CHAPTER 4
Alternatives

4.1 INTRODUCTION

This chapter presents a description of the alternatives to Connect SoCal 2024 ("Project" or "Plan"), evaluates their environmental impacts as compared to those of the Plan, and identifies the environmentally superior alternative as required by the California Environmental Quality Act (CEQA) requirements. The analysis presented below is separated into the following sections: Section 4.3 summarizes key elements of the Plan that are relevant to consideration of alternatives; Section 4.4 provides a discussion of the two selected alternatives; Section 4.5 evaluates how well the alternatives feasibly achieve most of the goals, policies, and basic objectives of the Plan, the extent of their environmental impacts compared to those of the Plan, whether they reduce or eliminate significant environmental impacts caused by the Plan, and at a screening level, whether the alternatives have more or fewer region-wide or statewide environmental benefits.

SCAG's Regional Council may choose to adopt any portion or all of any alternatives presented in this 2024 PEIR with appropriate findings as required by CEQA. The Regional Council is able to adopt any portion or all of any of the alternatives presented because the impacts of each alternative will be fully disclosed to the public, and the public will have the opportunity to comment on the alternatives and impacts generated by each alternative. Written suggestions on potential Plan alternatives received during the public review and comment period for the Draft 2024 PEIR will be considered when preparing the Final 2024 PEIR and included as an appendix of the Final 2024 PEIR.

4.1.1 CEQA REQUIREMENTS

CEQA Guidelines Section 15126.6 requires an Environmental Impact Report (EIR) to describe a reasonable range of alternatives to a project or to the location of a project that could feasibly avoid or substantially lessen any significant environmental impacts of the project while attaining most of the basic project objectives.

Key provisions of the CEQA Guidelines pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project, including alternative locations that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6(b)).
- The EIR shall include a brief discussion of the rationale for selecting alternatives to be discussed and should identify any alternatives that were considered but were rejected as infeasible during the scoping process and briefly explain the reason underlying the lead agency's decision. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet project objectives, are infeasible, or do not avoid any significant environmental effects. Among others, the following factors may be used to eliminate alternatives from detailed consideration in an EIR: (1) failure to meet most of the basic project objectives; (2) infeasibility, or (3) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6(c)).
- The evaluation of alternatives should include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the proposed project (CEQA Guidelines Section 15126.6(d)).

- The No Project Alternative shall be evaluated along with its impacts. The No Project Alternative analysis shall discuss the existing conditions at the time the notice of preparation is published, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. When the project involves an update to an existing land use or regulatory plan, the "no project" alternative will be a continuation of the existing plan, policy, or operation into the future. The projected impacts of the Plan are compared to the impacts from the continuation of the existing plan (CEQA Guidelines Section 15126.6(e)).
- The range of alternatives required in an EIR is governed by a "rule of reason." Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the proposed project (CEQA Guidelines Section 15126.6(f)).
- The range of feasible alternatives is selected and discussed in a manner intended to foster meaningful public participation and informed decision making (CEQA Guidelines Section 15126.6(f)). Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Guidelines Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative, and need not consider every conceivable alternative to a project (CEQA Guidelines Section 15126.6(f)(3)).

4.1.2 BACKGROUND

Five public comments received during the CEQA scoping process for the 2024 PEIR were on alternatives to the Plan. Majority of these comments suggested general concepts to be considered in the formulation of potential alternatives, namely, the "local input" that reflects the realization and fulfillment of each local government's general plan and vision for growth and the "smart growth pattern" that is not just land use patterns currently found in local governments' general plans. These scoping comments have been considered in this alternatives analysis.

4.1.3 EVALUATION CRITERIA CONSIDERED

As described above, CEQA requires that an EIR describe "a range of reasonable alternatives to the project, or to the location of the project. CEQA indicates 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. As a result, potential alternatives must be limited to those that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that SCAG determines could feasibly attain most of the basic objectives of the Plan as discussed in Chapter 2, *Project Description*.

LIMITS OF SCAG'S AUTHORITY

While SCAG is required to prepare a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP), SCAG lacks the legal authority to require the decision makers of cities and counties to adopt or amend their respective land use policies, such as general plan, housing element, and zoning code amendments that would implement the land use patterns included in the SCS component of Connect SoCal 2024. Furthermore, SCAG lacks the legal authority to implement land use designations in the SCS component of the Plan

or the alternatives. There are a vast variety of specific land use scenarios at the local level that could achieve Plan objectives to a similar extent. SCAG is aware that local jurisdictions have projects that have been approved and not constructed. As described in Chapter 2, *Project Description*, SCAG worked with each local jurisdiction through the Local Data Exchange (LDX) process to identify local land use plans and visions for growth patterns sourced from local jurisdictions and approved projects that each jurisdiction judges to be reasonably foreseeable. Pursuant to CEQA, the range of alternatives considered in this 2024 PEIR illustrates the different environmental consequences of distinct regional-level alternatives to Connect SoCal 2024.

FINANCIAL CONSTRAINT

Pursuant to the applicable federal regulations in 40 CFR Section 93.108 and 23 CFR Section 450.324(e), Connect SoCal 2024 must demonstrate financial constraint by including "sufficient financial information for demonstrating that projects" in the Plan "can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained. Fiscal constraint is one of the four tests required for transportation conformity. Connect SoCal 2024 must comply with federal financial constraint requirements. Therefore, its alternatives must also be fiscally constrained.

FEASIBILITY

Feasibility is one of the evaluation criteria for consideration of alternatives to the Plan. CEQA provides that among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of technology and/or infrastructure, whether the alternative can be accomplished within a reasonable period of time, and whether the proponent can reasonably acquire, control or otherwise have access to the alternate site (or the site is already owned by the proponent).

ENVIRONMENTAL BENEFITS

The performance-based planning process used in the development of Connect SoCal 2024 provides the means to objectively assess how well the Plan perform relative to the achievement of the regional goals and meeting state and federal requirements. Alternatives are evaluated on the basis of their environmental benefits. This evaluation is important because Plan implementation is expected to benefit the environment by reducing travel delay, reduced truck delay, increasing transit boarding per capita, and reducing single occupancy mode share. However, since CEQA does not specifically require consideration and discussion of environmental benefits of alternatives as compared to those of the Plan, the evaluation is generally based on a screening-level appraisal of likely environmental benefits, rather than the type of quantitative and/or qualitative analyses used to compare environmental impacts of alternatives to those of the Plan. Therefore, environmental benefits are add-on comparative factors for consideration.

4.2 METHODOLOGY FOR DEVELOPING PLAN ALTERNATIVES

In previous RTP/SCS development cycles, PEIR alternatives had been aligned with planning scenarios which were the alternative land use patterns to those of the previous plans. This cycle, SCAG refined the Connect SoCal 2024 planning process, which starts with data collection and research. Instead of a scenario planning process, SCAG staff developed only one set of regional growth strategies for the Plan's land use patterns that were based on local plans and reflected regional trends and research. As part of the local plans, transportation projects and programs

were sourced from the County Transportation Commissions (CTCs) while land use and growth were sourced from local jurisdictions based on local data input, integrating new projects and entitlements at the local level, and discussed in one-on-one meetings with the majority of local jurisdictions through a 10-month long LDX process (see Chapter 2, *Project Description*, to learn more about the Plan's LDX process). As a result, Connect SoCal 2024 is SCAG's first RTP/SCS to not modify local data inputs. Given this shift in the RTP/SCS planning for this cycle and in the absence of planning scenarios, the 2024 PEIR has modified its approach to formulating Plan alternative concepts. Therefore, the "local input" alternative raised by the commenters during the public scoping process is not needed because the growth projections for Connect SoCal 2024 are the local inputs.

As discussed in Chapter 2, *Project Description*, of this PEIR, Connect SoCal 2024 is a regional snapshot in time. Based on what is known today, the Plan outlines the region's vision for addressing current challenges and achieving regional goals. Every four years, SCAG has the opportunity to monitor progress, re-adjust vision, assess new challenges, and articulate new regional goals. As such, this Plan is a continuum of progress across each planning cycle by building upon the steps and efforts taken by local agencies.

Since the passage of SB 375 in 2008, SCAG has developed three RTP/SCSs (namely, the 2012 RTP/SCS, the 2016 RTP/SCS, and the 2020 RTP/SCS, also referred to as Connect SoCal 2020). A general observation emerging from these past plans and the current Plan is that the region as a whole is trending toward more sustainable growth. As local agencies incorporate RTP/SCS concepts into their own general/local plans, the previously analyzed No Project alternatives are showing signs of converging with previous regional plans. Implementing agencies have also been aligning their local plans and transportation strategies by promoting sustainable development and increasing use of transit and active transportation opportunities. Additionally, as the RTP/SCS is updated and improves each four-year cycle, it also gets closer to regional policies for more sustainable development patterns. As a result, the land use growth pattern for the CEQA-required No Project alternative (i.e., the pattern expected to occur without Connect SoCal 2024) and the options for intensification might get closer to that of the Plan.

The alternatives approach used for this 2024 PEIR represents a progression of regional land use strategies, such that the No Project Alternative includes the most dispersed land use pattern, and the Intensified Land Use Alternative represents the most compact land use pattern. The land use development pattern for the Plan falls somewhere in-between the No Project Alternative and the Intensified Land Use Alternative. As such, the two selected alternatives provide expected "book-ends" of the range of potential alternatives to present a framework for understanding the greatest potential impacts from alternatives when compared to the Plan.

The evaluations are both quantitative and qualitative as means for evaluating the comparative merits of each alternative to the Plan, and ultimately identifying the environmentally superior alternative.

4.3 DESCRIPTION OF PLAN

4.3.1 PLAN OBJECTIVES

The 2024 PEIR must consider "alternatives … 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(a)). The vision and goals for Connect SoCal 2024 are rooted in the direction set forth by Connect SoCal 2020, reflecting SCAG's statutory requirements, the emerging trends and persistent challenges facing the region, and feedback from stakeholders and members of the public. SCAG's vision for Southern California in the year 2050 is "A healthy, prosperous, accessible and connected region

for a more resilient and equitable future." To achieve this vision, the Plan has established four goals and 10 subgoals as follows. These goals and subgoals serve as "the basic objectives of the project" for CEQA purposes.

Mobility: *Build and maintain a robust transportation network*

- Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions
- Ensure that reliable, accessible, affordable and appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities
- Support planning for people of all ages, abilities and backgrounds

Communities: *Develop, connect and sustain communities that are livable and thriving*

- Create human-centered communities in urban, suburban and rural settings to increase mobility options and reduce travel distances
- Produce and preserve diverse housing types in an effort to improve affordability, accessibility and opportunities for all households

Environment: *Create a healthy region for the people of today and tomorrow*

- Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change
- Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions and enable more sustainable use of energy and water
- Conserve the region's resources

Economy: *Support a sustainable, efficient and productive regional economic environment that provides opportunities for all residents*

- Improve access to jobs and educational resources
- Advance a resilient and efficient goods movement system that supports the economic vitality of the region, attainment of clean air and quality of life for our communities

4.3.2 PLAN ELEMENTS

As described in Chapter 2, *Project Description*, Connect SoCal 2024 is a long-range (minimum of 20 years) plan for the region that links air quality, land use, and transportation needs. Key components include a forecasted regional development pattern based on expert projection, existing planning documents, and regional policies and review by local jurisdiction through the year 2050 as well as a transportation network including a list of transportation projects and investments from CTCs on their planned near-term and long-term projects. The Plan also identifies Regional Planning Polices as guidance for integrating land use and transportation planning to realize the vision of Connect SoCal 2024, Implementation Strategies that identify areas where SCAG will lead, partner, or support other responsible parties over the Plan horizon, and Regional Strategic Investments to supplement and address the gap between the local plans and inputs received from CTCs and jurisdictions and regional performance targets and goals. To provide context for the description of alternatives, land use and transportation elements of the Plan were used as variables to formulate alternatives and compare their performance and environmental impacts to those of the Plan. The Plan land use and transportation elements for the two alternatives vary in the following ways:

LAND USE ELEMENTS

- The amount and scale of development in Priority Development Areas (PDAs), where residents have more access to multiple modes of transportation or trip origins and destinations are closer together, thereby allowing for shorter trips.
- The amount and scale of compact or infill development, which is measured in terms of housing product mix (the mix of high- and low-density housing units) and amount and scale of development occurring in existing developed versus undeveloped areas. Compact development has been shown to be more effectively served by transit, to support potentially higher rates of walking and biking, and to generate less vehicle travel.
- The amount and scale of mixed-use development, which supports shorter vehicle trips, higher rates of non-motorized travel, and higher efficiencies and savings in electricity and water consumptions.
- The amount and scale of development in Green Region Resource Areas (GRRAs), where residents are generally far from jobs and destinations and have increased risk of climate hazards (i.e., flood areas, coastal inundation areas, wildfire), or encroach on sensitive habitats/species, farmlands, open space or tribal lands.
- The amount of natural and agricultural lands preservation that supports protection, restoration, and conservation of natural habitats and wildlife corridors, protects the regional and local food supply and agricultural economy, creates potential carbon sinks, and aligns with climate adaptation and resilience goals.
- The Regional Forecasted Development Pattern (RFDP) integrated with transportation network to the future (2050) horizon year details where jobs and housing will be anticipated to be located in the future and demonstrates where the region can sustainably accommodate growth and needed housing. The RFDP helps understand and analyze the travel behavior of people in the region, when paired with transportation investments and policies, as well as understand where local jurisdictions anticipate new jobs and housing but does not constrain local decision making.
- Connect SoCal 2024 projects regional growth of 2,055,000 new people, 1,272,000 new jobs, and 1,605,000 households between 2019 and 2050. Projections are reported at the regional and county levels. Total values will not vary between the Plan and alternatives.

TRANSPORTATION ELEMENTS

- Transportation projects and investments included in Connect SoCal 2024 are sourced primarily from project lists submitted from CTCs and supplemented by a set of regional strategic investments. The Connect SoCal 2024 "Build" transportation network scenario is generally defined as all Federal Transportation Improvement Program (FTIP) projects, including the 2023 FTIP No Build, and the future transportation system that will result from full implementation of Connect SoCal 2024.
- The location, frequency, and type of transit service would vary based on the extent of transit-supportive land uses in corridors. Higher density, mixed-use corridors provide greater opportunities for higher capacity transit, such as light rail.
- Work from Home (WfH) is the percentage of workers in a work arrangement that do not travel to their workplace, including telecommuting, home office workers, or other strategies. It is noted that the rebound effect, which the increase in travel from WfH workers for non-work purposes, is included SCAG's activities-based travel demand model for the Plan. While a WfH worker saves commuting trips to and from workplace, SCAG's model includes the additional non-work travel or business (work-related) travel by the worker.

