

## **Appendix H1. Transportation Impact Study**

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# El Centro General Plan Update

Transportation Impact  
Study

March 2021



Prepared for



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## 1.0 Introduction

### 1.1 Purpose of the Report

This Transportation Impact Study (TIS) serves to identify and document potential transportation impacts related to the City of El Centro General Plan Update proposed land uses and mobility networks (Proposed Project), its alternatives, and recommend improvements/mitigation measures, as appropriate.

The City of El Centro is in the southeastern portion of Imperial County (County), Southern California, 11 miles north of the United States-Mexico border. The City is the largest city in the Imperial Valley and is adjacent to the City of Imperial along its northern boundary and is approximately 120 miles east of the City of San Diego. Interstate 8 provides a regional east–west transportation corridor, which leads to north–south connectivity by way of State Route 86 in the City and State Route 111 east of the City.

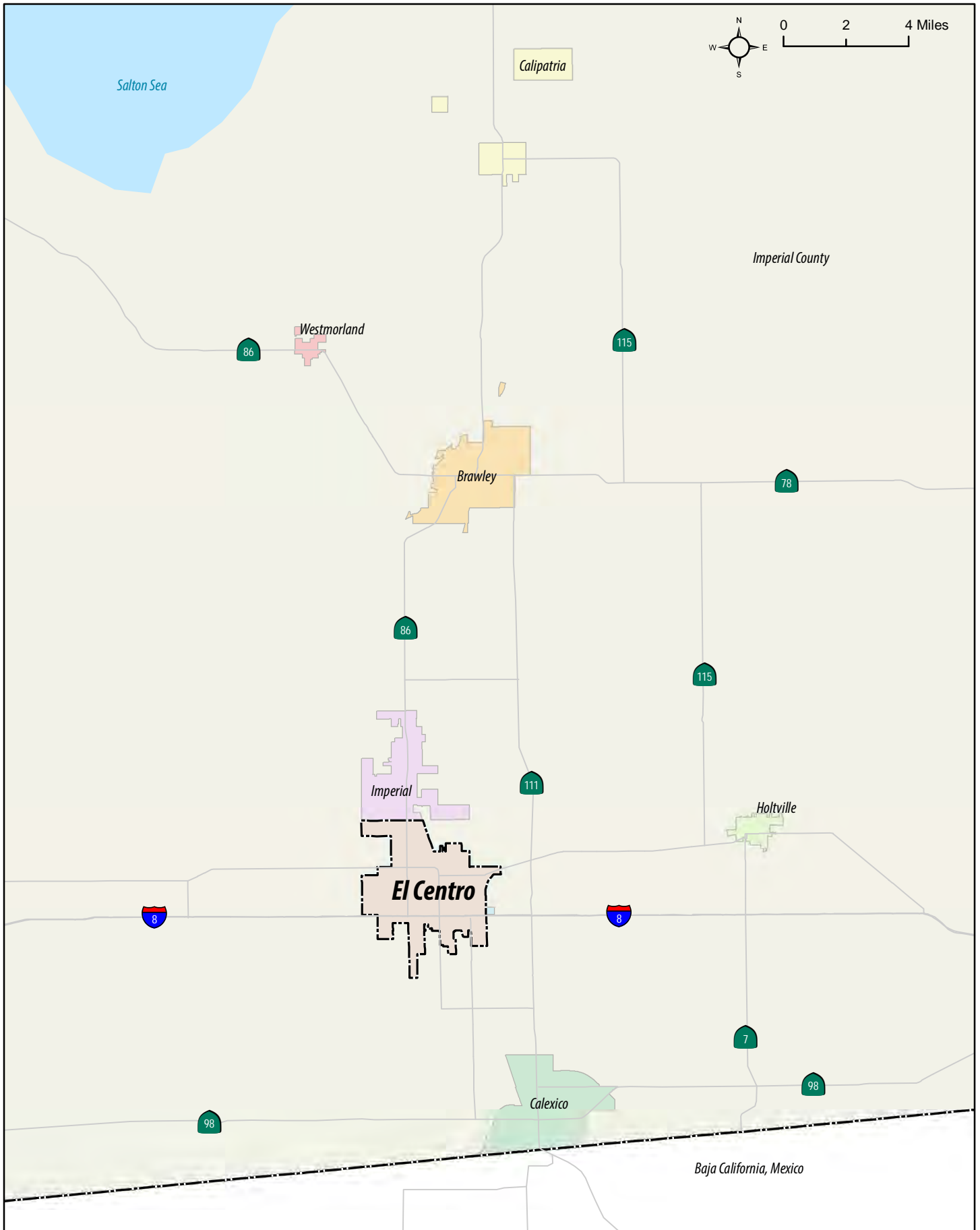
Figure 1.1 displays the City of El Centro location in the Imperial County Region.

