Appendix 5.17-1 Transportation Impact Study

Appendices

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WILDOMAR GPU

Transportation Impact Study

January 2024

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 Wildomar General Plan Update proposed land uses and mobility networks (Proposed Project), its alternatives, and recommend improvements/mitigation measures, as appropriate.

The City of Wildomar is nestled in the southwestern Riverside County, part of the growing Inland Empire region in Southern California. Geographically, it lies roughly between the bustling cities of Los Angeles and San Diego, approximately 60 miles north of San Diego and 75 miles southeast of Los Angeles. The city is bordered by the city of Murrieta to the south and the city of Lake Elsinore to the north. Its landscape features a mix of flat lands and mildly hilly terrains, characteristic of the broader region. Wildomar's location benefits from a close proximity to the Interstate 15 corridor, making it an accessible spot for those traveling between the major Southern California metropolitan areas.

Additionally, its position provides a blend of suburban and semi-rural atmospheres, with the Cleveland National Forest and the Santa Ana Mountains in close proximity, offering scenic views and outdoor recreational opportunities.

Figure 1.1 displays the City of Wildomar location in the Riverside County Region.

The analysis herein is based on the revised (January 2023) State of California Environmental Quality Act (CEQA) Guidelines and the City of Wildomar's adopted Resolution No. 2020-40, VMT CEQA Threshold Policy Guidelines (Wildomar VMT Guidelines) adopted on June 10, 2020.

1.2 Study Scenarios

Three (3) study scenarios were evaluated, including base year (2018) and two (2) future year alternatives, as follows:

- **Base Year (2018/2019)** – establishes the baseline VMT within the project study area. The Riverside County Transportation Model (RIVCOM) Base Year (2018) was utilized as a starting-point and validated for the City of Wildomar.

- **No Project (Adopted General Plan)** – represents buildout of the City of Wildomar's currently Adopted General Plan Land Use and Mobility Elements.

- **Preferred Plan (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.

All study scenarios were modeled using the validated RIVCOM model. This model was developed by Caltrans District 8 in coordination with Western Riverside Council of Governments (WRCOG) in 2010. As part of this General Plan Update effort, the project team developed a Wildomar-focused subarea model by updating the RIVCOM with relevant Wildomar information, including roadway network and socioeconomic data for the various alternatives listed above.