- Other transportation strategies such as transportation demand management (TDM), system pricing (e.g., cordon pricing, parking costs), complete streets, and transit fares incentives, and technology integration as tools for managing congestion and increasing transit ridership.

4.4 DESCRIPTION OF ALTERNATIVES

This section provides a description of the two selected "book-end" alternatives to the Plan including key land use and transportation elements as points of comparison for the evaluation of regional environmental impacts and benefits of each alternative.

4.4.1 ALTERNATIVE 1: NO PROJECT

Alternative 1 is the No Project Alternative. The No Project Alternative is required by CEQA Guidelines Section 15126.6(e)(2) and assumes what would occur if the Plan would not be approved. The No Project Alternative allows decision makers to compare the impacts of approving the Plan with the impacts of not approving the Plan. The No Project Alternative evaluates "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (CEQA Guidelines Section 15126.6(e)(2)). For purposes of this document, the No Project Alternative means continued implementation of goals and policies of the adopted 2020 RTP/SCS, as amended (CEQA Guidelines Section 15126.6(e)(3)(A)).

As described in Section 4.2, *Methodology*, this alternative is analyzed quantitatively. A summary of the land use and transportation elements for Alternative 1 is provided below.

LAND USE ELEMENTS

- Alternative 1 assumes continuation of goals and policies of the adopted 2020 RTP/SCS, as amended, with no new sets of regional planning policies or implementation strategies from Connect SoCal 2024. As such, the amount and scale of development in PDAs where residents have more access to multiple modes of transportation or trip origins and destinations are closer together would decrease as compared to those under the Plan implementation.
- The housing mix under Alternative 1 would have more single-family residences on small and large lots as compared to the Plan, which supports longer vehicle trips and lower rates of non-motorized travel. The No Project Alternative would include the lower proportion of multi-family compared to single-family homes.
- The amount and scale of development within GRRAs is assumed to increase compared to the Plan. The total and rate of land conversion of greenfield land consumption would be greater than under the Plan due to the greater land needed for development of single-family residences and more dispersed growth pattern overall with more development occurring away from transit and employment centers. As a result, the RFDP where future jobs and housing would be located would be more dispersed and sprawling under Alternative 1 than under the Plan.
- Regional growth projections/land use pattern to the future (2050) horizon year for Alternative 1 are based on the Trend baseline socioeconomic data (SED) which reflects historical growth (based on last three decennial Censuses and trend projections) to forecast future growth.

- Alternative 1 assumes the same total amount of population, household, and employment at the regional and county levels as the Plan.

TRANSPORTATION ELEMENTS

- The "No-Build" transportation network under Alternative 1 would include all existing regionally significant highway and transit projects, all ongoing TDM or Transportation System Management (TSM) activities, and all projects that are undergoing right-of-way acquisition, are currently under construction, have completed the NEPA process, or are in the first year of the previously conforming FTIP (2023 FTIP) (FY2022/2023).
- "Exempt projects" include certain highway and transit projects of the types listed in Table 2 of 40 CFR Section 93.126. These projects are exempt from the requirement to determine conformity and would be included in the No Project Alternative since they may proceed toward implementation even in the absence of a conforming transportation plan such as Connect SoCal 2024.[1]
- Due to a more dispersed growth pattern, employees and residents are also assumed to make more trips and trips would be longer.
- The location, frequency, and type of transit service under Alternative 1 would provide less opportunities for higher capacity transit as compared to the Plan.
- The percentage of WfH workers is assumed to be lower under Alternative 1; however, there could be fewer travel by work-at-home workers for non-work purposes; thereby lessening the rebound effect than under the Plan.
- Other transportation strategies such as TDM, system pricing (e.g., cordon pricing, parking costs), complete streets, and transit fares incentives, and technology integration as tools for managing congestion and increasing transit ridership would also decrease.

4.4.2 ALTERNATIVE 2: INTENSIFIED LAND USE

Alternative 2 is the Intensified Land Use Alternative.[2] It is based on more aggressive, faster implementation, and a greater scale of intensified land use development patterns than the Plan, and substantially beyond and different from existing land use patterns. The land use patterns in this alternative would build on land use strategies described in the Plan by increasing growth in and around PDAs and beyond to maximize transit opportunities. The focus of this alternative is on increased densities adjacent to existing employment and transportation infrastructure, which would lead to fewer and shorter trips and therefore a greater reduction in vehicle miles traveled (VMT) as compared to the Plan. Specifically, the growth pattern associated with this alternative includes a greater degree of progressive job-housing distribution in urban areas and suburban town centers, transit-oriented developments (TODs), transit priority areas (TPAs), livable corridors, and neighborhood mobility areas (NMAs). It optimizes for PDAs by placing additional emphasis on infill development and transit. As described in Section 4.2, *Methodology*, this alternative is analyzed qualitatively. A summary of the land use and transportation elements for Alternative 2 is provided below.

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1 United States Environmental Protection Agency. (2012). Transportation Conformity Regulations.

2 In previous cycles, the Intensified Land Use PEIR Alternative has been aligned with data generated from Plan's "Unconstrained" Scenario. This cycle, Connect SoCal 2024 did not engage in the scenario planning process to identify alternative land use patterns to the Plan and instead incorporated regional growth strategies in datasets for review by local jurisdictions directly into the Plan (see Chapter 2, *Project Description*, to learn more about the Plan's LDX process). Given this shift in approach, SCAG took a qualitative analytical approach the Intensified Land Use Alternative in this PEIR.

LAND USE ELEMENTS

- Because Alternative 2 assumes more aggressive land use development patterns than the Plan, the amount and scale of development in PDAs where residents have more access to multiple modes of transportation or trip origins and destinations are closer together would increase compared to the Plan.
- The housing mix under Alternative 2 would include fewer single-family but more mixed-use development and the highest proportion of multi-family residences within urban cores than under the Plan.
- The amount and scale of development within GRRAs is assumed to decrease while the amount of natural and agricultural lands preservation would increase under Alternative 2 than under the Plan. As such, the total and rate of land conversion of greenfield land, natural land, and agricultural land in acres would be less than under the Plan due to the increased concentration of development adjacent to transit and existing and future employment centers, and the development would be more suitable for walking, biking, and other modes of active transportation. As a result, the RFDP where future jobs and housing would be located would be more compact under Alternative 2 than under the Plan.
- Alternative 2 is assumed to have the same regional and county totals of population, household, and employment data as the Plan.

TRANSPORTATION ELEMENTS

- Alternative 2 is assumed to have the same transportation network, investments, and programs as the Plan, including implementation of the approximately 2,000 short-term and long-term transportation projects included in the Plan.
- Due to a more concentrated growth pattern, employees and residents are also assumed to make less and shorter motorized trips as compared to the Plan.
- Alternative 2 is assumed to have higher percentage of WFH workers; however, there could be greater rebound effect than that under the Plan as there would be more work-at-home workers and more travel for no-work purposes.

4.5 COMPARISON OF ALTERNATIVES

4.5.1 MEETING PROJECT OBJECTIVES

The effectiveness of each of the alternatives to achieve the basic objectives of the Plan has been evaluated in relation to the statement of the Plan's goals and subgoals described above. Although the No Project Alternative is not capable of meeting most of the goals and subgoals of the Project, it has been analyzed, as required by CEQA.

The Intensified Land Use Alternative is capable of meeting most of the goals and subgoals of the Plan. However, because it would place a large portion of growth in existing communities it may conflict with local plans or place

a burden on some community facilities such as parks and other services to a greater extent than the Plan. Therefore, it is less effective in meeting the following goals and subgoals:

2. **Communities: *Develop, connect, and sustain communities that are livable and thriving.***

    a. *Create human-centered communities in urban, suburban, and rural settings to increase mobility options and reduce travel distances*. The Intensified Land Use Alternative would not achieve this subgoal to the same extent as the Plan due to its focus on compact development beyond what is currently contemplated under the Plan. The emphasis on development in urban communities may result in overuse of parks and other services (police, fire, schools, library) which has the potential to result in quality of life impacts in urban areas. The resulting deficiencies in park facilities, fire and police protection services, and schools and libraries in areas that are currently underserved or would become underserved under the Intensified Land Use Alternative could create or exacerbate inequities in livability and opportunities for quality recreation, education, public safety, and community facilities in affected areas. Furthermore, a focus on development in existing urbanized areas may limit the potential growth and development of communities in rural and suburban settings with more limited transportation options and public services and facilities.

3. **Environment: *Create a healthy region for the people of today and tomorrow.***

    a. *Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change*. The Intensified Land Use Alternative would not achieve this subgoal to the same extent as the Plan also due to its focus on compact development beyond what is currently contemplated under the Plan. In areas where public services and facilities become overburdened and insufficient to meet growing demands, the surrounding community may be less resilient and unable to adequately respond to acute disruptions like natural disasters or other emergency conditions. Similarly, given the higher density in urban centers under this alternative, the increased concentration of people and vehicles in a denser configuration could result in localized effects such as higher traffic congestion and potential exposure higher numbers of people to risks associated with earthquakes, floods, urban fires, or other such events. In addition, the population density in urban areas would also place a higher burden on open spaces, parks, and recreational facilities that offer residents opportunities for outdoor activities and physical activity, and as such this alternative could reduce the availability of these opportunities for healthy lifestyle choices.

As further described below, consideration of alternatives requires careful examination of the multiple facets of each alternative. For example, while urban development may preserve farmland or other natural resources, it could place a burden on urban parks, schools, police and fire services, and aging infrastructure.

4.5.2 ENVIRONMENTAL IMPACTS OF ALTERNATIVES

Consistent with the requirements of CEQA Guidelines Section 15126.6(d), this section of the analysis provides information for the alternatives, including the No Project Alternative, to allow meaningful evaluation, analysis, and comparison with the Project, inclusive of direct, indirect, and cumulative impacts. The evaluation demonstrates if the alternative can avoid or reduce the significant and unavoidable effects of the Project.

ALTERNATIVE 1: NO PROJECT ALTERNATIVE

AESTHETICS

Impacts to scenic vistas from transportation projects in Alternative 1, the No Project Alternative, would be less than the Plan because the No Project Alternative would result in fewer transportation projects overall and therefore fewer opportunities to obstruct a scenic vista. However, impacts from land use development under the No Project Alternative could be greater than the Plan as the overall land use pattern would be more dispersed, resulting in more opportunities to obstruct a scenic vista. Therefore, overall, impacts to scenic vistas would continue to be significant and similar to the Plan.

Similarly, the No Project Alternative would have less transportation projects and would result in fewer opportunities to create visually contrasting elements that could adversely affect existing scenic resources. The No Project Alternative would not include any transportation projects that could affect State Scenic Highways or vista points. However, because of its more dispersed land use pattern Alternative 1 could result in greater opportunities for visual contrasts from land use development that could degrade the visual character or quality of views, including impacts to views of green space and other scenic resources. Therefore, overall impacts to views would continue to be significant and similar to those of the Plan.

The Plan includes strategies to focus growth in PDAs and away from GRRAs, which would help reduce the consumption and disturbance of greenfield and reduce resultant impacts on aesthetics and views. Under the No Project Alternative, greater areas of greenfield would be impacted resulting in greater impacts to visual character (although individual jurisdictions may still seek to reduce the urban footprint through their general plans). The No Project Alternative's impacts would result in the consumption of more greenfield land potentially resulting in loss of scenic resources and changes in visual character. Impacts to visual character in urbanized areas would be similar to the Plan because existing zoning and other regulations governing visual quality are mandatory and would be equally enforced under this alternative. Impacts would remain significant.

Regarding light and glare, with fewer transportation projects proposed, the No Project Alternative would require less transportation-related lighting to be installed and would introduce fewer vehicles that could create daytime glare effects in currently undeveloped areas in the region, which would reduce overall transportation-related light and glare impacts; however, the greater amount of land consumed under the No Project Alternative could introduce more lighting into undeveloped areas associated with land use development resulting in potential impacts greater than the Plan. Overall, light and glare impacts would be similar to the Plan and would remain significant.

AGRICULTURE AND FORESTRY RESOURCES

Conversion of agricultural land (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), timberland, and timberland zoned Timberland Production to non-agricultural, or non-timber uses under the No Project Alternative would be similar to Connect SoCal 2024 because although the projected land use pattern of the No Project Alternative would be more dispersed; overall, it would convert fewer acres of agricultural land to urban use. This is because the Plan anticipates using more agricultural land than the trend to accommodate growth, consistent with jurisdictional feedback on locally anticipated growth (see the Connect SoCal 2024 Land Use and Communities Technical Report). However, the planned transportation improvements of this alternative would include 4,766 fewer lane miles of new or expanded roadway and highways relative to the Plan. Impacts regarding conversion of agricultural land to non-agricultural uses would be similar to those of the Plan

and would be significant. Due to the lack of timberland production activities in the SCAG region, however, no impacts associated with conversion of timberland and timberland zoned Timberland Production would occur under this alternative, as is the case under the Plan.

The No Project Alternative would not include transportation projects with the potential to result in the loss or conversion of forest lands; however, given the expanded footprint of land use development under the No Project Alternative, more projects could be developed within GRRAs (including forest lands) compared to the Plan. Impacts under this alternative, therefore, would be similar to those of the Plan, and impacts related to forest land would remain significant.

The potential for conflicts with zoning, land use designations, Williamson Act contracts, and/or other applicable regulations that protect agricultural and forestry resources and timberlands would also be less because fewer additional agricultural lands would be converted to nonagricultural uses than under the Plan. However, the potential for other changes that could result in the conversion of agricultural land to developed land uses (e.g., encroachment into agricultural production areas, loss or reduction of water supply, changes to hydrology and drainage patterns, climate change, inadequate production value, urban development pressure, etc.) would be greater due to increases in urbanization in rural areas under this alternative as compared to the Plan.

AIR QUALITY

The Plan would meet federal transportation conformity requirements and would be consistent with State Implementation Plans and therefore would have a less than significant impact with respect to consistency with air quality management plans at the regional level. Individual projects have the potential to exceed project-level significance thresholds and, as such, there exists the potential for project-level inconsistencies with local air quality management plans. Therefore, the impact is considered significant at the project/local level. It is not clear that Alternative 1 would conform to the local air quality management plans because the No Project Alternative would not include updated strategies, including new transportation investments beyond those that are currently programmed in the Plan to meet federal transportation conformity requirements, and therefore, the No Project Alternative would potentially conflict with or obstruct implementation of air quality management plans at the regional level.

