



Land Use Alternatives Evaluation Background Report

OCTOBER 2023

Table of Contents

1. INTRODUCTION	1	Archaeological Resources	104
1.1 What is a General Plan?	2	Agricultural Resources.....	108
1.2 Creating the Land Use Alternatives	3	Biological Resources	111
1.3 Report Organization	5	Climate Change and Natural Hazards	128
2. GENERAL PLAN CONTEXT	9	Equity and Public Health	137
2.1 General Plan Vision Statement	9	5.2 Citywide Evaluation Topics.....	146
2.2 Projected Growth in Livermore.....	9	Housing and Jobs	146
2.3 Role of the Preferred Land Use Scenario in the General Plan Update Process	11	Community Services	149
2.4 Other Citywide Plans	11	Traffic and Multimodal Circulation.....	153
3. DESCRIPTION OF ALTERNATIVES.....	15	Utilities.....	160
3.1 Land Use Place Types.....	15	Fiscal Impacts	170
3.2 2045 Buildout Projections.....	22	6. POLICY IMPLICATIONS.....	175
3.3 Overview of Land Use Alternatives.....	24	6.1 Specific Plans	175
4. SUMMARY OF KEY FINDINGS	59	6.2 Aesthetics	175
4.1 Focus Area Key Findings	59	6.3 Scenic Corridor	175
4.2 Citywide Alternatives Key Findings	70	6.4 Historic and Archaeological Resources.....	175
5. ALTERNATIVES EVALUATION	75	6.5 Agricultural Resources.....	176
5.1 Focus Area Evaluation Topics.....	75	6.6 Biological Resources	176
Aesthetics	75	6.7 Climate and Natural Hazards.....	176
Scenic Corridor Policy	94	6.8 Equity and Public Health	177
Historic Resources.....	104	6.9 Housing and Jobs.....	177
		6.10 Community Services	178
		6.11 Traffic and Multimodal Network	178
		6.12 Utilities.....	178
		6.13 Fiscal Impacts.....	178
		6.14 East of Greenville Road Policy Considerations	179
		7. NEXT STEPS	181

TABLES

Table 1.	Projected Residential Growth, 2023 – 2047.....	11	Table 24.	Livermore Daily Vehicle Hours Traveled.....	158
Table 2.	Midtown Focus Area 2045 Buildout	28	Table 25.	Livermore Daily Vehicle Hours of Delay	158
Table 3.	Laughlin Road Focus Area 2045 Buildout	32	Table 26.	Livermore – Average Speeds on Non-Freeway Roads (MPH)	159
Table 4.	Las Positas Court Focus Area 2045 Buildout.....	38	Table 27.	Projected Population Comparison (2020 LMW UWMP, 2020 Cal Water WMP vs. Citywide Land Use Alternatives).....	160
Table 5.	Vasco Row Focus Area 2045 Buildout	43	Table 28.	Water Usage - Cal Water Livermore District - Normal Year Projected Demand and Supply	163
Table 6.	East of Greenville Road Focus Area 2045 Buildout	51	Table 29.	Water Usage - Cal Water Livermore District - Single Dry Year Projected Demand & Supply.....	163
Table 7.	Citywide Land Use Alternatives 2045 Buildout	55	Table 30.	Water Usage - Cal Water Livermore District - Multiple Dry Years Projected Demand & Supply	164
Table 8.	Midtown Focus Area Findings	60	Table 31.	Water Usage - Livermore Municipal Water - Normal Year Projected Demand and Supply	165
Table 9.	Laughlin Road Focus Area Findings.....	62	Table 32.	Water Usage - Livermore Municipal Water - Single Dry Year Projected Demand and Supply..	165
Table 10.	Las Positas Court Focus Area Findings.....	64	Table 33.	Water Usage - Livermore Municipal Water - Multiple Dry Years Projected Demand and Supply	166
Table 11.	Vasco Row Focus Area.....	66	Table 34.	Existing Sewer Design Flow Capacity	167
Table 12.	East of Greenville Road Focus Area	68	Table 35.	Projected 2045 Sewage Demand.....	168
Table 13.	Citywide Land Use Alternatives Summary Table..	71	Table 36.	Fiscal Impact Summary of General Plan Alternatives	173
Table 14.	Potential Biological Resources in the Focus Areas	112			
Table 15.	Citywide Housing Units by Type, 2045	148			
Table 16.	Citywide Jobs to Employed Residents Ratio	149			
Table 17.	Livermore Valley Unified School District Schools, Student Enrollment, and School Capacity (2021)	150			
Table 18.	New Students Under Each Citywide Alternative	151			
Table 19.	LARPD Park Service Standards.....	152			
Table 20.	Citywide Alternatives New Open Space and Parks	152			
Table 21.	Citywide Alternatives Park Acres Needed to Meet LARPD Park Service Standards.....	152			
Table 22.	Vehicle Miles Traveled	155			
Table 23.	Livermore Daily Person Trips by Mode	157			

FIGURES

Figure 1. Existing General Plan Land Use Map.....	7
Figure 2. General Plan Focus Areas	8
Figure 3. Place Types Menu	16
Figure 4. Midtown Focus Area Net New Development by 2045.....	28
Figure 5. Midtown Focus Area Alternatives	29
Figure 6. Laughlin Road Focus Area Net New Development by 2045	32
Figure 7. Laughlin Road Focus Area Alternatives.....	35
Figure 8. Las Positas Court Net New Development by 2045.....	38
Figure 9. Las Positas Court Focus Area Alternatives.....	39
Figure 10. Vasco Row Net New Development by 2045.....	43
Figure 11. Vasco Row Focus Area Alternatives	44
Figure 12. East of Greenville Road Focus Area Net New Development by 2045	50
Figure 13. East of Greenville Road Focus Area Alternatives .	52
Figure 14. Net New Growth for Citywide Alternatives 2045 Buildout	55
Figure 15. Citywide Alternative A	56
Figure 16. Citywide Alternative B	57
Figure 17. Citywide Alternative C	58
Figure 18. Scenic Corridor Subareas Map.....	95
Figure 19. Known Historic Resources in Livermore	107
Figure 20. Agricultural Land in the Focus Areas.....	110
Figure 21. Potential Biological Resources in the Midtown Focus Area	119
Figure 22. Potential Biological Resources in the Laughlin Road Focus Area.....	121
Figure 23. Potential Biological Resources in the Las Positas Court Focus Area	123
Figure 24. Potential Biological Resources in the Vasco Row Focus Area	125
Figure 25. Potential Biological Resources in the East of Greenville Road Focus Area	127
Figure 26. Flood Risks in Livermore	132
Figure 27. Wildland Urban Interface	135
Figure 28. Parks and Park Walkability.....	141
Figure 29. Food Access Research Atlas Low Income Low Access Census Tracts	144
Figure 30. Citywide Land Use Alternatives Ability to Accommodate Estimated Future State Housing Requirements through 2047.....	147
Figure 31. City of Livermore Water Service Districts	161

This page intentionally left blank.

1. Introduction

In 2021, the City of Livermore initiated a comprehensive update to the Livermore General Plan, the City's long-range policy document for growth, land use, sustainability and resource and open space conservation. To date, the update process has included:

- establishing a communitywide vision for 2045,
- preparing a summary of existing conditions in Livermore,
- and updating the Housing Element.

Next, the General Plan team developed three land use alternatives for five focus areas in the city. This document provides an overview of the land use alternatives and identifies the tradeoffs of each alternative.

The land use planning process attempts to balance the following major objectives:

- **Plan for Adequate Housing Options** - The State of California requires that all cities plan for an adequate amount of housing to meet expected demand in their community, which is identified through the Regional Housing Needs Allocation (RHNA or State Housing Requirements) process every eight years. Because the General Plan covers a 20-year period and accounts for two to three Housing Element cycles, the General Plan will need to identify areas to accommodate up to 19,000 new housing units to meet

Livermore's long-term State Housing Requirements through the 2045-time horizon.

- **Ensure Sufficient Public Revenue** - The City relies on three primary sources of revenue to fund the high-quality services and infrastructure residents deserve and expect: sales taxes, property taxes, and fees for service. As costs of providing services and maintaining aging infrastructure rise over time, it is important to maintain an adequate revenue base and a growing and diverse local economy. Property taxes from residential land uses cover only a portion of the City's costs and additional revenue from industrial and commercial uses are needed to maintain City infrastructure, fund police and fire services, and support a high quality of life.
- **Foster High Quality Job Creation** - As the cost of living in Livermore continues to rise over time, it is important to adopt policies and plans that encourage the creation of high-quality jobs, meaning jobs that pay wages commensurate with the cost of living. Many residents will not work in Livermore, but the availability of high-quality jobs decreases commuting and creates more time for family, volunteering, and other forms of civic engagement.
- **Maintain Sense of Place and Quality of Life** - Livermore residents, businesses, and visitors have chosen to live, work, and play in Livermore because of its unique attributes: safety, vibrant commercial spaces, small town feel, high-quality design, neighborhood character, and more. While some areas of Livermore will likely take on new development patterns in order to address housing, jobs and revenue needs over the next 20 years, it will remain

essential to create attractive, inviting, and functional spaces that integrate seamlessly with the existing community.

This Land Use Alternatives Evaluation Report is intended to help inform the community on a range of possible land use alternatives, including an analysis of both the positive and negative effects of each alternative to help evaluate tradeoffs and guide decisions about a Preferred Land Use Scenario. The Preferred Land Use Scenario is a major milestone in the development of a new General Plan Land Use Map, which will guide decision making around development, conservation, and infrastructure over the next 20 years.

The Introduction explains:

- What is the General Plan
- General Plan Land Use Element and Land Use Map
- Creating the Land Use Alternatives
- The Report Organization

This Alternatives Evaluation Document is intended to help inform the community, the General Plan Advisory Committee, the Planning Commission, and the City Council what each land use approach entails, including an analysis of both the positive and negative effects of each alternative.

1.1 WHAT IS A GENERAL PLAN?

The General Plan is the City's long-range policy document for growth, land use, sustainability and resource and open space conservation. The current Livermore General Plan establishes broad land use goals for a planning period that spans from 2003

to 2025. The traditional planning period for updating the General Plan is 10 to 20 years. A comprehensive General Plan update is needed due to the age of the current document, the data that supports it, and to comply with state Planning and Zoning Law.

The Livermore General Plan Update, known as Imagine Livermore 2045, is a major undertaking by the City of Livermore and its community. One of the major tasks is the development of a new land use map, which helps guide the land use development and, in turn, influences the look and feel of the City over the next 20 years.

The State of California requires all cities and counties to have a General Plan for the physical development within its jurisdictional boundaries as well as any land outside its boundaries that may have a relation to its planning processes. The State requires each General Plan to address various topics that affect the daily lives of the community. In addition to the required topics, cities may add topics of local importance. Livermore's General Plan addresses all the required elements, such as land use, housing, transportation, and public safety, and includes optional elements such as community character.

General Plan Land Use Map and Land Use Element

The General Plan land use map illustrates the location, type, and intensity of land uses. Each color on the map represents a land use designation. Each land use designation is further defined and described in the General Plan Land Use Element.

A significant component of the General Plan Update process is modifying the General Plan land use map to align with the community's vision and plan for future growth and conservation. The new General Plan land use map will be developed iteratively

through creation and evaluation of draft land use alternatives that can be mixed and matched to ultimately select a Preferred Land Use Scenario.

For many parts of Livermore, the General Plan land use designations are appropriate and are not expected to change. Instead, exploration of future land use changes is concentrated in specific areas, known as Focus Areas, where transformation is expected or desired to occur through 2045. These Focus Areas are mostly vacant or under-developed land, near existing or future transit and other infrastructure, some have already started transitioning to other uses, or include property owners that have expressed interest in considering redevelopment or change.

In addition to the type and mix of land use, their relationships and connections to each other, public services, and transportation systems, among other market factors, are an important consideration when discussing long term land use changes. Some land uses benefit from clustering and proximity to each other, whereas other land uses may benefit from wider distribution across the community.

The General Plan Land Use Element includes a map and policies that determine what can and cannot be built in the city, and requires all future decisions related to land use to be consistent with the adopted General Plan, along with all other City documents.

Each parcel in Livermore has a General Plan land use designation that guides the type and intensity of uses allowed on that property, as shown in Figure 1. Each color represents a land use designation. The type and intensity of development allowed in each designation is explained in the land use designations section of the Land Use Element. The range of land use designations covers all

the different types of places, activities, and development in Livermore, including residential, commercial, mixed use, industrial, community facilities, and open space.

1.2 CREATING THE LAND USE ALTERNATIVES

The alternatives presented in this document evaluate a range of commercial, industrial, and residential growth scenarios that are possible over the span of 20 years for each of the five Focus Areas. Each Focus Area is meant to test the pros, cons, and different potential outcomes of each possible future for a given area. The Focus Areas are the primary places the City anticipates potential General Plan land use designation changes. There will also be growth over the next 20 years, outside these study areas, consistent with the existing General Plan land use designations. The alternatives process outlined below will identify the Preferred Land Use Scenario for each Focus Area that best meets the community's vision and the level of growth over the next 20 years.

Creation of the land use alternatives was based on extensive input from the community about land use changes through 2045 in Livermore, including a virtual open house, an online activity, and eight pop-up events at the Downtown Farmers Market, a local coffee shop, winery, and Civic Center Library. From February to March 2022, Livermore community members were asked to provide ideas and to help identify areas of the city to study for potential change over the next 20 years. In general, the community identified focus areas that included vacant infill parcels, aging shopping centers, and industrial areas in transition. In addition, City staff sent letters to property owners within the potential Focus Areas informing them of the General Plan Update process and specifically that land use changes may be considered for their

property and within their area—this has spurred dozens of one-on-one discussions with various property owners regarding land use. Staff has also had a number of conversations with local property brokers and developers to gather their feedback about viable development alternatives.

These are the major steps in the alternatives process:

1. **Choose Focus Areas.** ✓ The General Plan team – City staff and consultants working on the General Plan - identified five Focus Areas to study for potential change over the next 20 years based on current land use patterns; existing and future economic trends; and community input from property owner meetings, pop-ups, workshops, and online geographical surveys. The Focus Areas, shown on Figure 2, have one or more of the following characteristics:
 - Are near existing or future transit and other infrastructure;
 - Are largely undeveloped or underutilized; are areas that have begun transitioning to other uses; or
 - Are areas where property owners have expressed interest in considering redevelopment or change of their property.
2. **Create Land Use Alternatives for each Focus Area.** ✓ The General Plan team created three draft land use alternatives for each Focus Area to consider different locations, intensities/types of development that could occur over the next 20 years. The three alternatives were vetted through additional communication with the identified property owners reviewed by the General Plan Advisory Committee, and Planning Commission, and selected for additional analysis and community feedback by the City Council.

3. **Evaluate and Compare Alternatives.** ✓ This Alternatives Evaluation Document evaluates and compares the alternatives to help facilitate selecting a Preferred Land Use Scenario by Focus Area that will be merged to create a single citywide Preferred Land Use Scenario.
4. **Choose a Preferred Land Use Scenario for Further Study.** Using this alternatives evaluation as a tool, the City will solicit community input on their preferences for the City's future growth and development. The Preferred Land Use Scenario will be developed through a robust public engagement process. The Preferred Land Use Scenario may be created by mixing and matching various features of each alternative. The City Council will provide final direction on the Preferred Land Use Scenario.
5. **Analyze the Preferred Land Use Scenario as part of the Draft General Plan.** Once the Preferred Land Use Scenario is finalized, the project consultant team will integrate it with the citywide General Plan Land Use Map for a comprehensive analysis. The Draft General Plan will cover the entire city and analyze all proposed growth to understand infrastructure improvements, demands for public services, net annual fiscal effects, and the financing tools and policies available to the City to finance any public costs associated with the Preferred Land Use Scenario. The entire Draft General Plan, including policies and actions in all Elements, will undergo additional analysis in the General Plan Environmental Impact Report (EIR), which will look at a wide range of potential impacts that future development could have on the physical environment.
6. **Continued Participation.** After the Preferred Land Use Scenario is selected, the public will continue to play an important role throughout the remainder of the General Plan process to inform the goals, policies, and actions of all General

Plan elements. City staff will ask the community for input on the Draft General Plan and the Draft EIR. Public participation at these key steps is vital to shaping a plan that represents the values and vision of the community.

1.3 REPORT ORGANIZATION

This Alternatives Evaluation Document will provide readers and decision makers with the necessary information to provide meaningful input into choosing the Preferred Land Use Scenario for each Focus Area that best meets the community's vision and the level of growth as well as the change they wish to see over the next 20 years. The Alternatives Evaluation Document is organized into the following chapters:

1. This **Introduction** chapter describes the organization of this document, purpose of the General Plan, and outlines the alternatives process.
2. The **General Plan Context** chapter lists the vision and values of the General Plan, provides an overview of the projected growth and pending or approved development projects; describes the relationship of the General Plan to the Housing Element; and cites other citywide plans and regulations in Livermore that will affect future development.
3. The **Description of Alternatives** chapter presents the proposed land use alternative maps, explains the place- type - menu that was used for each alternative, and provides the projected buildout for each alternative by Focus Area and Citywide.
4. The **Summary of Key Findings** chapter provides a high-level review of the key findings for each alternative, based on the more detailed evaluation in Chapter 5 Alternatives Evaluation,

and provides information on how to build a Preferred Land Use Scenario for each Focus Area.

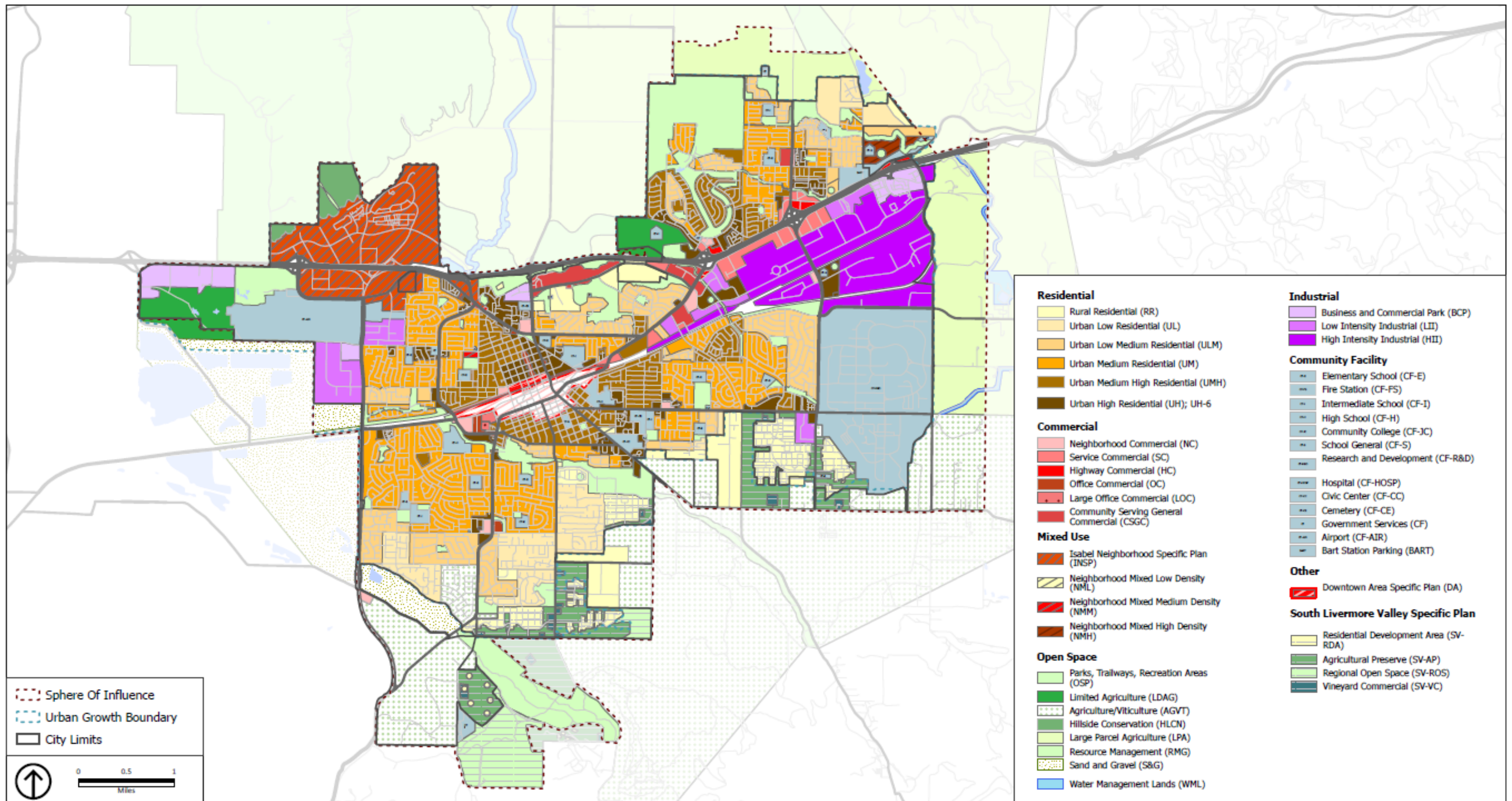
5. The **Alternatives Evaluation** chapter provides a detailed comparison of each alternative for the following topics within each Focus Area:
 - Aesthetics
 - Scenic corridor policy
 - Historic resources
 - Agricultural resources
 - Biological resources
 - Climate hazards
 - Equity and public health

The chapter also evaluates the following topics at a citywide scale:

- Housing and jobs
 - Community services
 - Traffic and multimodal circulation
 - Utilities
 - Fiscal impacts
6. The **Policy Implications** chapter identifies an initial list of potential policies or actions the General Plan Update could consider incorporating to minimize the effects of future growth.