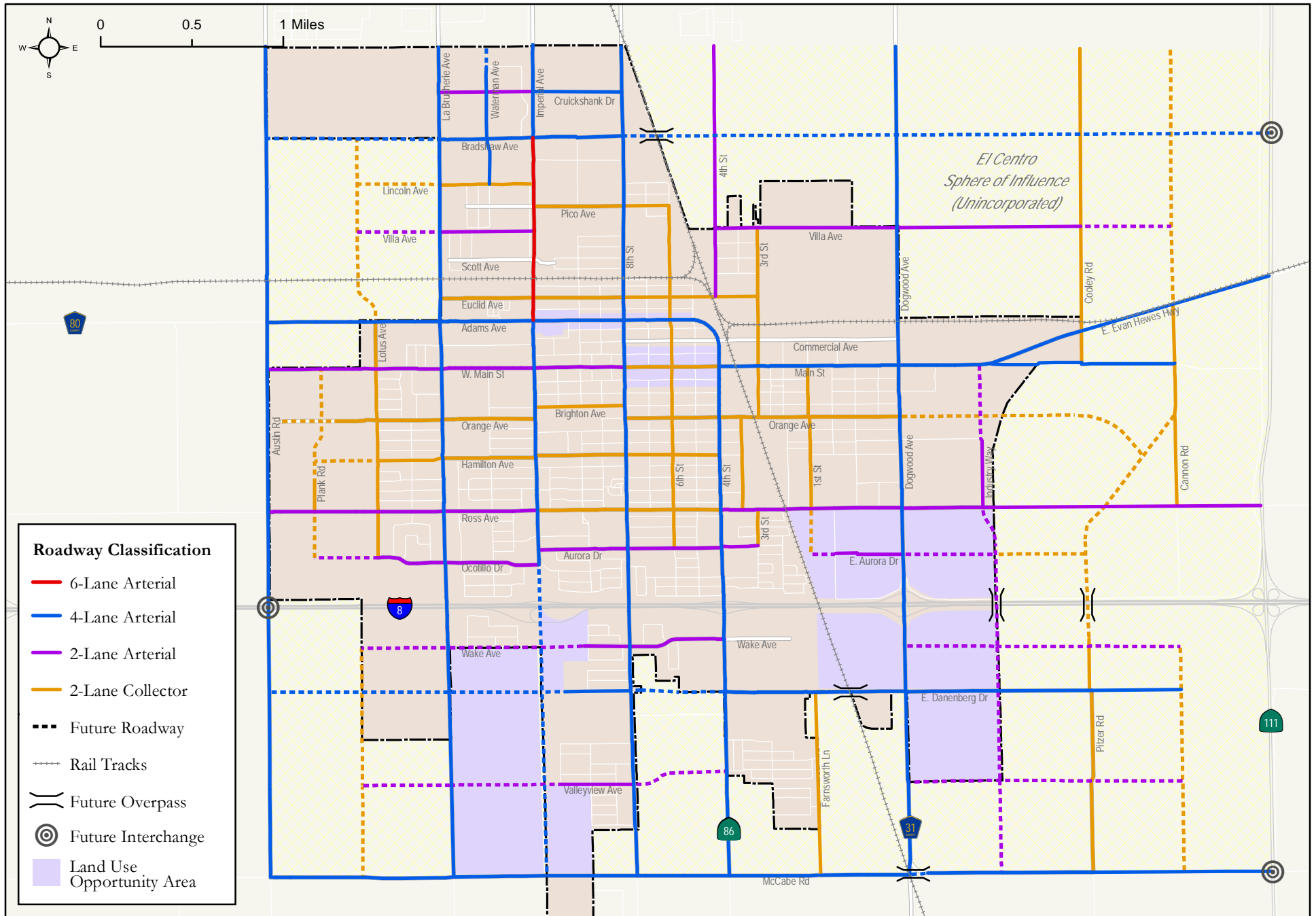
In December 2018, the California Resources Agency certified and adopted revised CEQA Guidelines, including new section 15064.3. Under the new section, vehicle miles traveled (VMT), which includes the amount and distance of automobile traffic attributable to a project, is identified as the “most appropriate measure of transportation impacts.” As of July 1, 2020, all CEQA lead agencies must analyze a project’s transportation impacts using VMT.

### 1.2 Study Scenarios

Four (4) study scenarios were evaluated, including base year (2014) and three (3) future year alternatives, as follows:

