

## 6 Alternatives

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As required by Section 15126(d) of the State CEQA Guidelines, this EIR examines a reasonable range of alternatives to the 2018 RTP/SCS that could feasibly achieve similar objectives. A primary objective is to achieve a coordinated and balanced regional transportation system while reducing GHG emissions from passenger vehicles and light trucks to meet the regional GHG reduction targets set by the California Air Resources Board (CARB). The analysis of alternatives focuses on the various land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements, as well as the practicality of each alternative given economic and financial feasibility. The 2018 RTP/SCS is specifically intended for the SJCOG region; therefore, an alternative location for the 2018 RTP/SCS as a whole is not possible. However, within the SJCOG region, the 2018 RTP/SCS considers different patterns of land use and transportation investments to accommodate forecast future growth and regional housing needs.

### 6.1 Alternatives Development and Screening Process

During the development of the 2018 RTP/SCS, SJCOG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB for the tri-county region as well as the effectiveness of other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the 2018 RTP/SCS planning process through workshops and meetings, surveys and interactive tools.

Beginning in 2015, SJCOG began the technical update to the 2014 RTP/SCS. This planning effort began by gathering and updating critical data as well as working with local jurisdictions on growth forecasts for 2020, 2035 and 2042. The regional growth forecast was then used as the growth parameter for the updating the various transportation and land use scenarios for the 2018 RTP/SCS.

Utilizing input from the public and stakeholders, SJCOG updated the land use and transportation scenarios through 2042. SJCOG evaluated these scenarios using a set of transportation, environmental and equity performance measures approved by the Board of Directors. These RTP/SCS scenarios were refined with continued extensive input from partner agencies and key stakeholders as well as from community workshops held in 2017 and 2018. Ultimately, the SJCOG Board selected a single preferred scenario. The preferred scenario, or the 2018 RTP/SCS, is summarized in Section 2.0, *Project Description*, of this EIR and the environmental effects of this scenario are addressed in Sections 4.1 through 4.16.

This alternatives analysis herein includes the following alternatives to the proposed 2018 RTP/SCS:

- **Alternative 1: No Project.** The No Project Alternative is comprised of a land use pattern that reflects existing land use trends and a transportation network comprised of transportation projects that are currently in construction or are funded in the short range Regional Transportation Improvement Program (RTIP). No new projects under the 2018 RTP would be constructed.

- **Alternative 2: Business As Usual.** The Business As Usual Alternative has focused funding in roadway expansion and maintaining and rehabilitating existing roads and streets. This Alternative places investments that support land use patterns along highway corridors and less in urban core areas. This Alternative has a future growth pattern that is reflective of growth and development trends over the last two decades in San Joaquin County.
- **Alternative 3: Compact Development.** The Compact Development Alternative places investments in transportation systems that support high level of compact growth and infill. It increases density and transit beyond what is included in the SCS. It includes a higher percentage of new growth as infill/redevelopment, additional transit and active transportation investments, and a larger percentage of new housing on small lots or as multi-family.

Each alternative is described and analyzed below to determine whether environmental impacts would be similar to, less than, or greater than those of the preferred scenario in the 2018 RTP/SCS. As required by CEQA, this section also includes a discussion of the “environmentally superior alternative” among those studied.

## 6.2 Alternatives Eliminated from Detailed Consideration

The CEQA Guidelines state that an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii), infeasibility, or (iii) inability to avoid significant environmental impacts. (CEQA Guidelines Section 15126.6(a)(c).)

For this EIR, there were no alternatives that were considered by the lead agency and rejected as infeasible during the scoping process.

## 6.3 Alternative 1: No Project Alternative

### 6.3.1 Description

The No Project Alternative is required by Section 15126.6(e)(2) of the State CEQA Guidelines and assumes that the proposed 2018 RTP/SCS would not be implemented. The No Project Alternative allows decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. However, “no project” does not necessarily mean that development would be prohibited. The No Project Alternative includes “what would be reasonably expected to occur in the future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” For purposes of this document, the No Project Alternative includes a land use pattern comprised of existing land use trends. In other words, it assumes that current sub-regional growth trends would continue. Rather than focusing on coordinating transportation projects that serve infill and transit oriented development, the transportation network would be comprised of transportation projects that are currently in construction or are funded in the short range Regional Transportation Improvement Program (RTIP).

## 6.3.2 Impact Analysis

### a. Aesthetics/Visual Resources

Implementation of this alternative would result in fewer visual impacts as compared to the 2018 RTP/SCS, because many of the proposed interchanges, bridges and roadway extensions, as well as transit and rail facilities would not be constructed. Nevertheless, many capital improvements would still be constructed under this alternative with the potential to impact scenic vistas on designated scenic highways, along with the gradual transformation toward a more urban/suburban character would occur in many parts of the SJCOG region. In fact, because this alternative would continue current sub-regional growth trends and existing land trends, rather than emphasizing an infill approach to land use and housing, more development would occur outside of existing urban areas, which may result in greater impacts to scenic resources in the less developed portions of the SJCOG region. Thus, impacts related to visual character would be significant and unavoidable as with the 2018 RTP/SCS. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the 2018 RTP/SCS with some impacts greater while other impacts less, but would remain significant and unavoidable.

### b. Agricultural Resources

This alternative would result in fewer transportation infrastructure projects being constructed, including roadway widening and other projects that could directly convert agricultural land to non-agricultural use. However, because this alternative would continue current sub-regional growth trends and existing land use trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas, including within areas currently used for agricultural production. Given the extent of Important Farmland in San Joaquin County, impacts related to converting Important Farmland to non-agricultural use, conflicts between urban and agricultural land uses, and conflicts with existing agricultural zoning and/or Williamson Act contracts would be worse under this alternative than for the proposed 2018 RTP/SCS. Under this Alternative, approximately 43,000 acres of important farmland would be consumed due to new development, whereas the proposed 2018 RTP/SCS would result in approximately 23,000 acres would be converted. Mitigation would not be available to reduce impacts to a less than significant level. Therefore, this impact would be significant and unavoidable for the No Project Alternative, and the overall impact to agricultural resources resulting from the No Project Alternative would be greater than under the 2018 RTP/SCS.