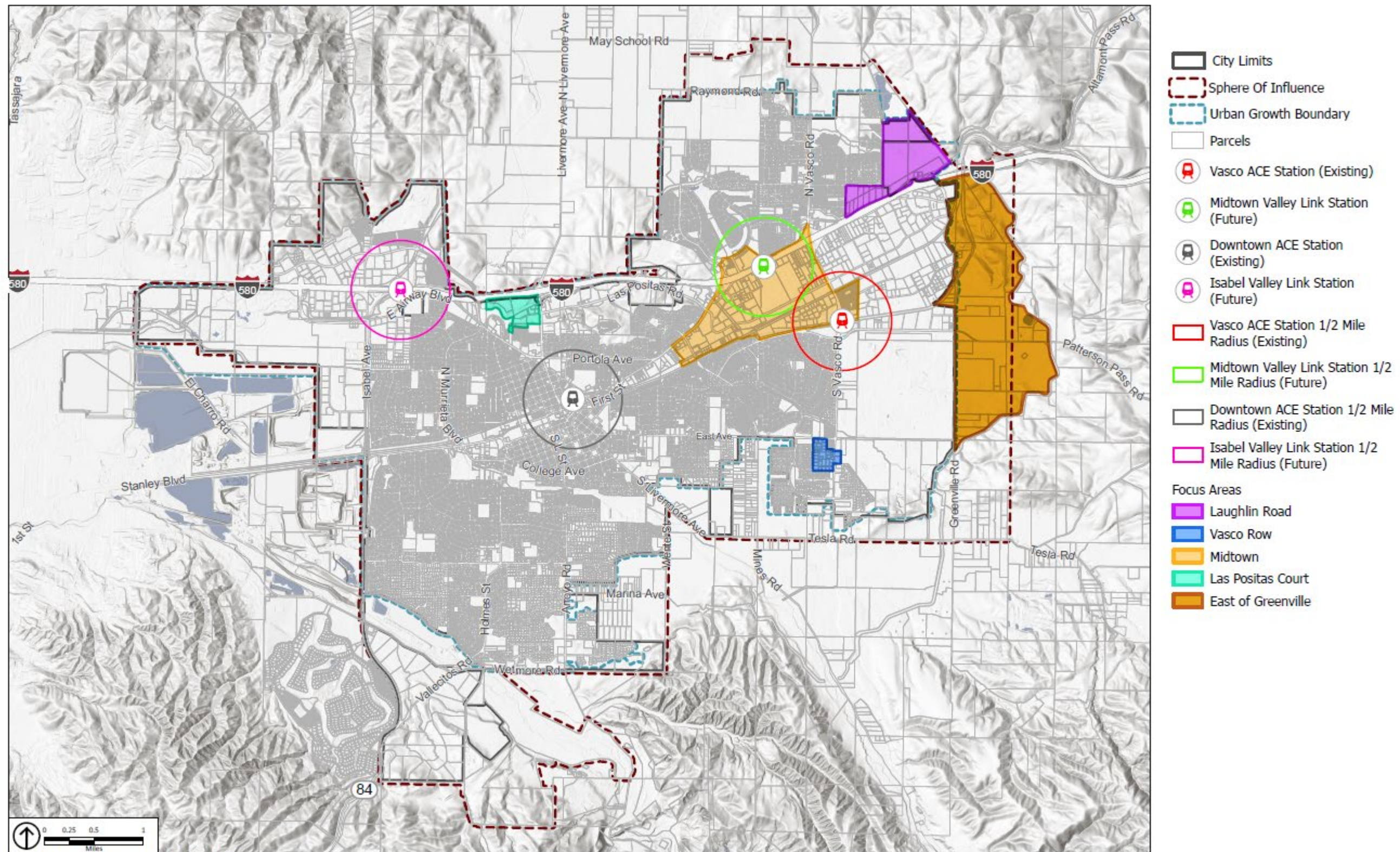
7. The **Next Steps** section describes the process to create a final Preferred Land Use Scenario and upcoming General Plan tasks and events.

Figure 1. Existing General Plan Land Use Map



Source: City of Livermore, 2021; Esri, 2021.

Figure 2. General Plan Focus Areas



Source: City of Livermore, PlaceWorks, 2021.

2. General Plan Context

This section provides an overview of the context for the General Plan Update, including the Draft General Plan Vision and Values, how projected growth and pending development projects were factored into the alternatives, and a summary of the citywide plans that relate to the General Plan Update.

2.1 GENERAL PLAN VISION STATEMENT

For eight months from summer of 2021 through spring 2022, hundreds of Livermore residents engaged with the General Plan team to provide valuable input on the General Plan Vision Statement. In April 2022, the City Council discussed and finalized the General Plan Vision Statement.

OUR VISION:

In 2045, Livermore will be a community with a big heart where families and individuals flourish, and people with diverse experiences and perspectives work together for the common good. Insightful land-use policies and wise resource management will ensure services and infrastructure for a high quality of life and enable Livermore to be safe and welcoming for all.

The Vision is supported by ten Guiding Principles: Prosperity, Vibrancy, Mobility, Sustainability, Resiliency, Homes, Equity, Diversity, Continuity, and Arts.

See <https://imagineLivermore2045.org/documents/> for the full text of all Guiding Principles.

2.2 PROJECTED GROWTH IN LIVERMORE

Livermore anticipates that both jobs and population will continue to grow over the next twenty-plus years. The General Plan will guide all types of land uses and future development and conservation during that time, including new jobs and businesses, new single-family homes and apartments, new parks and trails, and new government facilities.

Pipeline Projects

There are numerous residential and non-residential projects currently underway at various stages of planning: under City review, approved, or under construction. There are nearly 1,400 housing units in the residential development pipeline for Livermore. Additionally, there are nearly 64,525 square feet of retail, 94,455 square feet of industrial, 20,704 square feet of office space, and 534 hotel rooms in the non-residential project pipeline. These projects are scattered throughout the city.

Projected Residential Growth

Since 1969, California has required that all cities and counties adequately plan to meet the housing needs of everyone in the community. This is accomplished through a Housing Element, which is a required component of the General Plan and was recently updated. State law requires all California jurisdictions to plan for its “fair share” of the regional housing need for households of all income levels.

To comply with state law, the City's Housing Element was recently updated to ensure the City's policies and programs can accommodate estimated housing growth needs identified in the Association of Bay Area Government's (ABAG) Regional Housing Needs Allocation (RHNA) for the 2023-2031 planning period. This time period is the "6th cycle" Housing Element.

Livermore's state housing requirement, for 2023-2031 is 4,570 housing units, distributed among four income categories that range from Very Low Income to Above Moderate Income. The Council adopted Livermore's 6th cycle 2023-2031 Housing Element on March 13, 2023. The 2023-2031 Housing Element demonstrates that the City can accommodate the new housing units needed under the 6th cycle of state housing requirements based on the existing General Plan. All land use alternatives assume the amount and location of housing in the adopted 6th cycle Housing Element; none of the land use alternatives would require changes to the adopted Housing Element.

However, the General Plan extends beyond the end of the 6th cycle. Assuming continued 8-year housing allocation cycles, and that the General Plan's expected horizon year is 2045, the updated General Plan should designate sufficient residential land to accommodate the future 7th cycle (January 2031 to January 2039) and most of the 8th cycle (January 2039 to January 2047).

The scale of future housing allocations is unknown and difficult to predict. Housing requirement numbers are ultimately determined by the State and ABAG and are based on statewide demographics. Hypothetically, if the 7th cycle of state Housing requirements is in the same proportion to the existing number of homes as the 6th cycle, it would call for 5,100 to 5,200 new units. Similarly, if the 8th

cycle continues that trend, it could be expected to call for an additional 5,900 to 6,000 new units. The combined total would be approximately 11,000 new units over the 7th and 8th cycles (2031 to 2047). This does not include any additional "buffer" for the two future housing requirement cycles. A buffer is necessary to ensure that if the sites listed in the housing opportunity sites inventory are developed without housing, or are developed with less than the full amount of housing claimed in the inventory, there is remaining capacity to ensure an ongoing supply of sites for the full allocation during the eight years of the Housing Element cycle. HCD recommends a buffer of least 15% to 30%. Table 1 summarizes the projected state housing requirement for Livermore through 2045 and shows that the General Plan Update, with a buffer should likely plan for about 17,000 to 19,000 new homes through 2045.

If the City does not designate adequate residential sites to meet the future requirements as part of the General Plan Update, the next Housing Element, eight years from now, may need to revisit the General Plan land use map and include a process to identify and change the designations on additional sites to accommodate more future housing.

Future Job Growth

To understand potential employment growth for Livermore, the General Plan team reviewed employment forecasts from the California Department of Transportation; Jobs EQ by Chmura, a private-sector dataset and software tool; Moody's Analytics; and Woods & Poole Economics. These employment forecasts suggest that Livermore could potentially add between 5,400 and 21,300 jobs by 2050. Moody's Analytics provides the most conservative

estimate of job growth, assuming 0.3 percent un compounded yearly growth rate. The Woods & Poole’s forecast is the most optimistic growth scenario and assumes a 1.1 percent annual un compounded growth rate.

Table 1. Projected Residential Growth, 2023 – 2047

Housing Element Cycle	Projected Housing Need (Low)	Projected Housing Need (High)
6 th Cycle state housing requirement (Jan 2023 to Jan 2031)	4,570	4,570
7 th Cycle estimated state housing requirement (Jan 2031 to Jan 2039)	5,100*	5,200*
8 th Cycle estimated state housing requirement (Jan 2039 to Jan 2047)	5,900*	6,000*
15% - 30% Buffer Estimate for 7 th and 8 th Cycle state housing requirements	1,650	3,360
Total Projected Housing Unit Need	17,220	19,130

Source: PlaceWorks, 2023.

*Note: The 7th and 8th Housing Element cycle state housing requirements are unknown at this time. The numbers provided are estimates based on the 6th cycle state housing requirement for the City of Livermore.

2.3 ROLE OF THE PREFERRED LAND USE SCENARIO IN THE GENERAL PLAN UPDATE PROCESS

The Preferred Land Use Scenario will establish the foundation for future land use planning. Ultimately, the Preferred Land Use Scenario will become the General Plan land use map, which will

establish the type and intensity of development that can occur within a geographic area consistent with the community’s vision and civic goals. New homes and jobs will continue to be developed throughout the city based on the General Plan land use map. The Focus Areas are places where the current General Plan land use designation might change to lead to new or different land uses in the future.

2.4 OTHER CITYWIDE PLANS

The following citywide plans will continue to guide the future development and growth of the city, in conjunction with the General Plan Update.

- **Livermore Development Code.** The Livermore Development Code implements the development goals and policies established in the General Plan. It regulates land uses, building heights, setbacks, access, parking, provision of open space, and other factors that relate to development on individual properties.
- **Design Standards and Guidelines.** The City of Livermore has developed a set of policies and implementation tools in the form of Design Standards and Guidelines that are intended to preserve, protect, and promote a vibrant, healthy, and safe community. The main purpose of the Design Standards and Guidelines is to provide general design guidelines for the development of private and public projects. Livermore’s Design standards and Guidelines not only apply to parks, residential, mixed use, and commercial uses, but are intended to preserve the City’s historic resources, guide street design, create unique gateways to

the community and special districts, and ensure the unique character and identity of the city is maintained.

- **Bicycle, Pedestrian, and Trails Active Transportation Plan (ATP), 2018.** The City's Active Transportation Plan was adopted in June 2018 and seeks to create a vibrant environment that gives the community the opportunity to safely and comfortably bicycle, walk, roll, and have the ability to access other public amenities, such as parks and trails. The City's ATP covers the entire the 2003-2025 General Plan Planning Area, spanning beyond Livermore's City Limits to the north, east, and south to provide additional access to regional and local open spaces and parks, schools, job centers, and other regional amenities. The ATP identifies the existing bikeway network as having 40 miles of Class I Shared Use Paths and 66 miles of Class II Bicycle Lanes. The Class I shared use path is designed to be shared for walking, bicycling, and horseback riding. The ATP found that Livermore has a robust sidewalk network composed of approximately 566 miles, covering 93 percent of the street network. Planning for the future, the ATP proposes 147.7 miles of new bicycle facilities and shared use paths, and 6 miles of new sidewalks.
- **Bicycle, Pedestrian, and Trails Active Transportation Plan (Design Guidelines), 2018.** This document presents design guidelines and best practices recommended for the City of Livermore to use for pedestrian, bicycle, and equestrian facilities, to be used in conjunction with the City's Design Standards and Guidelines. This document follows the design standards and guidelines of national

best practice documents, as well as California -specific guidance.

- **Local Road Safety Plan Study (LRSP).** In 2022, the City of Livermore initiated development of the Local Road Safety Plan (LRSP). A LRSP provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads. The City is also developing a Vision Zero Action Plan, which is a comprehensive strategy to reduce and eventually eliminate traffic fatalities and severe injuries through a data-driven approach that ensures safety for all road users.
- **Capital Improvement Plan.** The Capital Improvement Program (CIP) is both a fiscal and planning tool which identifies capital improvement projects, provides a schedule for the projects, and identifies funding sources and financing options.
- **Climate Action Plan (CAP).** The most recent Climate Action Plan was adopted in November 2022. It includes both mitigation and adaptation measures to reach the City's adopted greenhouse gas (GHG) emissions targets for 2030 and 2045. The CAP has the following three goals: prepare the community for climate impacts, establish a pathway to carbon neutrality by 2045, and establish the City as a climate leader. The CAP also addresses existing and future climate hazards Livermore is facing, such as extreme heat, poor air quality, extreme weather events, and increased drought.

- **Tri-Valley Local Hazard Mitigation Plan.** The Tri-Valley Local Hazard Mitigation Plan (LHMP) provides a uniform hazard mitigation strategy for the Tri-Valley area, addressing a range of hazards. The Cities of Livermore, Pleasanton, and Dublin, Livermore-Pleasanton Fire Department, Dublin San Ramon Services District, and the Lawrence Livermore National Laboratory are jointly updating the LHMP and expect to finalize the plan in winter 2023.

This page intentionally left blank.

3. Description of Alternatives

3.1 LAND USE PLACE TYPES

Figure 3 presents the land use place types that were used in the creation of the alternatives. The Place Types Menu presents simplified land use place types in a more accessible format. Once the Council decides upon the Preferred Land Use Scenario, the General Plan team will revisit these land use place types to add additional detail about the allowed uses. The photographs in the Place Types Menu are not intended to represent recommended architectural design styles, only their general scale and character.

The Place Types Menu describes the density range permitted by each land use designation and the type of use that would be permitted based on the land use category. Most land use place types in the alternatives are similar to existing General Plan land use designations, however there are a few differences. The biggest changes are:

- The alternatives explore High Density Residential and High Density Mixed Use that would allow 60 to 100 dwelling units per acre (du/a) in areas close to existing or future transit. The existing General Plan’s highest density land use designation is Urban High Residential which allows 38 to 55 du/a. However, the recently approved Isabel Neighborhood Specific Plan (INSP) includes residential densities of 60 to 100 du/a in the core residential area—which is close to future transit. The High Density Residential and High Density Mixed Use would be similar to what is allowed in

the INSP. Focusing higher densities in these areas is ideal because of proximity to existing or future transit.

- Additionally, the alternatives also explore new non-residential mixed uses to support the maker industry, allowing the production of goods such as wine, beer, cheese, and coffee roasting accompanied by on-site retail sales.

Figure 3. Place Types Menu

RESIDENTIAL

Low Density Residential

- » Single-family homes, duplexes
- » 1 to 2 stories
- » 2 to 14 DU/A



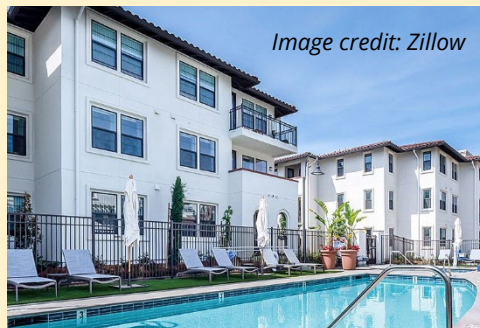
Medium Density Residential

- » Townhomes, low-rise garden apartments, and condominiums
- » 2 to 3 stories
- » 15 to 29 DU/A



Medium High Density Residential

- » Multi-story condominiums and apartment buildings with structured or below-ground parking
- » 3 stories or higher
- » 30 to 59 DU/A



RESIDENTIAL

High Density Residential (new)

- » Multi-story condominiums and apartment buildings with structured or below-ground parking
- » 4 stories or higher
- » 60 to 100 DU/A¹



MIXED USE

Medium High Density Mixed Use

- » Residential: Multi-story condominiums and apartment buildings
- » Non-residential: Neighborhood commercial or office
- » 3 stories or higher
- » 30 to 59 DU/A
- » 1.5 FAR (non-residential)



¹ New Land Use Category (or Place Type); Previously: 38 to 55 du/a (just an example)

MIXED USE

High Density Mixed Use (new)

- » Residential: Multi-story condominiums and apartment buildings
- » Non-residential: Neighborhood commercial or office
- » 4 stories or higher
- » 60 to 100 DU/A
- » 2.0 FAR (non-residential)



COMMERCIAL

Highway Commercial

- » Includes uses such as hotels and motels, restaurants, and motor vehicle and gasoline service stations
- » 1 to 4 stories
- » 0.30 to 1.0 FAR



Image credit: GHMG Hotel

Neighborhood Commercial

- » Includes uses such as dry cleaners, nail salons, grocery stores, and in-line retail
- » 1 to 2 stories
- » 0.30 to 1.0 FAR



COMMERCIAL

Service Commercial

- » Includes uses such as auto sales and service, nurseries, home maintenance centers, and kennels
- » 1 to 2 stories
- » 0.30 to 1.0 FAR



Wine-Country Commercial (new)

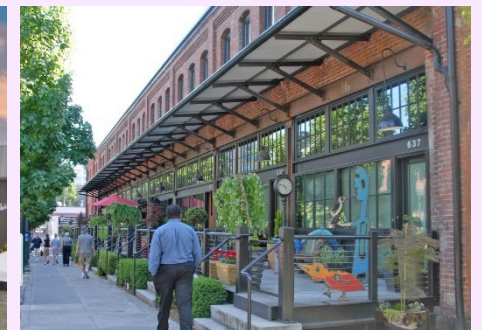
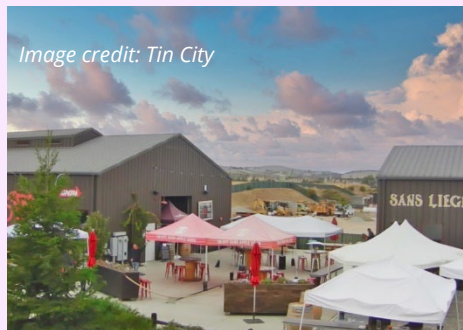
- » Includes uses such as wineries, production facilities, tasting rooms, small groceries, restaurants, bike rental facilities, lodging, and other visitor serving uses
- » 1 to 2 stories
- » 0.30 to 1.0 FAR



MIXED INDUSTRIAL

Mixed Commercial and Industrial (new)

- » Includes food or beverage production areas that come with a commercial component that include sales of products made on site, tasting rooms and event spaces, which could occur in the same building, such as a winery with production uses and a tasting room, cheese production, or coffee roasting; or could occur next to each other.
- » 1 to 2 stories
- » 0.30 to 1.0 FAR



MIXED INDUSTRIAL

Industrial-Office (new)

- » Includes office, Research & Development (R&D), and high-tech processing uses, such as life science; but not heavy industrial uses such as traditional manufacturing
- » 1 to 2 stories
- » 0.5 to 2.0 FAR



INDUSTRIAL

Industrial-General

- » Includes manufacturing, warehousing, R&D, recycling facilities, and heavy industry that uses, stores, or processes raw materials
- » 1 to 2 stories
- » 0.60 FAR



OPEN SPACE AND PARKS

Parks/Recreation

- » Includes active recreation areas, playgrounds, landscaped trails, and paths



Open Space

- » Includes passive recreation areas, trails, scenic buffers from I-580, and open space for floodplain and environmental conservation



Agriculture

- » Includes agricultural uses such as vineyards and orchards in areas suitable for cultivated agriculture



PUBLIC

Public

- » Includes public and quasi-public uses, such as schools, transit facilities, public and private meeting facilities, park and recreation areas, administrative and professional offices



INSTITUTIONAL

Research Campus (new)

- » A public or private research campus affiliated with a university or academic institution to support startup or existing companies in various fields, including energy, engineering, software development, food science, agriculture, and the life sciences sector.



3.2 2045 BUILDOUT PROJECTIONS

The 2045 buildout estimates shown in the following sections are meant to provide a big picture look at the range of possibilities that could unfold under these draft alternatives. While the buildout projections are estimates, the City of Livermore can reasonably assume it will continue to grow, and that it will need to identify where that growth should occur to meet the legal

requirements of the State. The General Plan Update provides an opportunity to set the foundation for future growth that is logical, orderly, and achieves the community's vision of a place "where families and individuals flourish."

The buildout projections show the 2020 existing households (i.e. occupied housing units), housing units (i.e. includes both occupied and unoccupied housing units), population, and jobs plus the

projected net new 2045 growth by alternative. The 2020 baseline numbers originate from the City's traffic model. The traffic model utilizes data from Urban Footprint, which is based on information from the Alameda County Assessor's Office (acquired from CoreLogic) and Census data. The City validated the 2020 data using information from the California Department of Finance and also completed a manual review of the results to assess the accuracy of the data.

Within the Focus Areas, projections for housing and jobs in 2045 are based on a formula that considers: the number of acres of each land use place type; the maximum and minimum allowed units per acre (for residential development) or floor area ratio (for non-residential development); the proportion of residential or non-residential development (for place types that allow more than one use); allowed building height; and estimates of jobs per square foot. Population projections for 2045 are based on the number of households times Livermore's current average of 2.87 persons per household, consistent with the adopted Housing Element.

In order to offer a simplified and consistent comparison among all alternatives, this evaluation assumes that every place type in every alternative will be fully built by 2045. However, market conditions and other external factors will influence private development, demand, and individual decision making.

As an early step in the General Plan Update, the City prepared a number of existing conditions reports, including on the local economy. The Economics report, available at https://imagineLivermore2045.org/wp-content/uploads/2022/06/09_Economics_06-2022.pdf,

considered projected future demand for different land use place types in Livermore based on past and current data, and found the following:

- **Residential demand:** Traditional suburban detached single-family homes comprise about 68 percent of the housing stock in Livermore. During the decade from 2011 to 2020, over one third of new home permits were for new housing in multifamily structures. Recent investments in multifamily housing located downtown and elsewhere in the city illustrate market potential for denser housing types.
- **Office demand:** The Tri-Valley has historically been a highly desirable office market due to its accessibility, relative affordability, and educated labor force. However, there has been minimal new office development in Livermore and the Tri-Valley more broadly since the early 2000s. Future Valley Link train service in Livermore and the possible rise of "hub-and-spoke" office strategies (i.e., main offices complemented by distributed, satellite facilities) following the pandemic could create new market opportunities for future office development, particularly near train stations.
- **Industrial demand:** Livermore is the most significant industrial real estate market in the Tri-Valley. Its location between the Port of Oakland, regional airports, and the Central Valley labor market offers important competitive advantages. Given increasing e-commerce and manufacturing in the region, it seems likely that modern industrial and "flex" space will remain in strong demand in Livermore for the foreseeable future.

- **Retail demand:** Retailing in Livermore increased dramatically when the Premium Outlets opened in 2012, adjacent areas have added new retail to leverage the consumer draw achieved by the outlet center. Apart from destination retail like the Premium Outlets, most future retail growth in Livermore would be expected to be in proportion to the growth in local residents and workers, providing new local offerings to serve new and growing neighborhoods. In order to add even more retail space, Livermore would need to capture demand from visitors coming from outside of the city.

It is common for General Plans to designate more land for a particular land use than the market requires at the time of the General Plan's adoption. The long planning horizon of the General Plan requires the use of assumptions about increasing demand over time as market forces change.

