Environmental Impact Report

COCHRANE-BORELLO RESIDENTIAL DEVELOPMENT PROJECT

State Clearinghouse #2011082039

CITY OF MORGAN HILL

City of Morgan Hill

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TABLE OF CONTENTS

FIGURES

TABLES

PHOTOS

APPENDICES

SUMMARY

The proposed project includes removal of the existing orchards and associated uses from the project site, and development of a gated residential community consisting of 244 single-family homes, up to 180 secondary units, a private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open space, private parks, and surrounding landscaping. The proposed lots would range in size from approximately 10,000 square feet to over 30,000 square feet, averaging approximately 15,000 s.f. The proposed single family homes would be one and two-stories and range in size from 3,000 square feet (s.f) to 6,000 s.f.

A minimum of 20 percent of the lots will have a detached cottage unit with kitchen in addition to a private single-family home. However, a total of 180 secondary units are currently proposed, exceeding the 20 percent.

The project also proposes to realign and widen Peet Road to the south of the existing Mariani parcel per the City's General Plan. The widening will increase the existing 20 foot wide roadway to 72 feet, but would not impact any existing structures on the four parcels south of Peet Road. The roadway alignment would include two eight foot bike lanes, two 12 foot travel lanes, and a 12 foot two-way left turn lane. The roadway would maintain a similar alignment as the existing Peet Road, but would angle to the south of the Mariani parcel for approximately 600 feet prior to intersecting with Half Road. An approximate two acre portion of the Mariani parcel would be converted to an on-site detention basin to be utilized by the proposed development on the 122-acre site north of Peet Road.

The project is in the process of acquiring the Mariani parcel (728-33-005) and the portions of the other three parcels needed for the roadway realignment. As part of the Residential Development Control System (RDCS) the project has committed to realigning Peet Road.

Existing and Proposed General Plan and Zoning Designations

The project site has a General Plan designation of *Single Family Low (1-3 D.U./Acre)* and three different underlying zoning districts divided equally within the property (i.e. 40 acres each). There are three zoning designations divided equally within the property. These include: *Residential Estate District (RE-40,000 PD), Single Family (R1-20,000 PD)*, and *Single Family (R1-12,000 PD).* The existing zoning allows for the development of 252 units. The project is proposing a lower density project. In order to prevent further subdivision of the project site, the project proposes to rezone the entire property to *Single Family (R1-20,000 PD)*. The proposed *R1-20,000* zoning designation allows for up to 240 units, which closely matches the actual development plan. The *Planned Development (PD)* overlay allows the site to retain the gross density while providing onsite amenities, project infrastructure, flexibility in proposed lot sizes, setbacks, and 244 residential lots while eliminating any future subdivisions beyond the proposed 244 lots.

The following is a **brief summary** of the significant project impacts and mitigation measures. The reader is referred to the main body text of the EIR for detailed discussions of the project, the existing setting, impacts, and mitigation measures.

Summary of Significant Impacts

The following information summarizes the significant effects of the proposed project and mitigation measures proposed to reduce these effects. Impacts that are less than significant are not described in this summary and can be found in the text of the EIR. A complete description of the project and of

its impacts and proposed mitigation measures can be found in the text of the EIR, which follows this summary.

Significant Impact	Mitigation and Avoidance Measures
Agricultural Impacts	
Impact AG-1: The phased loss of 99.9 acres of *Prime Farmland* over the next 12 years is a significant impact to agricultural resources. **(Significant Impact)**	The following agricultural mitigation measures have been proposed by the project applicant. Any one of these mitigation measures (or combination) achieving a 1:1 ratio of acreage protected for each acre lost would be deemed sufficient to mitigate the loss of agricultural lands from the project site. **AG MM-1:** Prior to issuance of the first building permit for each phase, the applicant shall comply with the adopted City of Morgan Hill Agricultural Mitigation and Preservation program (if such a program exists at the time each phase develops). **AG MM-2:** Prior to the issuance of the first building permit for each phase, provide conservation easements to the City of Morgan Hill at a 1:1 ratio on land of at least equal quality and size or 1:1 on land deemed suitable for conservation by the Director of Planning. Project applicant will provide agricultural easements on other properties owned now or in the future by the Borello family or its associates, or on purchased property within the State of California, mitigating for loss of prime agricultural land at a ratio of 1:1. **AG MM-3:** Prior to the issuance of the first building permit for each phase, the applicant shall provide evidence of payment of an in-lieu fee at a 1:1 ratio of acreage protected for each acre lost to an established local, regional or statewide organization or agency. The per acre payment shall be made to the entity/City that has an adopted Agricultural Mitigation Program.
Hazards and Hazardous Materials Impacts	
Impact HAZ-1: Based on findings of the regulatory database search, future development proposed at the project site is unlikely to interfere with any Underground Storage Tanks (USTs), however, the possibility of the historic UST listed at 18145 Peet Road presents potential environmental concerns for the realignment of Peet Road. **(Significant Impact)**	**MM HM-1.1:** A "no further action" determination shall be obtained from SCCEH for the former USTs, prior to development of Phase 13. **MM HM-1.2:** The presence of the recorded UST at 18145 Peet Road should be confirmed prior to issuance of building permits for Phase 8, providing sufficient time for the applicant to mitigate prior to installation of the planned realignment of Peet Road in Phase 10. This may be accomplished by a geophysical survey, or having an environmental professional onsite during road realignment activities to observe if UST indicators are present. Given

Significant Impact	Mitigation and Avoidance Measures
	the planned realignment (roughly 75 feet southwest of current location) it is unlikely the alleged UST would impact the realignment.
Biological Resources Impacts	
Impact BIO-1: Tree removal or pruning of retained trees during the nesting season could impact protected tree-nesting raptors. Any loss of fertile bird eggs, or individual nesting birds, or any activities resulting in nest abandonment during construction, would constitute a significant impact. **(Significant Impact)** **Impact BIO-3:** Demolition of onsite structures could impact roosting bats. Any loss of bats, would constitute a significant impact. **(Significant Impact)** **Impact BIO-5:** The loss of many native and non-native trees in the project area due to development allowed under the proposed project would be reduced to a less than significant level with implementation of standard measures SM BIO-5.1 and 5.2. **(Less Than Significant Impact)**	The following measures shall be implemented by the proposed project prior to each phase of construction (i.e. preconstruction surveys will be per phase) to reduce impacts to white-tailed kite and non-listed raptors: **MM BIO-1.1:** Should project construction be scheduled to commence between February 1 and August 31, a pre-construction survey will be conducted by a qualified biologist for nesting birds within the onsite trees as well as all trees within 250 feet of the site. This survey will occur within 30 days of the onset of construction. **MM BIO-1.2:** If pre-construction surveys undertaken during the nesting season locate active nests within or near construction zones, these nests and an appropriate buffer around them (as determined by a qualified biologist) will remain off-limits to construction until the nesting season is over. Suitable setbacks from occupied nests will be established by a qualified biologist and maintained until the conclusion of the nesting season. The following measures shall be implemented by the proposed project during each phase of construction that would demolish an existing structure onsite, to ensure that roosting bat mortality from project construction is avoided: **MM BIO-3.1:** A pre-construction survey will be conducted by a qualified bat biologist for roosting bats within 30 days of the on-set of construction. All suitable structures of the study area will be covered during this survey. **MM BIO-3.2:** If a non-breeding bat colony is found and construction will not include demolition, then a construction-free buffer of 25 to 50 feet shall be established around the structure. If construction will include demolition, then the individuals shall be humanely evicted via the partial dismantlement of the buildings prior to demolition under the direction of a qualified bat specialist to ensure that no harm or "take" would occur to any bats as a result of demolition activities. **MM BIO-3.3:** If a maternity colony is detected in the buildings, then a construction-free buffer shall be established around the structure and remain in place until it has been determined that the nursery is no longer active. If

Significant Impact	Mitigation and Avoidance Measures
	demolition is necessary, demolition shall be done between March 1 and April 15 or August 15 and October 15 to avoid interfering with an active nursery. **MM BIO – 5.1:** For the on-site trees proposed for preservation, a tree protection plan shall be completed by a certified arborist to the satisfaction of the City arborist. The plan shall demonstrate how tree protection shall be provided during and after construction. The key elements of a tree protection plan include; establishing Tree Protection Zones (TPZs) for each tree to be preserved; and providing supplemental irrigation during the demolition and construction phases of the project. The tree preservation plan shall include the following protective measures set forth in the tree survey prepared by *Moki Smith*: <u>Design Measures</u> • Locate structures, grade changes, etc. as far as feasible from the 'dripline' area of the tree. <u>Tree Protection During Construction</u> • Avoid root damage through grading, trenching, compaction, etc. at least within an area 1.5 times the 'dripline' area of trees. Where root damage cannot be avoided, roots encountered (over one inch diameter) should be exposed approximately 12 inches beyond the area to be disturbed (towards tree stem), by hand excavation, or with specialized hydraulic or pneumatic equipment, cut cleanly with hand pruners or power saw, and immediately back-filled with soil. Avoid tearing, or otherwise disturbing that portion of the root(s) to remain. • Construct a temporary fence as far from the tree stem (trunk) as possible, completely surrounding the tree, and six to eight feet in height. Post no parking or storage signs outside/on fencing. Do not attach posting to the mainstem of the tree. • Do not allow vehicles, equipment, pedestrian traffic; building materials or debris storage; or disposal of toxic or other materials inside of the fenced off area. <u>Tree Maintenance</u> • Avoid pruning immediately before, during, or immediately after construction impact. Perform only that pruning which is unavoidable due to conflicts with proposed development. Aesthetic pruning should not be performed for at least one to two years following completion of construction. • Trees that will be impacted by construction may benefit from fertilization, ideally performed in the fall, and

Significant Impact	Mitigation and Avoidance Measures
	preferably prior to any construction activities, with not more than six pounds of actual nitrogen per 1,000 square feet of accessible 'drip line' area or beyond. • Mulch 'rooting' area with an acidic, organic compost or mulch. • Arrange for periodic (biannual/quarterly) inspection of tree's condition, and treatment of damaging conditions (insects, diseases, nutrient deficiencies, etc.) as they occur, or as appropriate. • Individual trees likely to suffer significant impacts may require specific, more extensive efforts and/or a more detailed specification than those contained within these general guidelines will be established in the tree preservation plan.
Air Quality Impacts	
Impact AIR – 3: Construction activities, particularly generation of construction dust, if uncontrolled, could result in significant short-term air quality impacts. **(Significant Impact)**	**MM AIR-3.1**: The proposed project includes the following construction practices that can reduce construction dust/air quality impacts to a less than significant level. BAAQMD has prepared a list of feasible construction dust control measures that can reduce construction impacts to a level that is less than significant. The following construction practices shall be implemented during construction of the proposed project: • All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material offsite shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • 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. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code Regulations [CCR]).

Significant Impact	Mitigation and Avoidance Measures
	Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • 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. • 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. • All trucks and equipment, including their tires, shall be washed off prior to leaving the site. • 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. • Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. **MM AIR-3.2:** The following are additional mitigation measures recommended by the BAAQMD and included in the project to reduce engine exhaust emissions: • Use alternative fueled construction equipment, when feasible. • Minimize idling time (five minutes maximum). • Maintain properly tuned equipment. • Limit the hours of operation of heavy equipment and/or the amount of equipment in use.
Geology and Soils Impacts	
Impact GEO-2: The proposed project may result in soil instability as a result of proposed cut slopes below Coyote Road. **(Significant Impact)**	**MM-GEO-2.1:** Proposed cut slopes below Coyote Road, located within the City of Morgan Hill, have the potential to destabilize the roadway. Therefore, a slope stability analysis and remedial grading measures, documented in a grading and drainage plan review letter will be prepared by

Significant Impact	Mitigation and Avoidance Measures
	the applicant for City staff to review, to confirm required factors of safety are maintained.
Cultural Resources Impacts	
Impact CULT-1: This project may adversely impact undocumented human remains or unintentionally discover significant historic or archaeological materials. Implementation of avoidance measures would ensure that the proposed project would appropriately treat any buried archaeological resources. **(Less Than Significant Impact)**	**AM CUL-1.1:** An archaeologist shall be present on-site to monitor ground-disturbing activities during Phases 1 and 2. In the event that any bone material is discovered, work shall be halted with a distance determined by the project archaeologist until a qualified forensic archaeologist has made a determination that it is or is not human. **AM CUL-1.2:** The following measures are identified in the City of Morgan Hill Municipal Code Chapter 18.75. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans. • If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld. • Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled. • Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains. • In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may

Significant Impact	Mitigation and Avoidance Measures
	continue in other areas that are outside the exclusion zone as defined below. • An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the Monitoring Archaeologist (typically 25-50ft for single burial or archaeological find) • The exclusion zone shall be secured (e.g., 24 hour surveillance) as directed by the City or County if considered prudent to avoid further disturbance • The Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition: ▪ The City of Morgan Hill Community Development Director ▪ The Contractor's Point(s) of Contact ▪ The Coroner of the County of Santa Clara (if human remains found) ▪ The Native American Heritage Commission (NAHC) in Sacramento ▪ The Amah Mutsun Tribal Band • The Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American the Coroner has 24 hours to notify the NAHC. • The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.) • Within 24 hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose.

Significant Impact	Mitigation and Avoidance Measures
	• Within 24 hours of their notification by the NAHC, the MLD may recommend to the City's community development director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out. • If the MLD recommendation is rejected by the City of Morgan Hill the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.
Hydrology and Water Quality Impacts	
Impact HYDRO-1: Implementation of mitigation measures, MM HYDRO 1.1 would ensure that construction of the proposed development would not increase stormwater runoff and would not exceed the capacity of planned onsite and existing offsite stormwater drainage facilities. **(Less Than Significant Impact)** **Impact HYDRO-3:** Implementation of the mitigation measure, MM HYDRO-3.1, would ensure that construction and ongoing occupancy of the proposed subdivision would result in less than significant water quality impacts. **(Less Than Significant Impact)**	**Mitigation Measures:** In accordance with City of Morgan Hill standards, development of the proposed project shall implement the following measure to avoid impacts to the City's storm drainage system. **MM HYDRO-1.1:** The portion of the site that drains to San Francisco Bay via Coyote Creek is under the jurisdiction of the San Francisco RWQCB. For the portion of the site that drains to Coyote Creek, the project shall include hydromodification mitigation meeting or exceeding the specifications outlined in the SCVURPPP hydromodification mitigation plan (HMP). **MM HYDRO-3.1:** Potential construction-phase and post-construction pollutant impacts from development shall be controlled below the level of significance through preparation and implementation of an erosion control plan, a storm water pollution prevention plan (SWPPP) and a storm water management plan (SWMP) consistent with recommended design criteria in accordance with the NPDES permitting requirements enforced by the Regional Board (San Francisco or Monterey Bay as applicable for each phase), per requirements at time of development.

Significant Impact	Mitigation and Avoidance Measures
	The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP, which also details the construction-phase housekeeping measures for control of contaminants other than sediment. The SWMP implements treatment measures and best management practices (BMPs) to be implemented for control of pollutants once the project has been constructed. Both the SWPPP and the SWMP set forth the BMP monitoring and maintenance schedule and identifies the responsible entities during the construction and post-construction phases. The applicant's SWPPP shall prescribe construction-phase BMPs to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for revegetation or mulching. BMPs shall be implemented in accordance with criteria in the California Stormwater BMP Handbook for Construction or other accepted guidance and shall be reviewed and approved by the City of Morgan Hill prior to issuance of grading or building permits for each phase of development. The applicant shall identify the SWPPP Manager who will be the responsible party during the construction phase to ensure proper implementation, maintenance and performance of the BMPs. The applicant's SWMP shall implement post-construction water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable for both the Peet Road and site development projects. For the site itself, neighborhood and/or lot-level BMPs to promote infiltration or "green" treatment of storm runoff shall be emphasized, consistent with Regional Boards guidance for NPDES Phase 2 permit compliance.
Noise and Vibration Impacts	
Impact NV-1: Future residential uses developed at the project site would not be exposed to exterior noise levels from transportation sources greater than 60 dBA L_{dn}, which is in compliance with the exterior noise and land use	**MM NV-1.1:** Notify residents of Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230 of the potential for intermittent noises from operations and activities at the Santa Clara Water District Facility. This notification will be provided in the deed to the property. **MM NV-1.2:** Construct eight-foot noise barriers, relative

Significant Impact	Mitigation and Avoidance Measures
compatibility standard presented in the City of Morgan Hill's General Plan. Interior noise levels would be expected to be below 45 dBA L_{dn} assuming standard residential construction. Noise levels generated by operations at the Santa Clara Water District Facility may at times exceed the City of Morgan Hill's Zoning Code noise limits. **(Significant Impact)** **Impact NV-4:** Residences in the vicinity of the site, as well as future residences proposed on the project site, would be exposed to noise levels substantially above ambient conditions over the 10-12 year duration of project construction activities. **(Significant Unavoidable Impact)**	to the residential pad elevation, to reduce intermittent noises from activities associated with operations at the Santa Clara Water District Facility to less than 60 dBA. Noise barriers would be required at the property lines of Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230 that adjoin the Santa Clara Water District Facility. **MM NV-1.3:** Provide a suitable form of forced-air mechanical ventilation, as determined by the City Building Official, for units located on Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230, so that windows could be kept closed at the occupant's discretion to control interior noise. **MM NV-4.1:** The contractor shall prepare a detailed construction plan for each phase of development identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance. The plan shall consider the following available controls to reduce construction noise levels as low as practical: • Construction activities shall be limited to the hours between 7:00 a.m. and 8:00 p.m., Monday through Friday, and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays. No construction activities should occur on Sundays or federal holidays (Consistent with Section 8.28.040 of the Morgan Hill Municipal Code); • Temporary noise barriers (e.g., solid plywood fences (minimum 8 feet in height) and/or acoustical blankets could be erected, if necessary, along affected property boundaries facing the construction site. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected; • Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment; • Prohibit all unnecessary idling of internal combustion engines; • Route construction related traffic to and from the site via designated truck routes and avoid residential streets where possible; • Utilize "quiet" models of air compressors and other stationary noise sources where technology exists; • Locate all stationary noise-generating equipment, such as air compressors and portable power generators, as far away as possible from adjacent land uses;

Significant Impact	Mitigation and Avoidance Measures
	• Shield adjacent sensitive uses from stationary equipment with individual noise barriers or partial acoustical enclosures; • Locate staging areas and construction material storage areas as far away as possible from adjacent land uses; • Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and will require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. • 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.

SIGNIFICANT UNAVOIDABLE IMPACTS

The proposed project would result in the following significant unavoidable environmental impacts:

- Construction Noise Impacts (land use compatibility impact in terms of construction noise.)

All other impacts of the proposed project would be mitigated to a less than significant level with incorporation of the project-specific mitigation measures identified in this EIR.

SUMMARY OF ALTERNATIVES

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives that "will feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project." The purpose of this section is to determine whether there are alternatives of design, scope or location that will substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives," or are more expensive. [Section 15126.6]

The range of alternatives selected for analysis is governed by the "rule of reason," which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice. Although the alternatives do not have to meet every goal and objective set for the proposed project, they should "feasibly attain most of the basic objectives of the project."

CEQA does not require that all possible alternatives be evaluated, only that "a range of feasible alternatives" be discussed to encourage both meaningful public participation and informed decision making. In selecting alternatives to be evaluated, consideration may be given to their potential for reducing significant unavoidable impacts, reducing significant impacts that are mitigated by the project to less than significant levels, and further reducing less than significant impacts.

The significant impacts of the project include: agricultural resources, hazardous materials, biological resources, air quality, geology, hydrology and water quality, and noise impacts. With the exception of construction noise impacts, all of the identified impacts can be reduced to a less than significant level with mitigation measures included in the project. Alternatives required by CEQA to be considered should be capable of avoiding or reducing some or all of the significant impacts listed above.

Consideration of a "No Project" alternative is mandatory. Other logical alternatives include a reduced scale alternative, design alternatives, and a location alternative. Alternatives discussed in the EIR include:

1. No Project
2. Reduced Scale Alternative
3. Location Alternatives
4. On-Site Agricultural Preservation Alternative
5. Noise Buffer Alternative
6. Construction Schedule Alternative

No Project Alternative

The CEQA Guidelines stipulate that an EIR specifically include a "No Project" Alternative, which should discuss both "the existing conditions, as well as what will be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services."

The No Project Alternative would not avoid the significant agricultural, air quality, biological, and noise impacts of the project in that those impacts are likely to result from any development occurring on the site in a manner consistent with the current General Plan land use designation for the site.

Considering that the existing General Plan designation and zoning allows for increased density at the proposed project site, the No Project Alternative, which assumes future development consistent with the existing land use regulations, is feasible from a land use and planning standpoint.

The No Project Alternative would allow for development of the site under the existing General Plan designation and zoning districts which would meet some of the basic objectives of the project.

Reduced Scale Alternative

The Reduced Scale Alternative would reduce the amount of residential development on the project site to a level sufficient to avoid significant impacts resulting from the scale of the project. The project's operational air quality and traffic impacts were less than significant. The project's noise, agricultural, and biological impacts would not be substantially lessened by reducing the scale of proposed development. The greenhouse gas emissions analysis for the site determined that according to the BAAQMD emissions threshold (4.6 MT CO_2e/year per capita), the proposed project would not exceed the 'efficiency' significance threshold. However, the project would does exceed the 'bright-line threshold of 1,100 MT of CO_2e/yr., which is the trigger for a greenhouse gas emissions analysis (i.e. if a project results in less than 1,100 MT of CO2e/year, GHG emissions are considered *de minimus* and no GHG analysis is required). Project emissions must be reduced by 62 percent for the project to fall below 1,100 MT of CO_2e/yr. Therefore, a Reduced Scale Alternative consisting of 93 single-family primary units and 68 accessory units would generate GHG emissions below the 1,100 MT CO_2e/year bright-line-

threshold.

The Reduced Scale Alternative is feasible from a land use and planning standpoint in that it conforms to the site's General Plan designation and current zoning districts, however, the reduction in density allowed under the Reduced Scale Alternative would not meet the basic project objective of development of 244 single family residences and 180 detached cottage units at the project site.

Location Alternative

The CEQA Guidelines encourage 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 effects of the project and meet most of the project objectives need be considered for inclusion in an EIR. An alternative location of the same size elsewhere in Morgan Hill or southern Santa Clara County would not likely eliminate the impact on prime agricultural land unless the alternative location involved soils that were not suitable for agricultural use.

A location alternative that would provide the same area and possessed the site's existing General Plan land use designation and zoning as the project site was not identified in the City of Morgan Hill. Also, given the court ruling affecting the site related to the Cochrane Road Assessment District, an alternate site location is not considered further.

On-Site Agricultural Preservation Alternative

Under this alternative, mitigation for loss of prime agricultural land would be provided on the project site. Proposed on-site preservation at a ratio of 1:1 could occur in one of the following approaches:

1) Clustering proposed development onto smaller lots, allowing half of the total project site to be developed with smaller lots at the same density as the proposed project. Accessory units may still be provided onto smaller lots.
2) Maintain proposed lot sizes on half of the project site and reducing overall project density by 50 percent.

Development allowed under this alternative would maintain 60 acres of the project site for agricultural use in order to mitigate for the loss of prime farmland on-site.

The On-Site Agricultural Preservation Alternative is considered infeasible from a land use and planning standpoint. The site's residential General Plan land use designation and associated residential zoning, as mandated by the court's ruling arising from the lawsuit brought by the landowners participating in the Cochrane Road Assessment District, prevents the City from requiring an on-site agricultural mitigation, making a clustering option for the site infeasible. The assessment district fees were based on each parcel's acreage, and therefore the entire subject parcel is required to develop with urban uses.

Noise Buffer Alternative

Under this alternative, a setback is proposed for the Santa Clara Valley Water District (SCVWD) facility located to the west of the project site. The setback is proposed as a noise buffer for future residents adjacent to the SCVWD facility. Operations at the Santa Clara Water District Facility could generate intermittent maximum instantaneous noise levels of approximately 85 dBA Lmax at the property line (assuming that the noise source was located no closer than 25 feet from the property line). Per the Municipal Code, when uses are adjacent or contiguous to residential, park or

institutional uses, the maximum sound level shall not exceed 60 dBA Lmax. Assuming no intervening structures or noise barriers, residential land uses would have to be set back approximately 450 feet from the SCVWD property line to ensure that Lmax noise levels would be maintained at or below 60 dBA, thereby eliminating the 53 proposed lots within 450 feet of the SCVWD facility.

The Noise Buffer Alternative is considered feasible from a land use and planning standpoint, however, the reduction of 53 lots involved in this Alternative would not meet the basic project objective of development of 244 single family residences and 180 detached cottage units at the project site.

Construction Schedule Alternative

Under this alternative, the proposed construction program would be reduced from the currently proposed 16 phases to reduce the construction air quality and noise impacts. The overall proposed development for the site would remain the same as the proposed project, but the phases of development would be reduced.

As a result of the Cochrane Road Assessment District, the site is entitled to develop entirely with residential uses consistent with the General Plan land use designation and the zoning district. However, the project must receive development allocations through the Residential Development Control System (RDCS) process, which is the City's growth control system. Since allocations are provided on a limited, annual basis, the potential for the project to receive the required number of RDCS allocations to reduce the number of overall construction phases is not unknown. The Construction Schedule Alternative is considered infeasible in that the proposed phasing is the minimum number of phases the project can reasonably expect, considering the competitive RDCS allocation process.

This alternative, if sufficient RDCS allocations were allocated to the site to compress the number of phases and therefore the number of construction seasons, would meet basic project objectives.

Environmentally Superior Alternative(s)

The CEQA Guidelines specify that an EIR must identify the environmentally superior alternative among those alternatives discussed. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. [Section 15126.6(e)(2)]

Based upon the previous discussion, the Reduced Scale Alternative would be the environmentally superior alternative. The Reduced Scale Alternative, would avoid most of the significant impacts of the project, with the exception of the loss of prime farmland, however, it is the most environmentally superior of all the proposed alternatives because it reduced the greenhouse gas emissions impacts to below the threshold requiring analysis.

KNOWN VIEWS OF LOCAL GROUPS AND AREAS OF CONTROVERSY

The Department of Conservation and Committee for Green Foothills has commented about the conversion of agricultural lands resulting from the proposed project, and has requested that appropriate mitigation be provided as part of the proposed project. The project has proposed three

mitigation measures to mitigate the loss of agriculture lands to a less than significant level.

SECTION 1.0 INTRODUCTION

1.1 INTRODUCTION

This document has been prepared by the City of Morgan Hill as the Lead Agency in conformance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The purpose of this Environmental Impact Report (EIR) is to inform decision makers and the general public of the environmental effects of the proposed project, to identify ways in which the significant effects might be minimized, and to identify alternatives to the project that could avoid or reduce those significant impacts.

This document includes descriptions of the physical environment in the vicinity of the project, as those conditions existed at the time the EIR Notice of Preparation was circulated starting on August 16, 2011. The consideration and discussion of environmental impacts that result from the development in the project area evaluate whether the environmental effects are significant; that is: do those effects exceed stated levels, or "thresholds" of significance. Mitigation measures, proposed to minimize the identified significant environmental effects, are also described in the discussion of environmental impacts and mitigation measures, per CEQA Guidelines Section 15126.

The proposed Cochrane-Borello Residential Development project consists of rezoning the site from *R-1 12,000/PD* and *RE 40,000/PD* to *R-1 20,000/PD,* and proposing a *Planned Development (PD) Overlay* for the entire site The R-1 20,000 most closely reflects the actual development and establishes site development standards (i.e. setbacks, height, etc.) and the PD designation allows for flexibility of site planning. The scope of the proposed development is described in detail in *Section 2.0 Description of the Proposed Project*.

1.2 ORGANIZATION OF THE DRAFT EIR

The Draft EIR includes the following sections:

Summary

The Summary of the Draft EIR, which precedes this introduction, includes a brief description of the proposed project and summarizes the project's impacts, mitigation measures, and alternatives to the project. The summary also briefly describes any known areas of public controversy and the views of local groups.

Section 1.0 Introduction

This section provides a general overview of the CEQA process, describes the public participation process and opportunities for input, and outlines the contents of the Draft EIR.

Section 2.0 Description of the Proposed Project and Project Objectives

This section describes the physical and operational characteristics of the proposed project. Information on the location of the project and assumptions about implementation of the proposed project is addressed in this section.

The objectives for the project and the intended uses of the EIR are also listed in this section.

Section 3.0 Environmental Setting, Impacts, and Mitigation

The Environmental Setting, Impacts, and Mitigation section includes descriptions of the physical setting of the project area, identifies environmental impacts resulting from the project, and identifies mitigation measures for the environmental impacts examined in the EIR. The Draft EIR identifies proposed mitigation measures for significant impacts in this section and briefly evaluates effectiveness/feasibility of these measures. Each impact is numbered using an alpha-numerical system that identifies the environmental issue. For example, **Impact BIO-1** denotes the first impact in the biological resources section. Mitigation measures and conclusions are also numbered to correspond to the impacts they address. For example, **MM TRANS-2.1** refers to the first mitigation measure for the second impact in the transportation section. "Mitigation Measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370). Measures that are required by law or are City standard conditions of approval are categorized as "Standard Measures." Measures that are proposed that will further reduce or avoid already less than significant impacts are categorized as "Avoidance Measures." The letter codes used to identify environmental issues are listed as shown below.

Letter Codes for Environmental Issues	
Letter Code	**Environmental Issue**
AQ	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
ENER	Energy
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYDRO	Hydrology and Water Quality
LU	Land Use
NV	Noise and Vibration
PH	Population and Housing
PS	Public Facilities and Services
TRANS	Transportation
UTIL	Utilities and Service Systems
VIS	Visual and Aesthetic Resources

Section 4.0 Growth Inducing Impacts

The discussion of growth inducing impacts addresses the ways in which the proposed project could foster economic or population growth or the construction of additional housing in the surrounding area.

Section 5.0 Cumulative Impacts

This section includes a discussion of cumulative environmental impacts of the project along with other past, pending and future development in the area.

Section 6.0 Significant Unavoidable Impacts

This section lists any significant unavoidable impacts that could result if the proposed project is implemented.

Section 7.0 Consistency with Relevant Plans and Policies

The project's conformance with objectives, goals, and policies in applicable General Plans and regional plans is described in this section.

Section 8.0 Alternatives to the Proposed Project

This section identifies a reasonable range of alternatives to the proposed project which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen the significant impacts of the project. The environmental impacts associated with each alternative are discussed and a comparison of the impact to those of the project presented. Each of the alternatives is assessed to determine its ability to meet the objectives of the Project Applicant.

Section 9.0 Significant Irreversible Environmental Changes

This section discusses the irreversible commitment of natural resources that could occur as a result of the implementation of the proposed project.

Section 10.0 References

This section lists the references, persons, and organizations consulted during preparation of the Draft EIR.

Section 11.0 List of Preparers

This section lists the lead agency staff and consultants who participated in preparation of the Draft EIR.

1.4 REFERENCE AVAILABILITY

Copies of the EIR and documents referenced in this EIR are available for public review during normal business hours at:

City of Morgan Hill
Community Development Department
17575 Peak Avenue
Morgan Hill, CA 95037

Morgan Hill Public Library
660 West Main Avenue
Morgan Hill, CA 95037

1.5 PUBLIC PARTICIPATION IN ENVIRONMENTAL REVIEW

The City of Morgan Hill, as required under CEQA, encourages public participation in the environmental review process. Opportunities for comments by public agencies and the public include responding to the Notice of Preparation of the Draft EIR, participation and comment at a public scoping meeting, written comments on this Draft EIR, and presentation of written or verbal comments at future public hearings.

A Notice of Preparation for this Draft EIR was circulated from August 16, 2011 to September 15, 2011. Responses to the Notice of Preparation are included in Appendix A of this document. In addition, an EIR scoping meeting was held for the project on August 25, 2011 (refer to Appendix A).

Under the California Environmental Quality Act (CEQA), the Lead Agency is required, after completion of a Draft EIR, to consult with and obtain comments from public agencies having jurisdiction by law with respect to the proposed project, and to provide the general public with an opportunity to comment on the Draft EIR. The Draft EIR will be available for review during the 45-day public review and comment period at the City of Morgan Hill, Morgan Hill Library, and on the City's website. Written comments concerning the environmental review contained in this Draft EIR must be submitted to the Lead Agency (below) during the 45-day public review and comment period.

City of Morgan Hill
Terry Linder, Senior Planner
Community Development Department
17575 Peak Avenue
Morgan Hill CA 95037

The main project site is approximately 122-acres. The proposed project property is located on the east side of U.S. Highway 101 at Cochrane Road in the City of Morgan Hill. The site is one parcel (Assessor's Parcel Number (APN) 728-34-027) bordered by Cochrane Road, Half Road, and Peet Road. The site is currently used as a cherry and apricot orchard, for hay/row crops, crop drying, and there are agricultural-related structures located on the eastern portion of the site. The proposed project property is bordered by single-family residential to the south, east and west, Coyote Creek to the north, and the Anderson Reservoir is located to the northeast of the site. The Santa Clara Valley Water District (SCVWD) pumping station is located on a parcel (APN 728-34-008) to the southwest of the site.

The proposed project site also extends south of Peet Road onto portions of four additional parcels (728-33-005, 728-33-004, 728-33-003, and 725-33-002). The project will impact a total of 4.12 acres on these four parcels. These parcels are currently occupied by orchards (728-33-005), single family homes, and accessory structures (728-33-002, 728-33-003, and 728-33-004). The parcels are bordered by Peet Road to the north. A SCVWD parcel (728-33-007) is located at the southeastern corner of the Mariani parcel (728-33-005), adjacent to Half Road. Figures 2.1-1 through 2.1-3 show the Regional, Vicinity, and Aerial Maps.

2.1.3 Proposed Project Description

The proposed project includes removal of the existing orchards and associated uses, and development of a gated residential community consisting of 244 single-family homes, up to 180 secondary units, a private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open space, private parks, and surrounding landscaping. The proposed lots would range in size from approximately 10,000 square feet to over 30,000 square feet, averaging approximately 15,000 s.f. The proposed single family homes would be one and two-stories and range in size from 3,000 square feet (s.f) to 6,000 s.f.

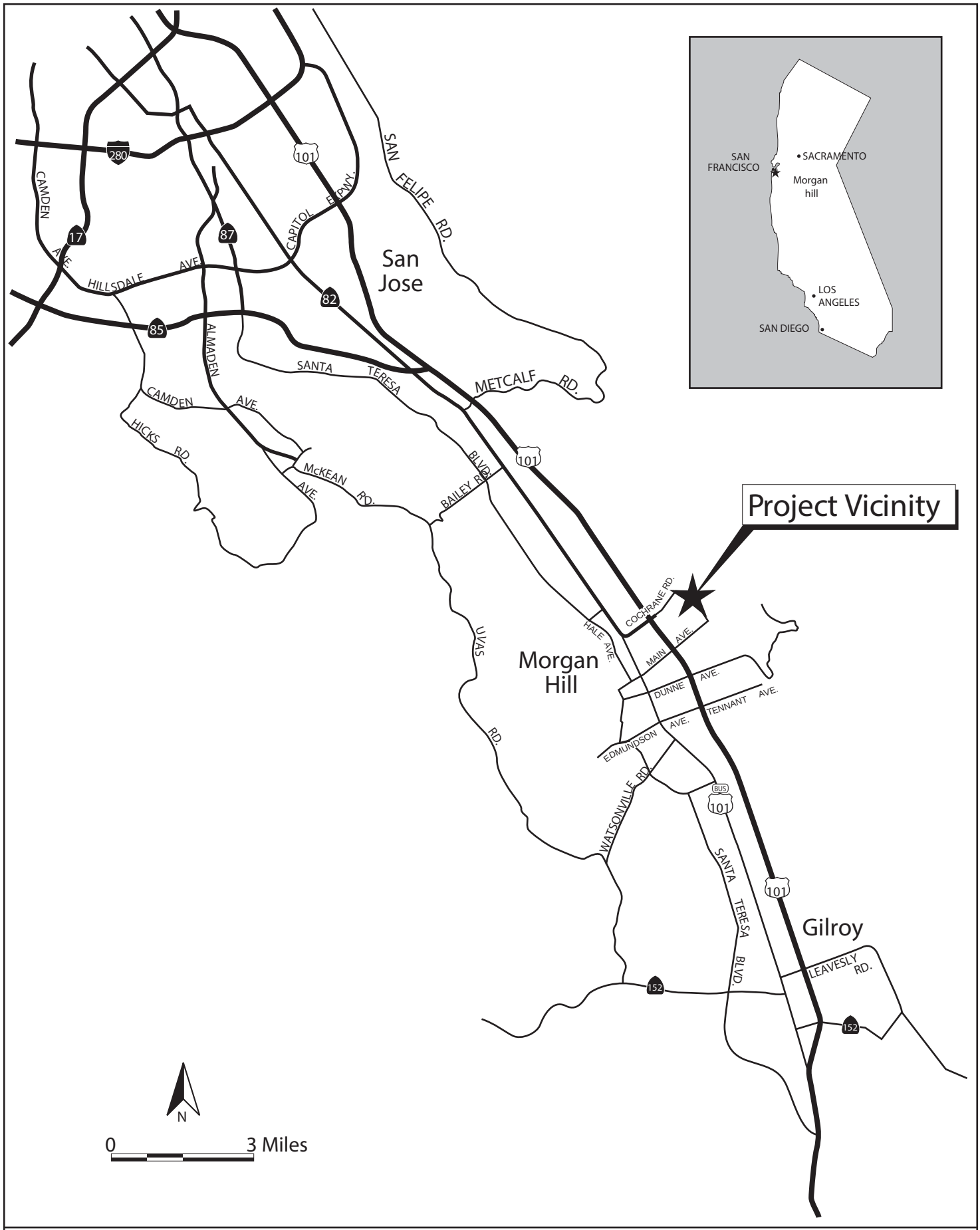
A minimum of 20 percent of the lots will have a detached cottage unit with kitchen in addition to a private single-family home. However, a total of 180 secondary units are currently proposed, exceeding the 20 percent. The site plan is shown in Figure 2.1-4.

The project also proposes to realign and widen Peet Road to the south of the existing Mariani parcel per the City's General Plan. The widening will increase the existing 20 foot wide roadway to 72 feet, but would not impact any existing structures on the four parcels south of Peet Road. The roadway alignment would include two eight foot bike lanes, two 12 foot travel lanes, and a 12 foot two-way left turn lane. The roadway would maintain a similar alignment as the existing Peet Road, but would angle to the south of the Mariani parcel for approximately 600 feet prior to intersecting with Half Road. An approximate two acre portion of the Mariani parcel would be converted to an on-site detention basin to be utilized by the proposed development on the 122-acre site north of Peet Road. Figure 2.1-5 shows the proposed Peet Road realignment.

The project is in the process of attempting to acquire a portion of the Mariani parcel (728-33-005) and the portions of the other three parcels needed for the roadway realignment. As part of the Residential Development Control System (RDCS) the project has committed to realigning Peet Road In the event the applicant is not able to acquire the Mariani parcel, the proposed detention area will be moved onto the project site, on the north side of Peet Road, as shown in the detailed project plans provided in Appendix B.

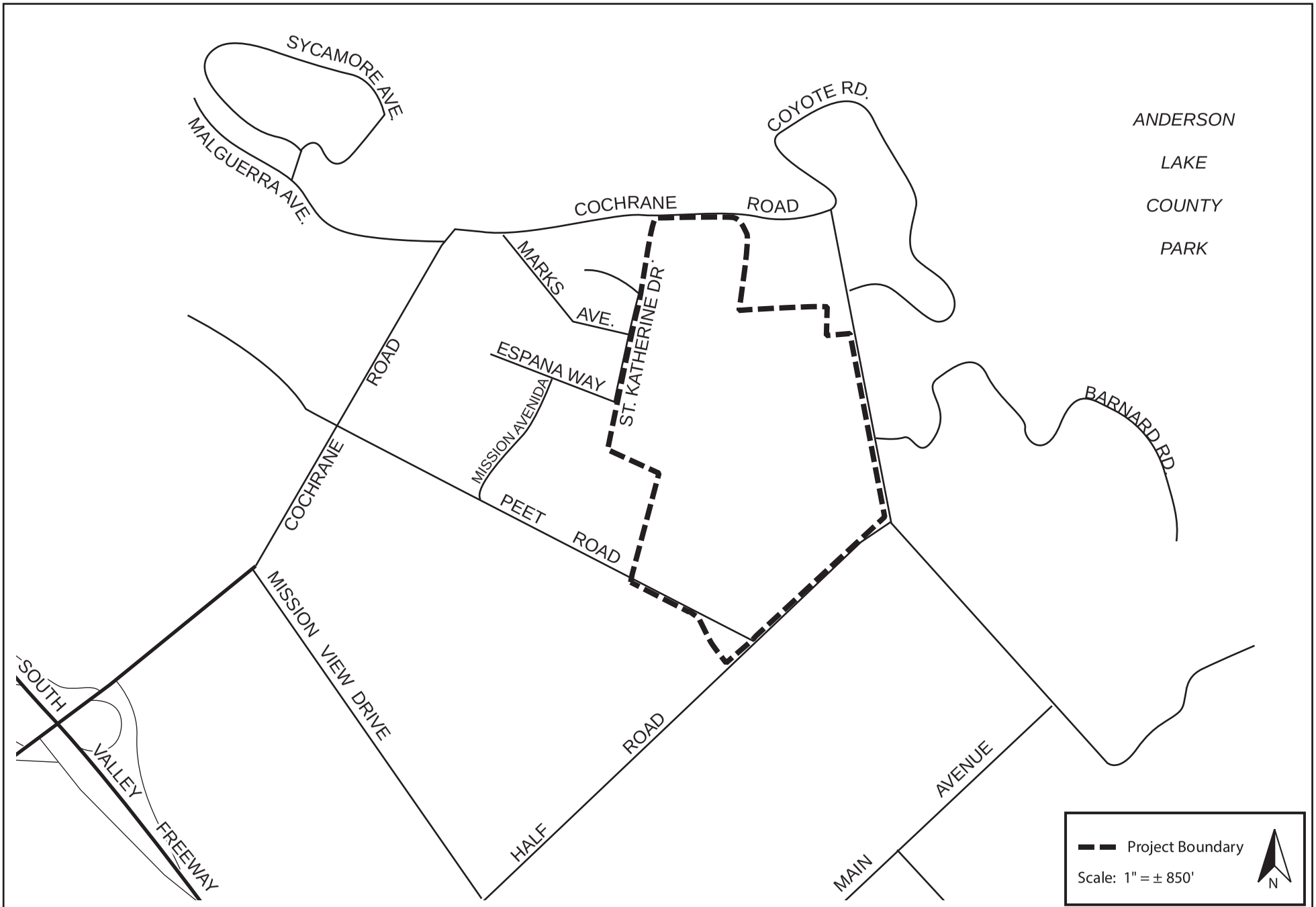
2.1.4 Existing and Proposed General Plan and Zoning Designations

The project site has a General Plan designation of *Single Family Low (1-3 D.U./Acre)* and three different underlying zoning districts divided equally within the property (i.e. 40 acres each). These include: *Residential Estate District (RE-40,000 PD), Single Family (R1-20,000 PD)*, and *Single Family (R1-12,000 PD)*. The existing zoning allows up to 252 units. In order to prevent further subdivision of the project site and to establish site development standards (i.e. setbacks, height, etc.) appropriate for the proposed project, the project proposes to rezone the entire property to *Single Family (R1-20,000 PD)*. The proposed zoning designation and Planned Development (PD) overlay allows for up to 244 units and prevents further subdivision within the property, which closely matches the actual development plan. The *Planned Development (PD)* overlay shall allow the site to retain the gross density while providing onsite amenities, project infrastructure, flexibility in proposed lot sizes, setbacks, and 244 residential lots.



REGIONAL MAP

FIGURE 2.1-1

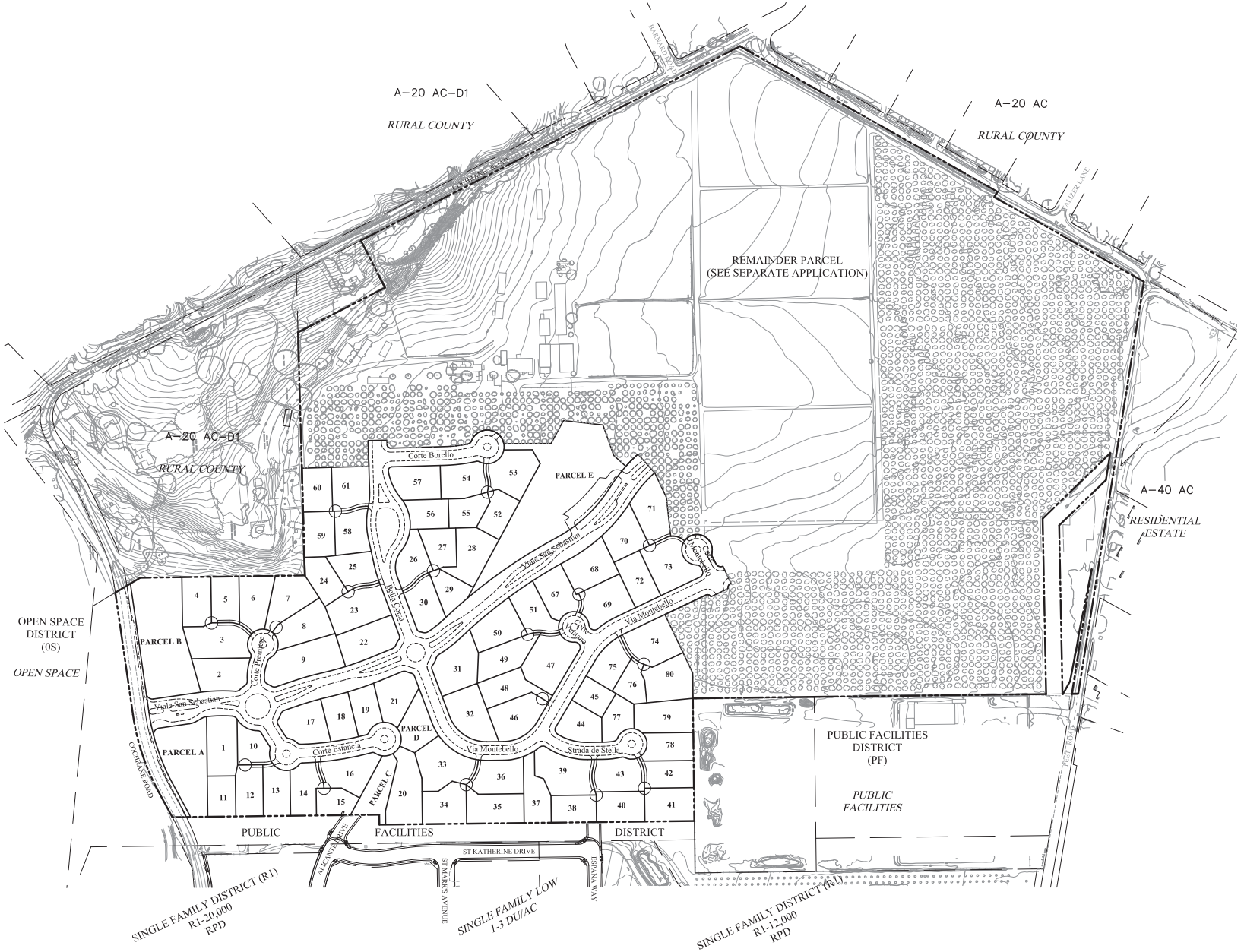


VICINITY MAP

FIGURE 2.1-2

AERIAL MAP

FIGURE 2.1-3

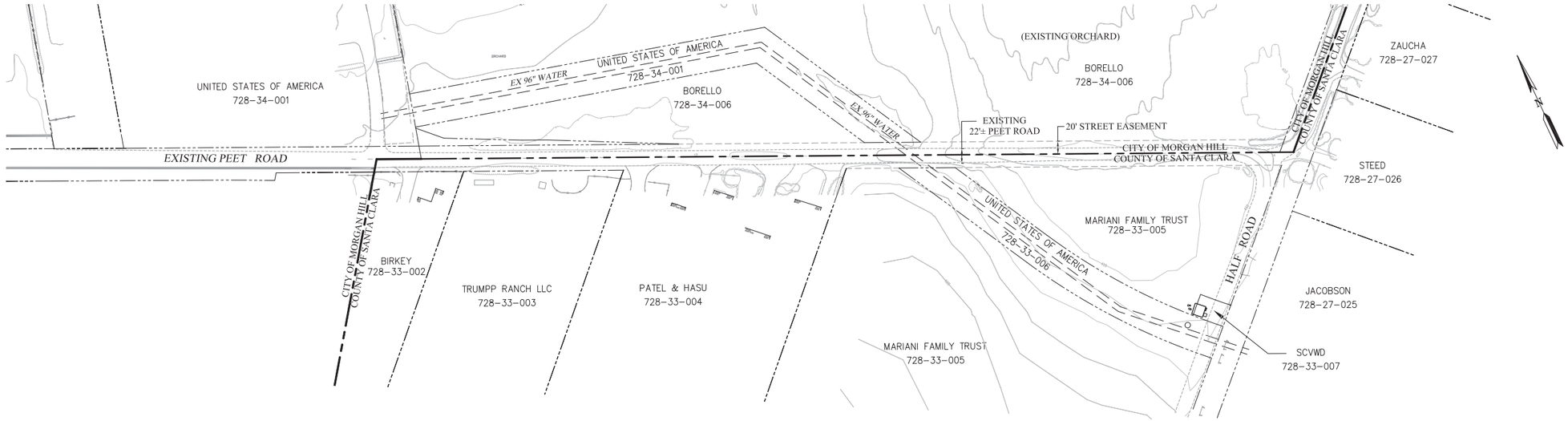


CONCEPTUAL SITE PLAN - PHASES 1-5

FIGURE 2.1-4(1)

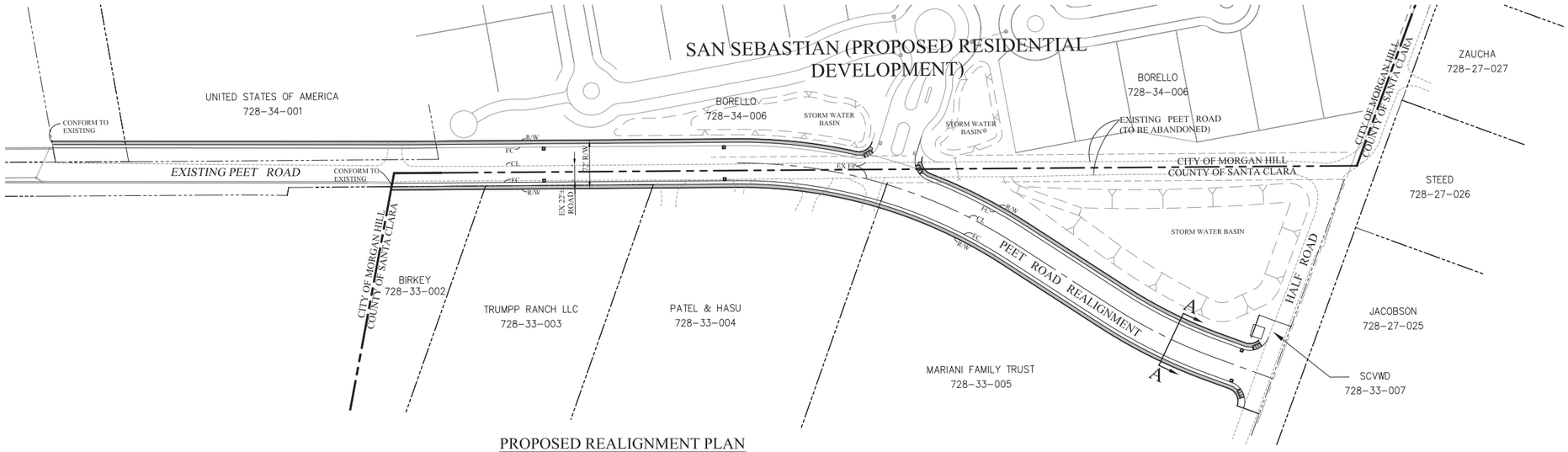
CONCEPTUAL SITE PLAN - PHASES 6-16

FIGURE 2.1-4(2)



EXISTING CONDITIONS

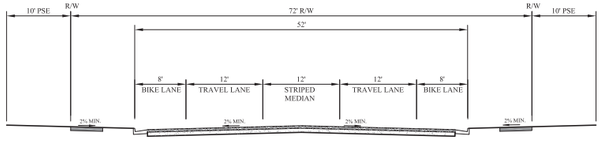
SCALE: 1"=80'



PROPOSED REALIGNMENT PLAN

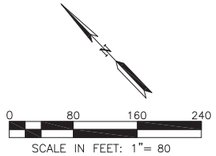
SCALE: 1"=80'

NOTE:
1. PROPOSED PEET ROAD REALIGNMENT PER CITY OF MORGAN HILL GENERAL PLAN MAP DATED FEBRUARY 29, 2012.



STREET SECTION - PEET ROAD

NO SCALE



LEGEND

- PROPERTY LINE (PL)
- CENTERLINE (CL)
- CITY LIMIT LINE
- FACE OF CURB (FC)
- EDGE OF PAVEMENT (EP)
- SIDEWALK
- EX — EXISTING
- STORM DRAIN CURB INLET
- HANDICAP RAMP
- 411.8 — SPOT ELEVATION
- 0.5% — SLOPE

PROPOSED PEET ROAD REALIGNMENT

FIGURE 2.1-5

2.1.5 Project Phasing

The proposed project will be built in multiple phases of development. Phase 1 would include a building allotment for 21 residences to be built from 2012-2013. Phases 2, 3, and 4 include an allotment for 45 residences to be developed from 2013-2014. Phase 4 includes development of six units that received allotment in March 2012. Also, the proposed allotments do not include the secondary units proposed within each phase as the secondary units are not subject to the RDCS process. Construction of Phase 1A is targeted for November 2012. Full development of the project would continue for 10 to 12 years beyond this time, as allocations become available and market conditions dictate.

The Peet Road realignment shall be developed within Phase 10 (no later than the 150th building permit). The detention pond located to the south of Peet Road, as well as the project entrance off of Peet Road would be provided as part of Phase 10.

Phase 1

The proposed Phase 1 of the project will be divided into Phase 1A and 1B, both located at the southwestern portion of the project site. The proposed location of Phase 1A and 1B, as well as subsequent phases, is shown in Figure 2.1-6, Proposed Phasing Plan. Phase 1A and 1B proposes construction of 21 single-family homes and up to 20 secondary units on approximately 14 acres of the site. Phase 1A would also include the following project improvements:

1. Installation of Cochrane Road frontage improvements consisting of an approximately 52 foot public right of way dedication. Within the dedication, the road shall consist of two five foot bike pathways and two 12 foot travel lanes. A 10 foot public service easement shall be provided along the frontage of the property in addition to the approximately 52 foot public right of way;
2. Installation of two storm water detention ponds and landscaping along the Cochrane Road frontage;
3. Landscaping of the main project entrance off Cochrane Road;
4. Installation of the main roadway entrance, including gates and gatehouse off of Cochrane Road;
5. Installation of a roundabout surrounding large oak tree;
6. Installation of sewer connection to Cochrane Road; and
7. One of the following temporary emergency access points will be located at the intersection of Alicante Drive via Parcel C and/or at the intersection of Espana Way via lots 38, 39, 40, and 43. The emergency vehicle access (EVA) will be temporary in nature and be installed during the initial phases of construction (Phase 1A). Upon the development of the permanent emergency vehicle access point to be accessed through Prominence Court and out through Parcel G to Half Road, or the secondary connection to the project parkway to Peet Road, the temporary emergency access point installed in the initial phases referenced above will be removed.
8. An EVA running from Prominence Court toward Parcel G, and exiting onto Half Road is proposed for permanent installation.

Phase 1B proposes the following improvements:

1. Street, boulevard, and cul-de-sac improvements will be made, as shown in Figure 2.1-4, and

in more detail in Project Lotting Plans provided in Appendix B.

Phases 2, 3, and 4

Phase 2 of the proposed project would include development of 15 single-family homes and up to 15 secondary units on approximately eight acres of the project site, Phase 3 would include development of 15 single-family homes and up to 11 secondary dwelling units on approximately seven acres of the project site, and Phase 4 would include development of 15 single-family homes and up to 12 secondary dwelling units on approximately seven acres of the project site. The remaining approximately 84 acres would be developed in the subsequent seven to nine years following development of Phases 1, 2, 3 and 4.

The following improvements are proposed in conjunction with Phases 2, 3, and 4 of the project:

Phase 2

1. Private street and boulevard improvements as shown in Figure 2.1-4, and in more detail in Project Lotting Plans provided in Appendix B.
2. Installation of sewer/water connection to Espana Way.

Phase 3

1. The pathway parcel connecting Phase IB to the existing Alicante Estates and proposed project to the County Park will be improved and landscaped.
2. Private street and boulevard improvements as shown in Figure 2.1-4, and in more detail in Project Lotting Plans provided in Appendix B.

Phase 4

1. A roundabout surrounding the existing large oak tree will be installed.
2. Private street and boulevard improvements as shown in Figure 2.1-4, and in more detail in Project Lotting Plans provided in Appendix B.

Phase 5 will include the installation of the recreation hall, swimming pool, workout facility, restroom facilities, children's tot lot, half court basketball court, and sunken tennis court, as well as connecting pathways and private roadways. Subsequent phases will include more private streets, boulevards, and pathways to provide access for future residents.

PROPOSED PHASING PLAN

FIGURE 2.1-6

2.1.6 Demolition of Existing Structures and Grading

The proposed project site is currently developed with approximately 32 acres of cherry orchards, a 20-acre apricot orchard, an 18-acre dry yard facility, 50-acres of hay/row crop, one single family home, multiple single wide mobile home trailers, temporary housing for the harvest periods, a farm office building, various outbuildings, and fruit cutting/storage sheds totaling two acres. All orchards and structures on the 122-acre portion of the site will be removed to accommodate the proposed development. 283 non-orchard trees are also located on the property, and 58 of these trees are proposed for removal. Species include: black walnut, coast live oak, American elm, blue oak, English walnut, coast redwood, California walnut, Ash, pepper tree, and olive.

The project site is generally flat to moderately rolling topography sloping east to west on the northeastern portion of the property. Site elevations range from approximately 470 feet in the northeastern corner to 405 feet at the lowest point of the property located near Peet Road. Excavation would occur throughout the entire site for grading and the establishment of building infrastructure, including electric lines, gas lines, sewer and water lines, communication lines, and stormwater drainage. Cut and fill throughout the site would typically require less than five feet, and maximum cuts and fills of 25 feet (at the northeastern corner of the site) and 10 feet, respectively. Sloping along the border of the site and between adjacent lots would be a maximum of 2:1 (horizontal to vertical). It is estimated that 170,000 to 220,000 cubic yards of earth would be moved from within the project site, and 50,000 cubic yards of earth would be imported from offsite.

Proposed foundations would be reinforced concrete slab on grade with design criteria developed and determined from geotechnical and structural design.

2.1.7 Site Access and Public Improvements

The project proposes two gated entrances to the development. The primary vehicle entrance to the site will be located off of Cochrane Road, and will be included in the first phase of construction. The second gated entrance will be located off of Peet Road. This entry will be constructed during a later phase of development (Phase 10). A central parkway with landscaped median will connect the two gated entrances.

Minor private roadways will extend from the central boulevard, providing access to the various residential enclaves, individual residences, community recreational center, parks, and open space throughout the site. Common driveways will be provided for access to residential cul-de-sacs.

Surrounding landscaping improvements will include trees, shrubs, vines, ground cover, and grassy areas. There are six existing oak trees that will be protected and maintained within the proposed development.

A centralized recreation center is proposed as part of project development. The recreation center will include a multi-purpose room, children's multi-purpose room, a lounge area, an office area, bathrooms, outdoor fire pit, outdoor event area, swimming pool, hot tub, tot lot, tennis court, a half basketball court, parking, and surrounding open, grassy areas. The project also proposes eight-foot wide asphalt pathways throughout the site for pedestrian and bicycle use.