### c. Air Quality and Health Impacts/Risks

This Alternative would involve the construction of fewer transportation improvement projects. Therefore, this alternative would result in reduced short-term air quality impacts from construction activity. Long-term emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> would be the same as the project for all criteria pollutants, except for PM<sub>2.5</sub> emissions, which would be 0.01 tons per day higher under this alternative than emissions anticipated with implementation of the 2018 RTP/SCS. Overall, this Alternative would result in lower short-term pollutant emissions and higher long-term pollutant emissions when compared to the 2018 RTP/SCS, overall similar impacts compared to the project.

### d. Biological Resources

Implementation of this Alternative may result in less impact to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening projects, and creek

crossings would occur. However, because this alternative would continue current sub-regional growth trends and existing land use trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas, including in areas providing habitat for special status plant and animal species. Overall impacts to special status plants, animals, wetlands and/or riparian habitat and wildlife movement outside developed urban areas would therefore be greater than under the 2018 RTP/SCS.

#### **e. Cultural and Historic Resources**

As described in Section 4.5, *Cultural and Historic Resources*, some of the 2042 RTP/SCS projects may be located in proximity to historical resources or include repair or replacement of potentially historical structures (e.g. bridges). Because these projects would not be developed under the No Project Alternative, these impacts would be eliminated unless determined to be required due to safety or seismic issues. In addition, because less infill development would occur under this alternative, fewer impacts involving redevelopment or demolition of existing structures resulting from land use development would occur. Impacts to historical resources would therefore be reduced when compared to the 2018 RTP/SCS. However, project-specific impacts may still be significant.

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2018 RTP/SCS. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped areas. As such, the potential for uncovering known or unknown archaeological resources or paleontological deposits would increase under this alternative for new development but decrease for transportation projects. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the 2018 RTP/SCS.

#### **f. Energy**

Because this alternative would result in less construction of transportation infrastructure, overall energy use associated with construction activities would be reduced when compared to the 2018 RTP/SCS. However, this alternative would not include many of the capital improvements envisioned under the proposed 2018 RTP/SCS that would improve transportation efficiency and reduce regional energy demand. Energy use will increase over time as the result of regional socioeconomic (population and employment) growth, regardless of implementation of the 2018 RTP/SCS. The No Project Alternative would result in lower total and per capita energy use as compared to the 2018 RTP/SCS. As discussed in Section 4.6, *Energy*, the 2018 RTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable energy conservation policies. Because the No Project Alternative would slightly reduce both total and per capita energy use, impacts would be reduced when compared to the 2018 RTP/SCS and impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would be less than significant.

The 2018 RTP/SCS would generate energy demand that may require construction of new energy facilities; however, this impact, as discussed in Section 4.6, *Energy*, would be less than significant. The No Project Alternative would reduce the amount of energy consumed overall, and the overall impact would be similar to or less than the 2018 RTP/SCS.

### **g. Environmental Justice**

The No Project Alternative would generally have less improved access but less exposure conditions for environmental justice communities as compared to existing conditions. Specifically, the No Project Alternative, when compared to existing conditions, would lessen the percentage of environmental justice households within one-half mile of high quality transit stops and centers. Meanwhile, the proposed Plan would decrease the percentage of jobs within one-half mile of high quality transit from 41 percent to 35 percent.. Overall, Alternative 1 would decrease the percentage of environmental justice households and employment located within one-half mile of high quality transit when compared to existing conditions. However, compared to the proposed Plan, environmental justice households have a lesser potential of being located within 500 feet of a highway, which would increase their exposure to certain air pollutants. Overall, due to the reduced transit access for environmental justice communities, the No Project Alternative would have a greater impact compared to the project.

### **h. Geology and Soils**

Impacts related to erosion and loss of topsoil would be less than significant pursuant to compliance with existing regulations, similar to the 2018 RTP/SCS. Because this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be less exposure of new structures to hazardous geologic conditions, including liquefaction, expansive soils, landslides, ground-shaking and flooding. Conversely, if inadequate structures are not replaced, the potential for these existing structures and people using these structures to be harmed by geologic hazards could be greater than under the proposed 2018 RTP/SCS than under the Project Alternative. As seismic hazards and unstable soil related impacts under the proposed project would be significant but mitigable, impacts would be similar to or slightly less under the Project Alternative.

### **i. Greenhouse Gas Emissions/Climate Change**

The No Project Alternative would result in fewer impacts associated with GHG emissions during construction activities as fewer transportation infrastructure projects would be constructed, but the fewer projects could lead to additional congestion and cars idling for longer periods. Therefore, short-term GHG emissions would potentially be lower under this alternative due to less construction but offset by increased congestion. Construction emissions associated with land use development cannot be compared at this time as emissions for either scenario could vary greatly depending on individual project characteristics. In addition, total VMT is expected to be lower (8.35 billion) in 2042 under this Alternative relative to the project (8.49 billion). Therefore, long-term GHG emissions could be reduced relative to the project making this alternative better than the project.

### **j. Hazards and Hazardous Materials**

This alternative would result in fewer infrastructure projects being constructed, thereby reducing hazardous material use, storage and transportation resulting from construction of those projects. However, the amount of hazardous materials being transported to support land use development in the region would remain the same. Because the No Project Alternative would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to the 2018 RTP/SCS. Because this alternative would allow more housing near wildlands, it would increase the vulnerability of people and structures to wildland fire. This impact

would be greater under the No Project Alternative and could be considered significant and unavoidable. Due to the increased severity of this significant impact, overall hazards and hazardous materials impacts would be greater under this alternative than under the 2018 RTP/SCS.

### **k. Hydrology and Water Quality**

This alternative would result in fewer transportation infrastructure projects being constructed. Therefore, this alternative would reduce water quality impacts resulting from construction-related erosion and sedimentation and would generate less water demand for dust suppression activities. These impacts would remain less than significant pursuant to compliance with existing regulations, similar to the 2018 RTP/SCS.

