

CHAPTER 4.0 ALTERNATIVES TO THE PROPOSED PROJECT

This chapter of the SEIR describes and evaluates project alternatives and is intended to implement the requirements set forth in the CEQA Guidelines (14 CCR 15000 et seq.). This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines Section 15126.6(e)(2).

4.1 Rationale for Alternative Selection

In accordance with Section 15126.6(a) of the CEQA Guidelines, an EIR must describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. CEQA Guidelines Section 15126.6(f) states that “the range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” The CEQA Guidelines Section 15126.6(f)(1) provides several factors that should be considered with regard to the feasibility of an alternative: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site (if an off-site alternative is evaluated).

According to the CEQA Guidelines Section 15126.6(d), discussion of each alternative should be sufficient “to allow meaningful evaluation, analysis, and comparison with the proposed project.” Therefore, the significant effects of each alternative are discussed in less detail than those of the project, but in enough detail to provide decision-makers perspective and a reasoned choice among alternatives to the proposed project.

As required in CEQA Guidelines Section 15126.6(a), in developing the alternatives to be addressed in this section, consideration was given regarding an alternative’s ability to meet most of the basic objectives of the proposed Project. These objectives are presented in Section 1.3, *Project Objectives*, of this SEIR and are listed below for reference:

1. Promote a well-organized international industrial and business district in East Otay Mesa to attract and accommodate forecasted growth.
2. Promote the conservation of open space to preserve environmental resources and provide recreational opportunities for the industrial workforce and surrounding community residents.

4.0 Alternatives to the Proposed Project

3. Implement the General Plan vision of providing a diversity of choices by creating a Village Core within East Otay Mesa that contains a mix of housing types located near retail businesses, employment, and recreational areas.
4. Establish a land use pattern with a mix of densities and land uses that will minimize automobile trips, support walking and bicycling, encourage participation in recreational activities, and invigorate the economic health of businesses.
5. Provide convenient housing opportunities for the adjacent industrial and business district employees in addition to supporting commercial/retail and employment uses to reduce vehicular dependence.
6. Provide a multi-modal transportation system consisting of highways, streets, and transit networks adequate to serve sub-regional transportation needs at an acceptable level of service.
7. Promote well-designed infrastructure, buildings and landscaping, both in the public and private realms, that creates a distinct urban image and establish a unique sense of identity for East Otay Mesa.
8. Provide infrastructure and public facilities in a planned and orderly fashion that will accommodate the planned growth in East Otay Mesa while meeting applicable County standards.

Potential impacts to the following issues were determined not to be significant or less than significant after further evaluation: aesthetics; geology and soils; hydrology and water quality; land use and planning; utilities and service systems; and energy use and conservation. The following issues were determined not to be significant or have no impact during the Initial Study process: agriculture and forestry resources; mineral resources; population and housing; public services; and recreation. The environmental issue areas that were analyzed and determined to be less than significant as part of the SEIR process and Initial Study process are not discussed in this chapter.

The SEIR determined that the proposed Project would result in potentially significant impacts associated with: air quality, biological resources, cultural resources, GHG emissions, hazards and hazardous materials, noise, paleontological resources, and transportation and traffic. All significant impacts would be reduced to below significant levels with incorporation of mitigation measures presented in this SEIR, with the exception of air quality. Each of the alternatives addressed in this chapter were examined in order to determine the extent to which they would avoid or further minimize the significant impacts associated with the project.

The CEQA Guidelines require the evaluation of a No Project Alternative. The discussion of the No Project Alternative may proceed along two lines:

4.0 Alternatives to the Proposed Project

1. If the project is a development proposal, the No Project Alternative is the circumstance under which the project does not proceed.
2. When the project is the revision of an existing land use or regulatory plan, the No Project Alternative is the continuation of the existing plan.

In the case of the Project described in this SEIR, both types of No Project Alternatives apply and are discussed. The No Project/No Development alternative is analyzed as what would reasonably be expected to occur in the future, if the project is not approved and development under the existing Specific Plan designation is not carried forward. Because the Project represents a revision of an existing approved plan—in this case the East Otay Mesa Business Park Specific Plan—the No Project/Development Under Existing Specific Plan Designation Alternative is also addressed and analyzes the development that is permitted under the existing plan.

4.2 Previous Analysis of Alternatives

This SEIR supplements information and analyses contained in two previous EIRs: the 1994 East Otay Mesa Specific Plan EIR and the 2000 East Otay Mesa Specific Plan Sunroad Centrum SEIR. Under CEQA, the 2012 Sunroad Otay Tech Centre Addendum did not require an analysis of alternatives and is, therefore, omitted from this discussion. Both of the aforementioned EIRs included a discussion of project alternatives, which is summarized below.

1994 East Otay Mesa Specific Plan EIR

The 1994 EIR analyzed the potential environmental effects associated with the implementation of three alternatives. Those alternatives included: the “No Project Alternative,” the “Otay Subregional Plan Alternative,” and the “Environmentally Preferred Alternative.” The County determined that the alternatives addressed in the previous 1994 EIR are not applicable to the proposed Project because the Specific Plan has been approved which allows development of the Project site. Additionally, subsequent to approval of the East Otay Mesa Business Park Specific Plan, the County approved TM 5139, which allows grading of the Project site, with the exception of areas reserved as open space or for protection of sensitive vernal pool habitat. Thus, the alternatives evaluated in the 1994 EIR would no longer be applicable.

2000 East Otay Mesa Specific Plan Sunroad Centrum SEIR

The 2000 SEIR addressed an additional alternative not presented in the 1994 EIR: the Alternative Road Alignment Alternative. The Alternative Road Alignment Alternative addressed a project alternative that would move the alignment for Lone Star Road southward to reduce potential impacts associated with fragmenting the vernal pool complex and its watershed. This alternative was rejected because the original alignment for Lone Star Road had been selected to minimize impacts to biological resources and to meet the County’s standard for road design and safety. Furthermore,

4.0 Alternatives to the Proposed Project

mitigation measures were required for the Sunroad Centrum project that would fully mitigate impacts to vernal pools to below a level of significance. The Alternative Road Alignment Alternative would also reduce the amount of land available for industrial/commercial use, conflicting with the primary goal of the East Otay Mesa Business Park Specific Plan of encouraging job-creation opportunities and commercial development in the area. The loss of industrial/commercial lots would result in an indirect effect on the County, due to the loss of sales and property tax revenues. Additionally, the Alternative Road Alignment Alternative would have adverse effects on six property owners and Caltrans's infrastructure plans for the area and would require an amendment to the Specific Plan. The County determined that the 2000 SEIR adequately addressed the Alternative Road Alignment Alternative as it relates to the proposed Project.

4.3 Alternatives Considered but Rejected

4.3.1 Alternative Sites

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by putting the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

An effort was made to identify an alternative location for the Project. The selection criteria were developed to identify potential alternative project sites that are owned by the Project applicant or would be fairly easy to acquire and large enough to accommodate the proposed uses. When looking for the alternative sites, the following criteria were used:

- Alternative site had to be within the identified market area.
- Land had to be privately owned and of similar size to accommodate a mixed-use project.
- Alternative site had to feasibly accomplish most of the basic objectives of the project.

Although minimal development has occurred within the Specific Plan area to-date, many properties currently have project approvals in place and are ready to move forward. Therefore, those sites were eliminated from consideration as an alternative site.

Sunroad Enterprises, the umbrella affiliate Project applicant, owns another property in the general Project area; the property is generally south of Otay Mesa Road; west of the

4.0 Alternatives to the Proposed Project

SR-125 southbound off-ramp terminus at Otay Mesa Road; east of the existing Avenida Costa Azul unimproved, dedicated public right-of-way; and north of SR-905. However, that site encompasses only 51 acres and would not be of sufficient size to develop a mixed-use village that provides much needed housing in support of planned employment uses in Otay Mesa. Furthermore, this Alternative Site is within the City of San Diego and is identified as Industrial Employment in the City's General Plan and designated for Industrial uses in the Otay Mesa Community Plan. Zoning for the Alternative Site is regulated by the Otay Mesa Development District (Industrial Subdistrict) (OMDD-I) pursuant to the San Diego Municipal Code. The OMDD-I zone allows for development to include research services; general industrial; motor vehicles and equipment; construction sales and services; wholesaling, storage, and distribution; business support services; major utilities and services; and agricultural uses. Development of the Alternative Site as a mixed-use project would not be consistent with the City's General Plan and would require a Community Plan amendment and Rezone. Therefore, the Alternative Sites alternative has been rejected as infeasible and is eliminated from detailed consideration in this SEIR.

4.3.2 Reduced Development Footprint

As determined by this SEIR, the proposed Project would result in potentially significant impacts associated with: air quality, biological resources, cultural resources, GHG emissions, hazards and hazardous materials, noise, paleontological resources, and transportation and traffic. All significant impacts would be reduced to below significant levels with incorporation of mitigation measures presented in this SEIR, except for air quality. Significant environmental impacts associated with Project implementation are due to construction activities (such as air quality) and ground disturbance occurring as a result of grading (such as biological resources, cultural resources, and paleontological resources); are related to the intensity of land uses (such as GHG emissions, transportation and traffic, and noise); or are associated with proposing sensitive receptors (residential uses) in an area that has a potential for exposure to hazardous materials.

As stated above, CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. In order to substantially reduce or avoid impacts associated with hazards and hazardous materials that are identified in this SEIR, elimination of residential uses would be required. *The No Project/Development Under Existing Specific Plan Designation Alternative* addressed in Section 4.4.2, below, addresses an alternative that would avoid impacts associated with hazards and hazardous materials. To reduce impacts associated with the intensity of development proposed (such as air quality, GHG emissions, transportation and traffic, and noise), please see the discussion in Section 4.4.3.1, *Reduced Intensity Alternative A*; Section 4.4.3.2, *Reduced Intensity Alternative B*; and Section 4.4.3.3, *Reduced Intensity Alternative C*. Any development of the Project site would result in impacts to unknown subsurface resources, such as archeological and paleontological resources, due to the

4.0 Alternatives to the Proposed Project

need to grade the site for development. A Reduced Development Footprint alternative was considered to determine if impacts to sensitive biological resources could be further avoided or substantially reduced.

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would result in impacts to disturbed wetlands (0.11 acre) and non-native grassland (195.99 acres). In addition, the proposed Project would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl). Mitigation measures would be required for the proposed Project and would mitigate impacts to below a level of significance. The open space easement previously established as part of TM 5139 mitigates Project impacts to vernal pool habitat and other native habitat, as well as sensitive species associated with those habitats. Additionally, mitigation for impacts associated with the loss of non-native grassland has already been accomplished.

Consideration was given to modifying the development footprint to avoid areas where sensitive plant species occur or have been previously documented on the Project site; in particular, San Diego button-celery and variegated dudleya. Protection of these areas within the Project site was a focus of consideration for a Reduced Development Footprint alternative because these species require new mitigation beyond what was previously required for TM 5139 and mitigation that has already been accomplished. The Reduced Development Footprint alternative would create additional open space easements around areas where these sensitive plant species were documented on the Project site in previous surveys in order to avoid or substantially lessen impacts to the species. (See Figure 2.2-4, *Project Impacts*.) The additional open space easement areas could be connected to the existing easement protecting the vernal pools south of Lone Star Road; however, there would not be a connection to the large Open Space Easement north of Lone Star Road, as it would be bifurcated by the road. Lone Star Road is a General Plan Mobility Element Road, and construction of that roadway is a requirement for development within the East Otay Mesa Business Park Specific Plan.

Less of the Project site area would be graded and developed under the Reduced Development Footprint alternative, with areas within the newly created open space easement for protection of San Diego button-celery and variegated dudleya left in their current ungraded state. Product types within the development portions of the project could change to taller buildings or smaller residential units, with a greater amount of structured or underground parking to accommodate the same development intensity as the proposed Project and also account for the loss of development area.

In accordance with CEQA Guidelines Section 15126.6(c), *[t]he EIR should ... identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination ... Among the factors that may be used to eliminate*

4.0 Alternatives to the Proposed Project

alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. This alternative was considered but rejected for the reasons presented below.