2.1.8 Parking/Emergency Access

The project proposes to meet and exceed the City's parking requirement of 745 total parking spaces (3.05 spaces per unit) for the 244 single family residences and up to 180 accessory units. Parking supply will be provided by two or three car garages at each single family residential unit, as well as adjacent driveways.

One of the following temporary emergency access points will be located at the intersection of Alicante Drive via Parcel C and/or at the intersection of Espana Way via lots 38, 39, 40, and 43. The emergency vehicle access (EVA) will be temporary in nature and be installed during the initial phases of construction (Phase 1A). Upon the development of the permanent emergency vehicle access point to be accessed through Prominence Court and out through Parcel G to Half Road, or the secondary connection to the project parkway to Peet Road, the temporary emergency access point installed in the initial phases referenced above will be removed.

2.1.9 Public Utility Easements

There are three Pacific Gas and Electric (PG&E) easements running through the project site. All existing easements and utilities are shown in Figure 3.10-1, Existing Easements and Utilities. Two of the easements are for high-pressure gas lines, and the third is intended to be abandoned. One of the PG&E easements is 50 feet wide and provides for a 34-inch high-pressure gas line. The easement runs at an angle from the northeastern portion of the site to the northwestern portion of the site, meeting up with the alignment for Alicante Drive. There is also a four-inch gas service line providing service to the adjacent parcel (APN 728-34-010). The line runs from the 34-inch high pressure gas line north and then jogs slightly to the northwest to the adjacent parcel.

The second PG&E easement accommodates a 34-inch high-pressure gas line. The easement is located at the southern portion of the site, and runs roughly parallel to Peet Road. The Peet Road project entrance to the site will be installed during Phase 10 of the proposed project. 150 units will be accessed by the entrance off of Cochrane Road, and the remaining 94 units will be accessed by the Peet Road entrance. The third PG&E easement is approximately 15-feet wide, containing a 20-inch diameter gas pipeline, and is thought to be abandoned. The easement runs straight from the southeastern portion of the site to the southwestern portion of the site, through the adjacent Santa Clara Valley Water District (SCVWD) jurisdiction.

A fourth easement on property owned by the United States of America, is located at the southern portion of the site, adjacent to Peet Road. The property accommodates the 96-inch Santa Clara Conduit line (i.e. San Felipe Pipeline Water Project). The project applicant owns an easement on the property that enters the site at an angle from Peet Road, runs for approximately 300 feet, and then jogs at another angle for approximately 575 feet, before terminating into the SCVWD property.

There is one existing well on the northern portion of the property. The well will be maintained for continued use by the adjacent Giancola property owners and an easement will be provided to the Giancola's. If the project developer and the Giancola's agree to develop a new well at a different location, it may be abandoned but there are no agreements currently in place to remove the well.

The proposed project will move the existing four-inch gas line serving APN 728-34-010 to between lots 58, 59 and 60 and 61 within Phase 4. This location is shown on Sheet 10 of the Vesting Tentative Map (Appendix B).

2.2 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15124 the Lead Agency must identify the purpose of the project and the discretionary actions required by the Lead Agency. The purpose of this project is stated in the project objectives below. The discretionary actions required are listed in *Section 2.3 Uses of the EIR*.

The Project Applicant[1] has identified the following basic objectives for the project:

- The project proponent's overall objective is the development of two hundred forty-four (244) single family residential units and up to one hundred eighty (180) detached cottage units.
- Attract and retain high quality members of the community by exceeding their expectations in the quality of construction, design and environment at the development.
- Develop a unique community that is rural in nature through the reduction in street pavement sections, sidewalks on both sides of the street, preservation of large oak trees on site, and maximizing view corridors throughout the development.
- Provide a different housing option that is currently unavailable in the City of Morgan Hill.
- Increase the supply of housing opportunities through the product developed as well as increasing the supply of funds for programs such as the Down Payment Assistant program through the Housing Mitigating fees.
- Create long-term revenue source for the City and County through the property taxes.
- Enhance the community's local restaurant and retail outlets through additional residences with disposable incomes.
- Have the smallest economically feasible carbon footprint through the installation of solar on 100% of the homes; exceeding title 24 standards and scoring a minimum of 130 Build it Green points.
- Provide opportunities for extended families to live independently via the detached cottage units.
- Reduce the number of garage doors fronting main streets through the utilization of creative architecture, land planning and the enclave concept throughout the majority of the development.
- Buffer the development from adjacent uses through the installation of sound deadening material, landscaping and large setbacks.
- Ensure that common space within the development is welcoming, useful and purposeful.
- Provide pedestrian and bicycle friendly pathways to and from the development.
- Minimize the volume and speed of traffic through the community to ensure that the neighborhoods are safe and quiet.
- The land plan creates a community, which will provide all residents with a unique physical and visual experience on a day-to-day basis while creating a sense of neighborhood and respect for the natural environment.
- Connect to existing sewer, water and utility connections to feed the new development.
- Relieve the City's typical burden of maintaining the roads and storm water sewer system by making it private and folding it into the Home Owners Association.
- Provide a heightened sense of security and protection via the entry gates.
- Ensure that common space within the development is welcoming, useful and purposeful.
- Maximize the use of Open Space by incorporating meandering walking paths throughout the development and connect them to adjacent developments and public parks.

[1] San Sebastian Homes LLC. Community Objectives Memo. June 2, 2011.

2.3 USES OF THE EIR

This EIR will provide decision-makers in the City of Morgan Hill and the general public with relevant environmental information to use in considering the proposed project. It is proposed that this EIR be used for appropriate discretionary and other approvals necessary to implement the project, as proposed. These actions include, but are not limited to, the following approvals:

- Rezoning entire 122-acres to *R1-20,000/PD*
- Vesting Tentative Map/Final Map/Parcel Maps/Lot Line Adjustments/Utility Infrastructure Improvements
- Development Agreement
- Design Review Permit, including removal of trees
- Improvement Plans and Tract Maps
- Grading Permit
- SCVWD and RWQCB Watershed Modifications Permitting
- County permits for the Peet Road realignment and the detention basin

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION

3.1 LAND USE

3.1.1 Existing Setting

The main portion of the proposed project site is 122-acres located on the east side of U.S. Highway 101, bordered by Cochrane Road, Peet Road, and Half Road in the City of Morgan Hill. This portion of the project site consists of one parcel, Assessor Parcel Number (APN) 728-34-027. Four additional parcels located south of Peet Road comprise the remaining portion of the project site. These four parcels are planned for the on-site stormwater detention basin (Mariani parcel 728-33-005) as well as the realignment and widening of Peet Road (parcels 728-33-002,003, and 004).

The 122-acre project site is currently designated *Single Family Low* (1-3 du/acre) in the City's General Plan, and divided equally into three zoning designations, including: *Residential Estate District (RE-40,000 PD), Single Family (R1-20,000 PD), and Single Family (R1-12,000 PD)*. The existing zoning allows for a total of approximately 252 single family residential units on the property.

The project site is developed with cherry and apricot orchards, hay/row crops, crop drying, and some agricultural-related structures. The orchards are currently in operation, and a temporary farmworker camp utilized during the harvest season is located on the eastern portion of the site.

The four parcels located south of Peet Road impacted by the proposed on-site stormwater detention basin and the realignment of Peet Road are outside of the City's urban service area and boundary and are located within Santa Clara County. The four parcels are designated *Agriculture Large Scale* in the County's General Plan and zoned *A-40Ac*. The project does not propose to change the General Plan designation or zoning for these parcels, and the detention basin and street alignment would occur under the County's jurisdiction.

The project area is located within the Draft Santa Clara Valley habitat conservation plan area[2].

3.1.1.1 *Surrounding Land Uses*

The overall project area is surrounded by single family residences and St. Katherine Drive to the west, Half Road and single family residences to the east, agricultural lands to the south, single family residences to the southwest, and Cochrane Road and Coyote Creek to the north (refer to Figures 2.1-3 and 2.1-4). The Anderson Dam/Reservoir is located approximately 0.25 miles northeast of the project site.

The site is surrounded mostly by residential uses. Land uses surrounding the project site include: St. Katherine Drive, single family residential (Alicante Estates), and the Santa Clara Valley Water District Pumping Plant to the west; Coyote Road, Half Road and single family residential uses to the east; Cochrane Road and Coyote Creek to the north; and agricultural lands, and single family residential (Mission Ranch) to the south. An aerial photograph with the surrounding land uses is shown on Figure 2.1-3.

[2] Santa Clara Valley Habitat Conservation Plan. http://www.scv-habitatplan.org/www/site/alias__default/319/default.aspx. July 17, 2012.

3.1.2 Land Use Impacts

3.1.2.1 *Thresholds of Significance*

For the purposes of this EIR, a land use impact is considered significant if the project would do any of the following:

- Physically divide an established community; or
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

3.1.2.2 *Overview of Land Use Conflicts*

Land use conflicts can arise from two basic causes: 1) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere; or 2) conditions on or near the project site may have impacts on the persons or development introduced onto the site by the new project. Both of these circumstances are aspects of land use compatibility. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritations and nuisance to potentially significant effects on human health and safety.

The discussion below distinguishes between impacts that could result from the proposed project upon persons and the physical environment, and potential impacts from the project's surroundings upon the uses proposed by the project.

3.1.2.3 *Impacts from the Proposed Project*

The proposed project includes removal of the existing orchards and associated uses, and development of a gated residential community consisting of 244 single-family homes, up to 180 secondary units, a private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open space, private parks, and surrounding landscaping. The proposed lots would range in size from approximately 10,000 square feet to over 30,000 square feet, averaging approximately 15,000 s.f. The proposed single family homes would be one and two-stories and range in size from 3,000 square feet (s.f) to 6,000 s.f.

The project site is currently surrounded by single family residential communities to the east, west, and southwest (refer to Figure 2.1-3). While the proposed development would be a private community, it would not divide an established community. There would be pathways through the site connecting to the adjacent neighborhoods. The proposed project would also include eight-foot wide pedestrian and bike paths throughout the proposed development, providing public access to the site. Many of the homes to the west of the site within the Alicante Estates development area, as well as homes to the east of the site along Half Road are similar in scale to the proposed homes. Therefore, the character of the proposed project would fit within the established communities

surrounding the site.

The project also proposes to realign and widen Peet Road to the south of the existing Mariani parcel. The widening will increase the existing 20 foot wide roadway to 72 feet, but would not impact any existing structures on the four parcels south of Peet Road. The roadway alignment would include two eight foot bike lanes, two 12 foot travel lanes, and a 12 foot two-way left turn lane. The roadway would maintain a similar alignment as the existing Peet Road, but would angle to the south of the Mariani parcel for approximately 600 feet prior to intersecting with Half Road. An approximately two acre portion of the Mariani parcel would be converted to an on-site detention basin to be utilized by the proposed development on the 122-acre site north of Peet Road.

The proposed realignment would maintain much of its existing alignment, but would allow for drainage from the proposed 122-acre project site to be detained in a planned detention basin on the Mariani parcel. The proposed realignment and widening of Peet Road would not divide an established community.

Impact LU – 1: The proposed project would not physically divide an established community and the new homes would be compatible with the existing neighborhood context. **(Less Than Significant Impact)**

General Plan Conformance

The project site's use and development is governed by the City's General Plan and Zoning Ordinance. The overall project consistency determination is made by the decision-making body of the jurisdiction and is based on broad local discretion to assess whether a proposed project conforms to the policies and objectives of its General Plan and its zoning regulations as a whole. The decision-making body may determine that the proposed project is or is not consistent with these land use policies and regulations despite any conclusion regarding conflicts with land use and planning set out in the CEQA document.

The 244 single family units proposed on the 122-acre site results in a density of two units per acre. The 180 secondary units are not considered as part of the proposed building allotments for the project. Therefore, the proposed project would conform to the site's existing General Plan designation *Single Family Low* (1-3 du/acre).

The proposed project would conform to the following General Plan policies.

3i. Protect agricultural lands from encroachment by incompatible land uses, including urban residential development. (SCJAP 14.02).

The 122-acre project site, and the Mariani parcel south of Peet Road, are currently actively used for agricultural purposes. Development of the 122-acre site with residential uses and the Mariani parcel with an on-site detention basin to support stormwater runoff from the proposed project would be compatible with existing residential uses to the east, west, southwest, and southeast of the project site. While development of the project site would convert existing agricultural land to residential, the proposed development would be consistent with surrounding residential and wouldn't encroach onto nearby agricultural uses intended to remain. In addition, the site has been designated for urban uses under the Cochrane Road Assessment District.

3p. Convert agricultural land that has been designated for urban growth in an orderly manner to

retain the stability and viability of remaining agricultural lands as long as possible. (SCJAP 14.08).

The proposed project site's landowner is part of a group of landowners that comprises the Cochrane Road Assessment District, formed in 1971-72. The Assessment District properties total approximately 585 acres of land located east of U.S. 101 along Cochrane Road in the City of Morgan Hill. Property owners voluntarily enrolled in the Assessment District in order to allow their properties access to urban infrastructure (i.e. public water and sanitary sewer), thus providing services for potential future development on the respective properties. In 1981 the Local Agency Formation Commission (LAFCO) removed the Assessment District properties from the City of Morgan Hill's Urban Service Area (USA), and at the City's request, revoked access to urban infrastructure. As a result of this action, the Assessment District property owners filed suit against the City of Morgan Hill, requesting annexation and general land use planning for the Assessment District area. The Santa Clara County Court ruled in favor of the Assessment District property owners in January 1984. The judgment provided for the inclusion of the Assessment District properties within the Morgan Hill USA (to be accomplished by LAFCO), Morgan Hill to amend its General Plan allowing residential density and research and development industrial on the entire assessment district area, and phased annexation for the entire Assessment District area.

As a result of the aforementioned court orders and the City's action to amend the General Plan to an urban designation and place the site in an urban zoning district, the project site is not intended to remain in agricultural use. The site has access to urban infrastructure and services, and is subject to the RDCS allotment process and therefore will develop in phases, with each phase converting farmland necessary to accommodate the planned phase of development.

The proposed realignment of Peet Road is currently planned for within the Santa Clara County Valley Transportation Authority's *Valley Transportation Plan (VTP) 2035*. The proposed realignment of Peet Road is proposed as part of the Hill Road Extension from East Main Avenue to Peet Road. The 2035 Plan proposes to "construct a new two-lane alignment for Hill Road from East Main Avenue across Half Road and connect to Peet Road." The project also includes realigning the existing Peet Road approach to Half Road to line up and connect with an extension of Hill Road. The total project cost is estimated at $8 million (in 2008 dollars). The proposed Peet Road realignment to be accomplished by the proposed project would be consistent with the County's VTP 2035.

The Hill Road Extension south of Half Road is a related activity to the Peet Road realignment to be accomplished by the project, but is neither proposed by, nor a prerequisite condition for, the project. The design and environmental review for the Hill Road extension from Main Avenue to Half Road will be accomplished by Santa Clara County, and the realignment of Peet Road does not predetermine the County's decision to extend Hill Road in any particular manner that result in avoidable environmental impacts, or eliminates options for mitigation. The Hill Road extension is likely to result in impacts to existing structures (demolition or relocation), tree removal, water quality, and noise impacts, and potential archaeological impacts.

Zoning Ordinance Conformance

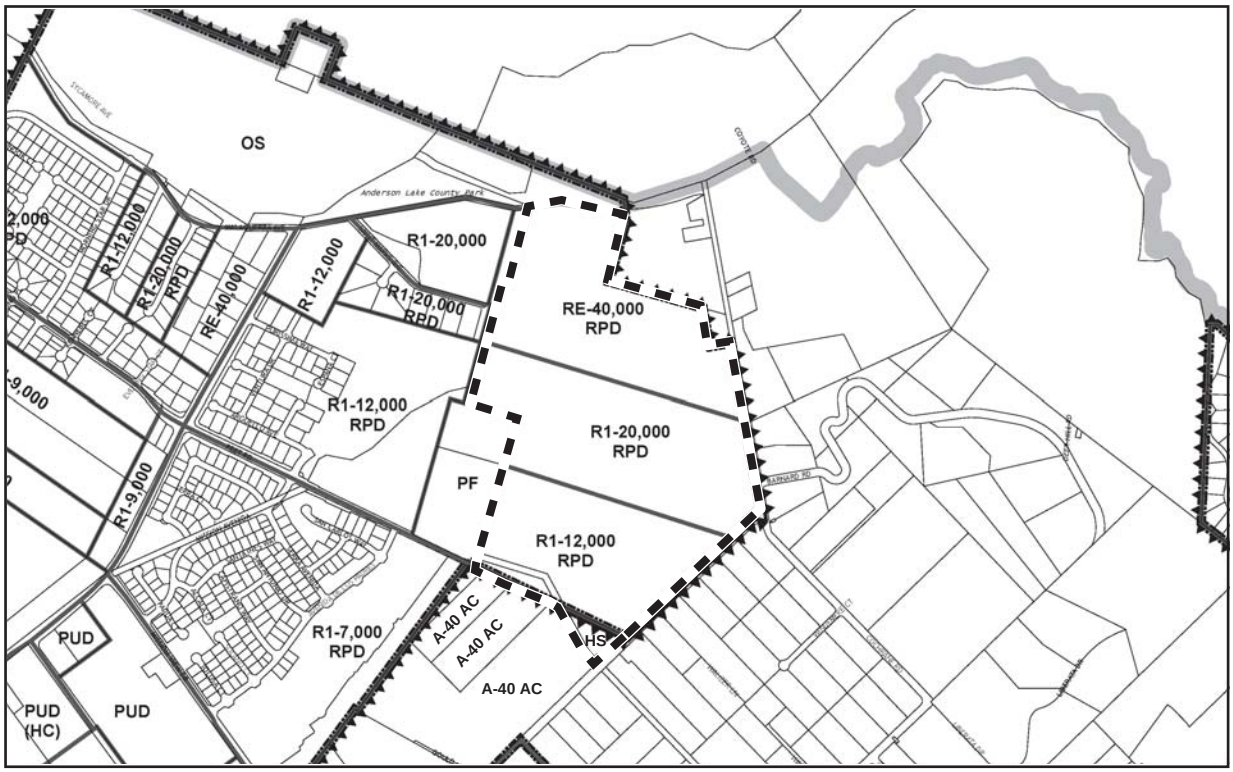
The project is proposing to rezone the project site north/east of Peet Road to *Single Family (R1-20,000 PD)*. The *Single Family (R1-20,000 PD) District* is intended to promote and encourage a suitable environment for family life on medium size parcels of land. The *R-1* single-family low density districts are to be used only for suburban single-family homes, community services and

facilities appurtenant thereto.[3]

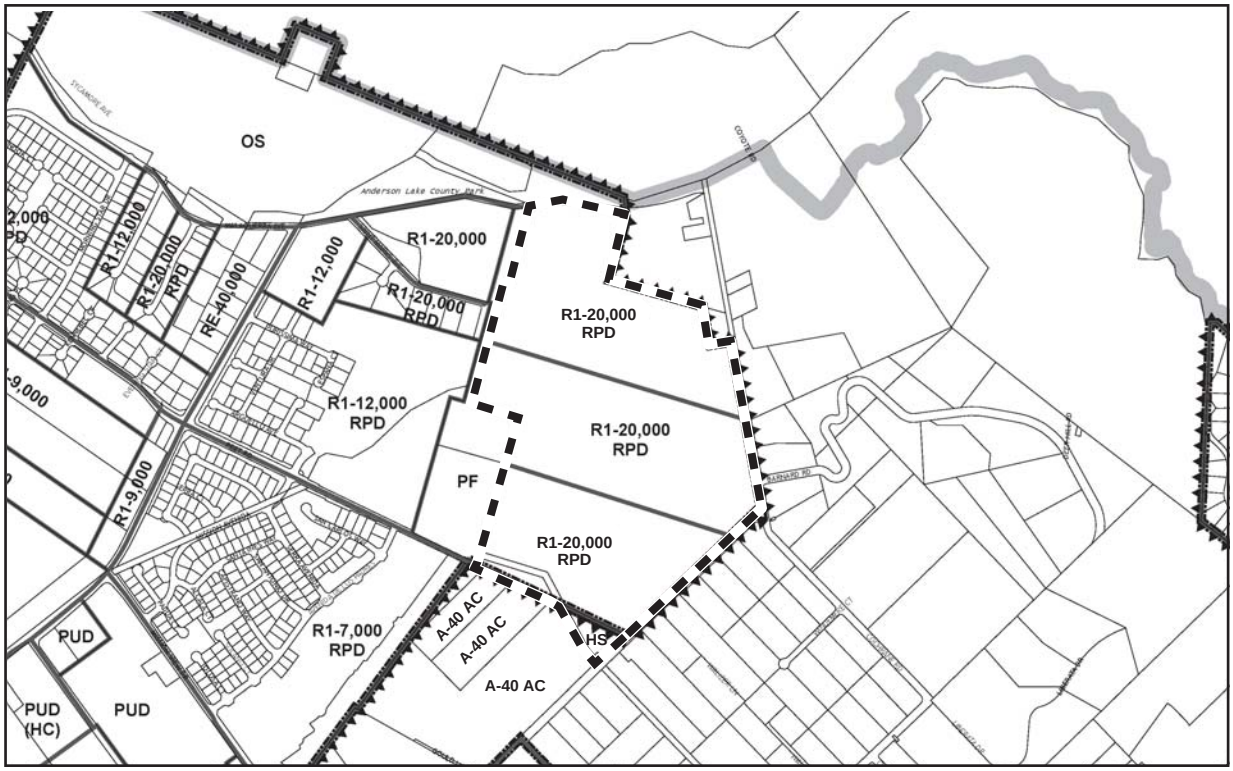
The project is also proposing a *Planned Development (PD) Overlay District* on the 122-acre portion of the project site. The *Planned Development (PD) Overlay District* is intended to facilitate and promote coordination of design, access, use intensity, and other features associated with development of mixed use developments, multiple adjacent properties or large single properties; encourage flexibility of site planning when it will enhance the area in which it is proposed.[4]

The portion of the project site located south of Peet Road is not located in Morgan Hill, and the project is not proposing any zoning changes to the existing four parcels in the County zoned *A-40Ac*.[5] The proposed stormwater detention basin on the Mariani parcel would be consistent with allowable land uses under the County's *A-40Ac* zoning. The proposed detention basin and roadway realignment and widening project will be accomplished with agreements with the County, a responsible agency for purposes of implementing the proposed project and this EIR. Figure 3.1-1 shows the existing and proposed zoning designations for the project site.

[3] City of Morgan Hill Municipal Code. Chapter 18.11. http://library.municode.com/index.aspx?clientID=16502&stateID=5&statename=California. August 3, 2011.
[4] City of Morgan Hill Municipal Code. Chapter 18.30. http://library.municode.com/index.aspx?clientID=16502&stateID=5&statename=California . August 3, 2011.
[5] Santa Clara County Zoning Ordinance. http://www.sccgov.org/SCC/docs/Planning,%20Office%20of%20(DEP)/attachments/ZonOrd_0609.pdf



EXISTING



PROPOSED

Project Boundary
Proposed Planned Development Overlay
Urban Service Area

EXISTING AND PROPOSED ZONING DESIGNATIONS FIGURE 3.1-1

The proposed zoning change and Planned Development (PD) overlay would allow for development of up to 244 units on the entire project site. The project is proposing 244 single-family homes with up to 180 secondary dwelling units. The proposed zoning and PD overlay would allow for 244 of the total 244 proposed units, however, the PD Overlay would allow for the remaining four (4) proposed units. Secondary units are not counted toward density and are not required to have building allocations.

The proposed rezoning of the project site, as well as the proposed *PD Overlay* for the entire site would not result in a significant land use impact in that it would facilitate construction of a new subdivision that is compatible in scale and appearance with surrounding residential development, in a manner consistent with the site's General Plan designation of *Single Family Low (1-3 du/acre)*.

Impact LU – 2: Rezoning the site to *Single Family (R1-20,000)* and applying a *Planned Development Overlay District* to the entire project site would not result in a significant land use impact. **(Less Than Significant Impact)**

Tentative Map Subdivision

The proposed tentative map would subdivide the existing parcel (APN 728-34-027) into 244 individual lots, accommodating the proposed residential development and associated infrastructure.

Impact LU-3: The act of subdividing the project site would not result in a significant land use impact. **(Less Than Significant Impact)**

Draft Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP)

The City of Morgan Hill is not within an adopted Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan.

A HCP/NCCP is currently being prepared for the Santa Clara Valley. The Santa Clara Valley HCP/NCCP is a regional partnership between six local partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy and Morgan Hill) and two wildlife agencies (the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS)).[6] The HCP/NCCP process is anticipated to be completed in 2013.

The HCP/NCCP will address listed species and species that are likely to become listed during the plan's proposed 50-year permit term and associated habitats. The species of concern include, but are not limited to, the California tiger salamander, California red-legged frog, western burrowing owl, Bay checkerspot butterfly, and a number of species endemic to serpentine grassland and scrub. As discussed in *Section 3.5, Biological Resources*, with the exception of some possible use by burrowing owls or tree-nesting raptors, the project area is not suitable habitat for the species that are currently being studied as a part of the HCP/NCCP process.

The project site is located within the Draft Santa Clara Valley Habitat Conservation Plan area.[7] The

[6] Santa Clara Valley HCP/NCCP website. http://www.scv-habitatplan.org/www/default.aspx August 2011.
[7] Santa Clara Valley Habitat Conservation Plan website. http://www.scv-habitatplan.org/www/site/alias__default/301/hcp_study_area.aspx. August 4, 2011.

City of Morgan Hill has submitted an Interim Project Referral Letter on behalf of the proposed project to CDFG and USFWS in order to obtain feedback on potential mitigation measures or recommended project alternatives that would help achieve the conservation objectives of the pending Santa Clara HCP/NCCP. No response has been received for the Interim Referral Letter.

Impact LU-4: The proposed project would not conflict with any applicable adopted habitat conservation plan or natural community conservation plan. **(Less Than Significant Impact)**

3.1.2.4 *Impacts to the Proposed Project*

As described above, the project site is currently used for agricultural purposes, and is proposed for redevelopment with single family residential and associated secondary units. The surrounding land uses are predominantly single-family residential, with the exception of the Santa Clara Valley Water District's (SCVWD) Coyote Pumping Plant bordering the southwestern portion of the site, and the SCVWD Anderson Hydroelectric Facility located to the northwest of the project site.

The proposed development of the property with 244 single family residences, and 180 secondary units would place new residences in close proximity to the SCVWD Pumping Plant and the SCVWD Hydroelectric Facility. The SCVWD Pumping Plant is enclosed within a large brick building on the SCVWD parcel, which would be setback approximately 300 feet from the nearest proposed residence. The SCVWD Anderson Hydroelectric Facility is a concrete structure and would be setback approximately 100 feet from the nearest proposed residence. As discussed in detail in *Section 3.16 Noise and Vibration*, operations at the Santa Clara Water District Facility may at times generate noise levels that range from 53 to 69 dBA L_{eq} at the property line. Second-story facades of residential buildings constructed closest to the facility may have direct line-of-sight to noise sources at the Santa Clara Water District Facility, thereby requiring noise insulation in order to minimize the intrusiveness of these intermittent sounds indoors. Minimal employee traffic may be observed entering the SCVWD gated parking area, but is restricted to normal business hours, and would not generate enough traffic to be considered a significant land use impact.

There are three Pacific Gas and Electric (PG&E) easements running through the project site. Two of the easements are for high-pressure gas lines, and the third is intended to be abandoned. These are discussed further in *Section 3.10 Utilities*.

Impact LU – 5: The proposed project would not be subject to significant land use compatibility impact. **(Less Than Significant Impact)**

3.1.3 Mitigation Measures

No mitigation required.

3.1.4 Conclusion

Impact LU-1: The proposed project would not divide an established community. **(Less Than Significant Impact)**

Impact LU-2 and 3: The proposed rezoning and subdividing the project site, as well as the Peet Road realignment, would not result in a significant land use impact. **(Less Than Significant Impact)**

Impact LU-4: The proposed project would not conflict with any applicable adopted habitat conservation plan or natural community conservation plan. **(Less Than Significant Impact)**

Impact LU – 5: The proposed project would not be subject to significant land use compatibility impact. **(Less Than Significant Impact)**

3.2 VISUAL RESOURCES AND AESTHETICS

3.2.1 Existing Setting

3.2.1.1 *Project Site*

The 122-acre project site is comprised of one parcel located within a developed residential area of Morgan Hill. The project site is surrounded by single family residences to the west, south, east, and southwest, agricultural lands to the south, Anderson Lake and County Park to the northeast, and Coyote Creek to the north.

The project site is developed with cherry and apricot orchards, hay/row crops, crop drying, and several agricultural-related structures. The northern and western portion of the site is currently utilized as approximately 30 acres of hay/row crops; the southern portion of the site is occupied with approximately 20 acres of cherry orchards at the southeastern corner, and approximately 20 acres of apricot orchards to the southwest; the eastern portion of the site has several uses, including approximately 12 acres of cherry orchards, approximately 20 acres of hay/row crops, approximately 18 acres of crop drying, and approximately two acres are occupied by agricultural-related structures (i.e. sheds, containers, etc.) and eight modular structures for a temporary agriculture housing during the harvest period. The orchards are currently in operation. Figure 3.2-1 shows the distribution of agricultural uses within the project site.

The northern portion of the site along Cochrane Road, and extending down the western edge of the site along St. Katherine Drive, is disked, vacant soil that appears to be inactive for agricultural purposes. A large live oak tree is centrally located at the northern portion of the site (Photo 1). The central and southern portions of the site are developed with rows of cherry and apricot orchard trees (see Photos 2 and 3).

The eastern portion of the site is primarily utilitarian open sided storage structures and temporary housing for agricultural workers. There are various types of housing on the property. Three wood framed modular homes contain two or more units in linear buildings. The buildings appear to have been constructed in the 1940s and moved to the site in the 1950s and sit on pier block foundations. A raised seam metal clad building providing temporary agriculture housing during the harvest period was moved to the property in the 1950s as well. One modular home (circa 1990), two mobile homes, and a residential building constructed of mixed materials (wood panels, raised seam metal siding, and a galvanized roof) are also located on the site, providing temporary agriculture housing during the harvest period. One permanent single family residence (circa 1945) is located at the northern portion of the site near Cochrane Road. The house is California Ranch Style. One trailer is located at the rear of the residence, but the remainder of the housing and structures are located on the eastern portion of the site. Figure 3.11-1 shows the location of all the structures on the site.

The sulfur house building is a mix of materials with a concrete slab foundation/floor. The rear and ends of the building are covered with seamed metal sheets. The building is in fair to poor condition with deteriorated metal siding that is pulling away and rusted.

An office structure (circa 1980s) is a one-story pitched roof building with an extended roof canopy in a front supported by posts. The building is wood frame and stands on pier block foundations with board frame windows.

Five open-sided, post and beam construction, storage sheds, are located on the site. Two sheds are

used to store fruit drying trays, two sheds are equipment storage sheds, and one is used to cover the above ground storage tanks.

The project site is bordered by tall, closely-spaced trees along Half Road, providing screening of this portion of the project site (see Photo 4).

To the south/southeast of the site is Peet Road followed by orchard lands and low density single family homes on larger lots. The portion of the parcels to be affected by the realignment of Peet Road are a portion of the frontage for three of the parcels, and some agricultural land located on the eastern portion of the realignment.

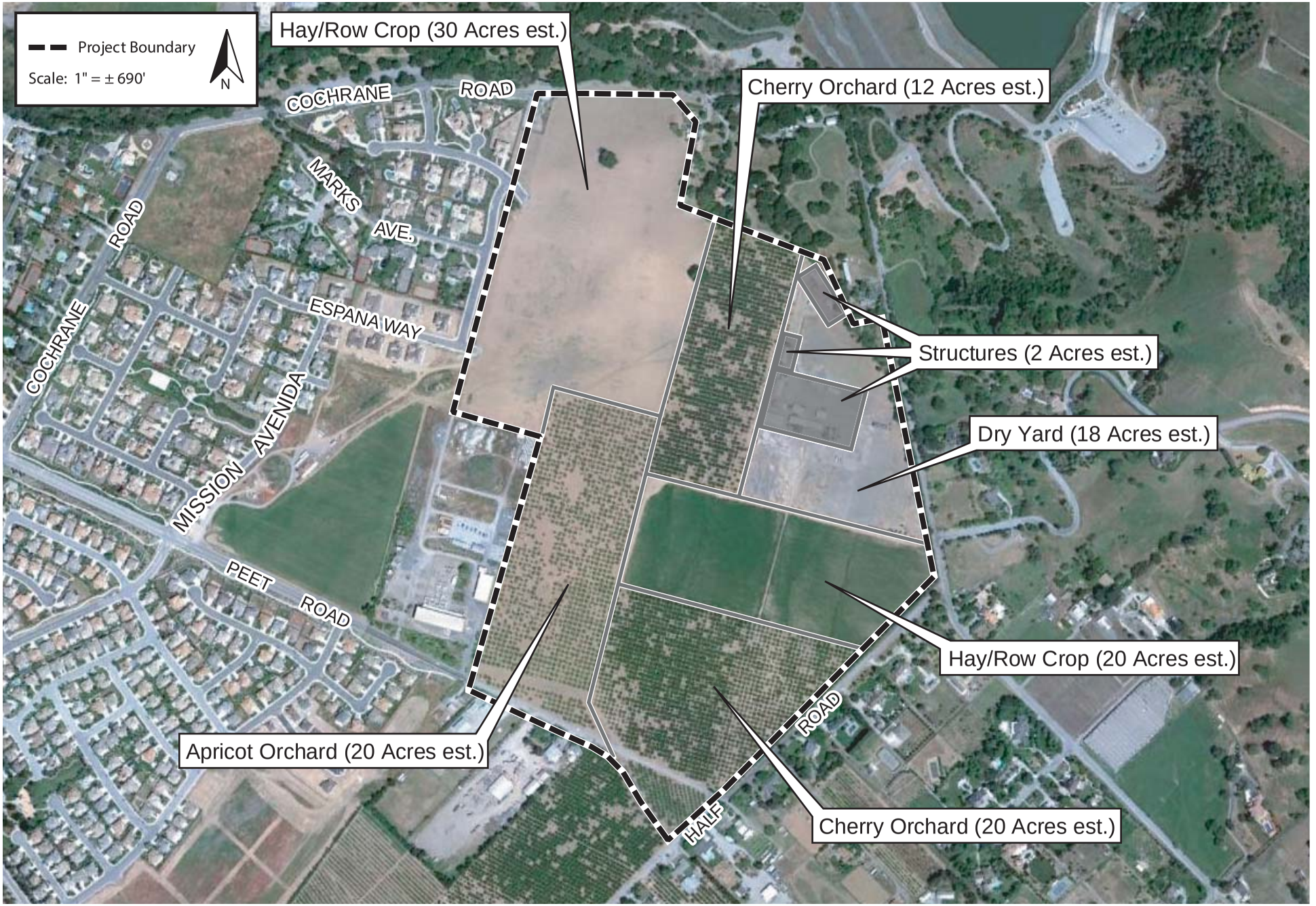
3.2.1.2 *Surrounding Area*

To the north of the site is Cochrane Road (a two lane connector roadway with shoulders) followed by Coyote Creek. The creek channel is open with concrete bank stabilization in place (see Photo 5). To the northeast of the site, bordered by Cochrane Road and Coyote Road, are a small number of single family residences surrounded by mature trees, open, grassy areas, and connecting driveways. Near the intersection of Cochrane Road and Coyote Road is the base of the Anderson Dam Reservoir. To the east of the site is Half Road, a two lane connector roadway, followed by large, single family residences on large lots with amenities. A drainage outfall is also located on the east side of Half Road, at the intersection of Half Road and Peet Road.

To the southwest of the site is the Mission Ranch subdivision community, comprised of two-story single family homes on approximately 6-12,000 s.f. lots, with surrounding landscaping (see Photo 6). To the west of the site is the Santa Clara Valley Water District (SCVWD) Pumping Plant property. The property contains a large brick building, auxiliary building, gatehouse, small surface parking lot, and a rear storage yard (see Photo 7). To the west, the site is bordered by St. Katherine Road and the Alicante Estates subdivision community. Alicante Estate homes are large two-story single family homes on large lots (approximately 15-30,000 s.f.) with amenities (i.e. swimming pools and tennis courts) (see Photo 8). Some homes immediately adjacent to St. Katherine Drive are currently under construction. To the northwest of the site is the SCVWD Anderson Hydroelectric Facility. The building is a smaller, concrete structure with flat roof, and railings located on a portion of the roof. The facility is surrounded by chain link fencing, with roof lighting (see Photo 9).

Surrounding Visual Character

The site is mostly flat and does not contain significant visual or aesthetic resources. The site is located within ¼ mile of the base of the Anderson Dam, and the eastern foothills of the Diablo Range are visible immediately to the north of the project site. The site itself is not located within any scenic view corridors, nor is it visible from a designated scenic highway.



EXISTING ON-SITE AGRICULTURAL USES

FIGURE 3.2-1

Photo 1 - View of the northern portion of the site from Cochrane Road, looking south.

Photo 2 - View of orchard trees at the southern portion of the site from Peet Road, looking north.

PHOTOS 1 AND 2

Photo 3 - View of orchard trees at the central portion of the site looking east.

Photo 4 - View of street trees lining the eastern portion of the site from Half Road, looking north.

PHOTOS 3 AND 4

Photo 5 - View of Coyote Creek from Cochrane Road, looking northwest.

Photo 6 - View of Mission Ranch homes from Peet Road, looking west.

PHOTOS 5 AND 6

Photo 7 - View of Coyote Pumping Plant from Peet Road, looking north.


Photo 8 - View of Alicante Estates from St. Katherine Drive, looking west.

PHOTOS 7 AND 8

Photo 9 - View of Anderson Hydroelectric Facility from Cochrane Road, looking south.

Photo 10 - View of building structure on APN 728-33-003, south of Peet Road.

PHOTOS 9 AND 10

Photo 11 - View of building structure on APN 728-33-004, south of Peet Road.

Photo 12 - View of building structure on APN 728-33-002, south of Peet Road.

PHOTOS 11 AND 12

3.2.2 Visual and Aesthetic Impacts

3.2.2.1 *Thresholds of Significance*

For the purposes of this EIR, a visual and aesthetic impact is considered significant if the proposed project would:

- Substantially alter existing views from public vantage points of scenic vistas or resources; or
- Substantially damage scenic resources as viewed from public vantage points, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or
- Substantially degrade the existing visual character or quality of the site and its surroundings as viewed from public vantage points; or
- Create a new source of substantial light or glare which will adversely affect day or nighttime views, as viewed from public vantage points in the area.

3.2.2.2 *Impacts from Development of the Project Site*

Change in Visual Character

The proposed project would result in the removal of all existing orchards trees, most other existing trees (six live oak trees would be preserved), and all existing structures on the project site, and development of the site with 244 single family homes, up to 180 secondary units, a private recreation center (including community pool, tennis court, half basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open space, private parks, and surrounding landscaping. The proposed lots would range in size from approximately 10,000 square feet (s.f.) to over 30,000 s.f.

The proposed residences would vary between one and two-stories in height (20.4 feet to 28.8 feet), with over forty percent of the lots proposed to be single story. The project proposes seven different floor plans, and three architectural styles including Spanish colonial, Andalusian, and Italian country. Exterior finishes of all proposed residences would be stucco, with various styles including stone veneer, wood, and iron accents. Roofing will be concrete tiling, and all homes would include a two, three, four, and up to six car garages. The majority of garages will not face the roadway. Additional outdoor amenities that vary among the proposed floor plans include a courtyard, covered porch, or covered balcony.

Proposed cottages would match the architectural style of accompanying single family residences, would provide an identical materials palette, and would be located internally within the lot, behind the single-family home. Two cottage styles and one carriage unit style are proposed. Cottage One would be 266 s.f., and Cottage Two would be 483 s.f. The proposed carriage unit would be two-stories with a two car garage on the lower level and a 483 s.f. living area on the second level with a covered deck. All seven proposed floorplans and elevations for single family residences, as well as plans and elevations for the cottage and carriage units are provided in Appendix B. The conceptual site elevations show the façades and height of the proposed residences.

All of the single family residences are proposed to include rooftop solar paneling. Proposed landscaping tree species include: red oak, bigleaf maple, California bay, Chinese pistache, coast live oak, holly oak, and maidenhair tree. Figure 3.2-2 shows proposed landscaping for a typical cluster or "enclave" of lots. Private roadways will be lined with varying landscaping trees, as shown in Figure

3.2-3, Conceptual Landscape Plan.

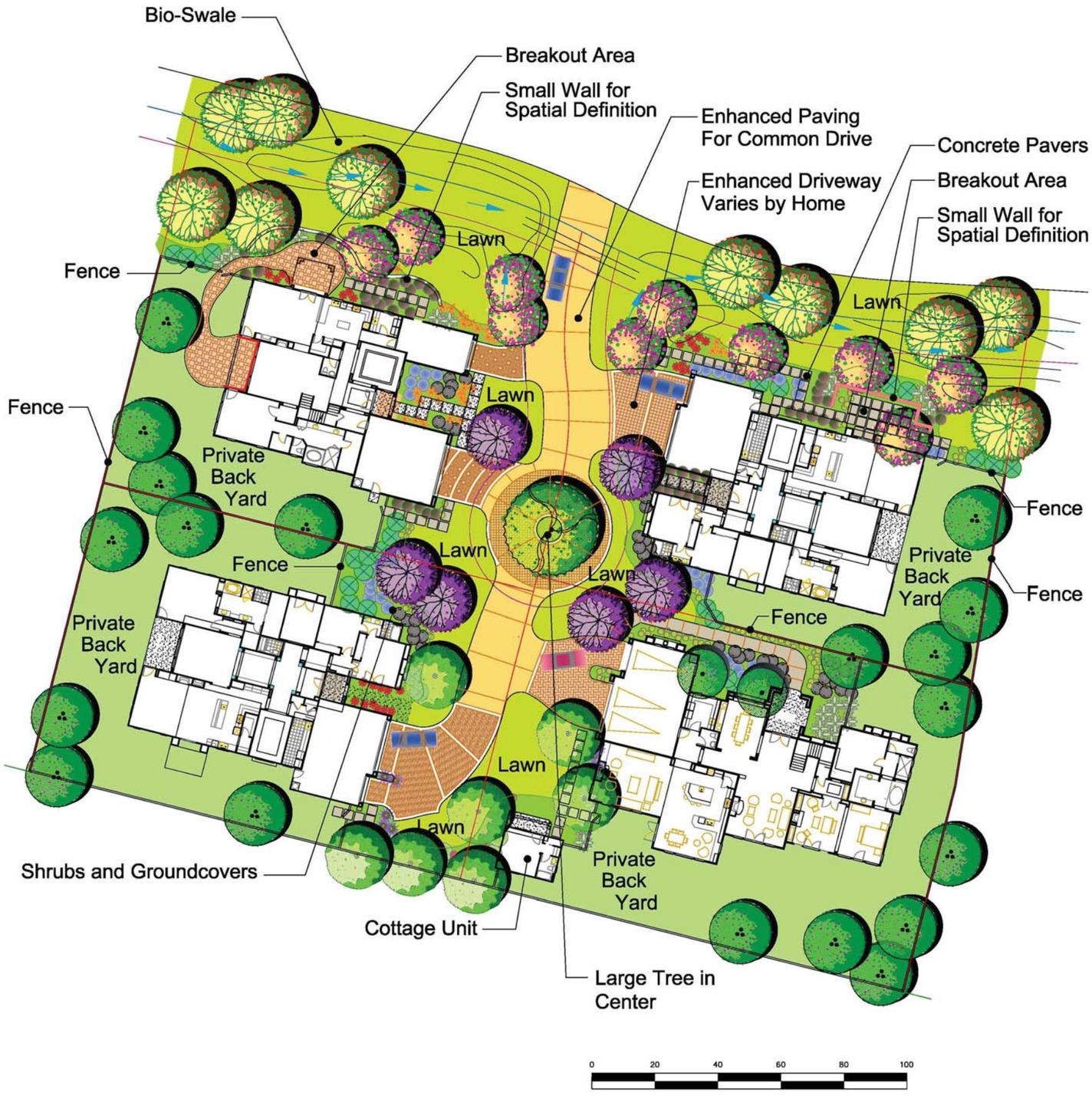
The proposed recreation center would include a half court basketball court, tennis court, tot lot, swimming pool, outdoor seating areas, a multi-purpose room, a children's multi-purpose room, a covered and open patio area, as well as offices and restrooms.

Fencing proposed along the back and side yards of lots along the perimeter of the site would screen views of the site and soften the change in visual character of the project site that would result from development of the proposed project.

The project also proposes landscaping surrounding the perimeter of the project site to provide shade and privacy from adjacent residences for the site, as well as to enhance the perimeter streetscape and to minimize erosion. Landscape areas will be designed to be compatible with the immediate area. The northern boundary perimeter on Cochrane Road will reflect the dominant oak woodland riparian character located across Cochrane Road from the site. Along the site's northwest boundary screening plant materials will be emphasized to minimize visual impacts to the existing residents. The character of the landscaping will be rural in character of the surrounding area. As discussed in *Section 3.5 Biological Resources*, the project shall conform to the City's Tree Preservation Ordinance and replace significant trees.

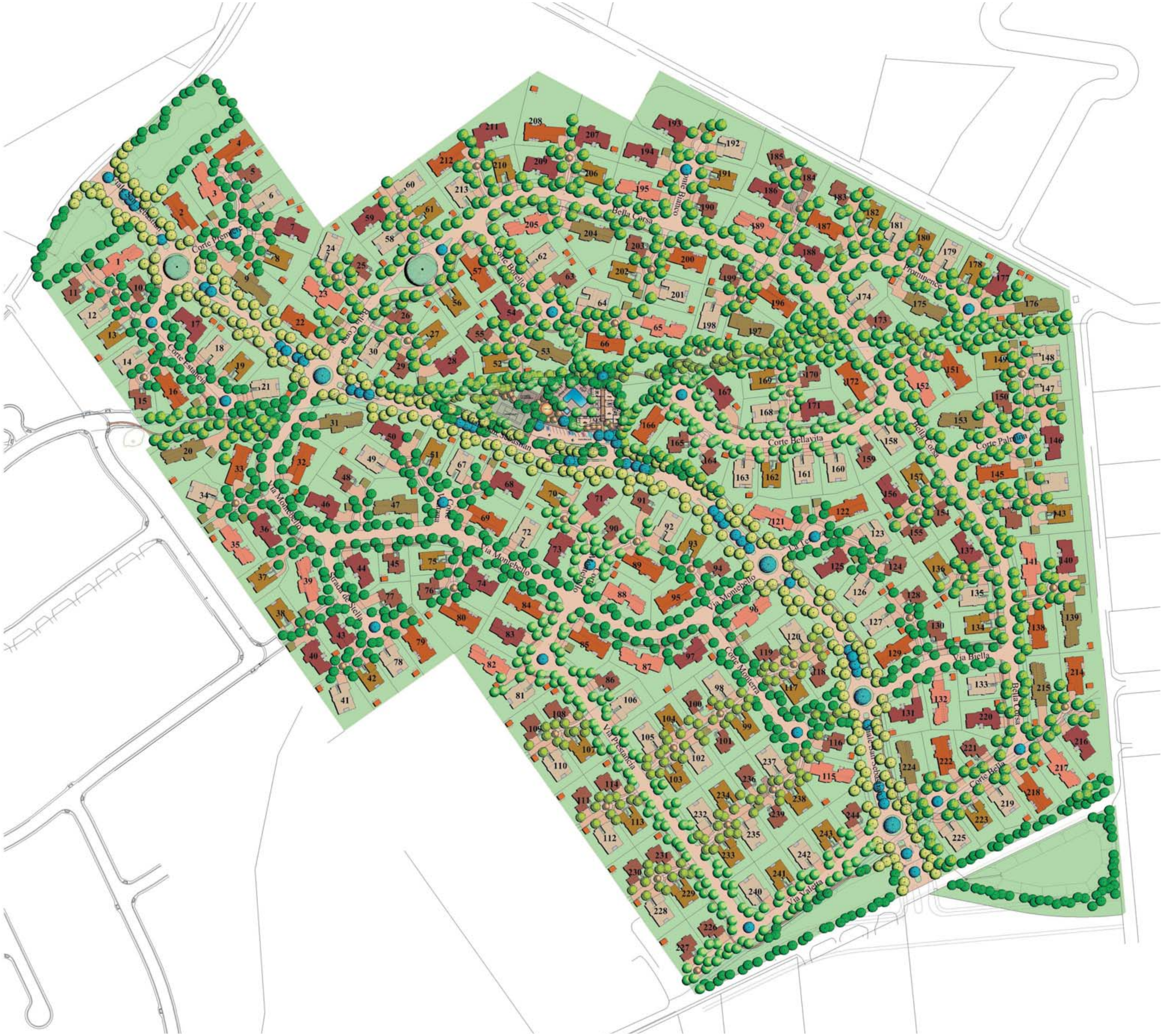
In summary, the proposed development would change the visual character of the project site. It would result in development of an existing undeveloped, agricultural site currently utilized as orchard lands, dry yards, and hay/row crops. Proposed residences would vary in mass and height, but would provide similar visual character to existing surrounding residential land uses to the west, east, and southwest. Therefore, the proposed project would provide consistency with the existing developed environment surrounding the site. Proposed landscaping and fencing would provide visual buffers for adjacent residences, and would enhance the existing aesthetic condition of the site. For these reasons, the proposed project would not result in significant adverse changes in the visual character of the project site.

Impact VIS – 1: The proposed project, would not result in significant adverse changes in the visual character of the project site. **(Less Than Significant Impact)**



PROPOSED ENCLAVE LANDSCAPING DESIGN

FIGURE 3.2-2



Planting Legend

Trees

QUERCUS RUBRA	RED OAK	24" BOX
ACER MACROPHYLLUM	BIGLEAF MAPLE	24" BOX
UMBELLULARIA CALIFORNICA	CALIFORNIA BAY	24" BOX
PISTACIA CHINENSIS	CHINESE PISTACHE	24" BOX
QUERCUS AGRIFOLIA	COAST LIVE OAK	36" BOX
QUERCUS ILEX	HOLLY OAK	36" BOX
GINKGO BILOBA	MAIDENHAIR TREE	24" BOX
EXISTING OAK TREES		

SHRUBS:

ACANTHUS MOLLIS	BEAR'S BREECH
AGAPANTHUS AFRICANUS	LILY OF THE NILE
AGAVE ATTENUATA	SOFT AGAVE
ARMERIA MARITIMA	COMMON THRIFT
ALOE SPECIES	ALOE
ARBUTUS UNEDO 'COMPACTA'	COMPACT STRAWBERRY TREE
ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH
ASPIDIUM CAPENSE	LEATHER LEAF FERN
ARACHNIODES SIMPLICIOR	HOLLY FERN
CEANOTHUS SSP.	CEANOTHUS
CISTUS 'BLANCHE'	NCN
CLIVIA MINIATA	KAFFIR LILY
DIETES BICOLOR	NCN
FESTUCA GLAUCA	BLUE FESCUE
HEMEROCALIS HIBRIDUS	DAYLILY
JUNIPERUS CALIFORNICA	CALIFORNIA JUNIPER
LIRIOPE GIGANTEA	GIANT BLUE LILY TURF
LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER
MYRTUS COMMUNIS 'COMPACTA'	COMPACT TRUE MYRTLE
PITTOSPORUM TOBIRA	TOBIRA
ROSA CALIFORNICA	CALIFORINA ROSE
RHAMNUS CALFORNICA	CALIFORNIA COFFEBERRY
RHAPHIOLEPIS SPECIES	COMPACT INDIA HAWTHORN
RHUS LENTII	PINK FLOWER SUMAC
ROSEMARINUS OFFICINALIS	ROSEMARY
SALVIA OFFICINALIS	GARDEN SAGE
STRELITZIA REGINAE	BIRD OF PARADISE

GROUNDCOVER:

BACCHARIS PILULARIS 'PIGEON POINT'	PIGEON POINT COYOTE BRUSH
LONICERA SEMPERVIRENS	TRUMPET HONEYSUCKLE
TRACHELOSPERMUM JASMINOIDES	STAR JASMINE

VINES

WISTERIA SINENSIS	WISTERIA
DISTICTIS 'RIVERS'	ROYAL TRUMPET FLOWER
JASMINUM POLYANTHUM	JASMINE

MULCH
A 3" LAYER OF MULCH SHALL BE INSTALLED TO COVER ALL SOIL.

0 50 100 150 200 250

N

CONCEPTUAL LANDSCAPE DESIGN

FIGURE 3.2-3

Impacts to Visual Resources and Scenic View Corridors

The project site is located at the base of the Anderson Reservoir and provides views of the southern foothills of the Diablo Mountain Range to the north. However, the project site itself does not contain significant visual or aesthetic resources, and it is not part of a scenic view corridor or scenic vista. Therefore, implementation of the proposed project would not have a substantial effect on a scenic vista or a state scenic highway.

Impact VIS – 2: The proposed project would not result in significant impacts to visual resources or scenic view corridors. **(Less Than Significant Impact)**

Light and Glare Impacts

All proposed single family residences would provide rooftop solar paneling with reflective glass surfaces that could result in glare impacts. Parking areas will be interior to the site and will be shielded by structures, as well as landscaping, which will limit the potential for light spill over. Street lighting will be directed downward and will not spill over onto adjacent properties.

Residences would not be located adjacent to the Coyote Creek riparian corridor, and spill over light onto the riparian area would be avoided. Shaded lighting fixtures as well as installation of landscaping trees and shrubs would limit lighting impacts along Coyote Creek and adjacent residences, and would not result in impacts that pose a hazard or nuisance.

The City's Municipal Code requires exterior lighting of residences, and any additional lighting, to be designed so lighting is not directed onto adjacent properties and the light source shielded from direct off-site viewing. Building surfaces (i.e. solar paneling) and outdoor lighting will be subject to administrative design review approval for conformance with City standards. For these reasons, the proposed project would not result in significant light and glare impacts.

Impact VIS – 3: The proposed project would not result in significant light and glare impacts. **(Less Than Significant Impact)**

2.5.3 Avoidance Measures

The final site design of the proposed project resulting from the proposed zoning changes, would be reviewed by the City's Community Development Director or designated staff, and/or Planning Commission and City Council upon referral or appeal, for consistency with the design guidelines and the existing and planned visual character of the surrounding area.

2.5.4 Conclusion

Impact VIS – 1: The proposed project, with conformance to the City's Tree Preservation Ordinance in *Section 3.5 Biological Resources*, would not result in significant adverse changes in the visual character of the project site. **(Less Than Significant Impact)**

Impact VIS – 2: The proposed project, in conformance with applicable General Plan goals, policies, and action statements, would not degrade the visual character of Morgan Hill, degrade scenic vistas, or degrade views from a scenic highway.

(Less Than Significant Impact)

Impact VIS – 3: The proposed project, in conformance with the City's design guidelines, would not result in significant light and glare impacts. **(Less Than Significant Impact)**

3.3 AGRICULTURAL AND FOREST RESOURCES

3.3.1 Existing Setting

3.3.1.1 *Agricultural Resources*

There are four farmland categories in the California Department of Conservation Farmland Mapping Program. These include: Prime Farmland, Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance. The non-farmland categories include Grazing Land, Urban and Built-up Land, Other Land, and Water.

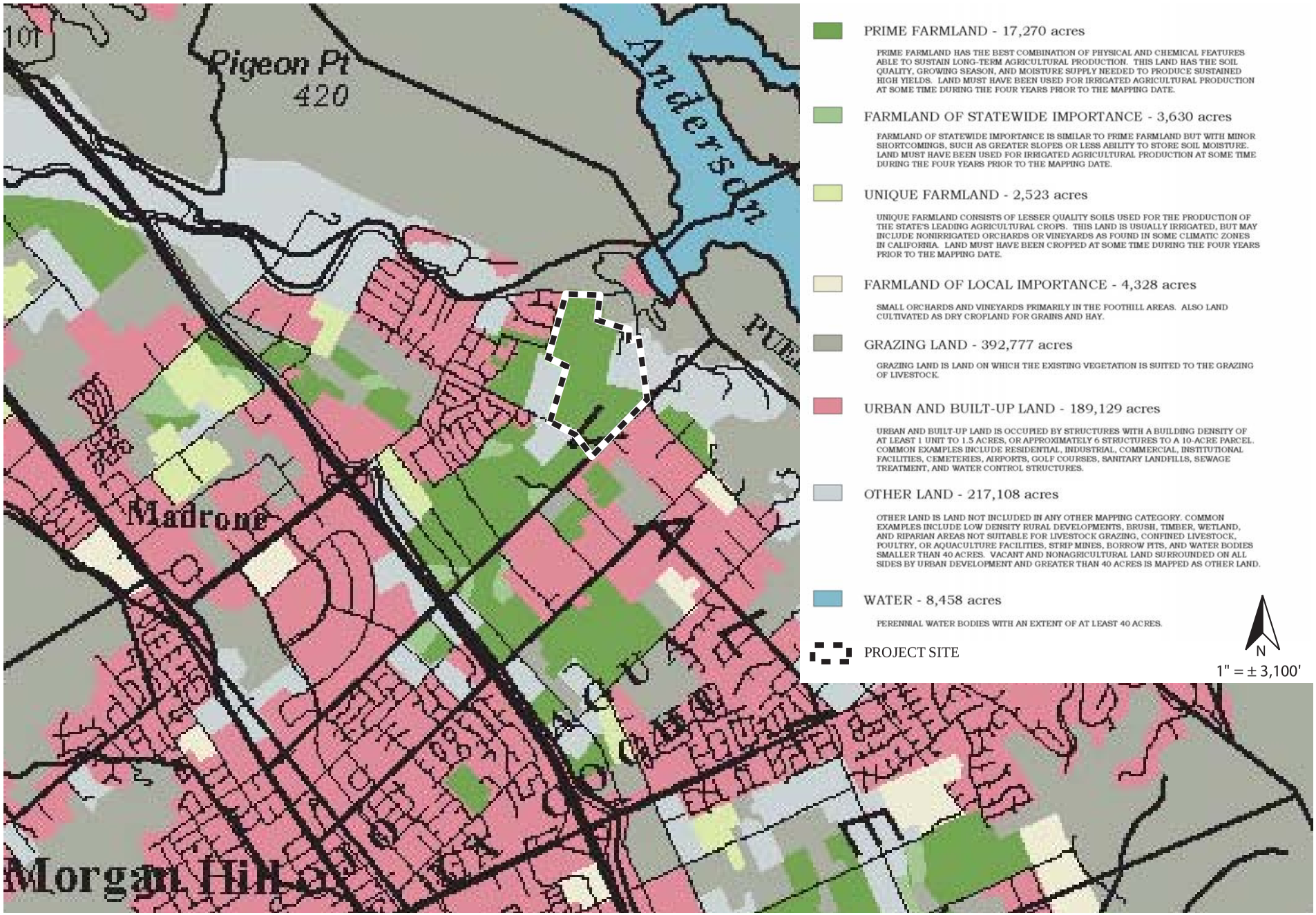
Areas designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance are located within the city limits of Morgan Hill. Most of the farmland in the Morgan Hill area is located on the east side of Highway 101. Farmland is also located north, south, and east of the City in unincorporated areas of Santa Clara County (refer to Figure 3.3-1).

Prime Farmland has the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. In order for land to be designated Prime Farmland, the land must have been used for agricultural production within approximately four years of the mapping date.

Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. In order for land to be designated Farmland of Statewide Importance, the land must have been used for agricultural production within approximately four years of the mapping date.

Unique Farmland is of lesser quality soils than those used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In the County of Santa Clara, Farmland of Local Importance includes small orchards and vineyards primarily in the foothill areas, and also land cultivated as dry cropland for grains and hay.