Because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas. As such, impervious surfaces would be expected to increase under this alternative. Because projects would be located in less developed areas, runoff would include fewer urban pollutants such as heavy metals from auto emissions, oil and grease than projects under the 2018 RTP/SCS. However, because more development would occur in and therefore be adjacent to agricultural areas, runoff from those adjacent agricultural areas would contain more fertilizers and pesticides. While projects under this alternative may require more grading and vegetation removal, including in proximity to creeks, less urban development may result in less disturbance of soils on previously contaminated sites. As such, water quality in creeks may be more impacted, but water quality within urban areas may be less impacted. Because of these tradeoffs, the No Project Alternative would be anticipated to result in impacts to water quality that are overall comparable to the 2018 RTP/SCS with some impacts greater while other impacts would be less; water quality impacts would remain less than significant, pursuant to compliance with existing regulations.

Increases to water demand are primarily associated with increased population levels. The No Project Alternative would result in the same population increases as the 2018 RTP/SCS. However, this alternative would result in wider spread land use development, which would result in a less efficient water supply system (e.g., greater areas of irrigated landscaping). As such, future water demand associated with this alternative would be greater than water demand for the 2018 RTP/SCS. This impact, which is significant and unavoidable for the 2018 RTP/SCS, would be greater under the No Project Alternative, particularly because mitigation would not apply to this alternative. Impacts would remain significant and unavoidable.

Overall hydrology and water quality impacts would be greater under the No Project Alternative than the 2018 RTP/SCS.

### **l. Land Use**

The No Project Alternative includes fewer transportation projects than the RTP/SCS and does not include any land use strategies to encourage a compact growth pattern. It would have a lesser potential for conflicting with general plans as the only growth strategies that would occur would be local land use controls. It would have less of an influence on the patterns of urbanization in the region. Nonetheless, urbanization with significant potential for land use incompatibility would occur. The No Project Alternative would result in a more dispersed land use pattern. The No Project Alternative is expected to accommodate the same increase in total population, housing, and employment as the 2018 RTP/SCS.

The No Project Alternative is expected to accommodate the same increase in total population, housing, and employment as the 2018 RTP/SCS. It is anticipated that more development would occur in urban areas under the 2018 RTP/SCS; therefore more displacement could occur under the proposed project than this Alternative, as well as potentially increase the level of incompatibility with surrounding land uses. The 2018 RTP/SCS includes additional transportation improvements that would facilitate access to currently vacant lands that would be less accessible with the No Project Alternative. Although the Plan and the No Project Alternative would result in a different distribution of consumed land, they would result in the same total number of population, households, and employment. As discussed in Agricultural Resources, the No Project Alternative would have greater impacts related to conversion of farmland and agricultural lands. The No Project Alternative would likely have similar or possibly greater impact to land use incompatibility because redevelopment in existing communities would still occur and more land in general would be impacted.

### **m. Noise**

Because noise is a site-specific issue, noise studies would be prepared for each project to determine whether impacts would occur. From a programmatic perspective, fewer transportation infrastructure projects would result in less construction activity under the No Project Alternative. This would reduce temporary noise impacts throughout the SJCOG region. In addition, because the number of infill or TOD projects would be less under the No Project Alternative, construction-related noise impacts on adjacent sensitive receptors would also decrease. However, construction noise would still occur and impacts would continue to be significant.

Although the number of transportation projects would be reduced as compared to the 2018 RTP/SCS, increased traffic volumes resulting from regional growth would continue to occur. Whether noise impacts would be greater or less than those anticipated under the 2018 RTP/SCS remains dependent on site-specific considerations that cannot currently be known. Regionally, the difference in VMT between the No Project Alternative and the 2018 RTP/SCS is not enough to noticeably change overall noise levels in the region. Mobile source noise levels resulting from traffic would therefore be similar under the No Project Alternative when compared to the 2018 RTP/SCS.

Because most rail and transit improvements planned under the 2018 RTP/SCS would not be implemented under this alternative, the potential for increased rail and transit noise would be reduced under the No Project Alternative.

Overall, noise-related impacts across the region would be similar to the 2018 RTP/SCS, and would continue to be significant and unavoidable.

### **n. Transportation and Circulation**

This alternative would not include many of the projects envisioned under the proposed 2018 RTP/SCS, including new highway and intersection projects, new bikeway and pedestrian projects (active transportation), new railroad projects, new transit projects, new intelligent transportation system/transportation demand management projects and aviation related projects. Many of these projects are intended to address traffic congestion, and in many cases would serve as mitigation measures to reduce potential impacts associated with planned long-term development.

The last two columns of Table 43 in the Transportation section compare the 2018 RTP/SCS against the No Project alternative in which new transportation investments cease after 2015 while population and development continue to grow to forecast levels, and development follows a more

dispersed pattern than called for in the 2018 RTP/SCS. The 2018 RTP/SCS compared to the No Project Alternative would result in slightly more VMT (+1.66%) and VMT per capita (1.65%) but approximately 20% less congested lane miles and vehicle hours of delay. The 2018 RTP/SCS would result in an increase in transit boardings and active transportation trips compared to the No Project alternative.

Overall, VMT within the SJCOG region would increase as a result of regional population growth. Under the No Project Alternative overall total VMT and VMT per capita would be increased, as compared to the proposed project. CVMT, as it is used in this EIR, is equivalent to the VMT on facilities that operate unacceptably during peak traffic hours. This is because the 2018 RTP/SCS projects increase capacity of roadways and transit services in the SJCOG region, as well as improve circulation at facilities that operate unacceptably during peak hours. Without these projects, the No Project Alternative would result in more miles travelled on congested facilities during the most congested periods of the day.

