care needs caused by a project, together with a response program showing how the child care needs resulting from a project are to be mitigated within Contra Costa County.

Contra Costa County Park Impact Fee Ordinance

The Contra Costa County Park Impact Fee Ordinance (Ordinance No. 2007-17) provides for the adoption of fees to be used for the acquisition and development of parks and recreation facilities required to serve new residential development in unincorporated areas of Contra Costa County.

3.15.1.2 *Existing Conditions*

Fire Protection Services

The Contra Costa County Fire Protection District (CCCFPD) provides fire protection services to the project site. The CCCFPD serves nearly a million people over its 304 square-mile service area.[76] The CCCFPD has 26 fire stations and more than 400 employees. The nearest fire station is Fire Station 1, located at 1330 Civic Drive, approximately 1.6 miles southwest of the project site.

Police Protection Services

The Contra Costa County Office of the Sheriff (CCCOS) provides police protection services to the project site. The CCCOS serves over a million people throughout the County and employs over 1,100 sworn and professional staff.[77] The nearest CCCOS station is located at 150 Alamo Plaza C in the unincorporated Alamo area, approximately 5.6 miles south of the project site.

Schools

The project site is located within the Walnut Creek School District and the Acalanes Union High School District.[78] Students in the project area attend Indian Valley Elementary, Walnut Creek Intermediate, and Las Lomas High School.

Child Care Facilities

According to CocoKids (formerly the Contra Costa County Child Care Council), there are currently 38 childcare centers, 10 small family childcare homes (FCCHs), and 19 large FCCHs within Walnut Creek. In total, there are 172 infant spaces, 2,076 preschool spaces, and 1,598 school age spaces in Walnut Creek, for a total of 3,846 spaces. There is currently a shortage of 193 infant spaces, a surplus of 440 preschool spaces, and a surplus of 98 school age spaces in Walnut Creek, or a total overall surplus of 344 licensed childcare spaces. However, a surplus in one category of care cannot meet the need for another age group.

There is currently an average vacancy rate of about seven percent for childcare centers and 15 percent for FCCHs in Walnut Creek. This results in 285 total available spaces for all age groups. This is likely due to the impacts of COVID-19, families being out of work, or other affordability reasons.

Parks

Contra Costa County is home to more than 1,200 miles of hiking trails within dozens of parks spread across the County.[79] The Contra Costa County Public Works Department operates and maintains a variety of parks throughout the County. Park services in the project vicinity are also provided by the

[76] Contra Costa County. "Fire Protection Districts". Accessed July 13, 2021. https://www.contracosta.ca.gov/1550/Fire-Protection-Districts
[77] Contra Costa County Office of the Sheriff. "Office of the Sheriff Overview". Accessed July 13, 2021. https://www.cocosheriff.org/about-us/office-of-the-sheriff-overview
[78] Acalanes High School District. "Schoolsite Locator". Accessed July 13, 2021. http://apps.schoolsitelocator.com/index.html?districtCode=12031
[79] Contra Costa County. "Parks and Recreation". Accessed July 13, 2021. https://www.contracosta.ca.gov/446/Parks-and-Recreation

City of Walnut Creek. Parks operated by the East Bay Regional Park District and the Mount Diablo State Park system also exist within the project region. The Growth Management Element of the County's General Plan establishes a goal of three acres of neighborhood parkland per 1,000 residents, and Goal 9-K of the Open Space Element establishes a goal of four acres of park facilities per 1,000 residents.

The nearest park to the project site is Heather Farm Park, located at 301 North San Carlos Drive. While the park is adjacent to the eastern corner of the project site, the entrance to Heather Farm Park is approximately 0.8 miles from the proposed entrance to the CCRC. Heather Farm Park is 102 acres in size and contains many amenities including a swim center, several baseball fields, a basketball court, equestrian center, playground, dog park, fishing pond, nature area, picnic area, tennis court, trail connections, and a volleyball court.

Other Facilities – Libraries and Community Centers

The Contra Costa County Library (CCCL) provides library services throughout the County. The nearest library to the project site is the Walnut Creek Library branch, located at 1644 North Broadway, approximately 1.8 miles southwest of the project site.

The nearest community center to the project site is the Heather Farm Community Center, located within Heather Farm Park.

3.15.2 Impact Discussion

For the purpose of determining the significance of the project's impact on public services, would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

1) Fire protection?
2) Police protection?
3) Schools?
4) Parks?
5) Other public facilities?

3.15.2.1 *Project Impacts*

Impact PS-1:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. **(Less than Significant Impact)**

The CCCFPD would review the project plans at the time of building permit issuance to ensure compliance with all applicable state and County fire safety requirements including adequate fire and life safety measures. Additionally, pursuant to General Plan Policy 7-64, the project shall pay its fair share of costs for fire protection facilities and services.

The proposed CCRC would be expected to result in an incremental increase in the number of emergency calls at the project site. The approximately 560 proposed residents would be a small percentage of the CCCFPD's current service population of nearly one million. The project, by itself, would not preclude the CCCFPD from meeting their service goals and would not require the construction of new or expanded fire facilities. In addition, the proposed project would be constructed in accordance with current building codes and the proposed health care center on-site would provide some medical attention to residents on-site and may decrease the need for medical-related emergency calls on-site. Therefore, the project would not result in the need for new or altered fire protection facilities. **(Less than Significant Impact)**

Impact PS-2:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. **(Less than Significant Impact)**

The project would incrementally increase the demand for police services, however, the increased demand generated by the approximately 560 residents of the proposed CCRC would not be substantial compared to existing conditions of the CCCOS's service area of over a million people. All 911 calls will be directed to the Valley Station located at the Alamo Plaza. The Valley Station is comprised of 27 sworn staff members including one Lieutenant (Station House Commander), five Sergeants, 16 Beat Deputies and five special district Deputies. The non-sworn staff includes one Community Services Officer and approximately 25 SAVES Volunteers.

The CCCOS does not employ a ratio method of deputies per civilian due to the varying area service needs in County. Staffing levels in geographic areas vary from station to station and are based on the size of the area policed, calls for service, and crime statistics. These factors are reviewed monthly by the Station House Commanders and Command Staff. However, the General Plan includes a sheriff facility standard of 155 square feet of station per 1,000 people within the unincorporated area of the County. The project's population will not exceed 1,000 people; therefore, it is not anticipated that the

project would require expansion of existing facilities at the Valley Station or preclude the CCCOS from providing services to the project site and rest of its service area. **(Less than Significant Impact)**

Impact PS-3:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools. **(No Impact)**

Residents of the proposed CCRC would not have school-age children. The proposed CCRC would employ a full-time equivalent of 225 workers, but does not propose any new housing for those employees. Therefore, employees of the proposed CCRC would not generate new students as they would live in existing communities that are already accommodated by local schools. Thus, the project would not impact schools. **(No Impact)**

Impact PS-4:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. **(Less than Significant Impact)**

Residents of the proposed site may use existing park facilities in the project area, including Heather Farm Park, and the proposed CCRC would provide various on-site recreational amenities (e.g., tennis court, parks, fitness center) and open spaces that would offset its park demand. The proposed project would house approximately 560 residents; however, since the proposed CCRC is not a residential use and considered a proprietor-lodger relationship, the County's Park Impact Fee Ordinance does not apply. Given the amount and size of existing parks within the County and the surrounding region and proposed on-site recreational amenities, increased park demand generated by the project would be incremental and would not require the construction of new or altered park facilities. **(Less than Significant Impact)**

Impact PS-5:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. **(Less than Significant Impact)**

Child Care Facilities

Brion Economics calculated that the project would generate demand for a total of 12 childcare spaces, based on the assumption that the project would employ approximately 225 full time jobs.[80] The estimated 12 childcare spaces generated by the project would consist of four infants, seven preschoolers, and one school age space. These calculations were based on data from the 2010 U.S. Census, Labor Force Participation Rates, and standard methodology for estimating childcare demand from employees. The childcare demand generated by the project would be made up of employees that are residents of Walnut Creek and non-resident employees commuting from other cities and counties. Table 3.15-1 summarizes the anticipated childcare demand for the project.

Table 3.15-1: Estimated Employee Childcare Demand

Type of Demand	Infants	Preschool	School Age	Total
Resident Employees	1	2	1	4
Non-Resident Employees	3	5	0	8
Total Employee Demand	4	7	1	12

There are currently sufficient vacant spaces to accommodate the estimated eight new childcare spaces that would be needed by the proposed project for preschool and school age children. These new spaces represent three percent of the current vacant supply of childcare spaces. Infant care is currently underserved by 193 licensed spaces. The four new employees in need of infant care may have difficulty finding a space within Walnut Creek. In accordance with Chapter 82-22 of the County's Ordinance Code, the project will be required to provide funding for the increase in childcare demand generated by the proposed project. Prior to issuance of any building permits, the project applicant, in coordination with the Contra Costa County Department of Conservation and Development and CocoKids, will pay a one-time fee to be used to offset the increased demand on licensed childcare providers within the Walnut Creek area. Given the incremental increase in childcare demand, no new childcare facilities are anticipated to be constructed as a result of the project. Therefore, the project would have a less than significant environmental impact.

Libraries

The project would incrementally increase demand on other public facilities, such as libraries and community centers. Given the nature of the project and the number of proposed on-site amenities (e.g., library, computer center, art studio, fitness center), the project would not result in a substantial

[80] It should also be noted that some families choose unlicensed care, such as a nanny, or have family that helps to provide care, which is why it is not assumed that all children require a licensed childcare slot.

increase in demand on other public facilities and would not require the construction of new or altered public facilities. **(Less than Significant Impact)**

3.15.2.2 *Cumulative Impacts*

Impact PS-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant public services impact. **(Less than Significant Cumulative Impact)**

While the projects listed in Table 3.0-1 may generate new students, the proposed CCRC would not generate any new students and therefore, would not contribute to a cumulative impact on schools. The other projects would be required to pay public services fees such as fair share costs towards fire and police protection services to offset impacts on public services. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant public services impact. **(Less than Significant Cumulative Impact)**

3.16 RECREATION

3.16.1 Environmental Setting

3.16.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Local

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to recreation and are applicable to the proposed project.

Policy/Implementation Measure	Description
Policy 3-6	Development of all urban uses shall be coordinated with provision of essential Community Services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water and flood control.
Policy 7-1	New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based upon the demand for these facilities which can be attributed to new development.
Implementation Measure 9-r	Require that new development meet the park standards and criteria included in the Growth Management Program and set forth in Table 9-1. Ensure that credit for the park dedication ordinance requirements be given for private recreation facilities only after a finding has been adopted that the facilities will be open to and serve the public.

Contra Costa County Park Impact Fee Ordinance

The Contra Costa County Park Impact Fee Ordinance (Ordinance No. 2007-17) provides for the adoption of fees to be used for the acquisition and development of parks and recreation facilities required to serve new residential development in unincorporated areas of Contra Costa County.

3.16.1.2 *Existing Conditions*

Contra Costa County is home to more than 1,200 miles of hiking trails within dozens of parks spread across the County.[81] The Contra Costa County Public Works Department operates and maintains a variety of parks throughout the County. Park services in the project vicinity are also provided by the City of Walnut Creek. Parks operated by the East Bay Regional Park District and the Mount Diablo State Park system also exist within the project region. The Growth Management Element of the County's General Plan establishes a goal of three acres of neighborhood parkland per 1,000 residents, and Goal 9-K of the Open Space Element establishes a goal of four acres of park facilities per 1,000 residents.

The nearest park to the project site is Heather Farm Park, located at 301 North San Carlos Drive. While the park is adjacent to the eastern corner of the project site, the entrance to Heather Farm Park is approximately 0.8 miles from the proposed entrance to the CCRC. Heather Farm Park is 102 acres in size and contains many amenities including a swim center, several baseball fields, a basketball court, equestrian center, playground, dog park, fishing pond, nature area, picnic area, tennis court, trail connections, and a volleyball court.