When compared to the proposed Project, reducing the project footprint would reduce, but not avoid impacts to biological resources; mitigation measures required under the proposed Project would also be required under this alternative.

First, a Reduced Footprint Alternative does not necessarily avoid a significant environmental impact. Reducing the development footprint to place open space easements around areas where San Diego button-celery and variegated dudleya have been previously documented would not avoid or substantially lessen any of the significant impacts of the Project. While any project entitlement would require pre-grading surveys for San Diego button-celery and variegated dudleya, neither species has been seen on-site for more than a decade. Furthermore, since the last siting, the areas identified for these sensitive species have suffered a fire. There is insufficient information to support that increased open space easements as considered under a Reduced Development Footprint alternative would substantially reduce a significant impact, because there is no evidence the impact would actually occur with the unknown and unverified occurrence of these species. Pursuant to CEQA Guidelines Section 15126.6(f)(3), CEQA does not require that an EIR consider an alternative whose effect cannot be reasonably ascertained. Moreover, the Project has mitigated all impacts to biological resources to less than significant.

Second, the isolation of sensitive species is not considered the ideal method of mitigation for these species. Even with the Reduced Development Footprint, the Specific Plan and the General Plan identify the Project site for development. The easement areas would be isolated and surrounded by urban development. The isolation of these areas, surrounded by urban development and adjacent to a major roadway, without connectivity to a larger open space, would lessen the long-term viability for protecting these areas – particularly where the species have not been documented in recent history.

Therefore, the Reduced Development Footprint alternative has been rejected as infeasible and is eliminated from detailed consideration in this SEIR.

4.4 Alternatives to the Proposed Project

4.4.1 No Project/No Development Alternative

4.4.1.1 *No Project/No Development Alternative Description and Setting*

The No Project/No Development Alternative proposes to leave the Project area in its present condition, without Project development or new construction. The No Project/No Development Alternative is what would reasonably be expected to occur in the future if the Project is not approved and the existing Specific Plan and approved Tentative Map are not carried forward. Existing conditions for each environmental issue as described in Chapters 2.0 and 3.0 of this SEIR would remain.

4.4.1.2 *Comparison of the Effects of the No Project/No Development Alternative to the Significant Impacts Associated with the Proposed Project*

Air Quality

As described in Section 2.1, *Air Quality*, of this SEIR, emissions of VOCs associated with the proposed Project would exceed the County's screening-level thresholds for construction. The emissions are mainly attributable to application of architectural coatings and would occur for a short duration during construction. However, the Project would reduce construction emissions associated with VOC to the extent feasible by utilizing low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. There are no additional mitigation measures that would reduce VOC emissions to less than significant levels. Therefore, direct air quality impacts associated with construction would remain significant and unmitigated.

The Project's operational emissions would be associated with traffic accessing the Project and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would exceed the screening-level thresholds for VOCs, CO, PM₁₀, and PM_{2.5} and would result in significant direct and cumulative air quality impacts. Project design features would reduce VOC, CO, PM₁₀, and PM_{2.5} emissions to the extent feasible, including providing a mix of uses in the Otay Mesa area that reduces VMT overall within the region; use of natural gas fireplaces; and providing on-site residential, employment, and retail uses. However, VOC emissions from consumer products and CO, PM₁₀, and PM_{2.5} emissions from on-road travel cannot be controlled by the applicant and are unmitigable.

The No Project/No Development Alternative would not result in any development on the Project site. Therefore, air quality impacts associated with construction and operations

4.0 Alternatives to the Proposed Project

(vehicle trips and emissions) would be avoided under this alternative. Compared to the proposed Project, this alternative would result in less air quality impacts.

Biological Resources

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would result in impacts to disturbed wetlands (0.11 acre) and non-native grassland (195.99 acres). In addition, the proposed Project would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl). However, mitigation measures required for TM 5139 would be required for the proposed Project and would mitigate impacts to below a level of significance.

Under the No Project/No Development Alternative, biological resource conditions on the site would remain as described under Section 2.2 of this EIR. No new development would occur on the Project site. Because no new development would occur on the Project site, implementation of the No Project/No Development Alternative would avoid all potentially significant impacts to biological resources associated with the proposed Project. Compared to the proposed Project, the No Project/No Development Alternative would avoid all identified environmental impacts.

Cultural Resources

As described in Section 2.3, *Cultural Resources*, of this SEIR, two of the archaeological sites (CA-SDI-5352 and CA-SDI-12730) identified in the 1994 EIR and 2000 SEIR were determined to be located within the Project site. Further testing of CA-SDI-5352 determined that site to be not significant; CA-SDI-12730 was identified as significant. As required in the 2000 SEIR, CA-SDI-12730 is located within an existing open space easement associated with TM 5139 and is, therefore, adequately protected from future impacts. Mitigation measures would be required involving monitoring grading operations in the event there are undiscovered buried significant resources associated with CA-SDI-5352. The proposed Project would be required to implement previously identified mitigation measures, and all potential impacts would be mitigated to below a level of significance.

Because no grading would take place under the No Project/No Development Alternative, unknown subsurface cultural resources that could exist within the Project site would not be disturbed. Compared to the proposed Project, this alternative would avoid the potential for impacts to unknown cultural resources.

Greenhouse Gas Emissions

As described in Section 2.4, *Greenhouse Gas Emissions*, of this SEIR, the proposed Project would result in significant impacts associated with GHG emissions. The

4.0 Alternatives to the Proposed Project

proposed Project would generate 3.53 metric tons of CO₂ equivalent (CO₂E) emissions per service population, which exceeds the 2028 efficiency metric of 3.0. However, the Project would implement mitigation measures to reduce GHG emissions to meet the 2028 efficiency metric of 3.0 metric tons of CO₂e per service population. With the implementation of mitigation measures, impacts would be less than significant.

The No Project/No Development Alternative would not result in any development on the Project site. Therefore, no GHG emissions would be generated. Impacts associated with GHG emissions would be less under the No Project/No Development alternative when compared to the proposed Project.

Hazards and Hazardous Materials

As described in Section 2.5, *Hazards and Hazardous Materials*, of this SEIR, the proposed Project would increase the potential for development in areas of historic or current agriculture uses. The residential land uses that would be allowed under the proposed Project would have the potential to introduce human populations into or near areas with a history of contamination from agricultural use. Parcels identified on the proposed Land Use Plan (Figure 1-3) as A, C, and D could contain toxaphene concentrations above regional screening levels. Therefore, contaminated soil, if encountered, could pose a potentially significant impact to occupants and/or visitors of the site. However, the Project would implement mitigation measures to reduce impacts related to hazards to ensure adequate protection of human health and environment. With implementation of mitigation measures, impacts would be less than significant.

The No Project/No Development Alternative would not result in development of the Project site and, therefore, would not have the potential to expose occupants and/or visitors to contaminated soils associated with previous agricultural uses on the Project site. Impacts associated with hazardous materials would be reduced under this alternative when compared to the proposed Project.

Noise

As described in Section 2.6, *Noise*, of this SEIR, the proposed Project would generate additional traffic volumes which may result in traffic noise levels that could exceed 60 dBA CNEL for on-site noise sensitive land uses. Mitigation measures would be implemented to reduce significant noise impacts to below a level of significance.

The No Project/No Development Alternative would not result in any new uses that would increase noise in the Project vicinity. Ambient noise conditions would remain consistent with those identified in Section 2.6. Compared to the proposed Project, this alternative would avoid significant noise impacts, because no noise sensitive land uses would occur on the Project site.

4.0 Alternatives to the Proposed Project

Paleontological Resources

As described in Section 2.7, *Paleontological Resources*, of this SEIR, the Project would result in 1,350,000 cubic yards of cut, which may occur in part within areas of Otay Formation occurring on the Project site. The upper sandstone/mudstone member of the Otay Formation is considered to have “high paleontological resource sensitivity”, and the middle gritstone and lower fanglomerate members of the Otay Formation are considered to have “moderate paleontological resource sensitivity.” This volume of excavation would exceed the County’s threshold of 2,500 cubic yards in areas of high or moderate paleontological sensitivity. Therefore, implementation of the proposed Project could result in potentially significant impacts to paleontological resources, requiring monitoring of excavation activities during grading with salvage, identification, and curation of unearthened fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

The No Project/No Development Alternative would not result in any grading on the Project site. Therefore, potentially significant impacts to paleontological resources would not occur. Impacts associated with paleontological resources would be less under this alternative when compared to the proposed Project.

Transportation/Traffic

As described in Section 2.8, *Transportation and Traffic*, of this SEIR, the proposed Project is estimated to generate 34,124 ADT at full build-out, with 2,785 trips in the AM peak hour and 3,474 trips in the PM peak hour. (See Table 2.8-7, *Project Trip Generation*.) The proposed Project would result in significant direct and cumulative impacts to roadway segments and intersections in the Project area. Additionally, the proposed Project would result in significant impacts at intersections located within the City of San Diego. However, mitigation measures would be incorporated into the Project to reduce significant impacts to below a level of significance.

The No Project/No Development Alternative would not involve any new uses in the Project area. Therefore, this alternative would not generate any new vehicle trips. Compared to the Project, implementation of this alternative would avoid the direct and cumulative impacts to study area intersections and roadway segments. However, under this alternative, no new roadways would be constructed, including planned circulation roadways identified in the East Otay Mesa Business Park Specific Plan and the General Plan.

4.4.1.3 Conclusions

The No Project/No Development Alternative would result in no physical changes to the environment and would avoid all significant impacts associated with the proposed Project. No development would occur on the Project site.

4.0 Alternatives to the Proposed Project

This alternative would not meet any of the Project objectives as described in Section 4.1. It would not promote development of a well-organized international industrial and business district in East Otay Mesa to attract and accommodate forecasted growth (Project Objective 1). While no development would occur on the Project site under this alternative, Open Space easements would not be put in place to preserve environmental resources (Project Objective 2). This alternative would not implement the General Plan vision of providing a diversity of choices by creating a Village Core within East Otay Mesa that contains a mix of housing types located near retail businesses, employment, and recreational areas (Project Objective 3). This alternative would not afford the community with the benefit of establishing a land use pattern that includes a mix of densities and land uses in a manner that can minimize automobile trips and facilitate walking and bicycling (Project Objective 4) and would not provide convenient housing opportunities for the adjacent industrial and business district employees in addition to supporting commercial/retail and employment uses to reduce vehicular dependence (Project Objective 5). While traffic impacts would not occur under this alternative, this alternative would also not allow for a multi-modal transportation system consisting of streets and transit networks adequate to serve sub-regional transportation needs at an acceptable level of service (Project Objective 7). Infrastructure and public facilities necessary to accommodate the growth in East Otay Mesa while meeting applicable County standards would not be constructed (Project Objective 8).

4.4.2 No Project/Development Under Existing Specific Plan Designation Alternative

4.4.2.1 *No Project/Development Under Existing Specific Plan Designation Alternative Description and Setting*

The No Project/Development Under Existing Specific Plan Designation Alternative would develop the Project site in accordance with the existing approved Specific Plan and Tentative Map. The County of San Diego Board of Supervisors approved the East Otay Mesa Specific Plan in 1994. In 2000, TM 5139 was approved for the Project site as part of the Sunroad Centrum project. The approved Specific Plan provides for development of the Project site with Technology Business Park and Commercial uses. The approved Tentative Map would allow for grading of the Project site to accommodate the land uses shown in the existing East Otay Mesa Business Specific Plan. The Sunroad Centrum project would develop the Project site as 74 industrial lots on approximately 130 acres, 22 commercial lots on 34.4 acres, and 51.7 acres of open space. The 51.7 acres of open space would include an area of approximately 0.25 acre consisting of an isolated vernal pool that would be preserved as permanent open space within one of the commercial/industrial lots located near the southeast corner of the proposed intersection of Lone Star Road and Sanyo Avenue. An additional area of approximately 51.5 acres, consisting of a vernal pool complex and sensitive biological habitat, would be preserved through an open space easement, located north of Lone Star Road. The 2000 SEIR evaluates impacts associated with the Sunroad Centrum

4.0 Alternatives to the Proposed Project

project. Those impacts have been summarized in various subsections within Chapters 2.0 and 3.0 of this SEIR.