Under the No Project Alternative, no new transportation investments would be made beyond those that are currently programmed. As a result, fewer transportation projects would be built than under the Plan resulting in less construction emissions compared to the Plan. However, it is still anticipated that construction emissions in the region could still exceed the significance thresholds established in the CEQA Guidelines (these thresholds were developed for use in analyzing individual development projects) and applied by the local air districts (SCAQMD, VCAPCD, MDAQMD, and AVPCD), which are typically based on daily and/or annual emissions. Individual construction projects and total regional construction on a given day or in a given year could be similar under the Plan and No Project Alternative; therefore, construction emissions in the region under the No Project Alternative could still result in a significant impact, which would be short-term for each individual project, but overall, the region would experience ongoing air quality impacts.

With respect to operations, under the No Project Alternative, investments in VMT reduction projects and infill and compact land use strategies would not occur to the same degree as the Plan. Therefore, the No Project Alternative is anticipated to have higher levels of VMT than the Plan (see **Table 4-6, VMT 2050 by County**, below) resulting in a higher level of operational emissions compared to the Plan for particulate matter and ozone precursors, pollutants for which the area is designated as non-attainment.

In addition, the No Project Alternative is anticipated to have higher levels of vehicle delay than the Plan (see **Table 4-10, Total Daily Vehicle Hours of Delay (2050)**, below, resulting in greater emissions from vehicle idling. As a result, the No Project Alternative could have a significant cumulative impact.

With respect to cancer risk and impact to public health, the No Project Alternative would result in greater emissions as compared to the Plan due to the increase in VMT given that under the No Project Alternative, investments in VMT reduction projects and infill and compact land use strategies would not occur to the same degree as the Plan. As shown in Table 4-6, total VMT would be less under the Plan than the No Project, with the exception of Imperial County which would be similar. Therefore, emissions will be less under the Plan as compared to the existing conditions and to the No Project.

As demonstrated in **Table 4-1, Summary Maximum Exposed Individual Residential 30-Year Exposure Cancer Risk**, seven of the transportation segments under the No Project scenario would have lower cancer risk than under the Plan. This is likely due to changes in the land use growth pattern and the ratio of light/medium vehicle versus heavy-duty truck travel expected under the Plan versus a No Plan. For example, Segment 1 is in El Centro on the I-8; under the Plan the segment would experience a decrease in VMT from light- and medium-duty cars of approximately 1,400 as compared to the No Project; however, heavy-duty truck traffic is expected to increase by over 200 daily trips under the Plan as compared to the No Project scenario. Since the majority of DPM emissions and the associated health risk results from heavy-duty vehicles, the health risk would be greater in this segment under the Plan. The health risk under the Plan is anticipated to be less in most segments as compared to the No Project scenario. The total health risk summed across the analyzed segments under the Plan (1,553 in 1 million) would be less than the No Project (1,575 in 1 million). Additionally, the total health risk (1,553 in 1 million) under the Plan would be less than under existing conditions (4,532 in 1 million). Similar to the Plan, future emissions under the No Project Alternative would be substantially less than existing conditions due to the dramatic reductions in emissions that are expected to result from federal and state regulations that require reduced tail pipe emissions from on-road heavy-duty diesel trucks. Health risk associated with construction activities under the No Project Alternative would be similar to the Plan and potentially significant adjacent to extended intense construction activities. While the No Project Alternative would not include new transportation investments beyond those that are currently programmed, individual construction projects and total regional construction on a given day or in a given year could be similar under the Plan and No Project Alternative, and therefore similar to the Plan, construction emissions and related construction health risk impacts in the region under the No Project Alternative could still result in a significant impact.

Health risk associated with construction activities under the No Project Alternative would be similar to the Plan and potentially significant adjacent to extended intense construction activities. While the No Project Alternative would not include new transportation investments beyond those that are currently programmed, individual construction projects and total regional construction on a given day or in a given year could be similar under the Plan and No Project Alternative, and therefore similar to the Plan, construction emissions and related construction health risk impacts in the region under the No Project Alternative could still result in a significant impact.

TABLE 4-1 **Summary Maximum Exposed Individual Residential 30-Year Exposure Cancer Risk**

SEGMENT NO.	TRANSPORTATION SEGMENT	COUNTY/REGION	2050 NO PLAN	2050 PLAN
1	IMP I-8	Imperial/El Centro	94.1	94.9
2	IMP SR-78	Imperial/Westmoreland	59.7	60.1
3	LA I-110	Los Angeles/Carson	114	118
4	LA I-710	Los Angeles/Compton	166	135
5	LA SR-60 DB	Los Angeles/Diamond Bar	143	146
6	LA SR-60 SEM	Los Angeles/South El Monte	88.4	86.2
7	ORA I-5	Orange/Orange	87.2	97.0
8	ORA I-405	Orange/Seal Beach	176	169
9	RIV I-10	Riverside/Banning	38.0	37.6
10	RIV I-15	Riverside/Temecula	38.9	38.9
11	RIV SR-91	Riverside/Corona	113	116
12	SB I-15 ONT	San Bernardino/Ontario	58.4	65.6
13	SB I-15 VIC	San Bernardino/Victorville	42.5	40.7
14	SB SR-60	San Bernardino/Ontario	185	182
15	VEN US-101 SB	Ventura/San Buenaventura	59.3	58.3
16	VEN US-101 TO	Ventura/Thousand Oaks	111	108

Source: Health Risk Assessment (Appendix B-2).
Table Note: Cancer Risk CEQA Significance Threshold is an increase of 10 per 1 million from the Plan.

A summary of NO_2 concentrations for existing and future conditions under the Plan and the No Project Alternative year 2050 are provided in **Table 4-2, Maximum 1-Hour NO_2 Concentrations (ppb) at Near-Freeway Sensitive Receptors**, and **Table 4-3, Maximum Annual NO_2 Concentrations (ppb) at Near-Freeway Sensitive Receptors**. As shown therein, NO_2 concentrations under the No Project Alternative would generally be higher than under the Plan. However, due to differences in in the land use growth pattern and VMT distribution and vehicle fleet (light and medium duty vehicles and heavy-duty truck traffic) in some cases, the NO_2 concentration for some segments under the No Project Alternative would be slightly lower than under the Plan. As under the Plan, the modeling analysis shows that the NO_2 concentrations under the No Plan Alternative would decrease substantially in the future as compared to the existing conditions and would not exceed the NAAQS 1-hour NO_2 100 ppb standard and annual NO_2 53 ppb standard. Therefore, as with the Plan, the No Plan Alternative would be protective of human health and public welfare as established by the Primary and Secondary NO_2 NAAQS.

TABLE 4-2 **Maximum 1-Hour NO_2 Concentrations (ppb) at Near-Freeway Sensitive Receptors**

SEGMENT NO.	TRANSPORTATION SEGMENT	COUNTY/REGION	2050 NO PLAN	2050 PLAN
1	IMP I-8	Imperial/El Centro	61.4	63.9
2	IMP SR-78	Imperial/Westmoreland	61.5	61.5
3	LA I-110	Los Angeles/Carson	88.9	88.3
4	LA I-710	Los Angeles/Compton	90.1	89.6
5	LA SR-60 DB	Los Angeles/Diamond Bar	93.6	93.8
6	LA SR-60 SEM	Los Angeles/South El Monte	86.5	86.3
7	ORA I-5	Orange/Orange	60.2	60.7
8	ORA I-405	Orange/Seal Beach	69.2	68.6
9	RIV I-10	Riverside/Banning	58.5	58.5
10	RIV I-15	Riverside/Temecula	61.9	61.9
11	RIV SR-91	Riverside/Corona	69.4	69.7
12	SB I-15 ONT	San Bernardino/Ontario	80.6	81.2
13	SB I-15 VIC	San Bernardino/Victorville	81.0	80.6
14	SB SR-60	San Bernardino/Ontario	87.6	87.8
15	VEN US-101 SB	Ventura/San Buenaventura	39.5	39.3
16	VEN US-101 TO	Ventura/Thousand Oaks	39.4	39.2
NAAQS (ppb)		—	100	100
Does any segment exceed?		—	No	No

Source: Health Risk Assessment (Appendix B-2).

Table Note: The NAAQS for the 1-hour NO_2 standard is 100 ppb. The results presented are in units of ppb and compared to the NAAQS for significance determination.

TABLE 4-3 **Maximum Annual NO_2 Concentrations (ppb) at Near-Freeway Sensitive Receptors**

SEGMENT NO.	TRANSPORTATION SEGMENT	COUNTY/REGION	2050 NO PLAN	2050 PLAN
1	IMP I-8	Imperial/El Centro	12.3	13.1
2	IMP SR-78	Imperial/Westmoreland	11.3	11.3
3	LA I-110	Los Angeles/Carson	26.8	26.9
4	LA I-710	Los Angeles/Compton	27.6	27.4
5	LA SR-60 DB	Los Angeles/Diamond Bar	27.7	27.8
6	LA SR-60 SEM	Los Angeles/South El Monte	26.4	26.3
7	ORA I-5	Orange/Orange	21.7	21.9
8	ORA I-405	Orange/Seal Beach	24.0	23.8
9	RIV I-10	Riverside/Banning	15.6	15.6
10	RIV I-15	Riverside/Temecula	18.5	18.5
11	RIV SR-91	Riverside/Corona	18.5	18.6
12	SB I-15 ONT	San Bernardino/Ontario	31.1	31.3
13	SB I-15 VIC	San Bernardino/Victorville	30.6	30.5
14	SB SR-60	San Bernardino/Ontario	33.4	33.5
15	VEN US-101 SB	Ventura/San Buenaventura	8.6	8.6
16	VEN US-101 TO	Ventura/Thousand Oaks	8.4	8.4
NAAQS (ppb)		—	53	53
Does any segment exceed?		—	No	No

Source: Health Risk Assessment (Appendix B-2).

Table Note: The NAAQS for the annual NO_2 standard is 53 ppb. The results presented are in units of ppb and compared to the NAAQS for significance determination.

A summary of existing and future conditions under the Plan and the No Project Alternative year 2050 Nitrogen Deposition is provided **Table 4-4, Maximum Nitrogen Deposition at Near-Freeway Sensitive Receptors**. As shown therein, nitrogen deposition for the No Project Alternative would generally result in higher nitrogen deposition than under the Plan. Due to differences in in the land use growth pattern and VMT distribution and vehicle fleet (light and medium duty vehicles and heavy-duty truck traffic) in some cases, for some segments the No Project Alternative would have slightly lower nitrogen deposition than under the Plan, though overall nitrogen deposition would be greater. However, the modeling analysis shows that the nitrogen deposition for all segments under the No Plan would be similar to the Plan and would decrease substantially in the future as compared to the existing conditions. As there is no national or state standard for comparison, nitrogen deposition results are provided primarily for informational purposes and the No Plan Alternative nitrogen deposition trends directly correlate to VMT as with nitrogen concentrations.

TABLE 4-4 **Maximum Annual Nitrogen Deposition at Near-Freeway Sensitive Receptors**

SEGMENT NO.	TRANSPORTATION SEGMENT	COUNTY/REGION	2050 NO PLAN	2050 PLAN
1	IMP I-8	Imperial/El Centro	0.149	0.150
2	IMP SR-78	Imperial/Westmoreland	0.104	0.104
3	LA I-110	Los Angeles/Carson	0.298	0.305
4	LA I-710	Los Angeles/Compton	0.363	0.346
5	LA SR-60 DB	Los Angeles/Diamond Bar	0.434	0.434
6	LA SR-60 SEM	Los Angeles/South El Monte	0.271	0.258
7	ORA I-5	Orange/Orange	0.254	0.269
8	ORA I-405	Orange/Seal Beach	0.499	0.476
9	RIV I-10	Riverside/Banning	0.090	0.090
10	RIV I-15	Riverside/Temecula	0.375	0.373
11	RIV SR-91	Riverside/Corona	0.466	0.475
12	SB I-15 ONT	San Bernardino/Ontario	0.138	0.146
13	SB I-15 VIC	San Bernardino/Victorville	0.083	0.076
14	SB SR-60	San Bernardino/Ontario	0.386	0.371
15	VEN US-101 SB	Ventura/San Buenaventura	0.244	0.228
16	VEN US-101 TO	Ventura/Thousand Oaks	0.185	0.173

Table Note: Units are in grams per meter-squared per year.

Objectionable odors under the No Project Alternative would be similar to the Plan. While under normal circumstances, the No Project Alternative would not be expected to result in substantial odor emissions or affect a substantial number of people when compared to existing conditions, given the size of and complexity of air quality conditions in the region, variability in application and enforcement of air quality rules and regulations, and potential for unforeseen circumstances to occur through the 2050 Plan horizon, it is possible that construction activities and operation of transportation projects and urban land use projects consistent with land use strategies currently in place could generate emissions (such as those leading to odors) adversely affecting a substantial number of people similar to the Plan. While the No Project Alternative would not include new transportation investments beyond those that are currently programmed, individual construction projects and total regional construction on a given day or year could be similar under the Plan and No Project Alternative, which would result in similar levels of construction-related emissions (such as those leading to odors) as the Plan.

BIOLOGICAL RESOURCES

The Plan includes strategies that focus new growth along existing transportation corridors and in urbanized areas, rather than vacant, open space/recreation, and agricultural lands such as GRRAs. While it is likely that some growth would still occur in GRRAs under the Plan, without Plan land use strategies, impacts to biological resources may be more widespread. Under the No Project Alternative there would be more standard (single-family) suburban residential development and a corresponding increase in the amount of greenfield land developed. However, the No Project Alternative would not include the implementation of planned transportation projects with the potential to affect biological resources. Impacts to biological resources are directly linked to the amount of native habitat

conversion in non-urban areas. As such, implementation of the Plan may lead to increased degraded habitat in some areas while other areas may see improved habitat compared to the No Project Alternative (see Connect SoCal 2024 Land Use and Communities Technical Report). Therefore, impacts to sensitive species and their habitats, riparian habitat and sensitive natural communities, and wetlands under Alternative 1 would be similar than under the Plan and would remain significant.

The increased development footprint would also increase the potential for reductions in habitat connectivity and wildlife movement, with the No Project Alternative resulting in the urbanization of more essential connectivity natural areas than the Plan. However, the No Project Alternative would not include the implementation of planned transportation projects and thus would not create additional barriers to wildlife movement associated with linear projects like new streets, highways, and rail facilities that would occur under the Plan. As such, overall, impacts to wildlife movement would be similar to those of the Plan but would remain significant.