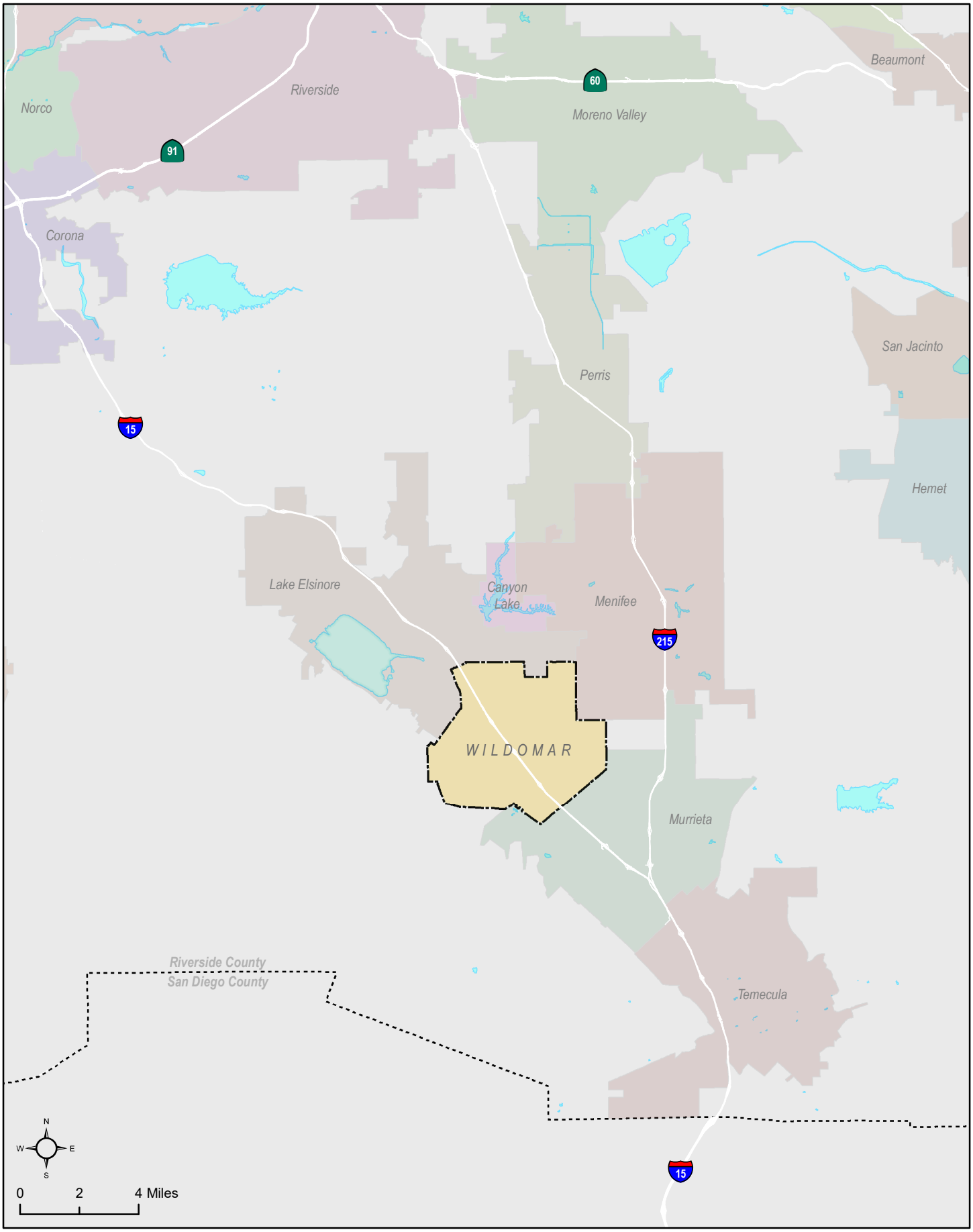

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Figure 1.1
City of Wildomar within the Region

1.3 Report Organization

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

2.0 *Alternative Description* – This chapter summarizes land use assumptions for Base Year (2018/2019) and future year alternatives including the Adopted General Plan (No Project), and the Preferred Plan (Proposed Project).

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 *Preferred Plan Analysis* – This chapter discusses the VMT analysis and potential transportation impacts of the Preferred Plan.

6.0 Summary – This chapter provides a summary of the VMT analysis for the two analyzed alternatives.

2.0 Alternatives Description

This section provides a summary of each of the modeled alternatives, land use information was obtained and developed in coordination with Placeworks and is consistent with the approach documented in the *General Plan Land Use Buildout Methodology* memorandum (Placeworks, July 26, 2023) also referred to as the "Buildout Methodology" memorandum. As mentioned earlier, a total of three (3) alternatives were evaluated, the Existing or baseline scenario, No Project or Currently Adopted Scenario, and Proposed Project or Preferred Plan scenario. Detailed descriptions of each of the alternatives are provided below.

Existing Conditions (Baseline)

The Riverside County Transportation Model (RIVCOM) Base Year (2018) was utilized as a starting-point and updated to reflect the baseline assumptions documented in the Buildout Methodology memorandum. Per the Buildout Methodology memorandum, the SCAG's 2019 Annual Land Use (ALU v.2019.2) Dataset, updated in February 2021, was used to establish on-the-ground uses. Non-residential building square footage was derived from GIS measurements of Riverside County building footprint data and spot-checked for accuracy. Roadway networks were updated to reflect the existing conditions. **Figure 2.1** displays the base year roadway network.

No Project (Adopted General Plan)

The No Project scenario began with the RIVCOM Year 2045 model, which incorporated land use data from SCAG's Regional Transportation Plan Sustainable Community Strategies (SCAG RTP/SCS). For the year 2045, the SCAG RTP/SCS land uses were revised according to the Buildout Methodology memorandum. This involved replacing certain SCAG RTP/SCS land use assumptions with specific project land uses, including those from the unbuilt Pipeline list and the Housing Element Sites inventory, wherever relevant. To maintain consistency with the RTP/SCS, land uses in areas not impacted by the project were kept unchanged (as assumed by the RTP/SCS). The roadway network was updated to reflect the currently adopted Mobility Element and is shown in **Figure 2.2**.

Preferred Plan (Proposed Project)

Consistent with the approach documented in the Buildout Methodology memorandum, the Preferred Plan or Proposed Project scenario starts with the No Project scenario as the baseline and was updated to reflect realistic growth. This growth was focused in nine (9) specific areas that were developed based on a community engagement process and in consultation with City staff. These nine Focus Areas were identified as locations where growth is likely to occur during the planning period, based on factors such as vacancy, development suitability and economic development potential. Proposed land uses in these areas informed by economic analysis of projected market demand during the planning period, result in a "realistic" growth scenario. Similar to the No Project scenario, land uses outside of the nine focused areas were kept unchanged.

The Preferred Plan (Proposed Project) also proposed selective improvements to the Mobility Element network. The improvements build upon the Mobility Element network that was adopted in 2021, with additional connections/modifications to support the land use changes in the nine focused areas. Wildomar'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 2.3** and **2.4**, and more detailed infrastructure, policy, and program recommendations can be found in the Mobility Element section of the General Plan Update.