SANTA CLARA COUNTY FARMLAND OF IMPORTANCE MAP

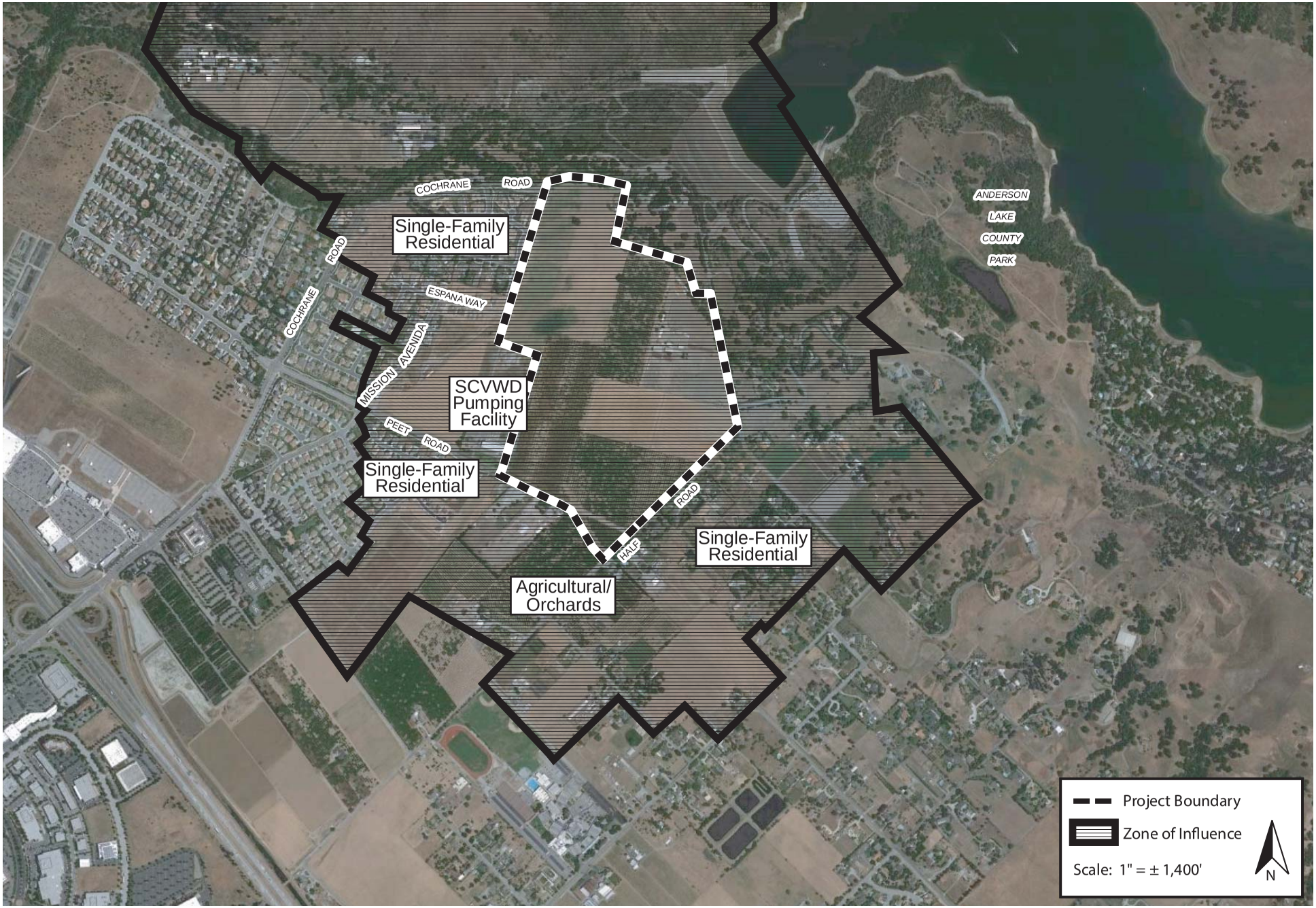
FIGURE 3.3-1

3.3.1.2 *Existing Site Conditions*

According to the Santa Clara County Important Farmland 2010 Map, Figure 3.3-1 shows that the majority of the project area is designated *Prime Farmland*. The majority of the project site (103 acres, including the Mariani parcel) is currently actively utilized for agricultural purposes. Existing uses include a cherry and apricot orchards, hay/row crops, and a dry yard. The site has been consistently used for agricultural purposes since the mid 1800s.

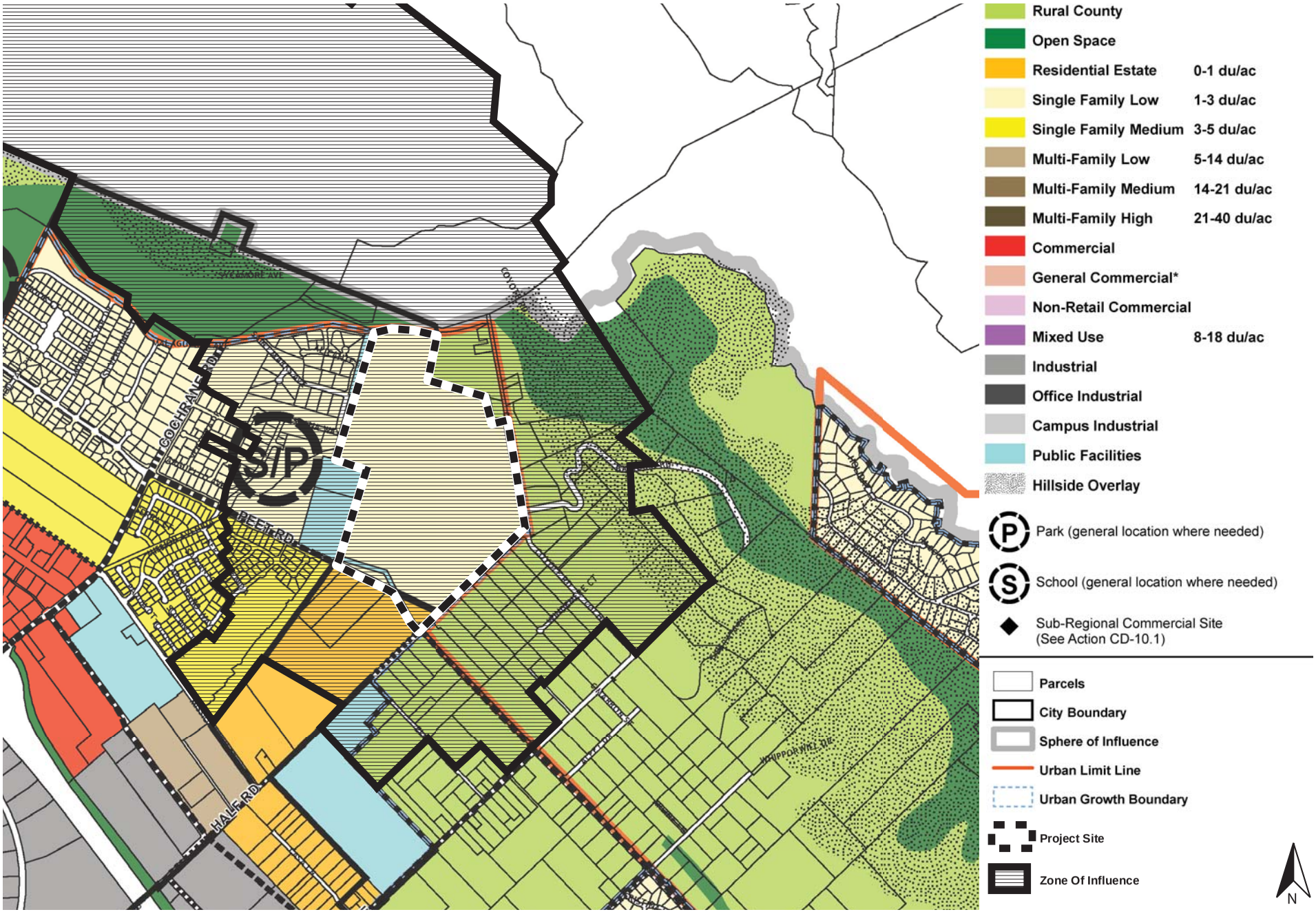
The California Agricultural Land Evaluation and Site Assessment (LESA) Model identifies land surrounding agricultural land using a "Zone of Influence" (ZOI) to determine if adjacent and nearby lands are likely to be influenced by development of agricultural land. The ZOI is generally defined as parcels of land within ¼ mile of a project site, as depicted in Figure 3.3-2. Figure 3.3-3 shows the project site with the surrounding ZOI and the associated General Plan land use designations of parcels within the ZOI.

As Figure 3.3-1 shows, properties identified as *Prime Farmland* are located to the south of the site across Peet Road (including the Mariani parcel) and to the west of the site adjacent to the Santa Clara Valley Water District (SCVWD) parcel in the City of Morgan Hill, as well as to the east of the site along Cochrane Road in Santa Clara County. *Prime Farmland* properties to the south of the site are actively farmed, but as shown in Figure 3.3-3, they are designated as *Residential Estate* in the General Plan. The *Residential Estate* designation provides the opportunity for future residential development. *Prime Farmland* properties to the west of the site, adjacent to the SCVWD, are also designated as *Single Family Low* in the General Plan. A portion of these properties appear to be actively farmed, while others are developed with single family homes. Properties to the east of the site are a mix of *Urban Built-Up Land, Other Land,* and *Prime Farmland*, and are all designated by Santa Clara County as *Rural County* lands, developed with low density single family homes with surrounding land.



SURROUNDING LAND USES AND ZONE OF INFLUENCE

FIGURE 3.3-2



GENERAL PLAN DESIGNATIONS WITH ZONE OF INFLUENCE FIGURE 3.3-3

3.3.1.3 *Site Background*

The proposed project site's landowner is part of a group of landowners that comprises the Cochrane Road Assessment District, formed in 1971-72. The Borello family became a member of the Assessment District in September 1976. The Assessment District properties total approximately 585 acres of land located east of U.S. 101 along Cochrane Road in the City of Morgan Hill. Property owners voluntarily enrolled in the Assessment District in order to allow their properties access to urban infrastructure (i.e. public water and sanitary sewer), thus providing services for potential future development on the respective properties. In 1981 the Local Agency Formation Commission (LAFCO) removed the Assessment District properties from the City of Morgan Hill's Urban Service Area (USA), and at the City's request, revoked access to urban infrastructure. As a result of this action, the Assessment District property owners filed suit against the City of Morgan Hill, requesting annexation and general land use planning for the Assessment District area. The Santa Clara County Superior Court ruled in favor of the Assessment District in January 1984. The judgment provided for the inclusion of the Assessment District properties within the Morgan Hill USA (to be accomplished by LAFCO), Morgan Hill to amend its General Plan allowing residential density and research and development industrial on the entire property area, and phased annexation for the entire Assessment District area.

The City annexed the Assessment District area (broken down into three portions) from 1984 to 1986. The City amended the General Plan designations for all parcels within the Assessment District in June 1984. Residential land use designations averaged no less than five dwelling units per acre and were comprised of a mixture of densities such as *Residential Estate, R-1, R-2, and R-3*. A low density *Campus/Industrial* designation was also established and designated within the Assessment District. The zoning map was also amended to conform to the General Plan Amendments.

Subsequent court cases (1991, 1992, and 1994) determined that Measure P (Morgan Hill ordinance No. 1010), the City's residential development control system (RDCS) measure passed in 1990, is applicable to all proposed development within the Assessment District, with the exception of one dwelling unit development not part of a current, planned or potential subdivision, or for secondary dwelling units.

In 2008, the property owners of the proposed project site submitted a Measure C (RDCS) application to the City of Morgan Hill, requesting building allotments for proposed residential development on the site. Twenty three (23) building allotments were granted for fiscal years 2011-2012. Again in 2009, the property owner of the proposed project site applied for and obtained 37 additional building allotments for fiscal years 2012-2013. In 2011 the current project applicant (San Sebastian MH) received an Exception to the Loss of Building Allocation (ELBA) for the proposed project site from the City of Morgan Hill. The extension allowed both building allotments to be postponed 24 months, putting the 23 allotments to fiscal year 2012-2013, and the 37 allotments to 2013-2014. In March 2012 an additional 15 building allotments were granted based on Measure C commitments made in October 2011. Therefore, the proposed project currently possesses 75 building allocations.

As a result of the aforementioned court orders and the City's action to amend the General Plan to an urban designation and place the site in an urban zoning district and within the USA, the project site can be considered for non-agricultural use through the City's environmental and entitlement review processes. The site has access to urban infrastructure and services, and is subject to the RDCS allotment process and therefore will develop in phases, with each phase converting farmland necessary to accommodate the planned phase of development.

3.3.1.4 *Williamson Act*

The California Land Conservation Act of 1965, also referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of foregone property tax revenues from the state via the Open Space Subvention Act of 1971.[8]

3.3.2 Agricultural Resources Impacts

3.3.2.1 *Thresholds of Significance*

For the purposes of this EIR, an agricultural resources impact is considered significant if the project would:

- Convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

3.3.2.2 *Direct Impacts to Prime Farmland, Farmland of Statewide Importance, and Unique Farmland*

As a result of the 1984 court ruling requiring annexation of lands within the Cochrane Road Assessment District into the City of Morgan Hill and to re-designate the assessment district properties from agricultural to residential and campus/industrial, respectively, the proposed project site has been allocated for residential development through General Plan amendments and subsequent zoning changes to conform to the General Plan. Therefore, the project site may be developed with urban land uses in the future, and the applicant proposes the phased development of the 122-acre site with single family residential over the next 12 years, thereby resulting in the loss of 99.9 acres of *Prime Farmland*, which is considered to be a direct significant impact to agricultural resources because the existing baseline condition of the site is farmland actively utilized for agricultural purposes.

Impact AG-1: The phased loss of 103 acres of *Prime Farmland* over the next 12 years is a significant impact to agricultural resources. **(Significant Impact)**

3.3.2.3 *Williamson Act*

The proposed project site is not under Williamson Act contract. **(Less Than Significant Impact)**

[8] Source: California Department of Conservation, September 29, 2008. [http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx]

3.3.2.4 *Indirect Impacts to Prime Farmland, Farmland of Statewide Importance, and Unique Farmland*

City lands within the ZOI (shown in Figure 3.3-2) surrounding the project site are within the Cochrane Road Assessment District and are currently designated for residential uses in the General Plan (see Figure 3.3-3). While some of the remaining assessment district sites within the City are currently utilized for agricultural purposes, these lands are not planned to remain in agricultural use according to the General Plan. Therefore, their eventual planned conversion from agricultural use to residential use (and resulting loss of prime farmland) would not be an indirect impact attributable to the proposed project.

The proposed project would not construct new infrastructure or extend existing infrastructure that would facilitate the conversion of surrounding unincorporated agricultural lands remaining in the county. New homeowners in the project may object to existing adjacent farming noise, fumes, odors, farm vehicles on the roads, and occasional mud/dust, however such conflicts are anticipated to be infrequent and a minor nuisance consistent with existing conditions for residents living in the Alicante Estates subdivision and other recent developments along Peet Road. The proposed project would not introduce a new land use (housing) to the area, rather it would continue to build out a planned residential neighborhood whose southerly boundary will be Half Road, providing a distinct boundary between the planned urban City edge and the rural agricultural County lands. County lands identified as *Prime Farmland* and within the ZOI are outside of the City's Sphere of Influence, and would not indirectly be impacted by the proposed development.

Impact AG-2: The phased loss of 103 acres of *Prime Farmland* over the next 12 years would not be an indirect impact by leading to the unplanned conversion of farmland on surrounding properties. **(Less Than Significant Impact)**

3.3.2.5 *Mitigation Measures for Agricultural Impacts*

The following agricultural mitigation measures have been proposed by the project applicant (letter response provided in Appendix C). Any one of these mitigation measures (or combination) achieving a 1:1 ratio of acreage protected for each acre lost would be deemed sufficient to mitigate the loss of agricultural lands from the project site.

AG MM-1: Prior to issuance of the first building permit for each phase, the applicant shall comply with the adopted City of Morgan Hill Agricultural Mitigation and Preservation program (if such a program exists at the time each phase develops).

AG MM-2: Prior to the issuance of the first building permit for each phase, provide conservation easements to the City of Morgan Hill at a 1:1 ratio on land of at least equal quality and size or 1:1 on land deemed suitable for conservation by the Director of Planning. Project applicant will provide agricultural easements on other properties owned now or in the future by the Borello family or its associates, or on purchased property within the State of California, mitigating for loss of prime agricultural land at a ratio of 1:1. Either this mitigation or AG MM-3 may be implemented for the Mariani portion of the site.

AG MM-3: Prior to the issuance of the first building permit for each phase, the applicant

shall provide evidence of payment of an in-lieu fee at a 1:1 ratio of acreage protected for each acre lost to an established local, regional or statewide organization or agency. The per acre payment shall be made to the entity/City that has an adopted Agricultural Mitigation Program.

3.3.3 Conclusion

Impact AG-1: The proposed project, with implementation of the proposed agricultural mitigation measures providing a 1:1 ratio of acreage protected for each acre lost, would offset the project's significant farmland impacts by protecting an equivalent amount of prime farmland as would be lost by the project. **(Less than Significant Impact with Mitigation)**

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

Impact AG-3: The proposed project would not result in an indirect impact to surrounding farmland or agricultural activities. **(Less Than Significant Impact)**

3.4 HAZARDS AND HAZARDOUS MATERIALS

The following discussion on hazardous materials was prepared based upon a Phase I Environmental Site Assessment prepared by *ENGEO, Inc.* in September 2011 and April 2012, and an Agrichemical Impact Assessment and Risk Evaluation prepared by *ENGEO, Inc.* in December 2011. Copies of these reports are provided in Appendix D.

3.4.1 Existing Setting

Hazardous materials are commonly used by large institutions, commercial, and industrial businesses. Hazardous materials include a broad range of common substances such as motor oil and fuel, pesticides, detergents, paint, and solvents. A substance may be considered hazardous if, due to its chemical and/or physical properties, it poses a substantial hazard when it is improperly treated, stored, transported, disposed of, or released into the atmosphere in the event of an accident.

A review of published agency documents, agency files, and other pertinent documents was completed for a one-mile radius of the site. The potential for the site impact was based on information from the database records regarding sites with past environmental releases, and/or those that use, store or dispose of regulated chemicals. A screening process was implemented to prioritize the sites of greater potential impact to the project area. This process consisted of evaluating the database listing, the type of release, current case status, distance and direction from the site, and professional judgment.

Based on the Phase I assessment prepared for the project site, no Recognized Environmental Conditions (RECs) and two historical RECs were identified for the property.

- Three Underground Storage Tanks (USTs) containing petroleum products were removed from the property approximately 20 years ago near the central agricultural compound.
- Road oil for dust control (SC-70) allegedly overflowed into an onsite swale.

The Phase I assessment also identified the following features of potential environmental concern that were either listed in the databases or observed on the property.

- The property has a long history of agricultural cultivation. It is likely that some residual levels of organochlorine pesticides or other agrichemicals exist in near-surface soils.
- Three functioning Above Ground Storage Tanks (ASTs) containing petroleum products are located near the agricultural compound.
- An equipment and maintenance shed is located near the agricultural compound, which includes a below-grade oil pit, oil containers, gasoline, propane, antifreeze, and compressed gas.
- Several localized areas of stained pavement and or soil were observed within the property, mostly located around the agricultural compound.
- Sulfur is stored and used onsite in connection with typical apricot processing procedures.
- Numerous below-grade greywater tanks and septic tanks, along with associated leach fields, exist within the project boundaries.
- A chemical storage shed is located near the farming compound.
- Several past chemical mixing areas for agriculture use.
- Discarded debris items including, but not limited to farming equipment, engine motors, drums, storage tanks, tires, wood and metal are placed throughout the property; mostly along the eastern property boundary.

- A Historic Underground Storage Tank (HIST UST) is listed at 18145 Peet Road (APN 726-33-004). The tank reportedly stored approximately 350 gallons of unleaded fuel.

3.4.1.1 *Site Conditions*

The property consists of orchards, row crops, and seasonal grasses, with an agricultural compound containing several structures situated along the east-central portion of the property. The additional areas involved with the planned Peet Road alignment consists of residential structures, orchards, and SCVWD equipment.

An inspection of the project area was performed on July 11, 2011 and on March 22, 2012. The property was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The property was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. The following issues were noted during the field inspections:

- Structures- Several structures were observed during the site reconnaissance, mostly around the access road and agricultural compound and consisted of residences, equipment/maintenance shed, chemical storage shed, office space, and other agricultural activities. A temporary residence supported on above-grade steel piers was observed under construction in the northeastern portion of the corner.
- Hazardous Substances and Petroleum Products in Connection with Identified Uses- A few hazardous substances and petroleum products were observed within the property during the site reconnaissance. The observed hazardous substances were associated with agricultural practices (pesticides, sulfur, etc.). The petroleum products were associated with farm equipment and re-fueling engines. The previously mentioned products were generally stored in five to 55 galloon steel containers, with the smaller quantities stored in both plastic and steel containers. The containers in the equipment shed were generally placed on concrete, but without secondary containment. Agricultural chemicals were stored in their original packaging in a dedicated wooden shed slightly raised off the ground. Large 300-gallon plastic containers identified as "soil sulphites," ranging from partially full to full, were observed in the agricultural compound. Miscellaneous containers found in the fields were placed on the ground and did not have secondary containment. Further, a few car batteries, tires, five-gallon hydraulic oil containers, and air compressors were observed within APN 728-33-004, but were not within the planned Peet Road realignment.
- Storage Tanks-Based on municipal records and anecdotal information, three USTs ranging from 250 to 1,000 gallons, which stored gasoline and diesel product, were removed near the agricultural compound. Several underground greywater and septic storage tanks were observed and/or confirmed during the site reconnaissance. A reported 350-gallon HIST UST is associated with APN 728-33-004. No obvious indications were observed during the reconnaissance as to the exact location; but it is unlikely it is located within the planned Peet Road realignment. Three above-ground storage tanks (ASTs) were also observed on the agricultural compound.
- Odors- No odors indicative of hazardous materials or petroleum material impacts were noted at the time of the reconnaissance, besides trace petroleum odors associated with open containers around the maintenance shed.
- Pools of Potentially Hazardous Liquid- No pools of potentially hazardous liquid were observed within the property at the time of reconnaissance.
- Drums- Numerous drums were observed on the property at the time of the reconnaissance.

The majority of drums observed were empty and stored along the eastern boundary. As previously mentioned a few drums/containers were located within the equipment shed and contained petroleum products.

- Hazardous Substance and Petroleum Product Containers- As previously mentioned, several hazardous substance and petroleum product containers were observed on the property at the time of reconnaissance.
- Polychlorinated Biphenyls (PCBs)- No obvious PCB-containing materials, with the exception of a few pole-mounted transformers, were observed within the property during site reconnaissance.
- Pits, Ponds and Lagoons- No pits, ponds, or lagoons were observed within the property at the time of reconnaissance.
- Stained Soil/Pavement- Minor stained soil and/or pavement was observed within the property at the time of our reconnaissance, mostly around the equipment/maintenance shed.
- Stressed Vegetation- No signs of stressed vegetation were observed on the property at the time of reconnaissance.
- Solid Waste/Debris- A few small piles of debris including wood, scrap metal, etc. were observed throughout the property. Large piles of tree and shrub remnants were observed in the central portion of the apricot orchard. A few stockpiles of soil were observed in the vicinity of the temporary residence under construction in the northeastern portion of the corner. A significant amount of equipment and miscellaneous items that included, but not limited to, engines, refrigerators, drums, and storage tanks were stored along the eastern boundary. No disposal of solid waste was observed at the subject property.
- Wastewater- No wastewater conveyance systems were observed at the property during the reconnaissance.
- Wells- One well was confirmed within the property during site reconnaissance. The well is in the northwest portion and supplies the domestic and irrigation water for the 728-34-027 property. Santa Clara Valley Water District has one active water supply well listed for each of the four parcels (728-33-002, 728-33-003, 728-33-004, and 728-33-005) located south of Peet Road as well.

3.4.1.2 *Potential On-Site and Off-Site Sources of Contamination*

The project site has been historically used for agricultural purposes. Several of the pesticides historically used in the area, including organochlorinated pesticides, are persistent in the environment. In addition, arsenical pesticides were frequently used in the area. As a result, shallow soils contain residual pesticides.

Soil Sampling

Based on the findings and recommendations of the Phase I ESA, an agrichemical impact assessment and risk evaluation was prepared by *ENGEO, Inc.* The purpose of the assessment was to evaluate the extent of agrichemical impacts resulting from historical agricultural practices that could affect the proposed development at the property.

A near-surface sampling study was conducted on November 3, 2011. A total of 112 soil samples were collected from approximate depths of three to nine inches below the ground surface. Discrete samples were analyzed for the presence of Organochlorine Pesticides and total arsenic.

Hazardous Building Materials

Due to the age of the existing buildings on the site, asbestos containing materials (ACMs) may be present. ACMs are of concern because exposure to ACMs has been linked to cancer. ACMs are defined by the Federal Environmental Protection Agency as materials containing more than one percent (1%) asbestos. Title 8, Section 1529, of the California Code of Regulations (CCR), however, defines asbestos-containing construction material (ACCM) as any manufactured construction material which contains more than one-tenth of one percent (0.1%) asbestos by weight.

Lead-based paint is of concern, both as a source of direct exposure through ingestion of paint chips, and as a contributor to lead interior dust and exterior soil. Lead was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments and drying agents from the early 1950's. In 1972, the Consumer Products Safety Commission limited lead content in new paint to 0.5 percent (5,000 ppm) and in 1978, to 0.06 percent (600 ppm).

Fluorescent light ballasts manufactured prior to 1980 may also contain polychlorinated biphenyls (PCBs).

All three of these substances can pose a threat to human health.

3.4.1.3 *Other Hazards*

The project site is not located within two miles of a public airport, nor is it on one of the City's designated evacuation routes. The project area is not located within a very high fire hazard severity zone.[9] Risks associated with the PG&E gas line are discussed in *Section 3.10 Utilities*.

3.4.2 Hazards and Hazardous Materials Impacts

3.4.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hazard and hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through the demolition of structures containing hazardous materials or routine transport, use or disposal of hazardous materials; or
- 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; or
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school; or
- 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; or
- 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, would the project result in a safety hazard for people residing or working in the project area; or

[9] State of California Department of Forestry and Fire Protection. Santa Clara County Very High Fire Hazard Severity Zones in Local Responsibility Areas (LRAs). October 8, 2008. http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.4.2.2 *Potential On-Site and Off-Site Sources of Contamination*

Regulatory Database Search

The review of regulatory databases maintained by the county, state and federal agencies found no documentation of hazardous materials violations or discharge on the property. Three USTs containing petroleum products were removed from the property approximately 20 years ago near the central agricultural compound. Soil sampling prepared in 2005 by *Light, Air & Space Construction (LA&S)* confirmed non-detect levels for petroleum hydrocarbons found in gasoline (see Appendix D for complete listing).

The road oil for dust control that allegedly overflowed into an onsite swale was observed by a representative for Santa Clara County Environmental Health (SCCEH), and a No-Further-Action letter was issued by SCCEH in 2004 as a result.

The historic UST listed at 18145 Peet Road, reportedly storing approximately 350 gallons of unleaded fuel, may not exist, given the omission of data at the City/County government level and previous conversations with the property owner.

Impact HAZ-1: Based on findings of the regulatory database search, future development proposed at the project site is unlikely to interfere with any USTs, however, the possibility of the historic UST listed at 18145 Peet Road presents potential environmental concerns for the realignment of Peet Road. **(Significant Impact)**

Agricultural Use Impacts

Review of laboratory results found detectable concentrations of organochlorine pesticides including DDT/DDD/DDE, chlordane, and dieldrin. Based on a review of the laboratory analyses, dieldrin was identified as the only chemical of potential concern at the property, as the other pesticides reported concentrations were below levels of concern for residential development. Levels of dieldrin onsite were considered to be below the EPA's upper confidence level (UCL) used for evaluating potential for human health risks (the full analysis is available in Appendix D).

Impact HAZ-2: Based on the findings of the agrichemical impact assessment and risk evaluation, the property would be suitable for residential development. **(Less Than Significant Impact)**

Hazardous Building Materials

Existing structures in the project area may contain asbestos and lead-based paint. The proposed project would include removal of structures containing these materials.

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines require that all potentially friable asbestos containing materials be removed prior to building demolition or renovation that may disturb asbestos containing materials (ACMs).

Demolition of buildings that contain lead-based paint may create lead-based dust at concentrations that would expose workers and nearby receptors to potential health risks. State regulations require that air monitoring be performed during and following renovation or demolition activities at sites containing lead-based paint. If the lead-based paint is peeling, flaking, or blistered, it would need to be removed prior to demolition. It is assumed that such paint would become separated from the building components during demolition activities; it must be managed and disposed of as a separate waste stream. If the lead-based paint is still bonded to the building materials, its removal is not required prior to demolition.

Standard Measures: Development of the project site is required to conform to the following regulatory programs to reduce impacts due to the presence of ACMs and/or lead-based paint to a less than significant level:

SM HM-3.1: A lead survey of painted surfaces and soil around buildings on parcels proposed for redevelopment shall be performed prior to demolition. Requirements outlined by Cal/OSHA Lead in Construction Standard, Title 8, CCR 1532.1 would be followed during demolition activities, including employee training, employee air monitoring and dust control. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.

SM HM-3.2: All potentially friable ACMs shall be removed in accordance with the NESHAP guidelines prior to building demolition or renovation that may disturb the materials. All demolition activities shall be undertaken in accordance with OSHA standards contained in Title 8 of the CCR, Section 1529, to protect workers from exposure to asbestos. Specific measures could include air monitoring during demolition and the use of vacuum extraction for asbestos-containing materials.

SM HM-3.3: A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.

SM HM-3.4: Materials containing more than one (1) percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations. Removal of materials containing more than one (1) percent asbestos shall be completed in accordance with BAAQMD requirements.

Impact HM-3: Implementation of the standard measures, SM HM-1 to SM HM-4, would ensure that construction workers and the public would not be exposed to hazardous building materials as a result of implementation of the proposed project. **(Less Than Significant Impact)**

3.4.3 Mitigation Measures

MM HM-1.1: A "no further action" determination shall be obtained from SCCEH for the former USTs near the central compound and removed 20 years ago, prior to

development of Phase 13.

MM HM-1.2: The presence of the recorded UST at 18145 Peet Road should be confirmed prior to issuance of building permits for Phase 8, providing sufficient time for the applicant to mitigate prior to installation of the planned realignment of Peet Road in Phase 10. This may be accomplished by a geophysical survey, or having an environmental professional onsite during road realignment activities to observe if UST indicators are present. Given the planned realignment (roughly 75 feet southwest of current location) it is unlikely the alleged UST would impact the realignment.

3.4.4 Conclusion

Impact HM-1: Implementation of the mitigation measures, MM HM 1.1 and 1.2, ensures that potential hazards resulting from USTs would be reduced to a less than significant level. **(Less Than Significant with Mitigation Incorporated)**

Impact HM-2: The proposed project would not be impacted by contaminated agricultural soils. **(Less Than Significant Impact)**

Impact HM-3: Implementation of the standard measures, SM HM-3.1 to SM HM-3.4, would ensure that construction workers and the public would not be exposed to hazardous building materials as a result of implementation of the proposed project. **(Less Than Significant Impact)**

3.5 BIOLOGICAL RESOURCES

The following discussion is based upon a biotic evaluation prepared by *Live Oak Associates, Inc.* in March 2012 and a tree survey prepared by *Moki Smith* in September 2008 and *Live Oak Associates* in June 2012. Copies of the reports are provided in Appendix E of this EIR.

3.5.1 Existing Setting

3.5.1.1 *Biotic Habitats of the Project Site*

The project site consists mainly of orchards and associated farm land uses. The site is currently a producing farm, including orchards and row crops. Most of the trees on the site are orchard trees including cherry and apricots. The orchards on site have been in production since the late 1930s. Small irrigation ditches (approximately one foot deep) exist along the south side of the drying lot and a portion of the west side of the drying lot, and a slightly larger irrigation ditch (approximately two feet deep) intersects the row crop land. Habitats that also occur on the site include fallow field, row crop, remnant woodland, and developed areas including a drying lot, sheds, and residences. Figure 3.2-1 shows the location of existing agricultural uses on the site.

3.5.1.2 *Plant and Wildlife Species and Their Habitats*

Orchard

The eastern boundary along Cochrane Road and Half Road is bordered by Lombardy poplar trees with some yellow star thistle, coyote brush, oleander, coast live oak, and tree of heaven mixed in. Plants identified within the orchard itself include ripgut, barley, Bermuda grass, pampas grass, puncture vine, annual firewood, narrow leaved plantain, black mustard, common mallow, morning glory, spiny sowthistle, Canada horseweed, prickly lettuce, cudweed, solanum, atriplex, and mimosa.

Species such as the Pacific chorus frog and western toad could occur when portions of the site become damp, especially along irrigation ditches. Edges of the habitat could be utilized by reptile species including the western fence lizard, southern alligator lizard, terrestrial garter snake, and gopher snake.

Bird species present within the orchard habitat include the turkey vulture, mourning dove, scrub jay, American crow, American robin, California towhee, barn swallow, and cliff swallow. Bird species that may also occur in the orchard habitat are the western kingbird, northern mockingbird, and Brewer's blackbird.

Mammals are expected to be sparse in this habitat, but may include Botta's pocket gopher and a variety of mice, as well as larger predators including the coyote, domestic dog, bobcat, and domestic cat. Also, mammals adapted to urban living such as the opossum, striped skunk, and raccoons may be present.

Fallow Field

Apricot trees were removed from a portion of the site due to age and low fruit production, resulting in the establishment of a large fallow field. Plants identified within the fallow field include wild oats, Italian rye grass, rape mustard, black mustard, white stemmed filaree, mourning glory, prickly lettuce, sow thistle, cheeseweed mallow, solanum, and pepper tree.

Bird species occurring within the fallow field include the turkey vulture, rock dove, and European starling. The field is also potential habitat for burrowing owl if left fallow for a long period of time, and small mammal burrows become present. Additional bird species with potential to occur on the site include killdeer, white-crowed sparrow, and western meadowlark.

Mammal species that may occur in this habitat include those listed in the orchard habitat, as well as California ground squirrels.

Row Crop

The row crops present on the site include wild oats. An irrigation ditch separates the east and west sections of the area. Although the ditch is dry, the habitat is likely to support amphibians such as the Pacific treefrog and western toad. Bird species occurring in the row crop include turkey vulture, American crow, barn swallow, and cliff swallow. Other species that may forage on the site include the common raven, red-winged blackbird, Brewer's blackbird, and raptors such as the white-tailed kite, red-tailed hawk, and American kestrel.

Developed

The developed area of the site is used as a drying lot to sun-dry apricots and tomatoes with associated open-air sheds. The drying lot is flat and graveled with sparse weeds. Four modular buildings, one modular home, two mobile homes, and a residential building are also located on the site, providing temporary worker housing. One permanent single family residence is located at the northern portion of the site near Cochrane Road with a trailer home to the rear of the home.

The northeastern corner supports native trees and rock piles separating the remnant woodland and the lot. Plants identified within the drying lot habitat include black mustard, grape, cactus, bearded iris, English walnut, and California walnut. Peet Road along the southwestern edge of the site and residences to the south of Peet Road are included as a part of this project. These residences include wooden houses, metal and wooden sheds, and a barn. Additional plants include foxtail barley, smilo grass, speedwell, sourgrass, prunus, prickly sow-thistle, filaree, burclover, mallow, iceplant, aloe, English ivy, rose bushes, coyote brush, oleander, juniper bush, spruce, Peruvian peppertree, elderberry, privet, Douglas fir, fan palm, Monterey pine, and several other ornamental plants and trees.

Reptiles such as the western fence lizard, southern alligator lizard, terrestrial garter snake, gopher snake and Pacific rattlesnake may occur in the developed habitat and along the edges.

Bird species that may occur include the barn swallow and cliff swallow. A nest was identified in an open air drying shed. Killdeer may use the habitat for nesting, and the habitat may also support flycatchers such as the black phoebe. The buildings and sheds onsite have metal roofing and are unsuitable for bat roosting, therefore, bats are not expected to roost within the developed habitat, although they may forage over the site.

Remnant Woodland

As mentioned above, native trees and rock piles separate the remnant woodland area and the drying lot. Plants identified within the remnant woodland habitat include ripgut, soft chess, wild oats, rape mustard, black mustard, Italian thistle, milk thistle, grape, poison-oak, coyote brush, and coast live

oak.

Amphibian and reptile species found in the adjacent habitats are likely to use the habitat, as well as the western skunk. Bird species identified in the remnant woodland include the scrub jay. The American robin may also use the habitat.

Mammal species in the aforementioned surrounding habitat may also occur in this habitat.

Special Status Plant and Animal Species

Among the various plant and animal species identified as having the potential to be found on the project site, only two animal species are considered to be special status species, the white-tailed kite and the western burrowing owl. There are no special status plant species present on the site.

3.5.1.3 *On-Site Trees*

The City of Morgan Hill Municipal Code (Chapter 12.32) Significant Tree Removal Ordinance regulates the removal of trees in the City. These controls serve to protect all indigenous (native) trees having a trunk measuring 18 inches or more in circumference and nonindigenous trees measuring 40 inches or more in circumference, at a height of four and one-half feet above the natural grade of slope. In addition, any tree found to be part of a "community of trees" such that the loss of several of the trees will cause a significant ecological, aesthetic, or environmental impact, regardless of tree size or species, are also protected. A tree removal permit is required from the City of Morgan Hill for removal of any such trees. All commercial tree farms, non-native tree species in residential zones and orchards (including individual fruit trees) are not protected by the City of Morgan Hill Tree Removal Controls.

A tree survey was completed by *Live Oak Associates* in June 2012. The project site contains hundreds of cherry and apricot orchard fruit trees. As stated earlier, the City's tree ordinance does not protect the orchard trees so that they can be removed at any time by right by a farmer and are not considered a biotic resource. A total of 283 ordinance-size trees were identified and evaluated on the project site. Of the 15 species of trees identified on the site, seven species are native to California. The native species included three species of oak, N. California black walnut, incense cedar, coast redwood, and Monterey pine. The non-native tree species included Lombardy poplar, English walnut, American elm, olive, shamel ash, almond, pepper, and pistachio. A summary of the tree species, size, health, and suitability for preservation is provided in Appendix E of this EIR.

Table 3.5-1 provides a summary of existing ordinance size trees on-site. Locations of trees on the site are provided in Figure 3.5-1.

Table 3.5-1
Existing Ordinance Size Trees

Species	Common Name	Native Species	Number of Ordinance Size Trees
Populus nigra	Lombardy Poplar	no	141
Quercus agrifolia	Coast Live Oak	yes	110
Juglans hindsil	N. California Black Walnut	yes	9
Juglans regia	English Walnut	no	5
Ulmus americana	American Elm	no	5
Quercus lobata	Valley Oak	yes	3
Olea sp.	Olive	no	2
Fraxinus uhdei	Shamel Ash	no	1
Prunus dulcis	Almond	no	1
Quercus douglasii	Blue Oak	yes	1
Schinus molle	Pepper	no	1
Calocedrus deccurrens	Incense Cedar	yes	1
Pistacia vera	Pistachio	no	1
Sequoia semervirens	Coast Redwood	yes	1
Pinus radiata	Monterey Pine	yes	1

Source: Live Oak Associates, 2012

LOCATION OF MATURE TREES

FIGURE 3.5-1

3.5.1.4 *Special Status Species Regulations*

Threatened and Endangered Species

Species of special status include: plants and animals listed, proposed for listing, or candidates for listing as "threatened" or "endangered" under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the California Fish and Game Code, animals designated as "Species of Special Concern" by the California Department of Fish and Game (CDFG); and plants listed as rare or endangered in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (2001).

Citywide Burrowing Owl Habitat Mitigation Plan

In June 2003, the City of Morgan Hill adopted the Citywide Burrowing Owl Habitat Mitigation Plan. The purpose of the plan was to create a comprehensive program to mitigate impacts to Burrowing Owls a "Species of Special Concern" and their habitat, instead of addressing such impacts on a project by project basis. This plan meets the requirements of CEQA and is based on the following two assumptions:

1. All development – both that which eliminates actual habitat and nearby development that does not result in a direct loss of owl habitat – affects burrowing owl populations to some degree; and

2. Mitigating impacts is most logically addressed by managing a fixed amount of habitat capable of supporting owls.

The Citywide Burrowing Owl Habitat Mitigation Plan's strategy addresses both assumptions by preserving a specific amount of suitable land (the City's Burrowing Owl Reserve is 30.5 acres off of Edmundson Avenue) and spreading the costs fairly over development projects that impact owls and owl habitat directly and indirectly.

Lands that are below 600 feet elevation above sea level that support any grassland and/or mixed herbaceous vegetation upon which activity is proposed that is defined as a "project" by CEQA and is not statutorily or categorically exempt from CEQA are subject to the Citywide Burrowing Owl Habitat Mitigation Plan.

After the Santa Clara Valley HCP/NCCP is adopted by the City of Morgan Hill, it is anticipated the June 2003 Citywide Burrowing Owl Mitigation Plan will no longer be in effect; it will be superceded by the HCP/NCCP and its standard requirements, conditions and fees.

Migratory Bird Treaty Act and State Fish and Game Code

The burrowing owl and nesting raptors are migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulation (50 C.F.R. 21).

Migratory birds are also protected under State regulations. The State Fish and Game Code Section 3503 emulates the MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the California Department of Fish and Game (CDFG). Nesting bats are also protected under CDFG code.

Draft Habitat Conservation Plan

A HCP/NCCP is currently being prepared for the Santa Clara Valley. The Santa Clara Valley HCP/NCCP is a regional partnership between six local partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy and Morgan Hill) and three wildlife agencies (the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service (NMFS-NOAA Fisheries).[10] The HCP/NCCP process is anticipated to be completed in 2012.

The HCP/NCCP will address listed species and species that are likely to become listed during the plan's proposed 50-year permit term and associated habitats. The species of concern include, but are not limited to, the California tiger salamander, California red-legged frog, western burrowing owl, Bay checkerspot butterfly, and a number of species endemic to serpentine grassland and scrub. The proposed project has submitted an Interim Referral Letter to applicable agencies for the HCP process, and has not been requested to include any further analysis for the proposed project site, therefore, no further action is required.

3.5.1.5 *Regulated Habitats and Resources*

Wetlands and Other Jurisdictional Waters

Areas meeting the regulatory definition of "Waters of the United States" are subject to the jurisdiction of the U.S. Army Corps of Engineers (Corp). The Corps, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899) has jurisdiction over "Waters of the U.S." These Waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.) all impoundments of waters otherwise defined as "Waters of the U.S." tributaries of waters otherwise defined as "Waters of the U.S.," the territorial seas, and wetlands adjacent to "Waters of the U.S." Wetlands are considered to be Waters of the United States. According to *Live Oak Associates, Inc.'s* findings, no waters of the U.S. are present on the project site.

3.5.1.6 *Movement Corridors*

Wildlife movement corridors are areas where regional wildlife populations regularly and predictably move during dispersal and migration. Movement corridors in California are typically associated with valleys, rivers and creeks supporting riparian vegetation, and ridgelines.

While no detailed study of animal movements has been conducted for the study area, the consulting biologist's knowledge of the site, its habitats, and the ecology of the species potentially occurring onsite permits sufficient predictions about the types of movements occurring in the region and whether or not proposed development would constitute a significant impact to animal movements.

[10] Santa Clara Valley HCP/NCCP website. http://www.scv-habitatplan.org/www/default.aspx. August 2011.

A number of reptiles, birds, and mammals may use the site as part of their home range and dispersal movements. However, the site itself lacks intrinsic features necessary for the regular movement of wildlife species through it in order to meet ecological requirements.

3.5.2 Biological Resources Impacts

3.5.2.1 *Thresholds of Significance*

For the purposes of this EIR, a biological resources impact is considered significant if the project would:

- 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
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means, or
- 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, or
- Conflict with any local ordinances protecting biological resources, such as a tree preservation ordinance, or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.5.2.2 *Discussion of Impacts*

Special-Status Plant and Animal Species

The implementation of the proposed project would result in the development of the project site with residential uses. The site would provide urban habitat for urban-adapted species with development of the site. Proposed development would not result in impacts to special-status plant and wildlife species, with the exception of burrowing owls, white-tailed kite, and non-listed raptors (not protected by the California Department of Fish and Game).

White-Tailed Kite and Non-Listed Raptors

The trees on the site provide suitable nesting habitat for the white-tailed kite, as well as more common raptor species also protected by the California Fish and Game Code. Although active stick nests or nests from previous years were not observed onsite or within 250 feet of the site, breeding pairs could choose to nest in the onsite trees or in the nearby trees in future years. Project construction at the time of nesting (February 1 through August 31) could induce the adults to abandon the nest when juveniles are present, thus leading to their starvation.

Tree removal or pruning of trees to remain, especially of large mature trees, during the February to August nesting season could impact tree-nesting raptors, such as white-tailed kite.

Impact BIO-1: Tree removal or pruning of retained trees during the nesting season could

impact protected tree-nesting raptors. Any loss of fertile bird eggs, or individual nesting birds, or any activities resulting in nest abandonment during construction, would constitute a significant impact. **(Significant Impact)**

Burrowing Owls

Development of the project site would result in the conversion of fallow field and banks of the irrigation ditches into habitat unsuitable for burrowing owls. The mortality of individuals that could move onto the site in the future would be considered significant. Should site grading occur during the nesting season for this species (February 1 through August 31) nest and nestlings that may be present would likely be destroyed. Resident owls may be buried in their nest burrows outside of the nesting season (September 1 through January 31).

Actions related to site development that result in the mortality of burrowing owls would constitute a violation of the federal Migratory Bird Treaty Act and provisions of the California Fish and Game Code. Therefore, the loss of these birds if they become established on the site in the future would result in a significant impact.

Standard Measures: In conformance with the City's Burrowing Owl Habitat Mitigation Plan, development proposed on the project site shall include the following measures for each phase of development (i.e. Preconstruction surveys will be conducted per phase. The entire site will not be surveyed all at once) to avoid impacts to burrowing owls:

SM BIO-2.1: A pre-construction survey shall be conducted by a qualified Burrowing Owl biologist no more than 30 days prior to initiation of any ground disturbing (construction) activity to assure take avoidance of burrowing owls. The survey shall consist of a habitat assessment, burrow survey, owl survey, and completion of a written report. If owls are observed during the pre-construction survey, no impacts to the owls or their habitat will be allowed during the nesting season (February 1 to August 31).

SM BIO-2.2: Should burrowing owls be found on the site during the breeding season (February 1 through August 31), exclusion zones with a 250-foot radius from occupied burrows, shall be established. All development-related activities shall occur outside of the exclusion area until the young have fledged.

SM BIO-2.3: If pre-construction surveys are conducted during the non-breeding season (September 1 through January 31) and burrowing owls are observed on the site, the owls may be relocated upon approval of the California Department of Fish and Game, in accordance with the Burrowing Owl Mitigation Plan.

Impact BIO-2: Conformance with the City's Burrowing Owl Habitat Mitigation Plan (or any adopted HCP/NCCP), including standard measures, SM BIO-1 through SM BIO-3, would ensure impacts to burrowing owls would be less than significant. **(Less Than Significant Impact)**

Bats

The development of the project site would result in the demolition of several buildings onsite. The

onsite buildings include residences, sheds, and a barn that may provide roosting habitat for bats, including the pallid bat. Since the project includes demolition of the onsite buildings, a detailed survey should be conducted.

Impact BIO-3: Demolition of onsite structures could impact roosting bats. Any loss of bats, would constitute a significant impact. **(Significant Impact)**

Plant Species

Due to the absence of suitable habitat and management of the site as an orchard for more than a century, it is unlikely that the ten special status species occurring in the region would find suitable habitat on the site.

Impact BIO-4: Development of the project site would not impact special status plant species. **(Less Than Significant Impact)**

Mature Trees

Implementation of the proposed project would result in the removal of all orchard trees and 58 non-orchard, ordinance-size trees. This includes five English walnuts, 28 coast live oaks, eight Northern California black walnuts, five American elm, two valley oaks, one blue oak, one pepper tree, one incense cedar, two olives, one pistachio, one coast redwood, one Monterey pine, and one Shamel ash.

Based on the tree survey and conceptual landscape plan for the proposed development, 226 existing trees will be maintained on the project site. This includes 141 Lombardy poplars, 82 coast live oaks, one California black walnut, one valley oak, and one almond. Figure 3.2-3 shows the conceptual landscape plan for the project site.

The proposed project would be required to conform to the City's Tree Removal Ordinance. Removal of orchard trees on the project site would not be considered a significant impact under the City's Municipal Code Tree Removal Ordinance. Removal or substantial changes in drainage or impact to root systems that could adversely affect tree health and condition of mature indigenous oaks is considered a significant impact, and would be subject to the following standard measures.

Standard Measures: In accordance with City of Morgan Hill Municipal Code and standard significant tree removal ordinance procedures, development on the project site would be subject to the following standard measures at the time of development.

SM BIO-5.1: The project proposes to exceed the tree replacement ratio as required by the City by a factor of three. The project proposes to replace native trees removed at a 3:1 ratio and non-native trees shall be replaced at a 3:1 ratio, unless practical reasons preclude this option, as determined by the Community Development Director. [MHMC 12.32.080(A)]

SM BIO-5.2: Prior to the removal of any tree or community of trees on any city or private property a tree removal permit would be required from the Community Development Director which would include a description of the tree replacement program and identify any additional conditions imposed by the City. Tree removal may also occur without a permit if the removal will take place in accordance with an approved landscape plan. [MHMC 12.32.030,

12.32.040, 12.32.060]

Impact BIO-5: The loss of many native and non-native trees in the project area due to development allowed under the proposed project would be reduced to a less than significant level with implementation of standard measures SM BIO-5.1 and 5.2. **(Less Than Significant Impact)**

Draft Habitat Conservation Plan

There is no adopted Habitat Conservation Plan for the project area at this time. If and when approved, the HCP/NCCP would cover the project site. The HCP/NCCP Planning Agreement between the local partners (including City of Morgan Hill) and the wildlife agencies requires that the agencies comment on reportable interim projects and recommend mitigation measures or project alternatives that would help achieve the preliminary conservation objectives and not preclude important conservation planning options or connectivity between areas of high habitat value.

Impact BIO-6: The proposed project would not conflict with any applicable adopted habitat conservation plan or natural community conservation plan. **(Less Than Significant Impact)**

Wetlands and Other Jurisdictions

There are no wetlands or other jurisdictional waters on site, but they are present in the area/watershed. The proposed project will require grading, excavation, and vegetation removal, thereby resulting in the project site becoming vulnerable to sheet, rill, or gully erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek/river beds, canals, and adjacent wetlands.

To avoid or minimize sedimentation to offsite waters (Coyote Creek located north of the site), development and implementation of best management practices for erosion and sedimentation control, as well as development of a SWPPP per the State Water Quality Control Board Stormwater Permit, will reduce impacts to downstream waters to a less than significant level.

Impact BIO-7: Demolition and grading activities could result in impacts to regulated habitats during construction. However, implementation of standard erosion control measures that employ Best Management Practices for erosion and sedimentation control, as well as compliance with provisions of a General Construction NPDES permit from the California Regional Water Quality Control Boards (both San Francisco and Monterey Bay), will reduce the potential for impacts to water quality in seasonal creeks, reservoirs, and downstream waters from the proposed project. **(Less Than Significant Impact)**

Movement Corridor

The site does not appear to constitute a movement corridor for native wildlife, although many species potentially move within it and through it. Site development will have little effect on home range and dispersal movements of native wildlife now using habitats where site development may eventually occur. Migratory species that now pass through the study area are neo-tropical migrant birds that are likely to pass through and over the site even when it is eventually developed. A considerable amount

of open space lands in the vicinity of the site will continue to be used by native species for home range and dispersal movements.

Impact BIO-8: The proposed project would not impact regional wildlife movements. **(Less Than Significant Impact)**

3.5.3 Mitigation Measures

As conditions of approval, in addition to the standard measures previously identified for burrowing owls and ordinance trees, the project proponent shall be responsible for the implementation of the following measures to reduce impacts to biological resources to a less than significant level:

3.5.3.1 *White-Tailed Kite and Non-Listed Raptors*

The following measures shall be implemented by the proposed project prior to each phase of construction (i.e. preconstruction surveys will be per phase) to reduce impacts to white-tailed kite and non-listed raptors:

MM BIO-1.1: Should project construction be scheduled to commence between February 1 and August 31, a pre-construction survey will be conducted by a qualified biologist for nesting birds within the onsite trees as well as all trees within 250 feet of the site. This survey will occur within 30 days of the onset of construction.

MM BIO-1.2: If pre-construction surveys undertaken during the nesting season locate active nests within or near construction zones, these nests and an appropriate buffer around them (as determined by a qualified biologist) will remain off-limits to construction until the nesting season is over. Suitable setbacks from occupied nests will be established by a qualified biologist and maintained until the conclusion of the nesting season.

3.5.3.2 *Bats*

The following measures shall be implemented by the proposed project during each phase of construction that would demolish an existing structure onsite, to ensure that roosting bat mortality from project construction is avoided:

MM BIO-3.1: A pre-construction survey will be conducted by a qualified bat biologist for roosting bats within 30 days of the on-set of construction. All suitable structures of the study area will be covered during this survey.

MM BIO-3.2: If a non-breeding bat colony is found and construction will not include demolition, then a construction-free buffer of 25 to 50 feet should be established around the structure, if construction will include demolition, then the individuals should be humanely evicted via the partial dismantlement of the buildings prior to demolition under the direction of a qualified bat specialist to ensure that no harm or "take" would occur to any bats as a result of demolition activities.

MM BIO-3.3: If a maternity colony is detected in the buildings, then a construction-free buffer shall be established around the structure and remain in place until it has been determined that the nursery is no longer active. If demolition is necessary, demolition should preferably be done between March 1 and April 15 or August 15 and October 15 to avoid interfering with an active nursery.

3.5.3.3 *Tree Protection Mitigation Measures*

MM BIO – 5.1: For the on-site trees proposed for preservation, a tree protection plan shall be completed by a certified arborist to the satisfaction of the City arborist. The plan shall demonstrate how tree protection shall be provided during and after construction. The key elements of a tree protection plan include; establishing Tree Protection Zones (TPZs) for each tree to be preserved; and providing supplemental irrigation during the demolition and construction phases of the project. The tree preservation plan shall include the following protective measures set forth in the tree survey prepared by *Moki Smith*:

Design Measures

- Locate structures, grade changes, etc. as far as feasible from the 'dripline' area of the tree.

Tree Protection During Construction

- Avoid root damage through grading, trenching, compaction, etc. at least within an area 1.5 times the 'dripline' area of trees. Where root damage cannot be avoided, roots encountered (over one inch diameter) should be exposed approximately 12 inches beyond the area to be disturbed (towards tree stem), by hand excavation, or with specialized hydraulic or pneumatic equipment, cut cleanly with hand pruners or power saw, and immediately back-filled with soil. Avoid tearing, or otherwise disturbing that portion of the root(s) to remain.
- Construct a temporary fence as far from the tree stem (trunk) as possible, completely surrounding the tree, and six to eight feet in height. Post no parking or storage signs outside/on fencing. Do not attach posting to the mainstem of the tree.
- Do not allow vehicles, equipment, pedestrian traffic; building materials or debris storage; or disposal of toxic or other materials inside of the fenced off area.

Tree Maintenance

- Avoid pruning immediately before, during, or immediately after construction impact. Perform only that pruning which is unavoidable due to conflicts with proposed development. Aesthetic pruning should not be performed for at least one to two years following completion of construction.
- Trees that will be impacted by construction may benefit from fertilization, ideally performed in the fall, and preferably prior to any construction activities, with not more than six pounds of actual nitrogen per 1,000 square feet of accessible 'drip line' area or beyond.
- Mulch 'rooting' area with an acidic, organic compost or mulch.

- Arrange for periodic (biannual/quarterly) inspection of tree's condition, and treatment of damaging conditions (insects, diseases, nutrient deficiencies, etc.) as they occur, or as appropriate.
- Individual trees likely to suffer significant impacts may require specific, more extensive efforts and/or a more detailed specification than those contained within these general guidelines.

3.5.4 Conclusion

Impact BIO – 1: The proposed project, with the implementation of the above standard and mitigation measures, would not result in significant impacts to white-tailed kites and raptors. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO – 2: The proposed project, with the implementation of the above standard measures, would not result in significant impacts to burrowing owls. **(Less than Significant Impact)**

Impact BIO – 3: The proposed project, with the implementation of the above mitigation measures, would not result in significant impacts to roosting bats. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO – 4: The proposed project would not result in significant impacts to special status plant species. **(Less than Significant Impact)**

Impact BIO –5: The proposed project, with the implementation of the above mitigation measures, would not result in significant impacts to existing trees onsite. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO – 6: The proposed project would not result in significant impacts to any applicable adopted habitat conservation plan or natural community conservation plan. **(Less than Significant Impact)**

Impact BIO – 7: The proposed project would not result in significant impacts to wetland habitats. **(Less than Significant Impact)**

Impact BIO – 8: The proposed project would not result in significant impacts to wildlife movement corridors. **(Less than Significant Impact)**

3.6 AIR QUALITY

3.6.1 Existing Setting

3.6.1.1 *Overview*

Air pollution typically refers to air that contains chemicals in concentrations that are high enough to cause adverse effects to humans, other animals, vegetation, or materials. Air pollutants include those from natural sources (e.g., forest fires, volcanic eruptions, windstorms, etc.) and human sources (e.g., factories, transportation, power plants, etc.). In Morgan Hill, vehicular emissions are the predominant source of air pollutants.

In recognition of the adverse effects of degraded air quality, Congress and the California Legislature enacted the Federal and California Clean Air Acts, respectively. As a result of these laws, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for what are commonly referred to as "criteria pollutants," because they set the criteria for attainment of good air quality. Criteria pollutants include carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, and particulate matter. In general, the California standards are more stringent than the federal standards. Table 3.6-1 lists these pollutants, their sources and effects, and the related standards.

The Bay Area Air Quality Management District (BAAQMD) oversees air quality in the San Francisco Bay Area. Its roles include the issuance of permits for stationary sources that emit pollutants, the development and oversight of pollutant reduction strategies, the monitoring of air quality, and the enforcement of air quality regulations.

BAAQMD also operates its Toxic Air Contaminant Control Program, which implements and enforces all Maximum Achievable Control Technology (MACT) standards and Airborne Toxic Control Measures (ATCMs) pertaining to the emission of such substances from stationary sources. This program also monitors the concentrations of toxic air contaminants at various locations in the Bay Area.

Despite the substantial growth of the Bay Area in recent decades, overall air quality has been improving. The improvement is primarily due to the implementation of measures that have reduced emissions from both stationary sources (e.g., factories, power plants, refineries, etc.) and mobile sources (e.g., automobiles, buses, trucks, aircraft, etc.). Complementing source-control measures are a variety of strategies, policies, and programs that are designed to improve air quality. These include programs to buy-back older automobiles and gasoline-powered lawnmowers, incentives for replacing older wood-burning stoves and fireplaces, incentives/subsidies for transit riders/carpoolers, incentives for purchasing low-emission products, Spare-the-Air campaigns, and local land use policies that result in a reduction in the number/length of vehicle trips. The latter category includes locating jobs near housing, constructing mixed-use developments, and zoning land along rail corridors for higher densities.