3.16.2 Impact Discussion

For the purpose of determining the significance of the project's impact on recreation:

1) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.16.2.1 *Project Impacts*

Impact REC-1:	The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(Less than Significant Impact)**

Residents of the proposed site may use existing park facilities in the project area, including Heather Farm Park. The proposed CCRC would provide various on-site recreational amenities and open spaces that would offset its park demand. Since the proposed CCRC is not a residential use and considered a proprietor-lodger relationship, the County's Park Impact Fee Ordinance does not apply. Given the amount and size of existing parks within the County and the surrounding region, increased park demand generated by the project would be incremental and would not require the construction of new or altered park facilities. **(Less than Significant Impact)**

[81] Contra Costa County. "Parks and Recreation". Accessed July 13, 2021. https://www.contracosta.ca.gov/446/Parks-and-Recreation

Impact REC-2:	The project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(Less than Significant Impact)**

The proposed CCRC includes a variety of amenities to offset the recreational needs of the project residents. The apartment style building would include a clubhouse and recreation building with amenities such as two open courtyard areas, common dining areas, an auditorium, a barbecue patio, an indoor pool, a fitness center, theater, a card room, a billiards room, a lounge area, an art studio, and a salon. Outdoor amenities would include tennis courts, walking trails, and a community garden. Construction and operation of these recreational facilities would be subject to the mitigation measures and standard conditions included in this EIR. Therefore, construction of recreational facilities proposed on the project site would not have a significant impact on the environment. **(Less than Significant Impact)**

3.16.2.2 *Cumulative Impacts*

Impact REC-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant recreation impact. **(Less than Significant Cumulative Impact)**

The projects listed in Table 3.0-1 would pay park impact fees to offset impacts to recreation facilities. Given the size and number of local and regional parks available, it is unlikely that new recreation facilities would be required to accommodate the cumulative increase in demand generated by the proposed CCRC and the projects listed in Table 3.0-1. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant recreation impact. **(Less than Significant Cumulative Impact)**

3.17 TRANSPORTATION

The following discussion is based, in part, on a Transportation Assessment prepared for the project by Fehr & Peers, dated July 2021, a peer review prepared by Hexagon Transportation Consultants in June 2021, and peer review response memos prepared by Fehr & Peers in July and October 2021. A copy of this report and the responses are included in Appendix P of this EIR.

3.17.1 Environmental Setting

3.17.1.1 *Regulatory Framework*

State

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Contra Costa County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2040.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by the Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant. Notably, projects located within 0.50 mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

2019 California Fire Code

The 2019 California Fire Code sets requirements for emergency vehicle access. Projects having more than 200 dwelling units must provide two separate and approved fire apparatus access roads. Where two fire access roads are required, they shall be placed at a distance of no less than one half-length of the maximum overall diagonal dimension of the project site. These fire access roads must be a minimum of 20 feet with turning radii of 25 feet inside and 45 feet outside.

Regional and Local

Congestion Management Program

The Contra Costa Transportation Authority (CCTA) oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital improvement element. The CCTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to transportation and are applicable to the proposed project.

Policy	Description
Policy 5-4	Development shall be allowed only when transportation performance criteria are met and necessary facilities and/or programs are in place or committed to be developed within a specified period of time.
Policy 5-16	Curbs and sidewalks shall be provided in appropriate areas.
Policy 5-17	Emergency response vehicles shall be accommodated in development project design.
Policy 5-20	New development (including redevelopment and rehabilitation projects) shall contribute funds and/or institute programs to reduce parking demand and/or provide adequate parking.
Policy 5-21	New development shall contribute funds and/or institute programs to provide adequate bicycle and pedestrian facilities where feasible.
Policy 5-31	Roads developed in hilly areas shall minimize disturbance of the slope and natural features of the land.

Capital Road Improvement & Preservation Program (CRIPP)

The Capital Road Improvement & Preservation Program ("CRIPP") is a programming document for the funding of capital road improvement projects within Contra Costa County. It includes estimated project costs, funding source information, and scheduling information for known potential projects within the next seven fiscal years. Approval of the CRIPP by the Board of Supervisors does not automatically approve each individual project listed in the CRIPP. Each project in the CRIPP is subject to a separate public review, engineering feasibility analysis, and environmental assessment before the Board of Supervisors will consider final approval of the project.

Complete Streets Policy

On July 12, 2016, the County Board of Supervisors adopted Resolution No. 2016/374 approving the Complete Streets Policy of Contra Costa County. The Complete Streets Policy stablishes principals

and guidelines to better accommodate vehicle, bicycle, and pedestrian traffic on existing and new infrastructure.

Contra Costa Countywide Bicycle and Pedestrian Plan

To support and encourage walking and bicycling in Contra Costa, the CCTA, on July 18, 2018, adopted the 2018 Contra Costa Countywide Bicycle and Pedestrian Plan (CBPP). The CCTA adopted its first CBPP in 2003 and updated it in 2009. The CBPP builds on and expands the goals, policies, and strategies of the CCTA's CTP. Both plans set goals for increasing walking and bicycling and identify actions the Authority and its partners should take to achieve them.

3.17.1.2 *Existing Conditions*

Roadway Network

Ygnacio Valley Road

Ygnacio Valley Road is a six-lane, east-west divided arterial that extends from Interstate 680 (I-680) to Clayton Road, where it continues as Kirker Pass Road. The Central Contra Costa County Action Plan identifies Ygnacio Valley Road as a Route of Regional Significance. The posted speed limit on Ygnacio Valley Road in the Plan Area is 30 miles per hour (mph).

Kinross Drive

East of its intersection at Marchbanks Road, Kinross Drive is a two- lane residential roadway generally running on a north-south alignment, connecting to Ygnacio Valley Road. Most of this easterly segment of roadway is a private facility passing through the Heather Farms residential development and has a posted speed limit of 15 mph which is reinforced through the presence of speed humps. West of the Marchbanks intersection, Kinross Drive is a two-lane public street having a 50-foot right-of-way with parking on one side and sidewalks on both sides, leading to a bulb turn-around at the intersection with Club View Terrace.

Marchbanks Drive

Marchbanks Drive is a two-lane collector roadway forming a loop north of Ygnacio Valley Road. It extends from its intersection at Ygnacio Valley Road/Tampico in the south to a tee-intersection with Ygnacio Valley Road approximately one-half mile to the northeast. Marchbanks Drive has a posted speed limit of 30 miles per hour.

Transit Services

County Connection

Fixed route bus transit service in the vicinity of the project site is provided by the County Connection. The County Connection provides bus transit service to communities throughout central Contra Costa County, including the cities of Pleasant Hill and Walnut Creek. County Connection is also a paratransit service provider. The project area is served by Routes 1, 92X, 93X, and 311. The routes connect the project site to the Walnut Creek Bay Area Rapid Transit (BART) Station, Pleasant Hill BART Station, Concord BART Station, Antioch BART Station, Pleasanton Altamont Corridor

Express (ACE) Station, San Ramon Transit Center, and many other local facilities and attractions. At the BART stations, connections to numerous other County Connection routes and other transit service providers are available. The closest bus stops to the project site are located at the intersections of Ygnacio Valley Road/Kinross Drive and Ygnacio Valley Road/Marchbanks Drive/Tampico.

Paratransit service within Contra Costa County is provided by the County Connection through LINK Paratransit. LINK Paratransit provides on-demand door-to-door service for eligible ADA patrons within the project's vicinity.

BART

Regional transit service in the study area is provided by BART. The Walnut Creek BART station is located roughly 1.5 miles southwest of the project site, north of Ygnacio Valley Road and west of North California Boulevard. The station is on the Pittsburg/Bay Point line, providing direct service to downtown San Francisco. Passengers travelling to or from destinations on the Fremont, Richmond, or Dublin/Pleasanton lines are required to transfer, generally at the MacArthur BART station. Trains operate approximately between 4:30 a.m. and midnight on weekdays. Train frequency varies from 20 minutes on weekends, to 15 minutes during off-peak weekday, to five to eight minutes during the peak commute hours.

The Pleasant Hill/Contra Costa Centre BART Station is also located in the vicinity of the project site and will serve project generated trips. The station is located just north of Treat Boulevard at Oak Road and can be directly accessed from the project site via the Iron Horse Trail by bicyclists and pedestrians. BART service at the station is like that provided at Walnut Creek as it is also on the Pittsburg/Bay Point line.

Bicycle Facilities

In the immediate vicinity of the project site, designated bicycle facilities area provided on Marchbanks Drive and Ygnacio Valley Road. Marchbanks Drive provides a striped Class II bicycle lane[82] for its entire length. Bicycles are allowed to ride on the sidewalk as Ygnacio Valley Road is a designated enhanced Class III bicycle route.[83] Bicycles are permitted to use all other roadway facilities near the project site.

The Iron Horse Regional Trail is a Class I multi-use path[84] located approximately one-quarter mile west of the project site (and accessible via Seven Hills Ranch Road) that spans a distance of 32 miles and connects East Bay cities including Concord, Walnut Creek, Alamo, Danville, and San Ramon. This trail provides a direct linkage to the Pleasant Hill BART Station.

The Contra Costa Canal Trail, located just north of the project site, parallels the Contra Costa Canal, following a horseshoe-shaped path through central Contra Costa County. The trail intercepts a

[82] The General Plan defines Class II bike lanes as a restricted right-of-way designated for the exclusive use or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.
[83] The General Plan defines a Class III bike route as a right-of-way designated by signs or permanent markings and is shared with pedestrians or motorists.
[84] The General Plan defines Class I bikeways as completely separated right-of-ways designated for the exclusive use of bicycles and pedestrians with crossflows of motorists minimized.

number of local parks in Pleasant Hill (Las Juntas Park), Walnut Creek (Larkey Park, Heather Farm Park), and Concord (Lime Ridge). It also makes connections to a number of regional trails, including the California State Riding and Hiking Trail, Briones-to-Mt. Diablo Trail, and the Iron Horse Trail.

Pedestrian Facilities

Pedestrian facilities in the project area include sidewalks, crosswalks, and pedestrian signals. A fairly complete system of sidewalks is provided to the east of the site; Marchbanks Drive, Ygnacio Valley Road and the public portions of Kinross Drive provide City standard sidewalks along both sides of the roadway. The private portion of Kinross Drive between Marchbanks Drive and Ygnacio Valley Road provides discontinuous sidewalks along one-side of the roadway (alternating sides in locations). Neither Seven Hills Ranch Road nor North San Carlos Drive provide sidewalks on the sections abutting the project site.

3.17.2 Impact Discussion

For the purpose of determining the significance of the project's impact on transportation, would the project:

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

3.17.2.1 *Project Impacts*

Impact TRN-1:	The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. **(Less than Significant Impact)**

Circulation System

The project's consistency with the County's VMT policy, the safety of the proposed improvements to the circulation system, and the project's consistency with the 2019 California Fire Code are discussed under TRN-2 through TRN-4. Additionally, the project's impacts to local traffic are discussed under the non-CEQA section after TRN-4.

Principal access to the project site is proposed from an extension of existing Kinross Drive along the southeasterly site boundary within the City. This segment of Kinross Drive west of Marchbanks Drive is a two-lane public street with no properties taking primary access to it. A 50-foot Kinross Drive right-of-way was dedicated with recordation of the Heather Farms Condominium Final Subdivision Map (#4006) in 1970 (see final map included in Appendix P), and is proposed to be utilized for completion of improvements extending westerly from the current Kinross turn-around (at Club View Terrace) to the project boundary, subject to an improvement agreement, encroachment

permit, or similar mechanism to provide details of improvements from the City of Walnut Creek (a Responsible Agency under CEQA).

Walnut Creek General Plan Transportation Element Goal 4, Policy 4.2 discourages through-traffic on local streets and collectors.[85] The proposed project includes no through connection of the Kinross Drive extension to be made to any other connecting public or private street. Emergency access needs will be satisfied by providing a fully gated and fire district compliant emergency vehicle access (EVA) extending from the proposed CCRC health care center parking lot to the North San Carlos Drive extension at the north end of the Site. A supplemental gated connection is also planned from the internal private roadway to the extension of Seven Hills Ranch Road at the southwest end of the project site. Improvements within this supplemental gated access may be less than the fire district's standard 20-foot width. Easements for emergency vehicle access and public utilities will be required from underlying owners along the alignment of the EVA route to North San Carlos Drive, including CCWD, the City of Walnut Creek and the United States Bureau of Reclamation.