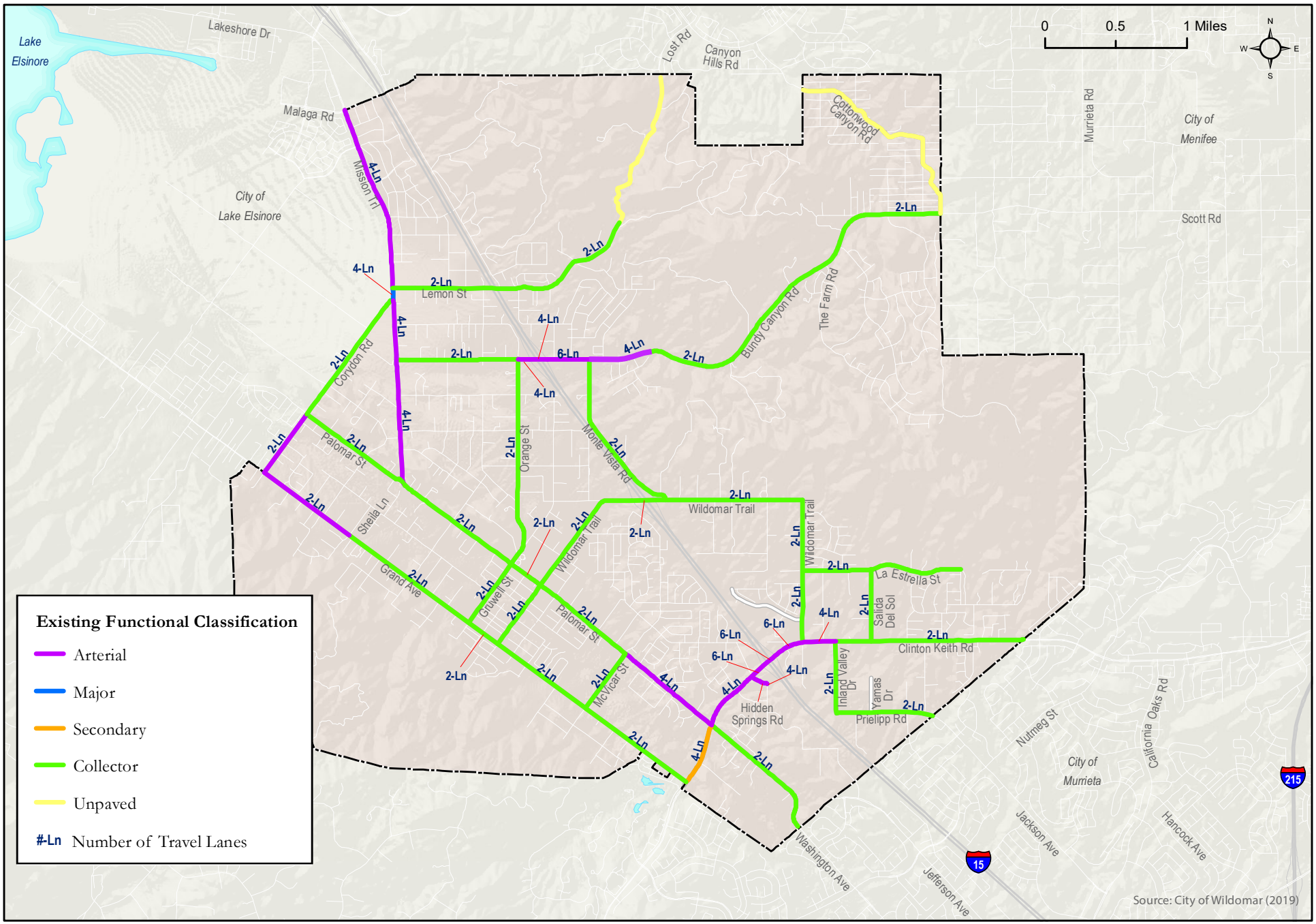

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Figure 2.1
Existing Functional Classifications