Under the No Project Alternative, projects to increase bus capacity on congested facilities and the frequency of bus lines would not be implemented. Additionally, the 2018 RTP/SCS projects that are intended to ensure a reliable bus fleet and purchase new stock would not be implemented under the No Project Alternative. Without these types of projects, operation of public transit may be unreliable or fail to meet the frequency and performance standards established by applicable public transit entities. Thus, compared to the 2018 RTP/SCS, the No Project Alternative would have a greater adverse impact on transit service in the SJCOG region.

Overall, the No Project Alternative would result in increased daily VMT in the SJCOG region compared to the 2018 RTP/SCS, it would also increase CVMT and adverse impacts to public transit. Thus, overall, impacts to transportation and circulation would be greater under the No Project Alternative.

#### **o. Tribal Cultural Resources**

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2018 RTP/SCS. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped or open space areas. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would increase under this alternative. Although mitigation would not apply to this alternative, future projects would be required to comply with AB 52, which may require formal tribal consultation. Compliance with this requirement would reduce impacts to a less than significant level, similar to the 2018 RTP/SCS. The overall impact of the No Project Alternative would be similar to or slightly greater than under the 2018 RTP/SCS.

## **6.4 Alternative 2: Business As Usual**

### **6.4.1 Description**

The Business As Usual Alternative has focused funding in roadway expansion and maintaining and rehabilitating existing roads and streets. This Alternative places investments that support land use patterns along highway corridors and less in urban core areas. This Alternative has a future growth pattern that is reflective of growth and development trends over the last two decades in San Joaquin County. This Alternative places less focus on investments in public transit with emphasis on

maintaining existing service over service expansion. As a result, this Alternative assumes ACE expansion for Modesto/Merced and does not include expansion of ACE service on existing routes. The growth network associated with the Business As Usual Alternative limits multifamily developments as a percentage of new growth to approximately 20 percent, as opposed to 39 percent under the 2018 RTP/SCS.

## 6.4.2 Impact Analysis

### a. Aesthetics/Visual Resources

Under Alternative 2, there would be a similar but slightly reduced number of transportation projects but development patterns would extend over a greater area of land resulting in similar impacts to scenic views and the alteration of existing visual character. However, Alternative 2 would not include some the compact growth form strategies, which intend to focus more growth in walkable, mixed-use communities and existing and planned urban areas. This Alternative promotes more spread out growth and development along regional highways, rather than compact infill development, which has the potential to increase impacts of views from existing roadways. As shade/shadow and glare impacts typically occur in urban areas, these impacts would be reduced under Alternative 2 as growth would be more distributed and less dense, however new lighting sources would still be generated. Nighttime lighting impacts would be greater as more development would be prioritized in areas where existing lighting may not currently exist, as lighting impacts are most pronounced in rural areas. Overall, this Alternative would result in similar impacts to scenic vistas and shade/shadow and glare but would result in greater lighting impacts than the propose 2018 RTP/SCS.

### b. Agricultural Resources

Under Alternative 2, there would be a similar but slightly reduced number of transportation projects but development patterns would extend over a greater area of land., Therefore the amount of agricultural land consumed would increase compared to the proposed project. Similar to the No Project Alternative, this Alternative would not encourage a compact growth pattern and Alternative 2 would consume a total of 42,315 acres of farmland, compared to the 23,404 acres in the proposed project. Alternative 2 would not include the urban form strategies that would focus growth within urban areas and as a result, would result in the consumption of a greater amount of farmland compared to the 2018 RTP/SCS. Impacts to forest lands would also be greater as the more dispersed land use pattern of this Alternative would result in development in areas that currently contain forest land. Therefore, the Business As Usual Alternative would result in greater impacts than the proposed project.

### c. Air Quality and Health Impacts/Risks

The Business As Usual Alternative would not include construction of transit projects included in the 2018 RTP/SCS. Therefore, short-term pollutant emissions would potentially be lower under this alternative; construction emissions associated with land use development cannot be compared at this time as emissions for either scenario could vary greatly depending on individual project characteristics. The Business As Usual Alternative would allow for lower-density, sprawling growth relative to the project, which would result in greater annual VMT (8.496 billion) relative to the project (8.493 billion), and thus, would result in greater criteria pollutant emissions associated with vehicle travel, which comprise the majority of operational emissions. In addition, the Business As

Usual Alternative would not include roadway improvement projects included in the 2018 RTP/SCS that would help alleviate congestion and reduce pollutant emissions associated with vehicle traffic.

Business As Usual Alternative would result in higher VMT and potentially result in greater exposure of sensitive receptors to DPM, long-term air quality impacts from this Alternative would be greater than the proposed 2018 RTP/SCS. This Alternative would introduce a potentially significant impact due to higher long-term pollutant emissions.

#### **d. Biological Resources**

Under the Business as Usual Alternative, similar areas would be impacted by excavation and construction activities as compared to the proposed project. This Alternative would not include the compact development and infill growth strategies, which intend to focus more growth in walkable, mixed-use communities and existing and planned urban centers. Therefore, this Alternative would result in transportation projects and development taking place over a greater area of land. This would result in greater vacant land consumption, including sensitive species habitat and natural lands, that would, in turn, increase the impacts to biological resources and open space, such as habitat loss and fragmentation. Therefore, this Alternative would result in increased impacts to biological resources and open space than from the proposed 2018 RTP/SCS.

#### **e. Cultural and Historic Resources**

Under the Business As Usual Alternative, there would be a similar but slightly reduced number of transportation projects but development patterns would extend over a greater area of land. This Alternative would not include the urban growth form strategies, intended to focus more growth in walkable, mixed-use communities and existing and planned urban centers. This Alternative would result in approximately 21,000 more acres of land consumption, as compared to the proposed 2018 RTP/SCS. This would increase the chance to uncover a greater number of previously undisturbed resources. Therefore, this Alternative would result in greater impacts to cultural resources than compared to the proposed 2018 RTP/SCS. In addition, this Alternative would not focus growth in urban areas to the extent of the proposed project and therefore could have fewer impacts to historic buildings.