4.4.2.2 Comparison of the Effects of the No Project/ Development Under Existing Specific Plan Designation Alternative to the Proposed Project

Air Quality

As described in Section 2.1, *Air Quality*, of this SEIR, emissions of VOCs associated with the proposed Project would exceed the County's screening-level thresholds for construction. The emissions are mainly attributable to application of architectural coatings and would occur on short duration during construction. The Project would reduce construction emissions associated with VOC to the extent feasible by utilizing low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. There are no additional mitigation measures that would reduce VOC emissions to less than significant levels. Therefore, direct air quality impacts associated with construction would remain significant and unmitigated.

The Project's operational emissions would be associated with traffic accessing the Project and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would exceed the screening-level thresholds for VOCs, CO, PM₁₀, and PM_{2.5} and would result in significant direct and cumulative air quality impacts. Project design features would reduce VOC, CO, PM₁₀, and PM_{2.5} emissions to the extent feasible, including providing a mix of uses in the Otay Mesa area that reduces VMT overall within the region; use of natural gas fireplaces; and providing on-site residential, employment, and retail uses. However, VOC emissions from consumer products and CO, PM₁₀, and PM_{2.5} emissions from on-road travel cannot be controlled by the applicant and are unmitigable.

The No Project/Development Under Existing Specific Plan Designation Alternative would develop the Project site with technology business park and commercial uses. Air quality impacts would occur associated with grading, construction, and operations, as described in the 2000 SEIR. As shown in Table 4-1, *No Project/ Development Under Existing Specific Plan Designation Alternative – Total Operation Emissions*, this alternative would result in exceeding the County's screening-level thresholds for VOC and PM₁₀ but not CO. Therefore, air quality impacts would be reduced under this alternative. Mitigation measures presented in the 2000 SEIR would reduce direct impacts to below a level of significance, but would not be able to reduce cumulative impacts to below a level of significance. Consistent with air quality impacts associated with the proposed Project as evaluated in this SEIR, cumulative impacts under this alternative would remain significant and unmitigated.

4.0 Alternatives to the Proposed Project

Biological Resources

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would remove non-native and native habitat, including disturbed wetlands (0.83 acre), non-native riparian (0.51 acre), native grassland (1.65 acres), and non-native grassland (201.79 acres). The area of impact would be the same as that associated with approved TM 5139. Therefore, mitigation measures required for TM 5139 would be required for the proposed Project and would mitigate impacts to below a level of significance. Additionally, the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place under this alternative. When compared to the proposed Project, impacts to biological resources associated with the No Project/Development Under Existing Specific Plan Designation Alternative would be the same as those associated with the proposed Project and would require the same mitigation measures.

Cultural Resources

As described in Section 2.3, *Cultural Resources*, of this SEIR, two of the archaeological sites (CA-SDI-5352 and CA-SDI-12730) identified in the 1994 EIR and 2000 SEIR were determined to be located within the Project site. Further testing of CA-SDI-5352 determined that site to be not significant; CA-SDI-12730 was identified as significant. As required in the 2000 SEIR, CA-SDI-12730 is located within an existing open space easement associated with TM 5139 and is, therefore, adequately protected from future impacts. Mitigation measures would be required involving monitoring grading operations in the event there are undiscovered buried significant resources associated with CA-SDI-5352. The proposed Project would be required to implement previously identified mitigation measures, and all potential impacts would be mitigated to below a level of significance.

The area graded for the No Project/Development Under Existing Specific Plan Designation Alternative would be the same as the proposed Project. Therefore, compared to the proposed Project, the potential to impact unknown subsurface resources would be the same.

Greenhouse Gas Emissions

As described in Section 2.4, *Greenhouse Gas Emissions*, of this SEIR, the proposed Project would result in significant impacts associated with GHG emissions. The proposed Project would generate 3.53 metric tons of CO₂E emissions per service population, which exceeds the 2028 efficiency metric of 3.0. However, the Project would implement mitigation measures to reduce GHG emissions to meet the 2028 efficiency metric of 3.0 metric tons of CO₂e per service population, and impacts would be less than significant.

The No Project/Development Under Specific Plan Designation Alternative would result in greater GHG emissions than the proposed Project. As shown in Table 4-2, *Summary*

4.0 Alternatives to the Proposed Project

of No Project/Development Under Existing Specific Plan Designation Alternative GHG Emissions, this alternative would generate 6.73 metric tons of CO₂E emissions per service population, which substantially exceeds the efficiency metric of 3.0 and which would be greater than what the proposed Project would generate. Therefore, this alternative would result in greater impacts associated with GHG emissions when compared to the proposed Project.

Hazards and Hazardous Materials

As described in Section 2.5, *Hazards and Hazardous Materials*, of this SEIR, the proposed Project would increase the potential for development on sites such as areas of historic or current agriculture uses. The residential land uses that would be allowed under the proposed Project would have the potential to introduce human populations into or near areas with a history of contamination from agricultural use. Parcels identified on the proposed Land Use Plan (Figure 1-3) as A, C, and D could contain toxaphene concentrations above regional screening levels. Therefore, contaminated soil, if encountered, could pose a potentially significant impact to occupants and/or visitors of the site. Mitigation measures would be required as part of the proposed Project to ensure adequate protection of human health and environment, reducing impacts to a level less than significant.

The No Project/Development Under Existing Specific Plan Designation Alternative would not introduce residential uses to the Project site, as TM 5139 was approved for Technology Business Park and Commercial uses and did not introduce sensitive receptors to the Project site. Thus, the potential to expose occupants and/or visitors to contaminated soils associated with previous agricultural uses on the Project site would not occur. Impacts associated with hazardous materials would be reduced under this alternative when compared to the proposed Project.

Noise

As described in Section 2.6, *Noise*, of this SEIR, the proposed Project would generate additional traffic volumes which may result in traffic noise levels that could exceed 60 dBA CNEL for on-site noise sensitive land uses. However, mitigation measures would be implemented to reduce significant noise impacts to below a level of significance.

The No Project/Development Under Existing Specific Plan Designation Alternative would not result in the introduction of noise sensitive uses on the Project site. Increased noise levels would be associated with vehicular traffic on roadways proposed as part of the No Project/Development Under Existing Specific Plan Designation Alternative. However, noise levels would not result in exceeding noise standards for technology business park and commercial land uses. Compared to the proposed Project, this alternative would result in reduced noise impacts.

4.0 Alternatives to the Proposed Project

Paleontological Resources

As describe in Section 2.7, *Paleontological Resources*, of this SEIR, the Project would result in 1,350,000 cubic yards of cut, which may occur in part within areas of Otay Formation occurring on the Project site. The upper sandstone/mudstone member of the Otay Formation is considered to have “high paleontological resource sensitivity”, and the middle gritstone and lower fanglomerate members of the Otay Formation are considered to have “moderate paleontological resource sensitivity.” This volume of excavation would exceed the County’s threshold of 2,500 cubic yards in areas of high or moderate paleontological sensitivity. Therefore, implementation of the proposed Project could result in potentially significant impacts to paleontological resources, requiring mitigation measures such as monitoring of excavation activities during grading with salvage, identification, and curation of unearthed fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

The No Project/Development Under Existing Specific Plan Designation Alternative would result in grading the Project site in a manner similar to the proposed Project, and impacts to paleontological resources could result. Therefore, this alternative would require the same mitigation measures as the proposed Project. Impacts associated with paleontological resources would be the same under this alternative when compared to the proposed Project.

Transportation/Traffic

As described in Section 2.8, *Transportation and Traffic*, of this SEIR, the proposed Project is estimated to generate 34,124 ADT at full build-out, with 2,785 trips in the AM peak hour and 3,474 trips in the PM peak hour. (See Table 2.8-7, *Project Trip Generation*.) The proposed Project would result in significant direct and cumulative impacts to roadway segments and intersections in the Project area. Additionally, the proposed Project would result in significant impacts at intersections located within the City of San Diego. However, mitigation measures would be incorporated into the Project to reduce significant impacts to below a level of significance.

As determined in the 2000 SEIR, development of the Project site in accordance with the Sunroad Centrum project would result in significant traffic impacts. Mitigation measures were required to reduce impacts to below a level of significance. Because the No Project/Development Under Existing Specific Plan Designation Alternative would develop the Project site as approved by TM 5139 and anticipated in the 2000 SEIR, significant traffic impacts would occur under this alternative requiring mitigation measures. Table 4-3, *Comparison of Traffic Impacts – Project Alternatives and Proposed Project*, provides a comparison of the traffic impacts that would occur under the No Project/Development Under Existing Specific Plan Designation alternative with those associated with the proposed Project.

4.0 Alternatives to the Proposed Project

As shown in Table 4-3, two segment impacts and three intersection impacts associated with the proposed Project would be avoided under this alternative. However, the No Project/Development Under Existing Specific Plan Designation Alternative would result in six additional segment impacts one additional intersection impact that would not occur with the proposed Project. Therefore, this alternative would result in greater impacts when compared to the proposed Project.

4.4.2.3 Conclusions

The No Project/ Development Under Existing Specific Plan Designation Alternative would develop the Project site in accordance with the existing approved Specific Plan and the Sunroad Centrum Tentative Map (TM 5139), which allows for Technology Business Park and Commercial uses. Circulation network roads and infrastructure would be constructed with this alternative. Areas of open space would be preserved under this alternative, providing for the protection of sensitive biological resources.

The No Project/ Development Under Existing Specific Plan Designation Alternative would result in less impact to air quality when compared to the proposed Project, due to a reduction in CO emissions, but would not avoid direct and cumulative impacts associated with VOC and PM₁₀. This alternative would result in greater impacts associated with GHG emissions and traffic. Impacts associated with all other environmental issue areas would be the same as those that would occur with the proposed Project.

The No Project/ Development Under Existing Specific Plan Designation Alternative would meet three of the eight Project objectives as described in Section 4.1. Specifically, this alternative would promote a well-organized international industrial and business district in East Otay Mesa to attract and accommodate forecasted growth (Project Objective 1). It would also promote the conservation of open space to preserve environmental resources (Project Objective 2). This alternative would provide for a transportation system that would serve sub-regional transportation needs at an acceptable level of service; however, it would not provide for the multi-modal transportation system and transit network associated with the proposed Project (Project Objective 6). Like the proposed Project, this alternative could be designed in a manner that promotes well-designed infrastructure, buildings and landscaping, both in the public and private realms; however, this alternative would not create a distinct urban image and establish a unique sense of identity for East Otay Mesa (Project Objective 7).

The No Project/ Development Under Existing Specific Plan Designation Alternative would not implement the General Plan vision of providing a diversity of choices by creating a Village Core within East Otay Mesa that contains a mix of housing types located near retail businesses, employment, and recreational areas (Project Objective 3). Because land uses developed under this alternative would not include residential uses, this alternative would not establish a land use pattern with a mix of densities and land uses that will minimize automobile trips, support walking and bicycling, encourage participation in recreational activities, and invigorate the economic health of businesses

4.0 Alternatives to the Proposed Project

(Project Objective 4). Additionally, this alternative would not locate housing proximate to adjacent industrial and business district employees or in areas that can support commercial/retail and employment uses to reduce vehicular dependence (Project Objective 5).

4.4.3 Reduced Development Intensity Alternatives

As evaluated in this SEIR and summarized in Subsection 4.1, the proposed Project would result in significant impacts associated with air quality, biological resources, cultural resources, GHG emissions, hazards and hazardous materials, noise, paleontological resources, and traffic/transportation. Impacts associated with biological, cultural, and paleontological resources would occur with any development of the Project site. While impacts to these resources could potentially be reduced under different development intensities, avoidance or substantial reduction of biological, cultural, and paleontological resources impacts could only occur under the No Project/No Development Alternative discussed in Subsection 4.4.1. Impacts associated with hazards and hazardous materials, as well as noise, occur when residential uses are introduced (as is the case with the proposed Project). However, impacts to hazards and hazardous materials, as well as noise, would be avoided under the No Project/No Development Alternative, as well as the No Project/Development Under Existing Specific Plan Designation Alternative discussed in Subsection 4.4.2.