With regard to tree preservation ordinances and other local policies or ordinances protecting biological resources, the No Project Alternative would not include construction of planned transportation projects and thus would have a reduced potential compared to the Plan to result in tree removals or physical impacts to biological resources associated with the construction of such facilities. However, because the land use development pattern under the No Project Alternative would be more widespread and fragmented compared to that under the Plan, it would result in an increased potential for impacts to trees and other biological resources and associated conflicts with policies or ordinances intended to protect them. As such, impacts would be similar to the Plan and would be significant.

Similarly, with regard to Habitat Conservation Plans and Natural Community Conservation Plans, the No Project Alternatives would result in the urbanization of more SCAG Natural Lands Conservation Areas and greenfield land than would occur under the Plan. Nonetheless, this alternative would not result in implementation of planned linear transportation projects that could traverse areas within the limits of such plans, thereby increasing the potential for conflicts to occur. As such, impacts would be similar to the Plan under the No Project Alternative.

CULTURAL RESOURCES

Impacts to historical resources could be reduced under Alternative 1 as there would be less pressure to redevelop existing sites in urban areas. Impacts to archeological resources and human remains under the No Project Alterative would be greater than under Connect SoCal 2024 because this alternative's projected land use pattern would be less compact and therefore would consume more greenfield land compared to the Plan. The additional land disturbance, such as grading and excavation, resulting from the projected land use pattern of this alternative would result in greater likelihood of encountering unknown surface or subsurface archaeological resources, or human remains; it would also result in greater impacts to the character of settings that contribute to the significance of historic built environments. The No Project Alternative would result in fewer lane miles constructed which would reduce transportation related impacts compared to the Plan, which would reduce the amount of soil disturbance associated with construction and expansion of highways and other planned roadway projects and therefore result in lower likelihood of encountering unknown surface or subsurface archaeological resources, and/or human remains. Overall, impacts to cultural resources would be greater when compared to Connect SoCal 2024 and remain significant.

ENERGY

The No Project Alternative would likely result in increased use of energy because it assumes more large lot development, resulting in a larger share of individual detached structures. These individual structures require more energy for materials, more materials overall, and more fuel to build (e.g., additional equipment and vehicle use for site development, grading, and excavation) than would be needed for attached structures.

Table 4-5, Energy Consumption Summary, summarizes the projected energy consumption associated with implementation of the No Project Alternative compared to that of the Plan in 2050. As shown in Table 4-5, per-capita energy consumption (based on consumption by household) under the No Project Alternative would be greater than under the Plan due to the more dispersed land use pattern. The No Project Alternative also includes a housing mix with a greater proportion of large-lot single-family homes as compared to the Plan. As a result, residential energy use, residential energy and water costs per household, and residential and commercial building total energy use would be higher under the No Project Alternative than under the Plan (see Table 3 in the Connect SoCal 2024 Land Use and Communities Technical Report), reflecting the efficiencies realized by the more compact development pattern resulting from implementation of the Plan.

TABLE 4-5 **Energy Consumption Summary**

PERFORMANCE MEASURE	2050 PLAN	2050 NO PLAN
Residential Energy Consumed (Btu)	348 trillion Btu	358 trillion Btu
Commercial Energy Consumed (Btu)	497 trillion Btu	504 trillion Btu
Total Energy Consumed (Btu)	845 trillion Btu	862 trillion Btu
Residential Energy Cost ($)	$11.0 billion	$11.2 billion
Residential Energy Cost per Household ($)	$1,411	$1,439
Water-Related Electricity Use (GWh)	12,960 GWh	13,060 GWh

Source: SCAG Scenario Planning Model (2023)
Table Notes: Btu = British thermal units; GWh = gigawatt-hour

Similarly, transportation fuel consumptions would be reduced under the No Project Alternative compared to under the Plan (see Table 3 in the Connect SoCal 2024 Land Use and Communities Technical Report). As such, similar to building-related energy use, transportation-related energy use would be higher under the No Project Alternative than under the Plan, which is consistent with the overall lower VMT associated with a more concentrated development pattern facilitated by the Plan.

Likewise, residential and commercial water use and water-related energy use under the No Project Alternative would be higher than under the Plan (see Table 3 in the Connect SoCal 2024 Land Use and Communities Technical Report).

Because the No Project Alternative would include more large-lot single-family homes, which require more energy use per capita as compared to attached and multi-family homes, this alternative would result in more energy use per capita as compared to the Plan. The more dispersed land use pattern also leads to higher VMT and thereby more inefficient consumption of transportation energy than under the Plan. As discussed above, per capita energy consumption would decrease under this alternative (as the trajectory of per capita energy is on a downward trend overall), but per capita energy consumption would be higher than under the Plan. Therefore, the No Project

Alternative would result in greater impacts related to the wasteful, inefficient, or unnecessary consumption of energy during construction activities and long-term operations and impacts would remain significant.

This alternative is likely to have similar impacts on state and local plans for renewable energy or energy efficiency as compared to the Plan. Use of some renewable energy sources could be facilitated, while the use of other renewable energy sources could be hindered by this alternative (e.g., more compact development can be more energy and efficient in building design and can provide more convenient access to alternative-powered transit, EVs, and active transportation options that would reduce energy consumption, while more dispersed rural and suburban development could facilitate larger-scale solar installations). Implementation of the California Energy Code and State goals for increasing the percentage of electricity from renewable and zero-carbon sources under this alternative would be the same as under the Plan. As such, this alternative could conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be significant, similar to the Plan.

GEOLOGY AND SOILS

While implementation of the Plan would result in a greater number of transportation projects than the No Project Alternative, Alternative 1 would result in similar significant impacts associated with risk as a result of surface fault rupture, ground-shaking liquefaction, landslides, and other risks associated with seismic events. This is because the same level of development would still occur but would be spread out over a wider area, thus having the potential to occur in more areas subject to or exacerbating geologic and seismic hazards. The anticipated population growth would remain constant under either alternative and the Plan, and the entire region is subject to the same seismic risk. Existing state and local building code requirements addressing substantial adverse effects due to earthquakes and seismic activity would still generally apply to the projected land use pattern and planned transportation improvements of the Plan.

Impacts related to soil erosion and loss of topsoil would be significant and would be greater under the No Project Alternative as there would be an increase in land consumed which could result in more soils exposed. Impacts related to unstable soil, expansive soil, and septic systems would also be significant and similar to the Plan as the majority of projects would continue to comply with existing regulations but there could be instances where some projects are not subject to applicable seismic safety and building code requirements.

Impacts to paleontological resources and unique geologic features would be greater under this alternative than under the Plan because the projected land use pattern of this alternative is more dispersed. The additional land disturbance resulting from the projected land use pattern under this alternative would result in greater potential for impacts to paleontological resources and unique geologic features.

GREENHOUSE GAS EMISSIONS

The greenhouse gas (GHG) emissions for on-road vehicles under the No Project Alternative would be higher than under the Plan. On a county basis, GHG emissions for on-road vehicles in the SCAG region under the No Project Alternative would also be higher than under the Plan for all counties. The more disbursed development pattern of the No Project Alternative would result in increased VMT compared to the Plan, and thus would result in a greater GHG impacts than the Plan. GHG emissions from other transportation sources would be expected to be similar

under the Plan or the No Project Alternative as these sources are regulated at the federal and state level.[3] Overall, the Plan would improve regional GHG emissions compared to the No Project Alternative.

The GHG emissions for building energy and water energy would be higher under No Project Alternative than under the Plan. The more disbursed development pattern of the No Project Alternative would result in increased building energy use (as multi-family buildings are more efficient than single-family homes). The Plan would improve regional GHG emissions compared to the No Project Alternative.

Senate Bill (SB) 375 requires CARB to develop regional CO_2 emission reduction targets, compared to 2005 emissions, for cars and light trucks only for 2020 and 2035 for each of the state's MPOs. As discussed in Section 3.8, *Greenhouse Gas Emissions*, the Plan meets the SB 375 targets and is not in conflict with SB 375 requirements. Since the No Project Alternative does not include the Regional Planning Policies (i.e., no regional planning policies for PDAs) and Implementation Strategies as with the Plan, this alternative could potentially conflict with SB 375 requirements. In addition, the No Project Alternative would likely result in greater GHG emissions than the Plan due to the reduced transportation investments to facilitate trip reductions and less compact growth patterns. Under the No Plan Alternative, there remains the possibility for conflicts with AB 32 and/or SB 32, and such conflicts may be somewhat greater under the No Project scenario as land use development patterns could be less efficient. As such, the No Project Alternative could have a greater adverse impact on GHG emissions than the Plan.

HAZARDS AND HAZARDOUS MATERIALS

Hazardous materials impacts to the public or the environment associated with construction activities and operation under this alternative would be similar to impacts under the Plan. This is because of the numerous federal, state, and local requirements and regulations that minimize, but do not entirely eliminate, the creation of significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials; through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; and through handling of hazardous materials, substances, and waste within 0.25 mile of an existing or proposed school. These existing requirements and regulations would apply equally to the different projected land use patterns and planned transportation network improvements of this alternative and the Plan. Therefore, impacts would be similar. The same is true for existing requirements and regulations addressing potential safety hazards and excessive noise within an airport land use plan or within two miles of a public or public use airport, so airport-related safety and noise impacts to people residing or working in the Plan area would be the same under this alternative. The potential to encounter contaminated sites identified under Government Code Section 65962.5 may be less under the No Project Alternative as a more dispersed growth pattern would not encourage development of sites that may have been contaminated by past uses to the same extent as the Plan. However, agricultural sites can be contaminated with pesticides and herbicides; these sites may be less frequently identified on lists developed pursuant to Government Code Section 65962.5.

The more dispersed land use pattern under the No Project Alternative would be more automobile-dependent than the Plan, which would result in higher total VMT and overall vehicle delay in the region, which could further limit emergency vehicle access, emergency response, and the ability of communities to evacuate an area during an emergency as compared to the Plan. Additionally, the lack of planned transportation improvements would not provide additional vehicle access options and potential evacuation routes compared to the Plan. Therefore, the more dispersed land use pattern of this alternative and lack of transportation system improvements would result

[3] Emission sources include rail, aviation, GSE, and ocean-going vessels. Rail, aviation, and ocean-going vessels are regulated at the federal level. Airport Ground Support (GSE) sources are regulated at the state level.

in greater impacts associated with emergency access and emergency response and evacuation plans and impacts would be significant.

HYDROLOGY AND WATER QUALITY

Under the No Project Alternative, fewer areas would be impacted by excavation and construction activities related to transportation projects as compared to the Plan but greater areas impacted by land use development. While the No Project Alternative would reduce the number of transportation projects built in the SCAG region, it would result in greater vacant land consumption that would, in turn, increase impervious surfaces. The additional land area permanently converted to impervious surfaces would increase the potential volume and degrade the water quality of stormwater flows, and thus would have an increased potential to contribute to violation of water quality standards or waste discharge requirements. Additional impervious surface would decrease groundwater supplies or interfere with groundwater recharge such that this alternative may impede sustainable groundwater management of the basin. Additional impervious surface also would alter drainage patterns in a manner that would increase the potential for substantial erosion, siltation, and flooding relative to the Plan. This alternative would require greater storm drainage system capacity than the Plan because of its conversion of additional land area to impervious surface area, which in turn could impede or redirect flood flows. In addition, the housing mix of this alternative would include a larger share of large-lot single-family homes, which would result in more managed landscaping areas and associated pollutants such as nutrients, herbicides, and irrigated runoff, which in turn could adversely affect surface and groundwater quality.

With fewer transportation projects than the Plan, impacts of the No Project Alternative would be reduced when compared with the Plan. As the currently planned projects included in the No Project Alternative are built, the impacts resulting from increased roadway runoff and drainage patterns would remain significant. Likewise, the impacts to groundwater infiltration caused by the increased impervious surfaces of roadway projects, and to increased flooding hazards, would remain significant.

With regard to flood hazard, tsunami, and seiche zones, the No Project Alternative would result in a larger development footprint, which would in turn increase the potential for inundation where development occurs within areas subject to such hazards. While the No Project Alternative would not result in implementation of planned transportation project that would occur under the Plan, transportation facilities are typically not subject to the same level of risk as habitable structures and other urban development. Therefore, although this alternative could potentially increase the likelihood of inundation in flood hazard, tsunami, and seiche zones, but would reduce inundation potential associated with transportation projects, impacts in this regard would remain significant and would be similar to those under the Plan.

Similar to the Plan, the No Project Alternative could result in significant impacts related to conflicting with or obstructing the implementation of a water quality control plan or sustainable groundwater management plan.

LAND USE PLANNING

Under the No Project Alternative, no new transportation investments would be made, beyond those that are currently programmed. As a result, fewer transportation projects would be built than under the Plan and new growth would occur consistent with local general plans, although it would be more dispersed than contemplated under the Plan. The more dispersed land use pattern of the No Project Alternative could provide less connectivity within existing communities because of its more dispersed allocation of future growth, and it would still have the potential to physically divide some existing communities. This impact would be the same as under the Plan. The

transportation projects in this alternative would add 4,766 fewer lane miles compared to the Plan. With fewer lane miles, planned transportation improvements under the No Project Alternative would result in less impact from physically dividing existing communities. Impacts would be less than the Plan, however, would remain significant.

The No Project Alternative would result in fewer impacts to conflicts with any applicable land use plan, policy, or regulation for the purpose of avoiding or mitigating an environmental effect due to there being fewer transportation projects, implementation of which could result in potential inconsistencies with other planned improvements or development patterns identified in applicable plans. Additionally, only some of the Plan's land use strategies would be implemented to the extent they have already been built into existing local jurisdictions' plans, policies, and regulations and therefore there would be less potential for land use policy conflicts given number of policies and strategies that would be implemented under the Plan compared to the No Project Alternative. Impacts would be less than under the Plan but would be significant.

MINERAL RESOURCES

The No Project Alternative would result in fewer lane miles compared to the Plan which would require less aggregate; however, a more dispersed growth pattern could result in greater consumption of aggregate as greater area of land would be paved. Alternative 1 could result in greater loss of availability of known mineral resources that would be of value to the region and the residents of the state, as well as locally important mineral resources, due to the greater amount of land that would be converted to urban land potentially covering more mineral resource extraction opportunities. While Alternative 1 would result in fewer lane miles, due to the more dispersed growth pattern, overall impacts would be significant and greater than the Plan.

NOISE

The No Project Alternative would result in reduced impacts from noise when compared with Connect SoCal 2024. Under Alternative 1, no new transportation investments would be made, beyond those that are currently programmed; and land use development would be more distributed than under the Plan. Alternative 1 would not implement transportation and land use strategies that focus growth along PDAs, existing corridors and in urbanized areas and would not result in construction or operation of new transportation. As a result, fewer transportation projects would be built than under the Plan, however a greater area would be affected by construction noise associated with more dispersed land use development pattern.