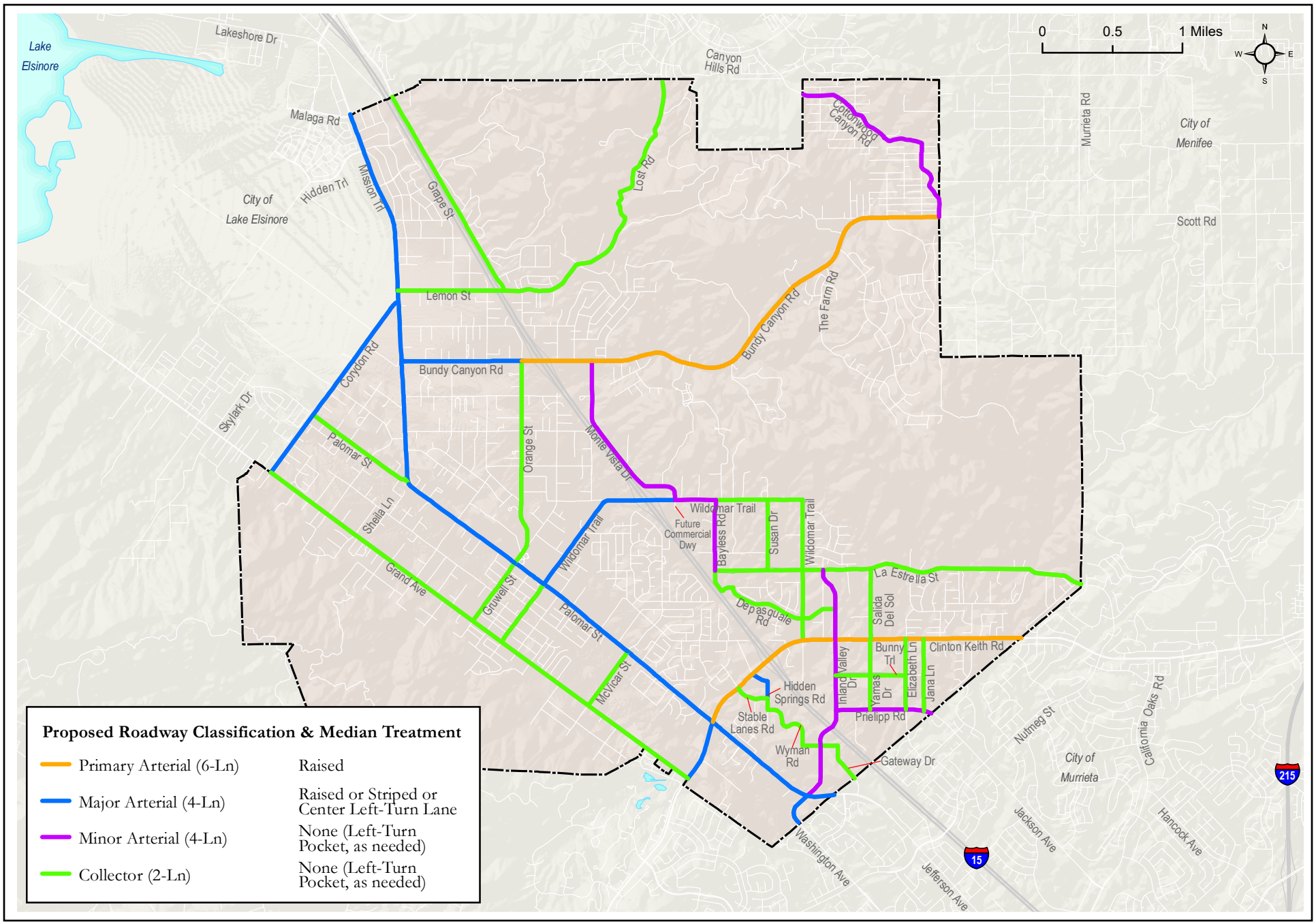

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Figure 2.2
Adopted Network

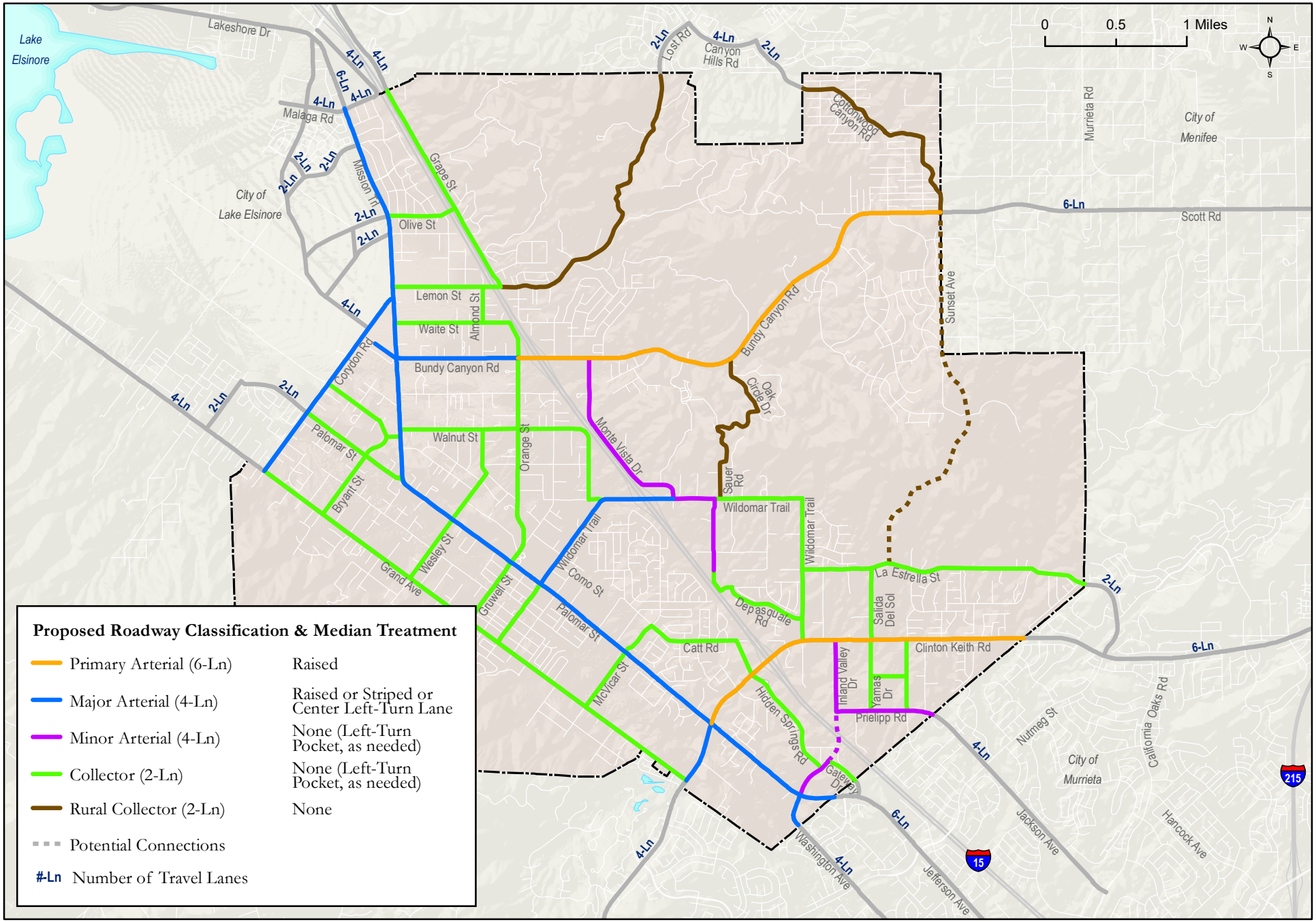

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Figure 2.3
Proposed Network

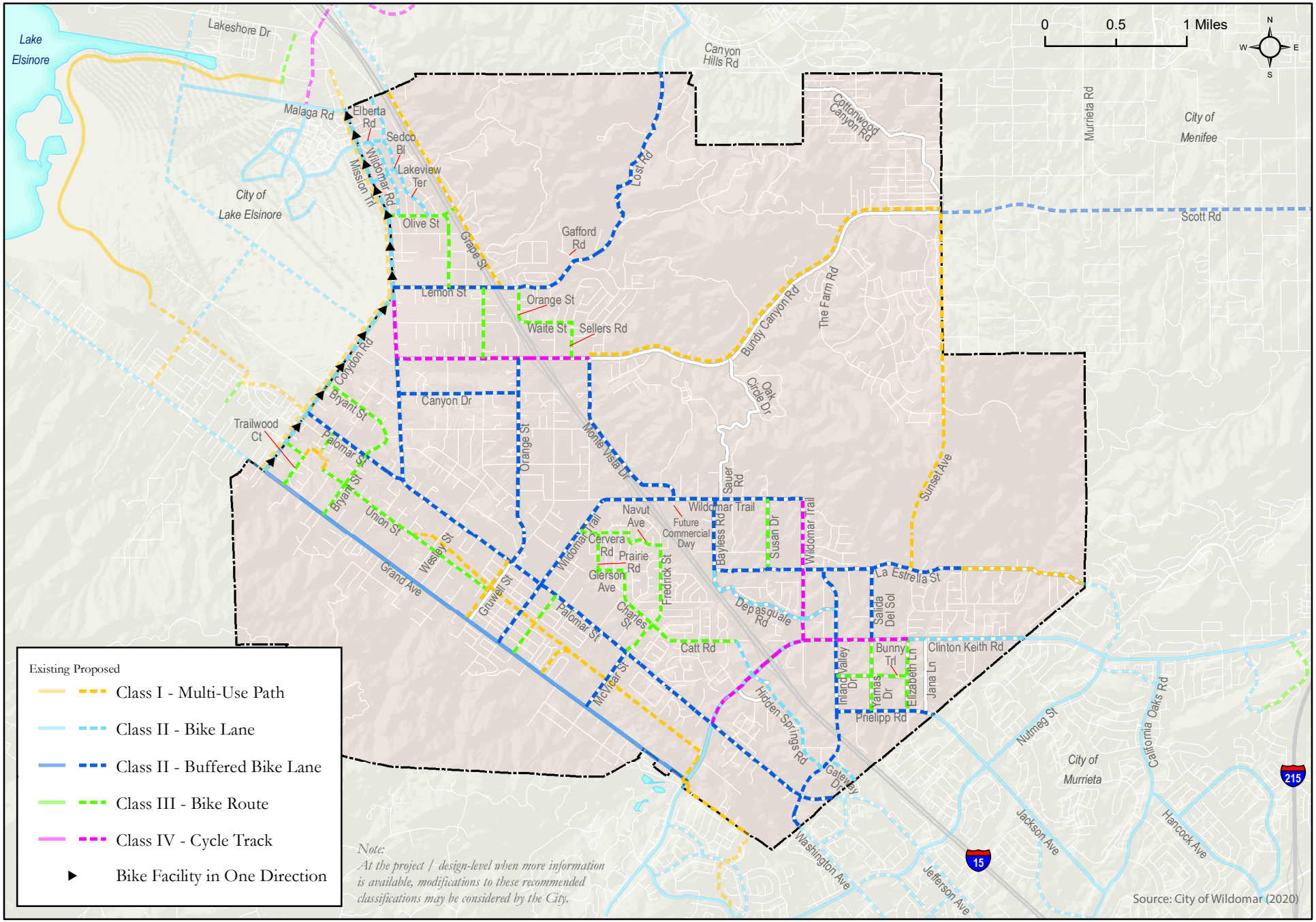

Figure 2.4
Planned Bicycle Network

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.

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 in determining how much 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.

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

- **VMT per Service Population** includes all daily vehicle-based trips associated with all land uses (residential, employment, retail, education, etc.). which are then summed for the study area (City of Wildomar) and divided by the population of the same analysis area to arrive at VMT per Service Population.