#### **f. Energy**

Unlike the Business As Usual Alternative, the 2018 RTP/SCS includes strategies to focus growth such as infill and mixed-use developments, in urban areas, which would help reduce the number of new energy facilities or expansion of existing facilities that need to be constructed. Infill and mixed-use developments are generally higher efficiency dwellings accounting for the reduction in total energy consumption. Lower density development would sprawl throughout San Joaquin County under the Business As Usual Alternative to satisfy the same population growth. Under this Alternative, these land use strategies may not occur, although individual jurisdictions may still seek to reduce the urban footprint through their general plans. Energy use under the Business As Usual Alternative would be less efficient per capita compared to the proposed 2018 RTP/SCS. Similarly to the proposed project however, this Alternative would add to cumulative demand for energy in California and in the world in general.

#### **g. Environmental Justice**

The Business As Usual Alternative compared to the proposed project, the amount of households located within a half mile of transit centers would be decreased, as development would be more

spread out. This Alternative does not promote compact infill approaches to land use as well as not focusing development near existing transit infrastructure. Therefore this Alternative would result in reduced transit efficiency for all communities. As such, impacts to communities of concern would increase, however these impacts would not be disproportionately impacted. Overall, impacts would be similar to slightly less than the proposed 2018 RTP/SCS.

#### **h. Geology and Soils**

Compared to the proposed project, there would be a similar but slightly reduced number of transportation projects but development patterns would extend over a greater area of land increasing the land area where transportation infrastructure could be subject to risk as a result of surface rupture, ground-shaking liquefaction, and landsliding and other risks associated with seismic events.. Impacts related to geologic and seismic resources would be similar to the proposed project under this Alternative because the population would remain the same and entire region is subject to seismic risk. Impacts would be similar to or slightly less than the proposed 2018 RTP/SCS

#### **i. Greenhouse Gas Emissions/Climate Change**

This Alternative would result in fewer impacts associated with GHG emissions during construction activities as fewer transit projects would be constructed. Therefore, short-term GHG emissions would potentially be lower under this alternative; however, construction emissions associated with land use development cannot be compared at this time as emissions for either scenario could vary greatly depending on individual project characteristics. Total VMT is expected to be higher (8.496 billion) in 2042 under this Alternative relative to the project (8.494 billion). In addition, this Alternative would not include implementation of policies and initiatives to support GHG reductions contained in the 2018 RTP/SCS. Therefore, long-term GHG emissions would be increased relative to the project and this Alternative would have a greater cumulative impact.

#### **j. Hazards and Hazardous Materials**

Alternative 2 would have similar impacts related to the accidental release of hazardous materials as compared to the Plan. The Business As Usual Alternative would not include the compact urban growth strategies which are intended to focus development and growth in walkable, mixed-use communities and existing and planned urban centers. This Alternative may not include as much redevelopment of urban infill properties as the proposed 2018 RTP/SCS, and, therefore, could result in fewer potential impacts related to disturbance of contaminated sites. However it would disturb more undeveloped and open space uses, some of which might be farmland or former oil uses and may be contaminated with pesticides or chemicals from past operations and thus can result in impacts when ground is disturbed.

With similar but slight reduced VMT compared to the proposed 2018 RTP/SCS, increased mobility would increase the possibility of hazardous materials transport throughout the region, as well as through areas outside of the region. As the population in Central California increases through 2042, the amount of hazardous materials that pass through San Joaquin County (trucks, trains, and pipelines) is expected to increase regardless of RTP/SCS scenario implemented. In regards to wildfire risks, less projects would be focused in the dense urban cores where fire hazards are reduced but would increase the amount of projects in more rural areas wherein wildland fire risks are higher. Therefore, the transportation improvements and land use scenario under this Alternative would likely result in an increased impact to wildfire risks. Some development would still occur in areas of

moderate or even high wildfire risk, therefore impacts could be significant and unavoidable under this alternative.

### **k. Hydrology and Water Quality**

Under the Business As Usual Alternative, similar areas would be impacted by excavation and construction activities related to transportation projects as compared to the Plan. However, this Alternative would not include the same type of urban growth strategies which promote denser compact development, intended to focus more growth in walkable, mixed-use communities and existing and planned high-quality transit areas. Therefore, this Alternative would result in development patterns consuming a greater amount of land. Due to the greater consumption of land, this Alternative would result in increased amounts of impervious surfaces and increased impacts to water resources. Further, the development pattern of this Alternative would not focus development in urban areas, as the proposed 2018 RTP/SCS would. As urban development is generally more water efficient (due to lack of large lawns, etc.) the Business As Usual Alternative's development pattern would be less efficient and result in more water use overall. Under this Alternative, water consumption would be 358 gallons per day per household, compared to 308 gallons per day under the proposed 2018 RTP/SCS. Therefore, this Alternative would result in greater impacts to water resources than the proposed project.

### **l. Land Use**

The Business As Usual Alternative includes similar transportation projects compared to the project but does not include land use strategies to focus growth in urban areas. It would have a lesser potential for conflicting with general plans as the only growth strategies that would occur would be local land use controls. It also would have less of an influence on the patterns of urbanization in the region. Nonetheless, urbanization with significant potential for land use incompatibility would continue to occur. The Business As Usual Alternative would result in a more dispersed land use pattern. The 2014 RTP Alternative would consume an estimated 35,184 acres of vacant land, while the Plan would consume only 18,123 acres of vacant land. The 2014 RTP Alternative would likely have similar or possibly greater impact on land use incompatibility because redevelopment in existing communities would still occur and more land in general would be impacted.

This Alternative contains similar transportation projects as compared to the Plan, and promotes growth in a more spread out growth pattern. Consequently, there would be fewer places where businesses and homes would be displaced by transportation projects and fewer places where communities could be disrupted. Due to the more dispersed pattern of this Alternative, fewer impacts on existing uses and residential land uses (rural, low, and medium to high-density housing land uses) would occur than under the proposed project. Under this Alternative, land uses would change to a greater extent in undeveloped areas.

The Business as Usual Alternative has the same population, household, and employment growth as the Plan. Given that the population, household, and employment growth would be the same; this alternative would result in similar impacts to those associated with the proposed 2018 RTP/SCS. Overall, impacts would be similar to or slightly less than the proposed project.