Transit Facilities

Given the nature of the project, it is not expected to generate transit demand that would exceed existing transit facility capacities. The project would include on-site shuttle services which may reduce the need for residents to access some local transit facilities. The project, therefore, would not conflict with regulations addressing transit facilities.

Bicycle Facilities

The project does not propose any bicycle-specific circulation amenities (routes, paths, or lanes), however, bicycles would not be prohibited from using any of the on-site roadways. The amount of bicycle parking required for developments within Contra Costa County is stipulated in County Ordinance Code Section 82-16.412. The Ordinance Code does not provide specific bicycle parking requirements for CCRCs such as the project. In the absence of a specific requirement, the County may rely on the Planned Unit District (P-1) regulations as outlined in Code Section 84-66.1404.

If the independent living unit portion of the project were treated as a traditional "Multi-Family Dwelling without private garage," Code Section 82-16.412 would require 79 long term bicycle parking spaces.[86, 87] The independent living units with garages are not required to provide long term bicycle parking. If the health care center portion of the project were treated as "health care/hospital," Code Section 82-16.412 would require 11 long term bicycle parking spaces.[88] The project proposes a total of 26 short term bicycle parking spaces spread across 13 bicycle racks throughout the project site. The project does not propose any long term bicycle parking spaces. As a condition of approval, the project would be required to show the location and number of bicycle parking spaces (based on Ordinance Code Section 82-16.412) on-site as part of the TDM program.

[85] Policy 4.2 states "discourage through-traffic on local streets and collectors. Source: City of Walnut Creek. *Walnut Creek General Plan 2025*. April 4, 2006.
[86] Long term bicycle parking refers to a covered access-controlled enclosure or room that includes permanently anchored bicycle racks or individually lockable bicycle lockers.
[87] Robert Sarmiento. Contra Costa County Transportation Planner. Personal Communication. February 10, 2022.
[88] Ibid.

The project does not propose any features that would be hazardous to bicycles nor is it expected to generate bicycle demand that would exceed the capacity of the area's bicycle network. The project would not conflict with regulations addressing bicycle facilities.

Pedestrian Facilities

The project proposes a City standard sidewalk along the northern side of the extension of Kinross Drive from Marchbanks Drive into the project site. Additional on-site pedestrian facilities would be installed throughout the project site. The EVA access points located on the north and south ends of the project site would be equipped with gates allowing pedestrian and bicycle access. Residents and employees would be provided with keycards allowing for access via these gates.

The project does not propose any features that would be hazardous to pedestrians. Given the nature of the project, it is not likely to generate pedestrian demand that would exceed the capacity of the area's pedestrian network. Observations at other similar Spieker properties throughout California have found that few off-site pedestrian trips occur. As the average resident age is greater than 80 years, most pedestrian activity is typically confined to the project site. The project would not conflict with regulations addressing pedestrian facilities. **(Less than Significant Impact)**

Impact TRN-2:	The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact)**

According to the County's Transportation Analysis Guidelines, a project is considered to have a significant impact if project VMT is greater than 15 percent below the Countywide average total VMT per service population for mixed-use projects. For the purposes of the VMT analysis, the proposed CCRC was considered a mixed-use project because it will serve as a place of residence for its occupants and will also employ a substantial number of people. Table 3.17-1, below, presents a summary of the project's VMT calculations.

Table 3.17-1: Project VMT Summary

Baseline VMT/Service Population	15% Below Baseline VMT/Service Population	2040 VMT/Service Population	15% Below 2040 VMT/Service Population	Project VMT/Service Population
30.3	25.8	29.4	25.0	21.5

As shown in Table 3.17-1, the project would generate a daily VMT per service population of 21.5[89] and would be less than 15 percent below the Countywide baseline and 2040 VMT per service population. Therefore, the project would have a less than significant impact pertaining to VMT. **(Less than Significant Impact)**

[89] VMT per service population is calculated by multiplying project daily trips by the trip length identified for the traffic analysis zone (TAZ) for the project site and dividing by the service population for the project. The trip length for the TAZ does not consider the characteristics of the project or unique nature of the trip lengths from a CCRC development.

Impact TRN-3:	The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(Less than Significant Impact)**

As noted above, principal access to the project site would be provided solely via an extension of Kinross Drive, located along the southeasterly site boundary. Kinross Drive is a two-lane public street located within the Walnut Creek city limits. The extension of Kinross Drive would be constructed within a 50-foot right-of-way that was previously dedicated to the City of Walnut Creek.

The extension from Kinross Drive would lead to a gated internal access road that would provide access to all project components. The internal access road would branch into a circle surrounding the apartment building, two cul-de-sacs giving access to a portion of the single-story buildings, and a road to the health care center. EVA would be provided via a gated, fire district compliant entrance extending from the health care center to North San Carlos Drive at the north end of the project site. The project would also improve North San Carlos Drive from the proposed EVA gate to the Heather Farm Dog Park to meet fire district standards. A supplemental gated EVA would also be provided from the internal access road to the extension of Seven Hills Ranch Road at the southwest end of the site.

The project plans show that the proposed internal roads would give adequate turning radii for garbage, delivery, and fire trucks. The North San Carlos Drive EVA road would be constructed in compliance with the current California Fire Code. The project would include staging areas for delivery and garbage trucks that would allow trucks to stop without blocking the internal roads. Additionally, the project circulation plans would be subject to review by County engineering staff to ensure that the applicable safety requirements are met. The project does not propose any incompatible uses. Therefore, the project would not substantially increase hazards due to a geometric design feature or incompatible uses. **(Less than Significant Impact)**

Impact TRN-4:	The project would not result in inadequate emergency access. **(Less than Significant Impact)**

EVA would be provided via a gated, fire district compliant entrance extending from the health care center to North San Carlos Drive at the north end of the project site. The project would also improve North San Carlos Drive from the proposed EVA gate to the Heather Farm Dog Park to meet fire district standards, in compliance with easements to be obtained from the City of Walnut Creek, Contra Costa Water District, and the United States Bureau of Reclamation. A second gated EVA would also be provided from the internal access road to the extension of Seven Hills Ranch Road at the southwest end of the site. The project roadways would be able to accommodate turn movements of fire trucks into, within, and out of the project site. Therefore, the project would be in compliance with the California Fire Code and would not result in adequate emergency access. **(Less than Significant Impact)**

3.17.2.2 *Cumulative Impacts*

Impact TRN-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant transportation impact. **(Less than Significant Cumulative Impact)**

The current General Plan designation for the project site is SM (Single Family Residential – Medium Density). This designation permits a housing density up to 4.9 dwelling units per net acre (DU/acre), which would equate to 144 single-family residences on an estimated 29.5-acre (net site area) project site. An additional 15 percent density bonus is allowable under the General Plan to account for mandatory inclusionary units. Thus, a total of 166 single-family residences would be permitted on the site under the current SM General Plan designation. The daily trip generation of 166 single-family residences would be approximately 1,567 trips. In comparison, the proposed CCRC would generate approximately 1,090 daily vehicle trips. Therefore, the project's cumulative impact on VMT would be beneficial as it would result in lower daily trips and lower VMT than what is expected for the project site under the current General Plan.

The projects listed under 3.0-1 would be required to comply with state, regional, and local regulations addressing safe project design, emergency access, and roadway, transit, bicycle, and pedestrian facilities. Therefore, the projects would not combine to form a significant cumulative transportation impact. **(Less than Significant Cumulative Impact)**

3.17.3 Non-CEQA Effects

While the evaluation of project CEQA impacts on the transportation system is based on VMT, in accordance with Contra Costa County's Transportation Analysis Guidelines, the following discussion is included for informational purposes because the County applies operational standards when evaluating the effects of development projects on the performance of the unincorporated County's transportation facilities to ensure the levels of growth and development provided in the General Plan Land Use Element are sufficiently accommodated.

Intersection LOS

The County considers LOS E and LOS F to be unacceptable conditions for intersections. Therefore, projects that result in the degradation from an acceptable LOS D or better to an unacceptable LOS E or LOS F must identify improvements to address operational deficiencies. Exceptions are made for intersections within PDAs, where the minimum acceptable operational standard is LOS E. A project is also considered to result in an operational deficiency if it results in the increase of the average control delay (for signalized and all-way stop-controlled intersections) or worst movement/approach delay (for side-street stop-controlled intersections) at an intersection by 5.0 seconds or more.

The operations of the following intersections were evaluated during the weekday morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak periods:

1. Marchbanks Drive/Tampico and Ygnacio Valley Road
2. Kinross Drive and Ygnacio Valley Road
3. San Carlos Drive and Ygnacio Valley Road

4. Kinross Drive and Marchbanks Drive
5. Civic Drive and Ygnacio Valley Road[90]
6. Bancroft Road and Ygnacio Valley Road[91]

The intersections listed above were evaluated for four scenarios; 1) existing conditions; 2) existing with project; 3) cumulative conditions; and 4) cumulative with project. The existing conditions were based on existing traffic counts and the cumulative conditions were based on forecasts of traffic growth trends as described in the County General Plan, as well as the General Plans for local cities, and supplemented by traffic forecasts for the project area in the 2040 Contra Costa Countywide travel demand model.

Project Trip Generation

The number of vehicle trips that would be generated by the project were estimated using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition.* The results of the trip generation analysis are summarized in Table 3.17-2, below.

Table 3.17-2: Weekday Project Vehicle Trip Generation

Land Use	Size	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
			Inbound	Outbound	Inbound	Outbound
CCRC (Land Use Code 255)	454 units	1,090	41	23	28	45

Existing and Existing Plus Project Conditions

Table 3.17-3 presents the results of the weekday morning and evening peak hour existing and existing plus project intersection LOS analysis.

Table 3.17-3: Existing Conditions AM and PM Peak Hour Intersection Delay/LOS

Intersection	Control	Peak Hour	Delay/LOS	
			Existing	Existing Plus Project
Marchbanks Dr & Ygnacio Valley Rd	Signal	AM	25.5/C	27.1/C
		PM	19.4/C	22.3/C
Kinross Dr & Ygnacio Valley Rd	Signal	AM	15.9/B	16.7/B
		PM	18.2/B	18.5/B

[90] The intersections at Civic Drive and Ygnacio Valley Road and at Bancroft Road and Ygnacio Valley Road were analyzed to determine the project's effects on designated Multimodal Transportation Service Objectives (MTSOs), pursuant to the Central County Action Plan.
[91] Ibid.

Table 3.17-3: Existing Conditions AM and PM Peak Hour Intersection Delay/LOS				
Intersection	**Control**	**Peak Hour**	**Delay/LOS**	
			Existing	**Existing Plus Project**
San Carlos Dr & Ygnacio Valley Rd	Signal	AM	73.7/E	74.7/E
		PM	62.5/E	63.6/E
Kinross Dr & Marchbanks Dr	All-way Stop-Control	AM	7.3/A	7.5/A
		PM	7.3/A	8.0/A
Civic Dr & Ygnacio Valley Rd	Signal	AM	50.9/D	50.9/D
		PM	99.4/F	99.5/F
Bancroft Rd & Ygnacio Valley Rd	Signal	AM	75.6/E	76.6/E
		PM	50.9/D	51.0/D

As shown in Table 3.17-3, above, the project would not cause any of the intersections studied to drop below LOS D and would not cause any delays greater than 5.0 seconds. Therefore, the project would not cause any operational deficiencies under existing plus project conditions.

Cumulative and Cumulative Plus Project Conditions

Table 3.17-4 presents the results of the weekday morning and evening peak hour cumulative and cumulative plus project intersection LOS analysis.