The Wildomar VMT Guidelines state that Projects that are at or below the city's current average VMT per Service Population or below the subregion's average VMT per Service Population be considered less than significant. Additionally, it states that the city shall endeavor to ensure that new projects are able to demonstrate a **3% reduction** in VMT that currently exists.

Existing VMT was determined using RIVTAM Base Year (2018), which yielded a VMT per Service Population of 34.6 miles. Excerpts from the regional transportation model are provided in **Appendix A**.

For the purpose of this transportation impact study, a Plan-to-Ground analysis was conducted by comparing the Proposed Project to Base Year (2018), which is representative of the baseline conditions.

4.0 Impact Analysis – Proposed Project

This chapter focuses on whether the Proposed Project would have a significant impact if the proposed land uses would in aggregate exceed the VMT per Service Population threshold shown in Table 3.1.

4.1 VMT Impact Analysis

To establish a baseline understanding, **Table 4.1** displays both Riverside County and Wildomar's VMT per Service Population for the Base Year (2018) conditions. As shown, Wildomar is 1% more efficient in VMT per Service Population compared to Riverside County.

Table 4.1 - Wildomar Base Year VMT Efficiency Metrics for Transportation Impact Analysis

VMT Metric	Base Year (2018)		% of Riverside County Base Year
	Riverside County	Wildomar	Wildomar
VMT per Service Population	34.8	34.6	99%

Source: RIVCOM, CR Associates (2023)

By 2040 with the implementation of the Proposed Project, the VMT efficiency of Wildomar substantially improves. **Table 4.2** presents the Wildomar VMT per Service Population with the Proposed Project. As shown in the table below, Wildomar is projected to have a VMT per Service Population at 30.6, which is 87.9% of the Riverside County's Base Year VMT per Service Population and 88.4% of Wildomar's Base Year VMT per Service Population. The land uses associated with the Proposed Project would reduce the VMT per Service Population within Wildomar by more than 3%. However, due to uncertainty regarding the actual development pattern, population growth, and other factors that are outside of the purview and control of this Project, the impact is considered to be significant, and the City would need to mitigate the Project's VMT to the extend feasible.

Table 4.2 - Wildomar Proposed Project VMT Efficiency Metrics for Transportation Impact Analysis

VMT Metric	Riverside County - Base Year	Wildomar – Base Year	Wildomar - Proposed Project	% of Riverside County Base Year	% of Wildomar Base Year	Significant Impact?
VMT Per Service Population	34.8	34.6	30.6	87.9%	88.4%	Y

Source: RIVCOM, CR Associates (2023)

4.2 Mitigation Recommendations

The City would provide the following mitigation measures to reduce the potential significant impacts:

- Mitigation Strategy 1: The City will implement the active transportation network as detailed in Section XXX of the Mobility Element. This implementation is expected to achieve a reduction of up to 6.4% (with implementation of built out sidewalk facilities) and 0.015% (with implementation of all proposed bicycle facilities) in Vehicle Miles Traveled (VMT) per service population.
- Mitigation Strategy 2: The City will establish a Transportation Demand Management Program. This program will engage with current and future key employers to decrease commute and work-related VMT. This will be achieved through various initiatives like employee shuttle bus services, vanpool programs, parking cash-out options, mobility hubs, and other related transportation demand management strategies. Depending on

the various strategies, a maximum of 30 percent reduction in VMT per service population could be achieved.

- Mitigation Strategy 3: The City will continue its collaboration with the Western Riverside Council of Governments and Riverside Transit Agency to boost transit usage. This will involve enhancing transit facilities and introducing more high-frequency transit services connecting areas of high employment with residential zones.

As shown, mitigation strategies 1 and 2 would potentially reduce the Project's VMT between 0.015% and 30%. It is not feasible to quantify the VMT reduction associated with Mitigation Strategy 3. If the City implements all of the mitigation strategies, the potential reduction would be 30% of the VMT per service population. However, due to the uncertainty regarding the timeframe of when these mitigation measures would be fully implemented, this study assumes that the Project would continue to have a significant transportation related impact under CEQA. See **Appendix B** for a list of VMT reduction strategies.

4.3 Additional Transportation-related CEQA Considerations

In addition to VMT, the following section focuses on the transportation impact analysis carried out utilizing the 2023 CEQA standards, with the objective of addressing the three additional (other than VMT) main inquiries detailed in Section XVII, Transportation, of Appendix G in the 2023 CEQA Statute & Guidelines.

Would the project

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project proposes additional enhancements to the multimodal transportation network. Consequently, it does not conflict with any existing program, plan, ordinance, or policy related to the circulation system, including transit, roadways, and bicycle and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines 15064.3, subdivision (b)?

Yes - See analysis in Section 4.1.

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) & d) Result in inadequate emergency access?

The Project includes the construction of new roadways and multi-modal facilities (bike and pedestrian). However, roadway and multi-modal recommendations are provided at the programmatic level, with no actual designs proposed. All recommended improvements will be evaluated during the design phase and will adhere to prevailing applicable standards, such as those in the California Manual of Uniform Traffic Control Devices (CA-MUTCD), highway capacity manual (HCM), etc., as well as any applicable environmental review. As such, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). For the same reasons as above, the Project would not result in inadequate emergency access.