Place types with an established track record in Livermore, such as Industrial General, demonstrate reliable long-term demand, but may take decades to fully build out. New place types, such as High Density Mixed Use and Mixed Commercial and Industrial, reflect types of development that are successful in other communities but as yet untested in Livermore; long-term demand is challenging to gauge. Finally, for place types such as Commercial, the land use alternatives may designate more acres of land for these uses than the market can fully absorb. As the community works together to create the Preferred Land Use Scenario, these place types are likely to be adjusted, which in turn will alter build out projections, fiscal results, and ability to meet civic goals. The reasonably foreseeable buildout of the ultimate Preferred Land Use Scenario will be calculated and studied in depth as part of the General Plan

Environmental Impact Report (EIR) in an upcoming phase of the General Plan Update.

3.3 OVERVIEW OF LAND USE ALTERNATIVES

The land use alternatives explore different ways to accommodate future housing, jobs, services, and public amenities. Future housing would be focused in infill areas that are close to existing amenities and already have access to City infrastructure and services. Creating complete neighborhoods with new housing, jobs, and services would help provide more residents with the opportunity to live and work in Livermore, reducing out-commuting and improving quality of life. The alternatives also explore a full range of jobs that require different skills from vocational to professional services.

Land Use Alternatives by Focus Area

This section describes the land use alternatives by Focus Area. The Focus Areas represent the places the City anticipates potential land use changes and changes to the General Plan land use map. For each Focus Area, the General Plan team developed three alternatives that explored different configurations of industrial, commercial, office, parks, and residential uses.

A community's mix of land uses is important. Each land use type has the potential to create impacts and/or benefits for the community. A healthy mix of land uses helps achieve a range of broader community goals such as job creation, cultural experiences, access to services, and financial stability. In addition to the type and mix of land use, their relationships and connections to each other, public services, and transportation

systems among other market factors are an important consideration when discussing long term land use changes. Some land uses benefit from clustering and proximity to each other, whereas other land uses may benefit from wider distribution across the community.

Each Focus Area includes a vision statement to guide the development of the alternatives. This vision statement is found at the beginning of each subsection below.

3.3.14 Midtown Focus Area

Midtown Vision: *establish a transit oriented, complete neighborhood, with a mix of housing, jobs, and services.*

The Midtown Focus Area is approximately 630 acres and currently includes a mix of existing commercial, office, industrial, and residential land uses. The predominant existing land use is low intensity, light industrial. The existing Vasco Ace Station is in the southeastern portion of the Focus Area near the existing Brisa Neighborhood. In addition, a planned Valley Link station area is proposed within this Focus Area located within the I-580 median approximately midway between the Frist Street Interchange and Vasco Road Interchange.² Because of its proximity to existing and planned regional transit, the area is identified as a Priority Development Area.

² For more information on Valley link please visit <https://www.valleylinkrail.com/valleylink-project>.

Each alternative in the Midtown Focus Area is intended to facilitate a mix of residential and job supporting land uses in varying proportions to create a transit oriented, complete neighborhood, with housing, jobs, and services. The Business Center Alternative is focused on job growth, the Residential Neighborhood Alternative is focused on housing growth, and the Blended Alternative includes a balanced mix of both jobs and housing.

The alternatives maintain the existing land use designations of the Lowe's and Safeway shopping centers, Brisa Neighborhood, and the approved, but unbuilt, Arroyo Vista Neighborhood which consists of 453 planned townhouses.



Bird's eye view looking north toward the Midtown Focus Area.



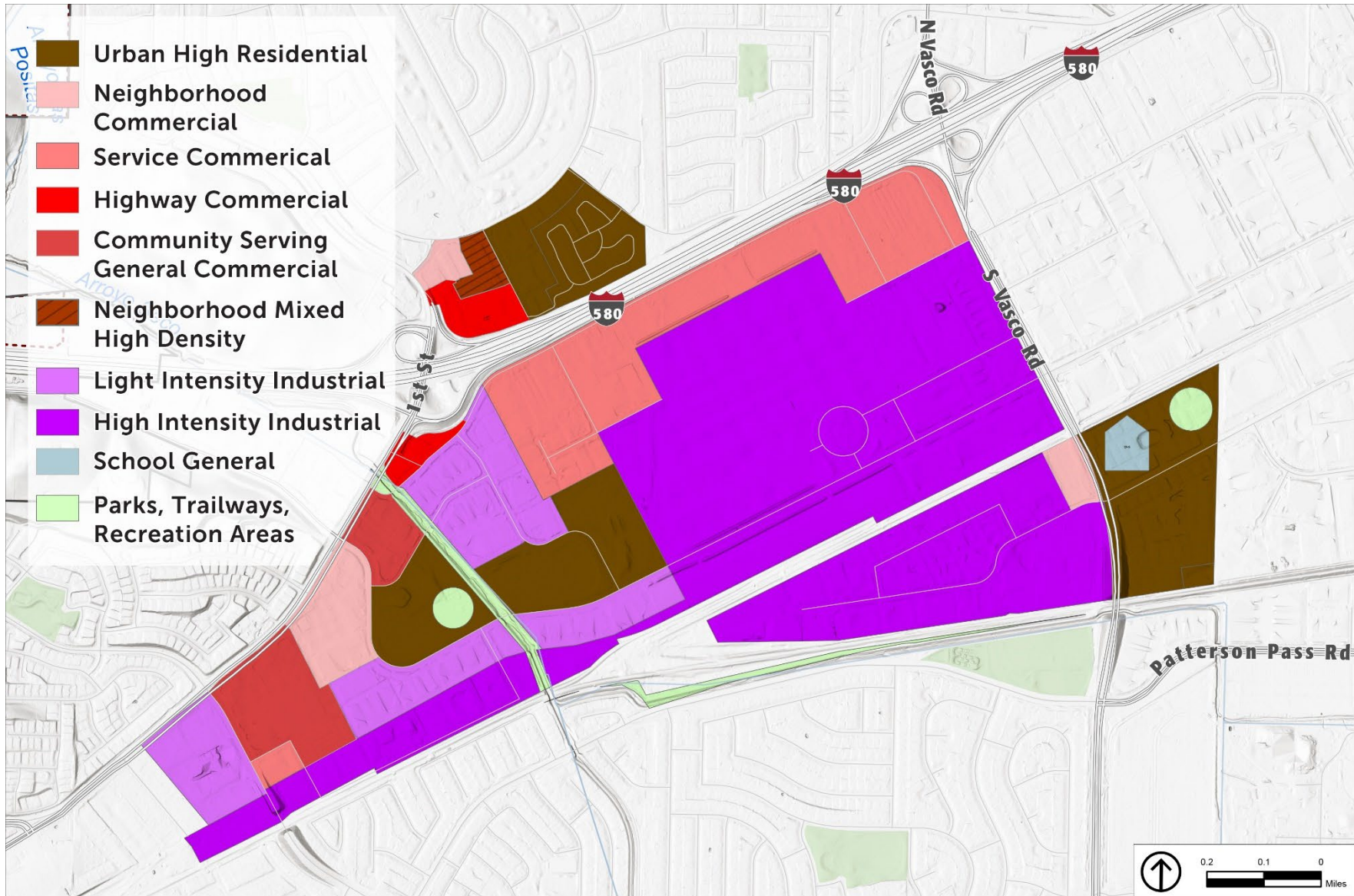
Existing commercial parking on Springtown Blvd lot in the Midtown Focus Area



Shopping center in the Midtown Focus Area.



Existing vacant lot on Southfront Rd in the Midtown Focus Area, looking south



Existing General Plan Land Use designations in the Midtown Focus Area.

As shown in Table 2 and Figure 4, this Focus Area would result in a range of 4,720 to 10,550 new housing units and 4,140 to 5,690 new jobs and provides an opportunity to achieve the City's state housing requirements into the 2045 horizon year. Figure 5 shows the Midtown Focus Area land use alternatives.

Given the size of this Focus Area, the City would likely prepare a Specific Plan after the adoption of the General Plan Update to

address issues such as improving the bicycle, pedestrian, and roadway network; planning for public facilities and infrastructure; and identifying financing mechanisms to implement the land use plan. However, establishing the General Plan land use designations for this Focus Area is an important first step, and will establish the overall land use framework that will set the parameters for future planning for this area.

Table 2. Midtown Focus Area 2045 Buildout

Midtown		Business Center Alternative		Residential Neighborhood Alternative		Blended Alternative	
	<i>Existing (2020)</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>
Households	720	4,430	5,150	9,900	10,620	6,130	6,850
Housing Units	770	4,720	5,490	10,550	11,320	6,540	7,310
Population	2,070	12,720	14,790	28,400	30,470	17,600	19,670
Jobs	2,960	5,690	8,650	4,770	7,730	4,140	7,100

Figure 4. Midtown Focus Area Net New Development by 2045

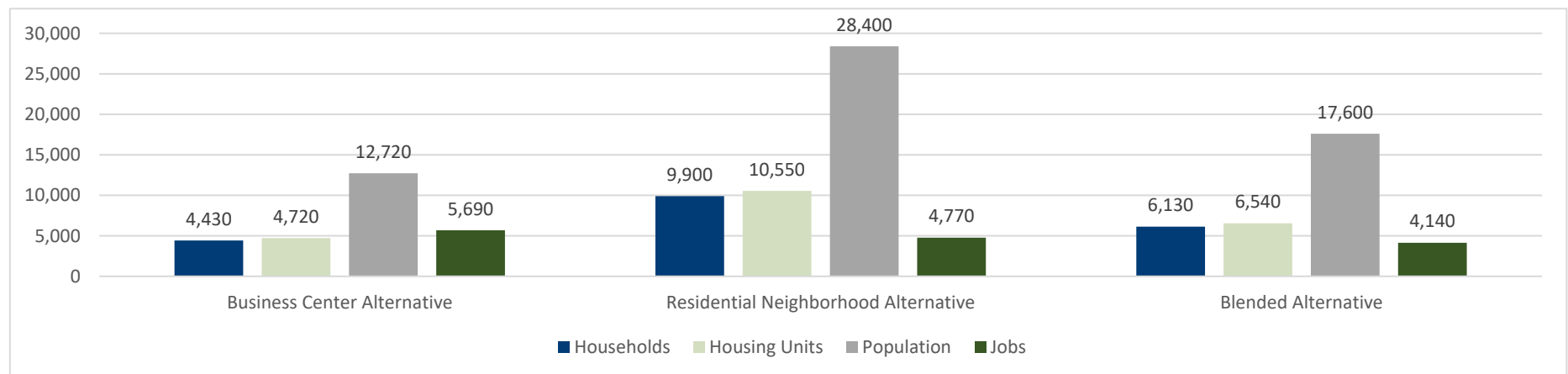
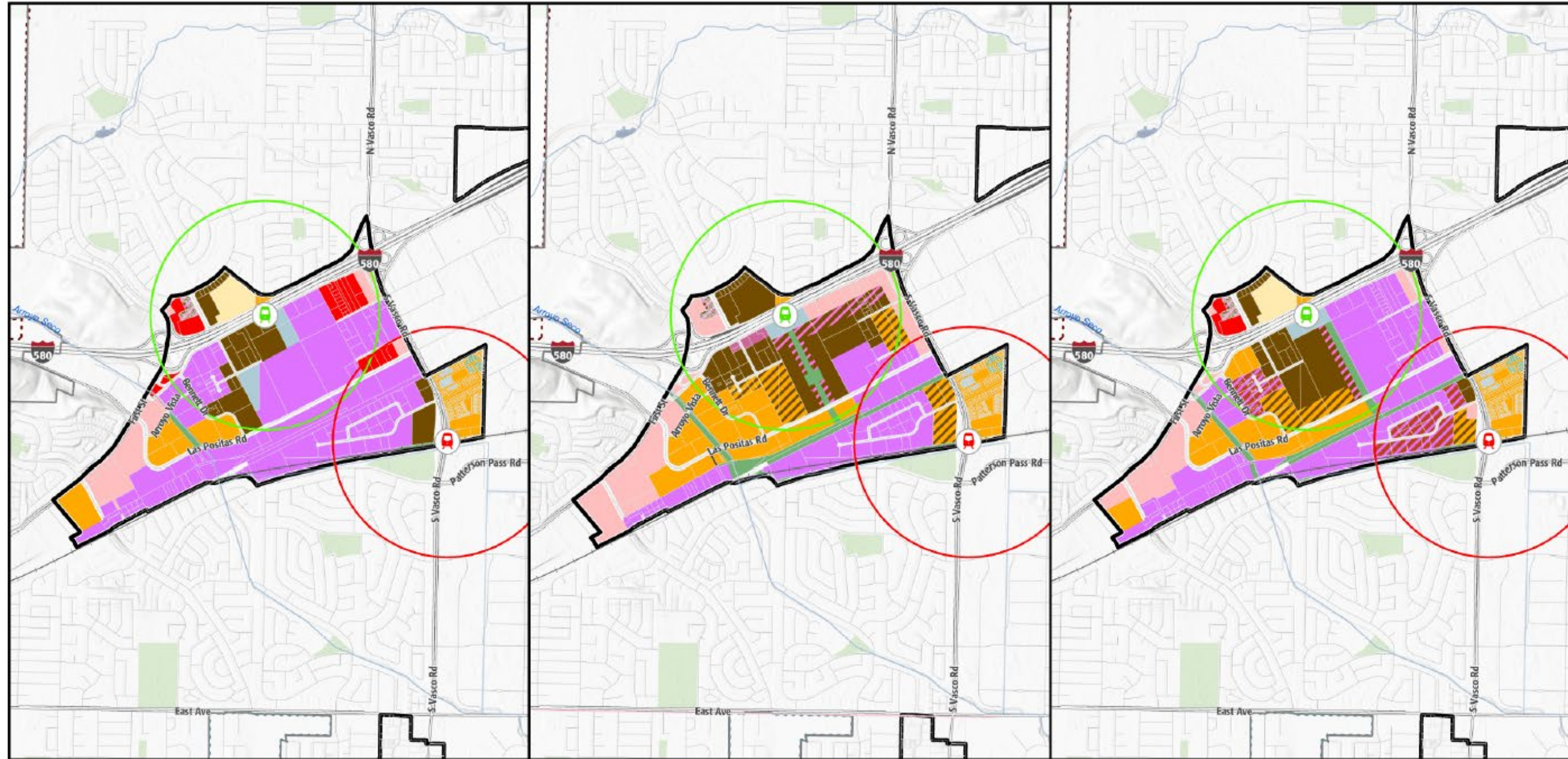


Figure 5. Midtown Focus Area Alternatives

BUSINESS CENTER ALTERNATIVE

RESIDENTIAL NEIGHBORHOOD ALTERNATIVE

BLENDED ALTERNATIVE



- City Limits
- Sphere Of Influence
- Urban Growth Boundary
- Place Type Descriptions**
- Residential Low Density (2 to 14 DU/A)
- Residential Medium Density (15 to 29 DU/A)
- Residential Medium-High Density (30 to 59 DUA)
- Residential High Density (60 to 100 DU/A)
- Mixed-Use High Density (60 to 100 DU/A, 0.5 FAR)
- Commercial - Neighborhood (0.3 to 1.0 FAR)
- Commercial - General (0.3 to 1.0 FAR)
- Commercial - Wine-Country (0.3 to 1.0 FAR)
- Mixed Industrial - Commercial and Industrial (0.3 to 1.0 FAR)
- General Industrial (0.3 to 0.5 FAR)
- Mixed Industrial - Industrial-Office (0.5 to 2.0 FAR)
- Agricultural
- Open Space
- Parks/Recreation
- Public
- Research Campus / Educational Facility
- Vasco ACE Station (Existing)
- Vasco ACE Station 1/2 Mile Radius (Existing)
- Midtown Valley Link Station (Future)
- Midtown Valley Link Station 1/2 Mile Radius (Future)
- Railroad



Midtown

Business Center Alternative

The Business Center Alternative focuses on retaining most of the existing industrial uses and clusters Residential High Density housing adjacent to the future Valley Link Station and next to the existing ACE Station. Residential Medium Density housing is added west of North Mines Road. This alternative anticipates new park space in conjunction with the High Density Residential housing and Public uses near the future Valley Link station.

Residential Neighborhood Alternative

The Residential Neighborhood Alternative focuses on adding housing, changing the existing General Plan land use designation from industrial to residential for much of the area. This alternative incorporates townhomes and apartments/condominiums near existing and future transit centers (Vasco Ace Station and Midtown Valley Link Station). Residential Medium Density occurs west of the central greenway and open space. This alternative considers a Residential High Density designation at the Sunrise Mobile Park on Sundial Circle north of I-580 to explore additional housing near the future Midtown Valley Link Station.

Mixed-Use commercial corridors provide north-south and east-west connections to help establish a walkable and vibrant neighborhood. New Neighborhood Commercial uses are proposed along Southfront Road and South Vasco Road. Most of the industrial land uses occur in the southern part of the Focus Area, with a greenway that serves as a buffer between the residential and industrial areas.

Blended Alternative

The Blended Alternative explores a mix of jobs and housing. This alternative features townhomes and multi-family units near the existing Vasco ACE Station and planned Midtown Valley Link station. New Park spaces would accompany the multi-family units. A greenway and Mixed Use corridor provides a buffer between the industrial and commercial and/or residential uses. Mixed Industrial-Commercial uses that could accommodate maker spaces such as coffee roasters and breweries are located in the center and southeast area of the Focus Area.

3.3.15 Laughlin Road Focus Area

Laughlin Road Focus Area Vision: Preserve open space and facilitate new compatible residential and commercial uses.

The Laughlin Road Focus Area is approximately 270 acres and currently consists of primarily vacant, undeveloped land with minimal light industrial and open space/recreational uses. Much of this Focus Area is outside of the City Limits, but within the Urban Growth Boundary. On the current General Plan map, this Focus Area is identified as a transit-oriented development in anticipation of a future BART station and maintenance facilities. However, BART formally decided not to extend service to Livermore. In addition, the proposed Valley Link rail system has identified transit stations in Livermore at Isabel Avenue and Southfront Road. Therefore, the current urban land use designations may not be appropriate at this location. Considering biological resources and earthquake fault lines in the undeveloped part of this Focus Area outside the City Limits, all three draft alternatives anticipate preserving the majority of the Focus Area's open space and explore different variations of residential, industrial, and commercial uses along I-580 at the southern and western edges of the Focus Area as shown on Figure 8.

As shown in Table 3 and Figure 6, this Focus Area would result in a range of 290 to 1,610 new housing units and 260 to 1,540 new jobs.



Bird's eye view looking west toward the Laughlin Road Focus Area.

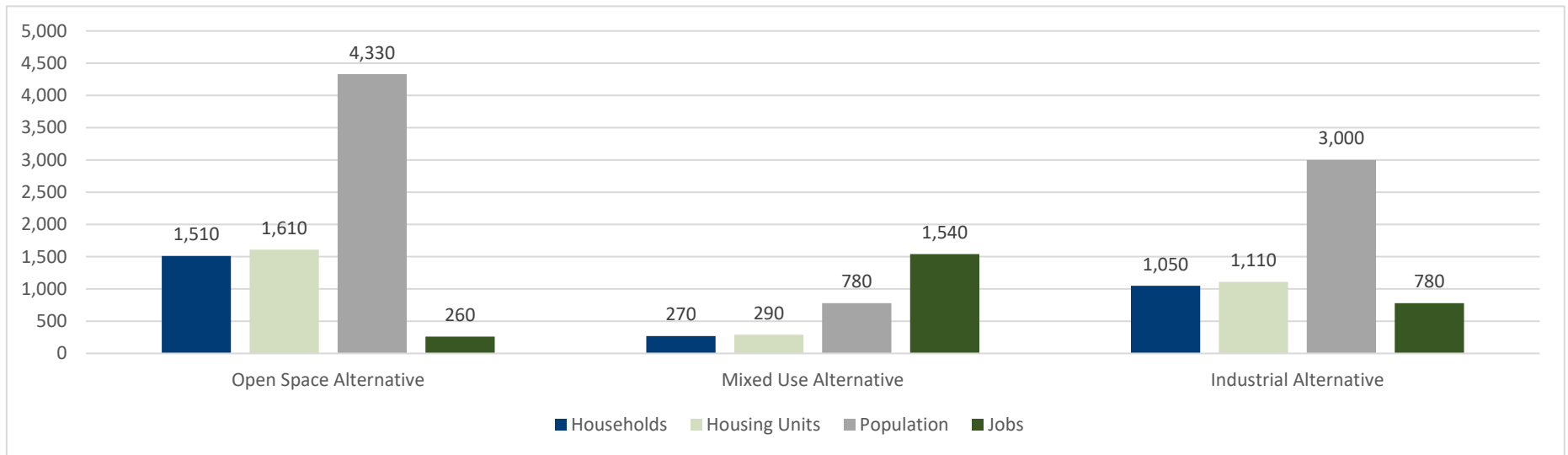


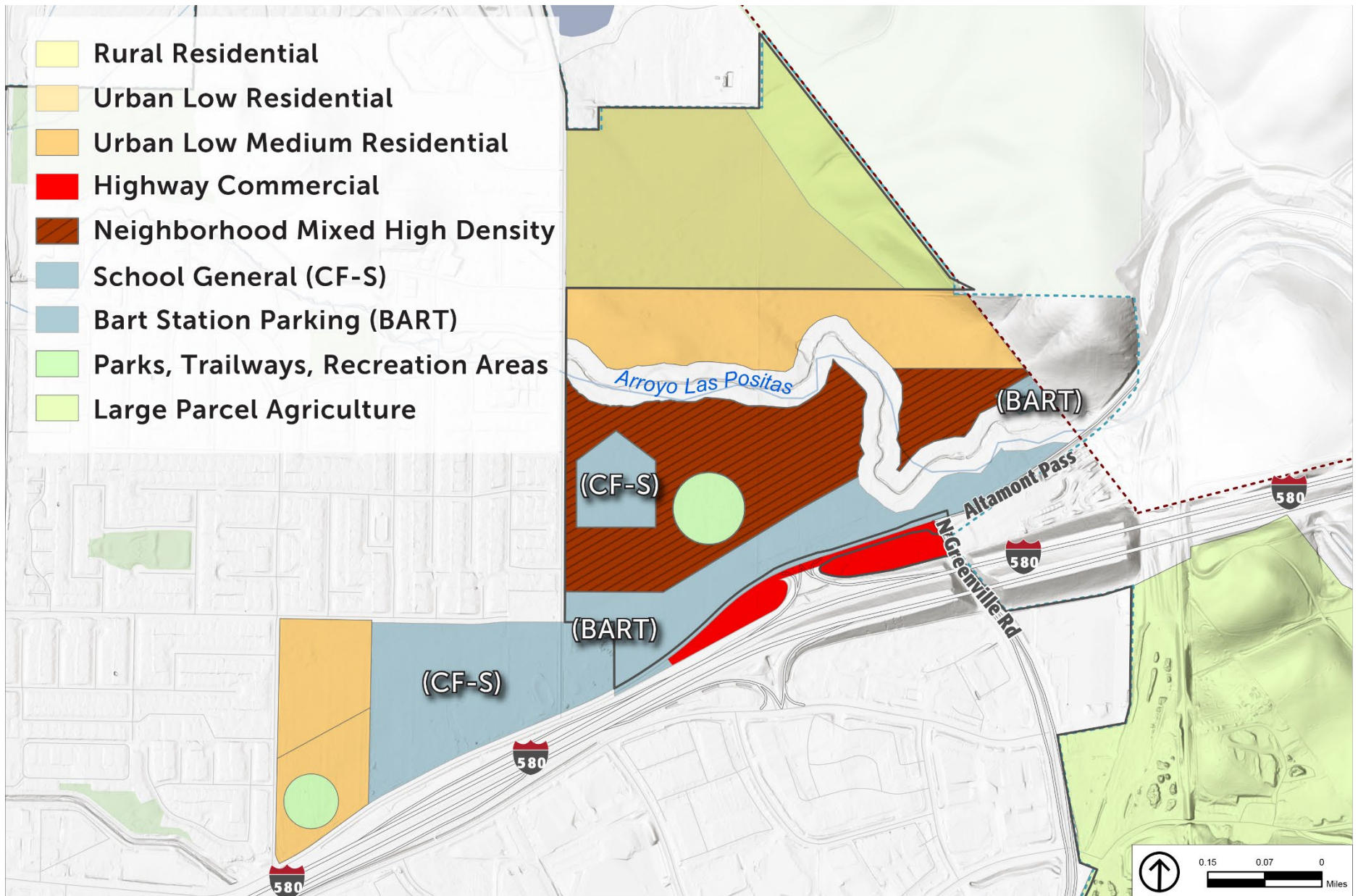
Storage facility along Northfront road in the Laughlin Focus Area, facing north

Table 3. Laughlin Road Focus Area 2045 Buildout

Laughlin Road Area		Open Space Alternative		Mixed Use Alternative		Industrial Alternative	
	Existing (2020)	2045 Net New	2045 Total	2045 Net New	2045 Total	2045 Net New	2045 Total
Households	0	1,510	1,510	270	270	1,050	1,050
Housing Units	0	1,610	1,610	290	290	1,110	1,110
Population	0	4,330	4,330	780	780	3,000	3,000
Jobs	0	260	260	1,540	1,540	780	780

Figure 6. Laughlin Road Focus Area Net New Development by 2045





Existing General Plan Land Use designations in Laughlin Road Focus Area

Open Space Alternative

The Open Space Alternative preserves most of the Focus Area for open space and introduces single family and high density multi-family residential units that front Northfront Road/I-580 in the western part of the Focus Area. A new park area would accompany the residential uses. Industrial and highway commercial uses also front Northfront Road/I-580.