While fewer transportation projects would be implemented, construction noise in urban areas is generally expected and while temporary in nature, is still considered significant. Construction noise on individual sites could still exceed significance thresholds in some jurisdictions. Construction-related noise impacts would be similar, although possibly fewer sensitive receptors would be impacted under this alternative due to less urban locations that would be subject to disturbance during construction activities. This would increase the number of separate construction sites, which would increase overall noise levels associated with construction activities. However, impacts overall would be similar to the Plan and still significant.

The No Project Alternative would result in reduced vibration or groundborne noise impacts to when compared with Connect SoCal 2024. Under Alternative 1, fewer transportation projects would be implemented resulting in reduced vibration or groundborne noise. However, planned transportation improvements of this alternative would still include limited roadway and highway improvements which still constitute significant impacts. The projected land use pattern under the No Project Alternative, while more dispersed than the Plan, would not result in meaningfully different levels of vibration or groundborne noise as compared to the Plan. This impact is the same under this alternative.

Regarding aviation noise, Alternative 1 would result in similar impacts to the Plan, as there would be no change in air traffic patterns or airport operations under this alternative.

POPULATION AND HOUSING

The No Project Alternative is anticipated to result in population and housing impacts similar to those that would be generated under the Plan, because the same total population, housing, and employment are assumed, and population and housing impacts are generally population-driven. The No Project Alternative assumes a more dispersed growth pattern which may result in less pressure to redevelop existing sites and induce direct population growth by encouraging new residential and commercial development within more rural or suburban settings where such growth may not have been planned. In addition, this alternative could indirectly induce unplanned growth in some areas of the SCAG region, similar to the Plan, due to urban redevelopment projects that could displace existing housing units and affected residents; however, this alternative would result in less displacement than under the Plan given the less intense urban development compared to the Plan. Furthermore, this alternative would have a lower potential to result in indirect population growth given that it would not involve implementation of all planned transportation projects that would be constructed under the Plan, which would facilitate additional housing and commercial development in currently undeveloped portions of the region. Similarly, the lack of large-scale transportation projects under this alternative would also reduce the potential for such transportation projects, particularly linear highway and rail projects, to require the acquisition of land for right-of-way and associated displacement of existing housing and affected populations. However, the more dispersed land use pattern of this alternative could still result in displacement of substantial numbers of people or existing housing that necessitates the construction of replacement housing elsewhere. This impact is similar to the Plan and would remain significant.

PUBLIC SERVICES

The No Project Alternative is anticipated to result in public service impacts similar to those that would be generated under the Plan, because the same total population, housing, and employment are assumed, and public service impacts are generally population-driven. However, this alternative could reduce the ability of public service providers to achieve local levels of service for fire and police services due to a more dispersed land use pattern that makes it more difficult to efficiently serve the population. While the overall efficiency of fire and police services could be reduced under this alternative, this would not necessarily result in the need to construct new or expanded facilities to meet acceptable service ratios or response times. Although implementation of planned transportation projects under the Plan could potentially facilitate emergency vehicle access and associated fire and police response in some areas where new facilities are constructed, overall congestion (vehicle hours of delay [VHD]) in the region would increase compared to the Plan which could adversely affect police and fire services in some areas. Impacts related to the provision of new or altered fire and police facilities would be similar to the Plan and would remain significant.

Regarding schools and libraries, the population would be the same under each of the alternatives. While there could be less demand for these services in urban areas under the No Project Alternative (due to the more dispersed land use pattern) existing facilities may be adequate to meet demands, but there could be greater impacts in less developed areas where new facilities or expansion of existing facilities may be necessary. Given the increased growth in suburban areas, this alternative could contribute to substantial adverse physical impacts associated with the construction and subsequent operation of new or physically altered school and library facilities in order to maintain acceptable service ratios. Impacts would be significant and similar to the Plan.

RECREATION

The No Project Alternative is anticipated to result in recreation impacts similar to those that would be generated under the Plan, because the same total population, housing, and employment are assumed, and recreation impacts are generally population-driven. The No Project Alternative would, therefore, result in similar levels of overall demand for the use of parklands and open spaces in the region. Potential impacts to parks and recreational facilities in urbanized areas would be reduced compared to the Plan given the dispersed development pattern under this alternative and associated reduction in the use of such facilities. Although there would be less demand on urban parks (which are often overburdened) there could be more demand on large regional parks due to a more dispersed land use pattern, which could lead to increased deterioration of affected facilities. In addition, the more dispersed development pattern could trigger the need to construct new local parks and recreational facilities in less urbanized suburban and rural areas under this alternative. Overall, the No Project Alternative could result in the construction and expansion of parks and other recreational facilities, and this impact would be similar to the Plan.

TRANSPORTATION

The No Project Alternative would result in greater total VMT and VMT per capita than under the Plan, in part because of the more dispersed land use pattern (see **Table 4-6, VMT 2050 by County**, and **Table 4-7, Population and VMT [2050]**). This alternative would also locate fewer homes and jobs within PDAs. Therefore, VMT impact of this alternative is greater than under the Plan. This alternative would also result in lower levels of transit ridership (by approximately one million boardings) as well as walking, and biking for commute trips and all trips and it would be less complementary to existing and planned bicycle and pedestrian facilities (see **Table 4-8, Daily Transit Boardings**, and **Table 4-9, Percentage of Mode Share on Transit and Active Transportation**).

TABLE 4-6 **VMT 2050 by County**

	IN THOUSANDS[A]			
	2050 NO PLAN		2050 PLAN	
COUNTY	LIGHT-MEDIUM-DUTY VEHICLES	ALL VEHICLES	LIGHT-MEDIUM-DUTY VEHICLES	ALL VEHICLES
Imperial	7,000	9,000	7,000	9,000
Los Angeles	208,000	226,000	190,000	208,000
Orange	73,000	78,000	70,000	75,000
Riverside	65,000	73,000	63,000	71,000
San Bernardino	66,000	75,000	62,000	71,000
Ventura	17,000	18,000	16,000	17,000
SCAG Region	***435,000***	***479,000***	***407,000***	***450,000***

Source: SCAG modeling (2023)

Table Notes:

a. Numbers are rounded to nearest thousand.

TABLE 4-7 **Population and VMT (2050)**

	2050 NO PLAN	2050 PLAN	2050 PLAN VS. 2050 NO PLAN
Total Population	20,882,000	20,882,000	0%
Light-Duty Vehicle VMT	435,000,000	407,000,000	-6.4%
Total VMT	479,000,000	450,000,000	-6.1%
VMT per Capita Light-Duty Vehicles	20.84	19.49	-6.5%
VMT per Capita All Vehicles	22.92	21.57	-5.9%

TABLE 4-8 **Daily Transit Boardings**

DAILY TRANSIT BOARDING	2050 NO PLAN	2050 PLAN
Commuter Rail	42,792l	130,426
Local Bus	1,330,874	2,254,503
Local Rail	386,958	733,094
Bus Rapid Transit	27,748	85,997
Express Bus	14,081	19,824
HSR	0	10,779
Rapid Bus	42,000	107,054
Transitway	25,327	36,321
Total (Transit)	***1,869,779***	***3,377,998***

Source: SCAG (2023)

TABLE 4-9 **Percentage of Mode Share on Transit and Active Transportation**

MODE SHARE	2050 NO PLAN	2050 PLAN
Walk	8.3%	8.9%
Bike	2.0%	2.8%
Transit	2.2%	2.9%
Total	***12.6%***	***14.7%***

Source: SCAG modeling (2023)

The No Project Alternative would also result in higher VHD by 631,185 (total), as shown in **Table 4-10, Total Daily Vehicle Hours of Delay (2050)**. As summarized in **Table 4-11, Percent of PM Work Trips Completed within 45 Minutes**, the No Project Alternative would result in an overall decrease in the percentage of evening commute trips completed within 45 minutes (for single-occupant and high-occupancy vehicles) compared to the Plan. Both the Plan and No Project Alternative would result in a similar percentage of evening commute trips completed within 45 minutes via public transit. The compact development pattern included in the Plan would concentrate population in urban areas and encourage alternative modes of travel other than automobiles. Without the Plan development patterns, vehicle miles traveled, vehicle hours of delay, worker commute trips, and accident rates would be higher than under the Plan resulting in greater impacts and potential conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

TABLE 4-10 **Total Daily Vehicle Hours of Delay (2050)**

COUNTY	2050 NO PLAN	2050 PLAN
Imperial	16,198	10,087
Los Angeles	1,399,627	1,126,307
Orange	331,019	221,469
Riverside	225,155	151,841
San Bernardino	278,952	131,054
Ventura	53,187	32,196
Regional	***2,304,139***	***1,672,954***

Source: SCAG modeling (2023)

TABLE 4-11 **Percent of PM Work Trips Completed within 45 Minutes**

COUNTY	2050 NO PLAN	2050 PLAN
Autos – Single Occupancy Vehicles		
Imperial	84.71%	84.89%
Los Angeles	77.19%	83.63%
Orange	87.47%	90.34%
Riverside	77.52%	82.88%
San Bernardino	73.37%	80.01%
Ventura	80.78%	85.28%
Region	***78.84%***	***84.41%***
Autos – High Occupancy Vehicles		
Imperial	82.30%	81.13%
Los Angeles	79.04%	83.21%
Orange	88.11%	90.19%
Riverside	78.56%	83.27%
San Bernardino	76.19%	81.62%
Ventura	83.45%	87.12%
Region	***80.49%***	***84.47%***

COUNTY	2050 NO PLAN	2050 PLAN
Transit		
Imperial	30.95%	22.67%
Los Angeles	28.32%	28.80%
Orange	22.12%	21.51%
Riverside	21.12%	17.81%
San Bernardino	20.45%	18.37%
Ventura	25.46%	17.60%
Region	***27.76%***	***27.64%***

Source: SCAG modeling (2023)
Note: Numbers are rounded to nearest thousand.

Under the No Project Alternative, the more dispersed land use pattern would result in similar impacts as the Plan since the lower overall density of development would not necessarily translate to increase potential for design hazards. However, impacts related to design hazards for transportation projects would be greater as fewer transportation improvements that meet current design standards would be constructed and the Plan's focus on safety would not be implemented. Overall impacts in this regard would be greater and would remain significant.

Impacts associated with emergency access are discussed above under Hazards and Hazardous Materials.

TRIBAL CULTURAL RESOURCES

The No Project Alternative would result in greater impacts to tribal cultural resources when compared with the Plan. Under the No Project Alternative, there would be an additional greenfield land consumed, which would have the potential to impact previously undiscovered tribal cultural resources, such as archaeological resources, sacred sites, or human remains. The transportation network in this alternative would include fewer lane miles and could reduce the potential to impact previously undiscovered tribal cultural resources as compared to the Plan. However, due to the more dispersed land use pattern and the increase in greenfield consumed, impacts would be greater under the No Project Alternative and would be significant.

UTILITIES AND SERVICE SYSTEMS

The No Project Alternative is anticipated to result in significant impacts to utilities and service systems similar to the Plan because the same total population, housing, and employment numbers are assumed, and utilities impacts are generally population driven. However, under this alternative the same population would need to be served but with a wider geographic distribution and thus construction, relocation, or expansion of water, wastewater treatment, stormwater, electrical, natural gas, and telecommunications facilities to deliver necessary services to the expanded development footprint could be required on a more widespread basis than under the Plan.

The No Project Alternative would result in the same amount of population, housing, and employment growth as the Plan, and therefore the overall volume of wastewater generated by the anticipated growth under either scenario would be the same, and thus on a regional basis, the demands placed on wastewater treatment facilities would be similar. Despite the need for a potentially expanded wastewater conveyance network compared to the Plan, construction of which would result in relatively greater impacts as noted above, the need for construction of

new wastewater treatment facilities or expansion of existing facilities to meet projected demands would be comparable to the Plan under the No Project Alternative, and impacts would remain significant.

The larger share of single-family homes under this alternative would likely increase the demand for surface and groundwater supplies because such housing units have higher demand for water, for example through increased irrigation demand for landscaping areas and additional appliances and fixtures that use potable water (e.g., sinks, toilets, showers). As a result, this alternative would increase overall water demand and thus impacts to water supply would be greater compared to the Plan and would be significant. Irrespective of the specific origin of solid waste generated within the region, all solid waste is recycled in compliance with applicable state and local reduction goals or disposed at one of numerous landfills or waste processing facilities in the region; as such, despite the change in the overall land use pattern under this Alternative, the overall impact to landfill capacity and attainment of solid waste reduction goals in the region would be similar to that of the Plan and would be significant. Similar to the Plan, land uses to be developed in the region under this alternative would be required to follow the same federal, state, and local statutes and regulations related to solid waste. This alternative would have the same impact related to compliance with solid waste management and reduction statutes and regulations, which would remain significant.

WILDFIRE

Impacts associated with emergency response and emergency evacuation plans are discussed above under Hazards and Hazardous Materials.

Under the No Project Alternative, wildfire impacts would increase due to the increased potential for development along the wildland interface that may exacerbate fire risks. The No Project Alternative would result in additional housing units being developed within or adjacent to natural areas as compared to the Plan, resulting in greater potential wildfire risk. Areas with dry vegetation have the potential to exacerbate wildfire risk due to future development activities that could generate flammable debris piles. This is particularly true in the currently rural and underdeveloped parts of the SCAG region. Future roadway and development construction in such areas has the potential to result in significant impacts from construction equipment generating sparks or oil spill and other combustible materials leading to the start and spread of wildfires. Additional development within wildfire-prone areas would also trigger the need for new or extended roads and utility infrastructure to serve proposed uses in areas not currently served by existing infrastructure; these additional facilities would increase associated construction-related and operational impacts in the region. Additionally, the overall increase in development footprint under this alternative would also increase potential secondary risks associated with downslope flooding or landslides due to post-wildfire conditions. This impact would be greater under the No Project Alternative and would be significant.

ALTERNATIVE 2: INTENSIFIED LAND USE ALTERNATIVE

AESTHETICS

The Intensified Land Use Alternative is assumed to have the highest percentage of new housing as urban infill and the smallest development footprint among the alternatives and the Plan. Impacts from transportation projects to scenic vistas under Alternative 2 would be the same as the Plan since the transportation network would be the same as the Plan. Impacts from the land use pattern under Alternative 2 in urban areas would be greater than under the Plan because this alternative assumes higher density and intensity of development within PDAs; new structures would be taller and more concentrated, with greater likelihood of blocking or impeding scenic vistas.

However, the impact would be less in suburban and rural areas as less development would occur in these locations. Overall, impacts to scenic vistas would continue to be significant and similar to the Plan.