Table 3.6-1
Major Criteria Air Pollutants and Standards

	Pollutant					
	Ozone	**Carbon Monoxide**	**Nitrogen Dioxide**	**Sulfur Dioxide**	**PM_{10}**	**$PM_{2.5}$**
Health Effects	Eye irritation, respiratory function impairment	Aggravation of cardio-vascular disease, fatigue, headache, confusion, dizziness, can be fatal	Increased risk of acute and chronic respiratory disease	Aggravation of lung disease, increased risk of acute and chronic respiratory disease	Aggravation of chronic disease and heart/lung disease symptoms	Aggravation of chronic disease and heart/lung disease symptoms
Major Sources	Combustion sources, evaporation of solvents and fuels	Combustion of fuel, combustion of wood in stoves and fireplaces	Motor vehicle exhaust, industrial processes, fossil-fueled power plants	Diesel exhaust, oil power plants, industrial processes	Combustion, cars, field burning, factories, unpaved roads, construction	Combustion, cars, field burning, factories, unpaved roads, construction
Federal Standard	1-hr: n/a	1-hr: 35ppm	1-hr: n/a	1-hr: n/a	24-hr: 150 $\mu g/m^3$	24-hr: 35 $\mu g/m^3$
	8-hr: .075ppm	8-hr: 9ppm	AA: .05ppm	24-hr:.14ppm AA: .03ppm	AA: n/a	AA: 15 $\mu g/m^3$
State Standard	1-hr: .09ppm	1-hr: 20ppm	1-hr: .18ppm	1-hr: .25ppm	24-hr: 50 $\mu g/m^3$	24-hr: n/a
	8-hr: .07ppm	8-hr: 9ppm	AA: .03ppm	24-hr:.04ppm AA: n/a	AA: 20 $\mu g/m^3$	AA: 12 $\mu g/m^3$
Bay Area Attainment Status	federal – N state (8-hr) – N state (1-hr) – N	A	A	A	federal – U state – N	federal (24-hr) – U federal (AA) -A state – N

Attainment Status: A = attainment N = nonattainment, U = Unclassified

PM10 = particulate matter, 10 microns in size PM2.5 = particulate matter, 2.5 microns in size
ppm = parts per million µG/m3 = micrograms per cubic meter
AA = annual average 1-hr = 1-hour average 8-hr = 8-hour average
24-hr = 24-hour average n/a = not applicable

Source: California Air Resources Board, Ambient Air Quality Standards, 2009.

As shown in Table 3.6-1, the Bay Area is designated as an "attainment area", meaning the area meets the relevant standards, for carbon monoxide, nitrogen dioxide, and sulfur dioxide. The region is classified as a "nonattainment area" for the eight-hour federal and state ozone standards and the state one-hour ozone standard. The area does not meet the state standards for particulate matter (PM_{10} or $PM_{2.5}$) but is in attainment of the federal $PM_{2.5}$ annual average standard.

3.6.1.2 *Ambient Air Quality*

The project area is within the San Francisco Bay Area Air Basin. The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that monitors and regulates air pollution at several locations within the air basin. The closest multi-pollutant monitoring stations to the project site are located in San Martin and in Gilroy. All of the ambient air quality standards are met in the project area.[11]

[11] BAAQMD.

3.6.1.3 *Toxic Air Contaminants*

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

3.6.1.4 *Sensitive Receptors*

The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, schools playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. The residential neighborhoods surrounding the site are considered sensitive receptors, as are the future residents of the proposed project.

3.6.2 Air Quality Impacts

3.6.2.1 *Thresholds of Significance*

For the purposes of the development project, an air quality impact is significant if the project will:

- Conflict with or obstruct implementation of the 2010 *Bay Area Clean Air Plan*; or
- Violate an ambient air quality standard or contribute substantially to an existing or projected air quality violation; or
- 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; or
- Expose sensitive receptors to substantial pollutant concentration; or
- Create objectionable odors affecting a substantial number of people.

3.6.2.2 *Regional Air Quality Impacts*

Vehicle trips generated by the project would result in air pollutant emissions affecting the entire San Francisco Bay Air Basin. Regional emissions associated with anticipated net new development through the year 2020 were calculated using the URBEMIS2007 emission model and are provided in Appendix F.

The incremental daily emission increase associated with project land uses is identified in Table 3.6-2 for reactive organic gases and oxides of nitrogen (two precursors of ozone) and PM_{10}. The BAAQMD has established thresholds of significance for ozone precursors (NOx, ROG, and $PM_{2.5}$)

http://www.baaqmd.gov/~/media/Files/Communications%20and%20Outreach/Annual%20Bay%20Area%20Air%20Quality%20Summaries/pollsum09.ashx.

of 54 pounds per day, and PM_{10} of 82 pounds per day. Proposed project emissions shown in Table 3.6-2 would not exceed the threshold of significance for any regional emissions, therefore, the proposed project would have a less than significant impact on regional air quality due to increases in ozone and particulate matter.

Table 3.6-2
Proposed Project Criteria Pollutant Emissions Calculations (Year 2020)

	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	PM_{10}	$PM_{2.5}$
Area Sources	4.93	1.35	0.00	0.00
Vehicles	2.50	2.56	8.71	1.64
Total	7.43	3.91	8.71	1.64
BAAQMD Significance Threshold	54.0	54.0	82.0	54.0

Impact AQ-1: The proposed project would not result in an increase in regional air pollutant emissions in excess of BAAQMD thresholds and, therefore, the project would result in a less than significant impact to regional air quality. **(Less Than Significant Impact)**

3.6.2.3 *Toxic Air Contaminants and Odors*

The California Air Resources Board published an air quality/land use handbook in 2005.[12] The handbook, which is advisory and not regulatory, was developed in response to recent studies that have demonstrated a link between exposure to poor air quality and respiratory illnesses, both cancer and non-cancer related. The CARB handbook recommends that planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners and large gasoline service stations.

Common TAC sources are gasoline stations, emergency diesel generators, dry cleaners and some industrial processes. All these sources are regulated by the BAAQMD. Such sources are subject to the rules and regulations of the District, which currently require that all sources of TACs be evaluated for health risks prior to issuance of a permit.

The proposed project does not place sensitive receptors near major stationary or mobile sources of TACs. There are no major odor sources within or near the project area. The impacts of the proposed project related to health risks from TACs and exposure to odors, therefore, would be less than significant.

Impact AQ-2: Development of the proposed project would not be subject to any major sources of stationary or mobile sources of TACs or odor sources. **(Less Than Significant Impact)**

[12] CARB. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005.

3.6.2.4 *Short-Term Construction Impacts*

Construction Dust Emissions

The proposed project includes removal of existing orchards and demolition of existing structures on the site. The physical demolition of existing structures and orchards, has a high potential for creating air pollutants. In addition to the dust created during demolition, substantial dust emissions could be created as debris is loaded into trucks for disposal, and orchard trees are uprooted and removed from the site. The realignment of Peet Road will also create dust during removal of the existing roadway and grading activities.

According to the BAAQMD CEQA Guidelines, emissions of ozone precursors (ROG and NOx) and carbon monoxide related to construction equipment are already included in the emission inventory that is the basis for regional air quality plans, and thus are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area.

Although construction activities would be temporary, they would have the potential to cause both health air quality impacts and nuisance. PM_{10} is the pollutant of greatest concern associated with dust. If uncontrolled, PM_{10} levels downwind of actively disturbed areas could possibly exceed state standards. In addition, dust fall on adjacent properties could be a nuisance.[13]

Impact AIR – 3: Construction activities, particularly generation of construction dust, if uncontrolled, could result in significant short-term air quality impacts. **(Significant Impact)**

Construction Toxic Air Contaminant Emissions

A Construction Emission Health Risk Analysis was prepared by *Illingworth & Rodkin (I&R)* for the proposed project in July 2012. The complete analysis is provided in Appendix F.

Construction of proposed development would require the use of various diesel-powered vehicles and equipment. In 1998 the California Air Resources Board identified particulate matter from diesel fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as having the highest associated risk.

Screening tables provided by the Bay Area Air Quality management District (BAAQMD) indicate that a project with 250 residential units has the potential for significant health risk impacts out to 300 meters (or almost 1,000 feet). The primary concern is increased cancer risk associated with diesel particulate matter (DPM) emissions from on-site activities. Since existing residences are located within 500 feet of the site, a health risk assessment of the project construction activities was conducted that evaluated potential health effects on sensitive receptors from construction emissions of DPM. Anticipated construction schedules and equipment usage projections were used with the California Air Resources Board's emission factor model to compute annual DPM emissions. These data were input to a dispersion model used to predict the off-site DPM concentrations resulting from project construction so that potential increases in lifetime cancer risks could be estimated.

Increased cancer risks were calculated using the maximum modeled annual concentrations and

[13] The word nuisance is used in this EIR to mean "annoying, unpleasant or obnoxious" and not in its legal sense.

BAAQMD recommended risk assessment methods for both a child exposure (3rd trimester through 2 years of age) and for an adult exposure. Since the modeling was conducted assuming emissions occurred 365 days per year, the default OEHHA[14] exposure period of 350 days per year was used.

Results of this assessment indicate an incremental residential child cancer risk of 4.5 cancer cases per million, a residential adult incremental cancer risk of 0.3 cancer cases per million. The residential child and adult increased cancer risks are all below the BAAQMD's threshold of 10 excess cancer cases per million.

Impact AQ-4: Health risks from construction emissions of diesel particulates would not result in significant air quality impacts. **(Less Than Significant Impact)**

3.6.3 Mitigation Measures

3.6.3.1 *Construction Dust Emissions*

MM AIR-3.1: The proposed project includes the following construction practices that can reduce construction dust/air quality impacts to a less than significant level. BAAQMD has prepared a list of feasible construction dust control measures that can reduce construction impacts to a level that is less than significant. The following construction practices shall be implemented during construction of the proposed project:

- All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

[14] OEHHA 2003. Air Toxics Hot Spots Program Risk Assessment Guid*elines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. August 2003.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- 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.
- 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.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- 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.
- Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-3.2: The following are additional mitigation measures recommended by the BAAQMD to reduce engine exhaust emissions:

- Use alternative fueled construction equipment, when feasible.
- Minimize idling time (five minutes maximum).
- Maintain properly tuned equipment.
- Limit the hours of operation of heavy equipment and/or the amount of equipment in use.

3.6.4 Conclusions

Impact AQ-1: The proposed project's contribution to regional pollutant emissions would be below BAAQMD's significance threshold. **(Less Than Significant Impact)**

Impact AQ-2: Development of the proposed project would not be subject to any major sources of stationary or mobile sources of TACs or odor sources. **(Less Than Significant Impact)**

Impact AQ-3: Proposed development of the project area, with the implementation of the construction dust and exhaust emission controls identified above, would not result in significant short-term air quality impacts. **(Less Than Significant Impact with Mitigation)**

Impact AQ-4: Toxic air contaminant emissions from construction would not result in significant health risks air quality impacts. **(Less Than Significant Impact)**

3.7 GREENHOUSE GAS EMISSIONS

The following discussion is based upon a greenhouse gas emissions analyses prepared by *Illingworth and Rodkin, Inc.* in March 2012. A copy of the report is provided in Appendix G of this EIR.

3.7.1 Existing Setting

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas emissions is based upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32), the 2006 and 2009 Climate Action Team (CAT) reports to Governor Schwarzenegger and the Legislature, and research, information and analysis completed by the International Panel on Climate Change (IPCC), the United States Environmental Protection Agency, California Air Resources Board, and the CAT.

Global climate change refers to changes in weather including temperatures, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic (generated by mankind) atmospheric gases such as carbon dioxide, methane, and nitrous oxide.[15] These gases allow sunlight into the Earth's atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the Earth's energy balance. This phenomenon is known as the greenhouse effect.

Naturally occurring greenhouse gases include water vapor[16], carbon dioxide, methane, nitrous oxide, and ozone. Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but are for the most part solely a product of industrial activities.

Agencies at the international, national, state, and local levels are considering strategies to control emissions of gases that contribute to global warming. There is no comprehensive strategy that is being implemented on a global scale that addresses climate change; however, in California a multi-agency "Climate Action Team", has identified a range of strategies and the Air Resources Board (ARB), under Assembly Bill (AB) 32, has approved the *Climate Change Scoping Plan***.** AB 32 requires achievement by 2020 of a statewide greenhouse gas emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions. The ARB and other state agencies are currently working on regulations and other initiatives to implement the *Scoping Plan*. By 2050, the state plans to reduce emissions to 80 percent below 1990 levels.

The California Natural Resources Agency, as required under state law (Public Resources Code §21083.05) has amended the State CEQA Guidelines to address the analysis and mitigation of greenhouse gas emissions. In the recently adopted changes to the CEQA Guidelines, Lead Agencies, such as the City of Morgan Hill, retain discretion to determine the significance of impacts from greenhouse gas emissions based upon individual circumstances.

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[15] IPCC, Summary for Policymakers. In: Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2007. Available at: http://ipcc.ch/

[16] Concentrations of water are highly variable in the atmosphere over time, with water occurring as vapor, cloud droplets and ice crystals. Changes in its concentration are also considered to be a result of climate feedbacks rather than a direct result of industrialization or other human activities. For this reason, water vapor is not discussed further as a greenhouse gas.

Neither CEQA nor the CEQA Guidelines provide a specific methodology for analysis of greenhouse gases. Under the 2010 amendments to the CEQA Guidelines, a Lead Agency may describe, calculate, or estimate greenhouse gas emissions resulting from a project and use a model and/or qualitative analysis or performance-based standards to assess impacts.

Given the global scope of global climate change, the challenge under CEQA is for a Lead Agency to translate the issue down to the level of a CEQA document for a specific project in a way that is meaningful to the decision making process. Under CEQA, the essential questions are whether a project creates or contributes to an environmental impact or is subject to impacts from the environment in which it would occur, and what mitigation measures are available to avoid or reduce impacts.

3.7.1.1 *BAAQMD CEQA Guidelines*

BAAQMD adopted an updated version of its CEQA air quality thresholds (June 2010) and developed guidelines for assessing and mitigating impacts under CEQA, including thresholds for greenhouse gas emissions. Under the June 2010 threshold, if a project would result in operational-related greenhouse gas emissions of 1,100 metric tons of carbon dioxide equivalents a year or more or emissions greater than 4.6 metric tons of carbon dioxide equivalents per Service Population (residents and employees) per year, it would make a cumulatively considerable contribution to greenhouse gas emissions and result in a cumulatively significant impact to global climate change. A threshold for stationary sources[17] of 10,000 metric tons of carbon dioxide equivalents a year also was adopted. The guidelines also outline a methodology for estimating greenhouse gases, including use of the URBEMIS model and a BAAQMD Greenhouse Gas Model (BGM) for direct emissions from land use projects.

On March 5, 2012, the Alameda County Superior Court issued a judgment that BAAQMD had failed to comply with CEQA when it adopted its Thresholds. The Court issued a writ of mandate ordering the District to set aside the Thresholds and cease disseminating them until the District fully complies with CEQA. The City understands the effect of the lawsuit to be that BAAQMD eventually will have to prepare an environmental review document before adopting the same or revised thresholds. However, the ruling in the case does not equate to a finding that the quantitative metrics in the BAAQMD thresholds are incorrect or unreliable for meeting AB 32's climate protection goals. Moreover, the determination of whether a project may have a significant effect on the environment is subject to the discretion of each individual lead agency, based upon substantial evidence. Notwithstanding the lawsuit, which has no binding or preclusive effect on the City of Morgan Hill's discretion to decide on the appropriate thresholds to use for determining the significance of greenhouse gas emissions impacts, the City has carefully considered the thresholds prepared by BAAQMD and regards the quantitative thresholds to be based on the best information available for the San Francisco Bay Area Air Basin.

The project size, 244 single-family dwelling units and up to 180 secondary dwelling units, exceeds the screening size listed by BAAQMD as having less than significant GHG emissions. Therefore, a refined analysis that includes modeling of GHG emissions from the project was prepared.

3.7.1.2 *Local Regulatory Overview*

The City of Morgan Hill does not currently have an adopted Greenhouse Gas Reduction Strategy as

[17] Stationary sources, such as boilers and emergency backup generators, burn fuels and directly emit greenhouse gases from combustion.

defined under the CEQA Guidelines or BAAQMD CEQA Guidelines.

Morgan Hill Municipal Code

The City of Morgan Hill Municipal Code includes requirements for energy and water conservation for new and existing development within the City. These measures include the Water Conserving Landscapes Ordinance adopted in February 2006. This ordinance regulates landscape design, construction, and maintenance. It promotes efficient water use and management of peak season water demands. The Morgan Hill Municipal Code requires all buildings to conform to the energy conservation requirements of California Administrative Code Title 24. In addition, the 2010 California Green Building Standards (CALGreen) Code, which includes more stringent requirements for energy and water conservation in new construction, became effective statewide on January 1, 2011.

City of Morgan Hill Environmental Agenda

In 2007, the City Council adopted an Environmental Agenda to enhance the long-term sustainability of Morgan Hill by reducing environmental impacts, increasing community health, and protecting environmental resources for future generations. Progress on environmental goals is assessed on a yearly basis.

To promote and provide opportunities for residents to reduce GHG emissions, the City of Morgan Hill has taken the following steps:

- Posting a carbon calculator on the City's website that is specifically designed for Morgan Hill residents to help conceptualize their contribution to global warming and to provide strategies for reducing emissions;
- Promoting bicycling and walking to City of Morgan Hill events through giveaways;
- Requiring green building checklists to be filled out with building permits, and updating residential development control system criteria to strengthen green building incentives;
- Researching programs that would allow residents to purchase local carbon offsets that would directly benefit the community;
- Implementing programs to reduce the cost of installing solar systems;
- Arranging free bus service for VTA community bus route 16 on Earth Day;
- Providing educational material with utility bills; and
- The Sustainable Buildings Ordinance was adopted on December 16, 2009, which established "green building" requirements for both residential and non-residential development.

3.7.1.3 *Existing Baseline Emissions*

The existing agricultural activities on the project site create a direct and indirect source of greenhouse gas emissions from water usage, and use of farming equipment. Existing residences (a combination of approximately six farm camp houses, two trailer homes, and a single family residence) on the site create minimal source of greenhouse gas emissions related to natural gas, electricity use, and transportation.

3.7.2 Greenhouse Gas Emissions Impacts

3.7.2.1 *Thresholds of Significance*

For the purposes of the EIR, a greenhouse gas emission impact is significant if the project will:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
- Result in greenhouse gas emissions in excess of 1,100 MT CO_{2e}/Yr or 4.6 MTCO_{2e}/yr per service population

3.7.2.2 *Greenhouse Gas Emissions From the Project*

Given the overwhelming scope of global climate change, it is not anticipated that a single development project would have an individually discernable effect on global climate change. It is more appropriate to conclude that the greenhouse gas emissions generated by the proposed project would combine with emissions across the state, nation, and globe to cumulatively contribute to global climate change.

Greenhouse gas emissions from the proposed project would include emissions from construction and operations. The greenhouse gas emissions would include:

- Construction emissions;
- Mobile emissions (e.g., emissions from combustion of fossil fuels for vehicle trips to and from the sites)
- Emissions from the generation of electricity to operate lighting, appliances, heating/cooling systems, and to convey water to the sites.

For the purposes of this EIR, the significance of emissions of greenhouse gases is evaluated based on a quantitative discussion of estimated net new greenhouse gas emissions.

Operational Emissions

Using the Greenhouse Gas Model (BGM) developed by BAAQMD, various factors including mobile emissions, a projected model year, per capita rate, and trip generation rates were applied to the model to provide a GHG emissions estimate resulting from the proposed project. The BGM model provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport.

The model is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. The Year 2020 was selected, since BAAQMD thresholds are based on meeting the AB32 reduction goals by 2020, and the project would be nearly fully built out. Project-specific trip generation was used in the analysis, as reported by *Fehr & Peers*.[18]

The number of persons that would be living at the project was calculated assuming that there would be an average of 3.08 persons per single-family residential unit and 1.54 persons per secondary unit. This

[18] Fehr & Peers. Final Transportation Impact Analysis Borello Residential Development. March 2012, see Appendix L.

average occupancy rate is based on the average persons per household assumed in the Morgan Hill General Plan. This equates to 1,029 new residents.

Area Sources (including Natural Gas and Electricity Consumption)

The proposed project would have to meet 2010 Title 24 standards that are approximately equivalent to LEED Silver certification. The proposed project has committed to scoring 131 Build It Green points. Therefore, energy efficiency would be at least 25 percent greater than the model assumed Title 24 standards (prior to the 2005 Title 24 amendments). In addition, the proposed project would include solar panels on 100-percent of the single family homes. These adjustments, as well as the following were made in the BGM model.

- Energy efficiency of the project, as discussed above, was assumed to be 25 percent greater than pre-2005 Title 24 standards;
- A minimum waste diversion rate of 50%, consistent with the rate currently met in Santa Clara County.
- 100 percent of the homes would include solar power, which are expected to generate 1,163,880 kilowatts hours of electricity per year.
- Emissions associated with electricity consumption output by BGM were adjusted to account for Pacific Gas & Electric utility's (PG&E) lower emission rate. BGM uses a Statewide rate of 805 pounds of CO_2 per megawatt of electricity produced, while the rate for PG&E is much lower[19]. The PG&E rate was also adjusted to account for increased use of renewable sources. The current Renewable Portfolio standard (RPS) of 13 percent was assumed to increase to 20 percent by 2020.[20] The derived 2020 rate for PG&E was estimated at 526 pounds of CO_2 per megawatt of electricity delivered.

GHG Emissions

The results of the BGM model analysis in terms of annual metric tons of equivalent CO_2 emissions (MT of CO_2e/yr) are presented below in Table 3.7-1. As shown below, the project would exceed the thresholds of 1,100 MT of CO_2e/yr. Therefore, the rate of project GHG emissions (in terms of annual emissions per person) was compared to the GHG efficiency significance threshold of 4.6 MT CO_2e/year per service population established by BAAQMD.

Impact GHG-1: The project service population emissions would be 2.78 MT CO_2e/year, which would not exceed the BAAQMD significance threshold. **(Less Than Significant Impact)**

[19] CARB, CCAR, ICLEI, and the Climate Registry. Local Government Operations Protocol For the quantification and reporting of greenhouse gas emissions inventories, Version 1.1 May 2010. *Table G.6 of Appendix G provides PG&E's Utility-Specific Verified Electricity CO2 Emission Factors. The years 2005 through 2007 were averaged.*

[20] BAAQMD. CEQA Guidelines Update – Thresholds of Significance. June 2010. Page 19 discusses the effect of the renewable portfolio Standard (rules) on PG&E's portfolio.

Table 3.7-1: Net New GHG Emissions-CO2e				
Source Category	**Unmitigated Emissions (metric tons per year)**	**Emissions with Project and City Conditions (metric tons per year)**	**VMT forecast from Fehr & Peers and Emissions converted for PG&E rates adjusted for RPS**	**BAAQMD Threshold of Significance**
Transportation	3516	3334	2004[1]	
Area Source	4	4	4	
Electricity	953	396	143	
Natural Gas	858	444	444	
Water and Wastewater	67	65	23	
Solid Waste	487	243	243	
TOTAL			**2862**	**1,100**
Emission per service population			**2.78**	**4.6**

[1] Used Fehr & Peers trip rates and adjusted for difference in forecasted VMT. Includes adjustments for sidewalks (single and both sides) and new bicycle lanes.

Construction Emissions

The URBEMIS2007 model was used to predict construction emissions in the form of CO_2. An approximate one-year construction schedule for each phase was assumed in the modeling. Construction phases included the following:

- Fine site grading, utilities, and paving was assumed to last two months;
- Trenching was used to address the installation of wet and dry utilities that would last about one month;
- Paving was assumed to occur at the same time as trenching. This phase would last one month; and
- Building construction would start when site preparation is completed and last for 10 months.

CO_2 emissions associated with construction were assumed to occur in between 2012 and approximately 2023. Under this scenario, construction of each phase of the project would emit 969 metric tons of CO_2. These would be temporary emissions. Neither the City of Morgan Hill nor the BAAQMD have quantified thresholds for construction activities. **(Less Than Significant Impact)**

3.7.3 Conclusion

Impact GHG-1: Implementation of the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. **(Less Than Significant Impact)**

3.8 ENERGY

This section was prepared pursuant to Appendix F of the CEQA Guidelines, which requires that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The information in this section is based largely on data and reports produced by the California Energy Commission and the Energy Information Administration of the U.S. Department of Energy.

3.8.1 Introduction

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g. oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

Energy use is typically quantified using the British Thermal Unit (Btu). As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 123,000 Btus, 1,000 Btus, and 3,400 Btus, respectively.

Electrical energy is expressed in units of kilowatts (kW),[21] megawatts (MW = 1,000 kW), gigawatts (GW = one million kW), or terawatt hours (TWh = one billion kWh). One kWh is equal to the amount of energy expended by 1,000 watts (the typical electricity that is consumed by a 1,000 watt hand-held hair dryer) over the period of an hour.

3.8.1.1 *Regulatory and Existing Setting*

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g. the *EnergyStar* [M] program,) and transportation (e.g. fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets forth energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the *Flex Your Power* program promotes conservation in multiple areas.

Total energy usage in California was 8,003 billion Btu in the year 2009 (the most recent year for which this specific data is available). Of California's total energy usage in 2009, the consumption breakdown by sector was approximately 1,527 billion Btu for residential uses, 1,578 billion Btu for commercial uses, and 1,769 billion Btu for industrial uses, and 3,129 billion Btu for transportation.[22] This energy is primarily supplied in the form of coal, natural gas, petroleum, nuclear electric power, and hydroelectric power.

3.8.1.2 *Electricity*

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico. The electricity is produced from power plants fueled by natural gas (41.9 percent), coal (7.7 percent), hydro (10.8 percent), nuclear (13.9

[21] Under the International System of Units (SI), one kWh is equivalent to 3.6 megajoules, which is the amount of energy converted if work is done at an average rate of one thousand watts for one hour.
[22] United States Energy Information Administration. State Energy Profiles. N.d. Available at: http://www.eia.gov/state/state-energy-profiles-data.cfm?sid=CA#Consumption

percent), and renewable (13.7 percent).[23] Electricity consumption in California increased by approximately 17 percent from approximately 245,000 gigawatt hours (GWh) in 1998 to approximately 286,800 GWh in 2008, and is forecasted to increase another 13 percent to approximately 325,000 GWh in 2018.[24] By this time, California utilities will need to procure approximately 24,000 MW of resources to replace expiring contracts and retiring power plants, and to meet peak demand, which is significantly higher than off-peak demand.

Electricity usage for differing land uses varies substantially by the type of uses in a building, the type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Most electricity used in California is consumed by the commercial sector (37 percent), residential sector (32 percent), and industrial sector (approximately 15 percent).[25] The average annual usage of electricity is approximately 6,456 kilowatt hours (kWh) per household.[26]

The project site is currently developed with orchards and associated agricultural structures, therefore, existing electricity use is minimal.

3.8.1.3 *Gasoline for Motor Vehicles*

California is the third highest producer of transportation fuels in the nation, with a crude oil distillation capacity of more than 2.0 million barrels per day.[27] Approximately 38 percent of crude oil used in California is produced in-state, while 14 percent comes from Alaska and 48 percent from foreign sources.[28] Californians currently use roughly 49.5 million gallons of gasoline and diesel each day. According to the California Energy Commission's *2009 Integrated Energy Policy Report*, California is experiencing a downward trend in sales of gasoline, diesel, and jet fuel. It is expected that gasoline consumption will decrease in the future largely due to high fuel prices, efficiency gains, competing fuel technologies, and mandated increases of alternative fuel use.

The average fuel economy for the fleet of light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from about 13.1 miles-per-gallon (mpg) in the mid-1970s to the 21.1 mpg (estimated 2009 rate).[29] At this rate, driving 12,000 miles in a year would equate to an annual gasoline usage of approximately 570 gallons. While federal standards have not substantially changed in the last 22 years, the Energy Independence and Security Act, which mandates a national fuel economy standard of 35 miles per gallon by 2020, was passed in 2007.[30]

It is estimated that the proposed residential uses on the site generate 3,255 daily vehicle trips.[31]

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[23] California Energy Commission, Energy Almanac, "Total Electricity System Power." Available at: http://www.energyalmanac.ca.gov/electricity/total_system_power.html.
[24] California Energy Commission, *2010 Integrated Energy Policy Report* (CEC-100-2009-003-CMF), 2010. Pages 49 and 51.
[25] Ibid, page 3.
[26] PG&E, Carbon Footprint Calculator Assumptions, http://www.pge.com/myhome/environment/calculator/assumptions.shtml, viewed August 24, 2011.
[27] United States Energy Information Administration. "California State Energy Profile." Available at: http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA#Datum.
[28] California Energy Commission, *2009 Integrated Energy Policy Report* (CEC-100-2009-003-CMF). 2009. Page 148.
[29] United States Environmental Protection Agency, *Light-Duty Automotive Technology, Carbon Dioxide Emissions and Fuel Economy Trends: 1975 through 2009*, November 2009. Page iii. Available at: http://www.epa.gov/oms/cert/mpg/fetrends/420s09001.pdf.
[30] The White House, *Energy Security for the 21st Century*, February 20, 2008, http://www.whitehouse.gov/infocus/energy/.
[31] Fehr & Peers Transportation Consultants. Transportation Impact Analysis. March 14, 2012.

Assuming the average vehicle trip is about 6.38 miles (approximately 0.048 gallons/mile), 363,836 gallons are used annually.

3.8.1.4 *Natural Gas*

In 2005, California used approximately 5.7 trillion cubic feet of natural gas per day.[32] Of the natural gas used in California, approximately 22 percent was used by residential uses, 10 percent by commercial uses, 26 percent by industrial uses, and 42 percent by other uses.[33]
Natural gas usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all gas-consuming devices within a building.

California imports 85 percent of its natural gas supplies from other states and Canada.[34] California's natural gas supplies are increasingly threatened by declining production in the US and growing demand in neighboring states.[35] Meeting peak demand under extreme weather conditions may require gas infrastructure improvements (e.g., additional pipeline capacity) earlier than currently programmed.

The project site is currently developed with orchards and associated agricultural structures, therefore, the increase in natural gas use for the proposed 244 residences and up to 180 secondary units on the site would be substantial.

3.8.2 Energy Impacts

3.8.2.1 *Thresholds of Significance*

For the purposes of this EIR, an energy impact would be considered significant if the project would:

- Use fuel or energy in a wasteful manner;
- Result in a substantial increase in demand upon energy resources in relation to projected supplies; or
- Result in longer overall distances between jobs and housing.

3.8.2.2 *Discussion of Impacts*

The proposed project would be constructed to meet the requirements of Title 24 of the California Administrative Code, as it pertains, to energy efficiency. Proposed development would consume energy during the demolition, construction and operational phases of the development. The demolition phase would require energy for the removal of the existing trees and structures on the site, the construction phase would require energy for the manufacture and transportation of building materials, preparation of the project site (e.g. grading), and the actual construction of the buildings and infrastructure. The operational phase would consume energy for multiple purposes including, but not limited to, heating and cooling, lighting, appliances, and electronics. Operational energy

[32] California Energy Commission. California Natural Gas Demand 2005. Table. 5 September 2006. Available at: http://www.energy.ca.gov/naturalgas/statistics/natural_gas_demand.html. Accessed: 4 May 2007.
[33] California Energy Commission. California Natural Gas Demand 2005. Table. 5 September 2006. Available at: http://www.energy.ca.gov/naturalgas/statistics/natural_gas_demand.html. Accessed: 4 May 2007.
[34] California Energy Commission. California's Major Sources of Energy. 16 April 2007. Available at: http://www.energy.ca.gov/html/energysources.html. Accessed 4 May 2007.
[35] California Energy Commission. 2005 Integrated Energy Policy Report. November 2005. Page 137.

would also be consumed during each vehicle trip associated with the proposed use. Rough estimates of operational energy usage by the proposed project are provided in Table 3.8-1.

Table 3.8-1
Estimated Net Annual Average Energy Use (2030)

Land Use	Type of Energy	Usage/Unit	Number of Units/Trips	Annual Energy Used
Residential	Electricity	6,500 kWh/du/year	424	1,586,000 kWh
	Natural Gas	45,000 ft^3/ft^2/year		10,980,000 ft^3
Transportation	Gasoline	0.048 gallons/mile	3,255 daily trips	363,836 gallons
Notes: du= dwelling unit, ft^2= square feet, ft^3= cubic feet, kWh=kilowatt hour, Average vehicle trip length= 6.38 miles.				
Annual gasoline used = (trips/day)(6.38 miles/trip)(0.048 gallons/mile)(365 days/year) Electricity and natural gas usage based on PG&E Carbon Footprint Calculator Assumptions.				

The proposed project would result in a net increase in electricity, natural gas, and gasoline use in the City of Morgan Hill. Residences and buildings constructed in the project area would be built at minimum to Title 24 energy conservation standards and would also commit to 131 Build It Green points.[36] Energy efficiency would be at least 25 percent greater than the Title 24 standards (prior to the 2005 Title 24 amendments). Energy efficiency measures include:

- 100 percent of the 244 single-family homes would include solar power, which are expected to generated 1,230,300 kilowatt hours of electricity per year. This calculation assumes that 100 percent of the homes have solar panels. Each home would provide a minimum of 16 255-watt panels produce 5,060 kilowatt hours per year per home.[37]

Impact ENER-1: The proposed project would result in an increase in electricity demand; however, development would be built to exceed Title 24 energy conservation standards by 25 percent and would also commit to 131 Build It Green points, including installation of 100 percent of residences with solar paneling. The proposed project would minimize energy use and would not use energy in a wasteful manner, therefore resulting in a less than significant impact. **(Less Than Significant Impact)**

3.8.5 Conclusion

Impact ENER-1: The proposed project will not result in significant energy impacts. Implementation of the energy efficiency measures would further reduce energy impacts of project operation. **(Less Than Significant Impact)**

[36] Build It Green is a membership supported non-profit organization whose mission is to promote healthy, energy and resource efficient homes in California, by promoting green building principles including livable communities, energy efficiency, indoor air quality, resource conservation, and water conservation. http://www.builditgreen.org
[37] Monterey Energy Group, Brian Knight. Solar Generation Letter. February 27, 2012.

3.9 GEOLOGY, SOILS, AND SEISMICITY

The following discussion is based upon a fault exploration report prepared by *ENGEO Inc.* in October 2011, a site infiltration analysis prepared by *ENGEO Inc.* in September 2011, and a geotechnical exploration report prepared by *ENGEO Inc.* in February 2012. Copies of these reports are provided in Appendix H of this EIR.

3.9.1 Existing Setting

3.9.1.1 *Topography*

The project site is located on the floor of the Santa Clara Valley with elevations on the site ranging from approximately 407 to 474 feet above mean sea level. The Santa Clara Valley is situated between the Santa Cruz Mountains to the west and the Diablo Mountain Range to the east. Geologically speaking, the region developed recently, during the Cenozoic era, when these two mountain ranges grew as a result of both the folding and thrusting of the earth's crust, and active volcanoes. Thus, the Santa Clara Valley is a structural valley, created by the development of mountain ranges, rather than the result of erosion.

The property slopes downward overall to the west, with slope gradients typically on the order of less than five degrees. Steeper ground is found near the eastern slope (upslope) margin of the property, fronting on Coyote Road. The grading plan shows cutting and filling up to 10 and 25 feet, respectively, in order to achieve conceptual design grades. This will be accomplished through cut slopes, fill slopes and potentially construction of retaining walls (single walls and terraced walls) within the property.

3.9.1.2 *Geology and Soils*

The City of Morgan Hill is in an area that consists of three distinct "terrain units," the Valley Floor, the Santa Cruz Mountains foothills, and the Diablo Range foothills. The site is located near the eastern margin of the Santa Clara Valley, where it abuts the toe of the Diablo Range.

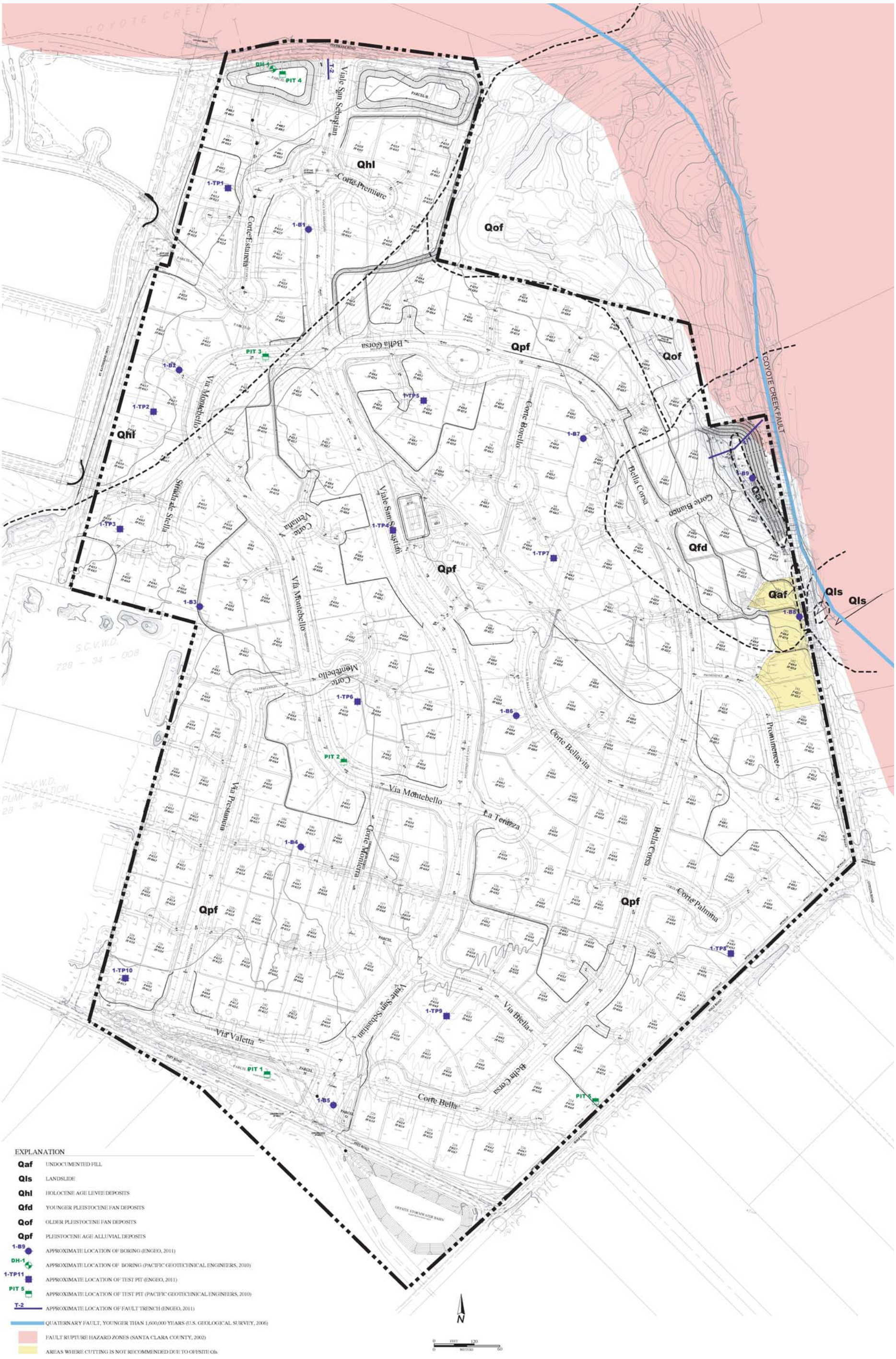
The geologic landscape in Morgan Hill consists of bedrock and surface soils. Most of the underlying bedrock belongs to either the Franciscan Assemblage or the Santa Clara Formation, although smaller deposits of other rock units are found throughout the study area. The site is underlain by Holocene age levee deposits (Qhl) at the northwest portion of the property, consisting of sandy and clayey silt ranging to sandy and silty clay. The northeast corner is mapped as underlain by middle to upper Pleistocene age Alluvial fan deposits (Qof) consisting of tan to reddish brown gravelly and clayey sand and clayey gravel, grading upwards to sandy clay. The remainder of the site is predominantly upper Pleistocene age Alluvial fan deposits (Qpf) consisting of tan to reddish brown gravel that is clast supported with a clayey and sandy matrix.

The area east of the site is mapped the Pliocene age Silver Creek Gravels (Tsg), consisting of interbedded conglomerate, sandstone, siltstone, tuffaceous sediment, tuff, and basalt. The contact between the Silver Creek Gravels and the Pleistocene age Alluvial fan deposits is mapped as a fault contact. The mapped fault continues to the north of the site, following the base of the east foothills and is named the Coyote Creek fault.

A brief discussion of the geologic units and mapped locations shown in Figure 3.9-1 is provided

below.

- *Existing Fill (Qaf)* was observed adjacent to Cochrane Road along the east property boundary, where fills in excess of five feet were identified for the steeper slope area identified in Figure 3.9-1. Other minor fill of less than two feet should be anticipated at existing structures on the property.
- *Levee Deposits (Qhl)* were mapped as underlying the northern portion of the property to a notable break in slope trending southwest.
- *Landslide Deposits (Qls)* were identified at the east property boundary with displacement interpreted to be southwest trending towards the property along the eastern portion of the site along Cochrane Road. Vegetation on the slope, including dense areas of trees, and an existing residential structure, suggests that the accumulation of landslide debris is a gradual process that has occurred over a long period of time.
- *Alluvial Fan Deposits (Qfd)* estimated to be upper Pleistocene in age, were mapped at the eastern portion of the site at a notable break in slope on topographic maps at the base of the foothills to the east.
- *Older Alluvial Fan Deposits (Qof)* estimated to be middle to upper Pleistocenein age, were mapped at the northeast portion of the site at a notable break in slope on topographic maps at the base of the foothills. Interpreted to be older in age than Qfd.
- *Pleistocene Alluvial Fan Deposits (Qpf)* were mapped for the remainder of the site at the gently sloping area to the southwest.



SITE GEOLOGIC MAP

FIGURE 3.9-1

Expansive Soils

Five samples of site materials were tested for Plasticity Index (PI) and yielded values of 5, 9, 11, 14, and 22.[38] This is an indication that the soils tested in the project area have low to moderate expansion potential.[39] Expansive soils shrink and swell as a result of moisture changes. These changes can cause heaving and cracking of slabs-on-grade, pavements and structures found on shallow foundations.

3.9.1.3 *Groundwater*

During soil boring, groundwater was initially encountered at 39 feet below the ground surface. Upon boring completion, groundwater was measured at 40 feet below the ground surface. Groundwater depth is subject to seasonal fluctuations depending on rainfall, local irrigation, water recharging program, well pumping, or other factors that may not be evident.

3.9.1.4 *Seismicity*

Morgan Hill is within Santa Clara County, which is part of the seismically active San Francisco Bay Area. It is classified as Zone 4, the most seismically active zone in the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture and local geologic conditions.

The project site is not located within a State of California Earthquake Fault Zone, and no known active faults cross the site.

There are several regional seismic sources capable of generating strong ground shaking at the site. The closest major fault line to the project site is the Calaveras Fault located 1.3 miles northeast of the site, along the eastern shore of Anderson Lake. Other significant sources include the San Andreas fault (11.7 miles southwest), Sargent fault (9.2 miles southwest), Hayward fault (6.3 miles northwest), Zayante-Vergeles fault (14.5 miles southwest), Monte-Vista Shannon fault (16 miles west), Otigalita fault (20.6 miles east), and the San Gregorio fault (34.1 miles west).

Fault Rupture Zone

The property is not mapped within a State of California Earthquake Fault Hazard Zone. The Coyote Creek Fault is mapped adjacent to the east and north property limits. Santa Clara County has defined a Fault Rupture Hazard Zone along the north and east property boundaries parallel to Cochrane Road

[38] The plasticity index is the size of the range of water contents where the soil exhibits plastic properties. The PI is the difference between the liquid limit and the plastic limit (PI = LL-PL). Soils with a high PI tend to be clay, those with a lower PI tend to be silt, and those with a PI of 0 (non-plastic) tend to have little or no silt or clay.
PI and their meanings

- 0 - Nonplastic
- (1-5)- Slightly plastic
- (5-10) - Low plasticity
- (10-20)- Medium plasticity
- (20-40)- High plasticity
- >40 Very high plasticity

http://en.wikipedia.org/wiki/Atterberg_limits

[39] ENGEO, Inc. Geotechnical Exploration. February 10, 2012.

with small areas mapped within the project limits as shown in Figure 3.9-1.[40] Subsurface investigation was prepared to evaluate the possible existence of the eastern fault trace. There are no active faults passing through the area of the site covered by the trenching and the risk of surface fault rupture within the planned development at the site is low.

Landslide

The County's Landslide Hazard Map shows a small portion of the extreme eastern portion of the site as lying adjacent to the County's zone of required evaluation for landslide potential. The County Landslide Hazard Zone Map is shown in Figure 3.9-2.

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loosely water-saturated soils (generally sands) from a solid state to a liquid-like state after ground shaking. The primary factors affecting soil liquefaction include: 1) intensity and duration of seismic shaking; 2) soil type and relative density; 3) overburden pressure; and 4) depth to ground water.

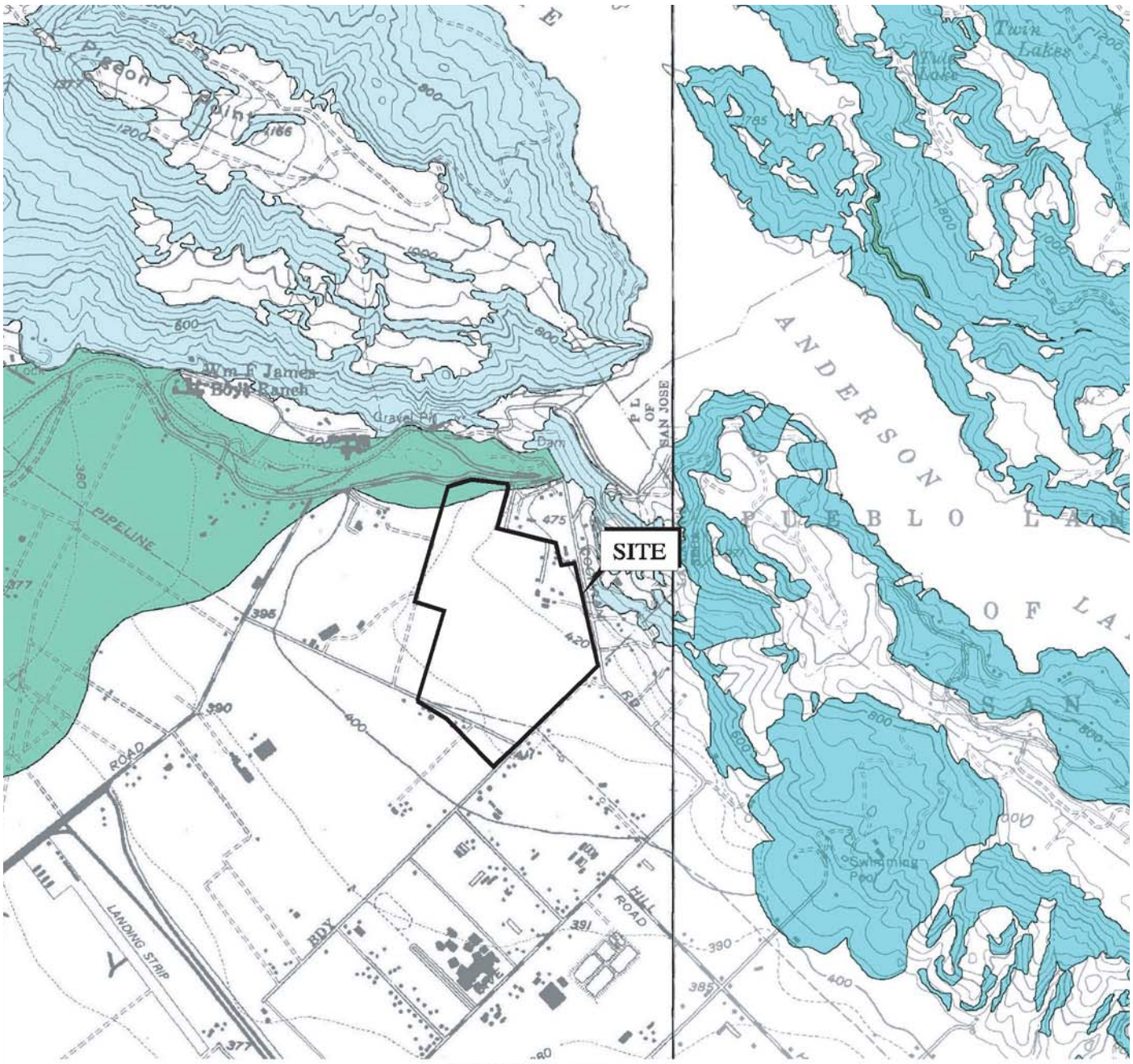
The site is within a liquefaction hazard zone as mapped both by the State of California and Santa Clara County. Figure 3.9-2 shows the regional liquefaction susceptibility.

Lateral Spreading

Lateral spreading occurs as a form of horizontal displacement of alluvial material toward an open free face, such as a creek channel. Lateral spreading may also occur in relatively flat-lying alluvial soils without a free face. The horizontal movement is generally due to failure along a weak plane and may often be associated with liquefaction. As cracks develop within the weakened soil, blocks of soil displace laterally towards the open face or down gradient of relatively flat-lying ground. Cracking and lateral movement may gradually spread away from the face as blocks continue to break free.

Due to the lack of adjacent open channels, the potential for lurching and lateral spreading is considered low.

[40] ENGEO, Inc. Fault Exploration Report. October 20, 2011.



SITE LIQUEFACTION SUSCEPTIBILITY AND LANDSLIDE POTENTIAL ZONES FIGURE 3.9-2

3.9.2 Geology, Soils, and Seismicity Impacts

3.9.2.1 *Thresholds of Significance*

For the purposes of this EIR, a geology, soils, or seismicity impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated o 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, or
  - Seismic-related ground failure, including liquefaction.
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

3.9.2.2 *Soil Conditions*

Expansive Soils

Soils on the project site have a low to moderate expansion potential, therefore, construction of improvements near existing grades will need to consider the potential impacts of expansive soils. Construction on expansive soils requires special attention during construction. It is imperative to keep exposed soils moist since it is difficult to remoisturize dry soil (because of its clayey nature) without excavation, moisture conditioning and recompaction.

Impact GEO-1: Provided that the site is prepared in accordance with the recommendations provided in the geotechnical exploration provided by *ENGEO* in February 2012, including removal of loose and medium dense existing fills, a structural mat (post-tensioned and conventionally reinforced) or conventional footings with slab-on-grade floors would be suited to support the proposed residential structures. **(Less Than Significant Impact)**

Landslide Potential

The risk of instability is greater during major earthquakes than during other time periods. The relatively flat portion of the site, planned for development, does not appear to be subject to seismically induced landsliding; however, the hillside terrain to the east of the development area is impacted by landsliding and slope raveling. As shown in Figure 3.9-2, landslides are mapped at the southwest facing slope of the adjacent foothill.

One deep (30 to 50 feet thick) landslide area (Qls) is mapped as shown on Figure 3.9-2. This area is

outside the planned development footprint. According to *Pacific Geotechnical Engineering,*[41] the landslide is dormant and toes out in the Coyote Road cut slope. Therefore, grading on the project side of Coyote Road should be performed in a manner that does not potentially aggravate the landslide.

The site is not located within a State Seismic Hazard Zone for landslide analysis.[42]

Impact GEO-2: The proposed project may result in soil instability as a result of proposed cut slopes below Coyote Road. **(Significant Impact)**

3.9.2.2 *Groundwater and Liquefaction*

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary loss of shear strength because of pore pressure buildup under the cyclic shear stresses associated with earthquakes. The State of California and County of Santa Clara locate the northwest portion of the proposed project site within a liquefaction potential zone (see Figure 3.9-2).

Groundwater was encountered at a depth of 39 feet. Therefore, a design groundwater level of 30 feet below existing grade within the area mapped for moderate liquefaction potential was analyzed for liquefaction potential. Loose to medium dense sand to silty sand zones below the design groundwater level may be potentially liquefiable. However, the depth of liquefiable soils in the two test borings (1-B1 and 1-B2) was masked by a layer of non-liquefiable soils above, therefore, ground failure is not anticipated.

The potential for liquefaction resulting from groundwater conditions on the site during construction can be avoided by utilizing standard engineering and construction techniques.

Impact GEO-3: The proposed project, with the use of standard engineering design measures, would not expose persons or property to significant impacts, such as liquefaction, associated with groundwater conditions on the project site. **(Less Than Significant Impact)**

The project does not include septic tanks or alternate waste water disposal systems, and will be served by City sewer systems.

3.9.2.3 *Seismicity and Seismic Hazards*

As previously discussed, the project site is located in a seismically active region, and therefore, strong ground shaking would be expected during the lifetime of the future development on the site. While no active faults are known to cross the project site, ground shaking on the site could damage future buildings and other structures, and threaten the welfare of future residents.

Dynamic densification is the densification of unsaturated, loose granular soils due to strong vibration such as that resulting from earthquake shaking. Granular soils and loose fills above groundwater may be subject to such a phenomenon. The potential for ground settlement to significantly affect the proposed improvements as a result of dynamic densification of native granular soils under the site is judged to be low, however, the geotechnical exploration prepared by *ENGEO, Inc.* (2012) analyzed

[41] Pacific Geotechnical Engineering. Unpublished geologic mapping completed for the City of Morgan Hill, 1994
[42] California Geological Survey Study Zones: Earthquake-Induced Landslides. http://gis.abag.ca.gov/website/LandslideCGS/ September 6, 2011.

the layers of granular materials encountered at the site (both above and below groundwater levels) to assess the predicted granular soil settlements.

Earthquake-induced settlement due to potential liquefaction of granular soils below a design groundwater level of 30 feet (at Borings 1-B1 and 1-B2) would be up to 1.5 inches total. In addition, up to 0.5 inch total of earthquake-induced settlement for loose to medium dense sands situated above design groundwater is possible across the site. Therefore, the northwest portion of the site mapped as Qhl (see Figure 3.9-1) should consider up to two inches of earthquake-induced settlement, while the rest of the site should consider up to 0.5 inches of total earthquake-induced settlement.

Fault Rupture

A subsurface investigation prepared by *ENGEO, Inc.* included excavation and logging of two trenches to depths of as much as six to eight feet. The second fault trench (T-1) was situated to evaluate the possible presence of the north-south-trending Coyote Creek Fault located along the eastern site boundary. No features indicative of faulting, such as clay shears or gouge, were observed through the entire length of the trench. Therefore, it is concluded that there are no active faults passing through the area of the site covered by the trenching and the risk of surface fault rupture within the planned development at the site is low.

Avoidance Measures: Implementation of the below standard requirements would reduce and/or avoid seismic and seismic hazards to the proposed project.

AM GEO-4.1: Future development on the project site shall be designed and constructed in conformance with the 2010 California Building Code guidelines for Seismic Site Class D to avoid or minimize potential damage from seismic shaking and seismic-related hazards, including liquefaction, on the site. Potential impacts, therefore, would be reduced or avoided by conformance with the standards specified in the California Building Code for Seismic Site Class D.

AM GEO-4.2: A detailed design-level geotechnical investigation shall be completed specific to each phase, and the project design and construction shall follow the specific recommendations of the investigation. The design-level investigation shall include exploration of appropriate foundation systems for proposed structures, as well as site preparation, grading, and pavement design.

Impact GEO – 4: Seismic impacts (including ground shaking and liquefaction) to the proposed project would be reduced or avoided by conformance with the standard engineering practices and techniques specified in the 2010 California Building Code for Seismic Site Class D and the implementation of the recommendations in the design-level geotechnical investigation to be prepared for the project. **(Less Than Significant Impact)**

Erosion

Grading and vegetation removal in could result in an increase in bank erosion, affecting both water quality and slope stability. However, after a project has been constructed and the landscaping has been installed, erosion and sedimentation from residential development sites are usually minimal. Site grading should accommodate known soil and geologic hazards and to improve the overall stability of the site.

Avoidance Measures: Implementation of the below standard requirement would reduce and/or avoid erosion to the proposed project.

AM GEO-5.1: Potential construction-phase and post-construction pollutant impacts from the development of the Site and the Peet Road realignment can be controlled below the level of significance through preparation and implementation of an erosion control plan. The project shall implement standard grading and best management practices, including but not limited to, street sweeping, fiber rolls, inlet protection, stockpile covering or watering, covering of trucks, and/or replanting of vegetation, to prevent substantial erosion and siltation during development of the site. The erosion control plan forms a significant portion of the construction-phase controls required in a storm water pollution prevention plan (SWPPP), which also details the construction-phase housekeeping measures for control of contaminants other than sediment.

Impact GEO-5: Erosion impacts resulting from grading of the proposed project site would be reduced or avoided with standard stormwater pollution prevention required by the Regional Water Quality Control Boards. **(Less Than Significant Impact)**

3.9.2.4 *Mitigation Measures*

MM-GEO-2.1: Proposed cut slopes below Coyote Road, located within the County of Santa Clara, have the potential to destabilize the roadway. Therefore, a slope stability analysis and remedial grading measures, documented in a grading and drainage plan review letter will be prepared to confirm required factors of safety are maintained.

3.9.4 Conclusion

Impact GEO – 1 and 2: The proposed project, designed and constructed with implementation of MM-GEO 2.1 and in accordance with the recommendations provided in the geotechnical exploration provided by *ENGEO, Inc.* in February 2012 as well as California Building Code, would not be subject to significant soil impacts. **(Less Than Significant Impact with Mitigation)**

Impact GEO-3: The proposed project, with the use of standard engineering design measures, would not result in significant liquefaction impacts. **(Less Than Significant Impact)**

Impact GEO–4: The proposed project, in conformance with standard engineering practices and techniques specified in the California Building Code for Seismic Site Class D, and with the implementation of the above standard requirements, would not result in significant seismic or seismic-related impacts. **(Less Than Significant Impact)**

Impact GEO-5: The proposed project, in conformance with standard stormwater quality pollution prevention, would not result in significant erosion impacts. **(Less Than Significant Impact)**

3.10 UTILITIES AND SERVICE SYSTEMS

The following discussion is based on the City of Morgan Hill's Sewer System Master Plan, Storm Drainage Master Plan, the 2010 Morgan Hill Urban Water Management Plan, and information provided by *Ruggeri-Jensen-Azar & Associates'* Preliminary Engineers Report in May 2012, available in Appendix I.

3.10.1 Existing Setting

3.10.1.1 *Water Service*

Water Supply Infrastructure

The City of Morgan Hill provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. The City's water system facilities include 17 groundwater wells, 13 potable water storage tanks, 10 booster stations, and over 160 miles of pressured pipes ranging from two to 14 inches in diameter. The City's water distribution system meets the needs of existing customers. The City has planned and constructed water projects in conjunction with new street construction in anticipation of future growth and water needs.

The City of Morgan Hill owns and maintains an eight-inch water main in Cochrane Road, Half Road, and St. Katherine Drive, as well as a 10-inch water main in Peet Road. As a result of a grant deed between the project land owner and the Santa Clara Valley Water District (SCVWD) in 1985, the SCVWD now owns and operates a 54-inch water force main from Anderson Lake, located within a 60-foot wide right-of-way area immediately west of the project site, adjacent to St. Katherine Drive. Figure 3.10-1 shows the existing easements and utilities within and adjacent to the project site.

There is one existing well on the northwest portion of the property, supplying domestic and irrigation water for the 122-acre portion of the project site. SCVWD has one active water supply well listed for the four parcels located south of Peet Road.

An easement on property owned by the United States of America, is located at the southern portion of the site, adjacent to Peet Road. The property accommodates the 96-inch Santa Clara Conduit line (i.e. Federal San Felipe Pipeline Water Project[43]). The project applicant has an easement on the property that enters the site at an angle from Peet Road, runs for approximately 300 feet, then jogs at another angle for approximately 575 feet, before terminating into the SCVWD property. The project proposes to utilize the conduit line for common area irrigation. The SCVWD also has turn blue valve (non potable) rights for the San Felipe easement.

Water Supply

The City of Morgan Hill currently relies on groundwater as its sole water supply source. The groundwater basin underlying the City is part of the Santa Clara Valley groundwater basin and managed by SCVWD. Groundwater is pumped from the Coyote Valley subarea of the Santa Clara Subbasin to the north and the Llagas Subbasin to the south.

[43] To balance Santa Clara Valley's water-use deficit, surface water has been imported from northern and eastern California via aqueducts- Hetch Hetchy (San Francisco Water Department, since 1951), the California State Water Project (since 1965), and the Federal San Felipe Water Project (since 1987).