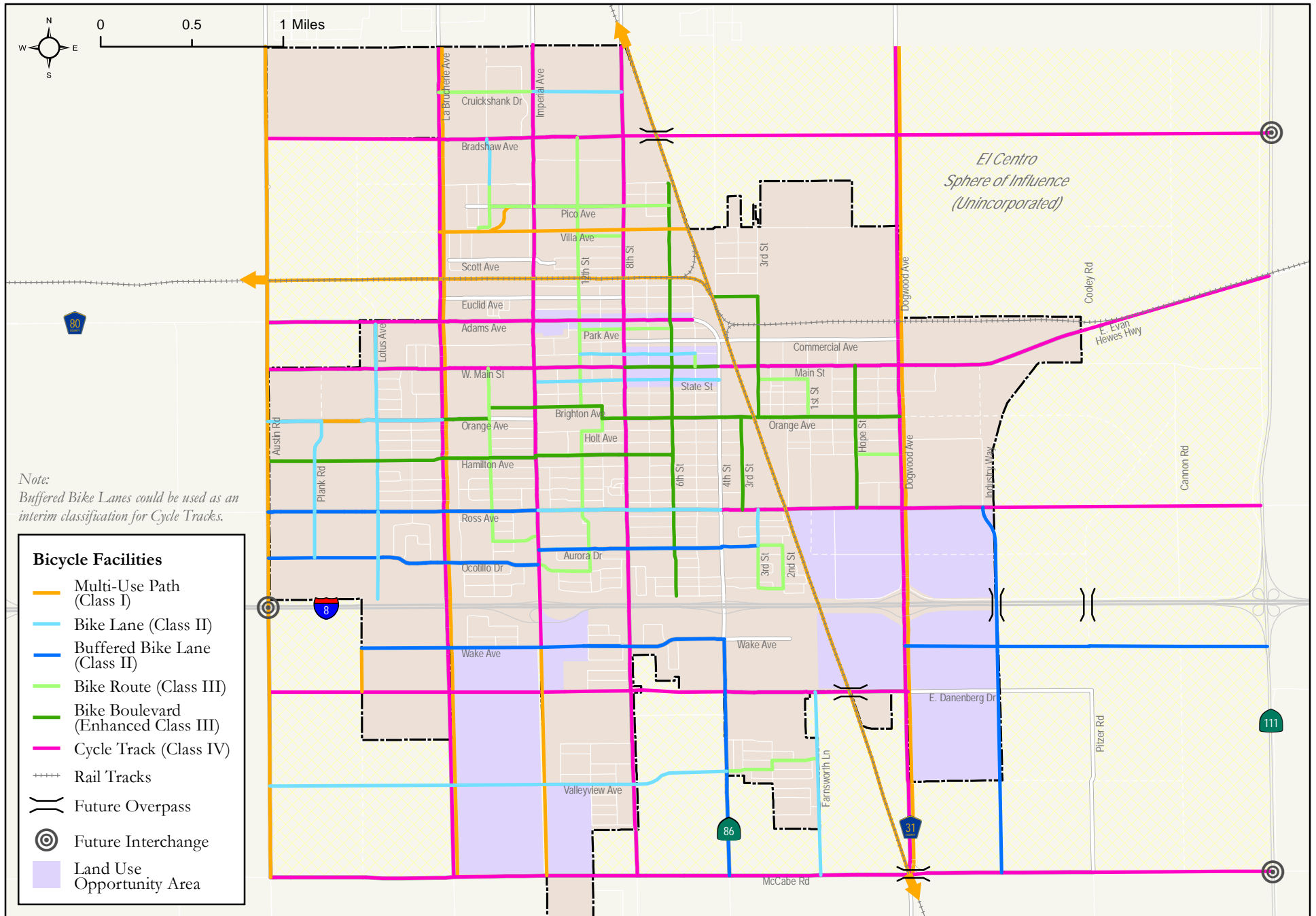
- **Base Year (2014)** – establishes the baseline VMT within the project study area (both the City of El Centro and its sphere of influence). The Imperial County Transportation Model (ICTM) Base Year (2014) was utilized as a starting-point and validated for the City of El Centro.
- **No Project (Adopted General Plan)** – represents buildout of the City of El Centro’s currently Adopted General Plan Land Use and Mobility Elements.
- **Alternative 1 (Proposed Project)** – represents buildout of the Proposed Project’s land uses and mobility network, which were developed in collaboration with community members, City staff, and the project consultant team. The center piece of this Land Use Element consists of five Opportunity Areas where the City wants or anticipates land use change or growth to occur during the planning period (see LUE Figure 3 of the General Plan Update). A summary of the proposed land uses is provided in Chapter 2 of this report, while the mobility network recommendations are provided in **Figures 1.2 and 1.3**. Figure 1.3 displays the proposed roadway network and Figure 1.3 illustrates the proposed bicycle network.





El Centro General Plan Update  
Transportation Impact Study

Figure 1.2  
Proposed Roadway Network





- **Alternative 2** – represents a more typical traditional suburban land use pattern, with an emphasis on the separation of land uses as opposed to the proposed project, which emphasizes mixed-use and village-oriented development patterns that support multimodal transportation options. It was chosen to analyze the continuation of traditional growth patterns for the City and its Sphere of Influence (SOI). The Traditional Land Use Alternative would result in 967 fewer overall residential units and would reduce the amount of non-residential space by 372,000 square feet, compared to the proposed project.

All study scenarios were modeled using the validated Imperial County Transportation Model (ICTM). This model was developed by Caltrans District 11 in coordination with Southern California Association of Governments (SCAG) in 2018. As part of this General Plan Update effort, the project team developed a El Centro-focused subarea model by updating the ICTM with accurate El Centro information, including roadway network and socioeconomic data for the various alternatives listed above. Detailed modeling information and documentation can be found in Chapter 2 of the Mobility Technical Report.

## 1.3 Report Organization

The remainder of this report is organized into the following chapters:

- 2.0 Project Description – This chapter summarizes land use assumptions for Base Year (2014) and future year alternatives including the Adopted General Plan (No Project), the Proposed Project (Alternative 1), and Alternative 2.
- 3.0 Analysis Methodology – This chapter describes the methodologies and thresholds utilized to evaluate potential VMT impacts for each of the future alternatives. Note that as of July 1, 2020, VMT is the metric (rather than Level of Service) for CEQA transportation-related impact evaluation.
- 4.0 Project Impacts – This chapter discusses the VMT analysis and identifies potential transportation impacts of the Proposed Project. Mitigation measures to reduce the identified VMT impacts, as necessary, are also discussed.
- 5.0 Alternatives Analysis – This chapter discusses the VMT analysis and potential transportation impacts of the two project alternatives, including the No Project and Alternative 2.

## 2.0 Project Description

The Proposed Project includes an update of the currently Adopted General Plan land uses to plan and accommodate future growth and development in the City of El Centro and its sphere of influence. Land use assumptions for the No Project (Adopted Plan), Alternative 1 (Proposed Project), and Alternative 2 scenarios are provided in Chapter 5.0 of the EIR.