However, any projects proposed within the vicinity of or adjacent to scenic resources, Officially Designated State Scenic Highways, Officially Designated County Scenic Highways, or roadways eligible for State Scenic Highway designation, could have the potential to significantly impact scenic resources, vistas, and other aesthetic resources, regardless of compliance with environmental and zoning regulations. Given implementation of the same type and number of transportation projects but with a more compact development pattern under this alternative, potential impacts to scenic resources would be reduced as more development would occur within urban centers with less potential to affect views of important visual features. As such, impacts would be less than under the Plan but still significant.

The potential for substantial degradation of visual character or quality of public views of sites and their surroundings in non-urbanized areas would be less under this alternative as compared to the Plan because under this alternative a smaller share of the projected land use pattern would be located within existing non-urbanized areas. Impacts to visual quality in urbanized areas would be similar to the Plan because existing zoning and other regulations typically address visual quality and would be equally enforced under this alternative.

Regarding light and glare, the Intensified Land Use Alternative would require comparable transportation-related lighting to be installed and would introduce a similar number of vehicles that could create daytime glare effects in currently undeveloped areas in the region; however, the reduced amount of land consumed under the No Project Alternative would be expected to introduce fewer lighting sources into undeveloped areas associated with land use development resulting in potential impacts less than the Plan. Overall, light and glare impacts would be similar to the Plan and would remain significant.

AGRICULTURE AND FORESTRY RESOURCES

Conversion of agricultural land (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), timberland, and timberland zoned Timberland Production to non-agricultural, or non-timber uses under this alternative would be less than under Plan because the projected land use pattern under the Intensified Land Use Alternative would convert fewer acres of agricultural land to urban use, although the transportation network would be generally the same. The more compact land use pattern within PDAs would reduce the amount of land disturbance overall (less greenfield developed). The improved land use and transit coordination would require less acreage to accommodate future growth and a higher concentration of development in urban areas will reduce the conversion of agricultural uses. Therefore, impacts regarding conversion of agricultural land to non-agricultural uses would be less than those of the Plan and would be significant. Due to the lack of timberland production activities in the SCAG region, however, no impacts associated with conversion of timberland and timberland zoned Timberland Production would occur under this alternative, as is the case under the Plan.

The Intensified Land Use Alternative would include implementation of transportation projects with the potential to result in the loss or conversion of forest lands, similar to the Plan; however, given the reduced footprint of land use development under the Intensified Land Use Alternative, fewer projects would be developed within GRRAs (including forest lands) compared to the Plan. Impacts under this alternative, therefore, would be less overall than those of the Plan, though impacts related to forest land would remain significant.

The potential for conflicts with zoning, land use designations, Williamson Act contracts, and/or other applicable regulations that protect agricultural and forestry resources and timberlands would be less because fewer

additional agricultural lands would be converted to nonagricultural uses than under the Plan. In addition, the potential for other changes that could result in the conversion of agricultural land to developed land uses (e.g., encroachment into agricultural production areas, loss or reduction of water supply, changes to hydrology and drainage patterns, climate change, inadequate production value, urban development pressure, etc.) would also be less due to higher intensity of development in urban areas rather than rural areas under this alternative as compared to the Plan. However, these impacts would remain significant.

AIR QUALITY

The Intensified Land Use Alternative is assumed to have the same transportation network, investments, and programs as the Plan. As such, similar to the Plan, this alternative would be expected to meet federal transportation conformity requirements and would be consistent with State Implementation Plans. In addition, this alternative would include more aggressive land use development patterns than the Plan and would have fewer motor vehicle trips and associated emissions. Therefore, this alternative would have a less than significant impact with respect to consistency with air quality management plans at the regional level. Individual projects could continue to have the potential to exceed project-level significance thresholds and, as such, there exists the potential for project-level inconsistencies with local air quality management plans. Therefore, this alternative would potentially conflict with or obstruct implementation of air quality management plans and the impact would continue to be considered significant at the project/local level.

Similar to the Plan, construction emissions would likely exceed the significance thresholds established in the CEQA Guidelines, which are typically based on daily and/or annual emissions. Individual construction projects and total regional construction on a given day or in a given year could be similar under the Plan and Intensified Land Use Alternative, and therefore similar to the Plan, construction emissions in the region under the Intensified Land Use Alternative could still result in a significant short-term impact for each individual project.

With respect to operations, under the Intensified Land Use Alternative, investments in VMT reduction projects and infill and compact land use strategies would occur to a greater degree as the Plan given a denser land use pattern. Thus, the Intensified Land Use Alternative is anticipated to have reduced levels of VMT than the Plan. In the long term, the Intensified Alternative would have a similar impact to the local AQMPs and a reduced cumulative impact since development projects would be more efficient than the Plan, resulting in fewer emissions.

As with the Plan, this alternative results in substantial reductions in cancer risk and impact to public health associated with diesel particulate matter would occur as compared to existing conditions. The cancer risk and impact to public health for this alternative would be similar compared to the Plan since the transportation network is the same as the Plan with minor adjustments for land use and transit coordination strategies. The Intensified Land Use Alternative would be expected to result in less overall emissions as compared to the Plan due to the reduction VMT given a denser land use pattern. However, localized areas with increased density could experience a greater degree of exposure to localized DPM emissions and associated health risk impacts. Similarly, with regard to nitrogen dioxide concentrations and nitrogen deposition, the Intensified Land Use Alternative would also result in overall similar or slightly lower impacts due to the reduction VMT given a denser land use pattern compared to the Plan. However, as with health risk impacts, localized areas with increased density could experience a greater degree of exposure to localized NO_2 emissions and nitrogen deposition.

Health risk associated with construction activities under the Intensified Land Use Alternative would be similar to the Plan and considered significant adjacent to extended intense construction activities. The Intensified Land Use Alternative would include new transportation investments beyond those that are currently programmed, and

individual construction projects and total regional construction on a given day or year could be similar under the Plan and this alternative, and therefore similar to the Plan, construction emissions and related construction health risk impacts in the region under the No Project Alternative could still result in a significant impact.

Objectionable odors under the Intensified Land Use Alternative are expected to be similar to the Plan. Similar to the Plan, while under normal circumstances, the Intensified Land Use Alternative would not be expected to result in substantial odor emissions or affect a substantial number of people when compared to existing conditions, given the size of and complexity air quality conditions in the region, variability in application and enforcement of air quality rules and regulations, and potential for unforeseen circumstances to occur through the 2050 Plan horizon, it is possible that construction activities and operation of transportation projects and urban land use projects consistent with land use strategies currently in place could generate emissions (such as those leading to odors) adversely affecting a substantial number of people. Individual construction projects and total regional construction on a given day or in a given year could be similar under the Plan and this alternative, which would result in similar levels of construction-related emissions (such as those leading to odors) as the Plan.

Overall impacts to air quality could be less when compared to Connect SoCal 2024 due to the more compact growth pattern and reduced VMT.

BIOLOGICAL RESOURCES

Impacts on candidate, sensitive, or special-status species (including plants, wildlife, and fish) under the Intensified Land Use Alternative would be less than under the Plan because while the transportation network would remain the same, this alternative's projected land use pattern would be more compact and convert fewer acres of greenfield development. Impacts to biological resources are directly linked to the amount of native habitat conversion in non-urban areas a potential project proposes. As such, impacts to sensitive species and their habitats, riparian habitat and sensitive natural communities, and wetlands would be less than under the Plan but would remain significant.

The reduced development footprint would also decrease the potential for reductions in habitat connectivity and wildlife movement, with the Intensified Land Use Alternative resulting in the urbanization of less essential connectivity natural areas than the Plan. Because this alternative would include the implementation of planned transportation projects, it would still result in the creation of additional barriers to wildlife movement associated with linear projects like new streets, highways, and rail facilities that would also occur under the Plan. As such, overall, impacts to wildlife movement would be similar to those of the Plan and would remain significant.

With regard to tree preservation ordinances and other local policies or ordinances protecting biological resources, the Intensified Land Use Alternative would involve construction of planned transportation projects and thus would have a similar potential compared to the Plan to result in tree removals or physical impacts to biological resources associated with the construction of such facilities. However, because the land use development pattern under this alternative would be more compact and concentrated in urbanized and other disturbed areas compared to that under the Plan, it would result in a reduced potential for impacts to trees and other biological resources and associated conflicts with policies or ordinances intended to protect them. As such, impacts would be less than the Plan but would remain significant.

Similarly, with regard to Habitat Conservation Plans and Natural Community Conservation Plans, the Intensified Land Use Alternative would result in the urbanization of less SCAG Natural Lands Conservation Areas and greenfield land than would occur under the Plan. Similar to the Plan, this alternative would also result in

implementation of planned linear transportation projects that could traverse areas within the limits of such plans, thereby increasing the potential for conflicts to occur. As such, impacts would be similar to the Plan under the No Project Alternative and would be significant.

CULTURAL RESOURCES

Increased development in urban areas, where historic buildings tend to be located, could result in greater impacts to historic resources including the character of settings that contribute to the significance of historic built environments, as pressure to redevelop historic buildings increases. Impacts to archeological, and human remains, would be less under the Intensified Land Use Alternative because this alternative's projected land use pattern would be more compact and include fewer acres of greenfield development in the same transportation network. The reduced amount of ground disturbance, such as grading and excavation, associated with the projected land use pattern of this alternative would result in lower likelihood of encountering unknown surface or subsurface archaeological resources, and/or human remains.

ENERGY

The Intensified Land Use Alternative contains more infill development to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial building types. As a result, building energy consumption would decrease compared to the Plan because there would be a higher percentage of multi-family units and higher density in the regional land use pattern. Individual detached structures require more energy for materials, more materials overall, and more fuels to build than would be needed for attached structures. This alternative would result in lower energy use per capita because attached homes require less energy per capita as compared to large-lot single-family homes. This alternative would result in less impacts related to the wasteful, inefficient, or unnecessary consumption of energy during construction activities and long-term operations. However, impacts would continue to be significant.

The Intensified Land Use Alternative would be overall more energy efficient compared to the Plan and as such, would be less likely to conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Implementation of the California Energy Code and State goals for increasing the percentage of electricity from renewable and zero-carbon sources under this alternative would be the same as under the Plan.

GEOLOGY AND SOILS

The following potential substantial adverse effects, including the risk of loss, injury, or death associated with earthquakes and seismic activity under this alternative would be similar to the Plan: rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides. Existing state and local building code requirements addressing substantial adverse effects due to earthquakes and seismic activity would apply to the land use pattern and planned transportation improvements of the Plan. The following operational and construction impacts of this alternative would be less than the Plan because this alternative includes a more compact land use pattern that would develop fewer acres in the region: soil erosion and loss of topsoil; on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; development on expansive soil; and inadequate soils for alternative wastewater systems.

Impacts to paleontological resources and unique geologic features would be less under this alternative than under the Plan because the land use pattern of this alternative is more compact and would develop fewer acres in the

same transportation network. The decreased land disturbance resulting from the projected land use pattern and planned transportation improvements under this alternative would result in less impacts to paleontological resources and unique geologic features.

GREENHOUSE GAS EMISSIONS

The GHG emissions for on-road vehicles in the SCAG region would be less than under the Plan given a denser land use pattern and associated reductions in VMT. GHG emissions from other transportation sources would be expected to be similar under the Plan or Alternative 2 as these sources are regulated at the federal and state level.[4] The denser development pattern of the Intensified Land Use Alternative would result in reduced VMT compared to the Plan, and thus would result in reduced GHG impacts than the Plan.

The GHG emissions associated with building energy and water-related energy would be less with the Intensified Land Use Alternative compared to the Plan as this alternative would develop a more dense land use pattern with increased infill and compact development which tends to be more efficient than large lot development. This alternative would improve regional GHG emissions compared to the Plan.

As discussed in Section 3.8, *Greenhouse Gas Emissions*, the Plan meets the SB 375 targets and is not in conflict with SB 375 requirements. Because the Intensified Land Use Alternative would have more compact and sustainable development patterns and more aggressive implementation of Regional Planning Policies, strategies, and investments than under the Plan, this alternative would likely lead to per capita GHG emissions that would also meet SB 375 targets. Therefore, this alternative's environmental impact in terms of conflict with SB 375 requirements would likely be similar to that of the Plan. Moreover, the Intensified Land Use Alternative would likely result in less GHG emissions than the Plan due to intensified transportation investments to facilitate greater trip reductions and land use strategies to increase the percentage of WfH workers. However, it could also have greater rebound effect than that under the Plan, thereby greater GHG emissions, as there would likely be more WfH workers having opportunities to do more travel and generate more trips for no-work purposes. As for the Plan, this alternative could still have the possibility of conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions including AB 32 and SB 32. The GHG impacts (except for compliance with SB 375) would remain significant under this alternative and similar to the Plan's impacts on GHG emissions.

HAZARDS AND HAZARDOUS MATERIALS

Hazardous materials impacts to the public or the environment associated with construction activities and operation under the Intensified Land Use Alternative would be similar to impacts under the Plan. This is because of the numerous federal, state, and local requirements and regulations that minimize the creation of significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials; through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; and through handling of hazardous materials, substances, and waste within 0.25 mile of an existing or proposed school. These existing requirements and regulations would apply equally to the different projected land use patterns and planned transportation network improvements of this alternative and Plan, so impacts would be the same. The same is true for existing requirements and regulations addressing potential safety hazards and excessive noise within an airport land use plan or within two miles of a public or public use airport,

[4] Emission sources include rail, aviation, GSE, and ocean-going vessels. Rail, aviation, and ocean-going vessels are regulated at the federal level. Airport Ground Support (GSE) sources are regulated at the state level.

so airport-related safety and noise impacts to people residing or working in the plan area would be the same under this alternative.

The more compact land use pattern under this alternative would be less automobile-dependent than the Plan, which would result in lower total VMT and overall vehicle delay in the region, which would improve emergency vehicle access, emergency response, and the ability of communities to evacuate an area during an emergency as compared to the Plan. Additionally, the planned transportation improvements under this alternative would provide additional vehicle access options and potential evacuation routes similar to the Plan. Therefore, the more compact land use pattern of this alternative and implementation of planned transportation system improvements would result in fewer impacts associated with emergency access and emergency response and evacuation plans but impacts would remain significant.

HYDROLOGY AND WATER QUALITY

Impacts associated with hydrology and water quality under the Intensified Land Use Alternative would be less than under the Plan because its more compact land use would result in disturbance to a smaller land area during construction activities and would permanently convert a smaller amount of land to impervious surfaces, such as parking lots, buildings, roadways, highways, and other paved areas, as compared to the Plan. The decreased land area subject to construction disturbance would decrease potential for short-term discharge of pollutants from construction sites into surface or groundwater.