In order to provide the decision makers with a full range of reasonable alternatives for consideration, Reduced Development Intensity Alternatives were evaluated in order to determine if reducing the Project's proposed intensity of development while still attaining most of the Project's objectives would reduce and/or avoid impacts associated with the Project. Table 4-4, *Comparison of Reduced Development Intensity Alternatives and the Proposed Project*, provides a summary of the land uses and development intensities associated with the Reduced Development Intensity Alternatives compared with the proposed Project. An evaluation of each Reduced Development Intensity Alternative is provided in this section.

4.4.3.1 Reduced Development Intensity Alternative A

Reduced Development Intensity Alternative A Description and Setting

Reduced Development Intensity Alternative A would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Residential development (up to 2,000 units) would occur within the Mixed Use planning areas identified for the proposed Project (Planning Areas A, B, C, and D shown on Figure 1-3, *specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*). Approximately 10,000 square feet of neighborhood commercial uses would occur in conjunction with the residential land uses to provide support retail services and

4.0 Alternatives to the Proposed Project

amenities for future residents and visitors to the site. Planning Area E would develop with technology business park uses at the same intensity as the proposed Project (7.8 acres, approximately 93,600 square feet of technology business park uses).

Development of the Project site under this alternative would be subject to the same development regulations and design standards as are presented in the EOMSP Amendment for the proposed Project; however, the amount of park space would be reduced to be commensurate with the anticipated population associated with the reduction in density associated with this alternative. Additionally, the Specific Plan Amendment proposed by the Project would need to be altered to reflect the reduction in residential units and reduction in commercial and employment uses square footages. This alternative would be served by the same network and street alignments as the proposed Project (see Figure 1-3, *Specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*), and it is assumed that street classifications and cross-sections would remain the same. The Project site would be graded in the same manner as proposed by the TM for the Project, resulting in approximately 1,350,000 cubic yards of balanced earthwork on the Project site. Like the proposed Project, approximately 51.3 acres located north of Lone Star Road would be preserved as open space.

Comparison of the Effects of the Reduced Development Intensity Alternative A to the Proposed Project

Air Quality

As described in Section 2.1, *Air Quality*, of this SEIR, emissions of VOCs associated with the proposed Project would exceed the County's screening-level thresholds for construction. The emissions are mainly attributable to application of architectural coatings and would occur on short duration during construction. The Project would reduce construction emissions associated with VOC to the extent feasible by utilizing low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. There are no additional mitigation measures that would reduce VOC emissions to less than significant levels. Therefore, direct air quality impacts associated with construction would remain significant and unmitigated.

The Project's operational emissions would be associated with traffic accessing the Project and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would exceed the screening-level thresholds for VOCs, CO, PM₁₀, and PM_{2.5} and would result in significant direct and cumulative air quality impacts. Project design features would reduce VOC, CO, PM₁₀, and PM_{2.5} emissions to the extent feasible, including providing a mix of uses in the Otay Mesa area that reduces VMT overall within the region; use of natural gas fireplaces; and providing on-site residential, employment, and retail uses. However, VOC emissions from consumer products and CO, PM₁₀, and PM_{2.5} emissions from on-road travel cannot be controlled by the applicant and are unmitigable.

4.0 Alternatives to the Proposed Project

The Reduced Development Intensity Alternative A would develop the Project site in a similar manner as the proposed Project but at a reduced intensity. Air quality impacts would occur associated with grading, construction, and operations, albeit to a lesser extent due to the reduction in development intensity and traffic associated with this alternative. Table 4-5, *Reduced Development Intensity Alternative A – Total Operational Emissions*, provides a summary of air quality emissions associated with Reduced Development Intensity Alternative A. Emissions associated with Reduced Development Intensity Alternative A would exceed the screening-level threshold for PM₁₀, but not VOCs and CO. Therefore, when compared to the proposed Project, air quality impacts would be reduced under this alternative. Mitigation measures as presented in this SEIR would be required and would reduce direct impacts to below a level of significance, but would not be able to reduce cumulative impacts to below a level of significance. Cumulative impacts would remain significant and unmitigated.

Biological Resources

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would result in removing non-native and native habitat, including disturbed wetlands (0.11 acre), and non-native grassland (195.99 acres). In addition, the proposed Project would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl). However, mitigation measures required for the proposed Project would mitigate impacts to below a level of significance; the open space easement established as part of TM 5139 to mitigate for project impacts and protect vernal pool habitat and other native habitat would remain in place as a part of the proposed Project.

Impacts to biological resources associated with the Reduced Development Intensity Alternative A would be the same as those associated with the proposed Project, because the same development area would be graded. Therefore, the Reduced Development Intensity Alternative A would require the same mitigation measures as the proposed Project. Additionally, the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place under this alternative.

Cultural Resources

As described in Section 2.3, *Cultural Resources*, of this SEIR, two of the archaeological sites (CA-SDI-5352 and CA-SDI-12730) identified in the 1994 EIR and 2000 SEIR were determined to be located within the Project site. Further testing of CA-SDI-5352 determined that site to be not significant; CA-SDI-12730 was identified as significant. As required in the 2000 SEIR, CA-SDI-12730 is located within an existing open space easement associated with TM 5139 and is, therefore, adequately protected from future impacts. Mitigation measures would be required involving monitoring grading operations

4.0 Alternatives to the Proposed Project

in the event there are undiscovered buried significant resources associated with CA-SDI-5352. The proposed Project would be required to implement previously identified mitigation measures, and all potential impacts would be mitigated to below a level of significance.

The area graded for the Reduced Development Intensity Alternative A would be the same as the proposed Project. Therefore, compared to the proposed Project, the potential to impact unknown subsurface resources would be the same, and the same mitigation measures would be required.

Greenhouse Gas Emissions

As described in Section 2.4, *Greenhouse Gas Emissions*, of this SEIR, the proposed Project would result in significant impacts associated with GHG emissions. The proposed Project would generate 3.53 metric tons of CO₂e emissions per service population, which exceeds the 2028 efficiency metric of 3.0. However, the Project would implement mitigation measures to reduce GHG emissions to meet the 2028 efficiency metric of 3.0 metric tons of CO₂e per service population, and impacts would be less than significant.

Since residential, commercial and employment uses would be reduced under the Reduced Development Intensity Alternative B, less traffic would be generated under this alternative. Although the Reduced Development Intensity Alternative A would generate less traffic than the proposed Project and would provide a mixed-use project directed at providing mobility options and reducing use of the private automobile, this alternative would increase GHG emissions when compared to the proposed Project. As shown in Table 4-6, *Summary of Reduced Development Intensity Alternative A Estimated Greenhouse Gas Emissions*, the Reduced Development Intensity Alternative A would generate 3.2 metric tons of CO₂e emissions per service population, which exceeds the efficiency metric of 3.0 and which would be greater than what the proposed Project would generate. The efficiency of a project considers the amount of GHG emissions, the reduction in VMT attributable to the mix of uses, and the service population. The efficiency metric is calculated based on Statewide emissions from land use sector divided by Statewide service population for 2020 and extrapolated out to 2028. While reducing the number of residential units reduces trips, reducing residential units changes the land use index calculation and reduces the service population of the project. Because the project's efficiency is defined as the GHG emissions divided by the service population, a smaller service population increases the metric. Due to the land use mix associated with this alternative, the amount of GHG emissions, and the VMT, this alternative would exceed the efficiency metric and generate more CO₂e emissions per service population than the proposed Project. Therefore, this alternative would result in greater impacts associated with GHG emissions than the proposed Project.

4.0 Alternatives to the Proposed Project

Hazards and Hazardous Materials

As described in Section 2.5, *Hazards and Hazardous Materials*, of the SEIR, the proposed Project would increase the potential for development on sites such as areas of historic or current agriculture uses. The residential land uses that would be allowed under the proposed Project would have the potential to introduce human populations into or near areas with a history of contamination from agricultural use. Parcels identified on the proposed Land Use Plan (Figure 1-3) as A, C, and D could contain toxaphene concentrations above regional screening levels. Therefore, contaminated soil, if encountered, could pose a potentially significant impact to occupants and/or visitors of the site. Mitigation measures would be required as part of the proposed Project to ensure adequate protection of human health and environment, reducing impacts to a level less than significant.

Like the proposed Project, the Reduced Development Intensity Alternative A would introduce residential uses to the Project site. Thus, the potential to expose occupants and/or visitors to contaminated soils associated with previous agricultural uses on the Project site would be the same as with the proposed Project, and impacts associated with hazardous materials would be the same.

Noise

As described in Section 2.6, *Noise*, of this SEIR, the proposed Project would generate additional traffic volumes which may result in traffic noise levels that could exceed 60 dBA CNEL for on-site noise sensitive land uses. However, mitigation measures would be implemented to reduce significant noise impacts to below a level of significance.

The Reduced Development Intensity Alternative A would also introduce noise sensitive uses on the Project site, as well as increased noise levels associated with vehicular traffic on roadways proposed as part of the Reduced Intensity Development Alternative A. Because this alternative would result in a reduction of residential, commercial and employment uses, it would result in a reduction in traffic. Compared to the proposed Project, this alternative would result in similar but reduced noise impacts, due to the reduction in traffic associated with this alternative. However, like the proposed Project, noise levels could exceed noise County noise standards for residential uses. Mitigation measures like those associated with the proposed Project would be required where residential uses are located proximate to heavily travelled roadways.

Paleontological Resources

As described in Section 2.7, *Paleontological Resources*, of this SEIR, the Project would result in 1,350,000 cubic yards of cut, which may occur in part within areas of Otay Formation occurring on the Project site. The upper sandstone/mudstone member of the Otay Formation is considered to have “high paleontological resource sensitivity”, and the middle gritstone and lower fanglomerate members of the Otay Formation are considered to have “moderate paleontological resource sensitivity.” This volume of

4.0 Alternatives to the Proposed Project

excavation would exceed the County's threshold of 2,500 cubic yards in areas of high or moderate paleontological sensitivity. Therefore, implementation of the proposed Project could result in potentially significant impacts to paleontological resources, requiring mitigation measures, such as monitoring of excavation activities during grading with salvage, identification, and curation of unearthened fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

The Reduced Development Intensity Alternative A would result in grading the Project site within the same footprint and in a manner similar to the proposed Project, and impacts to paleontological resources could result. Therefore, this alternative would require the same mitigation measures as the proposed Project. Impacts associated with paleontological resources would be the same as the proposed Project under this alternative.

Transportation/Traffic

As described in Section 2.8, *Transportation and Traffic*, of this SEIR, the proposed Project is estimated to generate 34,124 ADT at full build-out, with 2,785 trips in the AM peak hour and 3,474 trips in the PM peak hour. (See Table 2.8-7, *Project Trip Generation*.) The proposed Project would result in significant direct and cumulative impacts to roadway segments and intersections in the Project area. Additionally, the proposed Project would result in significant impacts at intersections located within the City of San Diego. However, mitigation measures would be incorporated into the Project to reduce significant impacts to below a level of significance.

Reduced Development Intensity Alternative A would result in a reduction in traffic associated with the proposed Project. Table 4-7, *Reduced Development Intensity Alternative A Project Trip Generation*, shows the traffic that would be associated with the Reduced Development Intensity Alternative A. As shown in Table 4-7, this alternative would result in 18,018 less overall trips, with 1,481 less trips in the AM peak hour and 1,822 less trips in the PM hour. Table 4-3, *Comparison of Traffic Impacts – Project Alternatives and Proposed Project*, provides a comparison of the traffic impacts that would occur under the Reduced Development Intensity Alternative A with those associated with the proposed Project. As shown in Table 4-3, while this alternative would reduce traffic volumes, it would not avoid significant direct and cumulative traffic impacts. However, mitigation measures similar to those required for the Project would also be required under this alternative.

Conclusions

The Reduced Development Intensity Alternative A would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Up to 2,000 units, approximately 10,000 square feet of neighborhood commercial uses, and approximately 93,600 square feet of technology business park uses would occur under this alternative.