Two geographic areas, the City's corporate limits and its SOI, are within the planning area covered by the El Centro General Plan. As defined by the City and the Imperial County Local Agency Formation Commission, an SOI is a plan for the probable physical boundaries and service area that a local governmental agency is expected to serve. The City includes 11 square miles plus an additional 12.5 square miles within the SOI. The project does not propose or anticipate annexation of the SOI at this time. Should annexation of one or more areas be considered at a future point in time, applicable procedures from the Imperial County Local Agency Formation Commission would apply. For a conservative analysis, this study includes both the City's corporate limits and the SOI.

## 2.1 Project Components

The El Centro Land Use Element was developed in concert with the Mobility Element. Both Elements focus on sustainability principles by providing a better balance between jobs and housing, encouraging smart-growth and mixed-use developments, connecting residential and employment land uses, and planning for well-connected and safe facilities to make the City of El Centro more walkable and bikeable. Each project component is described below.

### Land Use Element Update

The proposed update to the Land Use Element in the El Centro General Plan would be based on the City's existing Vision 2050, policy direction from City staff and decision makers, and input from the Community Advisory Committee and the public. The update would designate the proposed general distribution and extent of land uses in the City, focusing on preserving established land uses and accommodating future growth and physical development of the community. It would incorporate policies that integrate land use and transportation strategies to increase the share of bicycle, transit, and pedestrian trips, reducing greenhouse gas emissions. Specific topics to be incorporated into the Land Use Element Update include equity, health, sustainability, the economy, and the environment. An overarching objective of the Land Use Element Update would be to promote infill development and encourage efficient development patterns to spur economic revitalization, provide opportunities for innovative lifestyles envisioned by the Vision 2050, and promote environmental justice and equity.

The overall goal of the Land Use Element Update is to create a land use plan that promotes quality of life, health, and safety; meets the needs of the City's residents; supports multiple modes of transportation; fosters economic prosperity; provides a range of affordable housing options; is sustainable and environmentally responsible; encourages social cohesion and equity; and reflects and celebrates the City's unique character, culture, identity, and traditions.

### Proposed Land Use Designations

The proposed Land Use Element Update would include changes to the existing land use designations, which establish the general pattern of land uses in the planning area and would identify maximum permitted land use densities and intensities. The Land Use Element Update would establish 19 land use designations (15 primary land use designations and 4 overlay designations) that govern land uses in the planning area.

### **Proposed Opportunity Areas**

The centerpiece of the General Plan Land Use Element Update consists of five Opportunity Areas (OAs) where the City wants or anticipates land use change or growth to occur during the planning period. OAs are larger, specific areas where targeted change is anticipated. Several OAs are areas of existing development that can benefit from targeted plans and policies to help guide transformation, while others are proposed where growth is expected or proposed to occur.

Each OA has a vision and policies to guide future planning that emphasize the principles of smart growth, sustainability, community identity, and placemaking and the creation of physical and social connections. A key element of each OA is the correlation of land use and site design with proposed improvements to the mobility infrastructure, including providing right-sizing existing roadways, adding new roadways, improving sidewalks, adding multi-use trails and bicycle facilities, and facilitating transit.

### **Mobility Element Update**

The California Complete Streets Act of 2008 requires that General Plans demonstrate how cities will provide for the routine accommodation of all users of a road or street, including pedestrians, bicyclists, public transportation users, motorists, children, older adults, and those with disabilities. The El Centro General Plan Mobility Element addresses this requirement with policies and programs that consider all modes of travel, with the goal of making streets safer, accessible, and more convenient to walk, ride a bicycle, or use public transportation.

El Centro's transition from low density to higher density land use patterns under the Proposed Project, would require equally supportive mobility infrastructure, public improvements, and policies focused on better serving pedestrians, bicyclists and transit users, in addition to motorists. Therefore, to supplement these land use changes, the Proposed Project also includes transportation network and policy improvements to address existing and forecasted mobility needs and deficiencies. The proposed roadway and bicycle networks are included in Figures 1.2 and 1.3, and more detailed infrastructure, policy, and program recommendations can be found in the Mobility Element section of the General Plan Update.

### 3.0 Analysis and Methodology Thresholds

This chapter describes the methodologies and thresholds utilized to evaluate potential VMT impacts for each of the future alternatives. On September 27, 2013, Governor Edmund G. Brown, Jr. signed SB-743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Related revisions to the State's CEQA Guidelines include elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts, and replacement with Vehicle Miles Traveled (VMT) as the preferred CEQA transportation metric.

This chapter describes the methodologies and thresholds utilized to evaluate potential VMT impacts for each of the future alternatives.

#### 3.1 Determination of VMT Significant Impacts

VMT is positively correlated with growth and as the region is expected to grow, VMT is also expected to increase. However, where the growth occurs plays a significant role to determine how much the VMT will increase. Growth in areas with access to high-quality transit, a complete active transportation network, and/or complementary land use mixes are projected to be more VMT efficient.

In their Technical Advisory on Evaluating Transportation Impacts on CEQA (December 2018), the Governor's Office of Planning and Research (OPR) recommends the use of VMT metrics when analyzing land use projects and plans. For residential uses, the recommended efficiency metric is Resident VMT per Capita; and for employment uses, the recommended efficiency metric is Employee VMT per Employee. However, for retail uses, the recommended metric is a net change of total area (i.e. Imperial County) VMT due to the nature of retail trips typically redistributing shopping trips rather than creating new trips.