### **m. Noise**

The Business As Usual Alternative would result in some transportation improvements and some concentration of growth, but not to the same extent with transit projects as the proposed project. Therefore impacts would be similar to, but not as severe as the proposed project. Similar to the No

Project Alternative the Business As Usual Alternative would not make some of the improvements in urban areas, potentially leading to greater congestion on the outskirts of Stockton and towards the Sierra Nevada mountain range. Construction and operational noise sources would continue to generate noise levels that could exceed local thresholds, but overall, with growth that is more spread out, sensitive receptors may not be exposed to the same noise levels as with compact infill growth. Impacts would be similar to or slightly less than the proposed 2018 RTP/SCS.

#### **n. Transportation and Circulation**

This transportation planning scenario assumes an updated list of financially constrained projects, which reflect modest improvements to transit, bike, and walk infrastructure, and a continuation of the growth pattern occurring in San Joaquin County over the past several decades. Transportation investments are focused on freeways and roads to accommodate a peripheral development pattern, and improved truck flows and safety. Transit investments consist of operations and maintenance of existing bus and passenger rail services with expansion of key services. This alternative would slightly increase VMT in 2042 as compared to the Plan, as well as result in a drop in transit and active mode shares. Congested lane miles overall would be increased compared to the effectiveness of the proposed 2018 RTP/SCS, reflecting relatively less roadway investments compared to the Plan. Overall, impacts would be increased as compared to the proposed project.

#### **o. Tribal Cultural Resources**

Under the Business As Usual Alternative, there would be a similar but slightly reduced number of transportation projects but development patterns would extend over a greater area of land. This Alternative would not include the urban growth form strategies, intended to focus more growth in walkable, mixed-use communities and existing and planned urban centers. This Alternative would result in approximately 21,000 more acres of land consumption, as compared to the proposed 2018 RTP/SCS. This would increase the chance to uncover a greater number of previously undisturbed resources. Therefore, this Alternative would result in greater impacts to tribal cultural resources than compared to the proposed 2018 RTP/SCS, however all project sponsors would still be required to undergo AB 52 consultation with identified tribes. Overall, impacts would be similar to or slightly greater than the proposed 2018 RTP/SCS.

## **6.5 Alternative 3: Compact Development**

### **6.5.1 Description**

The Compact Development Alternative builds on the enhanced density and ideas of the SCS as described in the 2018 RTP/SCS and further supports the highest level of compact growth and infill. It includes more aggressive densities than the proposed 2018 RTP/SCS, increases mobility through additional transportation investments, and limits the development of single-family housing that would be built in the region. The Compact Development transportation network in this scenario is focused on utilizing flexible funds on bicycle and pedestrian facilities and public transit. In addition, this Alternative focuses on the highest level of ACE expansion and Bus Rapid Transit Corridors in urbanized areas. The growth network associated with the Compact Development Alternative limits single-family housing as a percentage of new growth to 51 percent (as opposed to 61 percent under the 2018 RTP/SCS).

## 6.5.2 Impact Analysis

### a. Aesthetics/Visual Resources

Under the Compact Development Alternative more aggressive growth strategies would be applied to the region. This would potentially result in greater impacts related to light and glare, shade and shadow, and visual character of neighborhoods as more intense development occurs within urban centers. Taller buildings could be incongruous with existing surroundings and could overwhelm historic buildings and/or existing neighborhoods. Further, glare impacts and shade and shadow impacts could be increased due to increased density. However, as more development is focused in urban areas, fewer nighttime lighting impacts would occur in undeveloped areas. Lastly, impacts related to scenic highways and vistas would generally be the same as both alternatives include similar transportation networks.

### b. Agricultural Resources

Under Alternative 3, more development would be targeted in urban areas. Approximately 14,000 acres of land would be consumed for new development, as opposed to over 17,000 acres for the proposed Plan, which would result in fewer acres of farmland consumed. Alternative 3 would consume approximately 4,000 acres of prime farmland, or approximately 28 percent of the total land that would be consumed would be prime farmland. Alternative 3 would also include urban form strategies that would further focus growth within urban areas and as a result, would result in the consumption of fewer acres of farmland compared to the Plan. Impacts to forest lands would also be lesser as the more efficient land use pattern of the Compact Development Alternative would reduce the potential for development in areas that currently contain forest land. Therefore, the Compact Development Alternative would result in fewer impacts to agricultural resources than the Plan.

### c. Air Quality and Health Impacts/Risks

This Alternative would increase the number of transportation improvement projects constructed relative to the project. Therefore, short-term emissions would potentially increase; construction emissions associated with land use development cannot be compared at this time as emissions for either scenario could vary greatly depending on individual project characteristics. This Alternative would result in a lower VMT of 8.38 billion relative to the project's VMT of 8.49 billion, resulting in lower long-term emissions. More compact development under this Alternative may also bring more sensitive receptors closer to major roadways and other sources of DPM. Air Quality impacts would be less under this alternative.

### Toxic Air Contaminants

Diesel particulate matter (DPM) generated from diesel-fueled engines and found in diesel exhaust, has been determined by CARB to be a toxic air contaminant as defined under Section 39655 of the Health and Safety Code. The long-term health effects of DPM are described in Section 4.3, *Air Quality*.

As discussed therein, PM<sub>2.5</sub> emissions is used as an indicator for DPM emissions in this analysis. While the precise difference between emissions resulting from the proposed Plan as opposed to Alternative 3 cannot be determined at this time, it is important to note that emissions of PM<sub>2.5</sub> from mobile sources would be reduced under the Compact Development Alternative to a similar degree

as the proposed Plan when compared to existing conditions. CARB additionally has several programs and regulations in place to reduce DPM emissions statewide, as described further in Section 4.3, *Air Quality*. These programs and regulations would reduce DPM emissions over the lifetime of the 2018 RTP/SCS. Consequently, it can be assumed that the reductions in PM<sub>2.5</sub> emissions include reductions in DPM emissions region-wide.