4.0 Alternatives to the Proposed Project

The Reduced Development Intensity Alternative A would result in less impacts to air quality when compared to the proposed Project, due to a reduction in VOC and CO emissions, but would not avoid direct and cumulative impacts associated with PM₁₀. Less traffic would be generated under this alternative; and this alternative would result in less noise impacts, because less traffic would be generated. This alternative would result in greater impacts associated with GHG emissions. Impacts associated with all other environmental issue areas would be the same as those that would occur with the proposed Project.

The Reduced Development Intensity Alternative A has the ability to meet most of the Project objectives, including promoting a well-organized international industrial and business district in East Otay Mesa (Project Objective 1); promoting the conservation of open space to preserve environmental resources (Project Objective 2); implementing the General Plan vision by creating a Village Core within East Otay Mesa that contains a mix of housing types located near retail businesses, employment, and recreational areas (Project Objective 3); providing convenient housing opportunities for the adjacent industrial and business district employees in addition to supporting commercial/retail and employment uses to reduce vehicular dependence (Project Objective 5); providing a multi-modal transportation system to serve sub-regional transportation needs at an acceptable level of service (Project Objective 6); promoting well-designed infrastructure, buildings and landscaping, both in the public and private realms, that creates a distinct urban image and establish a unique sense of identity for East Otay Mesa (Project Objective 7); and providing infrastructure and public facilities in a planned and orderly fashion that will accommodate the planned growth in East Otay Mesa while meeting applicable County standards (Project Objective 8).

Because this alternative would include the reduction of residential units, as well as employment and commercial uses, its ability to provide a mix of densities and land uses that will minimize automobile trips and support walking and bicycling (Project Objective 4) is also reduced. This alternative would not accommodate forecasted growth to the extent that the proposed Project would and less job opportunities would be created for this area of Otay Mesa.

4.4.3.2 Reduced Development Intensity Alternative B

Reduced Development Intensity Alternative B Description and Setting

Reduced Development Intensity Alternative B would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Residential development (up to 2,000 units) would occur within the Mixed Use planning areas identified for the proposed Project (Planning Areas A, B, C, and D shown on Figure 1-3, *specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*). Approximately 10,000 square feet of neighborhood commercial uses would occur in conjunction with the residential land uses to provide support retail services and

4.0 Alternatives to the Proposed Project

amenities for future residents and visitors to the site. Planning Area E would develop with technology business park uses at a lower intensity than the proposed Project (7.8 acres, approximately 200,000 square feet of technology business park uses).

Development of the Project site under this alternative would be subject to the same development regulations and design standards as are presented in the EOMSP Amendment for the proposed Project; however, the amount of park space would be reduced to be commensurate with the anticipated population associated with the reduction in density associated with this alternative. Additionally, the Specific Plan Amendment proposed by the Project would need to be altered to reflect the reduction in residential units and reduction in commercial and employment uses square footages. This alternative would be served by the same network and street alignments as the proposed Project (see Figure 1-3, *Specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*), and it is assumed that street classifications and cross-sections would remain the same. The Project site would be graded in the same manner as proposed by the TM for the Project, resulting in approximately 1,350,000 cubic yards of balanced earthwork on the Project site. Like the proposed Project, approximately 51.3 acres located north of Lone Star Road would be preserved as open space.

Comparison of the Effects of the Reduced Development Intensity Alternative B to the Proposed Project

Air Quality

As described in Section 2.1, *Air Quality*, of this SEIR, emissions of VOCs associated with the proposed Project would exceed the County's screening-level thresholds for construction. The emissions are mainly attributable to application of architectural coatings and would occur on short duration during construction. The Project would reduce construction emissions associated with VOC to the extent feasible by utilizing low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. There are no additional mitigation measures that would reduce VOC emissions to less than significant levels. Therefore, direct air quality impacts associated with construction would remain significant and unmitigated.

The Project's operational emissions would be associated with traffic accessing the Project and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would exceed the screening-level thresholds for VOCs, CO, PM₁₀, and PM_{2.5} and would result in significant direct and cumulative air quality impacts. Project design features would reduce VOC, CO, PM₁₀, and PM_{2.5} emissions to the extent feasible, including providing a mix of uses in the Otay Mesa area that reduces VMT overall within the region; use of natural gas fireplaces; and providing on-site residential, employment, and retail uses. However, VOC emissions from consumer products and CO, PM₁₀, and PM_{2.5} emissions from on-road travel cannot be controlled by the applicant and are unmitigable.

4.0 Alternatives to the Proposed Project

The Reduced Development Intensity Alternative B would develop the Project site in a similar manner as the proposed Project but at a reduced intensity. Air quality impacts would occur associated with grading, construction, and operations, albeit to a lesser extent due to the reduction in development intensity and traffic associated with this alternative. Table 4-8, *Reduced Development Intensity Alternative B – Total Operational Emissions*, provides a summary of air quality emissions associated with Reduced Development Intensity Alternative B. Emissions associated with Reduced Development Intensity Alternative B would exceed the screening-level threshold for VOCs and PM₁₀ but not CO. Therefore, when compared to the proposed Project, air quality impacts would be less under this alternative. Mitigation measures as presented in this SEIR would be required and would reduce direct impacts to below a level of significance; however, cumulative impacts would not be reduced below a level of significance. Like the proposed Project, cumulative impacts would remain significant and unmitigated.

Biological Resources

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would result in removing non-native and native habitat, including disturbed wetlands (0.11 acre), and non-native grassland (195.99 acres). In addition, the proposed Project would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl). However, mitigation measures required for the proposed Project would mitigate impacts to below a level of significance; the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place as a part of the proposed Project.

Impacts to biological resources associated with the Reduced Development Intensity Alternative B would be the same as those associated with the proposed Project, because the same development area would be graded. Therefore, the Reduced Development Intensity Alternative B would require the same mitigation measures as the proposed Project. Additionally, the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place under this alternative.

Cultural Resources

As described in Section 2.3, *Cultural Resources*, of this SEIR, two of the archaeological sites (CA-SDI-5352 and CA-SDI-12730) identified in the 1994 EIR and 2000 SEIR were determined to be located within the Project site. Further testing of CA-SDI-5352 determined that site to be not significant; CA-SDI-12730 was identified as significant. As required in the 2000 SEIR, CA-SDI-12730 is located within an existing open space easement associated with TM 5139 and is, therefore, adequately protected from future impacts. Mitigation measures would be required involving monitoring grading operations

4.0 Alternatives to the Proposed Project

in the event there are undiscovered buried significant resources associated with CA-SDI-5352. The proposed Project would be required to implement previously identified mitigation measures, and all potential impacts would be mitigated to below a level of significance.

The area graded for the Reduced Development Intensity Alternative B would be the same as the proposed Project. Therefore, compared to the proposed Project, the potential to impact unknown subsurface resources would be the same, and the same mitigation measures would be required.

Greenhouse Gas Emissions

As described in Section 2.4, *Greenhouse Gas Emissions*, of this SEIR, the proposed Project would result in significant impacts associated with GHG emissions. The proposed Project would generate 3.53 metric tons of CO₂E emissions per service population, which exceeds the 2028 efficiency metric of 3.0. However, the Project would implement mitigation measures to reduce GHG emissions to meet the 2028 efficiency metric of 3.0 metric tons of CO₂E per service population, and impacts would be less than significant.

Since residential, commercial and employment uses would be reduced under the Reduced Development Intensity Alternative B, less traffic would be generated under this alternative. Although the Reduced Development Intensity Alternative B would generate less traffic than the proposed Project and would provide a mixed-use project directed at providing mobility options and reducing use of the private automobile, this alternative would increase GHG emissions when compared to the proposed Project, as described below. As shown in Table 4-9, *Summary of Reduced Development Intensity Alternative B Estimated Greenhouse Gas Emissions*, the Reduced Development Intensity Alternative B would generate 3.1 metric tons of CO₂E emissions per service population, which exceeds the efficiency metric of 3.0 and which would be greater than what the proposed Project would generate. The efficiency of a project considers the amount of GHG emissions, the reduction in VMT attributable to the mix of uses, and the service population. The efficiency metric is calculated based on Statewide emissions from land use sector divided by Statewide service population for 2020 and extrapolated out to 2028. While reducing the number of residential units reduces trips, reducing residential units changes the land use index calculation and reduces the service population of the project. Because the project's efficiency is defined as the GHG emissions divided by the service population, a smaller service population increases the metric. Due to the land use mix associated with this alternative, the amount of GHG emissions, and the VMT, this alternative would exceed the efficiency metric and generate more CO₂E emissions per service population than the proposed Project. Therefore, this alternative would result in greater impacts associated with GHG emissions than the proposed Project.

4.0 Alternatives to the Proposed Project

Hazards and Hazardous Materials

As described in Section 2.5, *Hazards and Hazardous Materials*, of this SEIR, the proposed Project would increase the potential for development on sites such as areas of historic or current agriculture uses. The residential land uses that would be allowed under the proposed Project would have the potential to introduce human populations into or near areas with a history of contamination from agricultural use. Parcels identified on the proposed Land Use Plan (Figure 1-3) as A, C, and D could contain toxaphene concentrations above regional screening levels. Therefore, contaminated soil, if encountered, could pose a potentially significant impact to occupants and/or visitors of the site. Mitigation measures would be required as part of the proposed Project to ensure adequate protection of human health and environment, reducing impacts to a level less than significant.

Like the proposed Project, the Reduced Development Intensity Alternative B would introduce residential uses to the Project site. Thus, the potential to expose occupants and/or visitors to contaminated soils associated with previous agricultural uses on the Project site would be the same as with the proposed Project, and impacts associated with hazardous materials would be the same.

Noise

As described in Section 2.6, *Noise*, of this SEIR, the proposed Project would generate additional traffic volumes which may result in traffic noise levels that could exceed 60 dBA CNEL for on-site noise sensitive land uses. However, mitigation measures would be implemented to reduce significant noise impacts to below a level of significance.

The Reduced Development Intensity Alternative B would also introduce noise sensitive uses on the Project site, as well as increased noise levels associated with vehicular traffic on roadways proposed as part of the Reduced Intensity Development Alternative B. Because this alternative would result in a reduction of residential, commercial and employment uses, it would result in a reduction in traffic. Compared to the proposed Project, this alternative would result in similar but reduced noise impacts, due to the reduction in traffic associated with this alternative. However, like the proposed Project, noise levels could exceed noise County noise standards for residential uses. Mitigation measures like those associated with the proposed Project would be required where residential uses are located proximate to heavily travelled roadways.

Paleontological Resources

As described in Section 2.7, *Paleontological Resources*, of this SEIR, the Project would result in 1,350,000 cubic yards of cut, which may occur in part within areas of Otay Formation occurring on the Project site. The upper sandstone/mudstone member of the Otay Formation is considered to have “high paleontological resource sensitivity”, and the middle gritstone and lower fanglomerate members of the Otay Formation are considered to have “moderate paleontological resource sensitivity.” This volume of

4.0 Alternatives to the Proposed Project

excavation would exceed the County's threshold of 2,500 cubic yards in areas of high or moderate paleontological sensitivity. Therefore, implementation of the proposed Project could result in potentially significant impacts to paleontological resources, requiring mitigation measures, such as monitoring of excavation activities during grading with salvage, identification, and curation of unearthened fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

The Reduced Development Intensity Alternative B would result in grading the Project site within the same footprint and in a manner similar to the proposed Project, and impacts to paleontological resources could result. Therefore, this alternative would require the same mitigation measures as the proposed Project. Impacts associated with paleontological resources would be the same as the proposed Project under this alternative.

Transportation/Traffic

As described in Section 2.8, *Transportation and Traffic*, of this SEIR, the proposed Project is estimated to generate 34,124 ADT at full build-out, with 2,785 trips in the AM peak hour and 3,474 trips in the PM peak hour. (See Table 2.8-7, *Project Trip Generation*.) The proposed Project would result in significant direct and cumulative impacts to roadway segments and intersections in the Project area. Additionally, the proposed Project would result in significant impacts at intersections located within the City of San Diego. However, mitigation measures would be incorporated into the Project to reduce significant impacts to below a level of significance.