The following definitions describe how VMT is referred to, calculated, and accounted for in this programmatic CEQA impact analysis:

- **Resident VMT/Capita** includes all daily vehicle-based person trips originated from or ended at the home location of the individual (driver or passenger). Only home-based VMT are included in this calculation. The VMT for each individual is then summed for all individuals in the analysis area and divided by the population of the same analysis area to arrive at Resident VMT/Capita.
- **Employee VMT/Employee** includes all daily vehicle-based, work-based employee travel grouped and summed to the work location. The VMT for each work location is then summed for all work locations in the analysis area and then divided by the total number of employees of the same analysis area to arrive at the VMT/Employee. This does not include employees whose work location is specified as home.
- **Total Retail VMT** is the sum of all vehicle trips generated by retail uses in the analysis area multiplied by their associated trip lengths.
- **Transportation Project.** The OPR Technical Advisory and CEQA Guidelines provide that a VMT analysis be conducted for major roadway capacity expansion projects and that the analysis address potential induced travel effects.

The OPR Technical Advisory recommends that VMT/capita and VMT/employee results should be compared to the 85<sup>th</sup> percentile of region’s average for that land use type – in this case, the region’s average is the average Imperial County. The regional average VMT is determined using the ICTM Base Year (2014), and the regional average resident VMT per Capita is 13.76 miles and the regional average employee VMT per Employee is 18.59 miles per person. Excerpts from the regional transportation model is provided in **Appendix A**.

Consistent with the OPR Technical Advisory, the significance thresholds are shown in **Table 3.1**.

**Table 3.1 Transportation VMT Thresholds of Significance by Land Use Type**

Land Use Type	Threshold for Determination of a Significant Transportation VMT Impact
Residential	15% Below Region’s Average Resident VMT/Capita
Employment	15% Below Region’s Average Employee VMT/Employee
Retail	A Net Increase in Total Regional VMT

Source: ICTM, Iteris, Chen Ryan Associates (2020)

For the purpose of the transportation impact study, a Plan-to-Ground analysis was conducted by comparing the Proposed Project and the various alternatives to Base Year (2014), which is representative of the baseline conditions.

## 4.0 Impact Analysis – Proposed Project (Alternative 1)

This chapter focuses on whether the Proposed Project would have a significant impact if proposed new residential, office, or retail land uses would in aggregate exceed the respective VMT by land use thresholds in Table 3.1.

### 4.1 VMT Impact Analysis

To establish a baseline understanding, **Table 4.1** displays both Imperial County and El Centro’s resident and employee VMT efficiency metrics for the Base Year (2014) conditions. As shown, El Centro has more efficient VMT per capita for both residents and employees that are lower when compared to the region, at approximately 70% of the region’s resident VMT/capita and just over 60% of region’s employee VMT/employee.

**Table 4.1 El Centro Base Year VMT Metrics for Transportation Impact Analysis**

VMT Metric	Base Year (2014)		% of Regional Base Year
	Region	El Centro	El Centro
Resident VMT/Capita	13.76	9.62	70.0%
Employee VMT/Employee	18.59	11.35	61.1%

Source: ICTM, Iteris, Chen Ryan Associates (2020)

By 2040 with the implementation of the Proposed Project, the VMT efficiency of El Centro substantially improves. **Table 4.2** presents the El Centro average resident and employee VMT for the Proposed Project.

**Table 4.2 El Centro Proposed Project VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses**

VMT Metric	Imperial County Region - Base Year	El Centro - Proposed Project (Alternative 1)	% of Regional Base Year	Significant Impact?
Resident VMT / Capita	13.76	7.93	57.6% (< 85%)	No
Employee VMT / Employee	18.59	8.00	43.0% (< 85%)	No

Source: ICTM, Iteris, Chen Ryan Associates (2020)

#### Residential and Employment Land Uses Impact?

As shown in the table above, El Centro is projected to have an average Resident VMT per Capita at 7.93 and an average Employee VMT per Employee at 8.00, which are 57.6 percent and 43.0 percent, respectively, of the Base Year regional averages for these efficiency metrics. VMT associated with residential and employment land uses would not exceed the 85 percent thresholds at buildout of the Proposed Project. Therefore, impacts related to VMT for residential and employment land uses would be less than significant.

#### Retail Land Uses Impact?

Regarding VMT associated with retail land uses, the total regional VMT would increase from 5,507,484 miles under the Base Year conditions to 7,467,309 miles with the implementation of the Proposed Project, an increase of 1,959,825 miles. The VMT associated with retail (home-based shopping) also would increase from 331,912 miles under the base year to 494,465 miles with the implementation of the Proposed Project, an increase of 162,553 miles. According to OPR’s recommendations, a retail impact is considered significant when there is a net increase in total regional VMT related to the new retail and commercial uses that could be developed with the adoption of the Proposed Project. Furthermore, the

proposed retail land uses particular in some of the Opportunity Areas are regional retail in nature including tourist commercial and large regional shopping, would attract visitors from the surrounding cities and regions. Therefore, based on the criteria provided in Table 3.1, the retail component of the Proposed Project would have a significant impact.

OPR Technical Advisory states that “by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT”, and “retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.” In summary, OPR defers to the local jurisdiction to determine the definition of local-serving retail at the project-level.

### Transportation Project

According to OPR’s recommendations, a transportation impact is considered significant when the project caused an increase in VMT by encouraging more vehicular trips. This could come in the forms of adding new roadway connections and widening existing roadway to accommodate additional demand, etc. Given parts of El Centro are undeveloped and expecting growth and the existing roadway network does not provide direct or adequate access to these areas, the Proposed Project recommends several new roadway connections and widenings to accommodate the anticipated land use growth. However, it is important to note that the Proposed Projects proposes a number of road diets along with a comprehensive active transportation network is also recommended for the entire city when comparing to the currently Adopted General Plan (No Project). With that said, the Proposed Projects does increase the overall roadway capacities in El Centro from the baseline conditions; hence, it would result in a significant transportation impact under the VMT thresholds.