The decreased land area permanently converted to impervious surfaces would decrease the potential volume and improve the water quality of stormwater flows relative to the Plan. Thus, impacts related to violation of water quality standards or waste discharge requirements would be less than the Plan but would be significant. Less impervious surface also would reduce interference with groundwater recharge and result in less alteration of drainage patterns in a manner that would increase the potential for substantial erosion, siltation, and flooding. This alternative would require less storm drainage system capacity than the Plan because of its conversion of reduced land area to impervious surface area, which in turn could result in less redirection of flood flows. Therefore, impacts associated with groundwater supplies, groundwater recharge, alteration of existing drainage patterns, erosion and siltation, exceedance of stormwater drainage capacity, and flooding would be reduced compared to the Plan but would remain significant,

With regard to flood hazard, tsunami, and seiche zones, the Intensified Land Use Alternative would result in a smaller development footprint, which would in turn decrease the potential for inundation where development occurs within areas subject to such hazards. This alternative would result in implementation of planned transportation project that would also occur under the Plan, but transportation facilities are typically not subject to the same level of risk with regard to flooding as habitable structures and other urban development. Therefore, although this alternative could potentially decrease the likelihood of inundation in flood hazard, tsunami, and seiche zones, and would result in a similar inundation potential associated with transportation projects, impacts in this regard would remain significant and would be similar to those under the Plan.

In addition, the housing mix of this alternative would include a smaller share of single-family homes, which would result in less managed landscaping areas and associated pollutants such as nutrients, herbicides, and irrigated runoff, which in turn could adversely affect surface and groundwater quality. Impacts to groundwater recharge, erosion, siltation and flooding would be less than the Plan but would remain significant.

Similar to the Plan, the Intensified Land Use Alternative could also result in significant impacts related to conflicting with or obstructing the implementation of a water quality control plan or sustainable groundwater management plan.

LAND USE AND PLANNING

The more compact land use pattern of this alternative provides more connectivity within existing communities, so it would not physically divide any existing communities. This impact is similar to the Plan. New roadway or highway improvements can physically divide existing communities by providing physical barriers where none previously existed. Expansion of existing roadways and highways also can physically divide existing communities to the extent that wider facilities with additional lanes represent greater physical barriers than narrower facilities. The planned transportation improvements of this alternative would be generally the same as the Plan network, which means it would result in similar impacts from physically dividing existing communities.

The Intensified Land Use Alternative would result in comparable impacts regarding conflicts with any applicable land use plan, policy, or regulation for the purpose of avoiding or mitigating an environmental effect due to the implementation of planned transportation projects, implementation of which could result in potential inconsistencies with other planned improvements or development patterns identified in applicable plans. Additionally, it is assumed that the majority of the Plan's land use strategies would be implemented and therefore there would be a similar potential for land use policy conflicts under this alternative. Impacts would be similar to those of the Plan and would be significant as with the Plan.

MINERAL RESOURCES

The Intensified Land Use Alternative could result in less loss of availability of known mineral resources that would be of value to the region and the residents of the state, as well as locally important mineral resources, due to the reduction in land that would be converted to urban land potentially covering more mineral resource extraction opportunities. Transportation network improvements would occur similar to the Plan, requiring a comparable amount of aggregate resources to be used for the construction of the transportation network improvements. Although transportation network impacts would be similar under this alternative, overall impacts would be less than the Plan given the more compact land use pattern and associated incremental reduction in access to potential mineral resources in the region. Impacts would be reduced but would remain significant.

NOISE

The Intensified Land Use Alternative would generate noise levels generally similar to those that would be generated under the Plan because the same total population, housing, and employment are assumed. However, the more compact land use pattern of this alternative would direct less housing growth into non-urbanized areas, decreasing construction and operational noise levels relative to the Plan in areas that tend to have lower existing noise levels than more developed communities. Noise thresholds would be less likely to be exceeded than under the Plan.

The projected land use pattern of this alternative, while more compact than the Plan, would not result in land use types that would result in different levels of vibration or groundborne noise. There would potentially be less construction-related noise impacts under this alternative due to the fewer acres of land area that would be subject to disturbance during construction activities associated with the more compact land use pattern. This could decrease the number of separate construction sites, which could decrease overall noise levels associated with

construction activities relative to the Plan. However, more construction activity could occur in urban and suburban areas under this alternative which could mean more people are exposed to increased noise associated with construction activity.

The planned transportation improvements of this alternative would include the same lane miles of roadway and highway improvements, and this would also not result in significantly different levels of vibration or groundborne noise relative to the planned transportation improvements identified in the Plan. This impact would be similar under this alternative and would remain significant.

With regard to aviation noise, impacts would be similar to the Plan as this alternative would not affect airport capacity, and impacts would remain significant.

POPULATION AND HOUSING

Impacts related to population and housing would be generally similar under all alternatives, because the same number of people and dwelling units are assumed. However, the Intensified Land Use Alternative could indirectly induce unplanned growth in some areas of the SCAG region, similar to the Plan, due to urban redevelopment projects that could displace existing housing units and affected residents. Due to the more compact land use pattern, this alternative could result in greater displacement than under the Plan given the more intense urban development compared to the Plan. Additionally, this alternative would have a comparable potential to result in indirect population growth given that it would also involve implementation of all planned transportation projects that would be constructed under the Plan, which would potentially facilitate additional housing and commercial development in currently undeveloped portions of the region. The more compact land use pattern of this alternative combined with the same lane miles of roadway and highway improvements could still result in displacement of substantial numbers of people or existing housing that necessitates the construction of replacement housing elsewhere. Since this potential for displacement would be increased under this alternative, this impact is greater than under the Plan and would remain significant.

PUBLIC SERVICES

The Intensified Land Use Alternative is anticipated to result in public service impacts similar to those that would be generated under the Plan, because the same total population, housing, and employment are assumed. The planned transportation improvements of this alternative would have the same public services impacts as the Plan. It is possible that denser development in urban areas, although more efficient from a service perspective, could result in the need for more police and fire services from a demand perspective resulting in a need for new facilities to maintain service ratios. Nonetheless, due to the more efficient land use pattern, this impact would be less than the Plan.

Similarly, the more compact land use pattern would allow public service facilities to more efficiently serve the population for schools and libraries. As a result of increased demand for services there could be a need for new and/or expanded facilities resulting in physical impacts. As such, this impact would be significant, but less than those of the Plan.

RECREATION

The Intensified Land Use Alternative is anticipated to result in recreation impacts similar to those that would be generated under the Plan, because the same total population, housing, and employment are assumed, and

recreation impacts are generally population-driven. Potential impacts to parks and recreational facilities in urbanized areas would be increased compared to the Plan given the more compact development pattern under this alternative and associated increase in the use of such facilities. Although there would be increased demand on urban parks (which are often overburdened) there could be reduced demand on large regional parks given the development focus in urban centers, which could reduce potential deterioration of affected regional facilities. In addition, the more compact development pattern could trigger the need to construct new local parks and recreational facilities in urbanized areas under this alternative to serve the increased urban population. Overall, this alternative would result in similar impacts to parks and recreational facilities compared to the Plan and impacts would be significant.

TRANSPORTATION

The Intensified Land Use Alternative would result in slightly lower VMT (total and per capita), less VHD and less vehicle hours of travel (VHT) compared to the Plan. Despite the overall reduction in VMT, VHD, and VHT in the SCAG region as compared to the Plan, this alternative may not maximize mobility and accessibility for all people and goods in the region to the extent of the Plan because it could result in more severe localized traffic congestion conditions with adverse mobility and reliability consequences for goods and people (increased vehicle and truck delay), particularly in dense urban centers that tend to experience vehicle congestion under existing conditions. Although this alternative could result in localized congestion, it would facilitate overall mobility in the region and foster transportation options as would occur under the Plan, and thus impacts regarding conflicts with programs, plans, ordinances, or policies addressing the circulation system would be similar to the Plan and would be significant. As noted above, this alternative would result in an incremental reduction in VMT compared to the Plan, and thus impacts associated with conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b) would be less than under the Plan but would remain significant. While this alternative could increase and exacerbate existing localized congestion in compact urbanized areas, overall, it would result in similar impacts associated with design hazards given compliance with applicable engineering design standards for transportation improvements. As such, impacts regarding design hazards would be similar to the Plan and would remain significant.

Impacts associated with emergency access are discussed above under Hazards and Hazardous Materials.

TRIBAL CULTURAL RESOURCES

The Intensified Land Use Alternative would result in less impacts to tribal cultural resources when compared with the Plan. Under this alternative, although a similar suite of transportation projects would be implemented, there would be fewer acres of greenfield land consumed, which would reduce the potential to impact previously undiscovered tribal cultural resources, such as archaeological resources, sacred sites, or human remains. Due to the more compact land use pattern and the reduction in greenfield consumed, impacts would be less under this alternative.

UTILITIES AND SERVICE SYSTEMS

The Intensified Land Use Alternative is anticipated to result in impacts to utilities and service systems similar to those that would be generated under the Plan because the same total population, housing, and employment are assumed. However, under this alternative the same population would need to be served but with a more compact geographic distribution and thus construction, relocation, or expansion of water, wastewater treatment, stormwater, electrical, natural gas, and telecommunications facilities to deliver necessary services to the reduced development footprint would be required to a lesser extent than under the Plan.

The Intensified Land Use Alternative would result in the same amount of population, housing, and employment growth as the Plan, and as such the overall volume of wastewater generated by the anticipated growth under either scenario would be the same, and thus on a regional basis, the demands placed on wastewater treatment facilities would be similar. Despite the need for a potentially reduced wastewater conveyance network compared to the Plan, construction of which would result in relatively fewer impacts as noted above, the need for construction of new wastewater treatment facilities or expansion of existing facilities to meet projected demands would be comparable to the Plan under the Intensified Land Use Alternative, and impacts would remain significant.

With fewer single-family homes, this alternative could decrease demand for surface and groundwater supplies because such single-family homes have higher demand for water. Single-family homes typically require additional water due to increased irrigation demand for landscaping areas and additional appliances and fixtures that use potable water (e.g., sinks, toilets, showers). As a result, this alternative would decrease overall water demand, and thus, impacts to water supply would be reduced compared to the Plan but would remain significant.

Regardless of the specific origin of solid waste generated within the region, all solid waste is recycled in compliance with applicable state and local reduction goals or disposed at one of numerous landfills or waste processing facilities in the region; as such, despite the change in the overall land use pattern under this Alternative, the overall impact to landfill capacity and attainment of solid waste reduction goals in the region would be similar to that of the Plan and would be significant. Similar to the Plan, land uses to be developed in the region under this alternative would be required to follow the same federal, state, and local statutes and regulations related to solid waste. This alternative would have the same impact related to compliance with solid waste management and reduction statutes and regulations, which would remain significant.

WILDFIRE

Impacts associated with emergency response and emergency evacuation plans are discussed above under Hazards and Hazardous Materials.

The Intensified Land Use Alternative would result in fewer impacts related to wildfires than the Plan. This alternative would result in fewer housing units constructed in wildfire zones compared to the Plan. Therefore, fewer people and structures would be placed within proximity to wildfire-prone areas at urban-wildland interfaces. This alternative would reduce the amount of new development within wildfire-prone areas compared to the Plan and would also decrease the need for new or extended roads and utility infrastructure to serve proposed uses in areas not currently served by existing infrastructure. The reduced demand for such facilities would decrease associated impacts resulting from their construction and operation. Additionally, the overall decrease in development footprint under this alternative would also reduce potential secondary risks associated with downstream or downslope flooding or landslides due to post-wildfire conditions. Impacts would be less than the Plan but would be significant.

4.5.3 SUMMARY OF ALTERNATIVES COMPARISON

The performance comparison for the No Project Alternative and the Plan is included in the Connected SoCal 2025 Land Use and Community Technical Report. **Table 4-12, Comparison of Significant Adverse Environmental Impacts for Connect SoCal 2024 and Alternatives** presents a summary the relative level of environmental impacts associated with each alternative as compared to the Plan based on CEQA Guidelines Appendix G significance threshold questions used to analyze Plan's environmental impacts in Chapter 3 of this 2024 PEIR. For each resource area evaluated, Table 4-12 summarizes whether the impacts of the alternative would generally result in greater or lesser impacts than those of the Plan.

TABLE 4-12 **Comparison of Significant Adverse Environmental Impacts for Connect SoCal 2024 and Alternatives**

ENVIRONMENTAL ISSUE	CONNECT SOCAL 2024	ALTERNATIVE 1: NO PROJECT	ALTERNATIVE 2: INTENSIFIED LAND USE ALTERNATIVE
Aesthetics			
Scenic Vistas (AES-1)	Significant	Similar (Significant)	Similar (Significant)
Scenic Resources (AES-2)	Significant	Less (Significant)	Less (Significant)
Visual Character (AES-3)	Significant	Similar (Significant)	Less (Significant)
Light and Glare (AES-4)	Significant	Similar (Significant)	Similar (Significant)
Agriculture and Forestry Resources			
Convert Prime Farmland (AG-1)	Significant	Similar (Significant)	Less (Significant)
Conflict with Williamson Act (AG-2)	Significant	Similar (Significant)	Less (Significant)
Conflict with forest land zoning (AG-3)	Significant (except for timberland)	Similar (Significant)	Similar (Significant)
Loss of forest land (AG-4)	Significant	Similar (Significant)	Less (Significant)
Other changes that result in loss of farmland or forest land (AG-5)	Significant	Greater (Significant)	Less (Significant)
Air Quality			
Conflict with Air Quality Plans (AQ-1)	Significant (except for federal transportation conformity requirements)	Greater (Significant)	Similar (significant except for federal transportation conformity requirements)
Cumulatively considerable net increase in criteria pollutants (AQ-2)	Significant	Greater (Significant)	Less (Significant)
Expose sensitive receptors (AQ-3)	Significant	Similar (Significant)	Greater (Significant)
Odor (AQ-4)	Significant	Similar (Significant)	Similar (Significant)
Biological Resources			
Sensitive Species (BIO-1)	Significant	Similar (Significant)	Less (Significant)
Riparian Habitat (BIO-2)	Significant	Similar (Significant)	Less (Significant)
Wetlands (BIO-3)	Significant	Similar (Significant)	Less (Significant)
Migratory Fish/Birds (BIO-4)	Significant	Similar (Significant)	Similar (Significant)
Tree Preservation (BIO-5)	Significant	Similar (Significant)	Less (Significant)
Local Plans/HCPs (BIO-6)	Significant	Similar (Significant)	Similar (Significant)
Cultural Resources			
Historical Resources (CUL-1)	Significant	Greater (Significant)	Greater (Significant)
Archeological Resources (CUL-2)	Significant	Greater (Significant)	Less (Significant)
Disturb Human Remains (CUL-3)	Significant	Greater (Significant)	Less (Significant)