The Reduced Development Intensity Alternative B would result in a reduction in traffic associated with the proposed Project. Table 4-10, *Reduced Development Intensity Alternative B Project Trip Generation*, shows the traffic that would be associated with the Reduced Development Intensity Alternative B. As shown in Table 4-10, this alternative would result in 17,060 less overall trips, with 1,347 less trips in the AM peak hour and 1,678 less trips in the PM hour. Table 4-3, *Comparison of Traffic Impacts – Project Alternatives and Proposed Project*, provides a comparison of the traffic impacts that would occur under the Reduced Development Intensity Alternative B with those associated with the proposed Project. As shown in Table 4-3, while this alternative would reduce traffic volumes, it would not avoid significant direct and cumulative traffic impacts. Mitigation measures similar to those required for the Project would also be required under this alternative.

Conclusions

The Reduced Development Intensity Alternative B would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Up to 2,000 units, approximately 10,000 square feet of neighborhood commercial uses, and

4.0 Alternatives to the Proposed Project

approximately 200,000 square feet of technology business park uses would occur under this alternative.

The Reduced Development Intensity Alternative B would result in less impacts to air quality when compared to the proposed Project, due to a reduction in CO emissions, but would not avoid direct and cumulative impacts associated with VOC and PM₁₀. Less traffic would be generated under this alternative; and this alternative would result in less noise impacts, because less traffic would be generated. This alternative would result in greater impacts associated with GHG emissions. Impacts associated with all other environmental issue areas would be the same as those that would occur with the proposed Project.

The Reduced Development Intensity Alternative B has the ability to meet most of the Project objectives, including promoting a well-organized international industrial and business district in East Otay Mesa (Project Objective 1); promoting the conservation of open space to preserve environmental resources (Project Objective 2); implementing the General Plan vision by creating a Village Core within East Otay Mesa that contains a mix of housing types located near retail businesses, employment, and recreational areas (Project Objective 3); providing convenient housing opportunities for the adjacent industrial and business district employees in addition to supporting commercial/retail and employment uses to reduce vehicular dependence (Project Objective 5); providing a multi-modal transportation system to serve sub-regional transportation needs at an acceptable level of service (Project Objective 6); promoting well-designed infrastructure, buildings and landscaping, both in the public and private realms, that creates a distinct urban image and establish a unique sense of identity for East Otay Mesa (Project Objective 7); and providing infrastructure and public facilities in a planned and orderly fashion that will accommodate the planned growth in East Otay Mesa while meeting applicable County standards (Project Objective 8).

Because this alternative would include the reduction of residential units, as well as employment and commercial uses, its ability to provide a mix of densities and land uses that will minimize automobile trips and support walking and bicycling (Project Objective 4) is also reduced. Also, this alternative would not provide the amount of housing that is provided with the proposed Project and, therefore would not accommodate forecasted growth to the extent that the proposed Project would. Employment uses would be less under this alternative. Thus, less job opportunities would be created for this area of Otay Mesa.

4.4.3.3 Reduced Development Intensity Alternative C

Reduced Development Intensity Alternative C Description and Setting

Reduced Development Intensity Alternative C would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Residential

4.0 Alternatives to the Proposed Project

development (up to 1,650 units) would occur within the Mixed Use planning areas identified for the proposed Project (Planning Areas A, B, C, and D shown on Figure 1-3, *Specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*). Approximately 10,000 square feet of neighborhood commercial uses would occur in conjunction with the residential land uses to provide support retail services and amenities for future residents and visitors to the site. Planning Area E would develop with technology business park uses at a reduced intensity (7.8 acres, approximately 93,600 square feet of technology business park uses).

Development of the Project site under this alternative would be subject to the same development regulations and design standards as are presented in the EOMSP Amendment for the proposed Project; however, the amount of park space would be reduced to be commensurate with the anticipated population associated with the reduction in density associated with this alternative. Additionally, the Specific Plan Amendment proposed by the Project would need to be altered to reflect the reduction in residential units and reduction in commercial and employment uses square footages. This alternative would be served by the same network and street alignments as the proposed Project (see Figure 1-3, *Specific Plan Amendment Proposed Conceptual Land Use and Circulation Plan*), and it is assumed that street classifications and cross-sections would remain the same. The Project site would be graded in the same manner as the proposed Project, resulting in approximately 1,350,000 cubic yards of balanced earthwork on the Project site. Like the proposed Project, approximately 51.3 acres located north of Lone Star Road would be preserved as open space.

Comparison of the Effects of the Reduced Development Intensity Alternative C to the Proposed Project

Air Quality

As described in Section 2.1, *Air Quality*, of this SEIR, emissions of VOCs associated with the proposed Project would exceed the County's screening-level thresholds for construction. The emissions are mainly attributable to application of architectural coatings and would occur on short duration during construction. The Project would reduce construction emissions associated with VOC to the extent feasible by utilizing low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. There are no additional mitigation measures that would reduce VOC emissions to less than significant levels. Therefore, direct air quality impacts associated with construction would remain significant and unmitigated.

The Project's operational emissions would be associated with traffic accessing the Project and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the Project emissions would exceed the screening-level thresholds for VOCs, CO, PM₁₀, and PM_{2.5} and would result in significant direct and cumulative air quality impacts. Project design features would reduce VOC, CO, PM₁₀, and PM_{2.5} emissions to the extent feasible, including providing a mix of uses in the Otay Mesa area that reduces VMT overall within the region; use of natural gas fireplaces; and

4.0 Alternatives to the Proposed Project

providing on-site residential, employment, and retail uses. However, VOC emissions from consumer products and CO, PM₁₀, and PM_{2.5} emissions from on-road travel cannot be controlled by the applicant and are unmitigable.

The Reduced Development Intensity Alternative C would develop the Project site in a similar manner as the proposed Project but at a reduced intensity. Air quality impacts would occur associated with grading, construction, and operations, albeit to a lesser extent due to the reduction in development intensity and traffic associated with this alternative. Air quality impacts would occur with construction, like the proposed Project; but those impacts would be avoided to the extent feasible and would be of short duration. Table 4-11, *Reduced Development Intensity Alternative C – Total Operational Emissions*, provides a summary of air quality emissions associated with Reduced Development Intensity Alternative C. Emissions associated with Reduced Development Intensity Alternative C would not exceed the screening-level threshold for air pollutants. Therefore, operational air quality impacts would be reduced to a level of less than significant under this alternative.

Biological Resources

As described in Section 2.2, *Biological Resources*, of this SEIR, the proposed Project would result in removing non-native and native habitat, including disturbed wetlands (0.11 acre) and non-native grassland (195.99 acres). In addition, the proposed Project would result in significant direct impacts to three County List A or B plant species (variegated dudleya, San Diego button-celery, coastal barrel cactus), and eight County List 1 or Species of Special Concern (San Diego fairy shrimp, Riverside fairy shrimp, turkey vulture, northern harrier, white-tailed kite, loggerhead shrike, San Diego black-tailed jackrabbit, and burrowing owl). However, mitigation measures required for the proposed Project would mitigate impacts to below a level of significance; the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place as a part of the proposed Project.

Impacts to biological resources associated with the Reduced Development Intensity Alternative C would be the same as those associated with the proposed Project, because the same development area would be graded. Therefore, the Reduced Development Intensity Alternative C would require the same mitigation measures as the proposed Project. Additionally, the open space easement established as part of TM 5139 to mitigate for Project impacts and protect vernal pool habitat and other native habitat would remain in place under this alternative.

Cultural Resources

As described in Section 2.3, *Cultural Resources*, of this SEIR, two of the archaeological sites (CA-SDI-5352 and CA-SDI-12730) identified in the 1994 EIR and 2000 SEIR were determined to be located within the Project site. Further testing of CA-SDI-5352 determined that site to be not significant; CA-SDI-12730 was identified as significant. As

4.0 Alternatives to the Proposed Project

required in the 2000 SEIR, CA-SDI-12730 is located within an existing open space easement associated with TM 5139 and is, therefore, adequately protected from future impacts. Mitigation measures would be required involving monitoring grading operations in the event there are undiscovered buried significant resources associated with CA-SDI-5352. The proposed Project would be required to implement previously identified mitigation measures, and all potential impacts would be mitigated to below a level of significance.

The area graded for the Reduced Development Intensity Alternative C would be the same as the proposed Project. Therefore, compared to the proposed Project, the potential to impact unknown subsurface resources would be the same, and the same mitigation measures would be required.

Greenhouse Gas Emissions

As described in Section 2.4, *Greenhouse Gas Emissions*, of this SEIR, the proposed Project would result in significant impacts associated with GHG emissions. The proposed Project would generate 3.53 metric tons of CO₂E emissions per service population, which exceeds the 2028 efficiency metric of 3.0. However, the Project would implement mitigation measures to reduce GHG emissions to meet the 2028 efficiency metric of 3.0 metric tons of CO₂e per service population, and impacts would be less than significant.

Since residential, commercial and employment uses would be reduced under the Reduced Development Intensity Alternative C, less traffic would be generated under this alternative. Although the Reduced Development Intensity Alternative C would generate less traffic than the proposed Project and would provide a mixed-use project directed at providing mobility options and reducing use of the private automobile, this alternative would result in an increase in GHG emissions. As shown in Table 4-12, *Summary of Reduced Development Intensity Alternative C Estimated Greenhouse Gas Emissions*, the Reduced Development Intensity Alternative C would generate 3.2 metric tons of CO₂E emissions per service population, which exceeds the efficiency metric of 3.0 and which would be greater than what the proposed Project would generate. The efficiency of a project considers the amount of GHG emissions, the reduction in VMT attributable to the mix of uses, and the service population. The efficiency metric is calculated based on Statewide emissions from land use sector divided by Statewide service population for 2020 and extrapolated out to 2028. While reducing the number of residential units reduces trips, reducing residential units changes the land use index calculation and reduces the service population of the project. Because the project's efficiency is defined as the GHG emissions divided by the service population, a smaller service population increases the metric. Due to the land use mix associated with this alternative, the amount of GHG emissions, and the VMT, this alternative would exceed the efficiency metric and generate more CO₂E emissions per service population than the proposed Project. Therefore, this alternative would result in greater impacts associated with GHG emissions than the proposed Project.

4.0 Alternatives to the Proposed Project

Hazards and Hazardous Materials

As described in Section 2.5, *Hazards and Hazardous Materials*, of the SEIR, the proposed Project would increase the potential for development on sites such as areas of historic or current agriculture uses. The residential land uses that would be allowed under the proposed Specific Plan Amendment would have the potential to introduce human populations into or near areas with a history of contamination from agricultural use. Parcels identified on the proposed Land Use Plan (Figure 1-3) as A, C, and D could contain toxaphene concentrations above regional screening levels. Therefore, contaminated soil, if encountered, could pose a potentially significant impact to occupants and/or visitors of the site. Mitigation measures would be required as part of the proposed Project to ensure adequate protection of human health and environment, reducing impacts to a level less than significant.

Like the proposed Project, the Reduced Development Intensity Alternative C would introduce residential uses to the Project site. Thus, the potential to expose occupants and/or visitors to contaminated soils associated with previous agricultural uses on the Project site would be the same as with the proposed Project, and impacts associated with hazardous materials would be the same.

Noise

As described in Section 2.6, *Noise*, of this SEIR, the proposed Project would generate additional traffic volumes which may result in traffic noise levels that could exceed 60 dBA CNEL for on-site noise sensitive land uses. However, mitigation measures would be implemented to reduce significant noise impacts to below a level of significance.

The Reduced Development Intensity Alternative C would also introduce noise sensitive uses on the Project site, as well as increased noise levels associated with vehicular traffic on roadways proposed as part of the Reduced Intensity Development Alternative C. Because this alternative would result in a reduction of residential, commercial and employment uses, it would result in a reduction in traffic. Compared to the proposed Project, this alternative would result in similar but reduced noise impacts, due to the reduction in traffic associated with this alternative. However, like the proposed Project, noise levels could exceed noise County noise standards for residential uses. Mitigation measures like those associated with the proposed Project would be required where residential uses are located proximate to heavily travelled roadways.