However, improvements under Alternative 3 may also bring sources of DPM closer to sensitive receptors through construction of new facilities or widened roadways, which could increase exposure of sensitive receptors. In addition, another substantial source of TACs is stationary sources, such as diesel generators, industrial processes, and dry cleaners. However, there is no available data on possible new stationary sources that would be in operation in 2042 under the Compact Development Alternative. Therefore, it is unknown what impacts on health risks in San Joaquin County would be related to TACs from stationary sources. Consequently, this impact must be considered potentially significant. Furthermore, the Compact Development Alternative would result in 4.4 percent of all households being located within 500 feet of a freeway, as opposed to 4.3 percent under the proposed Plan. Overall, impacts related to TACs from the Compact Development Alternative would be greater than those under the Plan. As a result, Mitigation Measures AQ-1 through AQ-3 would be required to reduce air quality impacts to a less-than-significant level. Overall, impacts from Alternative 3 would be the same as the 2018 RTP/SCS.

#### **d. Biological Resources**

Under the Compact Development Alternative, fewer areas would be impacted by excavation and construction activities as compared to the Plan. The Compact Development Alternative would include a greater amount of infill development compared to the Plan. Therefore, the Compact Development Alternative would result in transportation projects and development taking place over a smaller amount of land. Specifically, new transportation projects and development included in the Compact Development Alternative would result in approximately 14,000 acres of new land consumption, as compared to over 17,000 acres under the Plan. Although the difference would be relatively small (a decrease of 3,429 acres), this would result in fewer acres of vacant land consumed, including sensitive species habitat and natural lands, that would, in turn, decrease the impacts to biological resources and open space, including habitat loss and fragmentation. Therefore, the Compact Development Alternative impacts to biological resources and open space would be less than the impacts from the Plan.

#### **e. Cultural and Historic Resources**

Under the Compact Development Alternative, fewer undeveloped areas would be impacted by excavation and construction activities related to transportation projects as compared to the Plan. The Compact Development Alternative focuses on more development in infill areas and further expansion of non-motorized transportation. Under the Compact Development Alternative, anticipated development would result in approximately 14,000 acres of new land consumption as compared to over 17,000 acres under the Plan, thereby exposing fewer previously undisturbed cultural resources. As with the Plan, increased focus on redevelopment of existing communities could result in increased impacts to historic buildings.

#### **f. Energy**

Similarly to the Compact Development Alternative, the 2018 RTP/SCS includes strategies to focus growth such as infill and mixed-use developments in urban areas. However, the Compact

Development Alternative would promote higher densities in urban areas which would help reduce the need for new energy facilities or expansion of existing facilities that could result in adverse environmental effects. Infill and mixed-use developments are generally higher efficiency dwellings accounting for the reduction in total energy consumption. The Compact Development Alternative would result in a 2042 annual per capita energy use of 80.6 Btu compared to 89 Btu under the proposed Plan, representing an approximately nine percent reduction from the proposed Plan. Similarly to the Plan, the Compact Development Alternative would add to cumulative demand for energy in California and in the western region of North America in general.

### **g. Environmental Justice**

The Compact Development Alternative would be generally similar to the proposed Plan by improving access and exposure conditions for environmental justice communities as compared to existing conditions. Specifically, both the proposed Plan and the Compact Development Alternative, when compared to existing conditions, would improve the percentage of environmental justice households within one-half mile of high quality transit stops and centers from 16 percent to 19 percent. Meanwhile, the proposed Plan would decrease the percentage of jobs within one-half mile of high quality transit from 41 percent to 35 percent, as opposed to the Compact Development Alternative which would result in 36 percent of jobs located within one-half mile of high quality transit. Furthermore, the Compact Development Alternative would result in a higher percentage (4.4 percent) of total households within 500 feet of a highway when compared to the proposed Plan (4.3 percent). This could result in a greater number of environmental justice households being located within 500 feet of a highway under the Compact Development Alternative as opposed to the proposed Plan. Overall, Alternative 3 would improve the percentage of environmental justice households and employment located within one-half mile of high quality transit when compared to existing conditions. However, compared to the proposed Plan, environmental justice households have a greater potential of being located within 500 feet of a highway, which increases their exposure to certain air pollutants.

### **h. Geology and Soils**

The Compact Development Alternative transportation network is similar to the Plan network with minor changes to transit projects. Construction and excavation impacts would therefore be generally the same as for the Plan. The Plan and the Compact Development Alternative would have similar construction related impacts. The Compact Development Alternative focuses residential and employment growth in urban areas; development is anticipated to be more compact (more multi-family as compared to large lot and conventional single-family housing). Some urban centers are located near known faults and other geologic hazards which could increase the number of people and structures exposed to potential surface rupture, ground-shaking liquefaction, and landsliding due to seismic events. Impacts related to geologic and seismic resources would be similar to the Plan under the Compact Development Alternative because the population would be the same and entire region is subject to seismic risk.

### **i. Greenhouse Gas Emissions/Climate Change**

This Alternative would result in greater impacts associated with GHG emissions during construction activities as more transportation projects would be constructed. Therefore, short-term GHG emissions would potentially be higher under this alternative; however, construction emissions associated with land use development cannot be compared at this time as emissions for either

scenario could vary greatly depending on individual project characteristics. Total VMT is expected to be lower (8.38 billion) relative to the project (8.49 billion), resulting in lower long-term GHG emissions. This Alternative would retain policies and initiatives to reduce GHGs contained in the 2018 RTP/SCS. Overall, this Alternative would lower GHG emissions and, like the project, would be consistent with state and local policies, plans, and recommended targets for GHG reductions. By decreasing long-term GHG emissions, this Alternative would have a lower cumulative impact. Impacts would remain less than significant with mitigation.