Table 3.17-4: Cumulative Conditions AM and PM Peak Hour Intersection Delay/LOS				
Intersection	**Control**	**Peak Hour**	**Delay/LOS**	
			Existing	**Existing Plus Project**
Marchbanks Dr & Ygnacio Valley Rd	Signal	AM	28.8/C	30.4/C
		PM	27.2/C	28.9/C
Kinross Dr & Ygnacio Valley Rd	Signal	AM	17.5/C	18.1/C
		PM	19.9/B	20.2/C
San Carlos Dr & Ygnacio Valley Rd	Signal	AM	86.2/F	86.9/F
		PM	65.2/E	65.5/E

Table 3.17-4: Cumulative Conditions AM and PM Peak Hour Intersection Delay/LOS				
Intersection	**Control**	**Peak Hour**	**Delay/LOS**	
			Existing	**Existing Plus Project**
Kinross Dr & Marchbanks Dr	All-way Stop-Control	AM	7.3/A	7.5/A
		PM	7.7/A	8.0/A
Civic Dr & Ygnacio Valley Rd	Signal	AM	61.6/E	61.6/E
		PM	125.3/F	126.2/F
Bancroft Rd & Ygnacio Valley Rd	Signal	AM	122.3/F	122.3/F
		PM	88.8/F	89.6/F

As shown in Table 3.17-4, above, the project would not cause any of the intersections studied to drop below LOS D and would not cause any delays greater than 5.0 seconds. Therefore, the project would not cause any operational deficiencies under existing plus project conditions.

Parking

A total of 594 on-site parking spaces would be provided in garages and surface parking lots located at various locations throughout the project site. The adequacy of the amount of parking provided has been calculated using two separate means. First, the supply has been compared to the anticipated parking demand of the project, based on statistics collected at similar facilities nationwide. Second, the County's Ordinance Code requirements for off-street vehicular parking have been calculated and compared to the proposed supply.

Off-Street Parking Demand

Anticipated parking generation rates with the proposed land use were taken from the ITE's *Parking Generation Manual, 5th Edition.* The weekday parking peak demand was calculated to be 494 spaces and the weekend parking peak demand was calculated to be 381 spaces. The project proposes to provide a total of 594 spaces, exceeding the anticipated parking demand for the project.

County Ordinance Code Requirements – Vehicular Parking

The Contra Costa County Ordinance Code does not have code requirements for off-street vehicular parking specific to the CCRC land use; however, the Ordinance Code requires projects to use the most similar land use to estimate vehicular parking requirements. The two land-uses specifically delineated within the Code which are most like the proposed project are "multi-family residential without private garage" and "Sanitariums, convalescent homes, rest homes, nursing homes." Table 3.17-5, below, summarizes the requirements for both of these land uses types under the Ordinance Code.

Table 3.17-5: Project Parking – Ordinance Code Requirements				
Land Use	**Code Section**	**Code Language**	**Code Requirement**	**Proposed Supply**
Sanitariums, convalescent homes, rest homes, nursing homes	82-16.406	One space for every three beds	255 spaces	594 spaces
Multi-family residential without private garage	84-26.1202	1 space per studio unit 1.5 spaces per 1-bedroom unit 2 spaces per 2+ bedroom unit 0,25 spaces per unit for guests	792 spaces	594 spaces

As summarized in Table 3.17-5, the Code required parking for the "multi-family residential without private garage" and "Sanitariums, convalescent homes, rest homes, nursing homes" land-use categories do not accurately describe parking conditions at a CCRC facility. Since there are no specific requirements for this land use, the County may rely on the Planned Unit District (P-1) regulations as outlined in Code Section 84-66.1404. Relying on the projected parking demand information calculated from ITE's *Parking Generation Manual, 5th Edition* would provide the most accurate guidance for the amount of parking required at the proposed CCRC.

Electric Vehicle Charging

Contra Costa County's Electric Vehicle charging requirements are described within their County Ordinance Code (County Code Section 74-4.006 – Amendments to CGBSC – Electric Vehicle Charging Standards) and Appendix A of the Transportation Analysis Guidelines. Per Section 4.106.4.1 of the County Code, 10 percent of the total number of parking spaces provided for multi-family housing uses shall be electric vehicle charging stations. Half of these spaces must be equipped with fully functioning electric vehicle charging stations. The remaining five percent shall be capable of supporting future electric vehicle charging stations. Non-residential uses are required to provide the number of electric vehicle charging stations specified in Table 5.106.5.3.3 of the County's Code, which equates a number of parking spaces to the number of charging stations.

A total of 594 parking spaces are proposed as part of the project. Of these, 410 would be dedicated to the apartment-style building, 104 to the single-story buildings, and 80 to the health care center. Treating the independent living units as multi-family residential housing and the health care center as a non-residential use yields the following number of electric vehicle charging stations:

- Apartment-style building (410 total parking spaces) – 21 fully functional electric vehicle charging stations and 20 spaces capable of supporting future electric vehicle charging stations
- Single-story residential buildings (104 total parking spaces) – six fully functional electric vehicle charging stations and five spaces capable of supporting future electric vehicle charging stations

- Health care center (80 total parking spaces) – six fully functional electric vehicle charging stations

The project proposes the number of electric vehicle charging stations mandated by the County Code, at the required locations.

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
    - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
    - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

Senate Bill 18

The intent of SB 18 is to aid in the protection of traditional tribal cultural places through local land use planning by requiring local governments to consult with California Native American tribes on projects which include adoption or amendment of general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.). SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process.

3.18.1.2 *Existing Conditions*

As discussed in Section 4.5 Cultural Resources, based on a site-specific records search and literature review, there are no known archaeological sites on the project site or nearby. The NAHC was contacted on April 24, 2020 to conduct a Sacred Lands File search. On April 28, 2020, the NAHC responded and determined there were no known sacred lands on the project site or within the project area. The NAHC provided a list of 10 Native American organizations to reach out to for additional information. These organizations were contacted on April 29, 2020 and one response was received. The Ohlone Indian Tribe requested Worker Awareness Training (WAT) for cultural resources and to stop, identify and evaluate any prehistoric resources exposed during construction.

On August 9, 2021, Contra Costa County sent out notifications to the Wilton Rancheria Tribe per SB 18 and AB 52 and received a request for consultation from the Wilton Rancheria Tribe on September

2, 2021. On September 22, 2021, the County provided the Wilton Rancheria Tribe with the requested project information and completed technical studies, and requested dates and times to meet for consultation. Since then, the County has yet to receive a reply from the Wilton Rancheria Tribe regarding scheduling for tribal consultation after multiple follow up emails and voicemails. The County has made a good faith effort to engage in tribal consultation with the Wilton Rancheria Tribe and concluded the tribal consultation process on February 18, 2022.

3.18.2 Impact Discussion

For the purpose of determining the significance of the project's impact on tribal cultural resources, would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.2.1 *Project Impacts*

Impact TCR-1:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(Less than Significant Impact with Mitigation Incorporated)**

There are no known TCRs on-site. Based upon the discussion above and in Section 3.5 Cultural Resources, the likelihood of encountering buried tribal cultural resources is high, given the proximity of Walnut Creek. The project, however, would be required to implement the mitigation measures described in Section 3.5 Cultural Resources (MM CUL-2.1 through MM CUL-2.3 ad MM CUL-3.1) to reduce impacts to any potential unknown cultural and human remains. **(Less than Significant Impact with Mitigation Incorporated)**

Impact TCR-2:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. **(Less than Significant Impact with Mitigation Incorporated)**

See response to Impact TCR-1 above. **(Less than Significant Impact with Mitigation Incorporated)**

3.18.2.2 *Cumulative Impacts*

Impact TCR-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant tribal cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

As discussed under Impact TCR-1, there are no known TCRs on the project site. In the event an unknown TCR is discovered, the mitigation measures identified in Section 3.5 Cultural Resources would reduce impacts to a less than significant level. The projects listed under 3.0-1 would be required to comply with state, regional, and local regulations addressing TCRs. Therefore, the projects would not combine to form a significant cumulative tribal cultural resources impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

3.19 UTILITIES AND SERVICE SYSTEMS

The following discussion is based, in part, on a drainage feasibility study and sanitary sewer demand study prepared for the project by BKF Engineers, dated October 2020 and a dry utility due diligence study prepared for the project by Giacalone Design Services, Inc., dated September 2020. Copies of these reports can be found in Appendix L, Appendix Q and Appendix R of this EIR, respectively.

3.19.1 Environmental Setting

3.19.1.1 *Regulatory Framework*

State

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The Contra Costa Water District adopted its most recent UWMP in June 2021.

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 set a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

The California Green Building Standards Code, establishes mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

Local

Construction and Demolition Debris Recovery Ordinance

The intent of Contra Costa County Ordinance 2004-16 is to reduce the quantity of construction and demolition debris disposed in landfills as required by State law. Ordinance 2004-16 requires owners of all construction or demolition projects that are 5,000 sf in size or greater to demonstrate that at least 50 percent of the construction and demolition debris generated on the jobsite are reused, recycled, or otherwise diverted (unless a diversion adjustment is granted).

Contra Costa Countywide Integrated Waste Management Plan

As required by the California Integrated Waste Management Act, Contra Costa County adopted a Countywide Integrated Waste Management Plan and Source Reduction and Recycling Element (SRRE). The Integrated Waste Management Act establishes waste management goals, objectives, and policies related to solid waste disposal; facilities siting; household hazardous waste collection and disposal; and implementing programs to achieve plan goals. The SRRE establishes policies and goals related to source reduction, recycling, composting, special waste, and public information and education, and programs designed to achieve SRRE goals.

Contra Costa County Landscape Ordinance

In accordance with the Water Conservation in Landscaping Act of 2006, Contra Costa County has an adopted ordinance that requires water efficient landscaping. The Department of Water Resources prepared a Model Water Efficiency Landscape Ordinance (CDWR, 2009), which Contra Costa County has adopted in its entirety. This ordinance requires water users to reduce water use to the lowest practical amount and to use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use. It also encourages local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure. To comply with the ordinance, project applicants of new construction projects are required to submit a Landscape Documentation Package (outlined in the ordinance) to the County for review and approval. Following approval, the project applicant must submit the approved

Landscape Documentation Package to the property owner and the Water Efficient Landscape Worksheet to the local water purveyor.

Contra Costa County 2005-2020 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the County. The following policies are specific to utilities and service systems and are applicable to the proposed project.

Policy	Description
Policy 7-1	New development shall be required to pay its fair share of the cost of all existing public facilities it utilizes, based on the demand for these facilities which can be attributed to new development.
Policy 7-2	New development, not existing residents, should be required to pay all costs of upgrading existing public facilities or constructing new facilities which are exclusively needed to serve new development.
Policy 7-21	At the project approval stage, the County shall require new development to demonstrate that adequate water quantity and quality can be provided. The County shall determine whether (1) capacity exists within the water system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
Policy 7-26	The need for water system improvements shall be reduced by encouraging new development to incorporate water conservation measures to decrease peak water use.
Policy 7-29	Sewer treatment facilities shall be required to operate in compliance with waste discharge requirements established by the Regional Water Quality Control Board. Development that would result in the violation of waste discharge requirements shall not be approved.
Policy 7-33	At the project approval stage, the County shall require new development to demonstrate that wastewater treatment capacity can be provided. The County shall determine whether (1) capacity exists within the wastewater treatment system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based in information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
Policy 7-37	The need for sewer system improvements shall be reduced by requiring new development to incorporate water conservation measures which reduce flows into the sanitary sewer system.
Policy 7-88	Solid waste disposal capacity shall be considered in County and city land use planning and permitting activities, along with other utility requirements, such as water and sewer service.