Groundwater supplies are recharged through infiltration of rainfall, leakage from pipelines, seepage from the surrounding hills, seepage into and out of the groundwater basin, and net irrigation return flows to the basin. In addition, to maintain the groundwater level in the Santa Clara County Basins and minimize the potential for basin overdraft, a recharge system was developed. In addition to the natural groundwater recharge, which is not controlled by SCVWD, "facility" recharge accounts for over 60 percent of the total recharge to the basins managed by SCVWD. Facility recharge is controlled by SCVWD, and includes imported raw water and water stored in local reservoirs.[44]

In accordance with the City's 2002 Water System Master Plan, alternatives for siting two new supply wells are being considered which will provide enhanced reliability to the water supply by allowing the City to meet maximum demand and provide standby production capabilities. In 2010, the City of Morgan Hill used approximately 6,778 acre feet of water.[45] Based on the City's 2010 Urban Water Management Plan, water demand in Morgan Hill would be approximately 9,637 acre-feet per year (AFY) in 2030, which would continue to be met by sustainable groundwater supplies.

The City adopted a Water Conserving Landscapes Ordinance in February 2006 which regulates landscape design, construction, and maintenance. The ordinance is intended to comply with Government Code 65591 (the Water Conservation Landscape Act), and it promotes efficient water use, to manage peak season water demands, and to preserve water storage in order to ensure reliable and adequate public water supply. The ordinance supports a City-wide increase in water conservation.

3.10.1.2 *Sanitary Sewer System*

The City of Morgan Hill sewer collection system consists of approximately 135 miles of six-inch through 30-inch diameter sewers, and includes 15 sewage lift stations and associated force mains. The system also consists of trunk sewers, which are generally 12 inches in diameter and larger, that convey the collected wastewater flows through an outfall that continues south to the South County Wastewater Treatment Plant (WWTP) in Gilroy. The WWTF is jointly owned by the cities of Gilroy and Morgan Hill. The City's existing sewer collection system meets the needs of existing customers. The City has planned and constructed sewer facilities in conjunction with new street construction in anticipation of future growth and sewage needs. Future development will be required to pay the City of Morgan Hill impact fees in accordance with Chapter 3.56 of the Morgan Hill Municipal Code. The fees established by this chapter are based on the costs required for new sanitary sewer facilities and other capital acquisition costs to serve new development. Existing sanitary sewer lines are located in St. Katherine Drive, Peet Road, Half Road, and Coyote Road adjacent to the project site.

The South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant provides service to the cities of Morgan Hill and Gilroy. The treatment plant has capacity to treat an average dry weather flow (ADWF) of 8.5 million gallons per day (mgd) and is currently permitted by the Regional Water Quality Control Board (RWQCB), Central Coast Region to treat up to 8.5 mgd. Both the cities of Gilroy and Morgan Hill have growth control systems in place which limit unexpected increases in sewage generation. 2010 ADWF for combined flows from Morgan Hill and Gilroy were approximately 6.8 mgd. Based on combined population projections for both cities, the current capacity of 8.5 mgd will be reached in approximately 2019.[46]

[44] Santa Clara Valley Water District. 2010 Urban Water Management Plan. December 20, 2005.
[45] City of Morgan Hill. 2010 Urban Water Management Plan. 2010. 1 acre foot per year (AFY)=325,000 gallons.
[46] MWH Global and Akel Engineering Group. Draft– South County Regional Wastewater Authority Wastewater Flow Projections 2011. July 2011.

3.10.1.3 *Storm Drainage System*

The City of Morgan Hill's storm drainage system consists of a combination of curb and gutter facilities, curb inlets, underground pipelines, and bubblers draining to the nearest creek, or to manmade natural retention areas, that flow through the City and are tributary to either Monterey Bay or San Francisco Bay. The City's storm drainage system meets existing drainage needs.

The Morgan Hill Municipal Code (MHMC) requires that stormwater runoff from subdivisions shall be collected and conveyed by an approved storm drain system that protects abutting and off-site properties that would be adversely affected by increased runoff attributed to development (MHMC 17.32.020B). The City requires on-site detention facilities designed to a 25-year storm capacity and on-site retention[47] facilities designed to a 100-year storm capacity to avoid flooding impacts due to increased runoff. Off-site detention and retention facilities may also be proposed, and are subject to the approval of the Director of Public Works. Future development also would be required to pay the City of Morgan Hill Storm Drainage impact fees in accordance with Chapter 3.56 of the Morgan Hill Municipal Code. The fees established by this chapter are based on the costs required for new storm drainage facilities and other capital acquisition costs to serve new development.

3.10.1.4 *Solid Waste*

Recology South Valley provides solid waste and recycling services to the businesses and residents of the cities of Morgan Hill and Gilroy. Recology South Valley has contracted through 2017 with the Salinas Valley Solid Waste Authority to dispose of municipal solid waste at Johnson Canyon Sanitary Landfill. Johnson Canyon Sanitary Landfill is anticipated to reach capacity in 2043.

3.10.1.5 *Electricity and Natural Gas Services*

Public Utility Easements

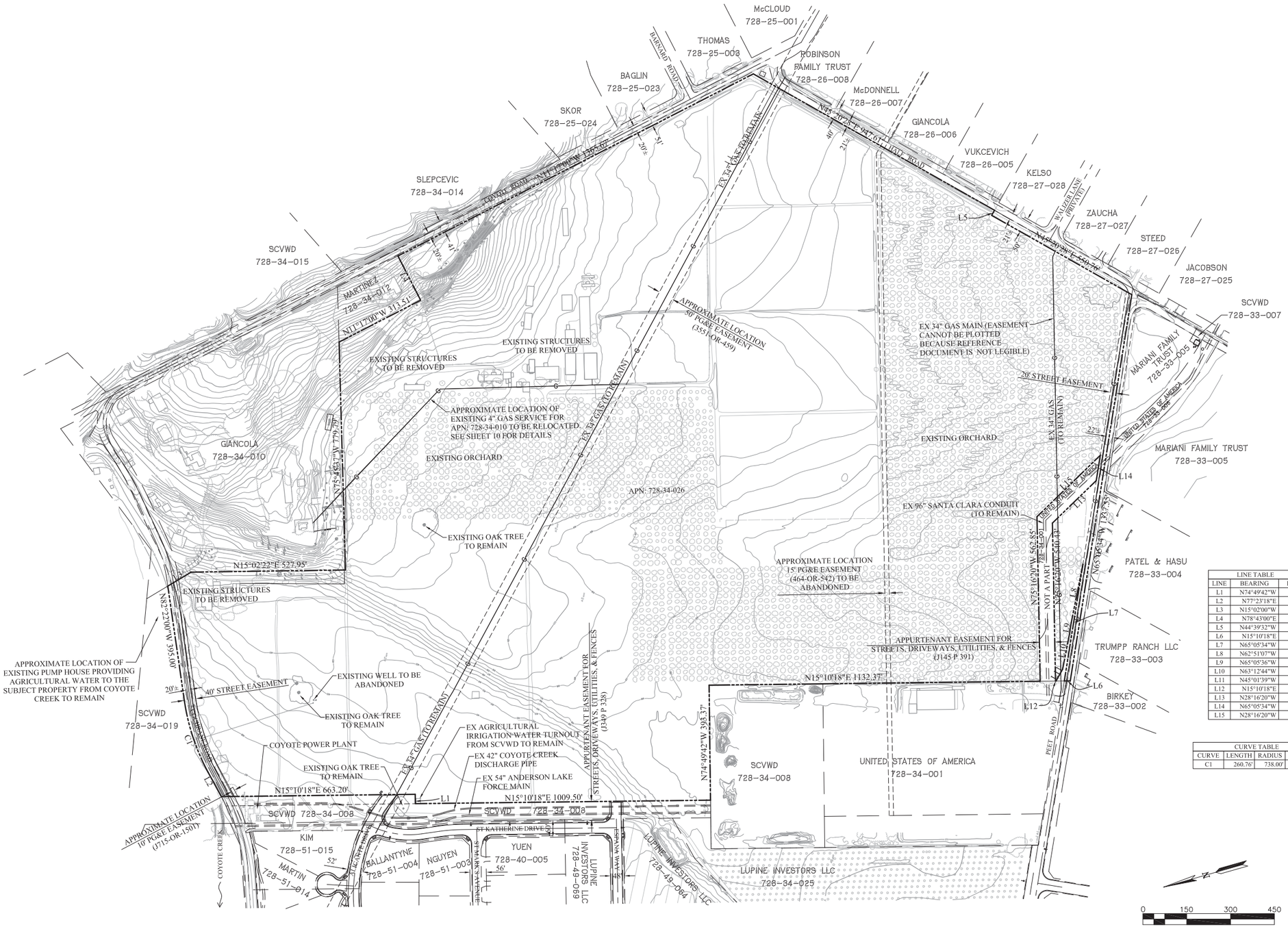
There are four Pacific Gas and Electric (PG&E) easements running through the project site. Two of the easements are for high-pressure gas lines, the third is intended to be abandoned, and the fourth will be relocated. One of the PG&E easements is 50-feet wide and provides for a 34-inch high-pressure gas line. The easement runs at an angle from the northeastern portion of the site to the northwestern portion of the site, meeting up with the alignment for Alicante Drive. The second PG&E easement accommodates a 34-inch high-pressure gas line. The easement is located at the southern portion of the site, and runs roughly parallel to Peet Road.

The third PG&E easement is approximately 15-feet wide, containing a 20-inch diameter gas pipeline. The gas line is not active and is intended be removed and the easement will be abandoned with a quit claimed. The easement runs straight from the southeastern portion of the site to the southwestern portion of the site, through the adjacent SCVWD jurisdiction. The project applicant will work with PG&E on the abandonment process to remove the easement and dig up and remove the line. The

[47] A retention pond by definition is designed to hold all of the runoff from the storm (often the 100-year event) and keep it in a wet pond; which, will evaporate or infiltrate into the soils. It is usually used when no runoff from a site is allowed, such as contaminated sites or industrial sites.
A detention pond is used to reduce the peak flow from a storm event. It is dry most of the year. It has an outlet structure designed to reduce the peak flow to a certain rate (often the pre-project discharge). These are often used on projects required to do hydromodification.
Caitlin Gilmore, Schaaf & Wheeler. Personal communication. April 18, 2012.

fourth easement contains a four-inch gas line providing service to the adjacent parcel (APN 728-34-010). The existing easement runs from the 34-inch high pressure gas line north and then jogs slightly to the northwest to the adjacent parcel. The proposed project will move the line to between lots 58, 59 and 60 and 61 within Phase 4. This location is shown on Sheet 10 of the Vesting Tentative Map.

Existing easements on the project site are shown in Figure 3.10-1.



LINE TABLE		
LINE	BEARING	DIST
L1	N74°49'42"W	32.00'
L2	N77°23'18"E	94.12'
L3	N15°02'00"W	92.89'
L4	N78°43'00"E	170.00'
L5	N44°39'32"W	20.00'
L6	N15°10'18"E	20.29'
L7	N65°05'34"W	404.45'
L8	N62°51'07"W	204.61'
L9	N65°05'36"W	39.14'
L10	N63°12'44"W	122.13'
L11	N45°01'39"W	46.41'
L12	N15°10'18"E	1.74'
L13	N28°16'20"W	208.83'
L14	N65°05'34"W	87.58'
L15	N28°16'20"W	301.77'

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	260.76'	738.00'	20°14'42"

EXISTING EASEMENTS AND UTILITIES

FIGURE 3.10-1

3.10.1.6 *Water Supply Assessment (WSA)*

Senate Bill 610 (SB 610), codified at Water Code Section 10910 et seq., requires that certain water supply and demand information be prepared for "projects" which are the subject of an EIR. Water Codes Section 10912 defines a "project" as, among other things, any proposal subject to discretionary approvals that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The project is proposing 424 total residential units, including 244 single family residences and 180 secondary cottage units. Although the total number of proposed units falls below the 500 unit threshold for preparation of a WSA, a water demand projection was prepared for the project because according to SB610, a proposed project may require preparation of a WSA if the project's demand is an amount of water equivalent to, or greater than, the amount of water required by a typical 500 dwelling unit project, in this case due to the atypical size of the lots and homes. Therefore, in order to determine whether an assessment will be required under the 500 unit equivalency threshold, the City determined if the demand associated with the proposed project would be equivalent to or greater than the demand for a typical 500 unit project in the City.

The Daily Per Capita Water use value for the City of Morgan Hill is 199 gallons per capita per day (gpcd).[48] The daily demand per unit increases to 613 gpd (199 x 3.08 persons per unit). The threshold for a Water Supply Assessment is reached at 306,460 gpd (500 x 613 gpd).

The proposed development (424 units, including 244 single family residences and 180 secondary units) is expected to have an Average Daily Water Demand (ADD) of approximately 203,196 gallons per day (gpd), and 31,835-gpd ADD for the landscaping, as shown in Table 3.10-1 below. Based on the preliminary land use assumptions and City of Morgan Hill design criteria, these estimations are below the ADD of a typical 500 unit development project in Morgan Hill.

Table 3.10-1
Projected Water Demand[1]

Land Use	Approximate Total Acreage	Residential Units		Average Daily Demand (gpd)
		Primary	Secondary	
Single Family Residential	87	244		150,300
Cottages			180	52,896
Landscape[2] (Non-potable)	10.8			31,835
Total				**235,031**

1 Water demand assumptions are taken from the City of Morgan Hill 2002 Water System Master Plan and 2010 General Plan. The water demand assumes 200 gpcd and 3.08 people per single family dwelling unit and 1.54 people per cottage dwelling unit. It is assumed the residential factor accounts for onsite common landscaping and community water demands. Secondary units were assumed at 1.54 people per unit for Cottage 1, Cottage 2 and Carriage.
2 The project proposes to use existing on-site well water, untreated surface water supplied from the adjacent 96-inch Santa Clara Conduit, SCVWD agricultural irrigation water, or water from the existing

[48] City of Morgan Hill. 2010 Urban Water Management Plan, p.3-3. 2010.

pump house that supplied irrigation water to the project site from Coyote Creek for irrigation of open space and street landscaping Reference: Preliminary Engineers Report prepared by RJA Engineers, 2011

3.10.2 Utilities and Service Systems Impacts

3.10.2.1 *Thresholds of Significance*

For the purposes of this EIR, a utilities and service systems impact is considered significant if the project would:

- Require new or expanded entitlements due to a lack of sufficient water supplies available to serve the project from existing entitlements and resources; or
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; or
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid-waste disposal needs;
- Not comply with federal, state, and local statutes and regulations related to solid waste.

3.10.2.2 *Water Supply and Service Impacts*

Water Supply Infrastructure

The project would install water lines and connections on the site to serve the proposed project, in conformance with City standards and the California Plumbing Code. The water distribution system within the proposed project area will consist of eight-inch pipes. The pipes will be located within private streets with public utility easements and will connect to existing eight-inch water mains in Cochrane Road, Alicante Drive, Espana Way, and a 10-inch water main in Peet Road. Figure 3.10-2 shows the conceptual water distribution layout for the proposed project.

It is estimated that the proposed project is expected to have an Average Daily Water Demand (ADD) of approximately 235,031 gallons per day (GPD).[49]

The 2010 Urban Water Management Plan (UWMP) states that the City of Morgan Hill recently constructed the Diana I Well pursuant to the recommendations of the 2001 Water Master Plan. This well was brought online in 2010 and produces approximately 900 gallons per minute, or 21,600 gpd.[50] Additionally, the City plans to construct an additional well in 2013/2014, which will be capable of producing approximately 700-900 gallons per minute. Through payment of development

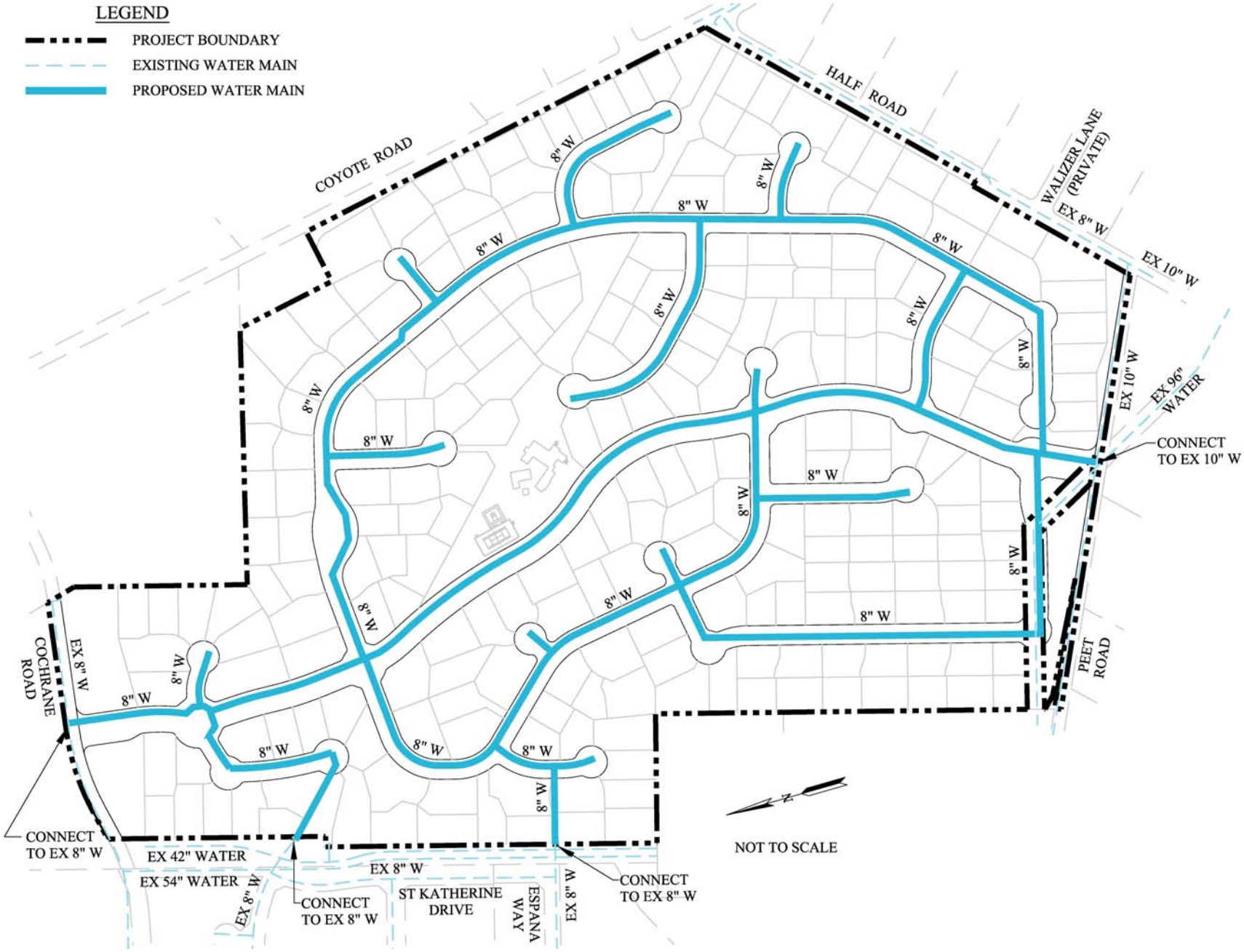
[49] Water demand assumptions, prepared by RJA & Associates, are taken from the 2002 City of Morgan Hill Water System Master Plan. The water demand assumes 200 gpcd and 3.08 people per single family dwelling unit and 1.54 people per secondary unit. It is assumed the residential factor accounts for onsite common landscaping and community center water demands.

[50] City of Morgan Hill. Urban Water Management Plan, Section 4.6. 2010.

impact fees, the proposed project will offset impacts onto water supply infrastructure within the City.

Development of the proposed project site was accounted for in the City of Morgan Hill General Plan, the Water System Master Plan (WSMP), and the 2010 UWMP, therefore, the City has accounted for the project and would be able to provide adequate water supply to the proposed development. No new offsite infrastructure for water, sewer, or storm drain is required for the proposed project.

Impact UTIL-1: Development of the project site is not anticipated to exceed the available water supplies in the Llagas and Coyote groundwater subbasins. **(Less Than Significant Impact)**



CONCEPTUAL WATER SYSTEM LAYOUT

FIGURE 3.10-2

Non-Potable Water

There is currently no recycled water service to the City of Morgan Hill. The South County Regional Wastewater Authority (SCRWA) does not plan to extend recycled water service to Morgan Hill in the near future due to an insufficient number of potential users to offset the construction and distribution costs of expanding the services to Morgan Hill.

Existing water sources on and adjacent to the project site include: an agricultural well located at the northern portion of the site, an existing pump house located to the north of the site, adjacent to Cochrane Road, existing SCVWD agricultural irrigation water service to the west of the site adjacent to St. Katherine Drive, and the 96-Inch Santa Clara Conduit located at the southern portion of the site. The project is proposing to use the existing on-site well water, untreated surface water supplied from the adjacent 96-inch Santa Clara Conduit, SCVWD agricultural irrigation water, or water from the existing pump house that supplied irrigation water to the project site from Coyote Creek for irrigation of open space and street landscaping (31,835 gpd). Figure 3.10-3 shows the conceptual non-potable water layout for the project site.

The project intends to use the San Felipe turnout to irrigate the common open space area of the project. The project applicant has been working with the Water District to amend the permit, similar to the adjacent Alicante project. The existing well located at the northwestern portion of the site would be maintained within a landscaped area adjacent to the existing oak tree being preserved.

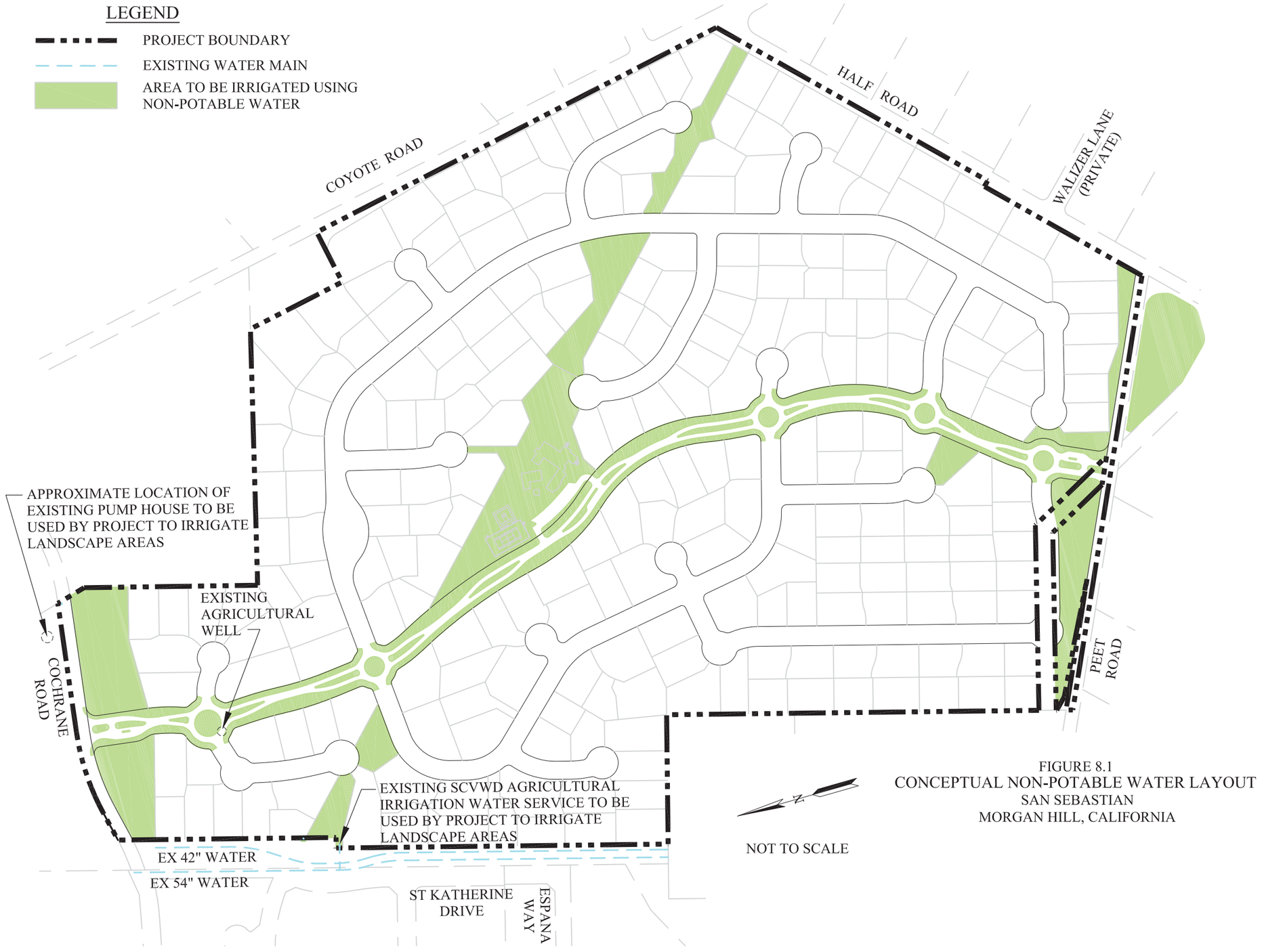


FIGURE 8.1
CONCEPTUAL NON-POTABLE WATER LAYOUT
SAN SEBASTIAN
MORGAN HILL, CALIFORNIA

CONCEPTUAL NON-POTABLE WATER LAYOUT

FIGURE 3.10-3

3.10.2.3 *Sanitary Sewer System*

The South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant (WWTP) provides service to the cities of Morgan Hill and Gilroy. The treatment plant has capacity to treat an average dry weather flow (ADWF) of 8.5 million gallons per day (mgd), with approximately 3.6 mgd of treatment capacity for the City of Morgan Hill (42 percent). 2010 ADWF for combined flows from Morgan Hill and Gilroy were approximately 6.8 mgd. Based on combined population projections for both cities, the current capacity of 8.5 mgd will be reached in approximately 2019.[51]

The proposed project is expected to generate an ADWF of approximately 96,800 gallons per day, based on City of Morgan Hill Design Standards, and assuming 90 gallons per capita per day (gpcd) and 3.08 persons per single family dwelling unit and 1.54 per cottage unit. The project proposes eight-inch sanitary sewer lines throughout the proposed development to connect to the existing eight-inch sanitary sewer lines located in Cochrane Road and Espana Way.

The current Sewer System Master Plan for the City (*Carollo Engineers*, January 2002) does not identify system deficiencies or associated capital improvements within the vicinity of the project site or directly downstream of the project. Since the proposed project site, with a comparable residential land use designation, was accounted for in the City of Morgan Hill General Plan and Sewer Master Plan, adequate treatment and disposal of wastewater will be accommodated for the proposed project.

Impact UTIL-2: Construction of the proposed project would not exceed the planned capacity of the sanitary sewer and treatment systems. **(Less Than Significant Impact)**

3.10.2.4 *Storm Drainage System*

Post-Construction Storm Water Management

Development of the project site has the potential to increase the volume, rate, and pollutant loading of storm water runoff after construction due to increased impervious surfaces. Future street construction/streetscaping for the project site will include installation of new storm drainage improvements. The proposed drainage system will be designed to reduce pollutant discharges and lower the post-development storm water runoff volume and rate to pre-development levels to the maximum extent practicable by implementing Low Impact Development (LID)[52] and Best Management Practice (BMP) planning and design strategies.

Peak runoff from the site shall be mitigated with retention (northern) and detention (southern) basins designed to not exceed pre-project peak runoff for the two, 10, and 100-year storm events. The portion of the site that drains to San Francisco Bay via Coyote Creek is under the jurisdiction of the San Francisco RWQCB, and is required to provide hydromodification[53] mitigation. For the portion

[51] MWH Global and Akel Engineering Group. Draft– South County Regional Wastewater Authority Wastewater Flow Projections 2011. July 2011.

[52] Low-impact development (LID) Low Impact Development (LID) is an alternative site design strategy that uses natural and engineered infiltration and storage techniques to control storm water where it is generated. http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/muni/nrdc/07%20lidtech.pdf

[53] Land development adversely affects the runoff hydrograph (flow pattern) from a site by increasing the impervious area, decreasing natural vegetation, changing grading and soil compaction, and creating new drainage facilities. These development activities decrease site infiltration, increase volume, duration, and frequency of flows, and increase connectivity of runoff to creeks. Overall, these effects can cause stream channel erosion and impair

of the site that drains to Coyote Creek, the project shall include hydromodification mitigation meeting or exceeding the specifications outlined in the SCVURPPP hydromodification mitigation plan (HMP). The portion of the site located within the Monterey Regional Water Quality Control Board jurisdiction would not be required to provide hydromodification mitigation.

Bioretention swales would also be incorporated on the site to retain some of the on-site stormwater and reduce peak runoff flows (refer to *Section 3.14 Hydrology and Water Quality*).

Construction Storm Water Management

Development of the project site has the potential to increase discharge of storm water pollutants during construction due to ground disturbance.

Potential construction-phase pollutant impacts from the development of the site and the Peet Road realignment can be controlled below the level of significance through preparation and implementation of an erosion control plan, a stormwater pollution prevention plan (SWPPP) and a storm water management plan (SWMP) consistent with recommended design criteria, in accordance with the NPDES permitting requirements enforced by the Regional Board. The project will be developed in phases over a 12 to 15 year period of time, and will meet regulation in place at the time of development for each phase.

The SWPPP shall prescribe construction-phase BMPs to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for re-vegetation or mulching.[54]

Impact UTIL-3: Implementation of standard/mitigation measures (*Section 3.14, Hydrology and Water Quality*), would ensure that construction of the proposed development project would not increase stormwater runoff, degrade water quality, and would not exceed the capacity of planned stormwater drainage facilities. **(Less Than Significant Impact)**

3.10.2.5 *Solid Waste*

The City of Morgan Hill has contracted with Recology South Valley to provide solid waste disposal and recycling service within the City. Recology South Valley would dispose of solid waste from the project at Johnson Canyon Sanitary Landfill which as of 2000 has projected permitted capacity of 6,923,297 cubic yards and is expected to remain open through 2040. The proposed project would result in increased waste disposal from the proposed residential development (472,018 pounds per year for 244 single family residences[55]).

Impact UTIL-4: Development of the proposed project would be served by a landfill with adequate capacity to serve the proposed project site. **(Less Than Significant Impact)**

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beneficial uses of the stream channel. This change in runoff characteristics from a drainage area caused by changes in land use conditions is defined as hydromodification. Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), *C.3 Guidance Handbook,* pg. V-1, May 2004, rev. September 2006

[54] Schaaf & Wheeler. Hydrology and Water Quality Review for Cochrane-Borello Development. April 4, 2012.

[55] 5.3 pounds of solid waste per day. City of Morgan Hill, June 2012.

3.10.2.6 *Electricity and Natural Gas Services*

The proposed project site contains four Pacific Gas and Electric (PG&E) easements. Three of the easements contain gas transmission lines (though one is inactive), and two of the transmission lines are active 34-inch high-pressure gas lines. The fourth easement contains a four-inch gas line for the adjacent Giancola property. On September 9, 2010 a PG&E gas transmission line exploded in a residential area of San Bruno, California, destroying 38 homes and damaging 70. Subsequent investigation by the National Transportation Safety Board of the gas line explosion incident in San Bruno determined the explosion resulted from a ruptured defective seam weld in the pipe segment.[56] PG&E is currently implementing a comprehensive survey and monitoring program to ensure safety of all natural gas transmission lines. To address the future safety of existing gas transmission lines, PG&E is implementing the following gas pipeline safety measures: monitoring system status in real time 24 hours a day, regularly conducting leak surveys and patrols of gas transmission pipelines, reducing pipeline pressure, hydrostatic pressure testing, camera inspections, pipeline leak surveys and testing, detailed pressure test records review, and valve automation.[57]

Construction activity would avoid impacts to the existing gas transmission lines, under Peet Road and adjacent to parcel 728-33-005 (Mariani) located south of Peet Road. Prior to construction, coordination would occur with PG&E to determine the depth of the gas line.

As stated in *Section 3.8 Energy*, the existing facilities would provide adequate supply for the project's energy demands.

Impact UTIL-5: Existing gas transmission lines within and adjacent to the project site would be monitored regularly by PG&E to ensure safety of future residents. **(Less Than Significant Impact)**

3.10.3 Mitigation Measures

No mitigation measures required.

3.10.4 Conclusion

Impact UTIL-1: Development of the project site is not anticipated to exceed the available water supplies in the Llagas and Coyote groundwater subbasins. **(Less Than Significant Impact)**

Impact UTIL-2: The construction of the proposed development would not exceed the planned capacity of the sanitary sewer and treatment systems. **(Less Than Significant Impact)**

Impact UTIL-3: Implementation of standard/mitigation measures (Section 3.14, Hydrology and Water Quality), would ensure that construction of the proposed development would not increase stormwater runoff and would not exceed the capacity of planned stormwater drainage facilities. **(Less Than Significant Impact)**

[56] San Francisco Gate. Feds Come Down Hard on PG&E for San Bruno Blast. August 31, 2011.
[57] http://www.pge.com/myhome/edusafety/systemworks/gas/pipelinesafety/index.shtml Accessed September 7,2011.

Impact UTIL-4: Development under the proposed project would be served by a landfill with adequate capacity to serve the project. **(Less Than Significant Impact)**

Impact UTIL-5: Development would be served by existing gas and electricity facilities with adequate capacity and safety. **(Less Than Significant Impact)**

3.11 CULTURAL RESOURCES

The discussion below is based upon the following three reports prepared by *Holman and Associates*:

1. A preliminary cultural resources examination of the project site prepared in August 2011;
2. An Extended Phase I Archaeological Testing prepared in November 2011, and
3. A revised Archaeological Field Survey for the Peet Road realignment prepared in March 2012.

These reports which discuss sensitive cultural resources are on file with the City of Morgan Hill Community Development Department, and may be reviewed by qualified professional archaeologists.

The following discussion is also based on a historic and architectural evaluation prepared by *Urban Programmers* in April 2012. This report can be found in Appendix J of this EIR.

3.11.1 Existing Setting

3.11.1.1 *Regulatory Setting*

Proposed projects must be examined for potential effects on historical and/or unique resources (Public Resources Code [PRC] Section 21083.2]. Historical resources are buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance (PRC Section 50201). The CEQA Guidelines (Section 15064.5) defines a historical resource as a resource that meets one or more of the following criteria: 1) listed in, or determined eligible for listing in, the California Register of Historical Resources, 2) listed in a local register of historical resources as defined in PRC Section 5020.1(k), 3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g) or (4) determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a)).

PRC Section 21083.2 governs the treatment of unique archaeological resources, defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated: as meeting any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person."

City of Morgan Hill Historical Resources Ordinance

The City's Historical Resources Ordinance is contained in Chapter 18.75 of the Morgan Hill Municipal Code.

The Historic Resources Chapter of the Municipal Code provide for the City to identify significant historical resources and to require permits to alter historic resources. Historic resources, including an object, building, structure, site, area, district, unique archaeological resource, place, record, or

manuscript may be classified a designated historical resource based on its age, integrity and historical significance.

- "Age" means the characteristic of being at least forty-five years old.

- "Integrity" is the ability of a property to convey its significance and evaluation of integrity is grounded in an understanding of a property's physical features and how they relate to its significance. There are seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling and association. To retain historic integrity a property will always possess several, and usually most, of the aspects. Determining which of the seven aspects are most important to a property requires knowing why, where and when the property is significant.
- "Historical Significance" in national, state or local history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures and objects that possess age, integrity and association with an important historical context:
    a. That are associated with events that have made a significant contribution to the broad patterns of our national, state and/or local history and cultural heritage; or
    b. That are associated with the lives of persons significant in our national, state and/or local past; or
    c. That embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master or important creative individual, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
    d. That have yielded, or may be likely to yield, information important in prehistory or history.

3.11.1.2 *Archaeological Resources*

Native American occupation and use of the resources in the Morgan Hill area extended over a period of 5,000-7,000 years and maybe longer. The aboriginal inhabitants of the Santa Clara Valley belonged to a group known as the Ohlone (or Costanoans) who occupied the central California coast as far east as the Diablo Range.

The majority of prehistoric archaeological sites in the Morgan Hill area have been found along fresh water sources (such as creeks and springs), in valley areas near water, at the base of the hills and along a major north/south trail. Potential Historic era archaeological sites also follow this pattern and often directly occupy prehistoric sites or are located at their periphery. Historic sites also are often sited along trails, roads, railroad tracks, and along urban and regional street grids.[58]

According to the City's Archaeological Sensitivity Map, the project site is archaeologically sensitive due to its location adjacent to Coyote Creek.

Literature Review

A records search was conducted by *Holman and Associates* at the California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC) on June 10, 2011. The NWIC at Sonoma State University is the official state repository of archaeological and historic records and reports for 16-counties including Santa Clara County.

[58] Basin Research Associates, Inc. Cultural Resources Supplement, Archaeological Resources Morgan Hill General Plan Santa Clara County, California. 2000.

The literature found that three cultural resources studies have been conducted in the immediate vicinity of the project property. Two studies were conducted for the Creekside Estates project to the west of the project area. The studies included a pedestrian survey and archaeological testing at a previously recorded site (CA-SCL-158). In addition, two cultural resources investigations were prepared for parcels adjacent to the project area. Both studies moved a previously recorded cultural resource (CA-SCL-358).

The cultural resource studies also found one cultural resource that was previously recorded on the northern portion of the project area (CA-SCL-159/H (P-43-171). The prehistoric site was previously recorded in 1974 and contained prehistoric artifacts.

Field Examination

An archaeological pedestrian survey and visual inspection of the project site was conducted by *Holman and Associates* on July 13, 14, and 18, 2011. During the survey, the project area was a working farm with orchards, a fruit processing facility, associated buildings, and two agricultural fields.

On October 18 and 19, 2011, *Holman and Associates* conducted a limited program of backhoe testing at two locations identified during the July 2011 field survey.

In February 2012, *Holman and Associates* visited the site for a third time to complete a visual field inspection of four additional parcels located south of existing Peet Road, that will be affected as part of the proposed Peet Road realignment, that weren't evaluated as part of the initial field inspection in July 2011. No evidence of prehistoric and/or historic archaeological material was seen anywhere inside the proposed road alignment or on property adjacent to it.

3.11.1.3 *Historic Resources*

Existing Historic Resources

The architecture on the site is primarily utilitarian open sided storage structures and temporary housing for agricultural workers. There are various types of housing on the property. Three wood framed modular homes contain two or more units in linear buildings. The buildings appear to have been constructed in the 1940s and moved to the site in the 1950s and sit on pier block foundations. A raised seam metal clag building providing temporary worker housing was moved to the property in the 1950s as well. One modular home (circa 1990), two mobile homes, and a residential building constructed of mixed materials (wood panels, raised seam metal siding, and a galvanized roof) are also located on the site, providing temporary worker housing. One permanent single family residence (circa 1945) is located at the northern portion of the site near Cochrane Road. The house is California Ranch Style. One trailer is located at the rear of the residence, but the remainder of the housing and structures are located on the eastern portion of the site. Figure 3.11-1 shows the location of the structures on the site.

The sulfur house building is a mix of materials with a concrete slab foundation/floor. The rear and ends of the building are covered with seamed metal sheets. The building is in fair to poor condition with deteriorated metal siding that is pulling away and rusted.

An office structure (circa 1980s) is a one-story pitched rook building with an extended roof canopy in a front supported by posts. The building is wood frame and stands on pier block foundations with

board frame windows.

Five open-sided, post and beam construction, storage sheds, are located on the site. Two sheds are used to store fruit drying trays, two sheds are equipment storage sheds, and one is used to cover the above ground storage tanks.

Rhoades Ranch

The Phegley/Rhoades Ranch (2290-A Cochrane Road, Morgan Hill) is a heavily wooded, historic property located along Cochrane Road, at the northeastern border of the Borello property. The site is a 12-acre property that is significant for its representation of the County's agricultural development patterns evidenced by residential and agricultural buildings that date from the 1860's through 1920's; including the Eclectic Spanish Revival Rhoades house designed by local architect Andrew P Hill Jr. and remodeled by architect Howard Wetmore Higbie. Also, for the association with James F. Phegley, a rancher during the last decades of the nineteenth century who served as a County Supervisor (1887-91); and for the association with Ira Osborne Rhoades who retired to the property from a position as a railroad purchasing agent and who was instrumental in the organization of the California Prune and Apricot Growers Association (Sunsweet); and Dr. Harold E. Thomas, professor of plant pathology at the University of California (1928-1945) and who was a founder of the Strawberry Institute of California.

The Rhoades Ranch was recently designated as a Santa Clara County Historic Landmark, however, this designation did not include the Borello property.

Peet Road Realignment

APN 728-33-002 is approximately 1.36 acres in a triangular (pie) parcel, the property is flat and used primarily for a residence and storage. Buildings on the site include one house c.1935 that has been dramatically remodeled and enlarged, and one barn c.1935, that is left from the previous use as a farm. The remodeling added manufactured siding and brick venire to the house as well as additional space. The barn is typical of a hay barn c.1935 with vertical board siding and a “pop-up” section in the center. The property is associated with the agricultural heritage of South Santa Clara County/Morgan Hill but in the reduced size and with the alterations it is not significant to that era. None of the buildings exhibit qualities of design or construction that meet the criteria of CRHR.

APN 728-33-003 is approximately 4.7 acres in a rectangular parcel, the property is flat and used primarily for storage or horse pastures. Buildings on the site include four storage buildings and one converted to apartments. With the exception of one building c.1940, converted to apartments c.1980, the buildings are contemporary c.1980’s. None of the buildings exhibit qualities of design or construction that meet the criteria of CRHR.

APN 728-33-004 approximately seven acres in a rectangular parcel, the property is flat and used primarily for storage or manufacturing of wood pallets. Buildings on the site include two houses and four storage buildings. The buildings date from the 1930’s to the 1980’s. The houses c. 1935 are cottage forms that have been enlarged and modified to the degree that they have lost architectural integrity. The storage buildings – former barns and workers housing, have been altered for storage of the pallets and equipment. None of the buildings exhibit qualities of design or construction that meet the criteria of CRHR.

The four parcels located to the south of existing Peet Road were initially surveyed in February 2012

and the structures on the site were not found to qualify as historic resources under CEQA criteria.[59]

The proposed Peet Road realignment would not require removal of any of the structures, only right-of-way along the street frontage for each parcel, so only impacts to the properties' settings would occur, not physical impacts to the buildings themselves.

[59] Urban Programmers. Department of Parks and Recreation Forms. April 15, 2012, see Appendix L.

LOCATION OF ON-SITE STRUCTURES

FIGURE 3.11-1

3.11.2 Cultural Resources Impacts

3.11.2.1 *Thresholds of Significance*

For the purpose of this EIR, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

3.11.2.2 *Impacts to Archaeological Resources*

During the July 2011 site investigation, two pestles[60] (one complete and one fragment) were observed approximately 20 meters apart in the northeast corner of the southern agricultural field. These artifacts indicate a possible cultural resource and were designated CB-1.

In addition, the prehistoric portion of site CA-SCL-159/H mentioned earlier was relocated on the northern portion of the site, and various artifact scatter was found.

Mechanical subsurface presence/absence testing was conducted at both locations in October 2011 to confirm the existence of an archaeological deposit below the existing surface and to define the borders of any identified deposit in order to accurately map their locations.

Backhoe trenching did not uncover any information that either of the two areas identified during the July 2011 site investigation contain materials which would make them eligible for inclusion in the California Register of Historic Resources (CRHR). In the Morgan Hill area, eligibility would be determined by the presence of paleosols[61] containing human remains (deliberate burials, either partial or complete), cultural features such as fire pits, caches of artifacts or faunal materials (favorite food remains such as fresh water shellfish, fish bones and small and large animal bones) and house floors.

Peet Road Realignment

In February 2012, *Holman and Associates* conduct a visual inspection and survey of four parcels and a 100 foot wide corridor of orchard lands located adjacent to the proposed Peet Road alignment. No evidence of prehistoric and/or historic archaeological material was seen anywhere inside the proposed road alignment or on property adjacent to it. Realignment of Peet Road should have no effect on buried archaeological resources.

Impact CULT-1: Implementation of avoidance measures (Section 3.11.3) would ensure that the proposed project would appropriately treat any buried archaeological resources. **(Less Than Significant Impact)**

[60] A heavy tool with a rounded end, used for crushing and grinding substances such as spices or drugs, usually in a mortar.
[61] Ancient, preserved soils.

3.11.2.3 *Impacts to Historic Buildings*

The property contains examples of utilitarian structures that are mostly storage structures with open sides for fruit drying trays, vehicles, and miscellaneous equipment. The residential buildings do not exhibit artistic design or high quality construction, and the site does not maintain integrity of the setting or feeling because the buildings have been altered or moved.

Development will be phased over several years. Removal of the operational and storage structures currently on the site will occur during Phases 8 through 12.

The existing structures on the project parcels are not significant to the architectural history or heritage of Morgan Hill or the County of Santa Clara, the state or the nation. The proposed Peet Road realignment would take some right-of-way along the street frontage for the four parcels located south of Peet, but it would not remove or impact any buildings or structures.

Impact CUL-2: The project parcels are not eligible for listing on the California Register of Historic Resources, the National Register of Historic Places, the County Historic Register, or City Historic Register. Therefore, removal of all structures on the main 122-acre site would not impact historic resources. **(Less Than Significant Impact)**

Rhoades Ranch

Proposed development located adjacent to the property line of the Rhoades Ranch would include rear yards of court homes separated from the historic landmark by a fence. The Rhoades Ranch currently has a driveway set away from the south property line that provides an additional buffer to the proposed development. The primary buildings of the Historic Landmark are set back from the parcel line with sufficient land between the new development and the historic buildings to maintain the rural setting on the landmark property. **(Less Than Significant Impact)**

3.11.3 Avoidance Measures

Archaeological Resources

Based upon the literature search and field studies, archaeological monitoring of the general vicinity of ground adjacent to Scl-159/H is recommended during construction of Phases 1 and 2. While the area testing of Scl-159/H did not identify archaeological soils, it could contain human burials: known as "outliers", the Native Americans in the Santa Clara Valley occasionally buried individuals outside of what is now understood to be their village centers, the preferred location for such activity.

Future development of the project site shall comply with the City of Morgan Hill Municipal Code Chapter 18.75, which establishes standard conditions of approval for development projects within archaeologically sensitive areas.

AM CUL-1.1: An archaeologist shall be present on-site to monitor ground-disturbing activities during Phases 1 and 2. In the event that any bone material is discovered, work should be halted with a distance determined by the project archaeologist until a qualified forensic archaeologist has made a determination that it is or is not human.

In the event that human remains are identified, work should be halted inside the zone designated by the project archaeologist until the County Coroner's Office and the Native American Heritage Commission (NAHC) have been notified. It is the duty of the NAHC to designate a Most Likely Descendant (MLD) to represent tribal interests regarding the method of exposure, removal and the place of reburial of any human bone and associated grave goods.

AM CUL-1.2: The following measures are identified in the City of Morgan Hill Municipal Code Chapter 18.75.

This project may adversely impact undocumented human remains or unintentionally discover significant historic or archaeological materials. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans.

- If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
- Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
- Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.

- In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below.

- An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the Monitoring Archaeologist (typically 25-50ft for single burial or archaeological find)

- The exclusion zone shall be secured (e.g., 24 hour surveillance) as directed by the City or County if considered prudent to avoid further disturbance

- The Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:

  - The City of Morgan Hill Community Development Director
  - The Contractor's Point(s) of Contact
  - The Coroner of the County of Santa Clara (if human remains found)
  - The Native American Heritage Commission (NAHC) in Sacramento
  - The Amah Mutsun Tribal Band

- The Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American the Coroner has 24 hours to notify the NAHC.

- The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.)

- Within 24 hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose.

- Within 24 hours of their notification by the NAHC, the MLD may recommend to the City's community development director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out.

- If the MLD recommendation is rejected by the City of Morgan Hill the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

3.11.4 Conclusion

Impact CUL-1: Implementation of avoidance measures would ensure that proposed development would not result in significant impacts to archaeological resources including human remains interred outside formal cemeteries. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact CUL-2: Proposed development would not result in impacts to historical resources. **(Less Than Significant Impact)**

3.12 PUBLIC FACILITIES AND SERVICES

3.12.1 Introduction

Public facilities and services, such as fire and police, parks, libraries, and schools, are provided to the community as a whole at defined locations and the resource base for delivery of these services is financed on a community-wide basis. In Morgan Hill, these services are provided by the City and County of Santa Clara.

New development usually creates an incremental increase in the demand for these services with the amount of demand varying widely between development types (e.g., residential versus commercial), the type of services, and the specific characteristics of the development (such as student generation by multiple family residences versus senior housing).

The impact of a particular project on public facility services is often a fiscal impact. Projects can cause an increase in the cost of providing service (for example more personnel hours for police patrols or park maintenance). These are fiscal impacts, not environmental impacts. An analysis of fiscal impacts is not required under CEQA.

CEQA analysis is required if the increased demand on public facilities and services is of sufficient size to trigger the need for a new or expanded facility (such as a school or fire station) since construction of the new or expanded facility would have a physical impact on the environment. CEQA requires that an EIR then identify and evaluate the physical impacts on the environment that such a facility would have.

3.12.2 Existing Setting

3.12.2.1 *Fire Service*

The City of Morgan Hill contracts for fire and emergency medical services with the Santa Clara County Fire Department. The City is served by the following two County fire stations: 1) El Toro Fire Station, located at 18300 Old Monterey Road, and 2) Dunne Hill Fire Station, located at 2100 East Dunne Avenue. It is the Fire Department's goal for a total response time to calls of seven minutes.[62] The City is also served under a mutual aid agreement by the California Department of Forestry and Fire Protection (CDF). The CDF Station is located at 15670 South Monterey Road.

3.12.2.2 *Police Service*

Police service is provided to the site by the City of Morgan Hill Police Department. The headquarters of the Morgan Hill Police Department is located at 16200 Vineyard Boulevard. The department currently employs 36 sworn officer positions, six paid reserve police officer positions, and 20 non-sworn support positions. The Police Department's goal is to respond to Priority One calls within five minutes and Priority Two calls within 10 minutes.

3.12.2.3 *Schools*

The project site is located within the Morgan Hill Unified School District. The district is comprised

[62] City of Morgan Hill. Fire and Emergency Medical Services Master Plan Update. 2002. http://www.morgan-hill.ca.gov/Upload/Document/D240005203/2002%20Fire%20&%20EMS%20Svcs%20Master%20Plan%20Study%20Part%201.pdf

of 15 schools: nine elementary schools, two middle schools, two high schools, a continuation high school, and a community adult school as well as a home schooling program. Residential development proposed on the project site would be served by three schools in the district. P.A. Walsh Elementary School is located 3.15miles southwest of the project site at 353 West Main Avenue, Lewis H. Britton Middle School is located 2.6 miles southeast of the project site at 80 West Central Avenue, and Live Oak High School is located 1.6 miles east of the project area at 1505 East Main Avenue.

There are a number of private elementary, middle, and high school facilities also located within Morgan Hill; however, enrollment and capacity of those schools is not reflected in this analysis because it is not possible to predict whether/how many project students would attend these facilities.

3.12.2.4 *Parks and Recreational Facilities*

The City of Morgan Hill owns approximately 150 acres of public parkland, including two community parks, two neighborhood parks, two neighborhood/school parks, and 14 mini-parks.

In addition to parks, the City owns special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Centennial Recreation Center, Community and Cultural Center, and the Outdoor Sports Center. The Community Center provides various rooms for events, meetings, classes; a children's pavilion, and an outdoor amphitheater. School facilities are also available for use after school hours and on weekends. These facilities include 12 baseball/softball fields, nine soccer fields, two football fields, two tracks, and four swimming pools. The closest recreational facility to the project site is located at Live Oak High School (1.6 miles to the east).

Morgan Hill residents also utilize county and state parks. These parks include Silveira Park at the southern end of the City, the Coyote Creek park chain to the north, Henry Coe State Park to the east, and Anderson Lake County Park located approximately ¼ mile northeast of the project site.

The City's General Plan has a parks and recreation goal to provide useful, accessible and high-quality park, recreation and trail facilities programs. Morgan Hill's recommended standard for parkland is five acres per 1,000 population.[63] Morgan Hill's population in 2010 was 40,246 and is projected to grow to 51,700 by 2030.[64] Based on the current Draft Capital Improvements Program (CIP), the City will own a total of approximately 213 acres of parkland by the end of 2011 to serve an estimated population of 41,391.[65] This exceeds the City's goal of five acres of parkland per 1,000 capita.

3.12.3 Public Facilities and Services Impacts

3.12.3.1 *Thresholds of Significance*

For the purposes of this EIR, a public services and facilities impact is considered significant if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically

[63] City of Morgan Hill, Parks, Facilities & Recreation Programming Master Plan, December 2000.
[64] Association of Bay Area Governments. *Projections 2007: Forecasts for the San Francisco Bay Area to the Year 2030.* December 2006.
[65] City of Morgan Hill, Projection of Developed Parkland per 1,000 Population, Based on Draft 09/10 - 11/12 CIP, June 17, 2009.

altered governmental facilities, the 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:

- Fire Protection,
- Police Protection,
- Schools,
- Parks.

3.12.3.2 *Fire Service*

The project would be built in conformance with current codes, including requirements for the installation of fire sprinklers, which would reduce fire hazards. Project design has been reviewed by both the Santa Clara County Fire Department and the Morgan Hill Police Department to ensure that it incorporates appropriate safety features to reduce fire hazards and criminal activity. Internal project site roadways and driveways have been designed to provide sufficient turning radii for fire trucks accessing the project site. Adherence to codes would minimize the potential damage and risk from fire and other hazards. The increased amount of development at the project site is likely to increase the demand for fire services by an incremental amount. The increased demand is not anticipated to result in the need for any new fire facilities, as the ability of each station to serve its respective service area would not change.

Standard Measures: In accordance with City of Morgan Hill standard conditions, development of the project site shall implement the following measure:

SM PS-1.1: Proposed development and roadways under the project have undergone SCCFD review to ensure building compliance with the Uniform Fire Code and roadway widths/configurations allow for fire truck access to buildings and adequate response times to the project site.

Impact PS-1: The proposed project site plan has been amended to include roadway widths/configurations and adequate cul-de-sac geometry to allow for fire services access throughout the entire proposed project development. **(Less Than Significant Impact)**

3.12.3.3 *Police Service*

The proposed project would allow for increased development in an area currently served by the Morgan Hill Police Department. The proposed project design has been reviewed to ensure that it incorporates appropriate safety measures to minimize criminal activity. Given the existing provision of police services to the area, the proposed project would not result in the need for additional police facilities. New development in Morgan Hill is required to pay an impact fee for police facilities; these fees go toward paying debt service and ensuring equipment such as police cars are available to serve new development.

Impact PS-2: The proposed project may incrementally increase calls for police service but would not result in the need for the construction of additional police facilities. **(Less Than Significant Impact)**

3.12.3.4 *Schools*

Future students of the proposed project site would be served by three schools within the Morgan Hill Unified School District. The schools serving the project site and their existing capacity are shown in Table 3.12-1. The elementary, middle, and high school would provide enough capacity for students from the proposed project.

Table 3.12-1
School Capacity and Student Generation

School	Existing Capacity	Existing Enrollment	Available Capacity	Project Student Generation*
Nordstrom	957	750	207	98.02
Martin Murphy	1,024[2]	552	472	31.50
Live Oak High	1,632	1,216	416	71.10

Notes:
*Based on single family attached student generation rates of 0.2312 (K-6), 0.0743(7-8), and 0.1677 (9-12).

Sources: Anessa Espinosa, Director of Facilities. Morgan Hill Unified School District. July 2, 2012.

Impact PS-3: State Law (Government Code Section 65996) specifies an acceptable method of offsetting a project's effect on the adequacy of school facilities is payment of a school impact fee prior to issuance of a building permit. The school impact fees and implementation of measures specified in Government Code 65996 would be used to offset project-related increases in student enrollment. Proposed residential development would be required to comply with the school impact fee requirements of the Morgan Hill Unified School District (MHUSD). The school district is responsible for mitigating school effects under the Government Code.

The elementary, middle and high schools have capacity for the proposed project.

Payment of fees to the School District is considered adequate mitigation. The phasing of the project would allow the Morgan Hill School District adequate time to plan for the increased student population at surrounding schools. In addition, a 10 acre site located to the west of the SCVWD facility on Peet Road has been dedicated to the Morgan Hill School District. The District intends to take title of the land in February/March 2013 following the completion of the environmental review process currently being prepared. The District intends to utilize the site for a future school facility according to enrollment rates and available funding. **(Less Than Significant Impact)**

3.12.3.5 *Parks*

The proposed residential development would increase the use of park facilities in the project area.

The City's General Plan has a parks and recreation goal to provide useful, accessible and high-quality park, recreation and trail facilities and programs. Morgan Hill's goal for parkland is five acres per 1,000 residents; however, the Municipal Code requires three acres of parkland per 1,000 residents in accordance with State law governing maximum requirements on development.

The City of Morgan Hill has adopted a parkland dedication/park land in-lieu fee ordinance (Municipal Code Chapter 17.28) that requires parkland dedication or in-lieu fees for residential developments. This ordinance requires residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. The acreage of parkland or amount of the in-lieu fee required is based upon criteria outlined in Chapter 17.28 of the City's Municipal Code.

Residential development proposed on the project site is assumed to result in 244 single family homes and up to 180 secondary units. Based on the City of Morgan Hill General Plan, average occupancy per single family unit is 3.08, which would result in an increase in population of up to 752. According to the assumptions provided by the City of Morgan Hill, the 180 secondary units have been allocated an average occupancy rate of 1.54 (half of the single family units) due to the smaller square footage, resulting in a population increase of 277 (1,029 total). Based upon the City's Municipal Code, implementation of the proposed project, therefore, would result in the need for approximately three acres of public parkland in the City of Morgan Hill, based on the projected population growth.

The proposed project includes the development of approximately 23 acres of private parks and open space throughout the project site. Since the project proposes private parkland and open space, additional in-lieu fees ($1,100 per unit) would be provided by the developer of the 122-acre property to fulfill the public parkland requirement.

Impact PS-4: Development of the proposed project would provide adequate park and recreational facilities to residents either in the form of new private open spaces amenities or through the payment of in-lieu fees for off-site public parks. **(Less Than Significant Impact)**

3.12.4 Conclusion

Impact PS-1: The proposed project and private roadways would not result in the need for the construction of additional fire service facilities or equipment. **(Less Than Significant Impact)**

Impact PS-2: The proposed project may incrementally increase calls for police service but would not result in the need for the construction of additional police facilities. **(Less Than Significant Impact)**

Impact PS-3: It is not anticipated that the construction of a new middle or high school or substantial expansion of existing facilities would be required to serve new residents of the project site. The payment of in-lieu fees is sufficient mitigation under State law. **(Less Than Significant Impact)**

Impact PS-4: The proposed project would provide adequate park and recreational facilities to service residents of the project site either in the form of new private open space available to project residents or through the payment of in-lieu fees for off-site public parks. **(Less Than Significant Impact)**

3.13 POPULATION, JOBS, AND HOUSING

3.13.1 Existing Setting

According to California Department of Finance estimates, Morgan Hill's population for 2011 was 38,547.[66] The Association of Bay Area Governments (ABAG) projects the population for Morgan Hill to be 51,600 in 2030.[67]

As part of the General Plan, residential development within the City of Morgan Hill is controlled by the Residential Development Control System (RDCS). By approving Measure C in 2004 and Measure F in 2006, Morgan Hill voters extended the City's RDCS to 2020. RDCS establishes a population ceiling for the City of 48,000 as of January 1, 2020. Additional population from three existing County subdivisions assumed to annex into Morgan Hill is also allowed by the RDCS, and therefore the 2020 population is projected to actually be 49,000 based on projected completion of those annexations.