Paleontological Resources

As described in Section 2.7, *Paleontological Resources*, of this SEIR, the Project would result in 1,350,000 cubic yards of cut, which may occur in part within areas of Otay Formation occurring on the Project site. The upper sandstone/mudstone member of the Otay Formation is considered to have “high paleontological resource sensitivity”, and the middle gritstone and lower fanglomerate members of the Otay Formation are considered to have “moderate paleontological resource sensitivity.” This volume of

4.0 Alternatives to the Proposed Project

excavation would exceed the County's threshold of 2,500 cubic yards in areas of high or moderate paleontological sensitivity. Therefore, implementation of the proposed Project could result in potentially significant impacts to paleontological resources, requiring mitigation measures such as monitoring of excavation activities during grading with salvage, identification, and curation of unearthened fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

The Reduced Development Intensity Alternative C would result in grading the Project site within the same footprint and in a manner similar to the proposed Project, and impacts to paleontological resources could result. Therefore, this alternative would require mitigation measures, such as monitoring of excavation activities during grading with salvage, identification, and curation of unearthened fossil remains encountered during grading activities. With implementation of mitigation measures, impacts would be reduced to a level less than significant.

Transportation/Traffic

As described in Section 2.8, *Transportation and Traffic*, of this SEIR, the proposed Project is estimated to generate 34,124 ADT at full build-out, with 2,785 trips in the AM peak hour and 3,474 trips in the PM peak hour. (See Table 2.8-7, *Project Trip Generation*.) The proposed Project would result in significant direct and cumulative impacts to roadway segments and intersections in the Project area. Additionally, the proposed Project would result in significant impacts at intersections located within the City of San Diego. However, mitigation measures would be incorporated into the Project to reduce significant impacts to below a level of significance.

The Reduced Development Intensity Alternative C would result in a reduction in traffic associated with the proposed Project. Table 4-13, *Reduced Development Intensity Alternative C Project Trip Generation*, shows the traffic that would be associated with the Reduced Development Intensity Alternative C. As shown in Table 4-13, this alternative would result in 20,538 less overall trips, with 1,683 less trips in the AM peak hour and 2,073 less trips in the PM hour. Table 4-3, *Comparison of Traffic Impacts – Project Alternatives and Proposed Project*, provides a comparison of the traffic impacts that would occur under the Reduced Development Intensity Alternative C with those associated with the proposed Project. As shown in Table 4-3, while this alternative would reduce traffic volumes, it would not avoid significant direct and cumulative traffic impacts. Mitigation measures similar to those required for the Project would also be required under this alternative.

Conclusions

The Reduced Development Intensity Alternative C would develop the Project site with a mix of uses similar to those proposed by the Project, but at a reduced intensity. Up to 1,650 units, approximately 10,000 square feet of neighborhood commercial uses, and

4.0 Alternatives to the Proposed Project

approximately 93,600 square feet of technology business park uses would occur under this alternative.

The Reduced Development Intensity Alternative C would result in less direct and cumulative impacts associated with operational air quality emissions when compared to the proposed Project. Less traffic would be generated under this alternative; and this alternative would result in less noise impacts, because less traffic would be generated. This alternative would result in greater impacts associated with GHG emissions. Impacts associated with all other environmental issue areas would be the same as those that would occur with the proposed Project.

The Reduced Development Intensity Alternative C has the ability to meet most of the project objectives, though in some instances, to a lesser degree as the proposed Project, including promoting a well-organized international industrial and business district in East Otay Mesa (Objective 1), promoting the conservation of open space to preserve environmental resources (Objective 2), and providing a multi-modal transportation system to serve sub-regional transportation needs at an acceptable level of service (Objective 6). This alternative would promote well-designed infrastructure, buildings and landscaping that creates a distinct urban image and establish a unique sense of identity for East Otay Mesa (Objective 7). However, this alternative would not have the same density of residential development and would implement the General Plan vision of creating a viable Village Core within East Otay Mesa to a lesser degree as the proposed Project (Objective 3). Similarly, this alternative not establish a land use pattern with a mix of densities that will minimize automobile trips, support walking and bicycling, encourage recreation, and invigorate the economy to the same degree as the Project (Objective 4). This alternative would provide infrastructure and public facilities at a similar level as the proposed Project, which would be designed to accommodate forecasted growth (Objective 8). This alternative would provide convenient housing opportunities for adjacent industrial and business district employees and support commercial/retail and employment uses to reduce vehicular dependence, although to a lesser degree as the proposed Project (Objective 5).

4.5 Environmentally Superior Alternative

Table 4-14, *Impact Comparison of Alternatives to Proposed Project*, provides a qualitative comparison of the impacts for each alternative compared to the proposed Project. The No Project/No Development Alternative would be environmentally superior to the proposed Project. The No Project/No Development Alternative would avoid all significant impacts associated with the proposed Project; however, the No Project/No Development Alternative does not meet any of the basic Project objectives.

CEQA Guidelines, Section 15126.6(e)(2) requires that, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Reduced Intensity Development Alternative C would be considered the environmentally superior alternative because, when compared with the proposed Project, it would reduce impacts associated with air

4.0 Alternatives to the Proposed Project

quality to a less than significant level and would reduce impacts associated with noise, and traffic. This alternative would result in an increase in GHG emissions when compared to the proposed Project. This alternative would still provide benefits of a mixed use development, albeit at a smaller scale. This alternative would require mitigation measures like those required for the proposed Project in order to reduce impacts associated with construction air quality emissions, GHG emissions, biological resources, cultural resources, hazards and hazardous materials, noise, paleontological resources, and traffic to below significant levels.

4.0 Alternatives to the Proposed Project

**Table 4-1. No Project/Development Under Existing Specific Plan Designation
Alternative – Total Operational Emissions**

	VOCs	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer, Lbs/day						
Area Sources	44.74	0.002	0.20	0.00	0.00	0.00
Energy Use	0.96	8.74	7.34	0.05	0.66	0.66
Vehicular Emissions	36.81	141.05	371.05	1.42	146.61	39.83
TOTAL	82.51	149.78	378.59	1.47	147.28	40.50
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	Yes	No	No	No	Yes	No
Winter, Lbs/day						
Area Sources	44.74	0.002	0.20	0.00	0.00	0.00
Energy Use	0.96	8.74	7.34	0.05	0.66	0.66
Vehicular Emissions	35.44	143.28	370.25	1.35	146.62	39.84
TOTAL	81.14	152.01	377.79	1.40	147.28	40.50
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	Yes	No	No	No	Yes	No
Tons/year						
Area Sources	8.16	0.00	0.02	0.00	0.00	0.00
Energy Use	0.18	1.59	1.34	0.01	0.12	0.12
Vehicular Emissions	6.28	26.19	66.39	0.25	26.06	7.10
TOTAL	14.62	27.78	67.75	0.26	26.18	7.22
Screening-Level Thresholds	13.7	40	100	40	15	10
Above Screening-Level Thresholds?	Yes	No	No	No	Yes	No

4.0 Alternatives to the Proposed Project

Table 4-2. Summary of No Project/Development Under Existing Specific Plan Designation Alternative GHG Emissions

Emission Source	Annual Emissions (Metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Operational Emissions				
Area Sources	0.0343	0.0001	0.0000	0
Electricity Use	4,320	0.1799	0.0360	4,750
Natural Gas Use	1,736	0.0333	0.0318	1,568
Water Consumption	792	10.1860	0.2456	1,206
Solid Waste Handling	237	14.0326	0.0000	315
Vehicles	19,881	1.0089	0	19,909
Amortized Construction	622	0.0000	0.0000	622
Amortized Land Use Change	28	0.0000	0.0000	28
Total	27,615	25.4408	0.3134	28,411
Global Warming Potential Factor	1	28	265	
CO ₂ Equivalent Emissions	27,615	712	83	28,411
TOTAL CO₂ Equivalent Emissions	28,411			
Service Population	4,219			
Metric Tons per Service Population	6.73			
Project Efficiency Metric	3.0			

4.0 Alternatives to the Proposed Project

Table 4-3. Comparison of Traffic Impacts – Project Alternatives and Proposed Project

Impacted Locations	Jurisdiction	Impact Type				
		Proposed Project	No Project/ Development Under Existing Specific Plan Designation Alternative	Reduced Development Intensity Alternative A	Reduced Development Intensity Alternative B	Reduced Development Intensity Alternative C
<u>Intersections</u>						
Otay Mesa Road / Heritage Road	City of San Diego	–	Direct	-	-	
Otay Mesa Road / La Media Road	City of San Diego	Direct & Cumulative	–	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative
Otay Mesa Road / Harvest Road	County of San Diego	Direct & Cumulative	Direct	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative
Otay Mesa Road / Sanyo Avenue	County of San Diego	Direct & Cumulative	Direct	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative
Otay Mesa Road / Vann Centre Boulevard	County of San Diego	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative	Direct & Cumulative
Airway Road / Sanyo Avenue	City of San Diego	Cumulative	Cumulative	Cumulative	Cumulative	Cumulative
Airway Road / Paseo de las Americas	County of San Diego	Cumulative	Cumulative	Cumulative	Cumulative	Cumulative
Siempre Viva Road / Paseo de las Americas	City of San Diego	Cumulative	–	Cumulative	Cumulative	Cumulative
Siempre Viva Road / Enrico Fermi Drive	County of San Diego	Cumulative	–	Cumulative	Cumulative	Cumulative
<u>Segments</u>						
Otay Mesa Road: Heritage Road to Cactus Road	City of San Diego/ Caltrans	–	Direct	-	-	-
Otay Mesa Road: Cactus Road to Britannia Blvd	City of San Diego/ Caltrans	–	Direct	-	-	-
Otay Mesa Road: Britannia Blvd to La Media Road	City of San Diego/ Caltrans	–	Direct	-	-	-
Otay Mesa Road: La Media Road to Piper Ranch Road	City of San Diego/ Caltrans	–	Direct	-	-	-
Otay Mesa Road: Piper Ranch Road to SR-125 Ramps	City of San Diego/ Caltrans	–	Direct	-	-	-
Otay Mesa Road: Harvest Road to Sanyo Avenue	County of San Diego	–	Direct	-	-	-
Otay Mesa Road: Sanyo Avenue to Vann Centre Blvd	County of San Diego	Direct	Direct	Direct	Direct	Direct
Otay Mesa Road: Vann Centre Blvd to Enrico Fermi Drive	County of San Diego	Direct	–	Direct	Direct	Direct
Enrico Fermi Drive: Otay Mesa Road to Airway Road	County of San Diego	Cumulative	–	Cumulative	Cumulative	Cumulative

4.0 Alternatives to the Proposed Project

Table 4-4. Comparison of Reduced Development Intensity Alternatives and the Proposed Project

Land Use	Development Intensity			
	Proposed Project	Reduced Development Intensity Alternative A	Reduced Development Intensity Alternative B	Reduced Development Intensity Alternative C
Residential	3,158 units	2,000 units	2,000 units	1,650 units
Employment Uses	765,600 square feet	93,600 square feet	200,000 square feet	93,600 square feet
Commercial Uses	78,000 square feet	10,000 square feet	10,000 square feet	10,000 square feet

4.0 Alternatives to the Proposed Project

Table 4-5. Reduced Development Intensity Alternative A – Total Operational Emissions

	VOCs	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer, Lbs/day						
Area Sources	56.29	18.48	170.73	0.11	2.25	2.25
Energy Use	0.73	6.29	2.85	0.04	0.51	0.51
Vehicular Emissions	20.86	80.82	234.51	0.93	97.96	26.60
TOTAL	77.88	105.58	408.09	1.09	100.71	29.35
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	Yes	No	No	No	Yes	No
Winter, Lbs/day						
Area Sources	56.29	18.48	170.73	0.11	2.25	2.25
Energy Use	0.73	6.29	2.85	0.04	0.51	0.51
Vehicular Emissions	20.13	82.52	230.37	0.88	97.96	26.60
TOTAL	77.15	107.28	403.94	1.04	100.71	29.35
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	Yes	No	No	No	Yes	No
Tons/year						
Area Sources	9.50	0.42	14.84	0.002	0.10	0.10
Energy Use	0.13	1.15	0.52	0.007	0.09	0.09
Vehicular Emissions	3.53	14.89	40.98	0.16	17.21	4.68
TOTAL	13.16	16.45	56.34	0.17	17.40	4.88
Screening-Level Thresholds	13.7	40	100	40	15	10
<i>Above Screening-Level Thresholds?</i>	No	No	No	No	Yes	No