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)).

This chapter discusses potential VMT impacts under the No Project alternative. The No Project alternative is identical to the currently adopted General Plan. The VMT Reports for this alternative are included in **Appendix C**.

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. maintaining 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.

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

Table 5.1 - Wildomar No Project
VMT Efficiency Metrics for Transportation Impact Analysis

VMT Metric	Riverside County Region - Base Year	Wildomar – Base Year	Wildomar – No Project	% of Regional Base Year	% of Wildomar Base Year
VMT Per Service Population	34.8	34.6	29.5	84.7%	85.2%

Source: RIVCOM, CR Associates (2023)

Proposed Project VMT per Service Population Impact?

As shown in the table above, Wildomar is projected to have a VMT per Service Population at 29.5, which is 84.7% of the region's Base Year VMT per Service Population and 85.2% of Wildomar's Base Year VMT per Service Population. The land uses associated with the No Project alternative would reduce the VMT per Service Population within Wildomar by more than 3%. However, due to uncertainty regarding the actual development pattern, population growth, and other factors that are outside of the purview and control of this Project, the impact is considered to be significant, and the City would need to mitigate the Project's VMT to the extent feasible.

6.0 Summary

Table 6.1 presents a summary of Wildomar average resident, employee VMT, and retail total VMT under all alternatives.

Table 6.1 - Summary of Wildomar
VMT Efficiency Metrics for Transportation Impact Analysis for All Alternatives

VMT Metric	Riverside County Region - Base Year	Wildomar – Base Year	Wildomar - Proposed Project	Wildomar – No Project	Below Riverside County Base Year	Below Wildomar Base Year	Significant Impact?
VMT Per Service Population	34.8	34.6	30.6	29.5	Yes (both alternatives)	Yes (both alternatives)	**Yes**

Source: RIVCOM, CR Associates (2023)

This report previously mentioned that a Plan-to-Ground analysis was carried out, comparing the Proposed Project with the baseline conditions represented by the Base Year (2018). This analysis revealed that the Proposed Project's impacts on Vehicle Miles Traveled (VMT) per Service Population are less than the applicable threshold. However, due to uncertainty regarding the actual development pattern, population growth, and other factors that are outside of the purview and control of this Project, the impact is considered to be significant, and the City would need to mitigate the Project's VMT to the extent feasible.

The Project would mitigation strategies 1, 2, and 3 and would potentially reduce the Project's VMT between 0.015% and 30%. If the City implements all of the mitigation strategies, the potential reduction would be 30% of the VMT per service population. However, due to the uncertainty regarding the timeframe of when these mitigation measures would be fully implemented, this study assumes that the Project would continue to have a significant transportation related impact under CEQA.

Appendix A
Base Year and Proposed Project VMT Results

	Households	SFDU	MFDU	TotPop	TotEmp	Service Pop	TotalEnroll	HHS	Wildomar Total OD VMT	VMT per SP	Constant Adopted HHS Pop	Adjusted Service Pop[1]	Adjusted VMT per SP
2018Cal3	11,989	8,022	3,967	37,150	5,839	42,989	6,624	3.096	1,448,089	33.7	36,022	41,861	34.6
2045Prop3	20,956	10,291	10,665	59,185	12,114	71,299	7,706	2.822	2,296,469	32.2	62,965	75,079	30.6

	Households	SFDU	MFDU	TotPop	TotEmp	Service Pop	TotalEnroll	HHS					
2018Cal3													
2045AdoptB	62.2%	82.8%	20.6%	57.4%	92.0%	62.1%	16.3%	-2.9%	42.2%	-12.3%	62.4%	66.5%	-14.6%
2045Prop3	74.8%	28.3%	168.8%	59.3%	107.5%	65.9%	16.3%	-8.8%	58.6%	-4.4%	74.8%	79.4%	-11.6%

	Households	SFDU	MFDU	TotPop	TotEmp	Service Pop	TotalEnroll	HHS					
2045AdoptB													
2045Prop3	7.7%	-29.8%	122.8%	1.2%	8.0%	2.3%	0.0%	-6.1%	11.5%	9.0%	7.7%	7.7%	3.5%

[1] Adjusted Service Population refers to the service population calculated utilizing the Household Size from the RIVCOM model.