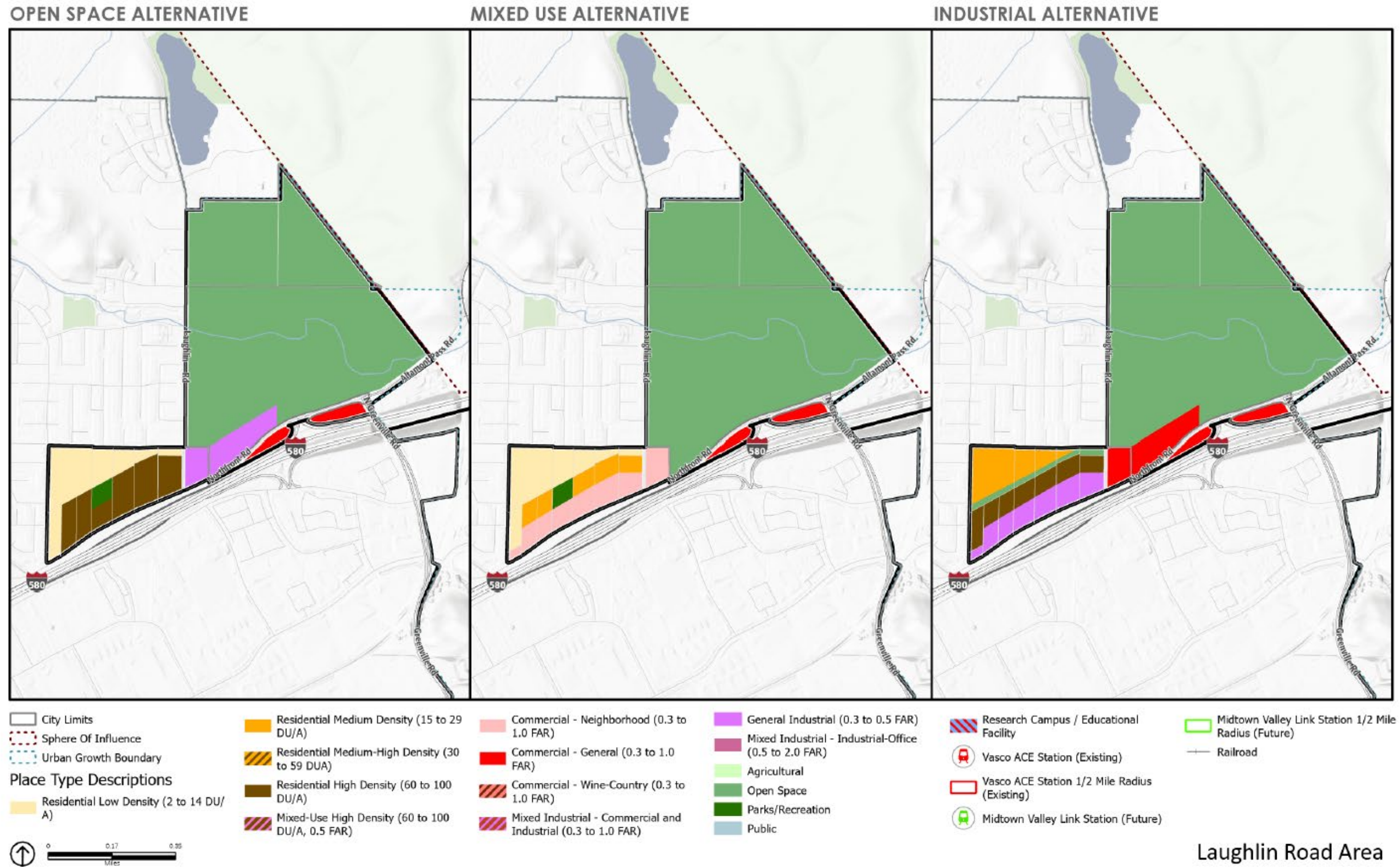
Mixed Use Alternative

The Mixed Use Alternative designates most of the Focus Area for open space. This alternative adds single family residential and townhouses in the western part of the Focus Area. A new park area would accompany the residential uses, which would be buffered by neighborhood and highway commercial uses fronting Northfront Road/I-580.

Industrial Alternative

The Industrial Alternative designates most of the Focus Area for open space. Townhomes and multi-family units occur in the western part of the Focus Area with a greenway buffer between the medium density and high density residential. Industrial uses front Northfront Road/I-580. Highway commercial uses also front Northfront Road/I-580.

Figure 7. Laughlin Road Focus Area Alternatives



3.3.16 Las Positas Court Focus Area

Las Positas Court Focus Area Vision: Revitalize underutilized industrial office spaces, facilitate housing, improve connectivity to existing services, and create a strong entryway.

The Las Positas Court focus area is approximately 75 acres and currently includes low-lying industrial/office buildings and undeveloped land that fronts I-580 along with highway-oriented retail commercial uses. Considerations for the northern portion of this focus area include Arroyo Las Positas, flood plain limitations, limited access across the creek and biological resources. All of the alternatives propose adding residential south of Las Positas Court along with a new open space corridor, while preserving or expanding the existing commercial and industrial/office space north of Las Positas Court.

As shown in Table 4 and Figure 8, this Focus Area would result in a range of 80 to 580 new housing units and 1,000 to 2,670 new jobs. Figure 9 shows the Las Positas Court Focus Area Alternatives.

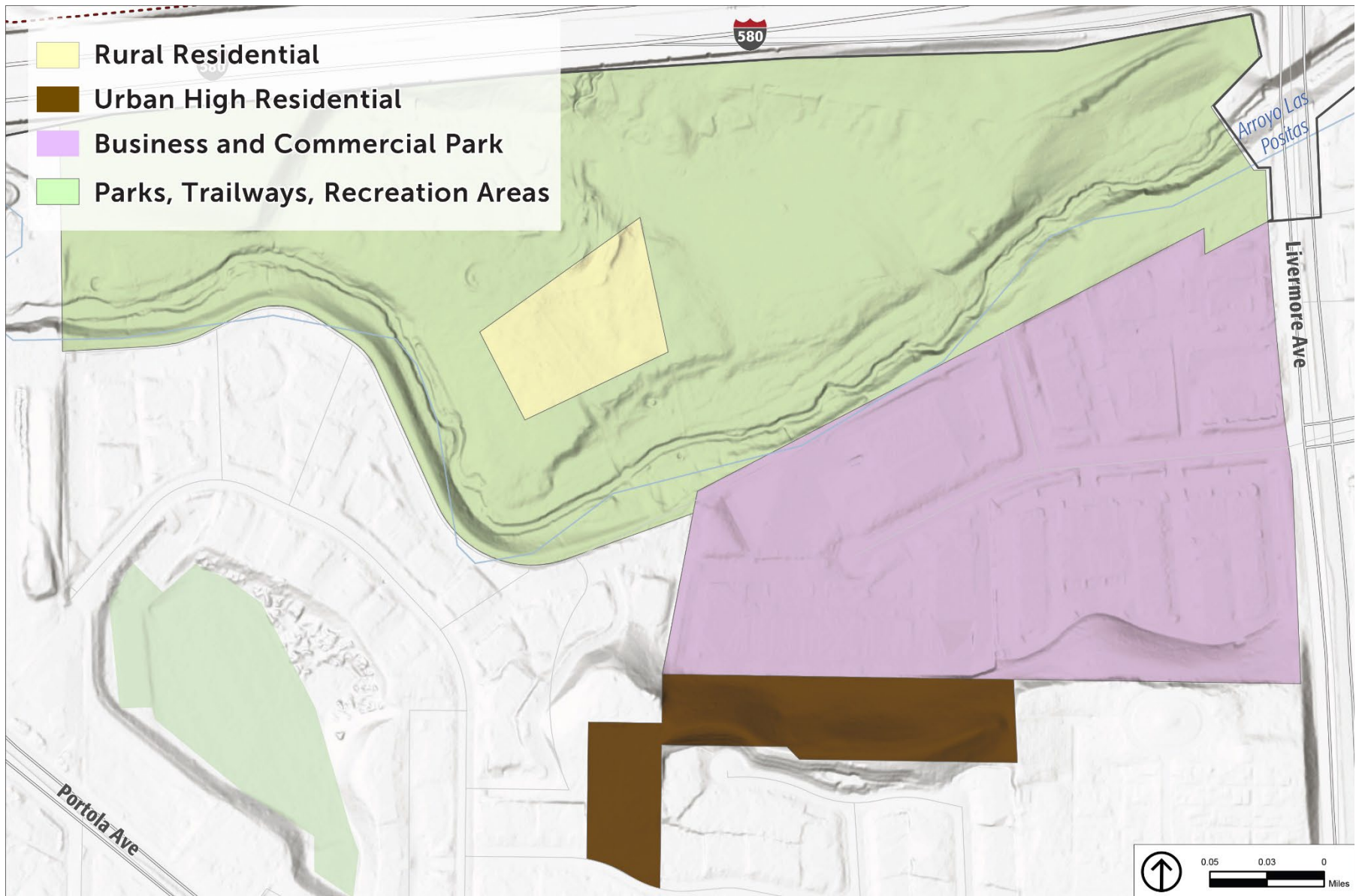
The draft alternatives explore variations of extending the surrounding residential, commercial, and open space uses, while preserving some of the existing commercial space to revitalize these underutilized areas as shown on Figure 9. Strengthening the land use pattern in this area has the potential to create a strong entryway into the city.



Bird's eye view looking west toward the Las Positas Court Focus Area.



Credit Union on Las Positas Ct in the Las Positas Court Focus Area, facing north



Existing General Plan Land Use designations in Las Positas Court Focus Area.

Table 4. Las Positas Court Focus Area 2045 Buildout

Las Positas Court		Residential Alternative		Neighborhood Center Alternative		Highway Oriented Alternative	
	Existing (2020)	2045 Net New	2045 Total	2045 Net New	2045 Total	2045 Net New	2045 Total
Households	0	70	70	130	130	270	270
Housing Units	0	80	80	140	140	280	280
Population	0	200	200	370	370	760	760
Jobs	250	1,000	1,250	1,100	1,350	2,670	2,920

Figure 8. Las Positas Court Net New Development by 2045

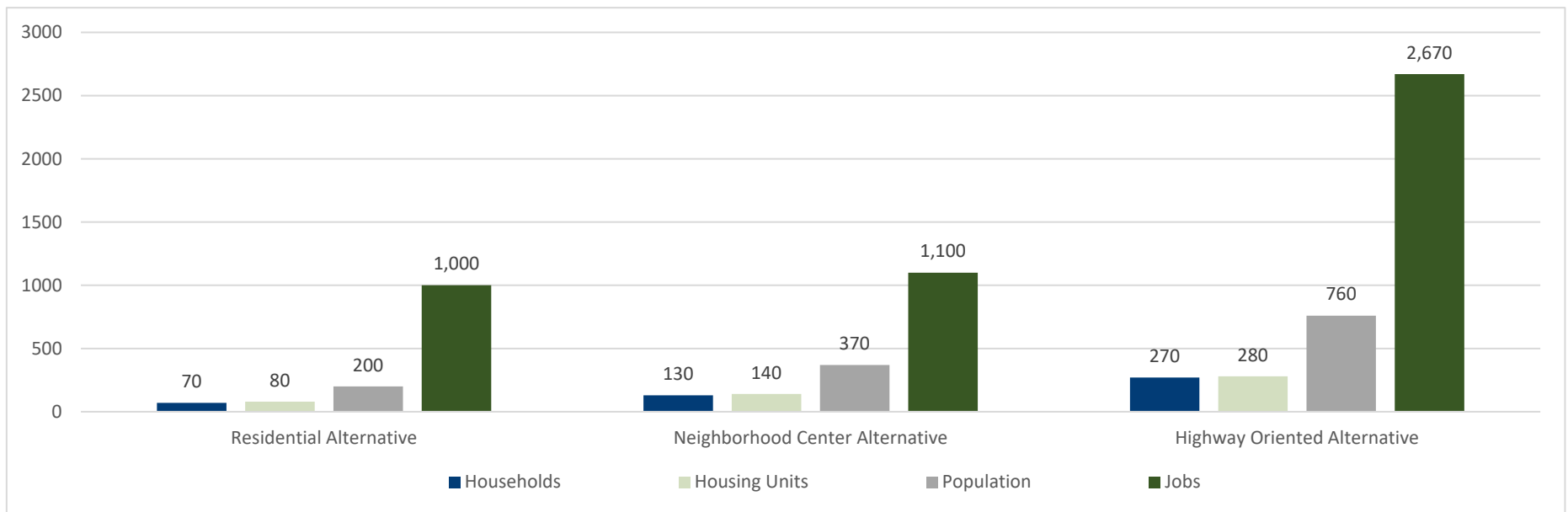
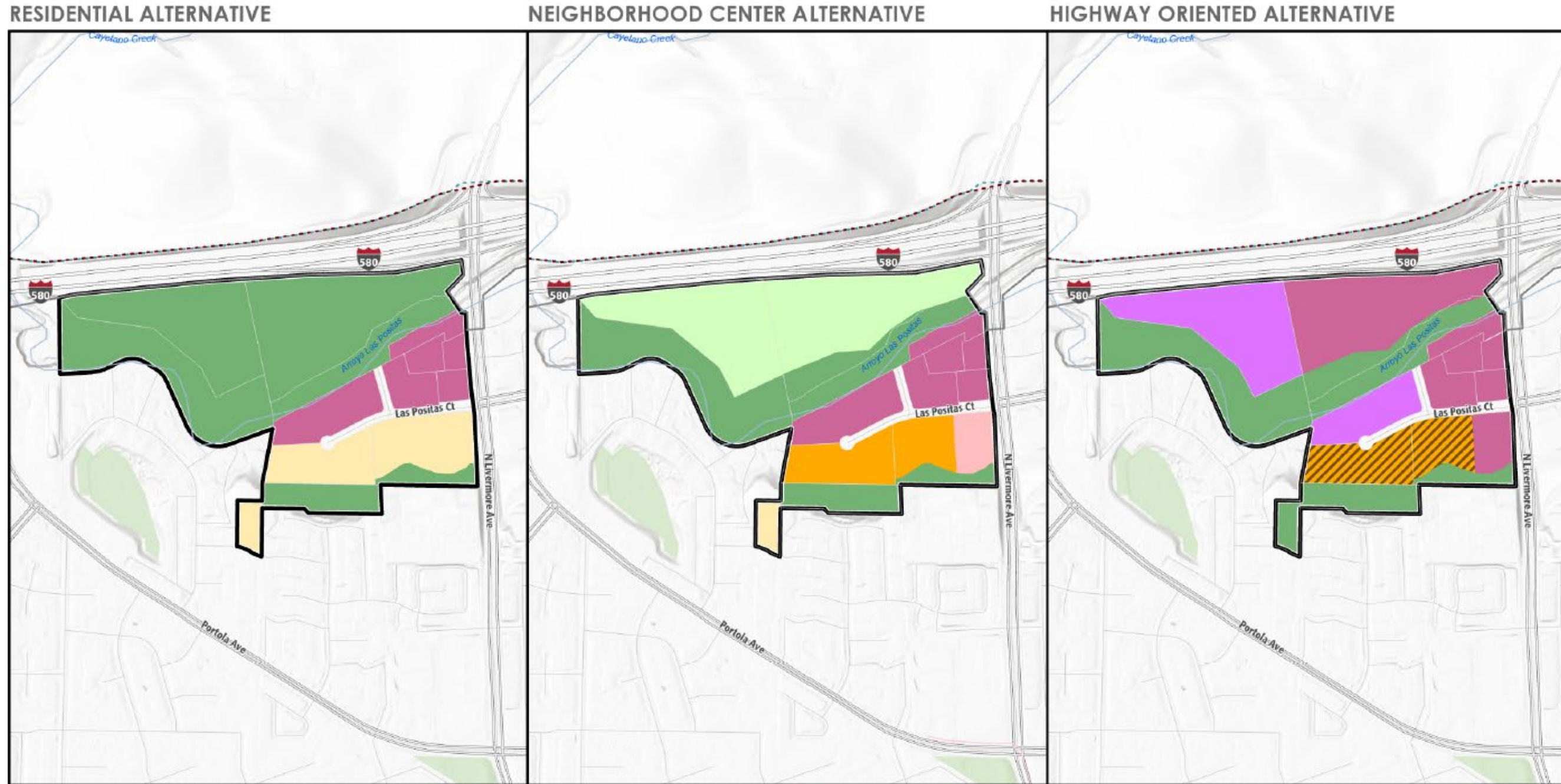


Figure 9. Las Positas Court Focus Area Alternatives



Las Positas Court

Residential Alternative

The Residential Alternative includes a mix of open space, industrial, and residential land uses. This alternative explores adding Residential Low Density and Mixed Industrial-Office Uses to the south and north of Las Positas Court respectively. The area surrounding Arroyo Las Positas Creek would be designated for Open Space as would the hills to the south of the Focus Area.

Neighborhood Center Alternative

The Neighborhood Center Alternative includes a mix of agricultural, industrial, commercial and residential uses. This alternative designates the area south of I-580 and north of Arroyo Las Positas Creek for agricultural uses, which would serve as a visual gateway to the South Livermore wine country. Open Space buffers are located north of Arroyo Las Positas Court and on the hillsides to the south of the Focus Area. Mixed Industrial-Commercial occurs north of Las Positas Court and Residential Medium Density, Residential Low Density, and Neighborhood Commercial occur to the south.

Highway Oriented Alternative

The Highway Oriented Alternative includes a mix of industrial and residential land uses with limited open space uses. This alternative is the most developed of the three alternatives with the greatest amount of area designated as industrial uses. This alternative designates the land fronting I-580 for General Industrial and Mixed Industrial-Office uses. Open Space buffers are located north of Arroyo Las Positas Court and on the hillsides to the south of the Focus Area. The area north of Las Positas Court and south of the creek would be designated for General Industrial and Mixed

Industrial-Office uses and the area to the south would include Residential Medium-High Density uses and Mixed Industrial-Office fronting North Livermore Avenue. Developing land north of Arroyo Las Positas creek could be challenging due to constrained site access. In addition, the City of Livermore has an offer of dedication to preserve open space on a portion of the area.

3.3.17 Vasco Row Focus Area

Vasco Row Vision: Create a visitor destination that supports production and maker spaces that serve as a gateway to South Livermore Wine Country.

The Vasco Row focus area is approximately 40 acres and currently includes a mix of existing predominately light industrial uses and a few rural residential uses. The emergence of commercial uses from winery and brewery businesses have created a new vibrancy to this area that was not originally anticipated by the existing General Plan. The proposed vision for this focus area is a visitor destination that supports production maker spaces and wine country commercial uses and serves as a gateway to South Livermore Wine region.

All three draft alternatives explore variations of a commercial and production maker village that accommodates the sale and cultivation of local products such as coffee, cheese, wine, and beer, along with related dining and entertainment uses. The maker village is activated by differing mixes of new residential uses and parks and open spaces as shown on Figure 10. Parking, traffic, and safe and comfortable crossings of South Vasco Road are all issues that would need to be addressed through the General Plan Update.

As shown in Table 5 and Figure 10, this Focus Area would result in a range of 190 to 560 new housing units and 70 to 820 new jobs. Figure 11 shows the Vasco Row Focus Area land use alternatives.



Bird's eye view looking south toward the Vasco Row Focus Area.