Morgan Hill currently has a significant portion of its workforce traveling outside the City for employment. Increasing jobs in the City would help to alleviate peak hour traffic by eliminating the need for workers to commute from Morgan Hill to employment centers in northern Santa Clara County.

The City's General Plan policies include maintaining a jobs housing balance (*Jobs and Housing Policy 2d*). In 2010, the City had approximately 19,180 employed residents and 14,630 jobs or 0.76 jobs per employed resident.

3.13.2 Population, Jobs, and Housing Impacts

3.13.2.1 *Thresholds of Significance*

For the purposes of this EIR, a population, jobs, and housing impact is considered significant if the project would:

- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure); or
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

3.13.2.2 *Population and Housing*

Implementation of the proposed project would allow for residential uses on the project site, consisting of 244 single family homes and up to 180 secondary units and the realignment and widening of Peet Road by 2022. As previously discussed, the rate of residential growth is controlled by the City's Residential Development Control System that limits new residences in the City to approximately 250 units per year.

[66] http://factfinder.census.gov/home/saff/main.html?_lang=en Accessed: September 14, 2011

[67] Association of Bay Area Governments. Projections and Priorities 2009: Building Momentum: San Francisco Bay Area Population, Household, and Job Forecasts.

The proposed project will be built in multiple phases of development. Phase 1 would include a building allotment for 21 residences to be built from 2012-2013. Phases 2, 3, and 4 include an allotment for 39 residences to be developed from 2013-2014. Phase 4 includes development of six units that have not received allotment. The confirmed RDCS allotments for Phases 1 through 4 include the secondary units proposed within each phase. Construction of Phase 1A is targeted for June 2012. Full development of the project would continue for 10 to 15 years beyond this time, as RDCS allocations become available and market conditions dictate.

The proposed Peet Road widening and realignment would not provide additional capacity for the roadway, and no additional residential growth is planned as a result of the roadway realignment.

Development of the project site would result in the removal of nine existing structures (mobile, modular, and single family homes), providing temporary agriculture housing for approximately 30-35 seasonal migrant farmworkers during harvest season and approximately 10 additional farmworkers year round. This would occur at the southeastern portion of the site. Displacement on this scale generally would not be considered substantial given the relatively small number of housing units and persons affected.

The City of Morgan Hill has recognized that development of existing housing sites can cause hardship to residents. Residents at the project site are temporary agricultural migrant workers, therefore, relocation assistance may not be deemed necessary. However, the City has typically applied the following measure as standard condition of approval where residents will be displaced.

Mitigation Measures: In accordance with the City of Morgan Hill standards for public projects,[68] the project proposes to implement the following measure to reduce and/or avoid impacts to people and housing:

SM PH-1.1: Relocation assistance in the form of a list of available rental units of similar price and in the same general area shall be provided each tenant, together with a relocation allowance equal to three (3) months rent at the tenant's rate in effect at the time final approval is granted. The rental list shall be updated weekly by the applicant until residences are vacated. A copy of all assistance plans shall be forwarded to the Housing Division for approval. Payment shall be made when relocation expenses are incurred or no later than the time the tenant vacates the premises. (Morgan Hill Municipal Code Chapter 15.30.050). The proposed Relocation Assistance Plan provided by the project applicant is provided in Appendix K, and has received approval by City of Morgan Hill staff.

Impact PH-1: Proposed project development would not result in impacts related to population growth, and implementation of standard measure SM PH-1 and implementation of the proposed Relocation Assistance Plan, would ensure that a substantial number of housing units or people are not displaced without the provision of replacement housing assistance. **(Less Than Significant Impact)**

3.13.2.3 *Jobs and Employed Residents*

The proposed project would allow for increased residential development at the project site. The

[68] City or Morgan Hill. Draft Housing Element. September 2010

existing jobs per employed resident ratio is approximately 0.76.[69] According to *ABAG Projections 2009*, the City is projected to have 25,090 employed residents and 23,950 jobs by 2030, or 0.95 jobs per employed resident. The project site has long been planned for residential development, and the proposed development would allow for up to 244 single family residences and up to 180 secondary units at the project site. Based on *ABAG Projections 2009*, Morgan Hill will have 1.5 employed residents per household by 2030. Based on this 1.5 factor applied to the 244 additional residential units proposed, and dividing this number in half (0.75 employed residents per unit) for the secondary units, the project would result in an additional 501 employed residents in the City.

As a result of the development of the project site, and the future cessation of agricultural farming at the site, farm worker jobs would be eliminated.

Residential development of the project site has been accounted for in the City's existing General Plan. Therefore, the proposed project would not conflict with existing housing and jobs projections within the City of Morgan Hill General Plan.

Impact PH-2: The proposed residential project would not substantially conflict with the City's policy of achieving a balance of jobs and housing. **(Less Than Significant Impact)**

3.13.3 Conclusion

Impact PH-1: Proposed residential development would not result in impacts related to population growth and implementation of standard measure, SM PH-1.1, would ensure that substantial numbers of housing units or people are not displaced without the provision of replacement housing assistance. **(Less Than Significant Impact)**

Impact PH-2: Proposed residential project development would not substantially conflict with the City's policy of achieving a balance of jobs and housing. **(Less Than Significant Impact)**

[69] Association of Bay Area Governments. Projections and Priorities 2009: Building Momentum: San Francisco Bay Area Population, Household, and Job Forecasts.

3.14 HYDROLOGY AND WATER QUALITY

The following discussion is based in part on a Hydrology and Water Quality Review prepared for the project by *Schaaf & Wheeler* in June 2012. A copy of this report is included as Appendix L in this EIR.

3.14.1 Existing Setting

The project site is located within two jurisdictional watersheds. All storm water from the site drains to facilities owned and maintained by the Santa Clara Valley Water District (SCVWD). However, the southern portion of the site eventually drains to the Monterey Bay while the northern portion of the site drains to the San Francisco Bay. The existing site is divided by a bluff in the northwest quadrant of the property. Lands to the south and west of the bluff are raised and slope generally southward, while land to the north and east of the bluff is depressed and slopes to the northeast. Generally, water to the south of the bluff is tributary to the Pajaro Creek watershed via Llagas Creek while water to the north of the bluff is tributary to the Coyote Creek watershed. The Monterey Bay watershed is regulated by the Central Coast Regional Water Quality Control Board (RWQCB), the City of Morgan Hill, and SCVWD. The northern drainage basin is regulated by the San Francisco RWQCB, the City of Morgan Hill, and SCVWD.

3.14.1.1 *Drainage*

Under existing conditions, stormwater runoff from the project site is tributary to two separate watersheds. The northerly portion of the site drains into Coyote Creek and ultimately to San Francisco Bay, while the southern portion ultimately drains into the Madrone Channel. Madrone Channel is a tributary to East Little Llagas Creek which drains into Llagas Creek, which eventually reaches Monterey Bay.[70]

The project site is further divided into three existing drainage basins: Basin I to the northwest, Basin II to the south, and Basin III to the east. Drainage Basin I is tributary to Coyote Creek and Basins II & III are tributary to Madrone Channel. The site also receives flows from adjoining properties to the north and east. Figure 3.14-1 shows the delineation of these basins. The entire project site is relatively flat, with an average slope of approximately one percent.

Basin I is approximately 35 acres and ranges in elevation from 468 feet at the offsite lands to the east to elevation 406 feet at the northwest corner of the site at Cochrane Road. Runoff is collected in a 10-inch diameter metal pipe under Cochrane Road that drains directly into Coyote Creek, or surface drains across the SCVWD property and into the storm drain system on Alicante Drive. Runoff from Basin I is within the Coyote Creek watershed, which ultimately discharges into the San Francisco Bay.

Basin II is approximately 72 acres and ranges in elevation from 475 feet on the offsite property to the northeast to onsite elevation 407 feet at Peet Road. Runoff passes through a 12-inch diameter culvert beneath Peet Road during small storm events. During larger storm events water overtops Peet Road to the southeast of the project site. Water from Basin II is tributary to either Madrone Channel or to Tennant Creek before entering East Little Llagas Creek, which flows to the Pajaro River and ultimately Monterey Bay.

Basin III includes the 30-acre eastern portion of the property and ranges from elevation 473 feet in

[70] City of Morgan Hill. Storm Drainage System Master Plan. January 2002.

the north to elevation 410 feet in the south at Half Road. Runoff from Basin III flows to the south and east, collecting in onsite drainage ditches before discharging through an existing 15-inch diameter drainage culvert beneath Half Road. A clay weir restricts flow to the 15-inch culvert beneath Half Road and acts as a sediment barrier. When the runoff rate exceeds the weir capacity, runoff sheet flows to the south and eventually crosses Half Road at a low point near Peet Road. Runoff from Basin III that enters the Half Road culvert is directed into an existing drainage ditch that conveys the runoff beyond the Half Road culvert to East Main Street where it is collected in a storm drain pipe, and eventually discharged to Madrone Channel and ultimately Monterey Bay.

3.14.1.2 *Flooding*

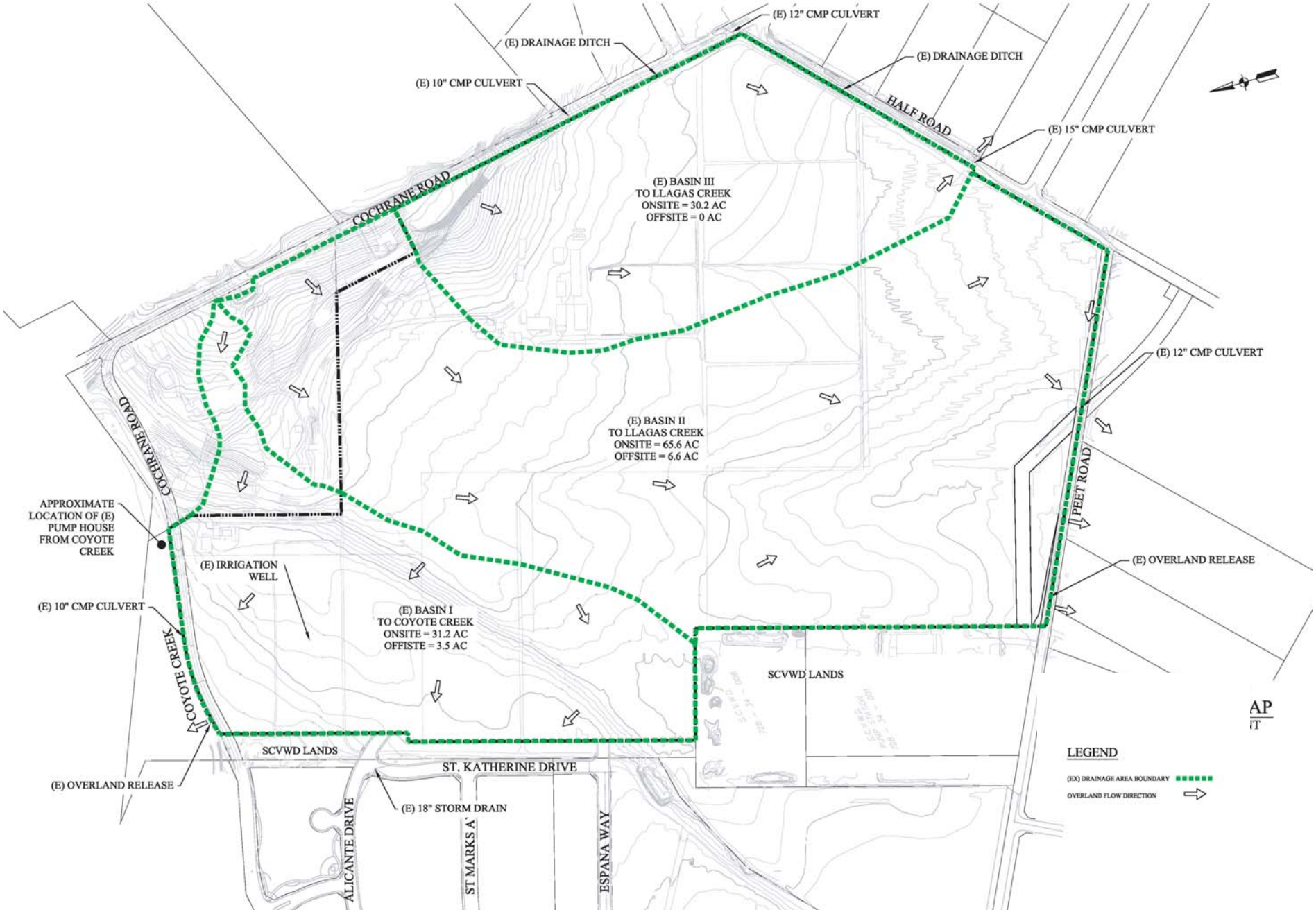
According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM),[71] the project site is located in special flood hazard area (SFHA) Zone D, designating an area in which flood hazards are undetermined, but possible. The Zone D boundary coincides with the Corporate limits for the City of Morgan Hill. Figure 3.14-2 shows the FEMA FIRM identifies the site as being located in unincorporated lands of Santa Clara County, but since the project site has been incorporated into the City of Morgan Hill, the site may be determined to be Zone X. Developed lands located adjacent to the project site have been designated Zone X. The Zone X designation is for areas of 0.2 percent (i.e. 500-year) chance flood; areas of one percent (i.e. 100-year) chance flood with average depths of less than one foot or with drainage areas less than one square mile. Both Zones D and X are considered outside of the designated 100-year floodplain.

3.14.1.3 *Dam Inundation Potential*

The project site is located within the inundation area for Anderson Dam. The dam is currently kept at a maximum depth of 68 percent full due to a recent SCVWD seismic analysis[72] which determined that the dam may experience significant damage in an earthquake and therefore to manage this risk, the water level would remain about 25 feet below the spillway until seismic retrofits can be completed.

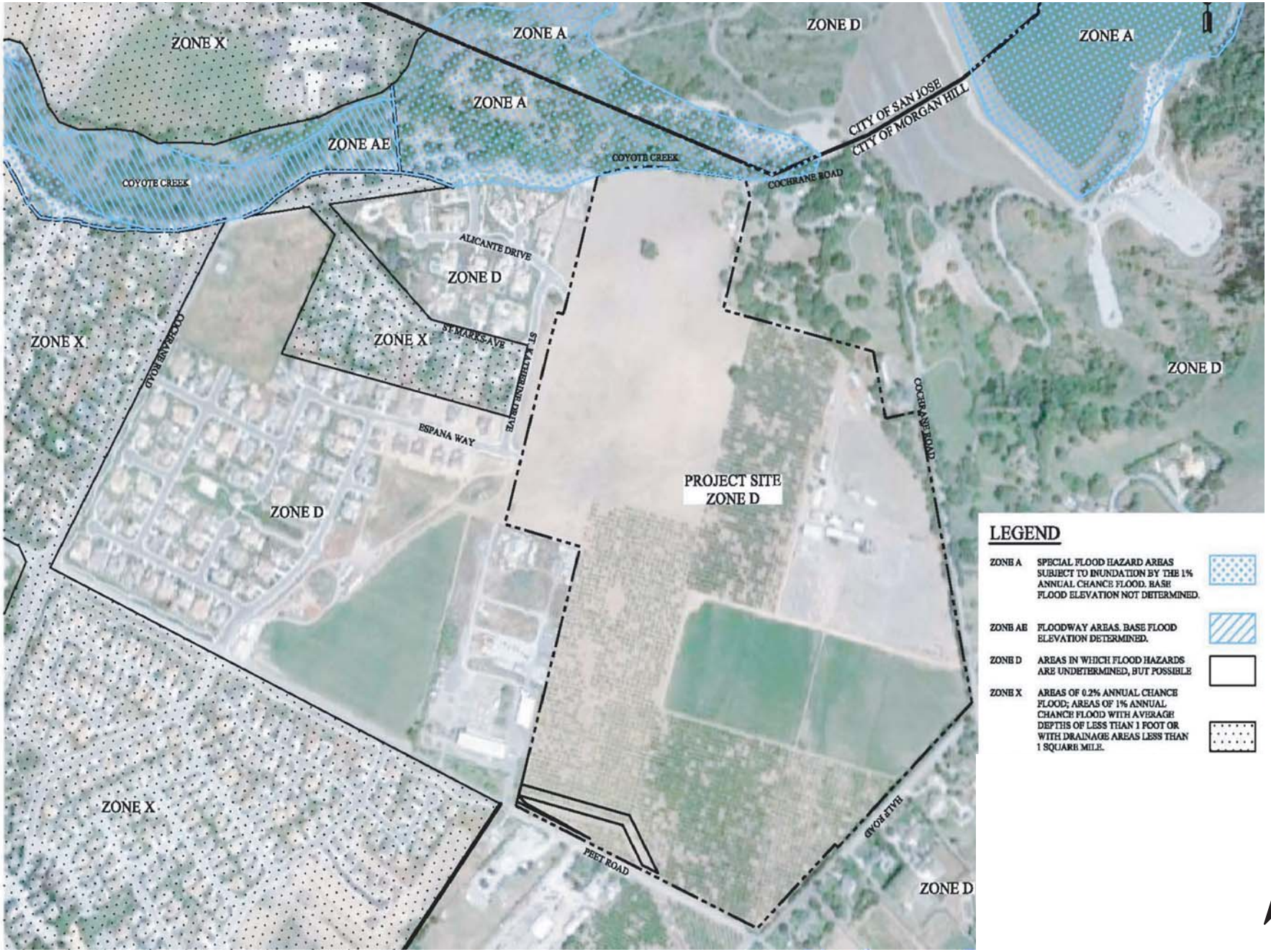
The analysis of the dam resulted in an expected maximum inundation depth of 25.6 feet (elevation 425.6 feet) at the project site. Due to the proximity of the project site to the dam, flood wave arrival would occur at the site immediately after failure at a maximum velocity of about 14.4 feet per second. This result assumes that the dam is at full capacity upon failure, which as mentioned above is not reflective of actual conditions while the SCVWD completes the retrofit project. The reduced water surface elevation ensures an adequate margin of safety for the site and the rest of the City until the dam retrofit is complete. Appendix J shows the Dam Inundation Map as Figure 4.

[71] FEMA FIRM number 06085C0442H, dated May 18, 2009.
[72] Anderson Dam Seismic Stability Study. Santa Clara Valley Water District. July 2011. Website: http://www.valleywater.org/.



DRAINAGE BASIN MAP

FIGURE 3.14-1



FEMA FLOODING MAP

FIGURE 3.14-2

3.14.1.3 *Groundwater*

The City of Morgan Hill currently relies on local groundwater as its sole water supply source. The groundwater basin underlying the City is part of the Santa Clara Valley groundwater basin and managed by the Santa Clara Valley Water District (SCVWD). The City's water supply comes from the Coyote and Llagas subbasins.

The project site is located on the ridge between the Coyote and Llagas Creek watersheds, however, the northern limit of the Llagas groundwater basin is Cochrane Road. Therefore, the site is entirely underlain by the Llagas groundwater basin. Recharge of the Llagas groundwater basin is achieved through an equal combination of natural recharge and recharge activities of the SCVWD (23,000 acre-feet per year (afy)).

As mentioned in *Section 3.9 Geology, Soils, and Seismicity*, during soil boring, groundwater was encountered at 39 feet below the ground surface.

3.14.1.4 *Water Quality*

The water quality of ponds, creeks, streams, and other surface water-bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as "non-point" source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.) pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

Regulatory Overview

The major federal legislation governing water quality is the Clean Water Act, as amended by the Water Quality Act of 1987. The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for water quality management nationwide.

The State of California's Porter-Cologne Water Quality Control Act provides the basis for water quality regulation within California; the Act assigns primary responsibility for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB), and the nine regional water quality control boards. Each Regional Water Quality Control Board (RWQCB) adopts and implements a water quality control plan ("Basin Plan"). Portions of the project site are located within the San Francisco and Central Coast regions.

The SWRCB has implemented a National Pollution Discharge Elimination System (NPDES) Program. The Central Coast RWQCB issues and enforces NPDES permits for discharges to water-bodies in the portion of Santa Clara County that drains to the Monterey Bay, and the San Francisco RWQCB enforces NPDES permits for discharges to water -bodies in Santa Clara County that drain to the San Francisco Bay. Projects disturbing more than 10,000 square feet of land during construction are required to file a Notice of Intent (NOI) to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activities.

The State NPDES General Construction Permit requires development and implementation of Storm Water Pollution Prevention Plan (SWPPP) and uses storm water Best Management Practices (BMPs)

to control runoff, erosion, and sedimentation from development sites both during and after construction. The SWPPP shall prescribe construction-phase BMPs to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for revegetation or mulching. The plan would also prescribe treatment measures to trap sediment once it has been mobilized, at a scale and density appropriate to the size and slope of the catchment.

As mentioned previously, the project site is located within two jurisdictional watersheds. The northern portion of the site is regulated by the SFRWQCB, City of Morgan Hill, and SCVWD. The SFRWQCB requirements are administered by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). For the portion of the site subject to SCUVRPPP standards, the project design should follow the regulations set forth in the C.3 Stormwater Handbook.[73]

Hydromodification

Hydromodification is a change in stormwater runoff characteristics from a watershed caused by changes in land use conditions (i.e. urbanization) that alter the natural cycling of water. Changes in local land use can cause runoff volumes and velocity to increase which can result in a decrease in natural vegetation, changing of river/creel bank grades, soil compaction, and the creation of new drainages.

3.14.2 Hydrology and Water Quality Impacts

3.14.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hydrology and water quality impact is considered significant if the project would:

- Violate any water-quality standards or waste-discharge requirements; or
- Substantially deplete groundwater supplies or interfere substantially with ground-water recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., would the production rate of preexisting nearby wells drop to a level which would not support existing land uses or planned uses for which permits have been granted?); or
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on- or off-site; or
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface run-off in a manner that would result in flooding on- or off-site;
- Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems; or
- Provide substantial additional sources of polluted runoff or otherwise substantially degrade surface or ground water quality; or
- Place within a 100-year flood hazard area structures, which would impede or redirect flood flows; or

[73] *C.3 Stormwater Handbook*. Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). May 2006.

- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

3.14.2.2 *Drainage*

The project proposes to use drainage swales to convey surface flow to retention or detention ponds, with limited underground storm drain infrastructure. Figure 3.14-3 shows the Proposed Drainage Basin Map, including the retention and detention pond locations.

The proposed project will generally maintain the existing drainage patterns toward San Francisco Bay and Monterey Bay. The proposed plan directs runoff from all of existing drainage Basin I as well as a portion of the offsite lands to the northeast, for a total of 33 acres, to the Coyote Creek watershed. The southern drainage basin will incorporate all of existing drainage Basins II and III and a portion of the offsite lands, to the Pajaro Creek watershed. The project will increase the area of land tributary to Coyote Creek while decreasing the Pajaro Creek watershed by redirecting site runoff from approximately 1.5 acres, as depicted in Figure 3.14-3, Proposed Drainage Basin Map. In an effort to compensate for this the project is proposing retention basins for the lands tributary to Coyote Creek.

Due to the increase in impervious area (17.4 acres currently vs. 55.4 acres for the proposed project), the peak runoff from the site and offsite Peet Road realignment would increase in the absence of mitigation. To address the impacts of increased runoff the project is proposing a combination of retention basins in the northerly watershed (Coyote Creek/San Francisco Bay) and detention basins in the southerly watershed (Madrone Channel/Monterey Bay).

In the northerly watershed tributary to Coyote Creek/San Francisco Bay the project proposes retention ponds to collect and percolate the post-development runoff. Retention ponds are required to retain the 100-year 24-hour storm per the City of Morgan Hill Storm Drainage System Master Plan and Design Standards and will have a minimum storage volume of 8.6 acre-feet

In the drainage area tributary to Madrone Channel (Monterey Bay) the project proposes detention ponds to collect and detain the post-development runoff to predevelopment volumes. The detention ponds will be designed to retain the 25-year 24-hour storm per the City of Morgan Hill Storm Drainage Master Plan and Design Standards. Due to the lack of existing formal downstream storm drain infrastructure and to further mitigate the impacts of increased impervious surface area the project has proposed to size the detention basin to contain the 100-year 24-hour storm and will have a minimum storage volume of 9.2 acre-feet. The detention ponds will outlet thru an existing culvert under Peet Road to the south. The existing culvert under Peet Road will need to be replaced due to the realignment of Peet Road. In addition, the culvert may not meet the City's standards for pipe material and pipe cover.

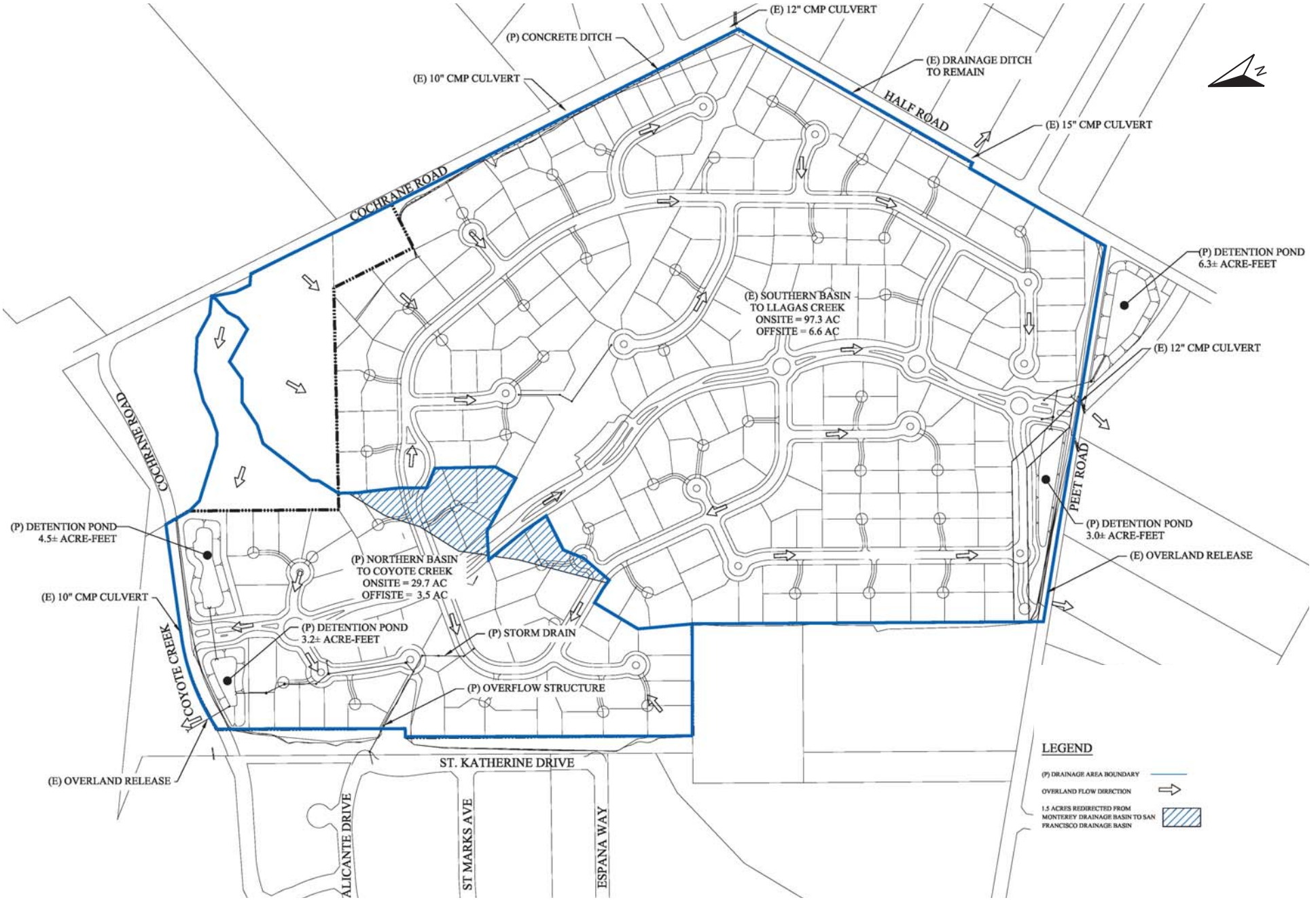
The northern detention pond will be constructed during the first phase of development (Phases 1A and 1B), and the southern detention pond shall be constructed no later than Phase 10 of development. The project also proposes an interim detention pond to be constructed in the southeast corner of the project, near the Peet Road/Half Road intersection to serve the project until the Peet Road realignment is completed or as an alternative location for the ultimate basin location, if Peet Road cannot be relocated due to unwilling sellers of right of way on the Mariani parcel.

The realignment and widening of Peet Road from 20 feet (edge of pavement to edge of pavement) to

52 feet (face of curb to face of curb) will increase its impervious surface and associated runoff peak rate and volume. In the current condition runoff from Peet Road sheet flows generally north to west before reaching a low point along the project frontage (elevation 408.4) and overland releases over existing Peet Road to the south over adjacent properties. Under existing conditions, the existing impervious surface within the limits of Peet Road realignment is 18 percent. In the post development condition impervious surface will increase to 87 percent. The southerly detention basins (either on or off site, as shown in Figure 3.14-3) will be designed to accept the runoff from the realigned portion of Peet Road and has been included in the 9.2 acre-feet volume for the southerly basins.

In order to mitigate the increase in peak flow rate due to the expansion of Peet Road, infrastructure would be appropriately sized and designed to convey the flow to one of the southern detention basins. The piping size of connection pipes between the basins and the replacement pipe under Peet Road could be maintained at the existing piping size (12-inch).

Impact HYDRO-1: Implementation of mitigation measure, MM HYDRO 1.1, as described in Section 3.14.3 would ensure that construction of the proposed development would not increase stormwater runoff and would not exceed the capacity of planned onsite and existing offsite stormwater drainage facilities. **(Less Than Significant Impact with Mitigation)**



PROPOSED DRAINAGE BASIN MAP

FIGURE 3.14-3

3.14.2.3 *Flooding and Dam Inundation*

The proposed project site is outside of the 100-year floodplain (Zones D and X). Therefore, future development of the project site would not place people or housing within the 100-year floodplain.

While the project site is subject to deep inundation should the Leroy Anderson Dam fail catastrophically, the dam is inspected twice a year by the District in the presence of representatives from the California Division of Safety of Dams and the Federal Energy Regulatory Commission. Furthermore, the Anderson Reservoir is managed to prevent significant damage during a maximum credible earthquake. While the potential inundation resulting from catastrophic dam failure could damage property and proposed structures within the project site and pose a severe hazard to public safety, the probability of such failure is extremely remote and reservoir levels have been lowered to maintain an additional level of safety, and therefore dam inundation failure is not considered a significant hazard.

The site is not subject to seiche or tsunami.

Impact HYDRO-2: The proposed project would not expose people to significant risk of flooding or inundation from dam failure. **(Less Than Significant Impact)**

3.14.2.3 *Water Quality*

Construction Phase Impacts

Short-term adverse impacts to water quality may occur during construction of the project when areas of disturbed soils become susceptible to water erosion and downstream sedimentation. Grading and vegetation removal could result in an increase in on-site erosion, affecting both water quality and slope stability.

Post-Construction Phase Impacts

The proposed project could adversely impact water quality. Pollutants and chemicals associated with urban development could run off new roadways, homes, and other impervious surfaces. The pollutants could then flow into the tributary creeks described previously. These pollutants could include, but may not be limited to, heavy metals from automobile emissions, oil grease, debris, and household chemicals. Contaminated urban runoff that remains relatively untreated could result in incremental long-term degradation of water quality.

Impact HYDRO-3: Implementation of the mitigation measure, MM HYDRO-3.1, would ensure that construction and ongoing occupancy of the proposed subdivision would result in less than significant water quality impacts. **(Less Than Significant Impact)**

3.14.2.4 *Impacts to Groundwater*

The surface area of the Llagas groundwater basin is 56,000 acres.74 Infiltration varies over the basin, and creates an average annual infiltration volume of 0.4 acre-feet per acre of surface area. The total impervious surface of the proposed development is about 48 acres. Applying the most

[74] Santa Clara Valley Water District 2010 Urban Water Management Plan.

conservative assumption, that no rainfall onto post-project impervious surfaces is able to percolate into the groundwater basin, a decrease of about 19 acre-feet per year of infiltration (less than one tenth of one percent of existing conditions) would result. This amount does not represent a substantial interference with groundwater recharge.

Given these calculations, and the project's plan to promote infiltration through the use of open swales and strategically located basins, the impact of the project to groundwater recharge would not be significant. The proposed project has no impact to the SCVWD recharge activities for the Llagas groundwater basin.

Impact HYDRO-4: Development of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. **(Less Than Significant Impact)**

3.14.3 Mitigation Measures

Mitigation Measures: In accordance with City of Morgan Hill standards, development of the proposed project shall implement the following measure to avoid impacts to the City's storm drainage system.

MM HYDRO-1.1: The portion of the site that drains to San Francisco Bay via Coyote Creek is under the jurisdiction of the San Francisco RWQCB. For the portion of the site that drains to Coyote Creek, the project shall include hydromodification mitigation meeting or exceeding the specifications outlined in the SCVURPPP hydromodification mitigation plan (HMP).

Mitigation Measure: In accordance with City of Morgan Hill standards, development of the proposed project shall implement the following measures to minimize construction phase and post-construction water quality impacts:

MM HYDRO-3.1: Potential construction-phase and post-construction pollutant impacts from development shall be controlled below the level of significance through preparation and implementation of an erosion control plan, a storm water pollution prevention plan (SWPPP) and a storm water management plan (SWMP) consistent with recommended design criteria in accordance with the NPDES permitting requirements enforced by the Regional Board (San Francisco or Monterey Bay as applicable for each phase), per requirements at time of development.

The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP, which also details the construction-phase housekeeping measures for control of contaminants other than sediment.

The SWMP implements treatment measures and best management practices (BMPs) to be implemented for control of pollutants once the project has been constructed. Both the SWPPP and the SWMP set forth the BMP monitoring and maintenance schedule and identifies the responsible entities during the construction and post-construction phases.

The applicant's SWPPP shall prescribe construction-phase BMPs to

adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for revegetation or mulching. BMPs shall be implemented in accordance with criteria in the California Stormwater BMP Handbook for Construction or other accepted guidance and shall be reviewed and approved by the City of Morgan Hill prior to issuance of grading or building permits for each phase of development. The applicant shall identify the SWPPP Manager who will be the responsible party during the construction phase to ensure proper implementation, maintenance and performance of the BMPs.

The applicant's SWMP shall implement post-construction water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable for both the Peet Road and site development projects. For the site itself, neighborhood and/or lot-level BMPs to promote infiltration or "green" treatment of storm runoff shall be emphasized, consistent with Regional Boards guidance for NPDES Phase 2 permit compliance.

3.14.4 Conclusion

Impact HYDRO-1: Implementation of mitigation measures, MM HYDRO-1.1 would ensure that construction of the proposed development would not increase stormwater runoff and would not exceed the capacity of planned stormwater drainage facilities. **(Less Than Significant Impact with Mitigation)**

Impact HYDRO-2: Development of the proposed project would not expose housing to significant flooding impacts or inundation from dam failure. **(Less Than Significant Impact)**

Impact HYDRO-3: Implementation of the mitigation measure MM HYDRO-3.1, would ensure that construction and post-construction runoff from the proposed development would result in less than significant water quality impacts. **(Less Than Significant Impact with Mitigation)**

Impact HYDRO-4: Buildout of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. **(Less Than Significant Impact)**

3.15 TRANSPORTATION

The discussion in this section is based on a Transportation Impact Analysis prepared by *Fehr & Peers* in March 2012. A copy of this report is included as Appendix M in this EIR.

3.15.1 Existing Setting

3.15.1.1 *Existing Roadway Network*

The project site and surrounding regional and local roadway network are described below and shown on Figure 3.15-1.

Regional Access

U.S. Highway 101 (US 101) is a north-south freeway that serves as the primary roadway connection between Morgan Hill and other areas of Santa Clara County. US 101 extends north to San Francisco and south to Los Angeles. The freeway includes six lanes (three mixed-flow lanes in each direction) within most of Morgan Hill. North of Cochrane Road, US 101 widens to eight lanes with three mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction. The Cochrane Road interchange provides primary access to the project site.

Local Access

Cochrane Road is a four-lane, divided arterial street that extends eastward from its intersection with Monterey Road through a partial-cloverleaf interchange at US 101. East of US 101, Cochrane Road is a two-lane road that extends eastward to Anderson Reservoir and then southward to its terminus at the Main Street/Liberata Drive intersection. Existing land uses along Cochrane Road, near the project site, are primarily residential in nature. The northeast site can be accessed via a driveway proposed to be located along this road.

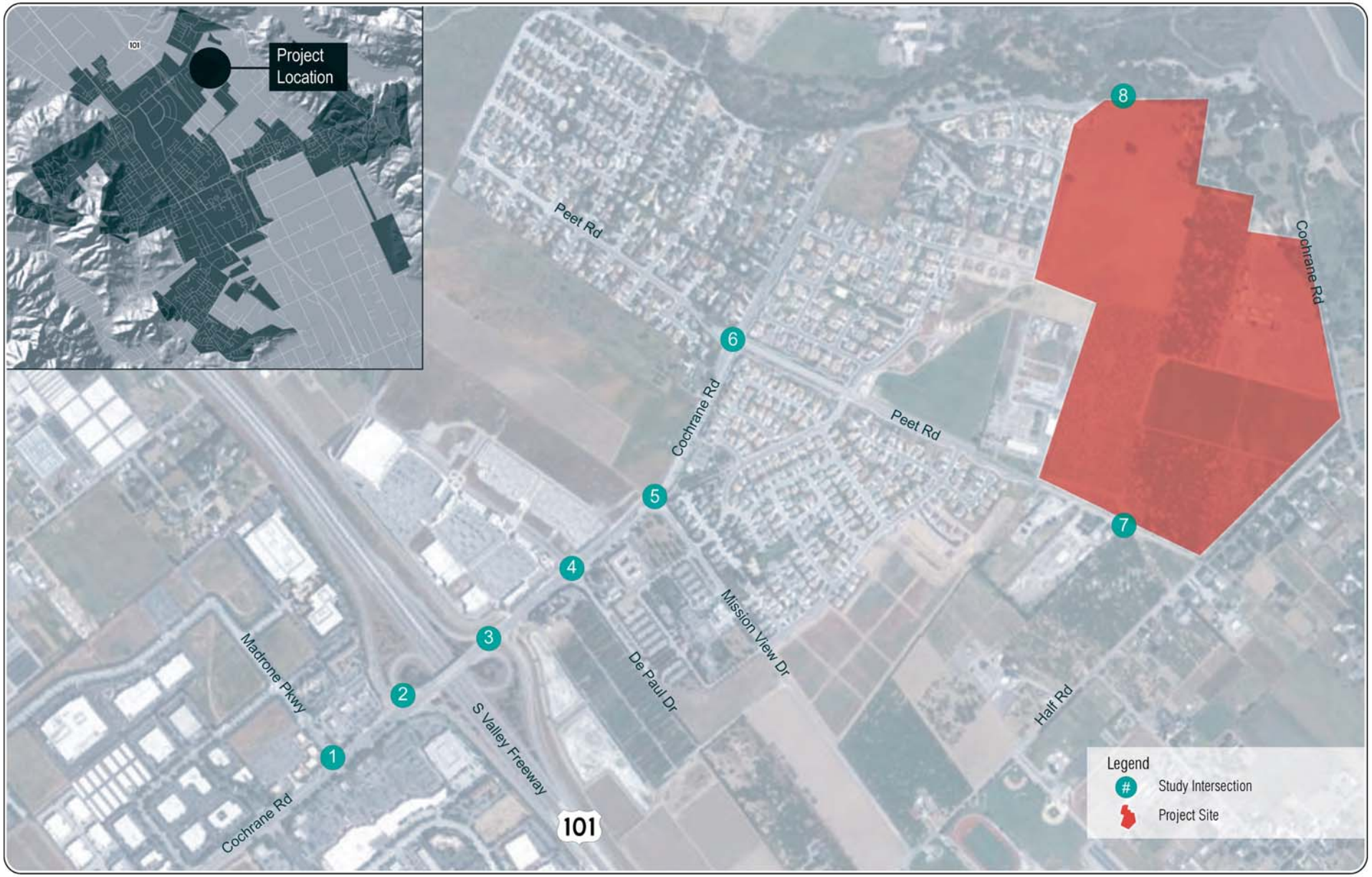
Madrone Parkway is a two-lane collector street that runs east-west between Cochrane Road and Monterey Road.

Half Road is a two-lane, east-west rural road between Condit Road and Peet Road. Half Road intersects both Mission View Drive and Elm Road.

Peet Road is a two-lane, north-south rural road between Cochrane and Half Road. The southwest side of the project site can be accessed via a driveway proposed to be located along this road.

Mission View Drive is a two-lane, north-south rural road between Cochrane Road and Half Road.

De Paul Drive (formerly known as Saint Louis Drive) is a two-lane residential street that terminates south of Cochrane Road. The DePaul medical center outpatient building is the primary use served by this street.



EXISTING ROADWAY NETWORK AND STUDY INTERSECTIONS FIGURE 3.15-1

3.15.1.2 *Existing Pedestrian and Bicycle Facilities*

Pedestrian facilities comprise sidewalks, crosswalks, and pedestrian signals. Sidewalks are provided on both sides of Cochrane Road across its interchange with US 101, the south side of Cochrane Road east of Mission View Drive, on the east side of Mission View Road south of Cochrane Road, and along both sides of Peet Road in residential areas. Marked crosswalks are present at all of the study intersections except for the intersection of Cochrane Road and Peet Road. Only one marked crosswalk is present on the east leg of the intersection of Mission View Drive and Cochrane Road.

Bicycle facilities comprise paths (Class I), lanes (Class II), and routes (Class III). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are roadways designated for bicycle use by signs only.

A Class I bike path, known as the Coyote Creek trail, is located approximately three quarters of a mile northwest of the project site. Class II bike lanes are located along the following roadways in the study area:

- Cochrane Road between Peet and Malaguerra Avenue
- Cochrane Road between Mission View Drive and US 101 Northbound Ramps
- Cochrane Road between Madrone Parkway and Monterey Road
- Sutter Boulevard between Cochrane Road and Butterfield Boulevard

Class III bike routes are provided on the following roadways:

- Morning Star Drive between Malaguerra Avenue and Peet Road
- Peet Road between Morning Star Drive and Cochrane Road
- Cochrane Road between Peet Road and Mission View Drive
- Cochrane Road between US 101 Soutbound ramps to Madrone Parkway

Figure 3.15-2 shows existing and proposed bicycle facilities in the vicinity of the project site.

Sources: City of Morgan Hill Trails and Natural Resources Master Plan (2007), Morgan Hill Bicycle Plan (2008)

EXISTING AND PROPOSED BICYCLE FACILITIES

FIGURE 3.15-2

3.15.1.3 *Existing Transit Service*

The Santa Clara Valley Transportation Authority (VTA) operates fixed route, commuter, and paratransit bus service and light rail service (LRT) in Santa Clara County. VTA provides four bus routes (two local and two regional) that serve the project area. Caltrain, a heavy rail commuter service, is operated by the Peninsula Joint Powers Authority, consisting of representatives from the City and County of San Francisco, the San Mateo County Transit District, and VTA. Monterey Salinas Transit (MST) operates transit service in Monterey County, and provides express bus service to Morgan Hill and San Jose. Figure 3.15-3 shows the existing transit service in the vicinity of the project site. Currently there are four transit stops on one route (Route 16) within a half mile radius of the proposed project site.

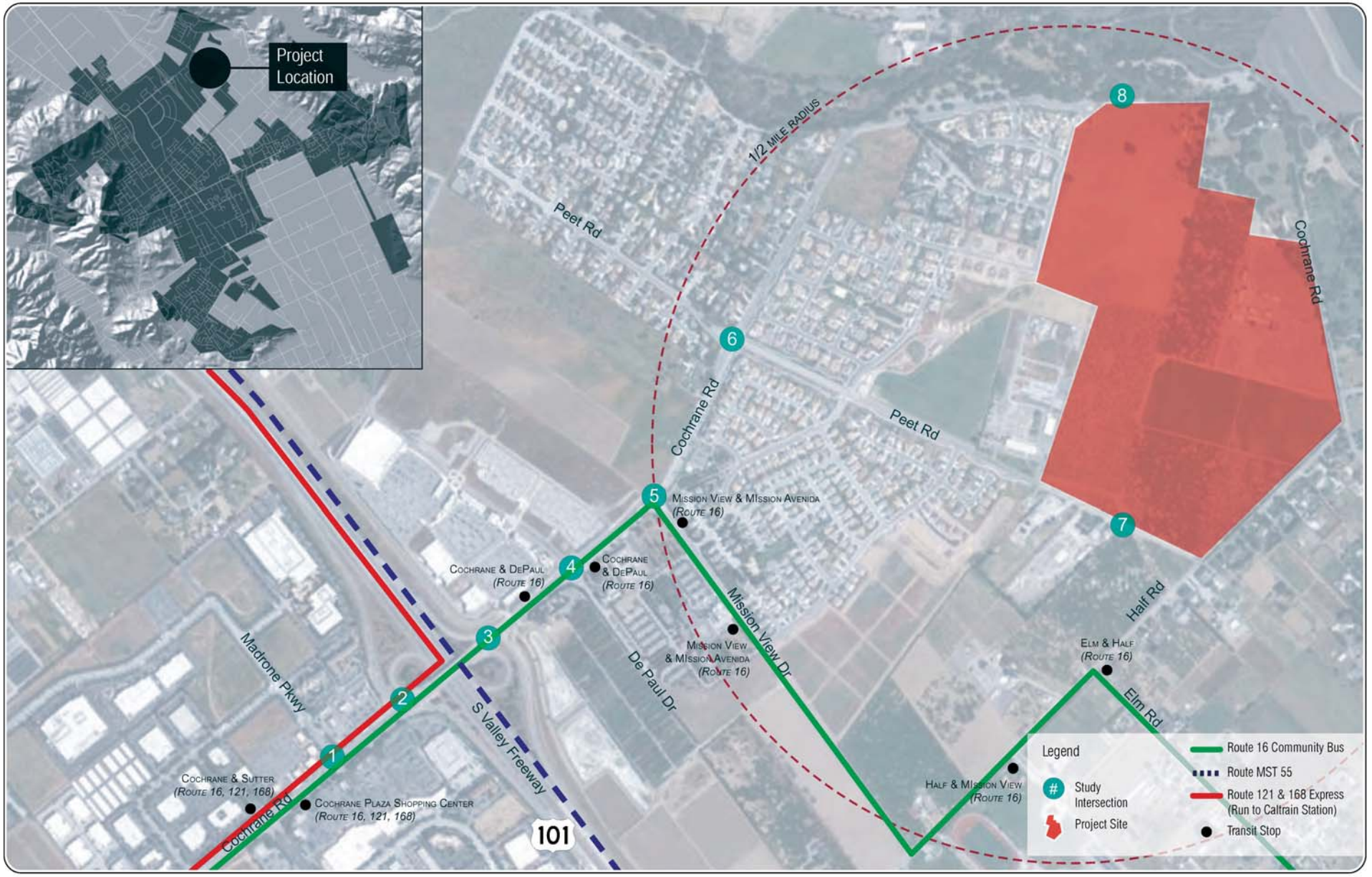
Route 16 provides bus service between Burnett Avenue and the Morgan Hill Civic Center. Route 16 does not operate on weekends. Near the project site, Route 16 operates along Cochrane Road, Mission View Drive, Half Road, and Elm Road. The closest bus top is located at the Half Road and Elm Road intersection.

Route 121 operates through Morgan Hill via Butterfield Boulevard and Monterey Road. Route 121 provides connections with Route 68 and the Caltrain station in Morgan Hill. No weekend service is available.

Route 168 operates through Morgan Hill via Butterfield Boulevard and Monterey Road. Route 168 provides connections with Route 68 and the Caltrain station in Morgan Hill. No weekend service is available.

MST 55 operates through Morgan Hill via US 101 and provides a connection with the Caltrain station in Morgan Hill.

Caltrain provides frequent daily train service between San Jose and San Francisco. Service extends south to Gilroy during commute periods, with three northbound trips during the AM peak period and three southbound trips during the PM peak period stopping at the Morgan Hill Caltrain Station. The Morgan Hill Caltrain station is located east of Depot Street between First and Second Streets, approximately 2.25 miles from the project site. Direct transit service is not provided between the project site and the Caltrain station. The station can be accessed via Bus Route 16 to the Main Avenue/Butterfield Boulevard intersection and then walking approximately ¼ mile.



EXISTING AND PROPOSED TRANSIT SERVICES

FIGURE 3.15-3

3.15.1.4 *Site Access and Circulation*

Main access to the site occurs along Peet Road and Cochrane Road. There are a total of five proposed access points. Each proposed access point is discussed in further detail below.

Access Point #1 (Private)-Project driveway located off of Peet Road approximately one half of a mile south of the Cochrane Road/Peet Road intersection. This driveway will feature a security gate at it's' entrance and exit.

Access Point #2 (Private)-Project driveway located off of Cochrane Road approximately one half of a mile north of the Cochrane Road/Half Road intersection. This driveway will feature a security gate at it's' entrance and exit.

Access Point #3 (Public)-Pedestrian trail located on the west side of the project site near Corte Estancia, extending to Saint Katherine Drive located on the adjacent property.

Access Point #4 (Public)-Emergency vehicle access located on the west side of the project site near Corte Estancia, extending to St. Katherine Drive located on the adjacent property.

Access Point #5 (Public)-Emergency vehicle access located on the west side of the project site near Strada de Stella, extending to Espana Way located on the adjacent property.

Intra-Site Accessibility

The two-gated project entries are proposed to be connected via a main boulevard (Viale San Sebastian) with a landscaped median. Access to residential lots is provided by minor neighborhood streets that extend off of Viale San Sebastian. Common driveways are proposed to provide access to cul-de-sacs.

Internal Traffic Control Devices

The project site plan indicates that five roundabouts will be located along Viale San Sebastian. No other traffic control devices at internal intersections are specified on the site plan. While not required by the City, traffic circles or other traffic calming features are proposed along Bella Corsa and Via Montebello (internal roadways), to reduce the potential for speeding.

3.15.1.5 *Existing Roadway Conditions*

Study Intersections

An analysis of AM and PM peak hour traffic conditions was completed for eight intersections, including four signalized intersections, two unsignalized intersections, and two future intersections. The intersection operations were evaluated following the guidelines of the City of Morgan Hill and the Santa Clara Valley Transportation Authority (VTA), which is the congestion management agency for Santa Clara County. The analysis evaluated the operations of the following eight study intersections, none of which are Congestion Management Program (CMP) intersections managed by the VTA:

1. Cochrane Road/Madrone Parkway
2. Cochrane Road/US 101 Southbound Ramps

3. Cochrane Road/US 101 Northbound Ramps
4. Cochrane Road/De Paul Drive
5. Cochrane Road/Mission View Drive
6. Cochrane Road/Peet Road
7. Project Driveway/Peet Road (future only)
8. Project Driveway/Cochrane Road (future only)

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 6:00 and 9:00 AM. The PM peak hour of traffic is typically between 4:00 and 7:00 PM. It is during these periods that the most congested traffic conditions occur on an average weekday. Available (2009) traffic counts at most of the study intersections were obtained from previous traffic studies and continue to be reflective of existing conditions. New traffic counts at the intersections of Cochrane Road/Mission View Drive and Cochrane Road/Peet Road were conducted at the end of August 2011 when schools in the vicinity of the project site were in session.

Intersection Level of Service Methodology

The operations of roadway facilities are described in terms of level of service (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, with the best operating conditions, to LOS F, with the worst congested operating conditions. LOS E represents "at-capacity" operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions.

Signalized Intersections

The level of service methodology for signalized intersections approved by the City of Morgan Hill and VTA analyzes intersection operations based on average control vehicular delay, as described in Chapter 16 of the *2000 Highway Capacity Manual* (2000 HCM) published by the Transportation Research Board, with adjusted saturation flow rates to reflect conditions in Santa Clara County. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using TRAFFIX analysis software and is correlated to a LOS designation as shown in Table 3.15-1.

Table 3.15-1
Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B+	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 12.0
B		12.1 to 18.0
B-		18.1 to 20.0
C+	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 23.0
C		23.1 to 32.0
C-		32.1 to 35.0

D+ D D-	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0
Sources: *Traffic Level of Service Analysis Guidelines*, VTA Congestion Management Program, June 2003; *Highway Capacity Manual*, Transportation Research Board, 2000.		

General Plan Circulation Element LOS Policy

Per the City of Morgan Hill's *General Plan* (February 2010), the following tiered approach is used to determine minimum acceptable levels of service at intersections:

LOS F in the Downtown intersections along Monterey Road between Main and Fifth Street, and along

- Depot Street at First through Fifth Street;

LOS E for the following intersections and freeway zones:

- Main Avenue and Del Monte Avenue
- Main Avenue and Depot Street
- Dunne Avenue and Del Monte Avenue
- Dunne Avenue and Monterey Avenue
- Dunne Avenue and Church Street; also until closed: Dunne Avenue and Depot Street
- Cochrane Road and Monterey Road
- Tennant Avenue and Monterey Road
- Tennant Avenue and Butterfield Boulevard
- Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane/DePaul
- Drive
- Dunne Avenue Freeway Zone: from Walnut Grove/East Dunne to
- Tennant Avenue Freeway Zone: from Butterfield/Tennant to Condit/Tennant
- Freeway Ramps (such as Cochrane Road/US 101 Southbound Ramps)

LOS D for all remaining intersections and roadway segments in the City.

Unsignalized Intersections

Operations of unsignalized study intersections are evaluated using the method contained in Chapter 17 of the 2000 HCM and calculated using TRAFFIX analysis software. LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At two-way or side-street-stop controlled intersections, control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, delay is computed as the average of all movements in that lane. For all-way stop-controlled locations, a weighted average delay for the entire intersection is presented. Table 3.15-2 summarizes the relationship between delay and LOS for unsignalized intersections. The City has generally used a minimum acceptable

operating level of LOS D for unsignalized intersections.

Table 3.15-2
Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Existing Intersection Levels of Service

Existing intersection lane configurations, signal timings, and peak-hour turning movement volumes were used to calculate existing intersection LOS. Intersection turning movement counts were completed in June 2007 and April 2008. The results of the LOS analysis for existing conditions are presented in Table 3.15-4.

Table 3.15-3
Existing Intersection Levels of Service

Intersection		Traffic Control[1]	Peak Hour	Delay[2]	LOS[3]
1	Cochrane Road/Madrone Parkway**	Signal	AM PM	21.1 32.7	C+ C-
2	Cochrane Road/US 101 SB Ramps**	Signal	AM PM	12.8 13.1	B B
3	Cochrane Road/US 101 NB Ramps**	Signal	AM PM	10.6 11.8	B+ B+
4	Cochrane Road/De Paul Drive	Signal	AM PM	16.2 16.7	B B
5	Cochrane Road/Mission View Drive	AWSC	AM PM	16.0 10.6	C B
6	Cochrane Road/Peet Road	SSSC	AM PM	12.5 13.3	B B
7	Project Driveway/Peet Road	Future Intersection			
8	Project Driveway/Cochrane Road	Future Intersection			

Notes:
(us) = unsignalized intersection
[1] SSSC=Side-Street Stop Control, AWSC=All-Way Stop Control
[2] Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 HCM, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[3] LOS = Level of service. LOS calculations conducted using the TRAFFIX level of service analysis software package.
** LOS E threshold (all other intersections have LOS D threshold)
Source: Fehr & Peers, October 2011.

All of the six existing study intersections are operating at acceptable levels of service during both peak hours under existing conditions.

Study Freeway Segments

Freeway traffic conditions in the vicinity of the project site were analyzed on the following two freeway segments in the northbound and southbound direction:

1. US 101 north and south between Dunne Avenue and Cochrane Road
2. US 101 north and south between Cochrane Road and Coyote Creek Golf Club Drive

Freeway Segment Level of Service Methodology

Freeway segments were evaluated using VTA's analysis procedure, which is based on the density of the traffic flow using methods described in the *2000 HCM*. Density is expressed in passenger cars per mile per lane. The Congestion Management Program (CMP) maintained by the VTA includes a range of densities for freeway segment level of service as shown in Table 3.15-4. The adopted acceptable LOS standard for freeway segments, as defined by the CMP, is LOS E.

Table 3.15-4
Freeway Segment Level of Service Definitions

Level of Service	Description	Density (passenger cars/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	11.1 to 18.0
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	18.1 to 26.0
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	26.1 to 46.0
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	46.1 to 58.0
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	> 58.0

Sources: *Traffic Level of Service Analysis Guidelines*, VTA Congestion Management Program, June 2003; *Highway Capacity Manual*, Transportation Research Board, 2000.

Existing Freeway Segment Level of Service

Freeway segment densities reported in the latest (2010) VTA's Monitoring and Conformance Report were used to calculate the levels of service for the key freeway segments during the AM and PM peak hours. The results of the LOS analysis for Existing Conditions are presented in Table 3.15-5.

All freeway segments operate at or above the VTA's LOS E standard.

Table 3.15-5
Existing Freeway Segment Levels of Service

Direction	Segment	Peak Hour	Number of Lanes		Density[1]		LOS[2]	
			Mixed	HOV	Mixed	HOV	Mixed	HOV
NB US 101	Dunne Avenue to Cochrane Road	AM	3	0	47	n/a	E	N/A
		PM	3	0	21	n/a	C	N/A
	Cochrane Road to Coyote Creek Golf Club Drive	AM	3	0	28	19	D	C
		PM	3	0	22	5	C	A
SB US 101	Dunne Avenue to Cochrane Road	AM	3	0	19	n/a	C	N/A
		PM	3	0	37	n/a	D	N/A
	Cochrane Road to Coyote Creek Golf Club Drive	AM	3	0	19	n/a	C	N/A
		PM	3	0	32	n/a	D	N/A

Notes:
1 Measured in passenger cars per mile per lane.
2 LOS=level of service.
N/A= Not applicable. Freeway segment does not have HOV lanes.
Source: VTA, 2010. Fehr & Peers, October 2011.

3.15.2 *Thresholds of Significance*

For the purposes of this EIR, a transportation impact is considered significant if the project would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible land uses (e.g. farm equipment)?
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.15.2.1 *Methodology*

The transportation impacts of the proposed project development are discussed in this section. First, the method used to estimate the amount of traffic added to the roadway system by the project is described. Then, individual intersections were analyzed under project conditions. Project conditions are defined as the existing conditions plus traffic generated by the proposed project.

The amount of traffic associated with the project was estimated using a three-step process: 1) trip

generation, 2) trip distribution, and 3) trip assignment. In the first step, the amount of traffic entering and exiting the project area was estimated on a daily and peak-hour basis. In the second step, the direction vehicles use to approach and depart the site was estimated. The trips were assigned to specific street segments and intersection turning movements in the third step and added to the existing traffic volumes to develop Existing plus Project traffic volumes.

Trip Generation

The amount of traffic generated by a development is estimated by applying the appropriate trip generation rates, corresponding to the land use type, to the size of the development. Automobile trip generation estimates for the 244 single-family dwelling units portion of the proposed project were calculated using land use rates identified in the Trip Generation, 8th edition (Institute of Transportation Engineers (ITE), 2008). The ITE manual does not specify a rate for secondary in-law units. Therefore, one-half of the single-family dwelling unit land use rate was used to quantify this land use, as secondary in-law units generally have similar travel characteristics as single-family dwelling units but approximately half the number of occupants.

The project's transportation impacts under existing plus project conditions were analyzed by adding the new vehicle trips generated by the proposed project to existing volumes. As shown in Table 3.15-6 the proposed project would result in approximately 3,255 new daily vehicle trips, and 248 and 324 new AM and PM peak hour vehicle trips, respectively.

Table 3.15-6
Project Vehicle Trip Generation Rates and Estimates

			AM			PM		
Land Use	**Size**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates								
Residential[1]	244 units	9.68	0.18	0.55	0.74	0.61	0.36	0.96
Secondary In-Law[2]	180 units	4.96	0.09	0.28	0.38	0.31	0.18	0.50
Trip Estimates								
Residential	244 units	2,362	45	135	181	148	87	234
Secondary In-Law	180 units	893	17	51	67	56	33	89
Total Project Trips		**3,255**	**62**	**186**	**248**	**189**	**120**	**324**

Notes:

1 The effective rate is based on the ITE equation for this land use.

2 See TIA Appendix C for corresponding calculations.

Source: Trip Generation (8th edition), Institute of Transportation Engineers, 2008; Fehr & Peers, October 2011.