3.19.1.2 *Existing Conditions*

Water Supply

Water is supplied to the project site by the CCWD. The CCWD provides treated and untreated water to approximately 500,000 people in Contra Costa County. The CCWD diverts water from the Sacramento-San Joaquin Delta at four intake facilities. The intakes are located at Rock Slough, Old River, Middle River at Victoria Canal, and Mallard Slough. The backbone of the CCWD's water conveyance system is the 48-mile Contra Costa Canal, which starts at Rock Slough and ends at the Martinez Reservoir. The Martinez Reservoir is one of four untreated reservoirs in the district, which altogether provide a total of approximately 165,000 acre-feet (AF) of storage.[92]

The CCWD operates three water treatment plants (WTP). These include the Randall-Bold WTP, the City of Brentwood WTP, and the Bollman WTP. The CCWD's treated water distribution system consists of more than 800 miles of pipelines, 40 storage reservoirs with a total capacity of 72 million gallons, and 30 pump stations.[93]

Wastewater/Sanitary Sewer

Central Contra Costa Sanitary District (CCCSD) provides wastewater treatment services to the project site. CCCSD conveys wastewater from the point of discharge to the CCCSD Treatment Plant, and discharges treated effluent into Suisun Bay in compliance with the San Francisco Bay Regional Water Quality Control Board requirements. The CCCSD treatment plant has a treatment capacity of 54 million gallons per day (gpd) and currently treats an average of approximately 34 million gallons of wastewater per day.[94]

Stormwater Drainage

The existing drainage system on-site is made up of natural channels, pipe culverts, and hillside sheet flow. The project site contains approximately eight watersheds with a total of six outfall locations.[95] These outfall locations are described below:

- In the western portion of the project site, runoff drains to a natural channel that feeds to a large concrete inlet structure within a Flood Control Easement that feeds into the Walnut Creek by way of a dual-box concrete culvert.
- Along the northern portion of the project site, runoff flows down the hills into the Lands of the Contra Costa County Flood Control and Water Conservation District, where the maintenance road's roadside ditch collects the runoff and directs it into the channel with outfalls within the wall of the channel structure.
- In the center of the project site a natural drainage collects water from a large area of the project site.

[92] Contra Costa Water District. *2020 Urban Water Management Plan*. June 2021.
[93] Ibid.
[94] Central Contra Costa Sanitary District. "Treatment Plant". Accessed August 18, 2021. https://www.centralsan.org/treatment-plant
[95] BKF Engineers. *Preliminary Hydrology and Water Quality Report for Spieker Senior Continuing Care Community.* February 17, 2021.

- In the eastern portion of the project site, stormwater drains towards the Seven Hills School in two different locations.
- Also in the eastern portion of the project site is a shed of 6.28 acres that flows onto North San Carlos Road and the Equestrian Center parking lot.

Solid Waste

The Central Contra Costa Solid Waste Authority (CCCSWA) provides solid waste and residential recycling services for areas within Contra Costa County. CCCSWA holds franchise agreements with Allied Waste, a division of Republic Services Inc. for the collection, transfer, and disposal of residential and commercial solid waste, and with Valley Waste Management for the collection and marketing of residential recycling, green waste and food scraps. Solid waste collected by Allied Waste is transported to the Contra Costa Transfer and Recovery Facility in Martinez. The waste is then transported to the Keller Canyon Landfill, located in Pittsburg. The Keller Canyon Landfill is a Class II facility, which has a maximum permitted capacity of approximately 75 million cubic yards (mcy) and a remaining capacity of approximately 63.4 mcy.[96] The Keller Canyon Landfill has a maximum permitted throughput of 3,500 tons of solid waste per day. Construction waste is transported to the Acme Landfill in Martinez. The Acme Landfill is currently estimated to have approximately 506,590 cubic yards of remaining capacity.[97]

Electric, Telecommunication, and Natural Gas Facilities

PG&E supplies electricity and natural gas services to the project area. Telecommunication services are also provided through PG&E overhead infrastructure by various service providers. Two overhead electric/telecommunication poles exist on-site. One pole is located in the northeastern portion of the project site and connects the north end of Matterhorn Drive to the Seven Hills School. The second overhead electric/telecommunications pole is located in the southwestern portion of the project site and provides service to the existing single-family residence.

The project site does not currently receive any natural gas services.

3.19.2 Impact Discussion

For the purpose of determining the significance of the project's impact on utilities and service systems, would the project:

1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

[96] CalRecycle. "Keller Canyon Landfill". Accessed August 18, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228
[97] CalRecycle. "Acme Landfill". Accessed August 19, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4396?siteID=217

3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
4) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?

3.19.2.1 *Project Impacts*

Impact UTL-1:	The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact with Mitigation Incorporated)**

Water

The proposed project would construct a new 16-inch water line, approximately 1,100 feet in length, within North San Carlos Drive to connect with an existing Contra Costa Water District line. Water service to the entire project site would be provided via the newly constructed water line. Construction of this new water line would be subject to construction-related mitigation measures within this EIR and therefore, would not result in a significant environmental effect.

Wastewater/Sanitary Sewer

The project proposes to connect to an existing eight-inch sanitary sewer line in North San Carlos Drive and an eight-inch sanitary sewer line in Seven Hills Ranch Road. Both the CCCSD and BKF Engineers estimated the average daily wastewater flow to be generated by the proposed CCRC. The results of their calculations are summarized below in Table 3.19-1.

Table 3.19-1: Summary of Proposed Average Daily Wastewater Flows

Sanitary Sewer Line	CCCSD Estimated Project Wastewater Flow (gpd)	BKF Engineers Estimated Project Wastewater Flow (gpd)
North San Carlos Drive	37,447	28,923
Seven Hills Ranch Road	60,039	42,862

Although the CCCSD estimated that the project would have a larger average daily wastewater flow, the CCCSD determined that the existing infrastructure would be adequate for the proposed project.[98] Therefore, the project would not require any off-site improvements to existing sanitary sewer facilities. The new lines connecting the proposed CCRC to North San Carlos Drive and Seven Hills Ranch Road would be subject to the construction-related mitigation measures and standard

[98] Leavitt, Russ, Engineering Assistant III at CCCSD. Email to Steel, Michael and Tully, Sean. September 16, 2020.

conditions of approval within this EIR and therefore, would not result in a significant environmental effect.

Stormwater Drainage

The project would involve construction of new stormwater drainage facilities on-site including new stormwater lines, bio-retention areas, flow-through planters, and improvements to the existing drainage channel running through the center of the project site. Four outfalls are proposed to discharge to the existing drainage through the center of the site. Two of these outfalls would be located at the easterly end of the drainage and would discharge at the realigned internal access road. The two remaining outfalls would discharge at the westerly end of the drainage near the existing outfall to Walnut Creek. The southwestern portion of the site would drain to a new 36-inch storm drainage line that would connect off-site to a FC District box culvert. Kinross Drive would drain to an interceptor channel along the south side of the internal access road and discharge to an existing drainage channel on the north side of Seven Hills Ranch Road.

Given that the project would drain into Walnut Creek stormwater facilities, the project would comply with the City of Walnut Creek's Minimum Drainage Design Standards. BKF Engineers concluded that the impacts of the project's outfall would be minimal to the existing stormwater drainage infrastructure.[99] Construction of the proposed stormwater drainage facilities would be subject to the construction-related mitigation measures and standard conditions of approval within this EIR and therefore, would not result in a significant environmental effect.

Electricity, Telecommunication, and Natural Gas Facilities

The existing utility pole in the northeastern portion of the project site that connects Matterhorn Drive to the Seven Hills School would be relocated during project grading and a temporary pole line would be constructed to maintain service to the school. After project grading, a permanent utility pole can be reestablished.

The project would tie-in to the existing electricity lines near Kinross Drive in order to bring electricity and telecommunication services to the proposed CCRC. Any conductor upsizing work would be performed by PG&E as needed.

The project would bring natural gas services to the project site by connecting to existing facilities.

All project construction associated with relocating existing facilities and extending connections to existing facilities would be subject to the construction-related mitigation measures within this EIR and standard conditions of approval typically applied to development project entitlements. Therefore, any needed relocation of existing facilities and extension of connections to existing facilities would not result in a significant environmental effect. **(Less than Significant Impact with Mitigation Incorporated)**

[99] BKF Engineers. *Spieker Senior Continuing Care Community Drainage Feasibility.* December 2, 2020.

Impact UTL-2:	The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

Given that wastewater is conservatively estimated at 85 percent of potable water demand, the project would result in a total water demand of approximately 114,689 gpd,[100] or approximately 128 acre-feet per year[101] (AFY), based on the CCCSD's estimated average wastewater flow. According to the CCWD's 2020 UWMP, the CCWD will have a progressively increasing water supply and will be able to meet water demand during average, single-dry, and up to three years of multiple-dry years through 2035. The CCWD estimates they will be able to meet demand during average, single-dry, and up to two years of multiple-dry years through 2045.

The CCWD would have approximately 700 AF of excess water for the year three multiple-dry year scenario and would have up to approximately 69,300 AF of excess water for the average year scenario. Therefore, the additional demand of 128 AFY generated by the project could be accommodated by the CCWD during average, single-dry, and up to three years of multiple-dry years without extra conservation measures. The CCWD will meet any potential supply shortfalls experienced during dry year conditions, with or without the project, through a combination of a short-term conservation program and/or short-term water purchases, consistent with the CCWD's Future Water Supply Study.

Given that the project site currently has a General Plan designation of SM, the project would not be considered an unplanned increased demand upon the CCWD. Additionally, the project would have water efficient landscaping, Energy Star appliances, and other high-efficiency water conservation measures. Therefore, the project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

Impact UTL-3:	The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **(Less than Significant Impact)**

The CCCSD treatment plant has a treatment capacity of 54 million gallons per day (gpd) and currently treats an average of approximately 34 million gallons of wastewater per day.[102] Therefore, the CCCSD has an available capacity of approximately 20 million gpd. The project would conservatively generate a net increase in wastewater treatment demand of approximately 97,486 gpd,[103] or 0.5 percent[104] of the CCCSD treatment plant's available capacity, based on the CCCSD's

[100] 37,447 gpd wastewater (North San Carlos) + 60,039 gpd wastewater (Seven Hills Ranch Road) ÷ 0.85 = 114,689 gpd total water demand
[101] 114,689 gpd x 365 days/year ÷ 325,851 gallons/acre-foot = 128.4 acre-feet per year
[102] Central Contra Costa Sanitary District. "Treatment Plant". Accessed August 18, 2021. https://www.centralsan.org/treatment-plant
[103] ,447 gpd wastewater (North San Carlos) + 60,039 gpd wastewater (Seven Hills Ranch Road) = 97,486 gpd wastewater
[104] 97,486 gpd ÷ 20 million gpd x 100 = 0.49 percent

estimated average wastewater flow for the project. There would be an incremental increase in wastewater treatment demand upon the CCCSD treatment plant. Therefore, the project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **(Less than Significant Impact)**

Impact UTL-4:	The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

Construction Waste

Construction waste would be hauled to the Acme Landfill in Martinez. The project would be required to comply with County Ordinance 2004-16, which requires owners of all construction or demolition projects that are 5,000 square-feet in size or greater to demonstrate that at least 50 percent of the construction and demolition debris generated on the jobsite are reused, recycled, or otherwise diverted. In order to comply with Ordinance 2004-16, the applicant would be required as a condition of approval to prepare and submit a Debris Recovery Report to the County's Department of Conservation and Development prior to the issuance of a building or demolition permit. The project's Debris Recovery Report would address major materials generated by a construction project of this size, including brush and other vegetative material, dimensional lumber, metal scraps, cardboard, packaging, and plastic wrap, and shall address opportunities to recycle such materials or divert them away from the landfill. In addition, the Project's Debris Recovery Report would demonstrate that at least 50 percent of jobsite debris was diverted from disposal by providing receipts or gate-tags from facilities or service providers used for recycling, reuse and disposal of jobsite debris.

The Acme Landfill is currently estimated to have approximately 506,590 cubic yards of remaining capacity.[105] The addition of construction debris from the project site would not result in a net increase of solid waste that would exceed the capacity of the Acme Landfill.