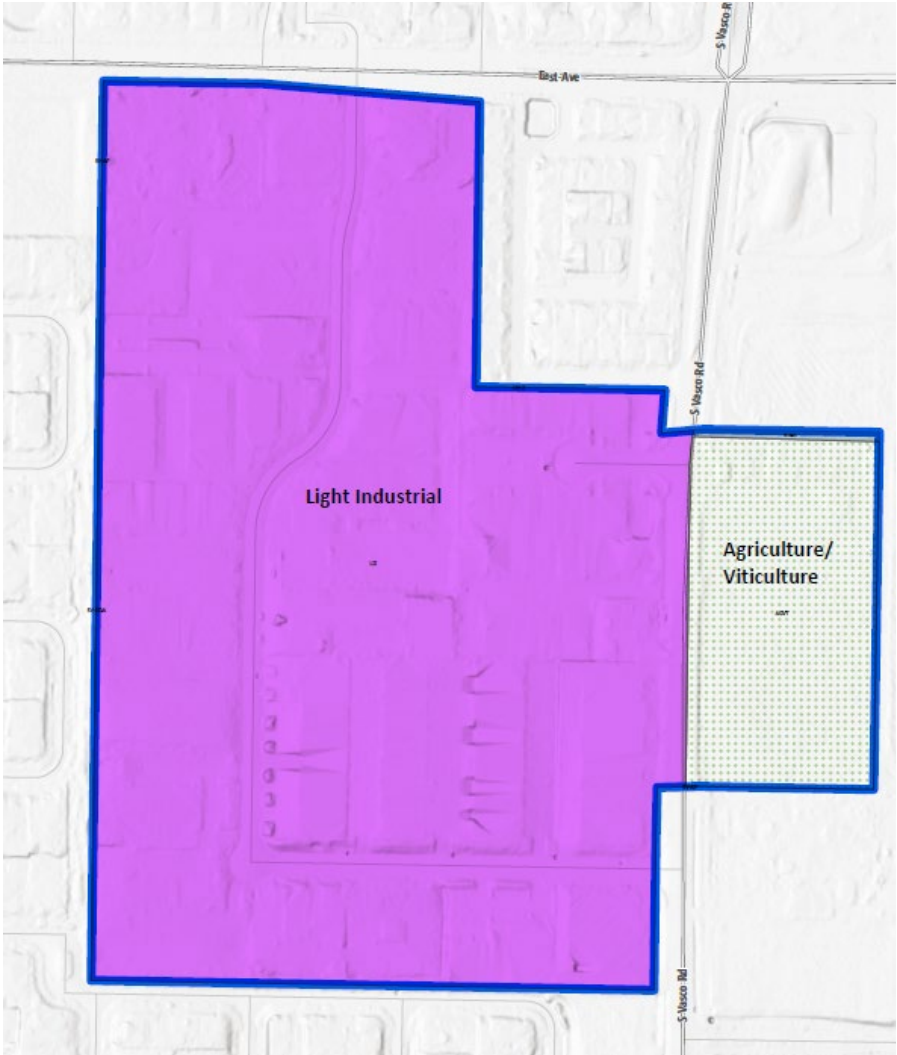
Existing Brewery in the Vasco Row Focus Area.



Existing light industrial uses in the Vasco Row Focus Area.



Existing light industrial uses in the Vasco Row Focus Area.



Existing General Plan Land Use designations in the Vasco Row Focus Area

Table 5. Vasco Row Focus Area 2045 Buildout

East Ave and South Vasco Rd.		Maker Village Alternative		Production Alternative		Wine Country Center Alternative	
	<i>Existing (2020)</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>
Households	5	530	535	0	5	175	180
Housing Units	5	560	565	0	5	190	195
Population	15	1,510	1,525	0	15	500	515
Jobs	440	70	510	380	820	210	650

Figure 10. Vasco Row Net New Development by 2045

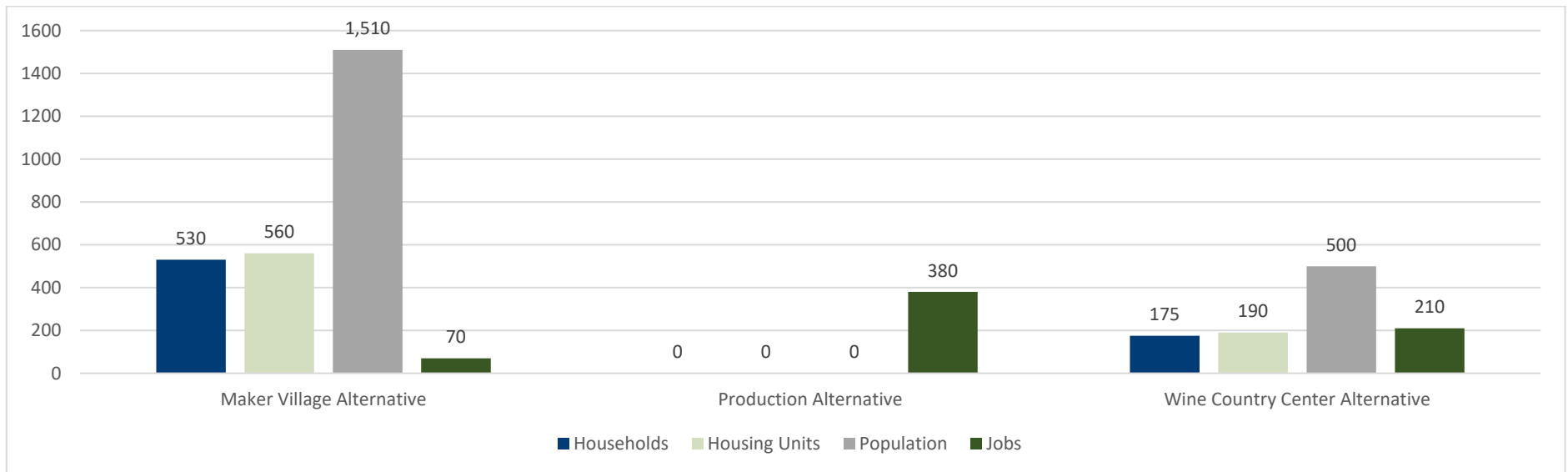
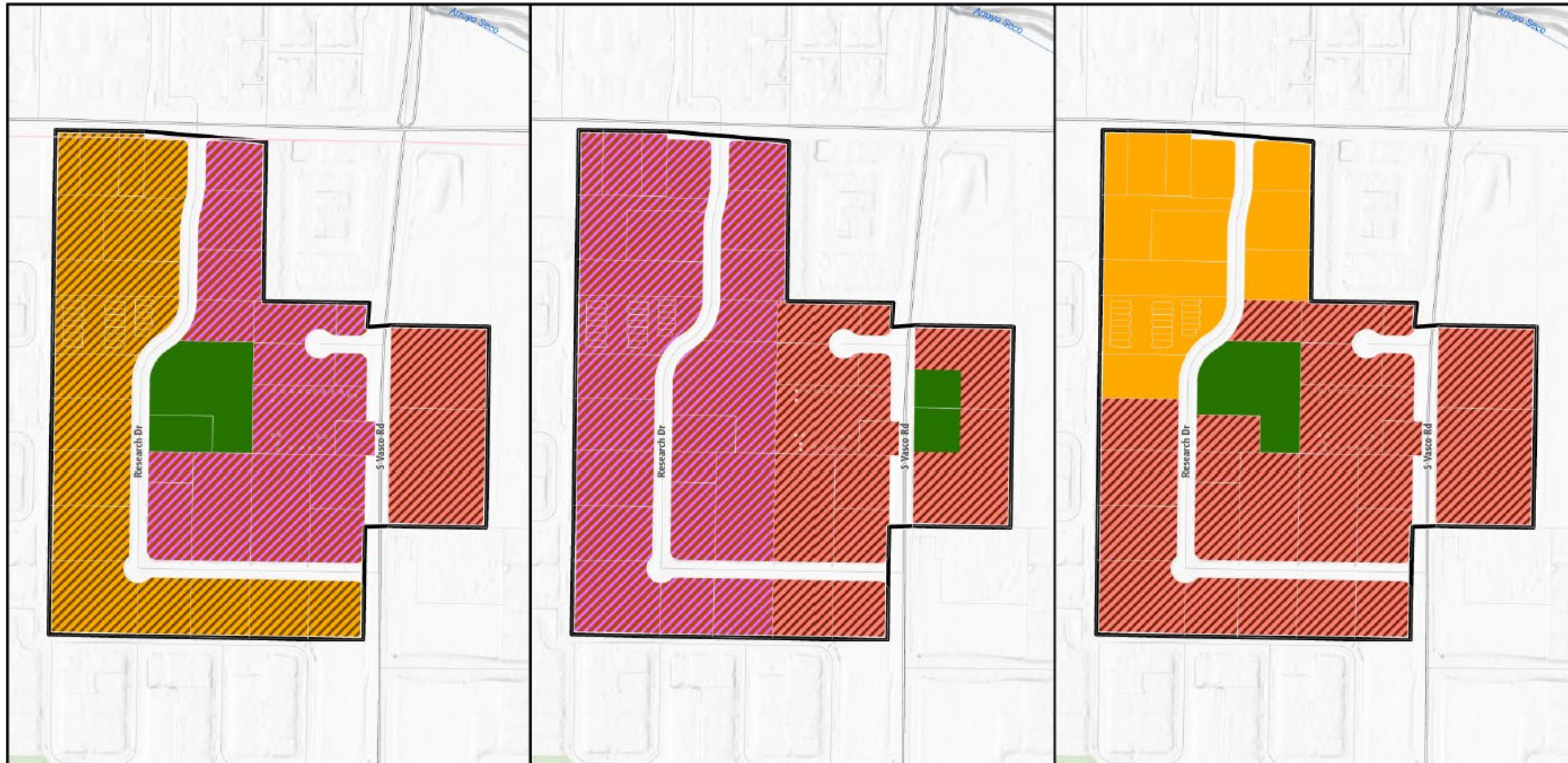


Figure 11. Vasco Row Focus Area Alternatives

MAKER VILLAGE ALTERNATIVE

PRODUCTION ALTERNATIVE

WINE COUNTRY CENTER ALTERNATIVE



Vasco Row

Maker Village Alternative

The Maker Village Alternative focuses on residential, industrial, and commercial land uses around a central green space. The area west and south of Research Drive would be designated for Residential Medium-High Density uses while the area east of Research Drive side would be designated Mixed Industrial uses. The area east of South Vasco Road would be designated as Wine Country Commercial.

Production Alternative

The Production Alternative includes industrial and commercial, with a small amount of green space west of South Vasco Road. Under this alternative, the Focus Area would be split between Mixed Industrial-Commercial and Wine Country Commercial uses.

Wine Country Center Alternative

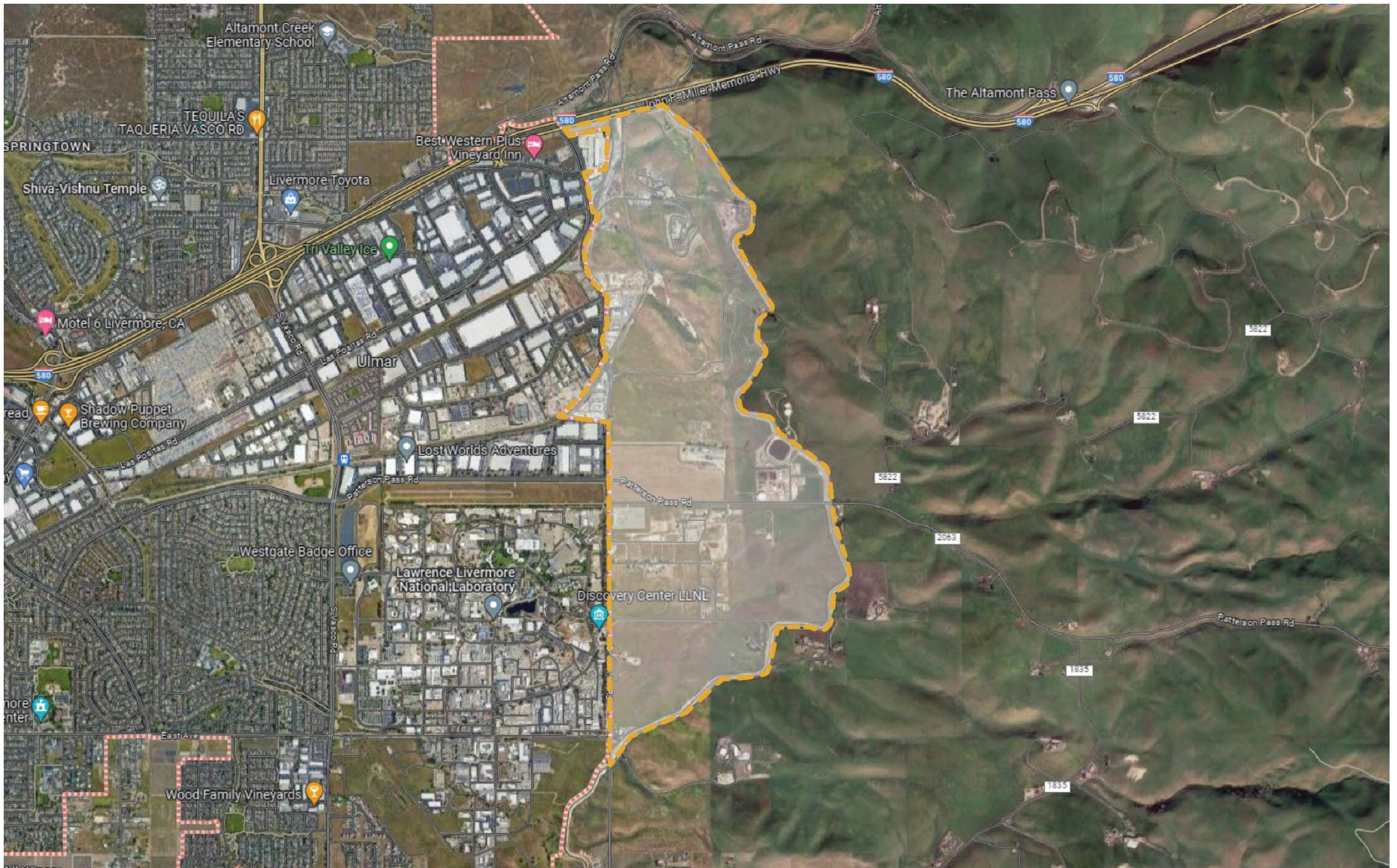
The Wine Country Alternative includes residential and commercial land uses around a central green space. The north part of the Focus Area would be designated for Residential Medium Density uses and the remainder of the Focus Area would be designated for Wine Country Commercial Uses.

3.3.18 East of Greenville Road Focus Area

East of Greenville Road Vision: Establish land uses that that support innovation and technology-based companies in a complete district, hosting a mix of jobs, services, and amenities, which collectively help the community achieve long term fiscal sustainability and serves as an inviting gateway that transitions into South Livermore Wine Country.

The East of Greenville Focus Area alternatives are shown in Figure 11. The East of Greenville Focus Area is approximately 1,139 acres, and is mostly located east of Greenville Road, west of the aqueduct, and between I-580 to the north and Tesla Road to the south. This Focus Area is primarily undeveloped but does include scattered industrial, public uses (utilities), and a few large lot rural residential homes.

The East of Greenville Focus Area is included as a potential new job area due to feedback received from the GPAC, business and commercial brokerage community, and direction from the City Council given consideration of the other Focus Areas inside City limits. At the February 8, 2023 GPAC meeting, the GPAC raised the idea of exploring geographic areas east of Greenville Road to ensure the City can balance new housing inside City limits with the need to maintain a supply of land for job-generating uses. Additionally, the General Plan team received input from the business community asking that the General Plan explore ways to maintain adequate supply of commercial industrial land and consider evaluating areas currently outside the city, including the area east of Greenville Road, to provide opportunities for existing commercial/industrial businesses to continue to grow and expand in Livermore. On April 10, 2023, the City Council directed Staff to study the East of Greenville focus area and limited the land uses for consideration to non-residential uses such as industrial, commercial, parks, open space, and agriculture.



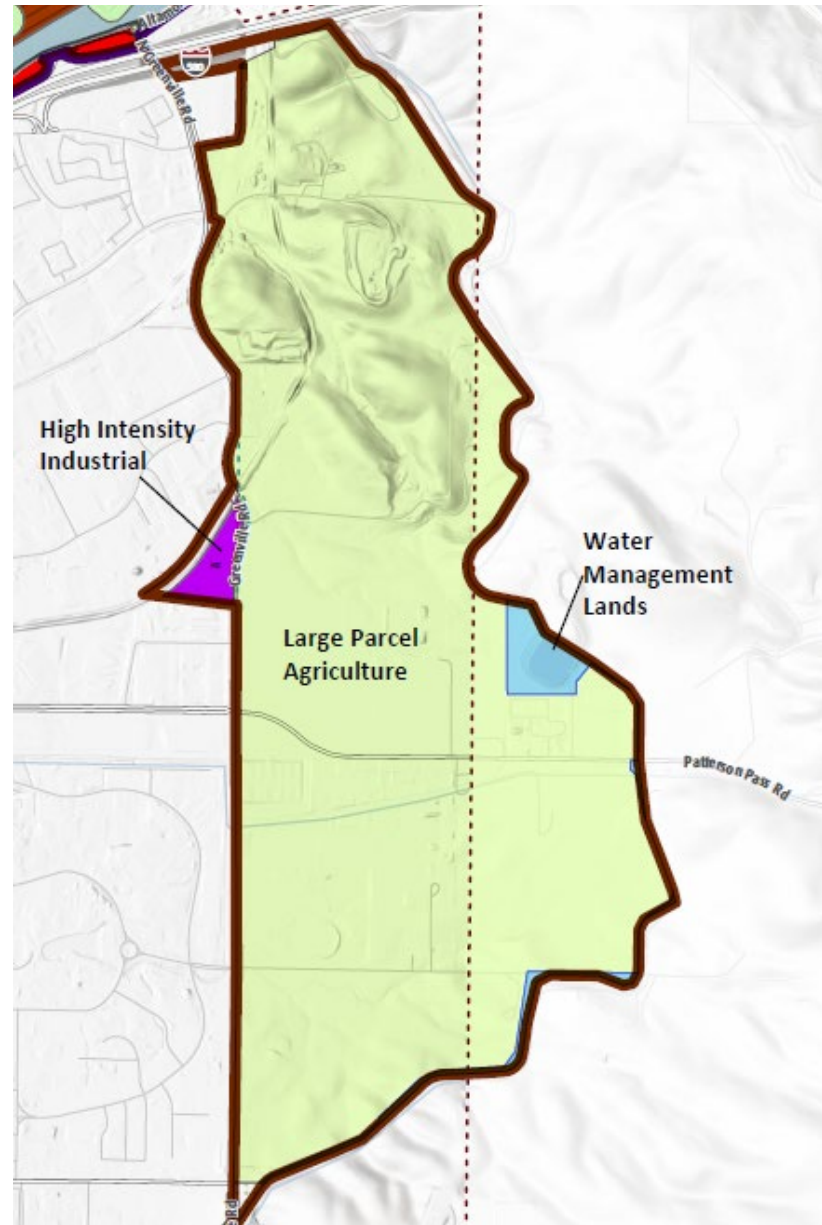
Aerial view of East of Greenville Focus Area.



Existing non-agricultural use.



Existing non-agricultural use.



Existing General Plan Land Use designations in the East of Greenville Focus Area.

This area is outside the City Limits and Urban Growth Boundary (UGB), but mostly within the Sphere of Influence. Although the focus of this General Plan Update will be on infill development, the East of Greenville Focus Area provides an opportunity to:

- Accommodate high-quality jobs for a range of skill levels that could be displaced through infill development.
- Improve the area as a gateway to Livermore wine country.
- Add uses and research facilities that would support the adjacent National laboratories.
- Create a more attractive entry to eastern Livermore and south Livermore wine country through site planning and required landscape and street improvements.
- Remedy County land use practices to align the area with the Livermore community values.

Future development in the East of Greenville Focus Area would require a ballot measure for Livermore voter consideration to expand the Urban Growth Boundary (UGB). In addition, annexation into the City Limits would be required as would the extension of municipal infrastructure. Similar to the Midtown Focus Area, the City would likely prepare a Specific Plan after adoption of the General Plan Update to address specific issues. Completing all these steps could take several years before any development occurs and buildout would likely extend beyond the 2045 horizon year of the General Plan.

All alternatives incorporate the following features:

- No residential uses are part of any of the alternatives.

- The area south of the aqueduct would be preserved for agricultural uses consistent with the South Livermore Valley Area Plan. Conceptually, urban development north and west of the aqueduct could be required to contribute funding to permanently preserve agricultural uses south of the aqueduct and/or conservation of wildlife habitat in the Altamont range.
- The Department of Water Resources Patterson Reservoir and supporting facilities and the Western Area Power Administration (WAPA) substation would remain unchanged and designated as Public.
- A public or private research campus or college would be located in proximity to the National Laboratories. A research campus could be affiliated with a university to support startup or existing companies in various fields, including energy, engineering, software development, advanced materials, food science, agriculture, and the life sciences sector. These types of environments bring together academia, industry partners, and government agencies to foster economic development and technological advancements with a focus on innovation. Examples include:
 - The Research Triangle Park (RTP); Raleigh, North Carolina
 - The University Research Park; Madison, Wisconsin
 - The Sid Martin Biotechnology Institute; Gainesville, Florida:
 - The Texas A&M University Research Park; College Station, Texas.

- The University Research Park; Norman, Oklahoma
- Nebraska Innovation Campus (NIC); Lincoln, Nebraska
- General Industrial land use type, which are contemplated to be business park environment with a variety of building types that can accommodate uses ranging from research and development offices, lab spaces, and manufacturing facilities with ancillary supporting logistical and/storage capabilities.
- A Wine Catalyst Site which would provide planting resources, land conservation, and infrastructure improvements to support the South Livermore wine region.
- Commercial Place Types includes district serving uses that would support new employment centers, researchers, and students, as well as the surrounding existing industrial and institutional uses. The commercial uses would be intended to meet one’s daily needs and provide a different experience than downtown, South Livermore, and the Vasco Road Focus Area. Examples include: quick serve or convenient retail, restaurants, lodging with meeting or event space, and other food and beverage establishments.

Two of the alternatives include a park space to accommodate active recreation facilities. The 2017 LARPD Master Plan identified the need for additional sports fields that could not be accommodated through existing neighborhood serving parks. A facility of this kind at this location could accommodate organized sports and minimize the impacts such as lighting, noise, or other issues that could be considered a nuisance when programmed near to existing neighborhoods. As part of the land use alternatives analysis, the project team will confer with the City’s partner, the

Livermore Area Recreation and Park District (LARPD), to seek input on the feasibility of a park as part of the Preferred Land Use Scenario.

As shown in Table 6 and Figure 12, this Focus Area would result in zero new housing units and 9,350 to 10,200 new jobs. Figure 13 shows the East of Greenville Road land use alternatives.