#### **j. Hazards and Hazardous Materials**

The Compact Development Alternative would result in similar impacts related to the accidental release of hazardous materials as compared to the Plan. The Compact Development Alternative focuses on more development in infill areas and further expansion of non-motorized transportation. Under the Compact Development Alternative approximately 14,000 acres of land would be consumed (as compared to over 17,000 acres under the Plan). The Compact Development Alternative could result in greater impacts related to disturbance of contaminated sites as compared with the Plan because of the increased focus on urban redevelopment and infill. The land use patterns associated with the Compact Development Alternative would maximize urban centers and focus on urban infill. This would increase the potential for disturbance of contaminated sites, as there is a greater likelihood for urban redevelopment sites to be previously exposed to hazardous materials. Furthermore, as the population in California increases through 2042, the amount of hazardous materials that pass through San Joaquin County (trucks, trains, and pipelines) is expected to increase regardless of the RTP/SCS scenario implemented. Impacts would be greater under this alternative.

#### **k. Hydrology and Water Quality**

Under the Compact Development Alternative, fewer undeveloped areas would be impacted by excavation and construction activities related to transportation projects as compared to the Plan. The Compact Development Alternative focuses on infill development and further expansion of non-motorized transportation. Under the Compact Development Alternative, anticipated development would result in approximately 14,000 acres of open space land consumption as compared to over 17,000 under the plan, thereby reducing the amount of impervious surfaces and decreasing impacts to water resources as compared to the Plan.

#### **l. Land Use**

Current land use practices may have to change to address the Compact Development Alternative because the Compact Development Alternative focuses growth into the existing urban area around transit stations and existing activity centers, possibly beyond what communities are ready to accept. The Compact Development Alternative would reduce the amount of land used for large lot and conventional single-family homes compared to the Plan. To achieve the densities of the Compact Development Alternative, there would be a greater chance of conflicting with market forces and community-desired growth patterns. The Compact Development Alternative would focus development in urban areas and existing communities and would have a greater emphasis on infill development. As a result, the Compact Development Alternative could result in increased division of existing communities as a result of aggressive redevelopment.

The Compact Development Alternative has the same population, household, and employment growth as the Plan. Given that the population, household, and employment growth would be the

same, the Plan impacts would be the same as those associated with the Compact Development Alternative.

#### **m. Noise**

The Compact Development Alternative would result in much more focused growth patterns concentrating growth and trips in urban areas, which would lead to greater noise levels in urban areas.

#### **n. Transportation and Circulation**

The Compact Development Alternative builds on the Plan alternative, but intensifies land uses in urban areas. The Compact Development Alternative assumes an increase in demand for multi-family housing in the region. Highway investments would be made to alleviate the most critical roadway bottlenecks and to achieve operational improvements, improved truck flows, safety and demand management strategies. Additional improvements would require the identification of new funding sources, as Alternative 3 constitutes a lower investment than the proposed Plan in maintenance of roadway systems and expansion of state highways and local roads and streets. Additional bike and pedestrian improvements would enhance transportation in infill areas. The Compact Development Alternative would result in a reduction in VMT by approximately 1.3 percent compared to the Plan and would increase transit and active mode shares compared to the Plan.

#### **o. Tribal Cultural Resources**

Under the Compact Development Alternative, fewer undeveloped areas would be impacted by excavation and construction activities related to transportation projects as compared to the Plan. The Compact Development Alternative focuses on more development in infill areas and further expansion of non-motorized transportation. Under the Compact Development Alternative, anticipated development would result in approximately 14,000 acres of new land consumption as compared to over 17,000 acres under the Plan, thereby exposing fewer previously undisturbed tribal cultural resources.

## **6.6 Environmentally Superior Alternative**

CEQA Section 15126.6 requires the selection of an environmentally superior alternative to the proposed project. This section compares the impacts of the three alternatives under consideration to those of the proposed project (2018 RTP/SCS). Table 45 shows whether each alternative is environmentally superior to, similar to, or inferior to the proposed project for each of the issue areas studied in this EIR.

The environmental analysis contained in this EIR determined that the proposed project would result in 16 significant and unavoidable impacts and several potentially significant but mitigable environmental impacts. The No Project Alternative (Alternative 1) could be considered environmentally superior overall, as it would entail the fewest projects and therefore result in the fewest construction-related impacts and ground disturbance-related impacts. However, as identified in Table 45, the No Project Alternative has greater impacts overall, including several categories compared to the proposed project; agriculture, biology, environmental justice, hazards, hydrology, and land use. The No Project alternative would also not result in several transportation improvements and the infill and TOD projects envisioned in 2018 RTP/SCS, thereby not meeting the goals set by SJCOG for this project.

The environmentally superior project is Alternative 3: Compact Development. This alternative has been evaluated to result in fewer impacts in seven categories and greater impacts in two categories compared to the proposed project as shown in Table 45. Although this project has been determined to be environmentally superior, this alternative would require limiting single-family housing as a percentage of new growth to 51 percent (as opposed to 61 percent under the 2018 RTP/SCS) and the highest level of ACE expansion and Bus Rapid Transit Corridors in urbanized areas. These more aggressive densities and transit focus were not selected as the preferred scenario by the SJCOG Board.

**Table 45 Impact Comparison of Alternatives**

Issue	Alternative 1: No Project	Alternative 2: Business As Usual	Alternative 3: Compact Development
Aesthetics/Visual Resources	=	-	=
Agriculture and Forestry Resources	-	-	+
Air Quality	=	-	+
Biological Resources	-	-	+
Cultural and Historic Resources	=	=	=
Energy	+	-	+
Environmental Justice	-	=	-
Geology and Soils	=	=	=
Greenhouse Gas Emissions /Climate Change	+	-	+
Hazards and Hazardous Materials	-	-	-
Hydrology and Water Quality	-	-	+
Land Use	-	=	=
Noise	=	=	-
Transportation	-	-	-
Tribal Cultural Resources	=	=	+
<b>Total</b>	-	-	+

**+** Alternative would result in fewer impacts than the 2018 RTP/SCS

**=** Alternative would result in impacts similar to the 2018 RTP/SCS

**-** Alternative would result in worsened or additional impacts than the 2018 RTP/SCS

**+/-** Alternative would result in impacts both better and worse than the 2018 RTP/SCS