Appendix B
VMT Reduction Measures

Transportation Demand Management Strategy		Applicable Land Use Type		Maximum Reduction
		Residential	Non-Residential	
Land Use				
T-1	Increase Residential Density	✓	✓	0.0% - 30.0%
T-2	Increase Job Density	✓	✓	0.0% - 30.0%
T-3	Provide Transit Oriented Development	✓	✓	6.9%
T-4	Integrate Affordable and Below Market Rate Housing	✓		0.0% - 28.6%
T-17	Improve Street Connectivity (Dependent on Project Site intersection density)	✓	✓	0.0% - 30.0%
Trip Reduction Strategies				
T-5	Implement Commute Trip Reduction Program (Voluntary) (Dependent on participation)		✓	0.0% - 4.0%
T-6	Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring) (Dependent on participation)		✓	0.0% - 26.0%
T-7	Implement Commute Trip Reduction Marketing (On-site TDM coordinator, Information center for transportation alternatives) (Dependent on participation)		✓	0.0% - 4.0%
T-8	Provide Ridesharing Program (Reserved parking for ridesharing and an app/website for coordinating rides) (Differs between urban and suburban environment)		✓	4.0% - 8.0%[1]
T-9	Implement Subsidized or Discount Transit Program (10% to 100% subsidy)	✓	✓	0.029% - 0.295%[1]
T-10	Provide End-of-Trip Bicycle Facilities (bike parking, bike lockers, showers, and personal lockers) (expanded mitigation options include bicycle repair station) (lower end associated with parking only compared to biking with additional supporting facilities)		✓	0.062% - 0.305%[1]
T-11	Provide Employer Sponsored Vanpool		✓	3.55%[1]
T-12	Price Workplace Parking		✓	0.0% - 20.0%
T-13	Implement Employee Parking Cash-Out (Dependent on number of eligible employees)		✓	0.0% - 12.0%
T-23	Provide Community-Based Travel Planning (Dependent on percentage of residences targeted with plan)	✓	✓	0.0% - 2.3%
Parking or Road Pricing/Management				
T-14	Provide Electric Vehicle Charging Infrastructure (Site Dependent)	✓	✓	0.0% - 11.9%
T-15	Limit Residential Parking Supply (Site Dependent)	✓		0.0% - 13.7%
T-16	Unbundled Residential Parking Costs from Property Cost (Parking Cost Dependent)	✓		0.0% - 15.7%
T-24	Implement Mark Price Public Parking (On-Street)	✓	✓	0.0% - 30.0%
Neighborhood Design				
T-18	Provide Pedestrian Network Improvement	✓	✓	0.0% - 6.4%
T-19-A	Construct or Improve Bike Facility	✓	✓	0.0% - 0.8%
T-19-B	Construct or Improve Bike Boulevard	✓	✓	0.0% - 0.2%

Transportation Demand Management Strategy		Applicable Land Use Type		Maximum Reduction
		Residential	Non-Residential	
T-20	Expand Bikeway Network	✓	✓	0.0% - 0.5%
T-21-A	Implement Conventional Carshare Program	✓	✓	0.0% - 0.15%
T-21-B	Implement Electric Carshare Program	✓	✓	0.0% - 0.18%
T-22-A	Implement Pedal (Non-Electric) Bikeshare Program	✓	✓	0.0% - 0.02%
T-22-B	Implement Electric Bikeshare Program	✓	✓	0.0% - 0.06%
T-22-C	Implement Scootershare Program	✓	✓	0.0% - 0.07%
Transit				
T-25	Extend Transit Network Coverage or Hours (Service miles and hours dependent)	✓	✓	0.0% - 4.6%
T-26	Increase Transit Service Frequency	✓	✓	0.0% - 11.3%
T-27	Implement Transit-Supportive Roadway Treatments	✓	✓	0.0% - 0.6%
T-28	Provide Bus Rapid Transit	✓	✓	0.0% - 13.8%
T-29	Reduce Transit Fares	✓	✓	0.0% - 1.2%
Non-Quantifiable Measures				
	Wayfinding signage	✓	✓	
	Off-site pedestrian supportive strategies	✓	✓	
	Pedestrian access with internal and external connections and sidewalk connections	✓	✓	
	Pre-tax transportation benefits		✓	
	Telecommute work center for residents	✓		
	Telecommute and/or compressed work week		✓	
	Delivery supportive amenities	✓	✓	
	On-site childcare	✓	✓	
	High-cost off-site transit stop amenities and upgrades	✓	✓	
	Low-cost off-site transit stop amenities and upgrades	✓	✓	

[1] VMT reduction specific to Wildomar.

Appendix C
Project Alternatives VMT Results

	Households	SFDU	MFDU	TotPop	TotEmp	Service Pop	TotalEnroll	HHS	Wildomar Total OD VMT	VMT per SP	Constant Adopted HHS Pop	Adjusted Service Pop[1]	Adjusted VMT per SP
2018Cal3	11,989	8,022	3,967	37,150	5,839	42,989	6,624	3.096	1,448,089	33.7	36,022	41,861	34.6
2045AdoptB	19,452	14,666	4,786	58,483	11,213	69,696	7,706	3.005	2,058,757	29.5	58,483	69,696	29.5

	Households	SFDU	MFDU	TotPop	TotEmp	Service Pop	TotalEnroll	HHS					
2018Cal3													
2045AdoptB	62.2%	82.8%	20.6%	57.4%	92.0%	62.1%	16.3%	-2.9%	42.2%	-12.3%	62.4%	66.5%	-14.6%
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2045AdoptB													
2045Prop3	7.7%	-29.8%	122.8%	1.2%	8.0%	2.3%	0.0%	-6.1%	11.5%	9.0%	7.7%	7.7%	3.5%

[1] Adjusted Service Population refers to the service population calculated utilizing the Household Size from the RIVCOM model.