## **4.2 Mitigation Measures**

As described in the Land Use Element of the General Plan Update, new developments are focused in mixed-use villages that would introduce new residential, retail and employment opportunities consolidated around a balanced mobility system to serve the needs of all current and future users. This system would provide an active transportation network that would be a viable and enjoyable option for traveling within the City in addition to providing connections to transit to get to and from destinations around the region. By bringing in varied and complementary uses and a mobility network that supports and encourages alternative mode choice, the Proposed Project plans a more VMT efficient and sustainable future for the community.

### Residential Land Uses

As shown in Table 4.2, impacts associated with the proposed residential land uses of the Proposed Project are considered less than significant, therefore, no mitigation measures are required.

### Employment Land Uses

As shown in Table 4.2, impacts associated with the proposed employment land uses of the Proposed Project are considered less than significant, therefore, no mitigation measures are required.

### Retail Land Uses

For the Proposed Project’s retail land uses, there is a significant impact due to planned and proposed retail and commercial uses that would be regionally serving. Overall, the proposed Land Use Element



Update (LEU) is a planning document intended to guide future development throughout El Centro. It provides detailed policies and implementation guidance that would be applicable for future developments. Due to the programmatic nature of the proposed LEU, it does not propose any specific development projects, and thus, cannot adequately anticipate specific project-level requirements at this time. To reduce retail VMT impacts, future developments under this proposed LEU would need to be mitigated on a project-by-project basis. This could be accomplished through a citywide VMT reduction ordinance that would require development projects to reduce their VMT to the extent feasible by providing on-site VMT reducing infrastructure such as those found in CAPCOA or other sources that have been vetted through peer-review research; or pay a fee that would fund active transportation infrastructure and transit improvements to reduce citywide VMT.

**Mitigation Measure MM-TR-1:** Implementation of Mobility Element Policies 1.1 through 1.11, 2.1 through 2.9, 3.1 through 3.5, 4.3 and 4.7. would reduce VMT throughout the City. Specifically, the City should ensure that future projects are compliant with Mobility Element Policy 4.5, which utilizes Transportation Demand Management Measures (TDM) to reduce single-occupant vehicles, and encourage alternative modes of transportation such as biking, walking or taking transit. Since TDM are typically applied at the project-level, a list of potential TDM is provided below:

- Increase mixed-use development
- Increase transit accessibility
- Provide pedestrian network improvement along project frontage
- Provide bicycle network improvement along project frontage
- Implement a Neighborhood Electric Vehicle (NEV) network, if appropriate
- Provide bicycle parking, bike locker, personal lockers, and showers
- Implement subsidized or discounted transit passes
- Provide rider-sharing programs
- Implement commute trip reduction marketing
- Implement school pool program
- Implement bike-sharing or micro mobility program
- Provide local shuttle to connect visitors to different attractions throughout the City

Additional measures can be found in the California Air Pollution Control Officers Associations (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures report (<http://www.aqmd.gov/docs/default-source/ceqa/handbook/capcoa-quantifying-greenhouse-gas-mitigation-measures.pdf>).

Implementation of the TDM above would potentially reduces each project's VMT. However, since TDM level of effectiveness varies from project to project, this Programmatic Environmental Impact Report (PEIR) cannot ensure that the TDMs would reduce the regional VMT to baseline conditions. Therefore, this mitigation while potentially feasible, is not implementable at this time. Therefore, this VMT impact is considered significant and unavoidable.

### 4.3 Level of Significance After Mitigation

Should MM-TR-1 be adopted by City Council, and implemented, VMT would be reduced by individual projects that maybe permitted and constructed under the proposed LEU. The effectiveness of the VMT reducing measures would need to be context-sensitive and would vary depending on the individual project site such as the location, access to transit, etc. For this reason, and because it is uncertain if, or when such measures would become effective, MM-TR-1 would not fully mitigate the VMT impact for retail land uses nor would it fully mitigate the VMT impact for transportation project (induced growth). Thus, transportation impacts due to the Proposed Project's retail land uses and transportation project would remain significant and unavoidable.

## 5.0 Alternatives Analysis

The California Environmental Quality Act (CEQA) mandates consideration and analysis of alternatives to the Proposed Project. According to CEQA Guidelines, the range of alternatives "shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts" (CEQA Guidelines Section 15126.6 (d) (2)). The discussion must also include an evaluation of the No Project Alternative to allow decision-makers to compare the impacts of approving the Proposed Project against the impacts of not approving it.

The alternatives discussion need not be exhaustive and is subject to a determination of reasonableness. The impacts of the alternatives may be discussed "in less detail than the significant effects of the project proposed" (CEQA Guidelines Section 15126.6 (d)). Additionally, the CEQA Guidelines generally permit analysis of alternatives at a less detailed level for general plans and other program EIRs than what is required for project EIRs. The CEQA Guidelines do not specify what constitutes an adequate level of detail, though an EIR must provide sufficient information to allow meaningful evaluation, analysis, and comparison of each alternative. The CEQA Guidelines require that this analysis identify the environmentally superior alternative among those analyzed.

This chapter discusses potential VMT impacts under the No Project alternative and Alternative 2. The No Project alternative is identical to the currently adopted General Plan, and Alternative 2 shares the same mobility network as the Proposed Project (Alternative 1) but varies in land uses especially in the Opportunity Areas. The Vehicle Miles of Travel Reports (SB 743 metrics for residential and employment) for both alternatives are included in **Appendix B**.