Figure 12. East of Greenville Road Focus Area Net New Development by 2045

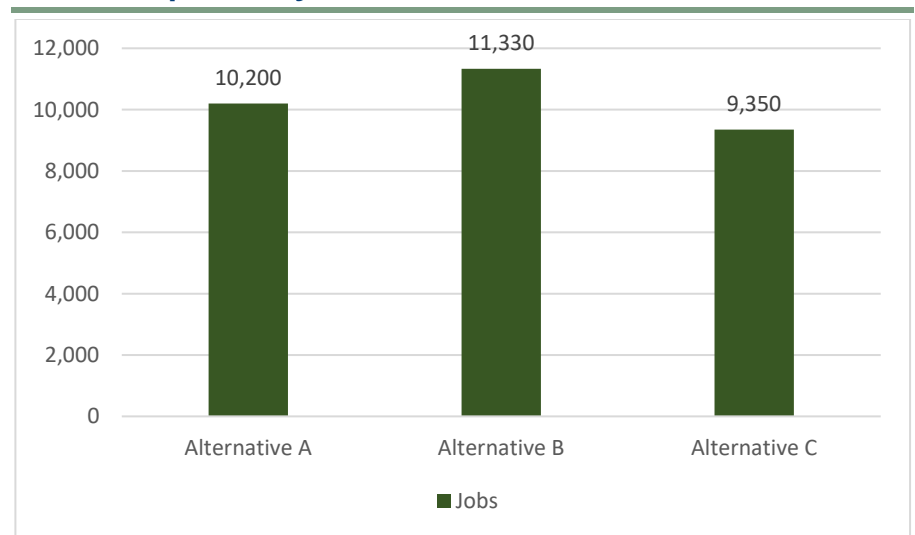
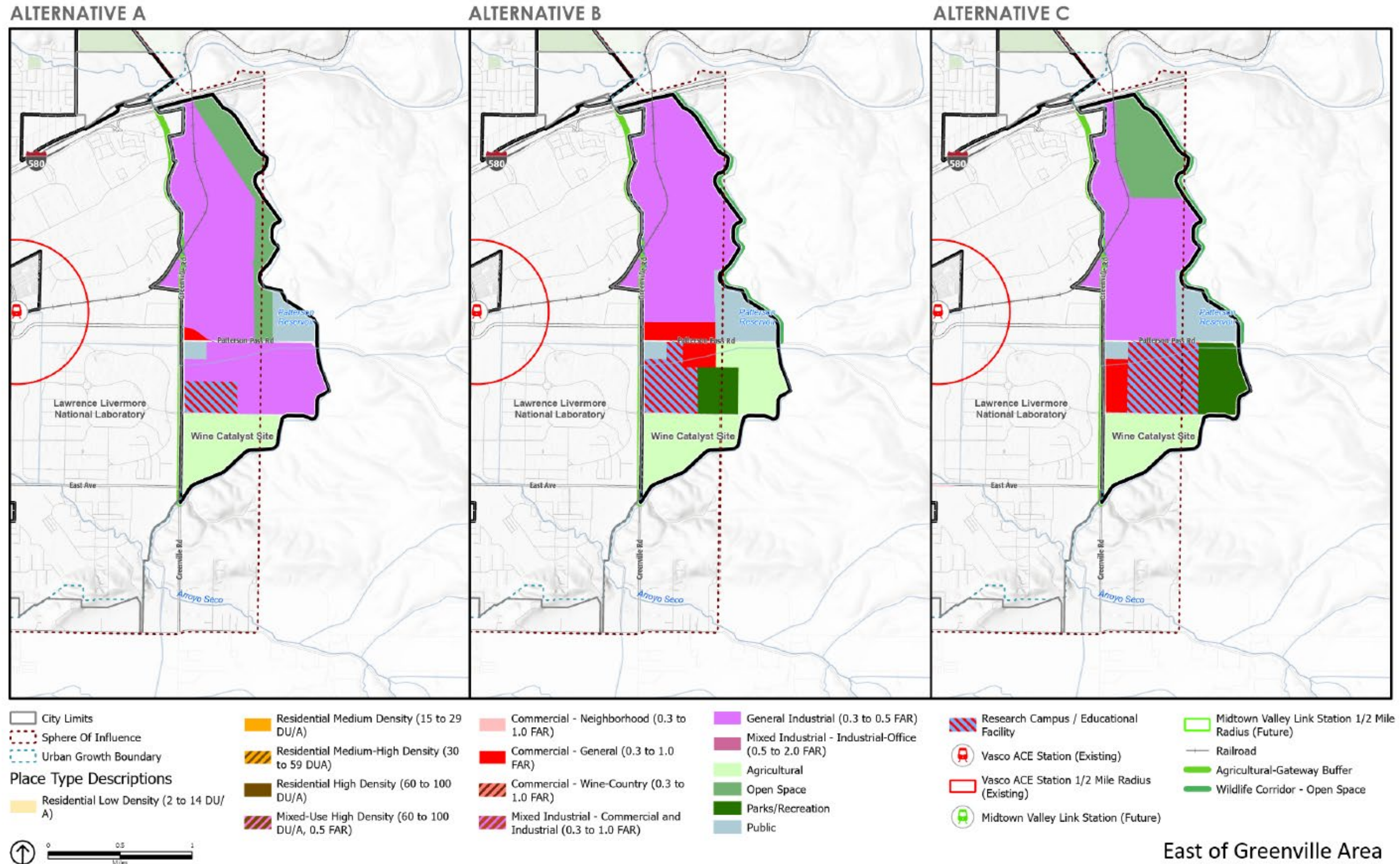


Table 6. East of Greenville Road Focus Area 2045 Buildout

East of Greenville Road		Alternative A		Alternative B		Alternative C	
	<i>Existing (2020)</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>	<i>2045 Net New</i>	<i>2045 Total</i>
Households	20	0	20	0	20	0	20
Housing Units	21	0	21	0	21	0	21
Population	55	0	55	0	55	0	55
Jobs	270	10,200	10,470	11,330	11,600	9,350	9,620

Figure 13. East of Greenville Road Focus Area Alternatives



Alternative A

Alternative A includes General Industrial uses north of Patterson Pass Road buffered by Open Space along the eastern edge of the Focus Area boundary, and Public uses on the easternmost edge. A small portion of General Commercial is shown at the intersection of Greenville Road and Patterson Pass Road. South of Patterson Pass Road includes a mix of General Industrial, Research Campus/Education Facility, and Public Uses with General Industrial being the majority use. The southern area of the Focus Area includes Agricultural uses, envisioned as a Wine Catalyst Site.

Alternative B

Alternative B includes a combination of General Industrial uses north of Patterson Pass Road with General Commercial and Public Uses fronting along the road. South of Patterson Pass Road includes an equal mix of Research Campus/Educational Facility, General Commercial, and Public uses fronting the road backed by Agricultural uses south and east, with a Park located in the center of these uses. The southern and southeastern areas of the Focus Area include Agricultural uses, envisioned as a Wine Catalyst Site.

Alternative C

Alternative C includes a combination of General Industrial and Public uses north of Patterson Pass Road with Open Space at the northernmost area. South of Patterson Pass Road includes a mix of Public, General Commercial, Research Campus/Educational Facility, and Parks/Recreation uses with Research Campus/Educational Facility being the majority use. The southern area of the Focus Area includes Agricultural uses, envisioned as a Wine Catalyst Site.

Citywide Land Use Alternatives

Additional growth will impact housing-to-employed-residents-ratios, schools, parks, the circulation system, utility infrastructure, and the City's fiscal health. To understand these impacts, the General Plan team created three Citywide Land Use Alternatives that incorporate the Focus Area alternatives into the bigger picture. This analysis assumes the same rate of growth for the existing General Plan land use designations outside the Focus Areas. Table 7 and Figure 14 summarize the potential buildout for the Citywide Land Use Alternatives. Figures 15, 16, and 17 illustrate the Citywide Land Use Alternatives A, B, and C.

The Citywide Land Use Alternatives are based on the combination of the Focus Area alternatives described in the following sections. The Focus Area alternatives can be mixed and matched in different ways to create the Citywide Preferred Land Use Scenario.

3.3.14 Citywide Land Use Alternative A

Citywide Land Use Alternative A would add 13,460 net new housing units and 29,240 net new jobs. This alternative is a combination of the following Focus Area alternatives:

- Midtown Business Center Alternative
- Laughlin Road Mixed Use Alternative
- Las Positas Residential Alternative
- Vasco Row Production Alternative
- East of Greenville Alternative A

3.3.15 Citywide Land Use Alternative B

Citywide Land Use Alternative B would add 16,490 net new housing units and 29,560 net new jobs. This alternative is a combination of the following Focus Area Alternatives:

- Midtown Blended Alternative
- Laughlin Road Industrial Alternative
- Las Positas Highway Oriented Alternative
- Vasco Row Wine Country Center Alternative
- East of Greenville Alternative B

3.3.16 Citywide Land Use Alternative C

Citywide Land Use Alternative C would result in 20,765 net new housing units and 27,140 net new jobs. This alternative is a combination of the following Focus Area alternatives:

- Midtown Residential Neighborhood Alternative
- Laughlin Road Open Space Alternative
- Las Positas Neighborhood Center Alternative
- Vasco Row Maker Village Alternative
- East of Greenville Alternative C

As noted above, additional future job and housing growth will also occur outside the Focus Areas consistent with the General Plan land use map in areas like the Isabel Neighborhood Specific Plan, Downtown Specific Plan area, and other infill sites.

Table 7. Citywide Land Use Alternatives 2045 Buildout

	Existing Conditions (2020)	Future Growth Outside Focus Areas (2045)	Alternative A		Alternative B		Alternative C	
			2045 Net New in Focus Areas	2045 Total	2045 Net New in Focus Areas	2045 Total	2045 Net New in Focus Areas	2045 Total
Households	31,550	7,850	4,770	44,170	7,625	47,025	11,640	51,040
Housing Units	33,640	8,370	5,090	47,100	8,120	50,130	12,395	54,405
Population	90,555	22,530	13,700	126,785	21,860	134,945	33,385	146,470
Jobs	52,270	10,430	18,810	81,510	19,130	81,830	16,710	79,410

Source: City of Livermore 2020 Traffic Model and PlaceWorks, 2023.

Figure 14. Net New Growth for Citywide Alternatives 2045 Buildout

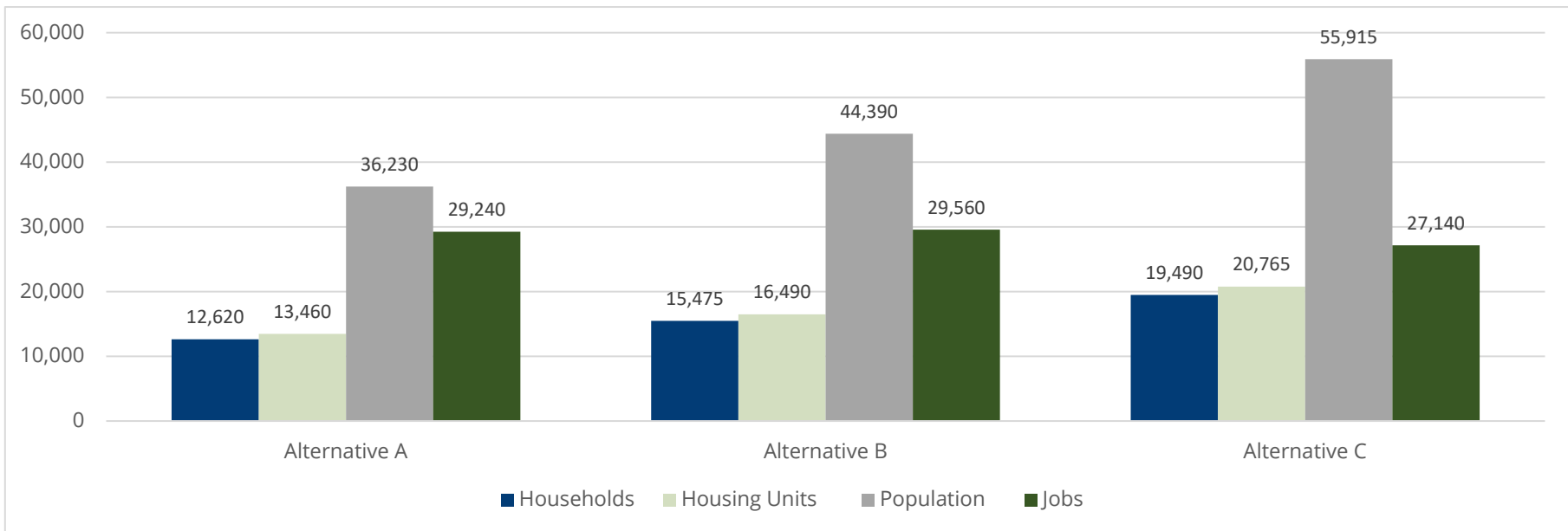
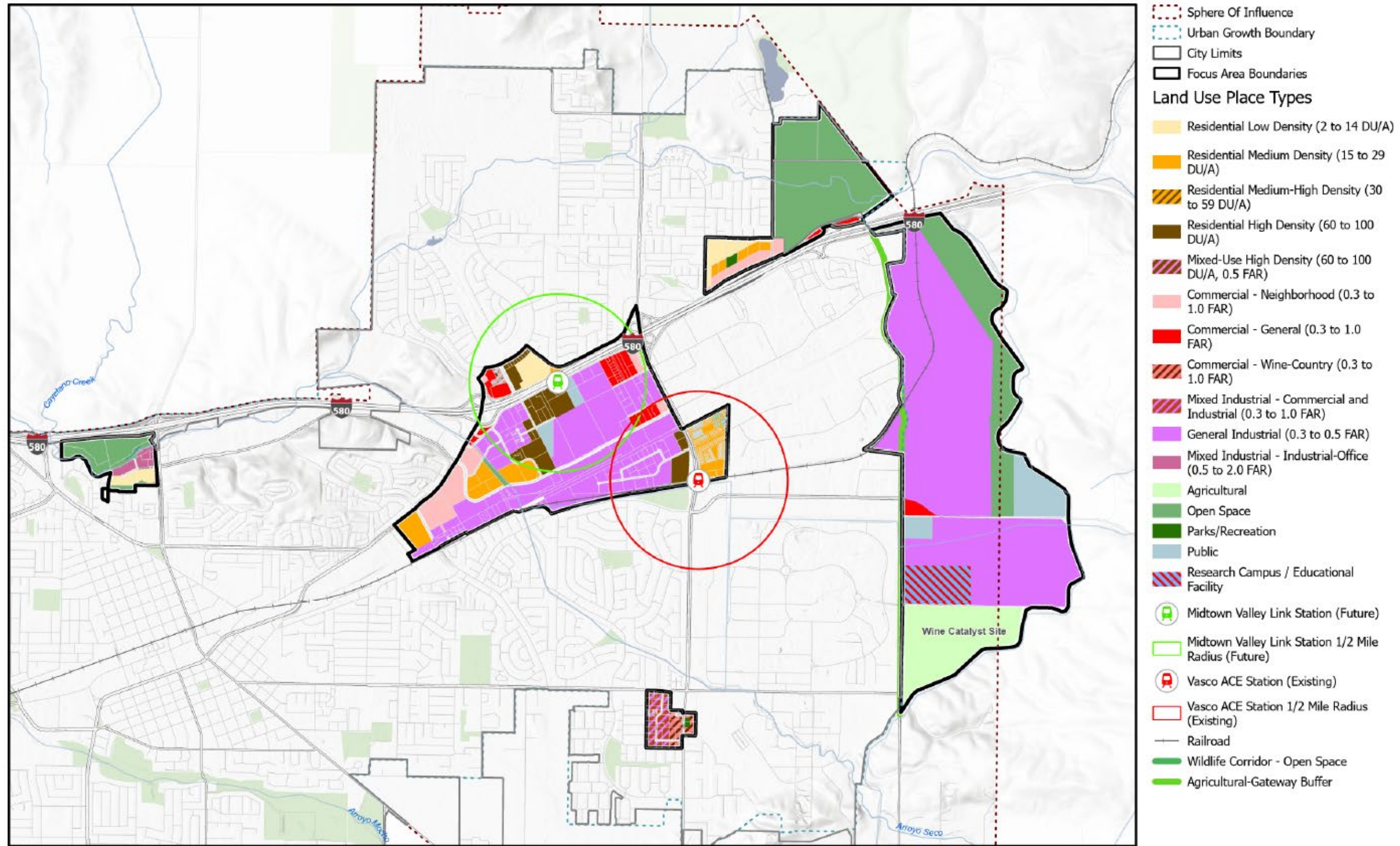


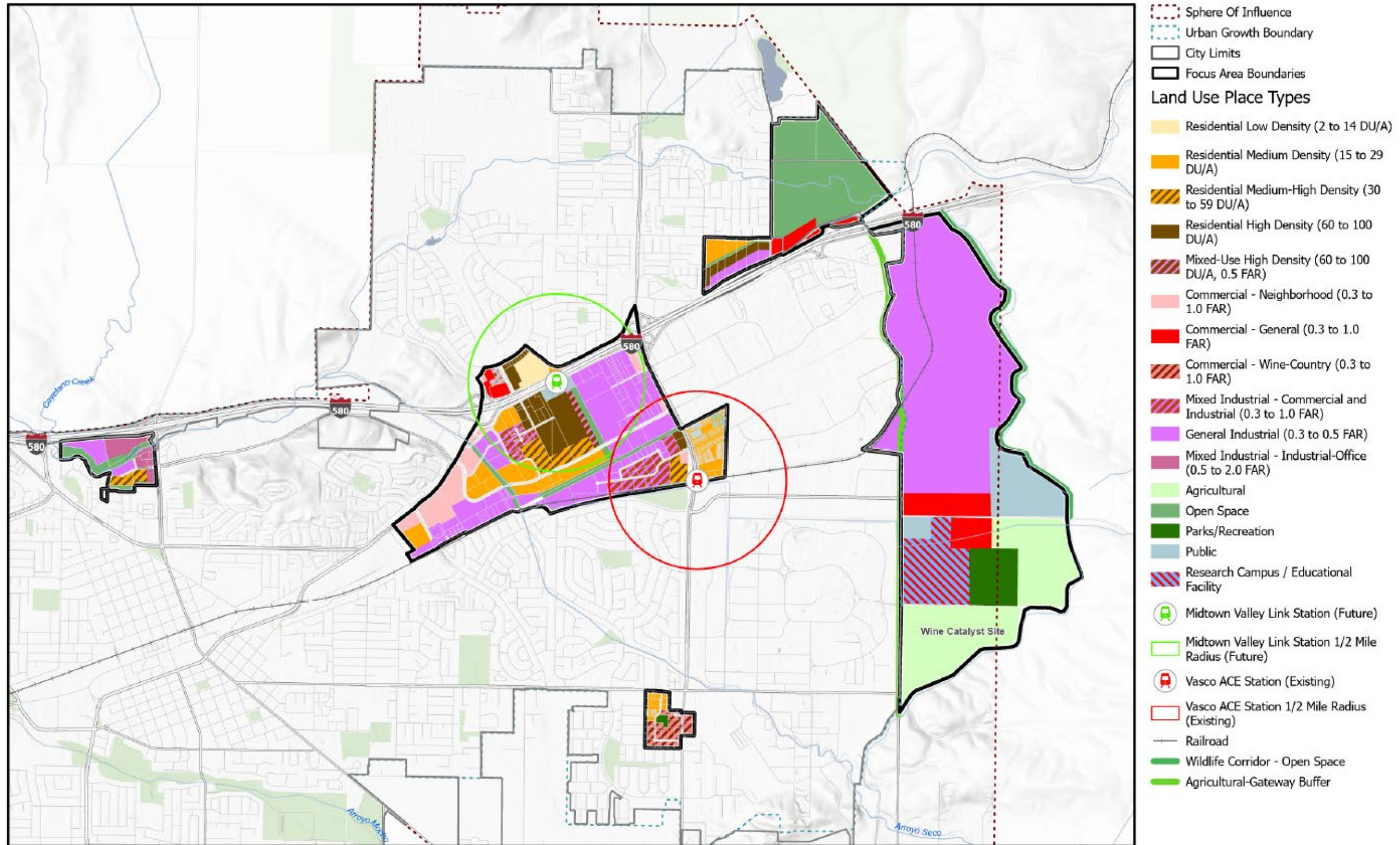
Figure 15. Citywide Alternative A



Alternative A - Citywide

Source: City of Livermore, 2021; Esri, 2023; PlaceWorks, 2023

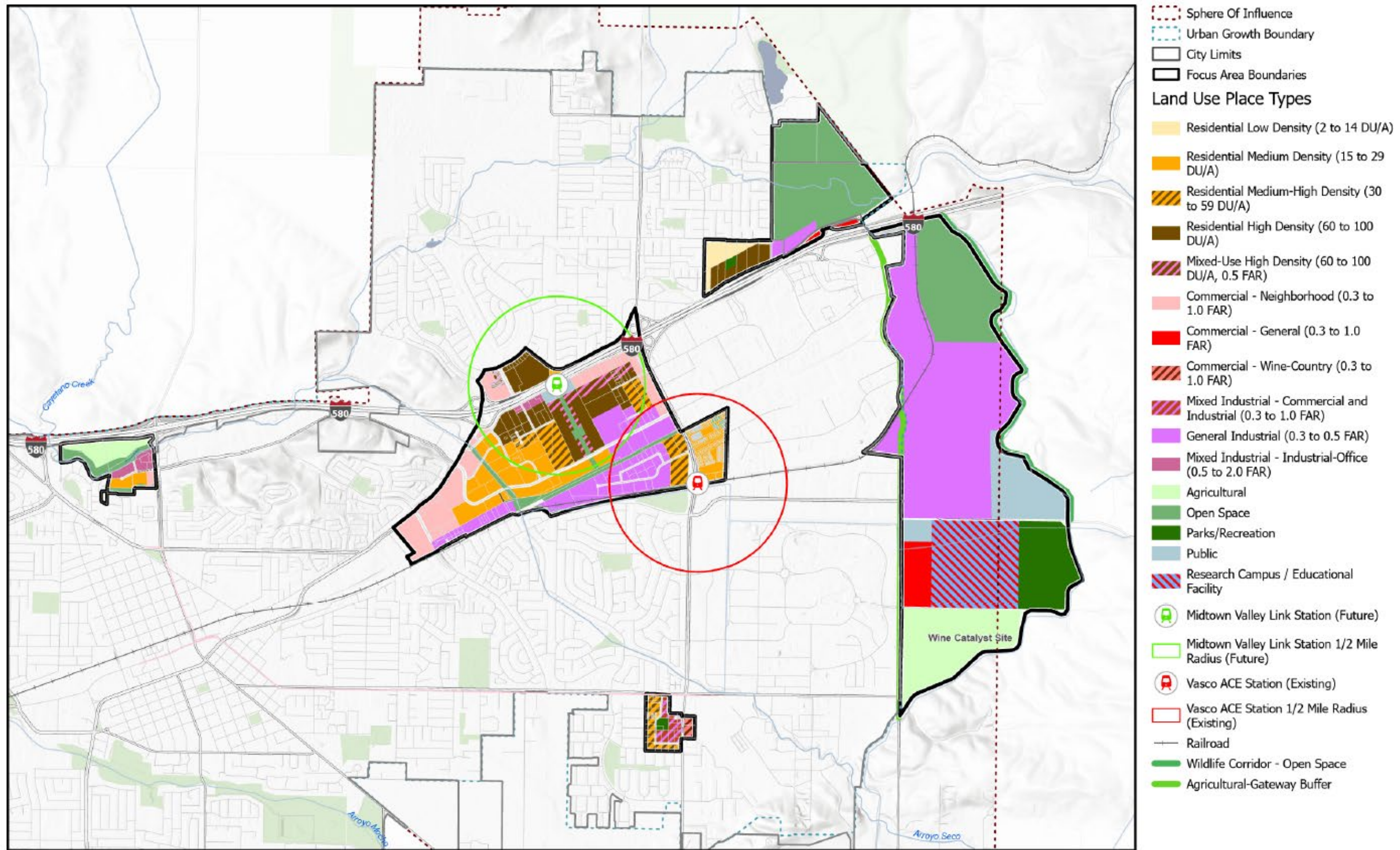
Figure 16. Citywide Alternative B



Alternative B - Citywide

Source: City of Livermore, 2021; Esri, 2023; PlaceWorks, 2023

Figure 17. Citywide Alternative C



Alternative C - Citywide

Source: City of Livermore, 2021; Esri, 2023; PlaceWorks, 2023

4. Summary of Key Findings

This chapter summarizes the key findings of the evaluation in Chapter 5. The findings are not valued or weighted. The goal of this section is to present sufficient information to let the reader draw their own conclusions. The framework of this Report is intended to articulate trade-offs and considerations in preparation of the Preferred Land Use Scenario.