4.0 Alternatives to the Proposed Project

Table 4-6. Summary of Reduced Development Intensity Alternative A Estimated Greenhouse Gas Emissions

Emission Source	Annual Emissions (Metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Operational Emissions				
Area Sources	312	0.0284	0.0053	314
Electricity Use	934	0.0389	0.0078	937
Natural Gas Use	1,323	0.0254	0.0243	1,330
Water Consumption	439	3.9971	0.0973	577
Solid Waste Handling	114	6.7618	0.0000	303
Vehicles	14,509	0.7317	0.0000	14,529
Amortized Construction	874	0.0000	0.0000	874
Amortized Land Use Change	28	0.0000	0.0000	28
Total	18,533	11.5833	0.1347	18,893
Global Warming Potential Factor	1	28	265	
CO ₂ Equivalent Emissions	18,533	324	36	18,893
TOTAL CO₂ Equivalent Emissions	18,893			
Service Population	5,936			
Metric Tons per Service Population	3.2			
Efficiency Metric	3.0			

4.0 Alternatives to the Proposed Project

Table 4-7. Reduced Development Intensity Alternative A Trip Generation

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour						PM Peak Hour					
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume				
		Rate ^a	Volume			In	Out	Total			In	Out	Total		
Planning Areas A -E															
Residential (6-20 DU/Acre)	2,000 Units	8 /Unit	16,000	8%	20 : 80	256	1,024	1,280	10%	70 : 30	1,120	480	1,600		
Tech Park ^b	93,600 SF	10 /KSF	936	14%	80 : 20	105	26	131	15%	30 : 70	42	98	140		
Neighborhood Shopping Center	10,000 SF	96 /KSF ^c	960	4%	60 : 40	23	15	38	10%	50 : 50	48	48	96		
Total	-	-	17,896	-	-	384	1,065	1,449	-	-	1,210	626	1,836		
Mixed Use Credit (10%)	-	-	(1,790)	-	-	(38)	(107)	(145)	-	-	(121)	(63)	(184)		
Net Total	-	-	16,106	-	-	346	958	1,304	-	-	1,089	563	1,652		

Footnotes:

- a. Rates from SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- b. Industrial Plant Land Use trip generation rate used, as used in the Otay Tech Center Project TIA.
- c. 20% pass-by reduction applied to the Neighborhood Shopping Center trip generation rate of 1,200 ADT / Acre.

4.0 Alternatives to the Proposed Project

Table 4-8. Reduced Development Intensity Alternative B – Total Operational Emissions

	VOCs	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer, Lbs/day						
Area Sources	58.74	18.48	170.74	0.11	2.25	2.25
Energy Use	0.78	6.75	3.24	0.04	0.54	0.54
Vehicular Emissions	22.07	85.50	247.80	0.98	103.44	28.09
TOTAL	81.59	110.73	421.78	1.14	106.23	30.88
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	Yes	No	No	No	Yes	No
Winter, Lbs/day						
Area Sources	58.74	18.48	170.74	0.11	2.25	2.25
Energy Use	0.78	6.75	3.24	0.04	0.54	0.54
Vehicular Emissions	21.30	87.29	243.46	0.93	103.44	28.09
TOTAL	80.82	112.52	417.44	1.09	106.23	30.88
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	Yes	No	No	No	Yes	No
Tons/year						
Area Sources	9.94	0.42	14.84	0.002	0.10	0.10
Energy Use	0.14	1.23	0.59	0.008	0.10	0.10
Vehicular Emissions	3.69	15.55	42.78	0.17	17.95	4.88
TOTAL	13.78	17.20	58.20	0.18	18.15	5.08
Screening-Level Thresholds	13.7	40	100	40	15	10
<i>Above Screening-Level Thresholds?</i>	Yes	No	No	No	Yes	No

4.0 Alternatives to the Proposed Project

Table 4-9. Summary of Reduced Development Intensity Alternative B Estimated Greenhouse Gas Emissions

Emission Source	Annual Emissions (Metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Operational Emissions				
Area Sources	312	0.0284	0.0053	314
Electricity Use	1,042	0.0434	0.0087	1,046
Natural Gas Use	1,416	0.0272	0.0260	1,424
Water Consumption	488	4.6403	0.1128	648
Solid Waste Handling	115	6.7941	0.0000	305
Vehicles	14,510	0.7120	0.0000	14,530
Amortized Construction	874	0.0000	0.0000	874
Amortized Land Use Change	28	0.0000	0.0000	28
Total	18,785	12.2454	0.1528	19,168
Global Warming Potential Factor	1	28	265	
CO ₂ Equivalent Emissions	18,785	343	40	19,168
TOTAL CO₂ Equivalent Emissions	19,168			
Service Population	6,169			
Metric Tons per Service Population	3.1			
Efficiency Metric	3.0			

4.0 Alternatives to the Proposed Project

Table 4-10. Reduced Development Intensity Alternative B Trip Generation

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour						PM Peak Hour					
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume				
		Rate ^a	Volume			In	Out	Total			In	Out	Total		
Planning Areas A -E															
Residential (6-20 DU/Acre)	2,000 Units	8 /Unit	16,000	8%	20 : 80	256	1,024	1,280	10%	70 : 30	1,120	480	1,600		
Tech Park ^b	200,000 SF	10 /KSF	2,000	14%	80 : 20	224	56	280	15%	30 : 70	90	210	300		
Neighborhood Shopping Center	10,000 SF	96 /KSF ^c	960	4%	60 : 40	23	15	38	10%	50 : 50	48	48	96		
Total	-	-	18,960	-	-	503	1,095	1,598	-	-	1,258	738	1,996		
<i>Mixed Use Credit (10%)</i>	-	-	(1,896)	-	-	(50)	(110)	(160)	-	-	(126)	(74)	(200)		
Net Total	-	-	17,064	-	-	453	985	1,438	-	-	1,132	664	1,796		

Footnotes:

- a. Rates from SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- b. Industrial Plant Land Use trip generation rate used, as used in the Otay Tech Center Project TIA.
- c. 20% pass-by reduction applied to the Neighborhood Shopping Center trip generation rate of 1,200 ADT / Acre.

4.0 Alternatives to the Proposed Project

Table 4-11. Reduced Development Intensity Alternative C – Total Operational Emissions

	VOCs	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer, Lbs/day						
Area Sources	46.52	12.34	139.62	0.08	1.62	1.62
Energy Use	0.61	5.26	2.41	0.03	0.42	0.42
Vehicular Emissions	17.56	68.03	197.06	0.78	82.24	22.33
TOTAL	64.69	85.63	339.08	0.89	84.28	24.37
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Winter, Lbs/day						
Area Sources	46.52	12.34	139.62	0.08	1.62	1.62
Energy Use	0.61	5.26	2.41	0.03	0.42	0.42
Vehicular Emissions	16.95	69.45	193.63	0.74	82.24	22.33
TOTAL	64.07	87.05	335.66	0.85	84.28	24.37
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Tons/year						
Area Sources	7.91	0.30	12.22	0.002	0.08	0.08
Energy Use	0.11	0.96	0.44	0.006	0.08	0.08
Vehicular Emissions	2.97	12.50	34.37	0.13	14.41	3.92
TOTAL	10.98	13.76	47.03	0.14	14.57	4.08
Screening-Level Thresholds	13.7	40	100	40	15	10
Above Screening-Level Thresholds?	No	No	No	No	No	No

4.0 Alternatives to the Proposed Project

Table 4-12. Summary of Reduced Development Intensity Alternative C Estimated Greenhouse Gas Emissions

Emission Source	Annual Emissions (Metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Operational Emissions				
Area Sources	207	0.0225	0.0034	209
Electricity Use	789	0.0329	0.0066	792
Natural Gas Use	1,106	0.0212	0.0203	1,112
Water Consumption	370	3.4000	0.0828	487
Solid Waste Handling	94	5.5385	0.0000	249
Vehicles	12,497	0.6134	0.0000	12,020
Amortized Construction	874	0.0000	0.0000	874
Amortized Land Use Change	28	0.0000	0.0000	28
Total	15,472	9.6043	0.1131	15,771
Global Warming Potential Factor	1	28	265	
CO ₂ Equivalent Emissions	15,472	269	30	15,771
TOTAL CO₂ Equivalent Emissions	15,771			
Service Population	4,951			
Metric Tons per Service Population	3.2			
Efficiency Metric	3.0			

4.0 Alternatives to the Proposed Project

Table 4-13. Reduced Development Intensity Alternative C Trip Generation

Land Use	Quantity		Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
					% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
							Rate ^a	Volume	In			Out	Total	In
Planning Areas A -E														
Residential (6-20 DU/Acre)	1,650	Units	8 /Unit	13,200	8%	20 : 80	211	845	1,056	10%	70 : 30	924	396	1,320
Tech Park ^b	93.60	KSF	10 /KSF	936	14%	80 : 20	105	26	131	15%	30 : 70	42	98	140
Neighborhood Shopping Center	10	KSF	96 /KSF ^c	960	4%	60 : 40	23	15	38	10%	50 : 50	48	48	96
Total	-	-	-	15,096	-	-	339	886	1,225	-	-	1,014	542	1,556
Mixed Use Credit (10%)	-	-	-	-1,510	-	-	-34	-89	-123	-	-	-101	-54	-155
Net Total	-	-	-	13,586	-	-	305	797	1,102	-	-	913	488	1,401

Footnotes:

- a. Rates from SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- b. Industrial Plant Land Use trip generation rate used, as used in the Otay Tech Center Project TIA.
- c. 20% pass-by reduction applied to the Neighborhood Shopping Center trip generation rate of 1,200 ADT / Acre.

4.0 Alternatives to the Proposed Project

Table 4-14. Impact Comparison of Alternatives to Proposed Project

Environmental Issue Area	Proposed Project	No Project/No Build	No Project/Existing Specific Plan – Approved Tentative Map	Reduced Development Intensity A	Reduced Development Intensity B	Reduced Development Intensity C
Air Quality	Significant unmitigated cumulative impacts.	No impacts.	Less than proposed Project for CO. Would not avoid direct and cumulative impacts associated with VOC and PM ₁₀ .	Less than proposed Project for VOC and CO. Would not avoid direct and cumulative impacts associated with PM ₁₀ .	Less than proposed Project for CO. Would not avoid direct and cumulative impacts associated with VOC and PM ₁₀ .	Less than proposed Project. Would avoid direct and cumulative impacts associated operational emissions.
Biological Resources	Significant impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.	Less than proposed Project.
Cultural Resources	Potential for significant impacts to unknown subsurface resources. Impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.
Greenhouse Gas Emissions	Without mitigation, emissions of GHGs exceed the efficiency metric.	No impacts.	Greater than proposed Project.	Greater than proposed Project.	Greater than proposed Project.	Greater than proposed Project.
Hazards and Hazardous Materials	Potential significant impacts to occupants/visitors due to previous hazardous soils associated with previous agricultural uses. Impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	No impacts.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.

4.0 Alternatives to the Proposed Project

Environmental Issue Area	Proposed Project	No Project/No Build	No Project/Existing Specific Plan – Approved Tentative Map	Reduced Development Intensity A	Reduced Development Intensity B	Reduced Development Intensity C
Noise	Potential impacts to noise sensitive land uses. Impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	No impacts.	Less than proposed Project.	Less than proposed Project.	Less than proposed Project.
Paleontological Resources	Potentially significant impacts to paleontological resources associated with the Otay Formation. Impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.	Same as proposed Project.
Transportation and Traffic	Potential impacts to street segments and intersections. Impacts reduced to below a level of significance with implementation of mitigation measures.	No impacts.	Greater than proposed Project.	Less traffic volumes but would not avoid significant impacts.	Less traffic volumes but would not avoid significant impacts.	Less traffic volumes but would not avoid significant impacts.