### 5.1 No Project Alternative (Adopted General Plan)

The purpose of evaluating the No Project Alternative is to allow decision makers to compare the outcomes by approving the Proposed Project vs. maintain the currently adopted Plan. The No Project Alternative represents what would reasonably be expected to occur in the foreseeable future if the Proposed Project were not adopted. Future development under the No Project Alternative would result in 1,678 fewer dwelling units in the City but 1,565 more dwelling units in the SOI. In addition, the No Project Alternative would result in 14,385 more square feet of non-residential development in the City but 3,655 fewer square feet of non-residential development in the SOI. The No Project Alternative does not include the proposed five Opportunity Areas (OAs); therefore, it would not emphasize the principles of Smart Growth, sustainability, community identity, placemaking, and the creation of physical and social connections.

Table 5.1 presents the El Centro average resident and employee VMT under the No Project conditions.

**Table 5.1 El Centro No Project  
 VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses**

VMT Metric	Imperial County Region - Base Year	El Centro – No Project (Adopted GP)	% of Regional Base Year	Significant Impact?
Resident VMT / Capita	13.76	8.73	63.4% (< 85%)	No
Employee VMT / Employee	18.59	8.74	47.0% (< 85%)	No

Source: ICTM, Iteris, Chen Ryan Associates (2020)

Residential and Employment Land Uses Impact?

As shown in the table above, El Centro is projected to have an average Resident VMT per Capita at 8.73 and an average Employee VMT per Employee at 8.74, which are 63.4 percent and 47.0 percent, respectively, of the Base Year regional averages for these efficiency metrics. VMT associated with residential and employment land uses would not exceed the 85 percent thresholds at buildout of the No Project. Therefore, impacts related to VMT for residential and employment land uses would be less than significant.

Retail Land Uses Impact?

Regarding VMT associated with retail land uses, the total regional VMT would increase from 5,507,484 miles under the Base Year conditions to 7,295,827 miles with the implementation of the No Project, an increase of 1,788,343 miles. The VMT associated with retail (home-based shopping) also would increase from 331,912 miles under the base year to 473,170 miles with the implementation of the No Project, an increase of 141,258 miles. According to OPR’s recommendations, a retail impact is considered significant when there is a net increase in total regional VMT related to the new retail and commercial uses that could be developed with the adoption of the No Project. Furthermore, the No Project includes land uses that are regional retail in nature including tourist commercial and large regional shopping, these land uses would attract visitors from the surrounding cities and regions. Therefore, based on the criteria provided in Table 3.1, the retail component of the No Project would have a significant impact.

OPR Technical Advisory states that “by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT”, and “retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.” In summary, OPR defers to the local jurisdiction to determine the definition of local-serving retail at the project-level.

Transportation Project

According to OPR’s recommendations, a transportation impact is considered significant when the project caused an increase in VMT by encouraging more vehicular trips. This could come in the forms of adding new roadway connections and widening existing roadways to accommodate additional demand, etc. Given parts of El Centro are undeveloped and expecting growth and the existing roadway network does not provide direct or adequate access to these areas, the No Project scenario includes several new roadway connections and widenings to accommodate the anticipated land use growth. Since the No Project scenario increases the overall roadway capacities in El Centro from the baseline conditions, it would result in a significant transportation impact under the VMT thresholds.

## 5.2 Alternative 2

Compared to the Proposed Project, Alternative 2 results in 967 fewer overall residential units and would reduce the amount of non-residential space by 372,000 square feet, compared to the proposed project.

Alternative 2 also includes five OAs similar to the proposed project. However, the planned designations change. OA-3 would change the existing land use designations from General Industrial and Planned Industrial to Tourist Commercial, with the anticipation that its location on the northern side of Interstate 8 would draw a variety of regionally serving commercial, recreational, and entertainment uses and provide the potential for recreational vehicle parks and housing to encourage tourism.

In addition, OA-4 would retain the General Commercial land use designation for the properties on the eastern side of Dogwood Avenue, including the Imperial Valley Mall and the commercially designated property to the north. The property at the northwestern intersection of Dogwood Avenue and Danenberg Drive would change from General Industrial to General Commercial with a Mixed Use 2 Overlay to allow additional commercial uses while also providing the opportunity for multi-family residential uses in proximity to commercial uses.

Table 5.2 presents the El Centro average resident and employee VMT for Alternative 2.

**Table 5.2 El Centro Alternative 2  
VMT Efficiency Metrics for Transportation Impact Analysis of Residential and Employment Uses**

VMT Metric	Imperial County Region - Base Year	El Centro – Alternative 2	% of Regional Base Year	Significant Impact?
Resident VMT / Capita	13.76	8.14	59.2% (< 85%)	No
Employee VMT / Employee	18.59	8.10	43.6% (< 85%)	No

Source: ICTM, Iteris, Chen Ryan Associates (2020)

### Residential and Employment Land Uses Impact?

As shown in the table above, El Centro is projected to have an average Resident VMT per Capita at 8.14 and an average Employee VMT per Employee at 8.10, which are 59.2 percent and 43.6 percent, respectively, of the Base Year regional averages for these efficiency metrics. VMT associated with residential and employment land uses would not exceed the 85 percent thresholds at buildout of the Alternative 2. Therefore, impacts related to VMT for residential and employment land uses would be less than significant.