When reviewing the key findings of the alternatives evaluation summarized below, you may want to think about the topics and outcomes that are most important to you to help define your Preferred Land Use Scenario. Each alternative represents various trade-offs. For example, an alternative that results in the lowest vehicle miles traveled might not add as many new retail destinations. An alternative that adds the most local jobs might also have the greatest visual impacts within Livermore's Scenic Corridor. You will need to decide which characteristics are most important to you when selecting the components and ideas from each alternative to mix and match to create an ideal Preferred Land Use Scenario for each Focus Area. Your Preferred Land Use Scenario may also include new ideas or components not represented in any of the alternatives.

One way to think about it is how your Preferred Land Use Scenario relates to the priorities you think are most important for the city as a whole. For example, if creating new local jobs is your top priority, you might prefer the alternatives that produce the most jobs. Or, if adding new parks and open space is your top priority, you might prefer the alternatives that incorporate these land use

designations. However, it's important to understand that for the City to function as a complete community, it requires a mix and balance of many different uses.

4.1 FOCUS AREA KEY FINDINGS

Tables 8 through 12 provide a summary of the differences among the Focus Area alternatives. These conclusions are summarized from the more detailed Focus Area topic evaluations analyzed in Chapter 5 of this report. Chapter 5, Alternatives Evaluation, provides a detailed explanation of the analysis and conclusions summarized in Tables 8 through 12. The Focus Area evaluation assesses site-specific topics where the effects of the land use pattern and amount of growth can be examined at a more localized scale.

Table 8. Midtown Focus Area Findings

Components	Business Center Alternative	Residential Neighborhood Alternative	Blended Alternative
Aesthetics			
Urban Form	All alternatives would result in changes to the urban fabric.		
Scenic Corridor	<p>On the north side of I-580, travelers would see the upper three to four stories of high-density residential buildings above the sound wall.</p> <p>On the south side of I-580, travelers would see a range of different development, including 4- to 6-story residential development close to the freeway. Greatest impacts to views to the south.</p>	<p>On the north side of I-580, travelers would see the upper four or more stories of multiple high-density residential developments in a row above the sound wall. Greatest impact to views to the north.</p> <p>On the south side of I-580, travelers would see a range of different development, including high density mixed use and residential beyond the future plaza.</p>	<p>On the north side of I-580, travelers would see the upper three to four stories of high-density residential buildings above the sound wall.</p> <p>On the south side of I-580, travelers would see a range of different development, including high density residential close to the freeway.</p>
Historic Resources			
Historic Resources	There are no known historic resources in this Focus Area. All alternatives would have an equal effect on historic resources.		
Environmental Resources			
Agricultural Resources	There are no farmlands of concern in this Focus Area; all alternatives would have an equal effect on agricultural resources.		
Biological Resources	All alternatives would have the same potential to disturb biological resources.		
Archaeological Resources	Has a smaller greenway buffer along the creek corridor compared to the Residential and Blended Neighborhood Alternatives and could therefore result in a slightly higher change of disturbing potential archaeological resources.	The Residential and Blended Neighborhood Alternatives protect a larger portion of the creek corridor and could therefore result in a slightly lower chance of disturbing potential archeological resources compared to the Business Center Alternative.	The Residential and Blended Neighborhood Alternatives protect a larger portion of the creek corridor and could therefore result in a slightly lower chance of disturbing potential archeological resources compared to the Business Center Alternative.
Climate Change and Resilience			

Components	Business Center Alternative	Residential Neighborhood Alternative	Blended Alternative
Extreme Precipitation and Flooding	There are no 100-year floodplains in this Focus Area; all alternatives would perform the same regarding flooding.		
Wildfire Risk	A portion of the Midtown Focus Area is located within the Wildland Urban Interface for wildfire risk. All alternatives would have equal wildfire risk.		
Extreme Temperatures	All alternatives would have equal risk from extreme temperatures.		
Equity and Public Health			
Air Quality	The Business Center Alternative would place the fewest residents near diesel particulate matter exposure areas compared to the Residential Neighborhood and Blended Alternatives.	The Residential Neighborhood Alternative would place more residents near diesel particulate matter exposure areas compared to the Business Center and Blended Alternatives.	The Blended Alternative would place more residents near diesel particulate matter exposure areas compared to the Business Center Alternative, but fewer residents compared to the Residential Neighborhood Alternative.
Groundwater Threats	Following regulations and appropriate construction practices will reduce the risk from groundwater threats under all alternatives.		
Physical Activity and Access to Open Space	The Business Center Alternative adds the fewest new residents to an area with already poor walkable park access. It also does not propose adding new park or open space.	The Residential Neighborhood Alternative adds the most new residents to an area with already poor walkable park access. This alternative proposes linear green spaces, but less than the Blended Alternative and more than the Business Center Alternative.	The Blended Alternative adds the second most new residents to an area with already poor walkable park access. This alternative includes the most park and open space.
Food Equity	None of the alternatives would affect food equity.		

Table 9. Laughlin Road Focus Area Findings

Components	Open Space Alternative	Mixed Use Alternative	Industrial Alternative
Aesthetics			
Urban Form	All alternatives would result in changes to the urban fabric.		
Scenic Corridor	The Open Space Alternative and Industrial Alternative both have the potential to block scenic view corridors.	The Mixed Use Alternative would provide the most opportunity to preserve views north toward the hills compared to the Open Space and Industrial Alternatives.	The Open Space Alternative and Industrial Alternative both have the potential to block scenic view corridors.
Historic Resources			
Historic Resources	There are no known historic resources in this Focus Area. All alternatives would have an equal effect on historic resources.		
Environmental Resources			
Agricultural Resources	The Open Space and Industrial Alternatives has the potential to disturb more farmlands of concern compared to the Mixed Use Alternative.	The Mixed Use Alternative has the potential to disturb fewer farmlands of concern compared to the Open Space and Industrial Alternatives.	The Open Space and Industrial Alternatives has the potential to disturb more farmlands of concern compared to the Mixed Use Alternative.
Biological Resources	The Open Space and Industrial Alternatives have the potential to disturb more biological resources compared to the Mixed Use Alternative.	The Mixed Use Alternative has the potential to disturb fewer biological resources compared to the Open Space and Industrial Alternatives.	The Open Space and Industrial Alternatives have the potential to disturb more biological resources compared to the Mixed Use Alternative.
Archaeological Resources	The Open Space and Industrial Alternatives have the potential to disturb more archaeological resources compared to the Mixed Use Alternative.	The Mixed Use Alternative has the potential to disturb fewer archaeological resources compared to the Open Space and Industrial Alternatives.	The Open Space and Industrial Alternatives have the potential to disturb more archaeological resources compared to the Mixed Use Alternative.
Climate Change and Resilience			
Extreme Precipitation and Flooding	All alternatives would have equal risk from flooding.		
Wildfire Risk	The Open Space and Industrial Alternatives would introduce more structures adjacent to a Wildland Urban Interface Area compared to the Mixed Use Alternative.	The Mixed Use Alternative would introduce fewer structures adjacent to a Wildland Urban Interface area compared to the Open Space and Industrial Alternatives.	The Open Space and Industrial Alternatives would introduce more structures adjacent to a Wildland Urban Interface Area compared to the Mixed Use Alternative.

Components	Open Space Alternative	Mixed Use Alternative	Industrial Alternative
Extreme Temperatures	The Open Space and Industrial Alternatives would have similar levels and extent of urbanized development and would be similarly affected by extreme temperatures.	The Mixed Use Alternative dedicates the most land to open space that could mitigate extreme heat and would be most resilient.	The Open Space and Industrial Alternatives would have similar levels and extent of urbanized development and would be similarly affected by extreme temperatures.
Equity and Public Health			
Air Quality	The Open Space Alternative would place the most new residents near diesel particulate matter exposure areas.	The Mixed Use Alternative would add the fewest new residents near diesel particulate matter exposure areas.	The Industrial Alternative would place the second most new residents near diesel particulate matter exposure areas.
Groundwater Threats	Following regulations and appropriate construction practices will reduce the risk from groundwater threats under all alternatives.		
Physical Activity and Access to Open Space	The Open Space Alternative would add less open space than the Mixed Use Alternative. It has a similar park centrally located in the residential area as the Mixed Use Alternative.	The Mixed Use Alternative would add the most new open space areas and improve opportunities for physical activities. It adds a new park centrally located in the new residential area, like the Open Space Alternative.	The Industrial Alternative would add less open space than the Mixed Use Alternative. Rather than a centrally-located park, it includes a linear greenway running the length of the new residential area.
Food Equity	None of the alternatives would affect food equity.		

Table 10. Las Positas Court Focus Area Findings

Components	Residential Alternative	Neighborhood Center Alternative	Highway Oriented Alternative
Aesthetics			
Urban Form	All alternatives would result in changes to the urban fabric.		
Scenic Corridor	I-580 travelers would view some one to two story buildings in the background; there would be no development adjacent to I-580.	I-580 travelers would view some one to two story buildings in the background; there would be no development adjacent to I-580.	I-580 travelers would view the most new development adjacent to I-580 with one- and two-story buildings in the foreground.
Historic Resources			
Historic Resources	There are no known historic resources in this Focus Area. All alternatives would have an equal effect on historic resources.		
Environmental Resources			
Agricultural Resources	There are no farmlands of concern in this Focus Area. The Neighborhood Center Alternative would add a new agricultural land use place type.		
Biological Resources	Has the least potential to disturb biological resources compared to the Neighborhood Center and Highway Oriented Alternatives.	The Highway Oriented Alternative and Neighborhood Center Alternative would have the potential to disturb more biological resources compared to the Residential Alternative.	The Highway Oriented Alternative and Neighborhood Center Alternative would have the potential to disturb more biological resources compared to the Residential Alternative.
Archaeological Resources	Has the least potential to disturb archaeological resources compared to the Neighborhood Center and Highway Oriented Alternatives.	The Neighborhood Center Alternative would have the potential to disturb the most biological resources compared to the Residential Alternative and Highway Oriented Alternatives.	The Highway Oriented Alternative has the potential to disturb more biological resources compared to the Residential Alternative, but less potential compared to the Neighborhood Center Alternative.
Climate Change and Resilience			
Extreme Precipitation and Flooding	All alternatives would perform the same regarding flooding.		
Wildfire Risk	The Las Positas Focus Area is located within the Wildland Urban Interface for wildfire risk. The Residential Alternative	The Las Positas Focus Area is located within the Wildland Urban Interface for wildfire risk. The Neighborhood Center Alternative would expose more development at risk to wildfires compared	The Las Positas Focus Area is located within the Wildland Urban Interface for wildfire risk. The Highway Oriented

Components	Residential Alternative	Neighborhood Center Alternative	Highway Oriented Alternative
	would potentially expose the least amount of development to wildfire risk.	to the Residential Alternative, but less than the Highway Oriented Alternative.	Alternative would expose the most development to wildfire risk.
Extreme Temperatures	The Residential Alternative would create open space north of the Arroyo, creating the largest potential for passive cooling; it would therefore be the most resilient alternative.	The Neighborhood Center Alternative would create agricultural use north of the Arroyo, which could be exposed to the risk of crop failure in extreme heat events.	The Highway Oriented Alternative would create the highest intensity development and therefore could both exacerbate and be most affected by extreme temperature events.
Equity and Public Health			
Air Quality	The Residential and Highway Oriented Alternatives would place the fewest new residents adjacent to industrial uses which could increase exposure to air pollutants.	The Neighborhood Center Alternative would place the second most new residents adjacent to industrial uses which could increase exposure to air pollutants.	The Highway Oriented Alternative would place the most new residents near adjacent to industrial uses which could increase exposure to air pollutants.
Groundwater Threats	Following regulations and appropriate construction practices will reduce the risk from groundwater threats under all alternatives.		
Physical Activity and Access to Open Space	The Residential Alternative adds the fewest new residents to an area with somewhat poor walkable park access, and proposes more open space areas compared to the Neighborhood Center and Highway Oriented Alternatives.	The Neighborhood Center Alternative adds the second most new residents to an area with somewhat poor walkable park access and proposes less open space areas compared to the Residential Alternative and the same amount of open space as the Highway Oriented Alternative.	The Highway Oriented Alternative adds the most new residents to an area with somewhat poor walkable park access and proposes less open space areas compared to the Residential Alternative and the same amount of open space as the Neighborhood Center Alternative.
Food Equity	None of the alternatives would affect food equity.		

Table 11. Vasco Row Focus Area

Components	Maker Village Alternative	Production Alternative	Wine Country Center Alternative
Aesthetics			
Urban Form	All alternatives would result in changes to the urban fabric.		
Scenic Corridor	This Focus Area is not adjacent to scenic corridors.		
Historic Resources			
Historic Resources	There are no known historic resources in this Focus Area. All alternatives would have an equal effect on historic resources.		
Environmental Resources			
Agricultural Resources	There are no farmlands of concern in this Focus Area; all alternatives would perform the same regarding agricultural resources.		
Biological Resources	All alternatives would have the same potential to disturb biological resources.		
Archaeological Resources	All alternatives would have the same potential to disturb archaeological resources.		
Climate Change and Resilience			
Extreme Precipitation and Flooding	There are no 100-year floodplains in this Focus Area; all alternatives would perform the same regarding flooding.		
Wildfire Risk	The part of this Focus Area that is east of South Vasco Road is within the Wildland Urban Interface area and exposed to wildfire risk. All alternatives would have equal wildfire risk.		
Extreme Temperatures	The Maker Village Alternative would create the highest volume of residential development, allowing for site designs that could incorporate robust landscaping to reduce urban heat island effects, as well as the largest park space. These features potentially make it the most resilient alternative against extreme temperatures.	The Production Alternative would create all commercial wine-country and mixed industrial-commercial developments, which would result in large building footprints and large hardscape surface parking areas. These would significantly increase urban heat island effect, making this alternative least resilient against temperature gain.	The Wine Country Center Alternative would create mostly commercial wine-country developments with some medium-density residential developments. The commercial development configurations would likely result in increasing urban heat island effects and temperatures. The residential area could be configured to have more robust landscaping and trees to mitigate temperature gain. The vulnerability of this alternative to extreme temperatures

Components	Maker Village Alternative	Production Alternative	Wine Country Center Alternative
			would fall between the Maker Village and Production Alternatives.
Equity and Public Health			
Air Quality	The Maker Village Alternative would place the most new residents near diesel particulate matter exposure areas compared to the Production and Wine Country Center Alternatives.	The Production Alternative would place no new residents near diesel particulate matter exposure areas.	The Wine Country Center Alternative would place the second most new residents near diesel particulate matter.
Groundwater Threats	Following regulations and appropriate construction practices will reduce the risk from groundwater threats under all alternatives.		
Physical Activity and Access to Open Space	The Maker Village Alternative adds the most new residents to an area with somewhat poor walkable park access and proposes the largest park area of the Vasco Row alternatives.	The Production Alternative adds no new residents and the second most employees to an area with somewhat poor walkable park access. This alternative proposes a new park area, but less park space than the Wine Country Center Alternative and less than the Maker Village Alternative.	The Wine Country Center Alternative adds the second most new residents and employees to an area with somewhat poor walkable park access. This alternative includes the second most new park space after the Maker Village Alternative.
Food Equity	This Focus Area is adjacent to a Census tract identified as low income and low access by the Food Access Research Atlas. All alternatives would allow retail food uses that may improve food access in this area.		

Table 12. East of Greenville Road Focus Area

Components	Alternative A	Alternative B	Alternative C
Aesthetics			
Urban Form	All alternatives would result in changes to the urban fabric.		
Scenic Corridor	This Focus Area is not adjacent to scenic corridors.		
Historic Resources			
Historic Resources	There are no known historic resources in this Focus Area. All alternatives would have an equal effect on historic resources.		
Environmental Resources			
Agricultural Resources	There are no farmlands of concern in this Focus Area; all alternatives would perform the same regarding agricultural resources.		
Biological Resources	All alternatives would have the same potential to disturb biological resources.		
Archaeological Resources	All alternatives would have the same potential to disturb archaeological resources.		
Climate Change and Resilience			
Extreme Precipitation and Flooding	Alternative A concentrates development along the arroyo, making this the least resilient to flooding.	Alternative B has agricultural land and a park adjacent to the arroyo that could help contain the flooding, making this the most resilient alternative.	Alternative C includes a large park site south of Patterson Pass Road that could potentially serve as emergency flood storage, making this the second most resilient alternative.
Wildfire Risk	Could create new Wildland Urban Interface zones on the eastern edge of the Focus Area where buildings meet grasslands.	Could create new Wildland Urban Interface zones on the eastern edge of the Focus Area where buildings meet grasslands but would include a greenbelt that could serve as a fuel break to mitigate wildfire risk.	Could create new Wildland Urban Interface zones on the eastern edge of the Focus Area where buildings meet grasslands.

Components	Alternative A	Alternative B	Alternative C
Extreme Temperatures	The significant amount of industrial development in Alternative A would contribute to urban heat island effects and temperature gains in the area. The large open space included in this alternative would help mitigate some of this effect. The vulnerability of this alternative to extreme temperatures would fall between Alternatives B and C.	Alternative B would create the least open space and would be least resilient to extreme temperatures.	Alternative C would create the most non-industrial uses by having the largest research campus and park combined with a significant open space on the north and agricultural site to the south. These uses could incorporate significant landscaping and trees to mitigate against urban heat island effects, making this alternative potentially the most resilient against extreme temperatures.
Equity and Public Health			
Air Quality	The East of Greenville Road Focus Area does not add new housing or residents near potential air pollutants.		
Groundwater Threats	Following regulations and appropriate construction practices will reduce the risk from groundwater threats under all alternatives.		
Physical Activity and Access to Open Space	The East of Greenville Road Focus Area does not add new housing or residents who would need access to parks and open space.		
Food Equity	None of the alternatives would introduce new residents nor affect food equity.		

4.2 CITYWIDE ALTERNATIVES KEY FINDINGS

The findings of this section are meant to help the reader understand how different levels of housing and job growth could affect citywide metrics including jobs/housing balance, school capacity, park standards, the circulation system, utilities, and the City's fiscal budget. Understanding the potential growth at a citywide analysis is necessary for these topics because:

- Evaluating the employed residents to jobs ratio is more meaningful when looking at how different levels of total net new housing and job growth through 2045 could affect this ratio.
- Looking at the school system at a citywide level is appropriate because Livermore students have the flexibility to attend any school within the District. The City will continue to work with LVJUSD to understand where new school sites might be needed upon selection of the Preferred Land Use Scenario.
- Understanding if the land use alternative could meet or improve Livermore Area Recreation and Park District standards needs to be done at the citywide scale because park service standards are measured citywide.
- Analyzing the traffic and utility system using assumptions about the total growth that could occur over the next 20 years provides a big picture understanding of how traffic conditions, travel patterns, water demand, and wastewater capacity could be affected.

- Examining how different land use alternatives could affect fiscal operations enables the City to identify how changes to the land use pattern could affect City revenue and expenditures.

Table 13 provides a summary of the differences amongst the Citywide Land Use Alternatives. These conclusions for each topic are summarized from the more detailed Citywide evaluations analyzed in Chapter 5 of this report. Chapter 5, Alternatives Evaluation provides a detailed explanation of the analysis and conclusions summarized in Table 13. As you review the summary of Citywide findings, bear in mind that this evaluation assumes that every place type in every alternative will be fully built by 2045. However, market conditions and other external factors will influence private development, demand, and individual decision making.

Table 13. Citywide Land Use Alternatives Summary Table

Components	Citywide Alternative A	Citywide Alternative B	Citywide Alternative C
Housing and Jobs			
Ability to meet Future state Housing Requirements	Would provide the least assurance of meeting future housing requirement cycles and buffers.	Would likely accommodate future housing requirement cycles, but would have a smaller buffer compared to Alternative C.	Would provide the most assurance of meeting future housing requirement cycles plus buffers.
Job-Housing Balance	Would have more local jobs than employed residents.	Would have more local jobs than employed residents.	Would have the same number of local jobs as employed residents.
Community Services			
Schools	Existing schools would be able to accommodate the additional new students under Alternative A. Would also generate the fewest new students.	Existing schools would be able to accommodate the additional new students under Alternative B. Would generate less students than Alternative C and more students than Alternative A.	Existing schools would be able to accommodate the additional new students under Alternative C. Would also generate the most new students.
Park Service Standards	All alternatives would further exacerbate the existing park land deficiency. Alternative A would generate the fewest new residents and would have the least demand for new parks compared to Alternatives B and C.	All alternatives would further exacerbate the existing park land deficiency. Alternative B would generate more park demand than Alternative A, but less park demand compared to Alternative C.	All alternatives would further exacerbate the existing park land deficiency. Alternative C would generate the most new residents and would result in the greatest demand for new parks.
Traffic			
Vehicle Miles Traveled (VMT)	Would result in least total VMT, but highest per capita VMT.	Would result in most total VMT, but lowest per capita VMT.	Would result in less total VMT compared to Alternative B, but more compared to Alternative A. Would result in less per capita VMT than Alternative A, but more than Alternative B.

Components	Citywide Alternative A	Citywide Alternative B	Citywide Alternative C
Mode Shift	Would result in more future residents traveling by bus, bicycle, and walking compared to Alternative B, but less than Alternative C.	Would result in the fewest future residents traveling by bus, bicycle and walking.	Would result in the most future residents traveling by bus, bicycle and walking.
Vehicle-Hours Traveled (VHT)	Would result in the lowest total hours in traffic.	Would result in less hours in traffic compared to Alternative C, but more hours in traffic compared to Alternative A.	Would result in the highest total hours in traffic.
Vehicle-Hours of Delay (VHD)	Would have the lowest total hours of vehicle delay.	Would have more total hours of vehicle delay than Alternative A and fewer total hours of vehicle delay than Alternative C.	Would have the highest total hours of vehicle delay.
Average Speed	Would have the highest average speeds.	Would have the lowest average speeds.	Would have higher average speeds compared to Alternative B, but lower average speeds compared to Alternative A.
Utilities			
Water	<p>Would generate the least water demand in the Cal Water service area compared to Alternatives B and C and would have sufficient water supply.</p> <p>Would result in the most water demand compared to Alternatives B and C and would result in the greatest need for additional future water supplies for the area within the Livermore Municipal Water District.</p>	<p>Would generate more water demand in the Cal Water service area compared to Alternative A, but less demand compared to Alternative C. Would have sufficient water supply.</p> <p>Would create more water demand than current projected supply in the Livermore Municipal Water District service area, but would create less demand compared to Alternative A and Alternative C.</p>	<p>Would generate the most water demand in the Cal Water service area compared to Alternatives A and B. There would be insufficient water supply in the normal year scenario, but sufficient water supply in the single dry year and multiple dry year scenarios.</p> <p>Would create more water demand than current projected supply in the Livermore Municipal Water District, but would create less demand compared to Alternative A and more demand compared to Alternative B.</p>

Components	Citywide Alternative A	Citywide Alternative B	Citywide Alternative C
Wastewater Service	Would generate the least wastewater compared to Alternatives B and C.	Would generate more wastewater compared to Alternatives A, but less wastewater compared to Alternative C.	Would generate the most wastewater compared to Alternatives A and B and would result in the need for additional wastewater treatment capacity.
Stormwater Service	All alternatives would have an equal impact to the stormwater system.	All alternatives would have an equal impact to the stormwater system.	All alternatives would have an equal impact to the stormwater system.
Fiscal Impact Analysis			
Fiscal Sustainability	Generates the least revenue (\$75.8 million) but would have the lowest costs to provide additional public service and infrastructure (\$41.1 million). The annual net fiscal surplus at General Plan buildout is estimated to be \$34.7 million.	Generates the most revenue (\$93.9 million). Would cost more to provide additional public services and infrastructure (\$47.7 million) than Alternative A, but less than Alternative C. The annual net fiscal surplus at General Plan buildout is estimated to be \$46.2 million.	Would generate more revenue (\$88.2 million) than Alternative A, but less than Alternative B. Would have the highest costs to provide additional public service and infrastructure (\$52.3 million). The annual net fiscal surplus at General Plan buildout is estimated to be \$35.9 million.