Trip Distribution

Trip distribution is defined as the directions of approach and departure that vehicles would use to arrive at and depart from the site. Trip distribution percentages were developed based on existing traffic patterns at the study intersections and the locations of complementary land uses. Distribution patterns are expected to be similar for the AM and PM peak periods. Project-generated trips were assigned to the surrounding transportation network based on the general directions of approach and departure are shown graphically in Appendix M. The project-generated vehicle trips would be distributed as follows:

- 45 percent from the north on US 101
- 25 percent from the south on US 101
- 30 percent from the west on Cochrane Road (to/from Downtown Morgan Hill, Morgan Hill Retail Center, Cochrane Plaza Shopping Center, and Monterey Highway)

Trip Assignment

Trips generated by the proposed project were assigned to the roadway system based on the directions of approach and departure described as trip distribution. The trip assignments for the AM and PM peak hours are shown graphically in Appendix M.

3.15.2.2 *Project Conditions*

Project Intersection Level of Service

The results of the intersection level of service analysis for project conditions are shown in Table 3.15-7. Results show that, under project conditions, all study intersections are estimated to operate at acceptable levels of service, at LOS C or better during both peak hours.

Table 3.15-7
Existing and Project Conditions Intersection Level of Service

		Existing		Project			
Intersection	**Peak Hour**	**Delay[1]**	**LOS[2]**	**Delay[1]**	**LOS[2]**	**Change in Critical Volume-to-Capacity[3]**	**Change in Critical Delay[4]**
1. Cochrane Road/Madrone Parkway**	AM	21.1	C+	20.7	C+	0.015	-0.4
	PM	32.7	C-	32.4	C-	0.0010	-0.1
2. Cochrane Road/US 101 SB Ramps**	AM	12.8	B	13.1	B	0.028	0.2
	PM	13.1	B	14.1	B	0.078	1.2
3. Cochrane Road/US 101 NB Ramps**	AM	10.6	B+	10.5	B+	0.063	0.6
	PM	11.8	B+	11.9	B+	0.081	0.6
4. Cochrane Road/De Paul Drive**	AM	16.2	B	16	B	0.058	-0.5
	PM	16.7	B	16.9	B	0.038	1.0
5. Cochrane Road/Mission View Drive*	AM	16.0	C	22.9	C	NA	NA
	PM	10.6	B	14.7	B	NA	NA
6. Cochrane Road/Peet Road*	AM	12.5	B	17.6	C	NA	NA
	PM	13.3	B	18.7	C	NA	NA
7. Project Driveway/Peet Road*	AM	Future Intersection		9.0	A	NA	NA
	PM			9.7	A	NA	NA

8. Project Driveway/Cochrane Road*	AM	Future Intersection		10.0	A	NA	NA
	PM			10.7	B	NA	NA

Notes:

[1] Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 HCM, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.

[2] LOS=Level of Service. LOS calculations conducted using the TRAFFIX level of service analysis software package.

[3] Change in the critical volume-to-capacity ratio (V/C) between signalized intersections under Existing and Project Conditions

[4] Change in critical movement delay between signalized intersections under Existing and Project Conditions.

* Unsignalized intersection

** LOS E threshold (all other intersections have LOS D threshold)

Source: Fehr & Peers, October 2011.

Impact TRANS-1: The project will not result in significant level of service impacts to City of Morgan Hill signalized intersections. **(Less Than Significant Impact)**

Project Freeway Level of Service

Project-generated traffic volumes were added to existing traffic volumes for each freeway mainline segment. The volumes were then used to re-calculate density for each segment under project conditions. The resulting freeway segment operations are shown in Table 3.15-8.

Table 3.15-8
Project US-101 Freeway Segment Impact Evaluation

Segment	Travel Direction[1]	Capacity (vphpl)[2]	Peak Hour	Existing Conditions		Project Conditions			
				Density[3]	LOS[4]	Trips Added[5]	Density[3]	LOS[4]	Percentage Impact[6]
Dunne Avenue to Cochrane Road	NB	6,900	AM	47	E	15	47	E	0.22
			PM	21	C	47	21	C	0.68
	SB	6,900	AM	19	C	43	19	C	0.62
			PM	37	D	28	32	D	0.41
Cochrane Road to Coyote Creek Golf Club Drive	NB	6,900 (mixed flow)	AM	28	D	66	28	D	0.96
			PM	22	C	46	22	C	0.67
		1,650 (HOV)	AM	19	C	12	19	C	0.71
			PM	5	A	4	5	A	0.23
	SB	6,900	AM	19	C	26	19	C	0.38
			PM	32	D	85	37	D	1.23

Notes:

[1] NB= Northbound, SB=Southbound

[2] vphpl=vehicles per hour per lane

[3] Measured in passenger cars per mile per lane.

[4] LOS= level of service

[5] Project trips added to individual freeway segments.

[6] Percent impact on mixed flow lanes determined by dividing the number of project trips by the freeway segment's capacity.

Source: Fehr & Peers, September 2011.

The addition of project trips will not degrade acceptable LOS E freeway operations to unacceptable levels (LOS F).

Impact TRANS-2: The project would not result in substantial impacts to freeway segments. **(Less Than Significant Impact)**

Parking

The City of Morgan Hill Municipal Code requires two covered parking spaces per single-family residential dwelling unit and a minimum of one space for a secondary dwelling unit. Off-street parking spaces for secondary dwelling units may be uncovered and located within the front, side , or rear yard areas. Guest parking spaces may be located on street or conveniently located at off-street mid-block locations and in close proximity to recreational amenities. This results in a required supply of 745 spaces.

The proposed project will have a total parking supply of 1,416 spaces (3.3 per unit). Of those spaces, 1,144 spaces will be provided for the 244 single-family dwelling units and 180 secondary in-law units (2.7 per unit) and 272 spaces will be provided for guest parking. Therefore, the proposed project exceeds the required parking supply standards identified in the City's Municipal Code (745 parking spaces).

Impact TRANS-3: The proposed project would provide parking consistent with projected demand and City requirements. **(Less Than Significant Impact)**

Pedestrian, Bicycle, and Transit

The proposed project provides a sidewalk along the east side of Viale San Sebastian, as well as walking paths throughout the project site. Figure 3.15-4 shows the proposed vehicular and pedestrian circulation plan for the proposed project site. Currently no sidewalk exists adjacent to the project site on portions of Cochrane Road north of the project site and Half Road east of the project site. The project does not currently propose a sidewalk along the external border of the site on Half Road or Cochrane Road, connecting to Coyote Road, however, a pathway is proposed connecting the site to Half Road, and sidewalks are proposed along the Peet Road frontage of the project site.

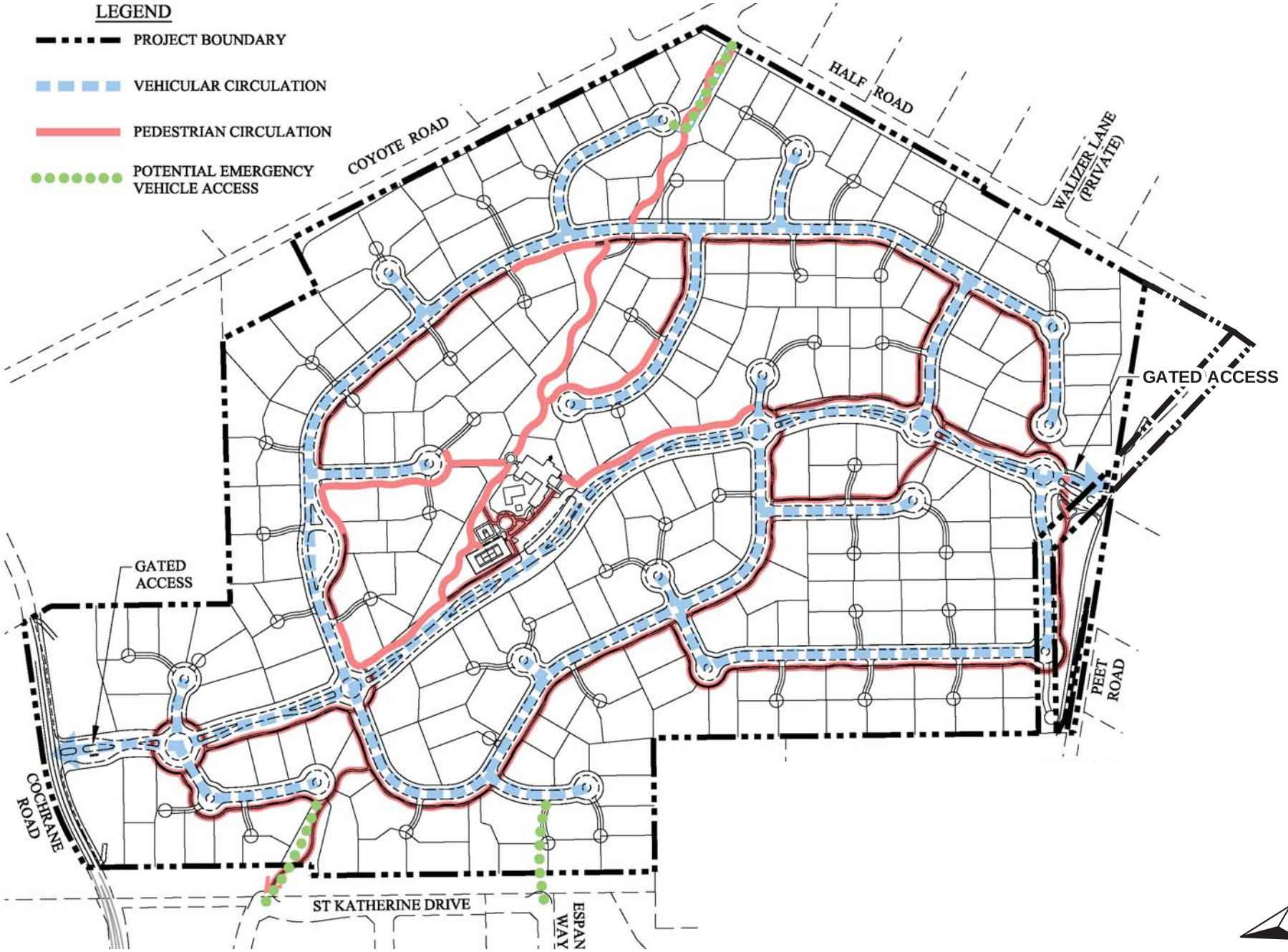
The project proposes a pedestrian pathway system that will connect to the open spaces located within the project site, adjacent developments, roadways, and county parks. The external connection points of the pathways and bikeways will be open to the public. No gates are proposed on the walking paths.

VTA Route 16 provides four (4) stops within a half-mile of the project site. Riders utilizing Routes 121, 168, or Caltrain to access the project site would have to walk more than one mile to the nearest bus stop or Caltrain station. Given the project's location to these facilities, transit ridership generated by the proposed project is expected to be minimal and would not conflict with existing or planned transit facilities.

As shown in the City's 2008 *Bikeways Master Plan Update* and in Figure 3.15-2, the proposed Class II bike lane on Peet Road and the proposed Class III bike route on Cochrane Road would provide direct access to the project site. The project has committed to fund the proposed bicycle facilities along the Cochrane Road frontage as identified in the City's *Bikeways Master Plan Update*. The

project has also committed to the installation of 6.1 miles of Class II bike lanes.

Impact TRANS-4: The proposed project is not expected to increase the pedestrian, biking, or transit demand to a level where it could not be accommodated by existing or planned facilities. Therefore, the project would have a less than significant impact on pedestrian, bicycle, and transit facilities and services. **(Less Than Significant Impact)**



PROPOSED VEHICULAR AND PEDESTRIAN CIRCULATION PLAN

FIGURE 3.15-4

On-Site Circulation and Access

Project Driveway Operation

Queuing at the project security gates was analyzed to ensure adequate vehicle storage. Traffic flows at the project driveways are projected to be heaviest in the inbound direction during the evening peak hour. Accordingly, vehicle queuing requirements were analyzed for the following condition:

- Evening peak hour: Maximum queue length for inbound traffic at the two project driveways.

As shown in Table 3.15-9, there is sufficient queuing space for the evening peak-hour inbound trips both project driveways.

Table 3.15-9
Evening Peak-Hour Maximum Queue Lengths

Location	Maximum Queue Length	Storage Needed	Storage Provided[1]
Project Driveway/Peet Road	4 vehicles	75 feet	110 feet
Project Driveway/Cochrane Road	5 vehicles	76 feet	111 feet

Notes: Approximate storage length per San Sebastian Tentative Map (August 2011).

Source: Fehr & Peers, 2011.

Sight Distance

Sight distance is evaluated to determine if a driver will have adequate visibility to enter a roadway without resulting in a conflict with through traffic. A sight distance analysis was conducted by Ruggeri-Jensen-Azar (RJA) to assess the sight distance for vehicles exiting the project site on Peet Road and Cochrane Road. The sight distance diagram and assumptions can be found on the project design plans titled Vesting Tentative Map and PD Package, Street Sections and Details provided in Appendix B.

Adequate sight distance will be provided at the two project driveways.

Impact TRANS-5: Adequate sight distance for the proposed driveways will ensure the project would have a less than significant impact on hazards due to a design feature. **(Less Than Significant Impact)**

Emergency Vehicle Access

Emergency vehicle access considers two factors: whether the project site is accessible to emergency vehicles from other areas of the City (regional accessibility) and whether the individual parcels or sites within the project are accessible by various types of emergency vehicles (internal accessibility).

The most likely access routes would be via Peet Road or Cochrane Road.

The project site plan provides four vehicle access locations for various areas of the site, which are connected to each by an extensive internal roadway network. Two of the access locations are private and require entrance through a security gate and two of the entrances are specifically for emergency vehicle access.

Emergency vehicle access is considered adequate because it is accessible to emergency vehicles from other areas of the City and the individual parcels within the project site are accessible by various types of emergency vehicles. The project site provides four vehicle access locations for various areas of the site, which are connected to each by an extensive internal roadway network. Two entrances are specifically for emergency vehicles. The internal roadway network is adequate because the project site itself is accessible through a variety of roadways, which connect to remaining areas of the City of Morgan Hill.

Peet Road Realignment and Widening

The City's 2002 *General Plan Update* encourages the northern extension of Hill Road to connect with Peet Road. As a part of this connection Peet Road would need to be realigned to intersect with Half Road approximately 280 feet west of its current location(the realignment of Peet Road is shown in Figure 2.1-5). In accordance with the City's General Plan, the project's developer would commit to fund, construct, and acquire the right-of-way necessary to realign Peet Road. The proposed Peet Road realignment would not result in any traffic impacts because the roadway extension is not increasing capacity and wouldn't create an increase in traffic volume.

The proposed realignment of Peet Road is currently planned for within the Santa Clara County Valley Transportation Authority's *Valley Transportation Plan (VTP) 2035*. The proposed realignment of Peet Road is proposed as part of the Hill Road Extension from East Main Avenue to Peet Road. The 2035 Plan proposes to "construct a new two-lane alignment for Hill Road from East Main Avenue across Half Road and connect to Peet Road." The project also includes realigning the existing Peet Road approach to Half Road to line up and connect with an extension of Hill Road. The total project cost is estimated at $8 million (in 2008 dollars). The proposed Peet Road realignment for the proposed project would be consistent with the VTA's VTP 2035.

Impact TRANS-6: The proposed project would feature adequate on-site circulation, site access, and emergency access. **(Less Than Significant Impact)**

3.15.2.3 *2015 Near-Term Cumulative With Project Conditions*

2015 Near-Term With Project Intersection Traffic Volume Estimates

Table 3.15-10 shows the Near-Term Cumulative With Project Conditions. Under projected 2015 conditions all eight of the study intersections are projected to operate at acceptable levels of service.

In order to determine the cumulative conditions for the year 2015, existing volumes were developed by using the base year (2011) and future year model forecasts from approved but not yet constructed and pending developments in the area (see Table 5.0-1 in Section 5.0 Cumulative). The traffic growth was developed based on a comparison of the traffic projections for the General Plan, as well as, cumulative scenarios from the City of Morgan Hill's travel demand forecasting model.

Table 3.15-10
Existing and 2015 Near-Term Cumulative Plus Project Intersection Level of Service

Intersection	Peak Hour	Existing		2015 Near-Term Cumulative with Project			
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Change in Critical V/C[3]	Change in Critical Delay[4]
1. Cochrane Rd./Madrone Pkwy.	AM	21.1	C+	24.5	C	0.057	5.0
	PM	32.7	C-	36.4	D	0.162	2.9
2. Cochrane Rd./US-101 SB Ramps	AM	12.8	B	23.8	C	0.173	12.1
	PM	13.1	B	34.9	C-	0.331	26.5
3. Cochrane Rd./US-101 NB Ramps	AM	10.6	B+	25.8	B-	0.267	15.6
	PM	11.8	B+	25.8	C	0.337	16.3
4. Cochrane Rd./De Paul Dr.	AM	16.2	B	28.6	C	0.272	12.9
	PM	16.7	B	27.6	C	0.409	15.0
5. Cochrane Rd./Mission View Dr.[5]	AM	16.0	C	31.0	C	NA	NA
	PM	10.6	B	19.4	B-	NA	NA
6. Cochrane Rd./Peet Rd.*	AM	12.5	B	29.4	C	NA	NA
	PM	13.3	B	21.0	C	NA	NA
7. Project Dwy./Peet Rd.*	AM	Future Intersection		9.0	A	NA	NA
	PM	Future Intersection		9.8	A	NA	NA
8. Project Dwy./Cochrane Rd.*	AM	Future Intersection		11.7	B	NA	NA
	PM	Future Intersection		10.9	B	NA	NA

Notes:

[1] Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 HCM, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.

[2] LOS=Level of service. LOS calculations conducted using the TRAFFIX level of service analysis software package.

[3] Change in the critical volume-to-capacity ratio (V/C) between signalized intersections under 2015 Near-Term Cumulative no Project Conditions and 2015 Near-Term Cumulative plus Project Conditions.

[4] Change in critical average movement delay between signalized intersections under 2015 Near-Term Cumulative no Project Conditions and 2015 Near-Term plus Project Conditions.

[5] The analysis of this intersection assumes side-street stop control under Existing Conditions and signal control under 2015 Near-Term Cumulative plus Project Conditions.

*unsignalized intersection

Source: Fehr & Peers, October 2011.

All of the study intersections would operate at acceptable LOS under 2015 Near-Term Cumulative Conditions with Project Conditions. The addition of project trips will not degrade acceptable LOS E freeway operations to unacceptable levels (LOS F), therefore, no additional freeway segment analysis is required (see Table 3.15-8).

Impact TRANS-7: Under 2015 cumulative conditions, the proposed project and other pending reasonably foreseeable projects together would not impact any intersections. **(Less Than Significant Impact)**

3.15.3 Conclusion

Impact TRANS-1: The proposed project would not result in significant level of service impacts to signalized intersections. **(Less Than Significant Impact)**

Impact TRANS-2: The proposed project would not result in significant near-term impacts to freeway segment capacities. **(Less Than Significant Impact)**

Impact TRANS-3: The proposed project would ensure adequate parking capacity consistent with the City's requirements. **(Less Than Significant Impact)**

Impact TRANS-4: The proposed project would have a less than significant effect on pedestrian, bicycle, and transit facilities and services. **(Less Than Significant Impact)**

Impact TRANS-5: The proposed project would adequate sight distance at the two project driveways. **(Less Than Significant Impact)**

Impact TRANS-6: The proposed project would not result in significant impacts to on-site circulation, site access, and emergency access. **(Less Than Significant Impact)**

Impact TRANS-7: The proposed project would not result in significant cumulative impacts to any intersections. **(Less Than Significant Impact)**

3.16 NOISE AND VIBRATION

The following discussion is based on an Environmental Noise Assessment prepared for the project by *Illingworth & Rodkin, Inc.* in March 2012. A copy of this report is included as Appendix N in this EIR.

3.16.1 Existing Setting

3.16.1.1 *Fundamentals of Environmental Noise*

Noise is measured in "decibels" (dB) which is a numerical expression of sound levels on a logarithmic scale. A noise level that is ten dB higher than another noise level has ten times as much sound energy and is perceived as being twice as loud. Sounds less than five dB are just barely audible and then only in absence of other sounds. Intense sounds of 140 dB are so loud that they are painful and can cause damage with only a brief exposure. These extremes are not commonplace in our normal working and living environments. An "A-weighted decibel" (dBA) filters out some of the low and high pitches which are not as audible to the human ear. Thus, noise impact analyses commonly use the dBA. Typical A-weighted levels measured in the environment and in industry are shown in Table 3.16-1.

Table 3.16-1
Typical Sound Levels Measured in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 20 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck pass by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Since excessive noise levels can adversely affect human activities (such as conversation, sleeping and human health) federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods such as L_{eq}, L_{dn}, or CNEL.[75] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a leaf blower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows or in the middle of the night).

3.16.1.2 *Fundamentals of Groundborne Vibration*

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV) and another is the Root Mean Square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration. In this section, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

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. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

3.16.1.3 *Applicable Noise Standards and Policies*

Morgan Hill General Plan

The Public Health and Safety Element of the General Plan sets forth noise and land use compatibility standards to guide development, and noise goals and policies to protect citizens from the harmful and annoying effects of excessive noise. Single-family residential land uses are considered normally acceptable in noise environments up to 60 dBA L_{dn}. Policies established in the Noise Element of the General Plan that are applicable to the proposed project include:

[75] L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. L_{dn} stands for Day-Night Level and is a 24-hour average of noise levels, with 10-dB penalties applied to noise occurring between 10 PM and 7 AM. CNEL stands for Community Noise Equivalent Level; it is similar to the L_{dn} except that there is an additional five-dB penalty applied to noise which occurs between 7 PM and 10 PM. As a general rule of thumb where traffic noise predominates, the CNEL and L_{dn} are typically within two dBA of the peak-hour L_{eq}.

7a. New development projects shall be designated and constructed to meet acceptable exterior noise level standards, as follows:

- The maximum exterior noise level of 60 dBA L_{dn} shall be applied in residential areas where outdoor noise is a major consideration (e.g., backyards in single family housing developments and recreation areas in multi-family housing projects.) Where the city determines that providing an L_{dn} of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, an L_{dn} of 65 dBA may be permitted.

- Indoor noise levels should not exceed an L_{dn} of 45 dBA in new residential housing units.

7b. The impact of a proposed development project on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.

7e. Noise level increases resulting from traffic associated with new projects shall be considered significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

Morgan Hill Municipal Code

The City of Morgan Hill also limits nuisances caused by excessive noise through the Municipal Code. The City of Morgan Hill Municipal Code, Chapter 8.28.040, limits construction activities to the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday, and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays. No construction activities should occur on Sundays or federal holidays. The Municipal Code, Chapter 18.48.075, also limits maximum noise levels when adjacent to various uses. These standards include limiting the maximum sound generated by any use at the lot line to seventy to seventy-five dBA when adjacent to industrial or wholesale uses, sixty-five to seventy dBA when adjacent to offices, retail or sensitive industries, and sixty dBA when adjacent or contiguous to residential, park or institutional uses, the maximum sound level shall not exceed. Excluded from these standards are occasional sounds generated by the movement of railroad equipment, temporary construction activities, or warning devices.

CEQA Guidelines

CEQA does not define what noise level increases are considered significant. Consistent with the City's General Plan Noise Element, project-generated noise level increases of three dBA L_{dn} or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA L_{dn}) and where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of five dBA L_{dn} or greater would be considered significant.

3.16.1.4 *Existing Noise Levels*

The predominant noise sources affecting the project site include local roadway traffic along Cochrane Road and Peet Road, and operations at the Santa Clara Valley Water District (SCVWD) pump facility, which borders the southwest portion of the site.

Two noise monitoring surveys were performed at the site during the months of June and September 2011. The June 2011 survey consisted of four long-term noise measurements along the roadways that border the site (i.e., Cochrane Road, Peet Road, and Half Road) and three short-term noise measurements at locations representative of nearby residential land uses. The September 2011 survey consisted of several short-term noise measurements at the SCVWD Facility. Figure 3.16-1 shows the noise monitoring locations.

NOISE MEASUREMENT LOCATIONS

FIGURE 3.16-1

Long-Term Noise Monitoring

Long-term noise measurement (LT-1) was made at the north end of the site along Cochrane Road, approximately 40 feet from the center of the roadway. Noise levels measured at this site were primarily the result of local traffic along Cochrane Road. Hourly average noise levels typically ranged from 42 to 55 dBA L_{eq} during the day, and from 38 to 44 dBA L_{eq} at night. The estimated day-night average noise level at this location was 50 dBA L_{dn}.

A second long-term noise measurement (LT-2) was made along the portion of Cochrane Road located northeast of the project site in the vicinity of Barnard Road. The microphone was positioned approximately 60 feet from the centerline of the road. Hourly average noise levels, generated primarily by local traffic, typically ranged from 49 to 59 dBA L_{eq} during the day, and from 41 to 51 dBA L_{eq} at night. The estimated day-night average noise level at this location was 56 dBA L_{dn}.

Long-term noise measurement LT-3 was made along the southeast portion of the site adjacent to Half Road. This segment of Half Road is not a through road, and thus carries a relatively low volume of traffic to and from local residential land uses. Hourly average noise levels at Site LT-3 typically ranged from 42 to 54 dBA L_{eq} during the day, and from 39 to 48 dBA L_{eq} at night. The estimated day-night average noise level at this location was 52 dBA L_{dn}.

The final long-term noise measurement (Site LT-4) was located along the southernmost boundary of the project site adjacent to Peet Road. Hourly average noise levels, generated primarily by local traffic, typically ranged from 55 to 63 dBA L_{eq} during the day, and from 44 to 57 dBA L_{eq} at night. The estimated day-night average noise level at this location was 60 dBA L_{dn}.

Short-Term Noise Monitoring

Short-term noise measurements ST-1, ST-2, and ST-3 were located adjacent to residential land uses that border the project site. Typical daytime ambient noise levels ranged from 47 to 49 dBA L_{eq}, and were primarily the result of local traffic, intermittent aircraft overflights, and the Santa Clara Water District Facility. Table 3.16-2 summarizes the results of these short-term measurements made in June 2011.

Table 3.16-2
Existing Short-Term Noise Measurements (dBA)

Noise Measurement Location	Noise Source	L_{eq}	L_{max}	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{dn}
ST-1: Eastern terminus of Espana Way adjacent to west boundary of site. (6/29/2011, 12:10-12:20 p.m.)	Jet aircraft/pump station	47	62	49	44	41	48
ST-2: San Carlos Place, south of Peet Road. (6/29/2011, 12:30-12:40 p.m.)	Aircraft/traffic	49	66	50	43	41	50
ST-3: North end of project site adjacent rural residential land use. (6/29/2011, 12:50-1:00 p.m.)	Distant Traffic	47	54	49	46	42	53

A series of short-term noise measurements were made at the Santa Clara Water District Facility on September 28, 2011. *Illingworth & Rodkin* visited the site to identify sources of noise at the Plant and document operational noise levels attributable to significant sources of noise. These particular sources included the pumps, an emergency diesel generator, electrical transformers, and a mechanics shop.

The Santa Clara Water District Facility's pump building houses six booster pumps. During the summer months, typical operations at the plant consist of the operation of two booster pumps within the building with the doors closed. These pumps run approximately half of the time during the summer, based on demand (i.e. 12 hours per day). During the winter months, the booster pumps are rarely in operation. Operational noise levels at the project site's westernmost property line, immediately east of the equipment bay door, were 44 dBA L_{eq}. With the bay door open, the operation of two booster pumps generated a noise level of 64 dBA L_{eq} at the project site's westernmost boundary. The operation of all six pumps simultaneously could yield noise levels approximately five dBA higher, but this would only occur on a limited basis.

3.16.2 Noise and Vibration Impacts

3.16.2.1 *Thresholds of Significance*

For the purposes of this EIR, a noise or vibration impact is considered significant if the project would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels; or
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

3.16.2.2 *Noise Impacts to Development in the Project Area*

Exterior Noise Levels

The future noise environment at the project site is anticipated to increase as a result of cumulative growth forecast under the current General Plan. Near-term cumulative plus project traffic volumes were used to assess the compatibility of the proposed residential project with respect to the noise environment expected at the site. Future noise levels were calculated for receptors positioned 100 feet from the center of Cochrane Road and 80 feet from the center of Peet Road (nearest residential rear yard areas). The results of these calculations indicate that exterior noise levels in the rear yard of the residential units nearest Cochrane Road would be approximately 55 dBA L_{dn}, and 51 dBA L_{dn} at residential units nearest Peet Road.

Noise levels in outdoor use areas that are affected by transportation noise are required to be maintained at or below 60 dBA L_{dn} to be considered acceptable for residential development. Overall L_{dn} noise levels in outdoor use areas of residential uses adjacent to area roadways would be below 60 dBA L_{dn} and would comply with the City's exterior noise standard.

Noise levels generated by operations at the Santa Clara Water District Facility may at times exceed the 60 dBA noise limit established in the City of Morgan Hill's Zoning Code. The primary noise source at Santa Clara Water District Facility is the operation of booster pumps. Additional noise sources identified at the Santa Clara Water District Facility included an emergency diesel generator that is tested once per week for a period of fifteen minutes, transformers, and machines and equipment in the mechanical maintenance building (e.g., air compressor, band saw, drill press, diesel forklift, etc.).

Operations at the Santa Clara Water District Facility may at times generate noise levels that range from 53 to 69 dBA L_{eq} at the property line. Intermittent operations could generate noises that exceed the Zoning Code noise limits by up to nine dBA.

Interior Noise Levels

The City of Morgan Hill requires that interior noise levels within new residential units not exceed 45 dBA L_{dn}. Residential units proposed along Cochrane Road would be exposed to exterior noise levels ranging from about 51 to 55 dBA. In buildings of typical construction, with the windows partially open, interior noise levels are approximately 15 dBA lower than exterior noise levels. With the windows closed, standard residential construction typically provides 20 to 25 decibels of exterior to interior noise reduction. Given the anticipated noise levels at exterior facades adjacent to project roadways, standard residential construction methods would achieve interior noise levels of 45 dBA L_{dn} or less.

Operations at the Santa Clara Water District Facility may at times generate noise levels that range from 53 to 69 dBA L_{eq} at the property line. Second-story facades of residential buildings constructed on Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230 (shown in Figure 2.1-4) may have direct line-of-sight to noise sources at the Santa Clara Water District Facility, thereby requiring noise insulation in order to minimize the intrusiveness of these intermittent sounds indoors.

Impact NV-1: Future residential uses developed at the project site would not be exposed to exterior noise levels from transportation sources greater than 60 dBA L_{dn}, which is in compliance with the exterior noise and land use compatibility standard presented in the City of Morgan Hill's General Plan. Interior noise levels would be expected to be below 45 dBA L_{dn} assuming standard residential construction. Noise levels generated by operations at the Santa Clara Water District Facility may at times exceed the City of Morgan Hill's Zoning Code noise limits. **(Significant Impact)**

3.16.2.3 *Impacts to Development in the Project Area from Groundborne Vibration*

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include site preparation work, foundation work, and new building framing and finishing. The proposed project would not require pile driving, which can cause excessive vibration.

For structural damage, the California Department of Transportation uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec, PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec, PPV for ancient buildings or buildings that are documented to be structurally weakened.

Construction activities would extend for over a decade as each phase is built, but construction vibration would not be substantial for most of this time except during vibration generating activities (as discussed above). Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels would be expected to be 0.2 in/sec PPV or less, below the 0.3 in/sec PPV significance threshold. Vibration generated by construction activities would at times be perceptible, however, would not be expected to result in "architectural" damage to these buildings.

In areas where vibration would not be expected to cause structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated and it would not be considered significant given the intermittent and short duration of the phases that have the highest potential of producing vibration (demolition and use of jackhammers and other high power tools). By use of administrative controls such as notifying adjacent residences of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with the least potential to affect these uses, perceptible vibration can be kept to a minimum and as such would not result in a significant impact with respect to perception.

Impact NV-2: Construction related vibration would not be excessive at nearby residential land uses or for residences built in earlier phases during subsequent project construction phases. **(Less Than Significant Impact)**

3.16.2.4 *Noise Impacts from Project-Generated Traffic*

Traffic volume information was reviewed at the following study area intersections:

1. Cochrane Road/Madrone Parkway
2. Cochrane Road /US-101 SB Ramps
3. Cochrane Road /US-101 NB Ramps
4. Cochrane Road /De Paul Drive
5. Cochrane Road /Mission View Drive
6. Cochrane Road /Peet Road
7. Project Driveway/Peet Road - Future Intersection
8. Project Driveway/Cochrane Road - Future Intersection

Traffic volumes under the "Existing" and "Project" traffic scenarios were compared to calculate the relative increase in traffic noise attributable to the proposed project. A noise impact was identified at noise-sensitive land uses where:

a) the noise level increase was predicted to be five dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or

b) the noise level increase was predicted to be three dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

A comparison of the "Existing" and "Project" traffic scenarios showed that traffic noise levels would not be substantially increased with the project as compared to existing conditions at sensitive land uses along roadway segments represented by Intersections 1-5 (as shown in Table 3.15-7). Traffic noise levels are calculated to increase by 0 to two dBA L_{dn} as a result of the project and such noise

increases would not be considered substantial.

Existing traffic noise levels along the segment of Cochrane Road between Peet Road and the Project Driveway (Intersection 8) are 45 dBA $L_{eq,}$ and the average noise level during the PM peak hour assuming the "Project" scenario is calculated to increase to 49 dBA L_{eq}. Traffic noise levels along Cochrane Road, between Peet Road and the Project Driveway, are calculated to increase by one dBA L_{dn} and to reach 56 dBA $L_{dn.}$

Traffic noise levels would be substantially increased during the peak traffic hour at sensitive land uses in the vicinity of Intersection 6 (Cochrane Road and Peet Road). The modeling accounted for the existing six-foot noise barriers that shield the rear yards of these receptors. The predicted "Existing" hourly average noise level during the PM peak hour is 40 dBA $L_{eq,}$ and the hourly average noise level during the PM peak hour assuming the "Project" scenario is calculated to reach 45 dBA L_{eq}. Traffic noise levels along this segment of Peet Road, between Cochrane Road and the Project Driveway (Intersection 7), are calculated to increase overall noise levels by one to two dBA L_{dn} reaching 51 dBA L_{dn}. Traffic noise levels will remain below the City's 60 dBA L_{dn} "normally acceptable" noise levels threshold, and the traffic noise increase would not be considered substantial.

Peet Road Realignment

The project also includes the re-alignment of Peet Road east of the Santa Clara Water District Facility. The realignment would shift the Peet Road travel lanes away from some receptors (i.e. APNs 726-33-002, 03, and 04) and nearer to others (i.e. APN 728-33-005) to the south. Table 3.16-3 summarizes the results of the traffic noise modeling calculations for receptors that adjoin the segment of Peet Road proposed for realignment.

Table 3.16-3
Traffic Noise Levels at Receptors Adjoining Realigned Segment of Peet Road

Receptor	Existing Traffic L_{dn} (dBA)	Project Traffic Ldn (dBA)	Change Due to Roadway Realignment (dBA)	Existing + Project + Roadway Realignment L_{dn} (dBA)
R1-Birkey	57	59.0	-2	57
R2-Trump Ranch LLC	55	57.0	-1	56
R3-Patel and Hasu	56	58.0	-1	57
R4-Patel and Hasu	55	57.0	1	58

As shown in Table 3.16-3, existing day-night average noise levels are calculated to increase by up to two dBA Ldn as a result of traffic attributable to the project. The roadway realignment would shift the location of the eastbound and westbound Peet Road travel lanes away from receptors on the Birkey parcel (APN 728-33-002). The Trump Ranch LLC parcel (APN 728-33-003), and the westernmost residential buildings on the Patel and Hasu parcel (APN 728-33-004). The shifting of the travel lanes away from these receptors would reduce traffic noise levels by one to two dBA because of the additional distance between the noise source and the receptor. The travel lanes would

shift closer to the easternmost residential building on the Patel and Hasu parcel increasing traffic noise levels by one dBA. Resulting noise levels assuming increased traffic from the project and the change in the roadway geometry would be one to three dBA L_{dn} above existing conditions. The noise increase would not be considered substantial as the increase is predicted to be less than five dBA L_{dn} and future noise levels would remain below 60 dBA L_{dn}.

The remaining buildings on the Birkey, Patel, and Hasu parcels are agricultural-related and not sensitive to noise. The minor realignment of the roadway adjacent to the Trump Ranch LLC parcel would not measurably change traffic noise. Traffic noise levels will remain below the City's 60 dBA Ldn "normally acceptable" noise levels threshold, and the traffic noise increase would not be considered substantial.

Impact NV-3: Noise level increases from proposed project traffic would not result in a substantial permanent noise level increase at residential land uses in the vicinity. **(Less Than Significant Impact)**

Construction Noise

The proposed project will be built in sixteen phases of development. Phase 1 would include a building allotment for 21 residences to be built from 2012-2013. Phases 2, 3, and 4 include an allotment for 39 residences to be developed from 2013-2014. Phase 4 includes development of six units that have not received allotment. Also, the proposed allotments do not include the secondary units proposed within each phase. Construction of Phase 1A is targeted for 2012. Full development of the project would continue for 10 to 12 years beyond this time, as allocations become available and market conditions dictate.

Construction of the project would involve site improvements, such as the establishment of utilities, site grading and excavation, the construction of foundations, building framing, paving, and landscaping. The project would also generate a large amount of truck trips along roadways serving the site.

Noise impacts from construction activities depend on the various pieces of construction equipment, the timing and length of noise generating activities, and the distance between the construction noise sources and noise sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when the construction occurs in areas adjoining noise sensitive land uses, or when construction lasts over extended periods of time.

During each stage of construction, there would be a different mix of equipment operating. Construction noise levels would vary by stage and vary within stages based on the amount of equipment in operation and location where the equipment is operating. The highest noise levels would be generated during demolition, excavation, and foundation construction. Jackhammers typically generate maximum noise levels of 85 dBA at a distance of 50 feet. Large pieces of earth-moving equipment, such as graders, excavators, and bulldozers, generate maximum noise levels of 85 to 90 dBA at a distance of 50 feet.

Average noise levels at 100 feet from the more typical construction activity at this site would range from 70 to 80 dBA L_{eq} during busy construction periods. These noise levels drop off at a rate of about six dBA per doubling of distance between the noise source and receptor, so noise levels at 200 feet would be expected to range from 64 to 74 dBA L_{eq}, and noise levels at 400 feet would be

expected to range from 58 to 68 dBA L_{eq}, and so on.

Project development would expose existing area residences to construction-generated noise over multiple building seasons. Given the potential for substantial increases in noise at adjacent residences as a result of project construction and the likelihood that substantial noise increases would likely occur for more than one construction season, construction of the project is determined to result in a significant unavoidable, short-term noise impact.

Impact NV-4: Residences in the vicinity of the site, as well as future residences proposed on the project site, would be exposed to noise levels substantially above ambient conditions over the 10-12 year duration of project construction activities. **(Significant Impact)**

3.16.3 Mitigation Measures

The following measures shall be implemented as part of the proposed project to reduce impacts to residents from exterior ambient noise to a less than significant level:

MM NV-1.1: Notify residents of Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230 of the potential for intermittent noises from operations and activities at the Santa Clara Water District Facility. This notification will be provided in the deed to the property.

MM NV-1.2: Construct eight-foot noise barriers, relative to the residential pad elevation, to reduce intermittent noises from activities associated with operations at the Santa Clara Water District Facility to less than 60 dBA. Noise barriers would be required at the property lines of Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230 that adjoin the Santa Clara Water District Facility.

MM NV-1.3: Provide a suitable form of forced-air mechanical ventilation, as determined by the City Building Official, for units located on Lots 41, 42, 78, 79, 81, 82, 109-112, 227, 228, and 230, so that windows could be kept closed at the occupant's discretion to control interior noise.

3.16.3.1 *Construction Noise*

MM NV-4.1: The contractor shall prepare a detailed construction plan for each phase of development identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance. The plan shall consider the following available controls to reduce construction noise levels as low as practical:

- Construction activities shall be limited to the hours between 7:00 a.m. and 8:00 p.m., Monday through Friday, and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays. No construction activities should occur on Sundays or federal holidays (Consistent with Section 8.28.040 of the Morgan Hill Municipal Code);
- Temporary noise barriers (e.g., solid plywood fences (minimum 8 feet in

height) and/or acoustical blankets could be erected, if necessary, along affected property boundaries facing the construction site. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected;

- Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment;
- Prohibit all unnecessary idling of internal combustion engines;
- Route construction related traffic to and from the site via designated truck routes and avoid residential streets where possible;
- Utilize "quiet" models of air compressors and other stationary noise sources where technology exists;
- Locate all stationary noise-generating equipment, such as air compressors and portable power generators, as far away as possible from adjacent land uses;
- Shield adjacent sensitive uses from stationary equipment with individual noise barriers or partial acoustical enclosures;
- Locate staging areas and construction material storage areas as far away as possible from adjacent land uses;
- Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and will require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.
- 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.

3.16.4 Conclusion

Impact NV-1: Various proposed residences would be exposed to exterior noise levels exceeding 60 dBA Ldn from operations and activities at the Santa Clara Valley Water District Facility which would exceed the City's noise and land use compatibility standards. The implementation of MM NV 1.1-1.3 above would reduce the impact to a less than significant level. **(Less Than Significant with Mitigation Incorporated)**

Impact NV-2: Construction related vibration would not be excessive at nearby residential land uses or for residences built in earlier phases during subsequent project construction phases. **(Less Than Significant Impact)**

Impact NV-3: Noise level increases from proposed project traffic would not result in a substantial permanent noise level increase at residential land uses in the vicinity. **(Less Than Significant Impact)**

Impact NV-4: Construction activities would impact residences in the project area for more

than one year. Implementation of MM NV 4.1 would reduce the effects of construction noise upon existing residences in the area. Even after implementation of this measure, however, noise levels at adjacent residences would continue to substantially exceed existing ambient noise levels. For this reason, and because construction is expected to last approximately 10-12 years, project construction noise would represent a significant unavoidable impact. **(Significant Unavoidable Impact)**

SECTION 4.0 GROWTH-INDUCING IMPACTS

As stated in the *CEQA Guidelines*, Section 15126.2(d), a project is considered growth-inducing if it would:

- Directly or indirectly foster economic or population growth, or the construction of additional housing in the surrounding environment.
- Remove obstacles to population growth or tax community service facilities to the extent that the construction of new facilities would be necessary.
- Encourage or facilitate other activities that would cause significant environmental effects.

The proposed project would directly foster population growth on the project site by proposing increased residential development. The project site is already served by existing and planned infrastructure, and has long been planned for urban uses since the establishment of the Cochrane Road Assessment District.

The proposed project has been found to not tax existing services and facilities in the community such that the construction of new facilities would be required as a result of the project (refer to *Sections 3.8 Utilities and Service Systems* and *3.13 Public Facilities and Services*). The proposed project would not allow development where it is not currently designated within the City, nor would it indirectly foster additional population growth beyond the project itself.

Impact GI-1: The proposed project would not result in significant growth-inducing impacts. **(Less Than Significant Impact)**

SECTION 5.0 CUMULATIVE IMPACTS

5.1 INTRODUCTION

Cumulative impacts, as defined by CEQA, consist of two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. Section 15130 of the *CEQA Guidelines* states that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively considerable, as defined in section 15065(c)." The discussion does not need to be as detailed 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 potential impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. 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. The effects of past projects are generally reflected in the existing conditions described in the specific sections of this EIR.

The discussion below addresses two aspects of cumulative impacts: (1) would the effects of all of the pending development listed result in a cumulatively significant impact on the resources in question and, if that cumulative impact is likely to be significant, (2) would the contributions to that impact from the project which is the subject of this EIR be cumulatively considerable.
Given that the project proposes rezoning and a specific development, projects which can be addressed at the same level of specificity as the project and which could contribute to cumulative impacts would include other pending development projects. Table 5.0-1 identifies all the pending, approved, and recently completed projects. The locations of the cumulative projects are shown on Figures 5.0-1 and 5.0-2.

5.1.1 Discussion of Cumulative Impacts

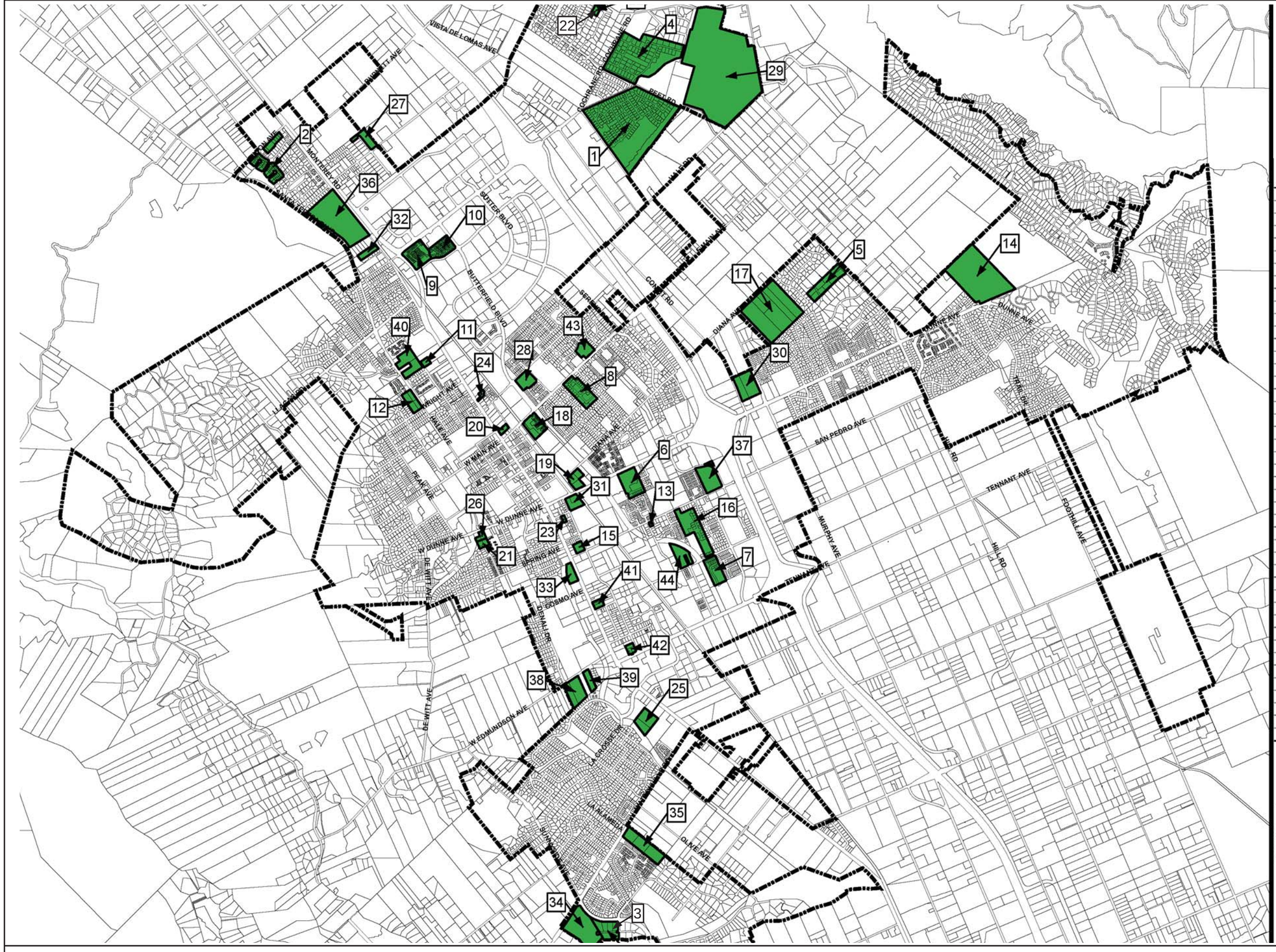
Even if all of these cumulative projects are approved, the implementation of all these projects is unlikely to occur immediately. They are, however, likely to develop or redevelop during the current 2020 General Plan horizon. All of the development is assumed to occur consistent with other relevant General Plan policies.

Table 5.0-1
Cumulative Projects List*

Number	Development	Status	Land Use/Description
COMMERCIAL/INDUSTRIAL			
1	Venture Professional Center	Approved	20,000 s.f. light industrial and General Office Condos
2	Spirit Road Oil	Under Construction	Frontage Improvements
3	Vista Del Toro	Approved	53,546 s.f. Mixed Use
4	Cochrane Commons	Approved	22,470 s.f. Retail Commercial
5	Madrone Village	Approved	48,632 s.f. Retail Commercial
6	American Institute of Mathematics	Approved	167,512 s.f. Conference Center
7	Walnut Grove-De Rose	In Process	Proposed commercial land use designation
8	Monterey-Dincer	Approved	3,150 s.f. Commercial
9	Beth-El Baptist Church	Approved	10,000 s.f. Religious Facility
10	Monterey-Dynasty	In Process	Retail Commercial
11	Morgan Hill Auto Imports	In Process	Auto Sales (Frontage Improvements)
12	CVS	Under Construction	14,715 s.f. Retail Commercial
RESIDENTIAL			
1	Mission Ranch	Under Construction	7 single family units
2	Morgan Glen at Capriano	Under Construction	7 single family units
3	Quail Meadows	In Process	2 single family units
4	Barrett Place	Under Construction	2 single family units
5	Alicante Estates	Under Construction	10 single family units
6	Pear Tree Estates	Under Construction	5 single family units
7	Jasper Park	Under Construction	42 multi-family low units
8	Villas of San Marcos II	In Process	23 multi-family low units
9	San Savigno	Under Construction	6 single family units
10	Madrone Plaza	In Process	84 multi-family medium units
11	Madrone Plaza	Under Construction	1 multi-family medium affordable units
12	Del Monte Corners	Plan Check	6 multi-family low units
13	Mallorca	In Process	15 multi-family low
14	San Pedro-Ahmadi	Under Construction	1 multi-family low unit
15	Dunne-Kruse	Pending Environmental Review	4 single family units
16	Colina Vista	In Process	12 multi-family low units
17	Rose Garden	Tentative Map Approved	35 single family medium units
18	Sherimar Ranch	Under Construction	20 single family low units
19	Huntington Square	In Process	85 multi-family units
20	Casa Diana	In Process	80 mixed use units
21	Vista Del Toro	Approved	4 mixed use units
22	Lone Hill-Benchmark	Under Construction	5 single family medium units
23	Malaguerra-Eilert	Tentative Map Approved	3 single family low units

24	Myrtle-Latala	Tentative Map Approved	6 multi-family units
25	Old Monterey-Tran	In Process	1 single family medium unit
26	McLaughlin-Malech	In Plan Check	4 multi-family units
27	Diamond Creek	Tentative Map in Process	129 multi-family rental units
28	W Dunne-Benchmark	Approved/Under Construction	13/1 multi-family units
29	Clayton-O'Brien	In Process	3 single family units
30	San Sebastian	EIR In Process	244 single family units
31	Milano	Under Construction	51 multi-family units
32	E Dunne-City Ventures	Tentative Map Approved	50 multi-family units
33	Campoli-E&H	In Process	12 single family units
34	Red Jasper	In Process	38 multi-family units
35	Quail Vineyards	In Process	15 single family units
36	Oak Park	In Process	16 single family senior units
37	Hale-Signature Homes	Pending Environmental Review	108 single family units
38	Walnut Grove-UCP	Tentative Map Approved	49 single family units
39	Edmundson Park	Tentative Map Approved	29 single family units
40	Piazza Park	Tentative Map Approved	14 single family attached units
41	San Gregorio	In Process	42 single family units
42	Barrett-Khanna	In Process	28 single family units
43	Tennant-Gera	In Process	12 single family attached
44	Main-Morgan Lane/Garcia	In Process	4 single family units
45	Morgan Hill Retirement	Plan Check In Process	137 multi unit/assisted living

*This list is derived from the City of Morgan Hill's project status reports updated in March 2012, which can be found here: http://www.morgan-hill.ca.gov/index.aspx?nid=671



ID	Project Name	Units Completed	Units Allocated	Units Total
1	Mission Ranch	233	77	328
2	Morgan Glen at Capriano	32	10	52
3	Quail Meadows	4	2	6
4	Alicante Estates	74	20	94
5	Pear Tree Estates	4	5	9
6	Jasper Park	35	42	80
7	Villas of San Marcos II	18	23	41
8	San Savigno	33	6	39
9	Madrone Plaza	18	84	134
10	Madrone Plaza	77	18	95
11	Del Monte Corners	0	6	6
12	Mallorca	0	15	15
13	San Pedro-Ahmadi	0	3	3
14	Dunne-Kruse	0	4	4
15	Colina Vista	0	12	12
16	Rose Garden	18	35	53
17	Sherimar Ranch	19	73	117
18	Huntington Square	14	85	136
19	Casa Diana*	0	80	80
20	Vista Del Toro	0	15	15
21	Lone Hill - Benchmark*	0	5	5
22	Malaguerra - Eilert	0	3	3
23	Myrtle - Latala	0	3	6
24	McLaughlin - Malech	0	4	4
25	Diamond Creek	0	129	129
26	W Dunne - Benchmark	0	14	14
27	Clayton - O'Brien	0	3	7
28	Ironhorse	0	32	32
29	San Sabastian	0	75	245
30	Milano	17	51	68
31	E Dunne - City Ventures	0	50	50
32	Campoli - E & H	0	12	12
33	Red Jasper	0	38	38
34	Quail Vineyards	0	15	15
35	Oak Park	0	16	37
36	Hale-Signature Homes	0	72	108
37	Walnut Grove-UCP	0	49	49
38	Edmundson Park	0	29	29
39	Piazza Park	0	14	14
40	San Gregorio	0	42	45
41	Barrett - Khanna	0	28	28
42	Tennant-Gera	0	12	12
43	Main-Morgan Lane/Garcia	0	4	8
44	Morgan Hill Retirement	0	137	137
	Total	**596**	**1452**	**2414**

*Exempt from RDCS or exempt through "Downtown Exemptions"

Notes: The project's Total units includes Complete, RDCS Allocated, units exempt from RDCS, and the balance of units not yet allocated. RDCS Allocated units have building allocations and have completed entitlements or awaiting to complete entitlements to build.

Residential Project Sites
City Boundary
0 0.25 0.5 1
Miles

PENDING RESIDENTIAL PROJECTS

FIGURE 5.0-1

ID	PROJECT NAME
1	Venture Professional Center
2	Spirit Road Oil
3	Vista Del Toro
4	Cochrane Commons
5	Madrone Village
6	American Institute of Mathematics
7	Walnut Grove-De Rose
8	Monterey-Dincer
9	Beth-El Baptist Church
10	Monterey-Dynasty
11	Morgan Hill Auto Imports
12	CVS
13	South Valley Orthopedics
14	California Sports Center

Commercial or Industrial Project Site

City Boundary

0 0.25 0.5 Miles

PENDING INDUSTRIAL AND COMMERCIAL PROJECTS STATUS REPORT

FIGURE 5.0-2

Given the size of Morgan Hill's Sphere of Influence, and the number and diversity of these pending project development projects, as well as their location within the existing urban envelope, the issue areas for which cumulative impacts could be significant include: land use, visual and aesthetics, transportation, noise, air quality, biological resources, hydrology and water quality, cultural resources, utilities and service systems, greenhouse gas emissions, and energy. These cumulative impacts are addressed in greater detail below.

5.1.1 Cumulative Land Use Impacts

5.1.1.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific land use impacts, this analysis examines whether development of the cumulative projects would result in the following types of land use impacts:

- Land use conflicts from placing incompatible land uses in proximity to each other. This can occur when industrial uses are constructed in an area of primarily residential development and vice versa, or when residential uses are constructed in proximity to freeways, railroad alignments, or airports. These land use conflicts can include:
  - long-term and short-term (construction-related) noise and dust generation;
  - hazardous materials use and/or contamination; and
  - traffic intrusion/spillover.
- Loss of agricultural lands, including prime farmlands;
- Population and housing growth that is inconsistent with the General Plan; and
- Loss of open space.

5.1.1.2 *Discussion of Impacts*

Land Use Compatibility

The proposed project would allow for the development of 244 single family homes, 180 secondary units, a private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open space, private parks, surrounding landscaping, and the realignment of Peet Road adjacent to existing residential uses and two SCVWD facilities, which would expose future residences to excess noise, dust, air pollution, and traffic particularly during construction. The site is buffered from other adjacent uses by roadways, including Peet Road (a two-lane roadway), Cochrane Road (two-lanes), Half Road (two-lanes), and St. Katherine's Road (two-lanes). With the implementation of the proposed mitigation measures identified in *Section 3.6 Air Quality, Section 3.16 Noise, and Section 3.2 Visual and Aesthetics***,** the proposed project would not result in significant air quality, noise, or visual aesthetics impacts. However, the project would result in significant noise impacts related to an increase in construction noise and significant air quality impacts related to construction related dust and diesel exhaust. As conditions of approval, the project shall implement the mitigation measures identified in *Section 3.16 Noise and 3.6 Air Quality*, and the mitigation measures would reduce the long-term impacts to a less than significant level. The short-term construction noise impacts would remain significant and unavoidable, however, this would not be a land use compatibility impact. For this reason, the project would not contribute to significant cumulative land use compatibility impacts.

All of the cumulative projects would be subject to General Plan goals, policies, and action statements that require appropriate buffers, edges, and transition areas between dissimilar land uses. In addition,

the setback, design, and operational requirements of the Morgan Hill Municipal Code and *Citywide Design Guidelines* should minimize land use compatibility issues. As discussed in *Section 3.1 Land Use*, the site is buffered from adjacent uses by roadways, including Peet Road, Cochrane Road, Half Road, and St. Katherine's Road, and a barrier wall proposed along the border of the SCVWD facility to mitigate operational noise to a less than significant level. With the implementation of mitigation measures identified in *Section 3.2 Visual and Aesthetics***,** the proposed project would not result in significant land use compatibility impacts.

Impact C-LU – 1: The cumulative projects, including the proposed project, would not result in significant cumulative land use compatibility impacts. **(Less Than Significant Cumulative Impact)**

Loss of Agricultural Lands

As discussed in *Section 3.3 Agricultural and Forest Lands*, the subject site provides Prime Farmland, and the project proposes mitigation sufficient to offset the loss of agricultural land, therefore, the project would have a less than significant impact. . The Mission Ranch and Alicante Estates projects are both in close proximity to the proposed project and propose 17 additional units for Mission Ranch and nine units for Alicante Estates. In addition, a future school is planned on the parcel located to the west of the SCVWD Pump Facility on Peet Road. Loss of agricultural lands has previously been addressed during environmental review of the Alicante Estates and Mission Ranch projects, and the future school site will address any potential loss of agricultural lands during preparation of environmental review.

The City of Morgan Hill is currently in the process of preparing environmental review (an EIR) for the southeast quadrant of the city. The Southeast Quadrant (SEQ) area consists of private lands that are currently not located within the City, but could possibly be annexed at some time in the future. The SEQ includes agricultural lands, and the City is preparing a comprehensive agricultural mitigation strategy for the future loss of farmland.

The cumulative effect of the proposed units would not be anticipated to have new and substantially different significant adverse environmental impacts on public facilities beyond those for the proposed project. For this reason, the proposed project would not have a cumulatively considerable contribution toward the loss of agricultural land within Morgan Hill and Santa Clara County.

Impacts C-LU – 2: The proposed project would convert agricultural land. **(Less Than Significant Cumulative Impact)**

Population and Housing

The cumulative effect of approving all of the projects listed in Table 5.0-1 would increase the number of dwelling units in the City by approximately 1,225 units. Most of the additional dwelling units would be developed on infill sites near or adjacent to existing infrastructure and existing or planned transit facilities and in compliance with the City of Morgan Hill's Residential Development Control System (RDCS) and the City's General Plan.