ENVIRONMENTAL ISSUE	CONNECT SOCAL 2024	ALTERNATIVE 1: NO PROJECT	ALTERNATIVE 2: INTENSIFIED LAND USE ALTERNATIVE
Energy			
Wasteful and inefficient use of energy (ENR-1)	Significant	Greater (Significant)	Less (Significant)
Conflict with or obstruct renewable energy plans (ENR-2)	Significant	Similar (Significant)	Similar (Significant)
Geology and Soils			
Fault rupture, ground shaking, ground failure/ liquefaction, landslides (GEO-1)	Significant	Similar (Significant)	Similar (Significant)
Soil Erosion (GEO-2)	Significant	Greater (Significant)	Less (Significant)
Unstable Soil (GEO-3)	Significant	Similar (Significant)	Less (Significant)
Expansive Soil (GEO-4)	Significant	Similar (Significant)	Less (Significant)
Septic Systems (GEO-5)	Significant	Similar (Significant)	Less (Significant)
Paleontological Resources (GEO-6)	Significant	Greater (Significant)	Less (Significant)
Greenhouse Gas Emissions			
Generate greenhouse gas emission (GHG-1) and Conflict with Plans (GHG-2)	Significant (except for consistency with SB 375)	Greater (Significant)	Similar (Significant except for consistency with SB 375)
Hazards and Hazardous Materials			
Routine Transport (HAZ-1)	Significant	Similar (Significant)	Similar (Significant)
Upset conditions (HAZ-2)	Significant	Similar (Significant)	Similar (Significant)
Emissions within 0.25 mile of school (HAZ-3)	Significant	Similar (Significant)	Similar (Significant)
Hazardous materials site (HAZ-4)	Significant	Similar (Significant)	Similar (Significant)
Airport hazards (HAZ-5)	Significant	Similar (Significant)	Similar (Significant)
Emergency response and evacuation plans (HAZ-6)/ (WF-1) and Emergency access (TRA-4)	Significant	Greater (Significant)	Less (Significant)
Hydrology and Water Quality			
Violate water quality standard (HYD-1)	Significant	Greater (Significant)	Less (Significant)
Decrease groundwater (HYD-2)	Significant	Greater (Significant)	Less (Significant)
Erosion or siltation (HYD-3A)	Significant	Greater (Significant)	Less (Significant)
Flooding (HYD-3B)	Significant	Greater (Significant)	Less (Significant)
Stormwater runoff (HYD-3C)	Significant	Greater (Significant)	Less (Significant)
Impede or redirect flood flows (HYD-3D)	Significant	Greater (Significant)	Less (Significant)
Flood, seiche, tsunami (HYD-4)	Significant	Similar (Significant)	Similar (Significant)
Conflict with water quality control plan (HYD-5)	Significant	Similar (Significant)	Similar (Significant)

ENVIRONMENTAL ISSUE	CONNECT SOCAL 2024	ALTERNATIVE 1: NO PROJECT	ALTERNATIVE 2: INTENSIFIED LAND USE ALTERNATIVE
Land Use and Planning			
Physically divide a community (LU-1)	Significant	Less (Significant)	Similar (Significant)
Conflict with land use plans (LU-2)	Significant	Less (Significant)	Similar (Significant)
Mineral Resources			
Loss in availability of mineral resources (MIN-1)	Significant	Greater (Significant)	Less (Significant)
Loss of locally important mineral resources (MIN-2)	Significant	Greater (Significant)	Less (Significant)
Noise			
Temporary or permanent increase in noise levels in excess of established standards (NOI-1)	Significant	Similar (Significant)	Less (Significant)
Groundborne vibration or noise (NOI-2)	Significant	Similar (Significant)	Similar (Significant)
Airport noise (NOI-3)	Significant	Similar (Significant)	Similar (Significant)
Population and Housing			
Induce unplanned population growth (POP-1)	Significant	Similar (Significant)	Similar (Significant)
Displace people or housing (POP-2)	Significant	Similar (Significant)	Greater (Significant)
Public Services			
Fire (PS-1)	Significant	Similar (Significant)	Less (Significant)
Police (PS-2)	Significant	Similar (Significant)	Less (Significant)
Schools (PS-3)	Significant	Similar (Significant)	Less (Significant)
Library (PS-4)	Significant	Similar (Significant)	Less (Significant)
Recreation			
Increase park use (REC-1)	Significant	Similar (Significant)	Similar (Significant)
Construction of new parks (REC-2) and Parks (PS-5)	Significant	Similar (Significant)	Similar (Significant)
Transportation			
Conflict with program, plan, ordinance, or policy addressing circulation system (TRA-1)	Significant	Greater (Significant)	Similar (Significant)
Conflict with CEQA Guidelines Section 15064.3(b) (TRA-2)	Significant	Greater (Significant)	Less (Significant)
Increase hazards (TRA-3)	Significant	Greater (Significant)	Similar (Significant)
Tribal Cultural Resources			
Adverse change in a TCR (TCR-1)	Significant	Greater (Significant)	Less (Significant)

ENVIRONMENTAL ISSUE	CONNECT SOCAL 2024	ALTERNATIVE 1: NO PROJECT	ALTERNATIVE 2: INTENSIFIED LAND USE ALTERNATIVE
Utilities and Service Systems			
New or expanded water, wastewater treatment, storm water, electric, natural gas, or telecommunications facilities (UTIL-1)	Significant	Similar (Significant)	Less (Significant)
New or expanded wastewater treatment (UTIL-2)	Significant	Similar (Significant)	Similar (Significant)
Sufficient water supply (UTIL-3)	Significant	Greater (Significant)	Less (Significant)
Generate excess solid waste or conflict with statutes (UTIL-4)	Significant	Similar (Significant)	Similar (Significant)
Comply with statues and regulations (UTIL-5)	Significant	Similar (Significant)	Similar (Significant)
Wildfire			
Slope, prevailing winds may exacerbate wildfire risk (WF-2)	Significant	Greater (Significant)	Less (Significant)
Expose people or structures to wildland fires (HAZ-7)	Significant	Greater (Significant)	Less (Significant)
Installation or maintenance of infrastructure that may exacerbate fire risk (WF-3)	Significant	Greater (Significant)	Less (Significant)

4.6 ALTERNATIVES CONSIDERED BUT REJECTED

Pursuant to CEQA, the range of alternatives required in the PEIR is limited to only those alternatives necessary to permit a reasoned choice. The PEIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. CEQA Guidelines Section 15126.6(c) requires that an EIR should also 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. CEQA Guidelines Section 15126.6(c) also states that among the factors that may be used to eliminate alternatives from detailed consideration in a CEQA document are (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental impacts.

This PEIR did not consider and reject any specific alternatives to the Plan. However, as described in Section 4.2, *Methodology*, the two selected alternatives provide expected "book-ends" of the range of potential alternatives to present a framework for understanding the greatest or least potential impacts from alternatives when compared to the Plan. Therefore, there could be alternatives not specifically analyzed but whose impacts could fall within the range and magnitude of impacts captured in the bookend analysis.

4.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires that an "environmentally superior" alternative be selected among the alternatives that are evaluated in the EIR. In general, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. If the No Project Alternative is identified as environmentally superior, then another environmentally superior alternative shall be identified among the other alternatives.

For purposes of this 2024 PEIR, the impacts associated with reducing global GHG emissions and regional air pollutants must be examined alongside the other adverse impacts that are caused by increasing the density and intensity of the region's development patterns and, for example, bringing people closer to sources of air pollutants such as transit corridors and freeways (even though these sources would have fewer emissions in the future, despite increasing traffic, due to emission controls). The tension between CEQA's mandate to reduce all types of impacts to the maximum extent feasible, and the statutory mandates of reducing GHG emissions under AB 32, SB 32, and SB 375, is a well-recognized CEQA compliance challenge.[5] CEQA does not provide any legal mechanism for "weighting" environmental impacts and scoring some categories of impacts as "more important" and others as "less important." Instead, CEQA is structured to require the disclosure of all impacts for each alternative and the Plan, to foster informed decision making and to disclose the inherent trade-offs between different types and magnitudes of impacts associated with different alternatives.

As indicated by the comparative analysis, the Plan and each alternative have the potential to result in "significant and unavoidable" impacts in all issue areas, but the degree and location of impacts would differ between alternatives. Alternative 2, the Intensified Land Use Alternative, would result in somewhat less adverse impacts for some issues in 17 of the 20 environmental topics that were analyzed. The anticipated increases in the density and intensity of development within the region's established communities under the Intensified Alternative would result in more localized impacts that are greater than the Plan in two areas (historical resources and population and housing).

Of the two alternatives, the Intensified Land Use Alternative would be considered the environmentally superior alternative due to fewer impacts including reduced VMT and GHG emissions, and because it would substantially restrict the use of land for single-family development. This alternative concentrates development in existing urban centers and near transit stations and activity centers. As such, the Intensified Land Use Alternative has less impact on rural and undeveloped areas, specifically greenfields.

While the Intensified Land Use Alternative would be considered the environmentally superior alternative because of the more compact land use patterns fewer emissions and reduced VMT, this alternative requires implementation of the same mitigation measures required for the Plan and would not resolve any of the significant and unavoidable impacts of the Plan. However, the more intensified and compact land use development pattern would result in somewhat less adverse impacts to aesthetics, agriculture and forestry resources, regional air quality, biological resources, archaeological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, mineral resources, noise (although more urban noise), public services (although more demand for services in existing urban areas), transportation, tribal cultural resources, utilities and service systems (although more impacts on existing systems in urban areas), and wildfire due to the

[5] Adams, Tom (California League of Conservation Voters), and Amanda Eaken and Anne Nothoff (Natural Resources Defense Council). 2010. Tackling California's Global Warming Challenge: A Guide to SB 375, by Tom Adams (California League of Conservation Voters), p. 24.

denser pattern of development. The Intensified Land Use Alternative would also achieve greater overall reductions in criteria air pollutants and greenhouse gas emissions, as a result of the more compact pattern of land use development. The Intensified Land Use Alternative may not avoid any of the significant and unavoidable impacts of the Plan because those impacts are primarily associated with net increase in population anticipated for the SCAG region and depend on detailed location information with respect to development—which is not reasonably foreseeable at a programmatic level. Therefore, the comparative impacts between the Intensified Land Use Alternative and the Plan are primarily related to the level of severity of the impacts.

Similarly, the No Project Alternative does not avoid the significant and unavoidable impacts of the Plan, and in several instances the impacts would be more adverse due to the failure to achieve reductions in the consumptive use of land, energy, and water resources achieved through the policies and program embedded in the Plan that facilitate a more efficient use of these resources.

As discussed throughout this 2024 PEIR, SCAG has no land use authority; rather it sets regional land use policy. SB 375 addresses the land use component (in the context of transportation planning) of statewide efforts to achieve AB 32 GHG reduction goals that include all sectors of the economy. In order to meet the SB 375 targets for statewide GHG reductions, CARB identified that SCAG must plan to reduce GHG emissions by 19 percent by 2035. SCAG has developed the SCS (the regional land use policy component of Connect SoCal 2024), which sets forth land use strategies to meet these GHG emissions reduction targets. Actual implementation of the SCS will be undertaken by local jurisdictions through general plans and specific plans and through actions on individual projects.

While the Intensified Land Use would achieve CARB SB 375 GHG targets (as well as reducing impacts on open space and agricultural lands), the Intensified Land Use Alternative would have other impacts. For example, the Intensified Land Use Alternative would result in more development in urban areas potentially overloading infrastructure in some areas. This scenario assumes that very little development would be approved outside urban areas, which could require zoning changes or land use interventions beyond those currently in place. In addition, as urban areas become denser (more units per acre), urban infrastructure is used more:

- Water and sewer lines are required to carry more, greater than the current capacity, which could result in the need to construct additional capacity in the older infill areas at significant cost.
- Demand for police and fire services increases requiring expansion of existing stations and service personnel (although significant environmental impacts are not anticipated from such construction).
- Parks are used more, resulting in potential crowding and/or overuse, with facilities becoming worn and substandard (grass becomes overused and dies, equipment breaks, etc.) and/or the need to construct more parks and recreational facilities.
- Passenger vehicle transportation infrastructure cannot accommodate peak period volumes creating increased noise and air emission impacts including in proximity to sensitive receptors. Increasing population in the infill core areas could also reduce mobility for goods movement which cannot use alternative modes during peak periods, resulting in more trucks in stop and go traffic, impacting air quality and noise.

The Plan allows for some development outside urban areas. While development outside urban areas does require the construction of new infrastructure, it generally occurs in less populated areas and would expose fewer people to construction impacts. Also, in general, infrastructure in less urban areas has greater available capacity since infrastructure is generally sized for capacities that can accommodate substantially more than the current densities

(parks, police stations, water lines, etc. have minimum sizes that can generally accommodate more than rural level density). New development on the periphery is often closer to higher capacity sewer trunk lines, treatment plants and water wells, lowering infrastructure costs compared to retrofitting older existing urban areas.

Each community must determine what level of population it can support – balancing infrastructure capacity and population density. In developing the Plan, SCAG has satisfied its obligation under SB 375 to identify a policy and growth pattern that meets desired GHG reduction goals.

The Plan provides general guidance on location of development. The Plan does not impose specific land use controls. This EIR evaluates a number of potential scenarios. It will be up to each jurisdiction to interpret the Connect SoCal 2024 Regional Plan Policies and through ongoing monitoring of key performance measures (in cooperation with SCAG), monitor GHG reductions. Through ongoing monitoring SCAG will adjust regional policy as needed (in the next RTP/SCS or in interim amendments if needed) to ensure that the region complies with applicable State law including AB 32 and SB 375.

SCAG is not rejecting the Intensified Land Use Alternative or any alternative with increased density and/or greater percentage of high-density housing that might fall between the Intensified Land Use Alternative and the Plan as a possible land use scenario for 2050. Because SCAG has no land use authority, it has no mechanism to impose such detailed land use changes, however, the Plan would not preclude local jurisdictions from conforming with the Intensified Land Use Alternative.

In sum, the Plan is the preferred alternative because it balances local input with the need to increase densities, complies with federal transportation conformity requirements for the RTP, and reduces GHG emissions consistent with SB 375 targets for the SCS, thereby achieving the Plan goals and objectives. While additional densities in urban areas could further reduce GHG emissions, such increased densities may not be consistent with existing General Plans and local planning policies.

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