### Retail Land Uses Impact?

Regarding VMT associated with retail land uses, the total regional VMT would increase from 5,507,484 miles under the Base Year conditions to 7,301,875 miles with the implementation of the Alternative 2, an increase of 1,794,391 miles. The VMT associated with retail (home-based shopping) also would increase from 331,912 miles under the base year to 484,272 miles with the implementation of the Alternative 2, an increase of 152,360 miles. According to OPR's recommendations, a retail impact is considered significant when there is a net increase in total regional VMT related to the new retail and commercial uses that could be developed with the adoption of the Alternative 2. Furthermore, the Alternative 2 includes land uses that are regional retail in nature including tourist commercial and large regional shopping, these land uses would attract visitors from the surrounding cities and regions. Therefore, based on the criteria provided in Table 3.1, the retail component of the Alternative 2 would have a significant impact.

OPR Technical Advisory states that “by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT”, and “retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.” In summary, OPR defers to the local jurisdiction to determine the definition of local-serving retail at the project-level.

#### Transportation Project

According to OPR’s recommendations, a transportation impact is considered significant when the project caused an increase in VMT by encouraging more vehicular trips. This could come in the forms of adding new roadway connections and widening existing roadways to accommodate additional demand, etc. Given parts of El Centro are undeveloped and expecting growth and the existing roadway network does not provide direct or adequate access to these areas, the Alternative 2 scenario includes several new roadway connections and widenings to accommodate the anticipated land use growth. Since the Alternative 2 scenario increase the overall roadway capacities in El Centro from the baseline conditions, it would result in a significant transportation impact under the VMT thresholds.

## Appendix A Base Year and Proposed Project VMT Results

## Region VMT

Imperial County			
ID	Purpose	Productions	Attractions
1	Home-based Work	1,090,934	991,090
2	Home-based School	50,141	49,037
3	Home-based University	82,990	95,002
4	Home-based Shopping	167,107	164,804
5	Home-based Social-Recreational	433,178	365,319
6	Home-based Serve Passenger	210,129	209,315
7	Home-based Other	492,845	437,349
8	Work-Based Other	100,458	89,856
9	Other Based Other	239,941	237,989
Total VMT		2,867,723	2,639,761
Total Home-based VMT		2,527,324	
Total Work-based VMT		1,091,547	
Total Population		183,730	
Total Employees		58,730	
Total Home-based VMT/Capita		13.76	
Total Work-based VMT/Employee		18.59	

## Base Year VMT (2014)

El Centro			
ID	Purpose	Productions	Attractions
1	Home-based Work	206,182	136,102
2	Home-based School	8,741	10,018
3	Home-based University	12,711	-
4	Home-based Shopping	26,684	59,074
5	Home-based Social-Recreational	81,241	66,976
6	Home-based Serve Passenger	43,104	57,596
7	Home-based Other	92,232	93,402
8	Work-Based Other	21,929	14,346
9	Other Based Other	61,800	66,506
Total VMT		554,625	504,022
Total Home-based VMT		470,896	
Total Work-based VMT		158,031	
Total Population		48,927	
Total Employees		13,924	
Total Home-based VMT/Capita		9.62	
Total Work-based VMT/Employee		11.35	

## Proposed Project VMT (2040)

El Centro			
ID	Purpose	Productions	Attractions
1	Home-based Work	194,882	369,788
2	Home-based School	16,391	6,417
3	Home-based University	15,183	-
4	Home-based Shopping	33,198	164,333
5	Home-based Social-Recreational	105,030	176,778
6	Home-based Serve Passenger	55,112	129,623
7	Home-based Other	120,698	273,731
8	Work-Based Other	74,701	45,606
9	Other Based Other	178,406	217,044
Total VMT		793,601	1,383,321
Total Home-based VMT		540,495	
Total Work-based VMT		444,489	
Total Population		68,193	
Total Employees		55,594	
Total Home-based VMT/Capita		7.93	
Total Work-based VMT/Employee		8.00	



## Appendix B Project Alternatives VMT Results

## No Project VMT (2040)

El Centro			
ID	Purpose	Productions	Attractions
1	Home-based Work	184,203	358,017
2	Home-based School	13,673	13,535
3	Home-based University	15,346	-
4	Home-based Shopping	38,355	115,394
5	Home-based Social-Recreational	109,213	123,899
6	Home-based Serve Passenger	51,916	116,691
7	Home-based Other	118,024	217,380
8	Work-Based Other	87,537	47,515
9	Other Based Other	119,496	134,095
Total VMT		737,763	1,126,527
Total Home-based VMT		530,730	
Total Work-based VMT		445,555	
Total Population		60,827	
Total Employees		50,983	
Total Home-based VMT/Capita		8.73	
Total Work-based VMT/Employee		8.74	

## Alternative 2 VMT (2040)

El Centro			
ID	Purpose	Productions	Attractions
1	Home-based Work	192,538	339,136
2	Home-based School	15,122	21,334
3	Home-based University	15,222	-
4	Home-based Shopping	34,785	148,802
5	Home-based Social-Recreational	103,942	156,138
6	Home-based Serve Passenger	52,829	125,753
7	Home-based Other	117,208	243,638
8	Work-Based Other	52,664	39,581
9	Other Based Other	146,386	181,075
Total VMT		730,695	1,255,457
Total Home-based VMT		531,645	
Total Work-based VMT		391,800	
Total Population		65,339	
Total Employees		48,378	
Total Home-based VMT/Capita		8.14	
Total Work-based VMT/Employee		8.10	