Operational Waste

During project operation, solid wastes would be generated by residents and employees of the proposed CCRC. CalRecycle's most recent average solid waste disposal rates are 6.7 pounds per resident per day and 11.9 pounds per employee per day.[106] Given that the project would house approximately 560 residents (see Section 3.14 Population and Housing) and a full time equivalent of up to 225 employees, the project would generate approximately 6,430 pounds of solid waste per day,[107] or approximately 3.2 tons of solid waste per day.[108]

[105] CalRecycle. "Acme Landfill". Accessed August 19, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4396?siteID=217
[106] CalRecycle. "Statewide Diversion and Per Capita Disposal Rate Statistics". Accessed August 19, 2021. https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate
[107] 560 residents (6.7 pounds/resident/day) + 225 employees (11.9 pounds/employee/day) = 6,429.5 pounds/day
[108] 6,430 pounds/day ÷ 2,000 pounds/ton = 3.21 tons/day

The receiving landfill for operational waste, Keller Canyon, is at approximately 15 percent of its permitted capacity and is permitted to operate through 2050. The landfill is permitted to accept 3,500 tons of solid waste per day. The project would generate approximately 0.09 percent of the landfill's maximum permitting daily throughput.[109] This would be a small increase in demand on the Keller Canyon Landfill. Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

Impact UTL-5:	The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

As previously discussed, the project would comply with County Ordinance 2004-16 by demonstrating that at least 50 percent of the construction and demolition debris generated on the jobsite are reused, recycled, or otherwise diverted. The project would not conflict with the Contra Costa Countywide Integrated Waste Management Plan. Therefore, the project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

3.19.2.2 *Cumulative Impacts*

Impact UTL-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant utilities and service systems impact. **(Less than Significant Cumulative Impact)**

Relocation or construction of new or expanded utility facilities by other projects would also be subject to similar construction-related mitigation measures as the proposed CCRC. As previously discussed under Impact UTL-2, the CCWD will have progressively increasing water supplies to accommodate growth within its service jurisdiction and will meet any potential supply shortfalls experienced during dry year conditions, through a combination of a short-term conservation program and/or short-term water purchases. The CCCSD treatment plant has an available capacity of approximately 20 million gpd, which would be more than sufficient to accommodate the proposed project and the projects listed in Table 3.0-1. Other projects over 5,000 sf in size would also be required to comply with County Ordinance 2004-16, thereby also reducing their construction and demolition waste by at least 50 percent. As previously discussed, Keller Canyon is at approximately 15 percent of its permitted capacity and is permitted to operate through 2050. Therefore, the Keller Canyon landfill could sufficiently accommodate the proposed CCRC and the cumulative projects listed in Table 3.0-1. Therefore, the project would not result in a cumulatively considerable contribution to a cumulatively significant utilities and service systems impact. **(Less than Significant Cumulative Impact)**

[109] 3.21 tons/ day ÷ 3,500 tons/day x 100 = 0.09 percent

3.20 WILDFIRE

3.20.1 Environmental Setting

3.20.1.1 *Existing Conditions*

The California Department of Forestry and Fire Protection (Cal Fire) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. Referred to as Fire Hazard Severity Zones (FHSZ), these maps influence how people construct buildings and protect property to reduce risk associated with wildland fires. The project site is not located in a FHSZ.[110]

3.20.2 Impact Discussion

For the purpose of determining the significance of the project's impact on wildfire, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

1) Substantially impair an adopted emergency response plan or emergency evacuation plan?
2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.20.2.1 *Project Impacts*

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not impair an adopted emergency response or evacuation plan, exacerbate wildfire risks, install infrastructure that would exacerbate fire risk, or expose people or structures to wildfire risks. **(No Impact)**

3.20.2.2 *Cumulative Impacts*

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in cumulative wildfire impacts. **(No Cumulative Impact)**

[110] California Board of Forestry and Fire Protection. *Fire Hazard Severity Zones Maps*. Accessed June 25, 2021. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

SECTION 4.0 GROWTH-INDUCING IMPACTS

For the purposes of this project, a growth-inducing impact is considered significant if the project would:

- Cumulatively exceed official regional or local population projections;
- Directly induce substantial growth or concentration of population. The determination of significance shall consider the following factors: the degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds planned levels in local land use plans; or
- Indirectly induce substantial growth or concentration of population (i.e., introduction of an unplanned infrastructure project or expansion of a critical public facility (road or sewer line) necessitated by new development, either of which could result in the potential for new development not accounted for in the Envision Contra Costa 2020 General Plan).

Impact GRO-1:	The project would not foster or stimulate significant economic or population growth in the surrounding environment. **(Less than Significant Impact)**

Under the existing General Plan Designation of SM, approximately 166 single-family residential units would be allowed on the project site. Contra Costa County has an estimated 2.9 persons per household; thus, the 166 residential units would house approximately 482 residents.[111] It is anticipated that the proposed CCRC would have approximately 1.23 persons per independent living unit. Therefore, it is estimated that the proposed CCRC would house approximately 560 residents. This would result in a net increase of 78 residents and represent a less than 0.1 percent increase in population in unincorporated Contra Costa County. The project, therefore, would not induce growth in an area that is not already planned for increased development.

The project site is located in an urban area on an infill site that is served by existing infrastructure, including roadways and utilities. The growth resulting from the implementation of the proposed project would incrementally increase the use of existing community service facilities (refer to Sections 3.15 Public Services and 3.16 Recreation). Utility improvements would be sized to serve the proposed development, and would not be sized to have excess capacity that would induce growth in the area. In addition, the project would pay all applicable impact fees and taxes, which would offset fiscal and service impacts to public facilities and services, including police and fire. As a result, growth associated with the implementation of the project would not have a significant impact on community service facilities, nor would it make a cumulatively considerable contribution to such impacts, requiring construction of new facilities that could cause significant environmental effects.

For the reasons discussed above, the project would not result in significant indirect growth-including impacts. **(Less than Significant Impact)**

[111] California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark". Accessed November 17, 2021. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the irretrievable use of nonrenewable resources, the commitment of future generations to similar use, and irreversible damage resulting from environmental accidents associated with the project.

5.1.1 Irretrievable Use of Nonrenewable Resources

During construction and operation of the project, nonrenewable resources would be consumed. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals. Renewable resources, such as lumber and other wood byproducts, could also be used.

Energy, as discussed in more detail in Section 3.6 Energy, would be consumed during both the construction and operational phases of the project. The construction phase would require the use of nonrenewable construction material, such as concrete, metals, and plastics, and glass. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, site preparation, and construction of the buildings. The operational phase would consume energy for multiple purposes including building heating and cooling, lighting, appliances, and electronics. Energy, in the form of fossil fuels, would be used to fuel vehicles traveling to and from the site.

The project would result in a substantial increase in demand for nonrenewable resources; however, the project is subject to the standard California Code of Regulations Title 24 Part 6 and CALGreen standards. The project would also be consistent with the County's Climate Action Plan to reduce energy consumption (see Appendix I). In addition, as discussed in Section 3.6 Energy, the electricity for the project would be provided by Marin Clean Energy from sources that are 100 percent carbon-free. For these reasons, future projects would minimize the use of nonrenewable energy resources.

5.1.2 Commitment of Future Generations to Similar Use

The project would be developed on an infill site surrounded by urban development. Development of the proposed project would commit a substantial amount of resources to prepare the site, construct the buildings, and operate them, but it would not result in development in an area where urban development does not already exist.

5.1.3 Irreversible Damage Resulting from Environmental Accidents

The project proposes a CCRC development that is not a uniquely hazardous use nor likely to cause environmental accidents that impact adjacent areas. As discussed in Section 3.9 Hazards and Hazardous Materials, there are no significant unmitigable hazards and hazardous materials conditions on-site or off-site that would substantially affect the public and surrounding environment. Additionally, there are no significant unmitigable geology and soils impacts which would result from

implementation of the project. For these reasons, the project would not result in irreversible damage that may result from environmental accidents.

SECTION 6.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

A significant unavoidable impact is an impact that cannot be mitigated to a less than significant level if the project is implemented as it is proposed. The proposed project would not result any significant and unavoidable impacts.

SECTION 7.0 ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that an EIR identify and evaluate alternatives to a project as it is proposed. Two key provisions from the CEQA Guidelines pertaining to the discussion of alternatives are included below:

> **Section 15126.6(a). Consideration and Discussion of Alternatives to the Proposed Project.** An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.
>
> **Section 15126.6(b). Purpose.** Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede, to some degree, the attainment of the project objectives, or be more costly.

Other elements of the CEQA Guidelines discuss that alternatives should include enough information to allow a meaningful evaluation and comparison with the proposed project. The CEQA Guidelines state that if an alternative would cause one or more additional impacts, compared to the proposed project, the discussion should identify the additional impact, but in less detail than the significant effects of the proposed project.

The three critical factors to consider in selecting and evaluating alternatives are: (1) the significant impacts from the proposed project that could be reduced or avoided by an alternative, (2) consistency with the project's objectives, and (3) the feasibility of the alternatives available. Each of these factors is discussed below.

7.1 SIGNIFICANT IMPACTS FROM THE PROJECT

7.1.1 Significant Unavoidable Impacts

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to potentially feasible alternatives that would avoid or substantially lessen any of the significant effects of the project and would achieve most of the project objectives. The project would not result in any significant, unavoidable impacts.

7.1.2 Less than Significant Impacts with Mitigation Incorporated

Alternatives may also be considered if they would further reduce impacts that are already less than significant because of required or proposed mitigation. Impacts that would be significant, but for which the mitigation is available to reduce them to less than significant levels include:

- Air Quality (construction criteria pollutants)
- Biological Resources (bats, owls, nesting birds, riparian habitat, wetlands)
- Cultural Resources (archaeological resource/human remains)
- Geology and Soils (seismic shaking, unstable soil)
- Hazards and Hazardous Materials (asbestos, lead-based paint)
- Hydrology and Water Quality (stormwater)
- Noise (Construction noise and construction vibration)
- Tribal Cultural Resources (unknown buried tribal cultural resources)

Table 7.4-2 summarizes the project (and project alternatives) impacts, including significant and unavoidable impacts and less than significant impacts with mitigation incorporated.

7.2 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15124, the EIR must include a statement of the objectives sought by the proposed project. While CEQA does not require that alternatives be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. The stated objectives of the project proponent include the following:

- Approval of all licensing for the CCRC from the State of California Department of Social Services to provide lifetime occupancy and support services for project residents.
- Combine independent living, assisted living, and nursing services as a complete and sustainable living arrangement for lifetime occupancy by community residents.
- Provide progressive care services for CCRC residents from independent living units with associated amenities and dining options to assisted living, skilled nursing, and memory support.
- Create a high-quality CCRC living environment with a wide range of quality amenities and services for persons aged 60 years and over, with a sufficient number of Independent Living Units to support those amenities and services.
- Design, build, and operate a high-quality CCRC on an infill site, to be compatible with the surrounding community and consistent with State standards.
- Contribute to greater livability for senior citizens by incorporating the following design and planning principles: safety and security, recreation and cultural activities, walkability/accessibility, on-site management and care, and transportation, including shuttle service to local restaurants, shopping, and health services.
- Offer a retirement community option not currently provided in Contra Costa County, which includes a comprehensive program and campus to allow potential residents and family members to plan for retirement.

- Provide an on-site Health Care Center licensed to provide assisted living, skilled nursing services, and memory support to residents of the CCRC, and to nonresidents as space permits.

7.3 FEASIBILITY OF ALTERNATIVES

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The CEQA Guidelines advise that such factors can include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can "reasonably acquire, control or otherwise have access to the alternative site (Section 15126.6[f][1])."

7.4 ALTERNATIVES ANALYSIS

7.4.1 Alternatives Considered But Rejected

7.4.1.1 *Location Alternative*

CEQA encourages consideration of an alternative site when significant effects of the project might be avoided or substantially lessened. Only locations that would avoid or substantially lessen any of the significant impacts of the project and meet most of the project objectives need be considered for inclusion in the EIR. In order to identify an alternative site that might reasonably be considered to "feasibly accomplish most of the basic purposes" of the project, and would also mitigate some or all of the significant impacts of the project, it is assumed that such a site would need to have the following characteristics:

- Approximately 30-acres or more in size;
- Located within Central Contra Costa County;
- Located on an infill site within the County Urban Limit Line;
- Served by available infrastructure and nearby commercial amenities; and
- Immediately available.

There are several sites in Contra Costa County (near the San Ramon Regional Medical Center and in the City of Lafayette) that are of similar size and would qualify as infill sites. While these sites meet the size requirement, location alternatives were rejected because the potentially suitable sites would not reduce the identified significant and unavoidable construction noise impact, which is primarily due to the size of the project, duration of the construction schedule, and proximity of nearby sensitive receptors for an infill site. In addition, the identified less than significant construction-related criteria air pollutant impact would also not be lessened because construction would occur on these alternative sites in a similar manner to the proposed project site and the surrounding mix of uses is similar (with sensitive residential receptors in the immediate vicinity). Further, these sites are not controlled by the applicant. Since no feasible alternative site was identified that would avoid or lessen the project impacts, a location alternative was not further analyzed.