Impact C-LU – 3: The cumulative projects, including the proposed project, would not result in significant cumulative population and housing impacts. **(Less Than Significant Cumulative Impact)**

Loss of Open Space

The cumulative projects, including the project site, are on land which is already designated for urban land uses and are within the City's Urban Service Area. The implementation of the cumulative projects could result in loss of existing landscaped areas and open grass areas; however, new development would offset the loss by planting new landscape and replacement trees.

Two residential projects are located adjacent to the site. The Mission Ranch development is located southwest of the site and has 223 existing units, and proposes an additional 80 units. The Alicante Estates project is located west of the site and has 65 existing units, and proposes 27 additional units. Both of these projects are phased developments and would not contribute to additional cumulative open space impacts. The remaining proposed projects are not located within one mile of the project site.

The cumulative projects, including the proposed project, would not result in a cumulatively significant loss of open space.

Impact C-LU – 4: The cumulative projects, including the proposed project, would not result in a significant cumulative loss of open space. **(Less Than Significant Cumulative Impact)**

5.1.2 Cumulative Visual and Aesthetic Impacts

5.1.2.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific visual and aesthetic impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.

5.1.2.2 *Discussion of Impacts*

Each cumulative project's visual and aesthetic impacts would be lessened by implementing various City codes and policies and guidelines such as incorporating parks and open space areas into site design, planting new landscaping, using aesthetically-pleasing architectural features in building designs, and directing light in a way to not cause significant glare or light spillover onto adjacent properties. As a result, the cumulative projects (including the proposed project) would not have significant impacts on a scenic vista, scenic resources, the visual character of a site, or create new sources of light or glare. The nearest projects to the project site are the phased residential developments located at Alicante Estates and Mission Ranch. Neither of these projects would contribute to a cumulative visual and aesthetic impact.

Impact C-VIS – 1: The cumulative projects, including the proposed project, would not have

significant cumulative impacts on visual and aesthetics. **(Less Than Significant Cumulative Impact)**

5.1.3 Cumulative Transportation Impacts

5.1.3.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific transportation impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

5.1.3.2 *Discussion of Impacts*

The cumulative 2015 traffic conditions with the proposed project were evaluated by *Fehr & Peers* (refer to *Section 3.15 Transportation*), and would not result in impacts to intersection level of service or freeway ramp capacities would result from the project and cumulative traffic conditions.

Impact C-TRAN – 1: The cumulative projects, including the proposed project, would not result in significant transportation impacts. **(Less Than Significant Cumulative Impact)**

5.1.4 Cumulative Air Quality Impacts

5.1.4.1 *Thresholds of Significance*

Consistent with the thresholds used by BAAQMD, this analysis evaluates whether the cumulative projects are consistent with the adopted *2010 Clean Air Plan*, or could result in a significant air quality impact.

5.1.4.2 *Discussion of Impacts*

Regional Air Quality

The proposed project would develop the existing site with 244 single family homes, 180 secondary units, a private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas), private streets, approximately 23 acres of private open

space, private parks, surrounding landscaping, and the realignment of Peet Road. The BAAQMD approved model (URBEMIS2007) predicts that the proposed project would increase emissions of ROG, NOx, and PM_{10} from existing uses, but it would not exceed the BAAQMD significance thresholds. With implementation of the mitigation measures identified in *Section 3.6 Air Quality***,** construction dust and diesel exhaust would be reduced and would not result in significant project impacts.

Impact C-AQ – 1: The cumulative projects would not result in cumulatively significant impacts on regional air quality. The proposed project would not result in a considerable contribution to this cumulative regional air quality impact. **(Less Than Significant Cumulative Impact)**

Short-Term Air Quality

Construction activities associated with all the cumulative projects would temporarily affect local air quality. Construction activities such as demolition, earthmoving, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local and regional air quality. However, the cumulative projects are scattered throughout the City (refer to Figure 5.0-1) and their schedules for construction are different and are likely to occur over the next several years. In addition, construction mitigation measures are typically included as part of each project, especially large development and public projects. As discussed in *Section 3.6 Air Quality*, the proposed project would implement mitigation measures to reduce construction-related air quality impacts to a less than significant level. Given the fact that all construction projects are temporary and the projects would implement mitigation measures to reduce their construction-related impacts, the cumulative short-term air quality impacts associated with the cumulative projects are not anticipated to be significant.

Impact C-AQ – 2: The cumulative projects, including the proposed project, would not result in significant cumulative short-term, construction-related air quality impacts. **(Less Than Significant Cumulative Impact)**

5.1.5 Cumulative Noise Impacts

5.1.5.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific noise impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- 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, would the project expose people residing or working in the project area to excessive noise levels; or

- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

5.1.5.2 *Discussion of Impacts*

Ambient Noise Levels

Some of the cumulative projects propose that noise-sensitive land uses (e.g., residences) be located where existing noise levels exceed the City's General Plan Noise/Land Use Compatibility standards. Such locations are typically adjacent to railroads, arterials, collectors, and freeways, and beneath or near aircraft flight paths.

Where noise-sensitive uses are proposed at locations with elevated ambient noise levels, such impacts are typically mitigated through the use of noise-reducing building materials (e.g., noise-rated windows, insulation, etc.) and through site design (e.g., setbacks, soundwalls, shielded outdoor use areas, etc.). As discussed in *Section 3.16 Noise*, the project would be required to implement mitigation measures as conditions of approval to reduce noise levels to acceptable levels. The City requires that the specific building design measures be identified during the design review process. The design and inclusion of mitigation measures for residences is also verified in conformance with state law prior to issuance of building permits. Existing laws and policies ensure that interior noise levels meet relevant standards. For these reasons, the cumulative projects, including the proposed project with the implementation of the mitigation measures identified in *Section 3.16 Noise*, would not result in cumulative ambient noise impacts.

Impact C-NOI – 1: The cumulative projects, including the proposed project, would not result in significant cumulative impacts from exposure to ambient noise levels. **(Less Than Significant Cumulative Impact)**

Traffic-Generated Noise

Under cumulative conditions, traffic volumes are expected to increase and traffic-generated noise, as a result, would also increase. It is expected that the cumulative projects would contribute to the traffic-generated noise in the area. As discussed in *Section 3.16 Noise*, the proposed project would result in a significant cumulative traffic noise impact if noise levels at existing sensitive receivers would be substantially increased ((a) the noise level increase was predicted to be five dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase was predicted to be three dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater) and if the project would make a "cumulatively considerable" contribution to the overall traffic noise level increase. A "cumulatively considerable" contribution would be defined as an increase of one dBA or more attributable solely to the proposed project.

Traffic noise levels are anticipated to increase by about zero to two dBA under project conditions along Cochrane Road, Peet Road and Half Road.

Cumulative plus project traffic noise levels are not anticipated to increase by five dBA L_{dn} or more at sensitive land uses near the project site and the project would not make a "cumulatively considerable" contribution to the traffic noise level increases anticipated by 2030.

Impact C-NOI – 2: The proposed project would not result in a considerable contribution to cumulative traffic-generated noise. **(Less Than Significant Cumulative Impact)**

Construction Noise

The construction of the cumulative projects would result in short-term noise impacts at various locations throughout the City. The cumulative project sites are scattered throughout the City (refer to Figure 5.0-1), their schedules for construction are different, and their construction is likely to occur over the next several years. In addition, projects are required to implement City standard requirements such as limiting hours of construction to reduce construction noise impacts. Given these factors, the cumulative construction noise associated with the pending projects would not result in a significant impact.

However, noise generated by construction activities at the project site would exceed 60 dBA and the ambient noise environment by five dBA or more for a period exceeding one construction season (10-12 years total). The ambient noise environment at adjacent residential receptors is low and would be substantially increased during most of the construction period.

Impact C-NOI – 3: The proposed project, in combination with the adjacent Mission Ranch and Alicante Estates development, as well as the future development of the school site west of the SCVWD facility, would result in a cumulatively considerable contribution to significant cumulative noise impacts. **(Less Than Significant Cumulative Impact)**.

5.1.6 Cumulative Biological Resources Impacts

5.1.6.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific biological impacts, a cumulative impact to biological resources is considered significant if the proposed project, in conjunction with the other cumulative projects, would have a substantial adverse effect, either directly or through habitat modification, on any special-status species or sensitive biological habitat.

5.1.6.2 *Discussion of Impacts*

Special-Status Species

Many of the cumulative project sites are currently developed and provide minimal habitat for special-status species. Typically, individual projects (like the proposed project) would be required to incorporate mitigation measures to reduce impacts to special-status species to a less than significant level. As described in *Section 3.5 Biological Resources*, while there is a potential for nesting raptors and burrowing owl to occur on the project site, the project would implement mitigation measures that would avoid impacts or reduce them to a less than significant level. For these reasons, the cumulative projects, including the proposed project, would not result in significant impacts to special-status species.

Impact C-BIO – 1: The cumulative projects, including the proposed project, would not result in significant impacts to special-status species. **(Less Than Significant Cumulative Impact)**

Trees

The City of Morgan Hill Tree Ordinance defines a tree of significant size as a native tree measuring 18 inches or more in circumference, and a non-native tree measuring 40 inches or more in circumference. The proposed project site has 25 trees considered to be significant in size. A tree removal permit is required from the City for the removal of any significant size trees. The proposed project and each of the cumulative projects would be required to mitigate the removal of mature, significant sized trees. For this reason, the cumulative projects would not result in a significant cumulative loss of significant sized trees.

Impact C-BIO – 2: The cumulative projects with mitigation through replacement tree planting, including the proposed project, would not result in a significant cumulative loss of significant sized trees. **(Less Than Significant Cumulative Impact)**

5.1.7 Cumulative Hydrology and Water Quality Impacts

5.1.7.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific hydrology and water quality impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- 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;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

5.1.7.2 *Discussion of Impacts*

The cumulative projects would be required to conform to applicable General Plan goals, policies, and action statements regarding surface runoff and flooding, applicable requirements in the Municipal Code, and the City's Storm Water Management Ordinance to avoid hydrology and water quality impacts or reduce them to a less than significant level (refer to *Section 3.14 Hydrology and Water Quality*). In addition, projects would be required to implement a SWPPP, erosion control plan, and

BMPs to comply with the NPDES C.3 permit to reduce water quality impacts. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative impacts to hydrology and water quality.

Impact C-HYD – 1: The cumulative projects, including the proposed project, would not result in cumulative hydrology and water quality impacts. **(Less Than Significant Cumulative Impact)**

5.1.8 Cumulative Cultural Resources Impacts

5.1.8.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific cultural resources impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Cause a substantial adverse change in the significance of a historical resources as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

5.1.8.2 *Discussion of Impacts*

Typically, individual projects (like the proposed project) that could impact cultural resources are required to incorporate mitigation measures to avoid the impacts or reduce them to a less than significant level. For this reason, the cumulative projects would not result in significant impacts to buried cultural resources.

In addition, the project site does not contain historic structures or landmarks and therefore, would not contribute to cumulative impacts to historical resources.

Impact C-CUL – 1: The cumulative projects, including the proposed project would not result in significant impacts to cultural resources. **(Less Than Significant Cumulative Impact)**

5.1.9 Cumulative Utilities and Service Systems Impacts

5.1.9.1 *Thresholds of Significance*

For the purposes of this project, a cumulative impact to utility and service systems resources is considered significant if the proposed project, in conjunction with the other cumulative projects, would exceed the current or feasible future capability of the relevant utility or service systems.

5.1.9.2 *Discussion of Impacts*

Implementation of the cumulative projects would result in additional demand upon utilities and service systems. Each project would be required to conform to the goals and policies in the City's

General Plan Environmental Management Sub-Element regarding water resources, sanitary sewer system, surface runoff, and solid waste management. The projects would also be required by the City to mitigate their project impacts as part of the development review process. It is anticipated that the cumulative projects, including the proposed project, would not result in significant cumulative water, storm drain, or solid waste impacts because their growth has already been assumed in the General Plan and their combined effects were included in the General Plan EIR.

As described in *Section 3.10 Utilities and Service Systems*, the Residential Development Control System (RDCS) process limits unexpected increases in sewage generation. The current sewage capacity will be reached by 2019. Prior to exceeding capacity, the sewage plant would undergo plant modernization and expansion to allow for development beyond 2019. Development of the proposed project as well as all cumulative projects would occur beyond 2019, but with future sewage expansion would not result in a cumulative impact.

The proposed project would contribute to an incremental increase in sewage flows in downstream pipes under cumulative conditions. All sewer lines downstream of the project site would operate below the City's operating capacity. The proposed project would continue beyond 2019, but with future modernization and expansion of the sewage plant, capacity would not be exceeded.

The City has determined that the cumulative flows from the cumulative projects listed in Table 5.0-1 and the proposed project would not result in significant cumulative impacts to the sewer system.

The cumulative water demand was included in the 2010 Urban Water Management Plan (UWMP) growth assumptions, therefore, adequate water supply is available for the proposed project as well as cumulative projects.

Impact C-UTIL – 1: The project would not contribute to a cumulatively significant sewer impact or excess available water supplies. **(Less Than Significant Impact Cumulative Impact)**

5.1.10 Cumulative Energy Impacts

5.1.10.1 *Thresholds of Significance*

Consistent with the thresholds used by the City in evaluating project-specific energy impacts, this analysis examines whether development of the cumulative projects would result in the following impacts:

- Use fuel or energy in a wasteful manner;
- Result in a substantial increase in demand upon energy resources in relation to projected supplies; or
- Result in longer overall distances between jobs and housing.

5.1.10.2 *Discussion of Impacts*

The cumulative projects are located in infill areas, required to meet applicable state and local requirements for energy efficiency (e.g., Title 24 of the California Administrative Code as it pertains to energy efficiency, applicable General Plan goals, policies, and action statements, and the City's Sustainable Development and Green Buildings Policy), and some are locating jobs and housing in proximity to each other. The increase in energy use (including electricity, natural gas, and gasoline)

by the cumulative projects would not be substantial compared to the overall energy used in the City of Morgan Hill the project reduces its contribution by installing solar panels on 100 percent of proposed units. For these reasons, the cumulative projects, including the proposed project, would not have a significant cumulative energy impact.

Impact C-EN – 1: The cumulative projects, including the proposed project, would not result in significant energy impacts. **(Less Than Significant Cumulative Impact)**

5.1.11 Discussion of Cumulative Greenhouse Gas Emissions

Consistent with the thresholds used by BAAQMD, this analysis evaluates whether the cumulative effects of the proposed project could result in a significant greenhouse gas effect. The project will result in greenhouse gas emissions of 2.78 metric tons/year, which is below the 4.6 MT/SP threshold.

Impact C-GHG-1: The effect of the proposed project, in addition to the proposed cumulative projects alone, would not result in a significant cumulative (global) greenhouse has impact. **(Less Than Significant Cumulative Impact)**

5.1.12 Cumulative Public Facilities and Services Impacts

Public facilities and services, such as fire and police, parks, libraries, and schools, are provided to the community as a whole at defined locations and the resource base for delivery of these services is financed on a community-wide basis. In Morgan Hill, these services are provided by the City and County of Santa Clara.

New development usually creates an incremental increase in the demand for these services with the amount of demand varying widely between development types (e.g., residential versus commercial), the type of services and the specific characteristics of the development (such as student generation by multiple family residences versus senior housing).

The cumulative impact of a group of projects on public facility services is generally a fiscal impact. Cumulative development can cause an increase in the cost of providing service (for example more personnel hours for police patrols or park maintenance). These are fiscal impacts, not environmental impacts. An analysis of fiscal impacts is not required under CEQA.

CEQA analysis is required if the increased cumulative demand is of sufficient size to trigger the need for a new facility (such as a school or fire station) since construction of the new facility would have a physical impact on the environment. CEQA requires that an EIR then identify and evaluate the physical impacts on the environment that such a facility would have.

Impact C-PS-1: The cumulative projects would increase the number of people utilizing police and fire protection services, schools, parks, and other community services. Impacts on public services can be reduced to a less than significant level by only approving and permitting development that complies with standard measures, such as the provision of parks or in-lieu fees to provide for new facilities. The Mission Ranch and Alicante Estates projects are both in close proximity to the proposed project and would utilize the same public facilities as (i.e. parks, schools, libraries). The number of units proposed for the Mission Ranch (17) and Alicante Estate (nine) is low would generate 5.98

elementary school students, 1.82 middle school students, and 4.42 high school students. The cumulative enrollment of the proposed units in addition to the proposed project would be 104 for elementary, 33.32 for middle, and 75.92 for high school, which would not exceed the available capacity at the applicable elementary (207), middle (472), and high schools (416). Therefore, the proposed project, as well as proposed projects in close proximity to the project site, would not be anticipated to have new and substantially different significant adverse environmental impacts on public facilities beyond those for the proposed project.

In addition, the undeveloped, approximately 10-acre site located to the west of the Santa Clara Valley Water District (SCVWD) facility, has been dedicated to the Morgan Hill School District and is anticipated for future use as a school facility. The timing of development and type of facility will be determined pending a possible Bond measure to provide funding, and projected enrollment rates. The proximity of the site to the proposed project would potentially provide a cumulatively beneficial impact to public services in the project area. **(Less Than Significant Cumulative Impacts)**

SECTION 6.0 SIGNIFICANT UNAVOIDABLE IMPACTS

If the project is implemented, the following significant unavoidable environmental impact will occur:

Impact NV-4: Construction activities, even with incorporation of standard and mitigation measures, would impact noise sensitive receptors in the project area for more than one year which would result in a significant and unavoidable impact.

All other significant impacts of the project would be mitigated to a less than significant level through implementation of the mitigation identified in this EIR.

SECTION 7.0 CONSISTENCY WITH RELEVANT PLANS AND POLICIES

7.1 REGIONAL PLANS AND POLICIES

7.1.1 Bay Area 2010 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD), in cooperation with the Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), and the Bay Conservation and Development Commission (BCDC), prepared the Bay Area 2010 *Clean Air Plan* (CAP) which serves as a roadmap showing how the San Francisco Bay Area will achieve compliance with the state one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The Bay Area 2010 *Clean Air Plan* updates Vehicle Miles Traveled (VMT) and other assumptions in the 2005 *Ozone Strategy* related to the reduction of ozone in the atmosphere and serves as the current CAP for the Bay Area. The consistency of the proposed project with this regional plan is primarily a question of the consistency with the population/employment assumptions utilized in developing the *Clean Air Plan*, which were based on ABAG *Projections 2009*.

Consistency: The proposed project would not increase population and VMT per capita within Morgan Hill that was not foreseen in the current Morgan Hill General Plan and CAP. For this reason, the proposed project is consistent with the *Bay Area 2010 Clean Air Plan*.

7.1.2 San Francisco Bay Region and Central Coast Region Water Quality Control Plan

The Regional Water Quality Control Board has developed and adopted a Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region and the Central Coast Region. The Basin Plan is a master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay and Central Coast regions.[76] The Regional Board first adopted a complete water quality control plan in 1975 and the last major revision was adopted in 1994.

The Basin Plan provides a program of actions designed to preserve and enhance water quality and to protect beneficial uses. It meets the requirements of the U.S. Environmental Protection Agency, and establishes conditions related to discharges that must be met at all times.

The implementation portion of the Basin Plan includes descriptions of specific actions to be taken by local public entities and industries to comply with the policies and objectives of the Basin Plan. These include measures for erosion and sediment control (nonpoint source management).

Consistency: Development proposed under the proposed project would be required to conform to the requirements of the San Francisco and Central Coast Regional Water Quality Control Boards for erosion and sedimentation control during construction and post-construction periods. With implementation of the City's Standard Conditions of

[76] The 11,274 square mile Central Coast Region encompasses all of Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara Counties, as well as the southern one-third of Santa Clara County, and small portions of San Mateo, Kern, and Ventura Counties.

Approval (refer to *Section 3.14 Hydrology and Water Quality*), the proposed project would conform to the plans and policies in the Basin Plan.

7.1.3 Santa Clara Valley Congestion Management Program

The proposed realignment of Peet Road is currently planned for within the Santa Clara County Valley Transportation Authority's *Valley Transportation Plan (VTP) 2035*. The proposed realignment of Peet Road is proposed as part of the Hill Road Extension from East Main Avenue to Peet Road. The 2035 Plan proposes to "construct a new two-lane alignment for Hill Road from East Main Avenue across Half Road and connect to Peet Road." The project also includes realigning the existing Peet Road approach to Half Road to line up and connect with an extension of Hill Road. The total project cost is estimated at $8 million (in 2008 dollars). The proposed Peet Road realignment to be accomplished by the proposed project would be consistent with the County's VTP 2035.

The Santa Clara Valley Transportation Authority (VTA) oversees the Santa Clara CMP. The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of increased gas tax revenues. The CMP legislation requires that each CMP contain the following five mandatory elements:

1) A system definition and traffic level of service standard element.
2) A transit service and standards element.
3) A trip reduction and transportation demand management element.
4) A land use impact analysis program element.
5) A capital improvement element.

The Santa Clara County CMP includes the five mandated elements and three additional elements:

1) A county-wide transportation model and data base element.
2) An annual monitoring and conformance element.
3) A deficiency plan element.

Consistency: The traffic analysis completed for the project was prepared in accordance with the standards of the CMP and evaluates impacts on regional roadway segments, consistent with CMP policies. The proposed project would not result in any impacts to regional roadway segments, and as discussed in *Section 3.15 Transportation*, the project is consistent with the provisions of the CMP.

7.1.4 Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP)

A HCP/NCCP is currently being prepared for the Santa Clara Valley. The Santa Clara Valley HCP/NCCP is a regional partnership between seven local partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy and Morgan Hill) and two wildlife agencies [the California Department of Fish and Game and the U.S. Fish and Wildlife Service]. One of the primary purposes of the HCP/NCCP is to provide a framework for the local partners and landowners to complete project while protecting at-risk species and their essential habitats, some of which occur only in Santa Clara County.

Consistency: As discussed in *Section 3.1 Land Use*, the project site is located within the Draft Santa Clara Valley Habitat Conservation Plan area. The City of Morgan Hill has submitted an Interim Project Referral Letter on behalf of the proposed project to CDFG, USFWS, and NMFS-NOAA in order to obtain feedback on potential mitigation measures or recommended project alternatives that would help achieve the conservation objectives of the pending Santa Clara HCP/NCCP. At this time, the Interim Referral Letter has received no response, therefore, no further action is required. The proposed project would not conflict with any applicable adopted habitat conservation plan or natural community conservation plan.

7.2 LOCAL PLANS AND POLICIES

7.2.1 Morgan Hill General Plan

7.2.1.1 *Overview*

The Morgan Hill General Plan is the document that contains the City's official goals, policies, and actions which are the mechanism for achieving the community's vision for its future. The General Plan includes the encouragement of urban land uses around the downtown, and incentives to foster infill development instead of sprawl as part of its vision. The preservation and enhancement of the downtown are considered high priorities for the City. The proposed project would change the zoning for a portion of the site and subdivide the property.

Consistency: The proposed project would change the zoning for a portion of the site and subdivide the property to accommodate development of 244 single family homes and up to 180 secondary units. The General Plan designations for the site will remain the same, therefore, the proposed project is consistent with the General Plan.

Consistency with individual policies is addressed in the following sections. A summary table is provided in *Section 7.2.1.7*.

7.2.1.2 *Community Development*

Development Patterns Policy 2c: Consider land within or adjacent to the city as available for urban development only when it is included within the Urban Service Area and Urban Growth Boundary and can be developed in a manner that will be cost-effective to the City.

Consistency: The proposed development would occur within the Urban Service Area of Morgan Hill. The proposed project, therefore, is consistent with this policy.

Residential Development Policy 7a: Plan for a population of approximately 48,000 residents in 2020.

Consistency: Residential development of the proposed project is allocated in the City's General Plan. The proposed project, therefore, is consistent with this policy.

Public Safety Policy 17b: Promote police and fire security considerations in all structures by ensuring that crime and fire prevention concepts are considered in development and design.

Consistency: The proposed project development has been reviewed by the Fire and Police

Departments, ensuring that the project incorporates crime and fire prevention concepts. Therefore, the proposed project is consistent with this policy.

Parks and Recreation Policy 18b: Parks and recreational facilities shall be sited to maximize access to all residents. Where feasible, neighborhood parks shall be distributed throughout the community so that all residents live within walking distance of a neighborhood or community park. (Walking distance is defined as within a 1/2-mile radius of the park.)

Consistency: The proposed project includes development of private recreation center (including community pool, tennis court, basketball court, tot lot, fitness center and outdoor gathering areas) and approximately 23 acres of private open space. These facilities are located within walking distance of all proposed residences on the project site. The project, therefore, is consistent with this policy.

School Policy 19a: Work with the Morgan Hill Unified School District (MHUSD) to assure coordinated planning for school facilities needed in conjunction with new development, and to identify appropriate locations for future school facilities.

Consistency: Development of the proposed project site would pay school impact fees, and the City will coordinate with the MHUSD as each phase of the project goes through the RDCS process so that the District can monitor the pace and nature of development and take appropriate measures to accommodate anticipated students generated by the phases of development. The project, therefore, would be consistent with this policy.

Sewer Capacity, Water Supply and Storm Drainage 20c: Ensure that the total capacity for the Gilroy/Morgan Hill Wastewater Treatment Facility, its timing for completion, and configuration are consistent with SCJAP policies for the overall growth of Morgan Hill and Gilroy.

Consistency: The proposed project includes standard measures to ensure that development does not exceed the planned capacity of the Gilroy/Morgan Hill Wastewater Treatment Facility (refer to *Section 3.10 Utilities and Service Systems*) and does not propose an increase in Citywide residential population greater than existing projections. The proposed project, therefore, is consistent with this policy.

Sewer Capacity, Water Supply and Storm Drainage 21b: Ensure that new development does not exceed the water supply. (SCJAP 7.08)

Consistency: Based on the water supply analysis prepared by RJA Engineers for the proposed project, the City has adequate water to serve full buildout of the project site (refer to *Section 3.10 Utilities and Service Systems*). The proposed project, therefore, is consistent with this policy.

Sewer Capacity, Water Supply and Storm Drainage 22a: Address issues related to flooding throughout the city.

Consistency: The proposed project site is located outside of the designated 100-year floodplain. Proposed redevelopment would also provide on-site stormwater detention facilities consistent with the Morgan Hill Municipal Code. The proposed project, therefore, is consistent with this policy.

7.2.1.4 *Circulation*

Level of Service Policy 3d: As the design criteria for roadway improvements, use LOS E at freeway ramp intersections and LOS D+ or better elsewhere, except use LOS D at the following intersections (where achieving LOS D+ would require extraordinary development expenditure and right-of-way acquisition):

- Madrone Parkway and Monterey Road
- Tennant Avenue and Butterfield Boulevard
- Watsonville Road and Monterey Road

Consistency: The project will not result in significant level of service impacts to City of Morgan Hill signalized intersections, therefore, the proposed project is consistent with this policy.

Circulation Policy 5a: Ensure that all developments provide adequate and convenient parking (also see Policy CD-13f).

Consistency: The proposed project will have a total parking supply of 1,416 spaces. Of those spaces, 1,144 spaces will be provided for the 244 single-family dwelling units and 180 secondary units and 272 spaces will be provided for guest parking. Thus, the proposed project is consistent with this policy.

Circulation Policy 7p: Promote extension of bicycle paths in conjunction with flood control efforts.

Consistency: The project proposes 6.1 miles of Class II bike lanes as required by the *2008 Bicycle Master Plan*. A Class II bike lane is proposed on Peet Road to connect to a proposed bike lane on Half Road. In addition, a Class III bike route is proposed on Cochrane Road to connect to a proposed bike lane on East Main Avenue. The proposed realignment of Peet Road would include flood control efforts to avoid existing overland release. The project, therefore, is consistent with this policy.

Circulation Policy 8b: Promote walking as an alternate transportation mode for its contribution to health and the reduction of energy consumption and pollution. (SCJAP 11.03)

Consistency: The project proposes a pedestrian pathway system that will connect to the parks located within the project site, adjacent developments, and roadways. The proposed project, therefore, is consistent with this policy.

7.2.1.5 *Open Space and Conservation*

Plants and Wildlife Policy 6e: Identify and protect wildlife, rare and endangered plants and animals and heritage resources from loss and destruction. (SCJAP 15.09)

Consistency: The large oak trees on the site will be preserved as part of the proposed project. Mitigation measures are included in the project to reduce impacts to nesting raptors to a less than significant level during construction activities (refer to *Section 3.5 Biological Resources*). The proposed project would identify and protect wildlife from loss and destruction and, therefore, is consistent with this policy.

Conservation Policy 7a: New development should be designed to exceed State standards for the use of water and energy.

Consistency: In accordance with the Morgan Hill Municipal Code, the proposed project would incorporate energy conservation measures which exceed Title 24 by 25 percent (refer to *Section 3.8 Energy*). The proposed project, therefore, is consistent with this policy.

Conservation Policy 7b: Promote energy conservation techniques and energy efficiency in building design, orientation and construction.

Consistency: The proposed project will incorporate energy conservation and efficiency measures including solar panels on all of the 244 single family homes. The proposed project, therefore, is consistent with this policy.

7.2.1.6 *Public Health and Safety*

Environmental Hazards Policy 1a: Limit uses on lands with geologic hazards.

Consistency: The proposed project includes standard measures to address natural hazards in the project area (refer to *Section 3.9 Geology and Soils*). The project, therefore, is consistent with this policy.

Hazardous Materials Policy 3t: Provide mitigation to remedy the effects of new or expanding development over areas with environmental contamination of any and all unauthorized discharges.

Consistency: The proposed project site has been identified as containing residual agricultural contamination. Mitigation measures included in the project to address environmental contamination are discussed in *Section 3.4 Hazards and Hazardous Materials*. The proposed project includes mitigation for existing contamination in the project area and, therefore, is consistent with this policy.

Flood Control Policy 4b: Prohibit development in floodways and regulate in floodplains to minimize flood damage and be consistent with the federal flood insurance program and Santa Clara Valley Water District regulations. (SCJAP 15.05)

Consistency: The Peet Road realignment will be designed to accommodate the existing drainage patterns of the project site and well as provide the required capacity and overland release for the proposed drainage basins. Proposed redevelopment would also provide on-site stormwater detention facilities consistent with the Morgan Hill Municipal Code. The proposed project, therefore, is consistent with this policy.

Noise Policy 7a: New development projects shall be designed and constructed to meet acceptable exterior noise level standards, as follows:

- The maximum exterior noise level of 60 dBA L_{dn} shall be applied in residential areas where outdoor use is a major consideration. Where the City determines that providing an L_{dn} of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, an L_{dn} of 65 dBA may be permitted.
- Indoor noise levels should not exceed an L_{dn} of 45 dBA in new residential

housing units.

- Noise levels in new residential development exposed to an exterior L_{dn} 60 dBA or greater should be limited to a maximum instantaneous noise level (e.g., trucks on busy streets, train warning whistles) in bedrooms of 50 dBA. Maximum instantaneous noise levels in all other habitable rooms should not exceed 55 dBA. The maximum outdoor noise level for new residences near the railroad shall be 70 dBA L_{dn}, recognizing that train noise is characterized by relatively few loud events.

Consistency: The proposed project is subject to elevated noise levels due to the Santa Clara Valley Water District Facility. Future development would be required to provide acoustical shielding for primary outdoor use areas where noise levels exceed the guidelines of the General Plan. In accordance with state law, residences would be required to meet interior noise levels of 45 dBA L_{dn}. Residences proposed adjacent to the Santa Clara Valley Water District Facility would include design measures that would reduce exterior and interior noise levels to below the General Plan noise guidelines. Therefore, the project would be consistent with this policy.

7.2.1.7 *Summary of General Plan Consistency*

Table 7.2-1
Summary of Project Consistency with Morgan Hill General Plan

Name of Policy	Project is Consistent	Project is Inconsistent
Development Patterns Policy 2c	X	
Residential Development Policy 7a	X	
Public Safety Policy 17b	X	
Parks and Recreation Policy 18b	X	
School Policy 19a	X	
Sewer Capacity, Water Supply and Storm Drainage 20c	X	
Sewer Capacity, Water Supply and Storm Drainage 21b	X	
Sewer Capacity, Water Supply and Storm Drainage 22a	X	
Level of Service Policy 3d	X	
Circulation Policy 5a	X	
Circulation Policy 7p	X	
Circulation Policy 8b	X	
Plants and Wildlife Policy 6e	X	
Conservation Policy 7a	X	
Conservation Policy 7b	X	
Environmental Hazards Policy 1a	X	
Hazardous Materials Policy 3t	X	
Flood Control Policy 4b	X	
Noise Policy 7a	X	

In summary, the proposed project is in conformance with the City of Morgan Hill General Plan.

7.2.2 Morgan Hill Zoning Ordinance

The purpose of Morgan Hill Zoning Ordinance is to guide the growth of the city in an orderly manner, based on the adopted General Plan, and to protect the public health and general welfare by regulating the use of land and buildings, space between buildings, height and bulk of buildings, and by requiring the provision of off-street parking facilities, landscaping, and other necessary site improvements. The proposed project has three parcels with three zonings, and proposes to rezone the entire site to R1-20,000 (PD) to accommodate the proposed project.

Consistency: **T**he proposed project would rezone the project site to R1-20,000 (PD) to be consistent with the goals of the current General Plan which the Zoning Ordinance is intended to implement. The proposed project, will be consistent with the Morgan Hill Zoning Ordinance upon adoption.

SECTION 8.0 ALTERNATIVES TO THE PROPOSED PROJECT

8.1 INTRODUCTION

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives that "will feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project." The purpose of this section is to determine whether there are alternatives of design, scope or location that will substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives," or are more expensive. [Section 15126.6]

The range of alternatives selected for analysis is governed by the "rule of reason," which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice. Although the alternatives do not have to meet every goal and objective set for the proposed project, they should "feasibly attain most of the basic objectives of the project."

CEQA does not require that all possible alternatives be evaluated, only that "a range of feasible alternatives" be discussed to encourage both meaningful public participation and informed decision making. In selecting alternatives to be evaluated, consideration may be given to their potential for reducing significant unavoidable impacts, reducing significant impacts that are mitigated by the project to less than significant levels, and further reducing less than significant impacts.

The three critical factors to consider in selecting and evaluating alternatives are: (1) the project's objectives, (2) the significant impacts from the proposed project which could be reduced or avoided by an alternative, and (3) the feasibility of the alternatives available.

Significant Impacts of the Project

As discussed above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to alternatives that would avoid or substantially lessen any of the significant effects of the project and would achieve most of the project objectives.

The significant impacts of the project include:

- agricultural (loss of prime farmland)
- noise and vibration (impacts to residences and construction noise)
- air quality (near-term project impacts and construction)
- biological resources (possible impacts to nesting birds)

With the exception of construction noise, all of the identified impacts can be reduced to a less than significant level with mitigation measures included in the project. Alternatives required by CEQA to be considered should be capable of avoiding or reducing some or all of the significant impacts listed above.

Consideration of a "No Project" alternative is mandatory. Other logical alternatives include a reduced scale alternative, an on-site agricultural preservation alternative, and a noise reducing setback alternative. A different location should be considered only if it is capable of avoiding or reducing some or all of the significant impacts identified. Alternatives discussed in the following section include:

1. No Project
2. Reduced Scale Alternative
3. Location Alternative
4. On-Site Agricultural Preservation Alternative
5. Noise Setback Alternative
6. Construction Phasing Alternative

Objectives of the Project

While CEQA does not require that alternatives must be capable of meeting all the project objectives, their ability to meet most of the objectives is relevant to their consideration. The project applicant has identified the following basic objectives for the project:

- The project proponent's overall objective is the development of two hundred forty-four (244) single family residential units and up to one hundred eighty (180) detached cottage units.
- Attract and retain high quality members of the community by exceeding their expectations in the quality of construction, design and environment at the development.
- Develop a unique community that is rural in nature through the reduction in street pavement sections, sidewalks on both sides of the street, preservation of large oak trees on site, and maximizing view corridors throughout the development.
- Provide a different housing option that is currently unavailable in the City of Morgan Hill.
- Increase the supply of housing opportunities through the product developed as well as increasing the supply of funds for programs such as the Down Payment Assistant program through the Housing Mitigating fees.
- Create long-term revenue source for the City and County through the property taxes.
- Enhance the community's local restaurant and retail outlets through additional residences with disposable incomes.
- Have the smallest economically feasible carbon footprint through the installation of solar on 100% of the homes; exceeding title 24 standards and scoring a minimum of 130 Build it Green points.
- Provide opportunities for extended families to live independently via the detached cottage units.
- Reduce the number of garage doors fronting main streets through the utilization of creative architecture, land planning and the enclave concept throughout the majority of the development.
- Buffer the development from adjacent uses through the installation of sound deadening material, landscaping and large setbacks.
- Ensure that common space within the development is welcoming, useful and purposeful.
- Provide pedestrian and bicycle friendly pathways to and from the development.
- Minimize the volume and speed of traffic through the community to ensure that the neighborhoods are safe and quiet.
- The land plan creates a community, which will provide all residents with a unique physical and visual experience on a day-to-day basis while creating a sense of neighborhood and respect for the natural environment.
- Connect to existing sewer, water and utility connections to feed the new development.
- Relieve the City's typical burden of maintaining the roads and storm water sewer system by making it private and folding it into the Home Owners Association.
- Provide a heightened sense of security and protection via the entry gates.
- Ensure that common space within the development is welcoming, useful and purposeful.

- Maximize the use of Open Space by incorporating meandering walking paths throughout the development and connect them to adjacent developments and public parks.

Feasibility of Alternatives

CEQA, the CEQA Guidelines, and case law on the subject have found that feasibility can be based on a wide range of factors and influences. CEQA's general definition of feasibility is "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Among the factors that may be taken into account in considering the feasibility of an alternative are "…site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site…" [Section 15126.6 (f)(1)].

8.2 NO PROJECT ALTERNATIVE

The CEQA Guidelines stipulate that an EIR specifically include a "No Project" Alternative, which should discuss both "the existing conditions, as well as what will be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services."

Under the "No Project" Alternative, the project site would remain in its current condition, in which instance all of the project's environmental impacts would be avoided, and the environmental baseline conditions described would remain unchanged. However, because the site is underutilized and located within the Cochrane Road Assessment District, for which property owners have been paying fees for construction of urban infrastructure in anticipation of developing their properties with urban uses, it is foreseeable that the site would be eventually be developed according to the existing General Plan land use designation (Single Family Low 1-3 DU/AC) and zoning (R-1 Single Family), which minimum lot size restrictions currently allow up to 252 units. Therefore, it is unrealistic to assume the site would remain in its current farming condition should the subject project not move forward, rather, at some point another development proposal would come forward for the site.

The "No Project" Alternative would also include the Peet Road realignment, which is currently planned for within *VTA's VTP 2035*.

8.2.1 *Comparison of Environmental Impacts*

The extent to which this No Project Alternative might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact for the proposed project.

Agricultural Resources

As a result of the establishment of the Cochrane Road Assessment District, the project site's existing General Plan designation and zoning allows for development of the site with residential uses. Therefore, if the current project does not go forward, it is foreseeable the No Project Alternative would involve development of prime agricultural land with residential uses. The density of future development may be more than the proposed project, but the loss of prime agricultural lands would nonetheless occur under any scenario in that the entire site would eventually be converted to residential use consistent with the General Plan (and prior court orders). Therefore, the No Project

Alternative would not result in reduced impacts to agricultural resources at the project site.

Air Quality Impacts

Construction Air Quality

Construction impacts, and mitigation measures to avoid excess dust generation, would be similar to the proposed project if developed by another developer in a similar low density subdivision consistent with the General Plan.

Biological Resources Impacts

As with the proposed project, foreseeable future development under the No Project Alternative will remove significant trees to accommodate redevelopment and impacts to nesting birds during construction could occur. The No Project Alternative would not result in fewer impacts to trees used by nesting birds, or necessarily involve removal of fewer trees. Mitigation measures would be implemented, as identified for the subject project.

Noise Impacts

Under the existing General Plan and zoning regulations, residential uses can be developed adjacent or near the Santa Clara Valley Water District facility where noise is over 60 dBA L_{dn}. The number of new residences that could be exposed to noise would be more than the proposed project since the intensity of residential development and number of residential units would be higher. Noise impacts to future residents near the Santa Clara Valley Water District facility would be similar to the proposed project.

Similarly, the length of time adjacent residents would be exposed to construction noise would likely be more than under the proposed project, in that more units would be built requiring more overall phases and construction seasons. The length of time residents are exposed to construction noise would be increased, and depending on the timing and location of future development, significant temporary impacts from construction noise could still occur.

The No Project Alternative would not avoid the significant agricultural, air quality, biological, and noise impacts of the project in that those impacts are likely to result from any development occurring on the site in a manner consistent with the current General Plan land use designation for the site.

8.2.2 *Feasibility*

Considering that the existing General Plan designation and zoning allows for up to 252 units at the proposed project site, the No Project Alternative, which assumes future development consistent with the existing land use regulations, is feasible from a land use and planning standpoint.

8.2.3 *Relationship to Project Goals and Objectives*

The No Project Alternative would allow for development of the site under the existing General Plan designation and zoning districts which would meet some of the basic objectives of the project.

8.3 REDUCED SCALE ALTERNATIVE

The Reduced Scale Alternative would reduce the amount of residential development on the project site to a level sufficient to avoid significant impacts resulting from the scale of the project. The project's operational air quality and traffic impacts were less than significant. The project's noise, agricultural, and biological impacts would not be substantially lessened by reducing the scale of proposed development. The greenhouse gas emissions analysis for the site determined that according to the BAAQMD emissions threshold (4.6 MT CO_2e/year per capita), the proposed project would not exceed the 'efficiency' significance threshold. However, the project would exceed the 'bright-line threshold of 1,100 MT of CO_2e/yr., which is the trigger for a greenhouse gas emissions analysis (i.e. if a project results in less than 1,100 MT of CO2e/year, GHG emissions are considered *de minimus* and no GHG analysis is required). Project emissions must be reduced by 62 percent for the project to fall below 1,100 MT of CO_2e/yr. Therefore, a Reduced Scale Alternative consisting of 93 single-family primary units and 68 accessory units would generate GHG emissions below the 1,100 MT CO_2e/year bright-line-threshold.

8.3.1 *Comparison of Environmental Impacts*

The extent to which the Reduced Scale Alternative might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact for the proposed project.

Agricultural impacts could be reduced by clustering reduced development (93 units) onto smaller lots, allowing for agricultural uses to be maintained on a portion of the site. Biological resources impacts would be the same as the proposed project, as they are unrelated to the number of units.

Noise Impacts

Under the existing General Plan and zoning regulations, residential uses can be developed adjacent or near the Santa Clara Valley Water District facility where noise is over 60 dBA L_{dn}. The number of new residences that could be exposed to noise would be less than the proposed project since the intensity of residential development and number of residential units would be lower. Noise impacts to future residents near the Santa Clara Valley Water District facility would be similar to the proposed project, however, with a reduced number of units (93), the 450 foot buffer required to reduce noise impacts to future residents may be applied if units are clustered and setback, allowing for the 450 foot buffer.

Similarly, the length of time adjacent residents would be exposed to construction noise would likely be less than under the proposed project, in that fewer units would be built (93 units to be built in forst six phases of development) requiring fewer overall phases and construction seasons. The length of time residents are exposed to construction noise would be reduced, but depending on the timing and location of future development, significant temporary impacts from construction noise could still occur.

Greenhouse Gas Emissions

A Reduced Scale Alternative would allow for the reduction of greenhouse gas emissions to less than the BAAQMD bright-line-threshold, and greenhouse gas emissions could be considered de minimus.

8.3.2 *Feasibility*

The Reduced Scale Alternative is feasible from a land use and planning standpoint in that it conform to the site's General Plan designation and current zoning districts.

8.3.3 *Relationship to Project Goals and Objectives*

The reduction in density allowed under the Reduced Scale Alternative would not meet the basic project objective of development of 244 single family residences and 180 detached cottage units at the project site.

8.4 LOCATION ALTERNATIVE

The CEQA Guidelines encourage 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 effects of the project and meet most of the project objectives need be considered for inclusion in an EIR. An alternative location of the same size elsewhere in Morgan Hill or southern Santa Clara County would not likely eliminate the impact on prime agricultural land unless the alternative location involved soils that were not suitable for agricultural use, which would likely entail a hillside location since the valley floor is generally suitable for agriculture.

A location alternative that would provide the same area and possessed the site's existing General Plan land use designation and zoning was not identified in the City of Morgan Hill. Also, given the court ruling affecting the site related to the Cochrane Road Assessment District, an alternate site location is not considered further.

8.5 ON-SITE AGRICULTURAL PRESERVATION ALTERNATIVE

Under this alternative, mitigation for loss of prime agricultural land would be provided on the project site. Proposed on-site preservation at a ratio of 1:1 could occur in one of the following approaches:

3) Clustering proposed development onto smaller lots, allowing half of the total project site to be developed with smaller lots at the same density producing 244 units as the proposed project. Accessory units may still be provided onto smaller lots.
4) Maintain proposed lot sizes on half of the project site and reducing overall project density by 50 percent, resulting in 122 units with accessory units.

Development allowed under this alternative would maintain 60 acres of the project site for agricultural use in order to mitigate for the loss of prime farmland on-site.

8.5.1 *Comparison of Environmental Impacts*

The extent to which the On-Site Agricultural Preservation Alternative might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact for the proposed project.

Agricultural Resources

The On-Site Agricultural Preservation Alternative would allow for development of half of the project site with residential uses. The loss of prime agricultural lands on the site would be reduced and

mitigation for the development would occur on-site, therefore, the impact to agricultural resources would be reduced by half compared to the proposed project.

Air Quality Impacts

Construction Air Quality

Construction impacts, and mitigation measures to avoid excess dust generation, would be similar to the proposed project.

Biological Resources Impacts

Even under the On-Site Agricultural Preservation Alternative, the site would be developed with higher density residential uses than what currently exists at the site. Like the proposed project, orchard trees will be removed to accommodate redevelopment and impacts to nesting birds during construction could occur. The rate of redevelopment and intensification, however, would be lower than under the proposed project. The On-Site Agricultural Preservation Alternative would not result in fewer impacts to trees used by nesting birds.

Noise Impacts

Under the existing Cochrane Road Assessment District, residential uses can be developed adjacent or near the Santa Clara Valley Water District facility where noise is over 60 dBA L_{dn}. The On-Site Agricultural Preservation Alternative could maintain agricultural uses adjacent to the SCVWD facility in order to avoid exposure of residences to noise. Noise impacts to future residents near the Santa Clara Valley Water District facility would be reduced by the proposed project.

Similarly, the length of time adjacent residents would be exposed to construction noise would likely be less than under the proposed project since the overall project development area would be reduced. The length of time residents are exposed to construction noise would be reduced (the project constructs 122 units in eight (8) phases), but depending on the timing and location of future development, significant temporary impacts from construction noise could still occur.

8.5.2 *Feasibility*

The On-Site Agricultural Preservation Alternative is considered infeasible from a land use and planning standpoint. The site's residential General Plan land use designation and associated residential zoning, as mandated by the court's ruling arising from the lawsuit brought by the landowners participating in the Cochrane Road Assessment District, prevents the City from requiring an on-site agricultural mitigation, making a clustering option for the site infeasible. The assessment district fees were based on each parcel's acreage, and therefore the entire subject parcel is required to develop with urban uses.

8.6 NOISE BUFFER ALTERNATIVE

Under this alternative, a setback is proposed for the Santa Clara Valley Water District (SCVWD) facility located to the west of the project site. The setback is proposed as a noise buffer for future residents adjacent to the SCVWD facility. Operations at the Santa Clara Water District Facility could generate intermittent maximum instantaneous noise levels of approximately 85 dBA Lmax at the property line (assuming that the noise source was located no closer than 25 feet from the property

line). Per the Municipal Code, when uses are adjacent or contiguous to residential, park or institutional uses, the maximum sound level shall not exceed 60 dBA Lmax. Assuming no intervening structures or noise barriers, residential land uses would have to be set back approximately 450 feet from the SCVWD property line to ensure that Lmax noise levels would be maintained at or below 60 dBA, thereby eliminating the 53 proposed lots within 450 feet of the SCVWD facility. These units could potentially be regained by reducing lot sizes throughout the project.

8.6.1 *Comparison of Environmental Impacts*

The extent to which the Noise Setback Alternative might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact for the proposed project.

Agricultural Resources

The Noise Buffer Alternative would allow for development of the majority of the project site, but would eliminate 53 of the proposed lots. The loss of prime agricultural lands on the site would be reduced by approximately 17-18 acres. This area would likely be too small for continues agricultural use considering the proposed surrounding uses. Therefore, there would still be a loss of prime agricultural land resulting from the proposed project, and the Noise Buffer Alternative would not result in fewer impacts to agricultural resources at the project site.

Air Quality Impacts

Construction Air Quality

Construction impacts, and mitigation measures to avoid excess dust generation, would be similar to the proposed project.

Biological Resources Impacts

Like the proposed project, significant trees will be removed to accommodate redevelopment and impacts to nesting birds during construction could occur. The rate of redevelopment and intensification; however, would be lower than under the proposed project. The Noise Buffer Alternative would not result in significantly fewer impacts to trees used by nesting birds.

Noise Impacts

Under the existing General Plan, residential uses can be developed adjacent or near the Santa Clara Valley Water District facility where noise is over 60 dBA L_{dn}. The Noise Buffer Alternative would maintain a greater setback between the SCVWD facility and future residences in order to completely avoid noise mitigation to reduce exterior noise levels to a less than significant level. Noise impacts to future residents near the SCVWD facility would be reduced by creating an open space setback sufficient to buffer future residences from noise generated by the SCVWD facility.

For construction noise, the length of time adjacent residents would be exposed to construction noise would likely be less than under the proposed project since the overall project development area would be reduced by 53 lots (unless these lots were accommodated elsewhere on site by reducing lot sizes for the remaining units), and those lots would be located a farther distance. The length of time residents are exposed to construction noise would be reduced, but depending on the timing and

location of future development, significant temporary impacts from construction noise could still occur.

8.6.2 *Feasibility*

The Noise Buffer Alternative is considered feasible from a land use and planning standpoint.

8.6.3 *Relationship to Project Goals and Objectives*

Unless the lots were regained elsewhere on site, the reduction of 53 lots involved in this Alternative would not meet the basic project objective of development of 244 single family residences and 180 detached cottage units at the project site.

8.7 CONSTRUCTION SCHEDULE ALTERNATIVE

Under this alternative, the proposed construction program would be reduced from the currently proposed 16 phases to reduce the construction air quality and noise impacts. The overall proposed development for the site would remain the same as the proposed project, but the phases of development would be reduced. If allocation requirements were unnecessary for development the number of phases would be dictated by market conditions and availability of financing. In the most redeeming circumstances, it is estimated that the project could be built in 10 phases or less.

8.7.1 *Comparison of Environmental Impacts*

The extent to which the Construction Schedule Alternative might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact for the proposed project.

Agricultural, biological resources and land use impacts would be the same as the proposed project.

Air Quality Impacts

Construction Air Quality

Construction impacts, and mitigation measures to avoid excess dust generation, would potentially be less than the proposed project because the length of overall construction would be reduced.

Noise Impacts

Under the existing General Plan, residential uses can be developed adjacent or near the Santa Clara Valley Water District facility where noise is over 60 dBA L_{dn}. The number of new residences that could be exposed to noise would be the same as the proposed project. However, because of a reduction of overall construction phases, the length of time adjacent residents would be exposed to construction noise would likely be less than under the proposed project. The length of time residents are exposed to construction noise would be reduced.

Land Use

8.7.2 *Feasibility*

As a result of the Cochrane Road Assessment District, the site is entitled to develop entirely with residential uses consistent with the General Plan land use designation and the zoning district. However, the project must receive development allocations through the Residential Development Control System (RDCS) process, which is the City's growth control system. Since the project has successfully undergone the RDCS process previously, once the project is under construction, 15 allocations would be granted on an annual basis without requiring future rounds of the RDCS process. However, the proposed project may obtain more allocations than the 15 annual allotments by competing in the RDCS process, and could gain anywhere from 30 to 40 allocations which would substantially reduce the overall number of project phases. Since allocations are provided on a limited, annual basis, the potential for the project to receive the required number of RDCS allocations to reduce the number of overall construction phases is not unknown.

The Construction Schedule Alternative is considered infeasible in that the proposed phasing is the minimum number of phases the project can reasonably expect, considering the competitive RDCS allocation process.

8.7.3 *Relationship to Project Goals and Objectives*

This alternative, if sufficient RDCS allocations were allocated to the site to compress the number of phases and therefore the number of construction seasons, would meet basic project objectives.

8.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE(S)

The CEQA Guidelines specify that an EIR must identify the environmentally superior alternative among those alternatives discussed. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. [Section 15126.6(e)(2)]

Based upon the previous discussion, the Reduced Scale Alternative would be the environmentally superior alternative. The Reduced Scale Alternative would avoid most of the significant impacts of the project, with reduced agricultural loss if 93 units are clustered, however, it is the most environmentally superior of all the proposed alternatives because it reduced the greenhouse gas emissions impacts to below the threshold requiring analysis.

SECTION 9.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible environmental changes that would result from the implementation of a proposed project. Significant irreversible environmental changes include the use of nonrenewable resources, the commitment of future generations to similar uses, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources.

9.1 USE OF NONRENEWABLE RESOURCES

Future demolition of existing structures on the project site, construction, and operation of the proposed development would require the use and consumption of nonrenewable resources. Renewable resources, such as lumber and other wood byproducts, would also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals.

Energy would be consumed during both future construction and operation of the proposed project. The construction phase would require the use of nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the development site, and construction of residences. The operational phase would consume energy for multiple purposes including, heating and cooling, lighting, appliances, and electronics (refer to *Section 3.12 Energy*). Energy in the form of fossil fuels would be used to fuel vehicles traveling to and from the area.

The proposed project would reduce nonrenewable energy consumption rates due to its use of energy-efficient building techniques, materials, and appliances to the satisfaction of the Community Development Director.

9.2 COMMITMENT OF FUTURE GENERATIONS TO SIMILAR USE

The proposed project would not change the land use designation of the project site. The change in land use would place residential units in proximity to existing mass transit facilities which would encourage future generations to uses these services and reduce the amount of fossil fuels used in the Morgan Hill area. The proposed project is located in a developed area and although the proposed project would represent a substantial increase in development in the project area it would not commit adjacent sites to similar uses.

9.3 IRREVERSIBLE DAMAGE RESULTING FROM ENVIRONMENTAL ACCIDENTS ASSOCIATED WITH THE PROJECT

The proposed project does not propose any new or uniquely hazardous uses, and operation of development in the project area would not be expected to cause environmental accidents that would impact other areas. The project area is located within a seismically active region and would be exposed to ground shaking during a seismic event.

Conformance with standard engineering practices in the California Building Code would reduce impacts from seismic hazards to redevelopment in the project area. Development of the site with the implementation of the standard measures identified in *Section 3.9 Geology and Soils* would avoid

significant geology and soils impacts on future development and would not likely result in irreversible damage that may result from environmental accidents.

SECTION 10.0 REFERENCES

Association of Bay Area Governments. Projections and Priorities 2009: Building Momentum: San Francisco Bay Area Population, Households, and Job Forecasts.

Basin Research Associates, Inc. Cultural Resources Supplement Archaeological Resources Morgan Hill General Plan Santa Clara County, California. 2000.

Bay Area Air Quality Management District (BAAQMD). CEQA Guidelines Update-Thresholds of Significance. June 2010.

California Energy Commission. Energy Almanac, Total Electricity System Power. Available at: http://www.energyalmanac.ca.gov/electricity/total_system_power.html.

California Energy Commission. 2010 Integrated Energy Policy Report (CEC-100-2009-003-CMF). 2010. Pages 49 and 51.

California Energy Commission. 2009 Integrated Energy Policy Report (CEC-100-2009-003-CMF). 2009. Page 148.

California Air Resources Board (CARB). Air Quality and Land Use Handbook: A Community Perspective. April 2005.

CARB, CCAR, ICLEI and the Climate Registry. Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories, Version 1.1. May 2010.

California Department of Conservation. Santa Clara County Farmland of Importance Map. 2010.

California Geological Survey Study Zones: Earthquake-Induced Landslides. http://gis.abag.ca.gov/website/landslideCGS/ Accessed September 6, 2011.

California Integrated Waste Management Board. Residential Waste Disposal Rates. January 5, 2004. http://www.ciwmb.ca.gov/wastechar/ResDisp.htm Accessed April 17, 2012.

City of Morgan Hill. 2010 Urban Water Management Plan. 2010

City of Morgan Hill. Morgan Hill General Plan. As amended through July 2006.

City of Morgan Hill. Morgan Hill, CA Municipal Code. As amended through February 20, 2008.

City of Morgan Hill. Storm Drainage System Master Plan. January 2012.

ENGEO, Inc. Agrichemical Impact Assessment and Risk Evaluation. December 2011.

ENGEO, Inc. Phase I Environmental Site Assessment. September 2011 and April 2012.

ENGEO, Inc. Fault Exploration Report. October 2011.

ENGEO, Inc. Geotechnical Exploration Report. February 2012.

ENGEO, Inc. Site Infiltration Analysis. September 2011.

Fehr & Peers. Final Transportation Impact Analysis for Borello Residential Development. Jun e27, 2012.

Holman and Associates. Preliminary Cultural Resources Examination. August 2011; Extended Phase I Archaeological Testing. November 2011; Revised Archaeological Field Survey for Peet Road Realignment. March 2012.

Illingworth & Rodkin. Construction Emission Health Risk Analysis. July 2012.

Illingworth & Rodkin. Environmental Noise Assessment. March 2012.

Illingworth & Rodkin. Greenhouse Gas Emissions Analyses. March 2012.

IPCC, Summary for Policymakers. Climate Change 2007: The Physical Science Bases, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2007. Available at http://ipcc.ch/

Live Oak Associates, Inc. Arborist Evaluation. June 5, 2012.

Live Oak Associates, Inc. Biotic Evaluation. March 2012.

Moki Smith Professional Tree Care. Tree Survey. September 2008.

MWH Global and Akel Engineering Group. Draft-South County Regional Wastewater Authority Wastewater Flow Projections, 2011. July 2011.

PG&E, Carbon Footprint Calculator Assumptions, http://www.pge.com/myhome/environment/calculator/assumptions.shtml, viewed August 24, 2011.

Ruggeri, Jensen, Azar (RJA) Engineers. Preliminary Engineers Report for San Sebastian. May 30, 2012.

Santa Clara Valley HCP/NCCP. www.scv-habitatplan.org/www/deafult.aspx Accessed August 2011.

Santa Clara Valley HCP/NCCP. http://scv-habitatplan.org/www/site/alias__default1301/hcp_study_area.aspx. Accessed August 4, 2011.

Santa Clara Valley Water District (SCVWD). Anderson Dam Seismic Stability Study. http://www.valleywater.org Accessed July 2011.

Schaaf & Wheeler. Hydrology and Water Quality Review for Cochrane-Borello Development. June 22, 2012.

State of California Department of Forestry and Fire Protection. Santa Clara County Very High Fire Hazard Severity Zones in Local Responsibility Areas (LRAs). October 8, 2008.

http://www.fire.ca.gov/fire_prevention_wildland_zones_maps.php

The White House, Energy Security for the 21st Century. February 20, 2008, http://www.whitehouse.gov/infocus/energy/

United States Energy Information Administration. "California State Energy Profile." Available at: http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA#Datum.

Urban Programmers. Historic and Architectural Evaluation. April 2012.

United States Environmental Protection Agency. Light-Duty Automotive Technology, Carbon Dioxide Emissions and Fuel Economy Trends: 1975 through 2009. November 2009. Page iii. Available at: http://www.epa.gov/oms/cert/mpg/fetrends/420s09001.pdf.

U.S. Census Bureau. http://factfinder.census.gov/home/saff/main.html Accessed September 14, 2011.

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