7.4.2 Analyzed Alternatives

In addition to a "No Project" Alternative, the CEQA Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that "would avoid or substantially lessen any of the significant effects of the project" (Section 15126.6[f]). The discussion below addresses alternatives which could reduce project impacts and are feasible from a physical land use, infrastructure, site suitability, and general plan consistency perspective, and whether the proponent can reasonably acquire, control, or otherwise have alternative access to the site. This Draft EIR does not evaluate the financial or economic feasibility of the alternatives. The components of these alternatives are described below, followed by a discussion of their impacts and how they would differ from those of the proposed project.

7.4.2.1 *No Project Alternative*

The CEQA Guidelines specifically require consideration of a "No Project" Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." The Guidelines emphasize that an EIR should take a practical approach, and not "…create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B])."

The No Project Alternative assumes that the project site would remain as it is today with the existing buildings being reoccupied.

Comparison of Environmental Impacts

The No Project Alternative would avoid all the project's environmental impacts.

Relationship to Project Objectives

The No Project Alternative would not meet any of the project objectives as no change would be made to the existing land uses at the site and the current land uses do not provide any senior living facilities.

Conclusion

Because the No Project Alternative would not result in any new development on the site, this alternative would avoid all environmental impacts of the project. This alternative would not, however, meet any of the project's objectives.

7.4.2.2 *Existing General Plan Development Alternative*

This alternative assumes that the project is not approved and the project site is redeveloped consistent with the General Plan designation of SM (Single Family Residential – Medium Density). The General Plan defines the SM designation as allowing 3.0 to 4.9 single-family units per net acre. With the addition of a 15 percent density bonus for mandatory inclusionary housing, this would result in

approximately 166 single-family residential units on the project site.[112] Associated infrastructure and roadway improvements would also be required to construct the Existing General Plan Development Alternative. Contra Costa County has an estimated 2.9 persons per household; thus, the 166 residential units would house approximately 482 residents.[113]

Comparison of Environmental Impacts

The Existing General Plan Development Alternative would result in the development of approximately 166 single-family homes, while the proposed project would result in the development of 454 CCRC units. The Existing General Plan Development Alternative would have 188 fewer units and would remove the approximately 85,000 square-foot health care center altogether; however, grading of the project site in order to develop the Existing General Plan Development Alternative would be similar to the proposed project due to the topography. Given that the grading is the most intense phase of construction and contributes the most towards air quality emissions and construction noise, the Existing General Plan Development Alternative would result in similar construction criteria pollutant and construction noise impacts.

The Existing General Plan Development Alternative would result in an increase in vehicles miles traveled (VMT) and VMT per service population compared to the proposed project. As shown in Table 7.4-1 below, the Existing General Plan Development Alternative would result in 477 more daily trips compared to the proposed project and more than double the VMT per service population to 50.4. This would exceed the 15 percent below the Countywide baseline and 2040 VMT per service population threshold of 25.0 and result in a significant VMT impact.

Table 7.4-1: No Project/New Development Alternative VMT

	Daily Trips	Daily VMT	VMT/Service Population
Proposed Project	1,090	16,895	21.5
No Project/New Development Alternative	1,567	24,289	50.4[1]

1. VMT/Service Population = (Daily Trip Generation x Service Population Trip Length)/(Total Service Population = (1,567*15.5)/482 = 50.4

The Existing General Plan Development Alternative would result in the same or similar less than significant impacts (with mitigation) as the proposed project related to biology, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and tribal cultural resources.

Relationship to Project Objectives

The Existing General Plan Development Alternative would not meet the project objectives of creating a CCRC and senior living community. While the Existing General Plan Development

[112] Fehr & Peers. *Spieker Walnut Creek – Draft Transportation Assessment*. July 21, 2021.
[113] California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark". Accessed November 17, 2021. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

Alternative would allow for the development of single-family housing which could be utilized by senior citizens, it would not include the assisted living programs and continuing care identified in the project objectives.

Conclusion

The Existing General Plan Development Alternative would have similar construction criteria pollutant and construction noise impacts. The Existing General Plan Development Alternative would result in a new significant VMT impact compared to the proposed project. The Existing General Plan Development Alternative would result in similar or same impacts to all other environmental resources. The Existing General Plan Development Alternative would not meet the project's objectives.

7.4.2.3 *Roadway Redesign Project*

The Roadway Redesign Project Alternative assumes that the proposed project's extension of Kinross Drive, located along the southeasterly site boundary, would be removed and the main entrance to the project site would be relocated to the current entrance to the project site along Seven Hills Ranch Road. Seven Hills Ranch Road from Walnut Boulevard to the project site entrance is an approximately 17-foot wide residential street with no existing roadway markings or sidewalks; therefore, the Roadway Redesign Project Alternative assumes Seven Hills Ranch Road would be improved to the same size and standards as the proposed project's Kinross Drive extension. Under this alternative, Seven Hills Ranch Road would require 50 feet of right-of-way (ROW) to accommodate a 33-foot curb to curb roadway and six-foot sidewalks on either side. In order to provide the necessary ROW, the project developer would need to acquire a portion of the adjacent land along Seven Hills Ranch Road or the County may take the land through eminent domain. All other aspects of the proposed project would remain the same, including land use totals, location of internal access roads, and location of proposed buildings.

Comparison of Environmental Impacts

The Roadway Redesign Project Alternative would reduce impacts to riparian and wetland habitat and trees by removing the extension of Kinross Drive to the project site. Construction of this extension would have required the disturbance and/or removal of jurisdictional perennial drainage and seasonal wetland habitat. Relocating the entrance to the existing Seven Hills Ranch Road entrance would avoid these features altogether. The Roadway Redesign Project Alternative would still maintain a 50-foot buffer around the central drainage on the project site during construction and include a clear span bridge over the central drainage to avoid impacts. All other less than significant biological resource impacts (bats, owls, and nesting birds) would remain similar or the same as the development of the rest of the project site would remain unchanged.

The Roadway Redesign Project Alternative would require widening and improving Seven Hills Ranch Road to accommodate project traffic. Widening Seven Hills Ranch Road to meet the same roadway standards as the proposed project's Kinross Drive extension would require a total of 50 feet of ROW. Currently the Seven Hills Ranch Road is approximately 17 feet wide and immediately surrounded by single-family homes; thus, widening Seven Hills Ranch Road may require land acquisition by the project developer or taking by the County through eminent domain and the removal of trees near the road.

The Roadway Redesign Project Alternative would result in the same or similar less than significant impacts (with mitigation) as the proposed project related to air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and tribal cultural resources.

Relationship to Project Objectives.

The Roadway Redesign Project Alternative would meet all of the project's objectives of developing an infill site with a CCRC and health care center within Contra Costa County.

Conclusion

The Roadway Redesign Project Alternative would lessen the project's biological resources impacts by avoiding riparian and wetland habitats. The Roadway Redesign Project Alternative would result in in similar or same impacts to all other environmental resources. The Roadway Redesign Project Alternative would meet all the project's objectives.

7.4.3 Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative to the proposed project is the No Project Alternative because all of the project's significant environmental impacts would be avoided. However, Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." In addition to the No Project, the Roadway Redesign Project Alternative would lessen the project's biological resources impact.

Table 7.4-2: Summary of Project and Project Alternative Impacts

Impacts	Proposed Project	No Project Alternative	No Project/New Development Alternative	Roadway Redesign Project Alternative
Aesthetics	LTS	**NI**	LTS	LTS
Agricultural and Forestry Resources	NI	NI	NI	NI
Air Quality	SM	**NI**	SM	SM
Biological Resources	SM	**NI**	SM	**SM**
Cultural Resources	SM	**NI**	SM	SM
Energy	LTS	**NI**	LTS	LTS
Geology and Soils	SM	**NI**	SM	SM
Greenhouse Gas Emissions	LTS	**NI**	LTS	LTS

Table 7.4-2: Summary of Project and Project Alternative Impacts				
Impacts	**Proposed Project**	**No Project Alternative**	**No Project/New Development Alternative**	**Roadway Redesign Project Alternative**
Hazards and Hazardous Materials	SM	**NI**	SM	SM
Hydrology and Water Quality	LTS	**NI**	LTS	LTS
Land Use	LTS	**NI**	LTS	LTS
Mineral Resources	NI	NI	NI	NI
Noise	SM	**NI**	SM	SM
Population and Housing	LTS	**NI**	LTS	LTS
Public Services	LTS	**NI**	LTS	LTS
Recreation	LTS	**NI**	LTS	LTS
Transportation/Traffic	LTS	**NI**	LTS	LTS
Tribal Cultural Resources	SM	**NI**	SM	SM
Utilities and Service Systems	LTS	**NI**	LTS	LTS
Wildfire	NI	NI	NI	NI
Meets Project's Objectives?	Yes	No	No	Yes
Notes: SU = Significant unavoidable impact; SM = Significant impact, but can be mitigated to a less than significant level; LTS = Less than significant impact; and NI = No impact. **Bold** text indicates being environmentally superior to the proposed project where the impact is to a lesser extent.				

SECTION 8.0 REFERENCES

The analysis in this Environmental Impact Report is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

Acalanes High School District. "Schoolsite Locator". Accessed July 13, 2021. http://apps.schoolsitelocator.com/index.html?districtCode=12031

Archaeological/Historical Consultants. *Historical Resources Evaluation Report – 850 Seven Hills Ranch Road.* October 2020

Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." http://projectmapper.planbayarea.org/. Accessed July 13, 2021.

Association of Bay Area Governments. "Projections 2040." Accessed July 13, 2021. Available at: http://projections.planbayarea.org/.

Atmospheric Dynamics, Inc. *Peer Review of the Spieker CCRC AQ/GHG Emissions Analsis Report 9/17/21 by Illingworth & Rodkin, Inc.* Revised October 6, 2021.

BAAQMD. *Final 2017 Clean Air Plan.* April 19, 2017. http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans.

Baez Geotechnical Group. *Due Diligence Geotechnical and Geologic Investigation – Seven Hills Ranch Senior Living Center*. March 24, 2020.

Basin Research Associates. *Archaeological Resources Assessment Report – Senior Housing Project Seven Hills Ranch, Unincorporated Walnut Creek, Contra Costa County.* July 16, 2020.

BKF Engineers. *Preliminary Hydrology and Water Quality Report for Spieker Senior Continuing Care Community*. February 17, 2021.

BKF Engineers. *Preliminary Stormwater Control Plan for Spieker Senior Continuing Care Community*. Revised October 4, 2021.

BKF Engineers. *Spieker Senior Continuing Care Community Drainage Feasibility.* December 2, 2020.

BKF Engineers. *Spieker Senior Continuing Care Community Sanitary Demand.* October 5, 2020.

Brion Economics, Inc. *Child Care Needs Assessment for Spieker Senior Continuing Care Community Project.* November 21, 2021.

CalEPA. Cortese List Data Resources. Accessed December 1, 2020. https://calepa.ca.gov/sitecleanup/corteselist/

California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed October 6, 2021. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

California Air Resources Board. "The Advanced Clean Cars Program." Accessed October 11, 2021. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about

California Board of Forestry and Fire Protection. *Fire Hazard Severity Zones Maps*. Accessed June 25, 2021. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

California Building Standards Commission. "California Building Standards Code." Accessed October 11, 2021. https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo.

California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed June 25, 2021. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.

California Department of Conservation. "Williamson Act." http://www.conservation.ca.gov/dlrp/lca.

California Department of Conservation. Earthquake Zones of Required Investigation. Accessed June 30, 2021. https://maps.conservation.ca.gov/cgs/EQZApp/app/

California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark". Accessed November 17, 2021. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed June 25, 2021. http://frap.fire.ca.gov/.

California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed Jul 13, 2021. http://hcd.ca.gov/community-development/housing-element/index.shtml.

California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed October 11, 2021. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.

California Department of Transportation. "Scenic Highways." Accessed August 16, 2021. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

California Department of Water Resources, Division of Safety of Dams. https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD). Accessed June 9, 2020.

California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed October 11, 2021. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.

California Energy Commission. "Natural Gas Consumption by County." Accessed October 11, 2021. http://ecdms.energy.ca.gov/gasbycounty.aspx.

California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed October 11, 2021. http://ecdms.energy.ca.gov/elecbycounty.aspx.

California Environmental Protection Agency. "Cortese List Data Resources." Accessed June 28, 2021. https://calepa.ca.gov/sitecleanup/corteselist/.

California Gas and Electric Utilities. 2019 *California Gas Report.* Accessed October 11, 2021. https://www.socalgas.com/regulatory/documents/cgr/2019_CGR_Supplement_7-1-19.pdf.

California Natural Diversity Database. 2021. Rarefind 5.0. California Department of Fish and Wildlife. Accessed July 2021 by H.T. Harvey & Associates. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed August 31, 2020. http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.* November 2015.

Callander Associates Landscape Architecture, Inc. *Spieker Senior care Visual Impact Assessment/Peer Review Services*. Revised October 18, 2021.

CalRecycle. "Acme Landfill". Accessed August 19, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4396?siteID=217

CalRecycle. "Keller Canyon Landfill". Accessed August 18, 2021. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228

CalRecycle. "Statewide Diversion and Per Capita Disposal Rate Statistics". Accessed August 19, 2021. https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate

Central Contra Costa Sanitary District. "Treatment Plant". Accessed August 18, 2021. https://www.centralsan.org/treatment-plant

Contra Costa County Office of the Sheriff. "Office of the Sheriff Overview". Accessed July 13, 2021. https://www.cocosheriff.org/about-us/office-of-the-sheriff-overview

Contra Costa County, Conservation and Development Department. "Building Permit Forms and Information". Accessed November 8, 2021. https://www.contracosta.ca.gov/4781/Building-Permit-Forms.

Contra Costa County. "Energy and Water". Accessed October 11, 2021. https://www.contracosta.ca.gov/6859/Energy-and-Water

Contra Costa County. "Fire Protection Districts". Accessed July 13, 2021. https://www.contracosta.ca.gov/1550/Fire-Protection-Districts

Contra Costa County. "Parks and Recreation". Accessed July 13, 2021. https://www.contracosta.ca.gov/446/Parks-and-Recreation

Contra Costa County. "Sustainability". Accessed October 7, 2021. https://www.contracosta.ca.gov/6780/Sustainability

Contra Costa County. Airport Land Use Compatibility Plan – Buchanan Field Airport Policies. December 2000.

Contra Costa County. December 15, 2015.Climate Action Plan. https://www.contracosta.ca.gov/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan

Contra Costa County. General Plan 2005-2020.

Contra Costa County. *Hazard Mitigation Plan, Volume 1. Figure 12-2: Tsunami Inundation Zones*. January 2018.

Contra Costa Water District. *2020 Urban Water Management Plan*. June 2021.

EMG. *Phase I Environmental Site Assessment – 850 Seven Hills Ranch Road.* August 6, 2019.

Fehr & Peers. *Spieker Walnut Creek – Draft Transportation Assessment.* July 21, 2021.

FEMA. *Flood Insurance Rate Map No. 06013C0291F*. Effective on June 16, 2009.

Giacalone Design Services, Inc. *Spieker Senior Care Dry Utility Due Diligence Study*. September 4, 2020.

H.T. Harvey & Associates. *Spieker Senior Continuing Care Community Project – Biological Resources Report Peer Review.* Revised September 17, 2021.

Hexagon Transportation Consultants, Inc. *Peer Review of Transportation Assessment Study for Proposed Spieker Retirement Facility in Contra Costa County.* July 30, 2021.

Illingworth & Rodkin, Inc. *Spieker CCRC Air Quality & Greenhouse Gas Emissions Assessment.* Revised October 11, 2021.

Illingworth & Rodkin, Inc. *Spieker Senior Continuing Care Community Environmental Noise Assessment*. November 12, 2021.

Leavitt, Russ, Engineering Assistant III at CCCSD. Email to Steel, Michael and Tully, Sean. September 16, 2020.

Loewke Planning Associates, Inc. *Aesthetics Analysis and Site Photos for Spieker Senior Continuing Care Community Project.* July 22, 2020.

Loewke Planning Associates, Inc. *Agricultural Resources Analysis for Spieker Senior Continuing Care Community Project.* July 21, 2020.

LSA. *Biological Resources Report – Senior Residential Development Project*. February 2020.

MCE. "Where Does your MCE Service Come From?" Accessed October 11, 2021. https://www.mcecleanenergy.org/#

Office of Planning and Research. "Changes to CEQA for Transit Oriented Development – FAQ." October 14, 2014. Accessed August 16, 2021. http://www.opr.ca.gov/ceqa/updates/sb-743/transit-oriented.html.

Olberding Environmental, Inc. *Spieker Senior Development Partners – Walnut Creek Property Botanical Survey Report 2020.* July 1, 2020.

Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007.* Accessed October 11, 2021. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

Reyes, Gabriel. Wildlife Biologist. USGS Western Ecological Research Center. Dixon. July 15, 2021–correspondence with Kim Briones of H. T. Harvey & Associates regarding occurrence of pallid bats at Mount Diablo.

RGD Acoustics, Inc. *Environmental Noise Assessment Review for Spieker Senior Continuing Care Community*. November 10, 2021.

Schaaf & Wheeler. *850 Seven Hills Ranch Road EIR Review.* September 27, 2021.

United States Department of Energy. *Energy Independence & Security Act of 2007.* Accessed October 11, 2021. http://www.afdc.energy.gov/laws/eisa.

United States Department of the Interior. "Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take." Accessed August 26, 2021. https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf.

United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed October 11, 2021. https://www.eia.gov/state/?sid=CA#tabs-2.

United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed May 11, 2020. https://www.epa.gov/superfund/superfund-cercla-overview.

United States Environmental Protection Agency. "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." January 2021. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf

Walker, James P. *Evaluation of Paleontological Impacts for the Spieker Senior Continuing Care Community Project.* April 29, 2020.

SECTION 9.0 LEAD AGENCY AND CONSULTANTS

9.1 LEAD AGENCY

Contra Costa County
Department of Conservation and Development

Sean Tully, *Principal Planner*

9.2 CONSULTANTS

David J. Powers & Associates, Inc.
Environmental Consultants and Planners

Will Burns, *Principal Project Manager*
Tyler Rogers, *Project Manager*
Connor Tutino, *Associate Project Manager*
Ryan Osako, *Graphic Artist*

EMG
Owings Mills, Maryland
Phase I ESA

RGD Acoustics
Larkspur, CA
Noise Assessment Peer Review

Brion Economics
South Lake Tahoe, CA
Child Care Needs Assessment

Callander Associates
Burlingame, CA
Aesthetics Assessment Peer Review

BKF Engineers
Walnut Creek
Hydrology, Water Quality, Sanitary Sewer, and Stormwater Control Plan

Schaaf & Wheeler
San Francisco, Ca
Stormwater Control Plan Peer Review

Giacalone Design Services, Inc
Dry Utility Consultants

LSA
Richmond, CA
Biological Resources Report

H.T. Harvey & Associates
Los Gatos, CA
Biological Resources Report Peer Review

Archaeological/Historical Consultants
Oakland, CA
Historic Assessment

Baez Geotechnical Group
Turlock, CA
Geotechnical Investigation

James P. Walker
Paleontological Evaluation

Fehr & Peers
Walnut Creek, CA
Transportation

Hexagon Transportation Consultants
Gilroy, CA
Transportation Peer Review

Illingworth & Rodkin
Cotati, CA
Air Quality, Greenhouse Gas Emissions, and Noise

Olberding Environmental, Inc.
Biological Resource Consultants

Basin Research Associates
San Leandro, CA
Archaeological Consultants

HortScience|Bartlett Consulting
Arborist

Associated Lighting Representatives
Oakland, CA
Lighting Consultants

Gates & Associates
Walnut Creek, CA
Landscape Architects

SECTION 10.0 ACRONYMS AND ABBREVIATIONS

A-2	General Agriculture
ABAG	Association of Bay Area Governments
ACM	Asbestos-containing material
ADT	Average daily traffic
AF	Acre-feet
AFY	Acre-feet per year
AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
AST	Above-ground storage tank
AWSC	All-way stop controlled intersection
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Bgs	Below ground surface
BMPs	Best Management Practices
BPMP	Bicycle and Pedestrian Master Plan
Btu	British thermal units
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CalARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model
CalTrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CBPP	Contra Costa Countywide Bicycle and Pedestrian Plan
CC	Congregate Care/Senior Housing
CCCFPD	Contra Costa County Fire Protection District
CCCL	Contra Costa County Library
CCCOS	Contra Costa County Office of the Sheriff

CCCSD	Contra Costa County Sanitary District
CCCSWA	Central Contra Costa Solid Waste Authority
CCHS	Contra Costa Health Services
CCRC	Continuing Care Retirement Community
CCTA	Contra Costa Transportation Authority
CCWD	Contra Costa Water District
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CFCs	Chlorofluorocarbons
CGS	California Geological Survey
CH_4	Methane
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CocoKids	Contra Costa County Child Care Council
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
Cy	Cubic yards
DPF	Diesel particulate filter
DPM	Diesel particulate matter
DSOD	Division of Safety of Dams
DSS	Department of Social Services
DTSC	Department of Toxic Substances Control
DU	Dwelling unit
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan

EPA	Environmental Protection Agency
EVA	Emergency vehicle access
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FCCH	Family childcare home
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zones
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHGs	Greenhouse gases
Gpcd	Gallons per capita per day
Gpd	Gallons per day
GPS	Global positioning system
GWP	Global warming potential
HFCs	Hydrofluorocarbons
HI	Hazard Index
HSWA	Federal Hazardous and Solid Waste Amendments
HVAC	Heating, ventilation, and air conditioning
I	Interstate
In./sec	Inches/second
ITE	Institute of Transportation Engineers
Kw	Kilowatt
LBP	Lead-based paint
LID	Low-impact development
LOS	Level of service
LTA	Local Transportation Analysis
MBTA	Migratory Bird Treaty Act
Mcy	Million cubic yards
MEI	Maximally exposed individual
Mgd	Million gallons per day
MGY	Million gallons per year
MLD	Most likely descendant

$MMTCO_2e$	Million metric tons of CO_2E
Mpg	Miles per gallon
Mph	Miles per hour
MRP	Municipal Regional Stormwater NPDES Permit
MT	Metric ton
MTC	Metropolitan Transportation Commission
N_2O	Nitrous oxide
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NOD	Notice of Determination
NOP	Notice of Preparation
NO_x	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ground-level ozone
OHWM	Ordinary high-water mark
OITC	Outdoor-Indoor Transmission Class
OPR	Office of Planning and Research
P-1	Planned Unit
PCBs	Polychlorinated biphenyls
PDAs	Priority Development Areas
PFCs	Perfluorocarbons
PM	Particulate matter
PPV	Peak particle velocity
RCFE	Residential care for the elderly
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Need Allocation
ROG	Reactive organic gases
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board

SB	Senate Bill
SCS	Sustainable Communities Strategy
Sf	Square feet
SF_6	Sulfur hexafluoride
SHMA	Seismic Hazards Mapping Act
SM	Single-Family Residential, Medium Density
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SO_x	Sulfur oxide
SR	State Route
SRRE	Source Reduction and Recycling Element
STC	Sound Transmission Class
SVP	Society for Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TAZ	Transportation Analysis Zone
TCRs	Tribal Cultural Resources
TDM	Transportation demand management
TIA	Transportation Impact Analysis
TSCA	Toxic Substances Control Act
ULL	Urban Limit Line
USACE	United States Army Corps of Engineers
USBOR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	Underground storage tank
UV	Ultraviolet
UWMP	Urban water management plan
VMT	Vehicle miles traveled
WAT	Worker awareness training
WTP	Water treatment plant