This page intentionally left blank.

5. Alternatives Evaluation

This section compares the citywide and Focus Area alternatives and their differing potential outcomes.

The Focus Area Analysis reviews topics that are more localized to a smaller geographic area. The topics in this section include:

- Aesthetics
- Scenic Corridor Policy
- Historic Resources
- Archaeological Resources
- Agricultural Resources
- Biological Resources
- Climate Change Related Hazards
- Equity and Public Health

The purpose of the Citywide Alternatives Evaluation is to understand the implications of growth citywide. The topics in this section include:

- Housing and Jobs
- Community Services
- Traffic and Multimodal Circulation

- Utilities
- Fiscal Impacts

5.1 FOCUS AREA EVALUATION TOPICS

Aesthetics

This section qualitatively describes the potential aesthetics of development for each Focus Area alternative. Aesthetics are defined as form, scale, and design features of development and public spaces that contribute to the overall look, feel, and character of a place. For background information about urban design principles and definitions, review the November 4, 2022 General Plan Advisory Committee staff report: https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/1643635/Staff_Report_Urban_Design_Principles.pdf

Future development in the Focus Areas (and throughout Livermore) will be required to follow the City's Development Code, which regulates aspects of the built environment such as heights, setbacks, and site regulations, as well as the City's Design Standards and Guidelines. The goals of the Design Standards and Guidelines include encouraging development that is harmonious with the city's surrounding built and natural environments; preserving a small-town community surrounded by rural open space; maintaining views to around scenic corridors and natural features unique to Livermore; encouraging development that strengthens connectivity across the community by linking open space, parks, schools, and civic buildings; recognizing the historic significance of vineyards and wineries; identifying gateways to the city; encourage high-quality placemaking; and facilitating

sustainable design. The Design Standards and Guidelines also provide general guidance on design and development of city streets and streetscape features to ensure that new roadways are complete streets that accommodate a range of users through appropriate sidewalk widths, landscaping strips, trees, and lighting.

In addition to these City regulations, urban design components of future development projects are also likely to be influenced by future Specific Plans, development agreements, and project-specific design review. The evaluation below is based on assumptions about theoretical development given the types and range of uses allowed by the Land Use Place Types, as described in Figure 3, above. The land use changes considered in this report have not been decided on. Therefore, no specific project applications are currently being considered, and there are no site plans, architectural drawings, or renderings illustrating specific future changes or details such as proposed building height, architectural details, or landscaping.

5.1.14 Key Urban Design Terms and Concepts

The aesthetics evaluation in this section relies on some of the following terms and concepts for understanding urban design.

- **Land Use** = describes the human activities on a given land area, which may include residential, industrial, commercial, civic, recreational, or other uses.
- **Mix of Uses** = when more than one land use is existing or allowed on a given property, area, or building.
- **Circulation Network and Connectivity** = Circulation refers to the movement of people, goods, and services, through, around, and between buildings and other parts of the built environment. At the general plan scale this is the street network and can also include pathways and trails. Connectivity refers to the structure of the street network and how accessible it is from surrounding developments.
- **Pedestrian Scale** = this refers to the design of building and site elements such as storefronts with windows, lighting, street furniture, street trees, and short blocks that enhance the pedestrian experience by making it more comfortable and interesting to walk.
- **Auto-oriented** = a term that refers to buildings and developments that are designed to accommodate automobiles conveniently. Because spaces required by automobiles to travel and park are so much greater than required by pedestrians and bicycles, it's difficult to achieve a high level of convenience while also maintaining a pedestrian scale.
- **Street Definition** = this refers to streets enclosed by vertical edges such as buildings or trees. Research shows people in urban settings are more comfortable in contained areas, encouraging them to spend time with friends, shopping, and visiting cafes and restaurants. An example is First Street in Downtown Livermore.
- **Focal Point or Landmark** = a concept from traditional city planning where prominent sites in a town or city are reserved for a landmark such as a church with a steeple, a monumental library or a city hall. Focal points or landmarks

help orient people to the geography, add to the area's unique urban character and identity, and make places more vibrant by attracting visitors.

- **Gateway and Node** = Gateways and nodes provide a sense of place and identity in a district or neighborhood. Gateways mark an entry into a development, neighborhood or community. Nodes can be described as an area where residential, commercial, and institutional uses are concentrated to create a memorable place in the community.
- **Compatibility** = using methods to ensure new development that respects the existing character of existing development. Methods can include reflecting existing architectural style, building setbacks, building height and other elements.
- **Setbacks and Build-to Lines** = Setbacks are the distance of the building from the property line. Traditionally this has been a minimum distance, so a building could set back far from the street. More recently, to promote street definition (see term above), some regulations require a building to be built on or near a build-to line typically close to a sidewalk.
- **Massing** = refers to the height, width, and shape of a building. The parcel size and zoning regulations directly inform the massing of a building.
- **Building Orientation** = siting a building to take advantage of its surroundings such as fronting sidewalks in commercial districts, capturing scenic views, and/or minimizing environmental impacts such as flooding, wind, shadows, etc.

- **Scale and Modulation** = Scale and modulation are terms applied to the architectural appearance of a building. Scale is the relative size of the building overall as well as the elements that make up the façade. Modulation applies recesses or similar features on a building façade to break it up into separate elements, thereby reducing the scale of the building.
- **Rhythm or Cadence** = Good buildings are designed with windows, doors, structural elements, and roof features that are arranged in a pleasing composition that can be described as having rhythm or cadence, or pattern similar to a piece of music.
- **Transparency** = where buildings are located close to a sidewalk or street, transparency into the interior provides interest to passers-by, as opposed to a blank wall which does not reward attention. Transparency is provided by windows, storefronts, glass doors, entry recesses and other features.

5.1.15 Midtown Focus Area

The descriptions of possible urban design characteristics are based on the place types shown in **Figure 5, Midtown Focus Area Alternatives**.

Business Center Alternative

The Business Center Alternative for the Midtown Focus Area envisions developing the areas around the existing and future transit stops as transit-oriented business nodes with a mix of residential development, public buildings, and some commercial development in the predominantly industrial area.

- **Future Southfront Valley Link Station Node.** High- and low-density residential, public buildings, general industrial, and various commercial developments would be planned for within a half-mile radius of the planned Midtown Valley Link Station. Pedestrian, bicycle, and vehicular connectivity over I-580 would be planned to create north-south connections.

High-density residential buildings would be the tallest buildings here at four stories or higher. These buildings would have minimal front setbacks and side setbacks, all of which would be landscaped. The site and building design would address transition and compatibility issues with the existing industrial fabric by careful building orientation and site buffering while ensuring a livable environment through components such as common open space, lighting, landscaping, and trees. Buildings would include visually interesting features such as facade reliefs, upper story setbacks, and balconies. Parking would be provided in a ground-floor podium, underground, or in a separate parking structure. Additional landscaping would be provided on sides adjacent to I-580.

The public lands nestled between the high-density residential buildings and industrial facilities provide opportunities for public plazas, pedestrian corridors, transit stops, and government facilities. Buildings could be one to two stories high and would be designed similar to other public structures across Livermore. Their site design would complement the exterior spaces of both the residential and industrial developments.



Santana Row In San Jose is an example of a mixed-use village

Most of the general industrial buildings would be existing buildings with potential for redevelopment over time. These facilities would typically be one to two stories high and feature landscaped setbacks all around. Pathways and open space could be provided between buildings to help create a pedestrian environment. Additional landscaping

and trees would be provided on sides adjacent to residential buildings.

The low-density residential developments north of I-580 would be single-family homes or duplexes, one to two stories in height. These would be designed as a cohesive neighborhood with an internal circulation network. The streets here would be flanked by landscaping, trees, sidewalks, front yards, and front porches overlooking the streets. Buildings here would have garages set back to minimize visibility from the street and feature sloped roofs. Style, colors, and materials may vary between buildings though there would be common elements.

- **Vasco ACE Station Node.** High- and medium-density residential developments, general industrial, and some public buildings would be planned for within a half-mile radius of the existing Vasco ACE Station.

The high-density residential apartment or condominium buildings west of South Vasco Road would be tallest at four stories or higher. Setbacks and landscaping on the western edges would create a buffer with the adjacent industrial developments. Parking for these apartments would be either in a ground-floor podium, underground, or a separate parking structure.

- **Las Positas Road Corridor.** Many lots will be maintained as industrial, with mixes of commercial and medium density residential added to the area. A medium-density residential area is already approved for at the westernmost bend of Los Positas Road, north of the road and south of Arroyo Vista. A central greenway is the key open space amenity for this area. Across Las Positas Road to the west

of this residential area is a significant neighborhood commercial area. Parking would be placed behind or to the side of buildings.

Two commercial areas would be planned along South Vasco Road at the corners of Southfront Road and at Los Positas Road. Neighborhood commercial would front South Vasco Road, with service commercial developed west of these lots. South Vasco Road at these segments would have landscaping, sidewalks, and trees to create a pedestrian-friendly area in front of these commercial lots.

The industrial areas would be one- to two-story buildings that can include a wide range of different facilities. Over time, site design of these lots would plan for landscaping and trees to create compatibility with nearby residential and commercial uses.

Residential Neighborhood Alternative

The Residential Neighborhood Alternative for the Midtown Focus Area envisions a transit-oriented community around the future Midtown Valley Link Station with a new boulevard connecting it to Las Positas Road; and a transit-oriented residential community around the existing Vasco ACE Station. The land south of Las Positas Road would be maintained primarily as general industrial, with much of the Focus Area transitioning into other development types over time.

- **Future Midtown Valley Link Station Node.** This node would be planned for mixed-use residential development ranging from high to medium densities. Neighborhood commercial, industrial-office, and industrial buildings would be planned near the future transit station.

Pedestrian, bicycle, and vehicular connectivity over I-580 would be planned to connect north and south areas of the station area.

High-density mixed use and residential buildings would front along a central north-south greenway connecting the planned plaza of the future Midtown Valley Link station to Las Positas Road. Ground-floor storefronts, four-story apartment buildings, outdoor seating, and a pedestrian-oriented streetscape would define the character of this corridor. Spreading from this central corridor would be medium-high and medium density residential developments with some mixed-use areas. These would be two- to four-story buildings surrounded by a walkable environment and streetscapes. The streets in this area would be fronted by potential balconies, porches, and ground-floor uses. Parking would be located at the rear, side, or underground. Neighborhood commercial and some industrial-office buildings would line Southfront and South Vasco Roads.

- **Vasco ACE Station Node.** Medium-high density residential and general industrial developments would be planned for within a half-mile radius of the existing Vasco ACE Station. The medium-high density residential developments would be adjacent to the industrial developments west of South Vasco Road. This would create an area of two- to four-story residential buildings adjacent to one- to two-story industrial buildings. Landscaping and buffering along edges of property lines would allow for compatible transition between the two areas.

- **Las Positas Road Corridor.** Much of the industrial development of this area would transition to medium density residential neighborhoods. Some general industrial would be maintained towards South Vasco Road. An east-west greenway south of Las Positas Road would connect to two new north-south greenways to create an open space network throughout the Focus Area. The medium-density residential area would consist of two- to three-story townhomes, low-rise garden apartments, or condominiums. Streetscapes and public space would include trees, landscaping, paths, and other elements to help create a residential feeling throughout this area. This area would connect to an existing neighborhood commercial area to the west. The area south of Las Positas Road would be general industrial development. This area would be characterized by one- to two-story industrial facilities with site designs that would feature service and loading areas, parking, and landscaped setbacks with pedestrian paths where possible.

Blended Alternative

The Blended Alternative for the Midtown Focus Area envisions focused transit-oriented transformations around the future Midtown Valley Link Transit Station and existing Vasco ACE Station. Much of the Focus Area would remain general industrial with some parts transitioning to neighborhood commercial and medium-density residential over time.

- **Future Midtown Valley Link Station Node.** The area within a half-mile radius of the future transit station would be planned as a mixed-use, transit-oriented community balanced between housing, mixed-use, and mixed

commercial and industrial. A new north-south greenway corridor would connect the future transit plaza to Las Positas Road and provide a spine to organize future development. Mixed-use and residential buildings would be located west of this greenway, and the existing industrial place type would remain to the east of the station. The residential area would be comprised of high-density apartment or condominium buildings four stories or higher nearest the transit station with transition to two- to three-story medium-density homes to the west and south. Mixed-use developments would be planned to front the new north-south greenway, Las Positas Road, and Bennett Drive. Some mixed commercial and industrial would be planned in the western portion of the station node. The internal circulation network of this residential area would have pedestrian-oriented streetscapes with landscaping, trees, and sidewalks.

The industrial area to the east would be one- to two-story buildings surrounded by landscaped setbacks. Parking would be placed at the rear or the sides where possible. If opportunities present, a campus like environment could be planned for with pedestrian paths navigating multiple properties to provide connectivity. Trees and landscaping would be provided where possible. Service and loading areas would be essential parts of the site designs of these developments.

- **Vasco ACE Station Node.** Industrial, industrial-office, and residential developments would be planned for within a half-mile radius of the Vasco ACE Station. Residential medium-high density development would be nearest the station, with high density residential and mixed commercial

and industrial and office located further out. The residential buildings would be condominiums and apartment buildings three stories or higher, transitioning to a one- to two-story mixed commercial and industrial area. Landscaping and pedestrian-oriented streetscapes would help connect the area. Additional trees and landscaping may be buffers between the two areas.

5.1.16 Laughlin Road Focus Area

New medium-density residential and developments would be introduced along Las Positas Road north of the Union Pacific Railroad (UPRR) tracks with existing or redeveloped general industrial and some service commercial remaining in the eastern part of the area closest to South Vasco Road. Much of the area south of Las Positas Road would be maintained as industrial developments. A new east-west greenway would be planned along the UPRR corridor to provide open space in the area and connect to two new north-south greenways to create an open space network throughout the Focus Area. The medium density residential neighborhood would include two- to three-story attached townhomes, low-rise garden apartments, or condominiums with landscaping and setbacks to both create the feeling of a residential area while ensuring adequate buffering with adjacent industrial uses.

The descriptions of possible urban design characteristics are based on the place types shown in Figure 7, Laughlin Road Focus Area Alternatives.

Open Space Alternative

The Open Space Alternative envisions a residential neighborhood with both low and high density developments west of Laughlin Road, general industrial facilities and highway commercial developments east of Laughlin Road along Northfront Road, and open space maintained in the north for the remainder of the Focus Area.

- **Residential west of Laughlin Road.** New high-density homes would line Northfront Road, surrounded by low-density homes to the west and north adjacent to the existing neighborhoods. A centrally located park would provide a common space within this new neighborhood. The high-density residential developments would be apartment buildings four stories or higher with landscaped setbacks on each side. Site design would include common open space in each development and parking would be located in a ground-floor podium, underground, or in a separate structure. Buildings would be characterized by flat or sloped roofs, articulated building facades, and potential balconies. Colors and materials may vary between buildings.

The low-density residential area would be one- to two-story single-family homes or duplex types with landscaped setbacks on all sides. Parking would be provided in garages that would be set back to minimize visibility from the street. Buildings would be characterized by sloped roofs,

articulated building facades, and front porches. Colors and materials may vary between buildings.



The Hercules Waterfront District is an example of contemporary single-family neighborhood design that emphasizes front porches and de-emphasizes garages. This type of development would be allowed in the Low Density Residential place type.

- **General Industrial and Highway Commercial east of Laughlin Road.** General industrial and highway commercial buildings would be along Northfront Road with the general industrial buildings on the north side of Northfront Road and highway commercial buildings located on the south side, closest to I-580.

The general industrial facilities would be one- to two-story structures surrounded by landscaped setbacks. Site design would promote an attractive surrounding outdoor environment between buildings. The front landscaped

setbacks would contribute to Northfront Road being a pedestrian-friendly streetscape. Parking would be located to the side or behind the buildings where possible. Buildings would be characterized by either flat or sloped roofs, facades with modulation, and modern architectural styling. Colors and materials may vary between buildings.

The highway commercial developments would include hotels, motels, restaurants, gas stations, and similar buildings oriented towards travelers. Most structures would be between one to four stories in height with setbacks on all sides. The front and side setbacks would likely be landscaped; parking and access would likely be located for convenience and accessibility with some landscaping. Site design would place buildings as close to the front property line as possible. Buildings would be characterized as having either flat or sloped roofs, facades with modulation, and potential balconies. Buildings may have storefronts facing Northfront Road. The ground floor may feature awnings or overhands over primary entrances and promenades. Colors and materials would vary between buildings.

- **Streetscapes.** Northfront Road along the residential area would be a pedestrian-oriented environment with sidewalks, landscaping, trees, and pedestrian-scaled lights. Northfront Road along the industrial and commercial area closer to the I-580 ramps would be similar with potentially wider setbacks of buildings. The highway commercial developments may include plazas or outdoor spaces for seating at the front of buildings. Laughlin Road would be a pedestrian-friendly environment with potential ground-floor frontage from the high-density residential buildings.

The east side would feature landscaped setbacks and trees as a screen for the industrial developments.

- **Open Space.** The majority of the Focus Area would remain undeveloped open space. If public access were to be allowed in the future, some small staging areas would be developed that would potentially include parking, signage, and restrooms. However, the majority of the open space would remain in its current appearance.

Mixed-Use Alternative

The Mixed-Use Alternative for the Laughlin Road Focus Area envisions a mixed residential and neighborhood commercial area west of Laughlin Road; and a strip of highway commercial east of Laughlin Road between Northfront Road and I-580. Much of the northern area would be maintained as open space.

- **Residential and Neighborhood Commercial west of Laughlin Road.** The southwest portion of the Focus Area would be for neighborhood commercial fronting Northfront Road with a combination of medium-density residential and low-density residential to the north. A common public open space would be located in the center of this area.

The neighborhood commercial developments would be one to two stories high and potentially attached to have a continuous frontage along Northfront Road. These buildings may have little to no setback from the front property line with potential for usable outdoor space in front. Parking would be located at the rear. The buildings would be characterized by either flat or sloped roofs;

storefronts along Northfront Road; and awnings in the front.

The medium-density residential would be two- to three-story attached residential structures, which could be townhomes, low-rise garden apartments, or condominiums. The buildings would have landscaped frontages set back from the street. Parking may be in the form of attached garages or as a common parking lot to the rear of the buildings. Buildings would be characterized by sloped roofs, articulated building facades, potential balconies, and porches. Colors and materials may vary between buildings.

The low-density residential area would be one- to two-story single-family homes or duplex types with landscaped setbacks on all sides. Parking would be provided in garages that would be set back to minimize visibility from the street. Buildings would be characterized by sloped roofs, articulated building facades, and front porches. Colors and materials may vary between buildings.

- **Highway Commercial east of Laughlin Road.** The highway commercial buildings like hotels, restaurants, and gas stations would be located between Northfront Road and I-580. These buildings would be between one to four stories high with setbacks on all sides. The front and side setbacks and parking lots would be landscaped. Site design would place buildings as close to the front property line as possible. Buildings would be characterized as having either flat or sloped roofs, facades with reliefs and potential balconies. Buildings may have storefronts facing Northfront Road. The ground floor may feature awnings or

overhands over primary entrances and promenades. Colors and materials may vary between buildings.

- **Streetscape.** Northfront Road along the neighborhood commercial developments would be a pedestrian-friendly street with wide sidewalks, landscaping strips, trees, and pedestrian-scaled lights. There may be plazas or space for outdoor dining along the street. The streetscape along the highway commercial developments would be similar. Laughlin Road would be a pedestrian-friendly environment featuring landscaping, trees, and wide sidewalks.
- **Open Space.** The majority of the Focus Area would remain undeveloped open space. If public access were to be allowed in the future, some small staging areas would be developed that would potentially include parking, signage, and restrooms. However, the majority of the open space would remain in its current appearance.

Industrial Alternative

The Industrial Alternative for the Laughlin Road Focus Area envisions an area mixed with housing and industrial uses to the west of Laughlin Road and highway commercial developments to the east along Northfront Road. Much of the northern area would be maintained as open space.

- **General Industrial and Residential west of Laughlin Road.** General industrial buildings containing manufacturing and warehousing operations would front Northfront Road. A strip of high-density residential would be located adjacent to the north. The remainder of this area would be planned for medium-density residential, with a

greenway running between the medium and high-density residential.

The general industrial developments would be one- to two-story buildings surrounded by landscaped setbacks and parking located to the rear. Additional landscaping and trees along the northern edges would allow for a landscaped transition and buffer to high-density residential developments. Buildings would be characterized by flat or sloped roofs, facades with modulation, and modern architectural styling. Colors and materials may vary between buildings.

The high-density residential developments would be apartments or condominiums four stories or higher and have landscaped setbacks on each side. Each development would connect to a new adjacent greenway with potential for primary pedestrian entrances to front along it. Access to these apartment buildings would be off a new residential lane that would connect to Laughlin Road, Scenic Avenue, and/or Herman Avenue. Each development would have common open space and parking would be located in a ground-floor podium, underground, or in a separate structure. Buildings would be characterized with flat or sloped roofs, articulated building facades, upper floor setbacks, and potential balconies. Colors and materials may vary between buildings.

The medium-density residential to the north of the greenway would be two- to three-story attached residential structures, which could be townhomes, low-rise garden apartments, or condominiums. These would provide a transition between the new high-density residential

developments and existing low-density neighborhoods to the north and west. These buildings would have landscaped front setbacks and parking may be in the form of attached garages or as a common parking lot at the rear of buildings. Buildings would be characterized by sloped roofs, articulated building facades, porches, and potential balconies. Colors and materials may vary between buildings.

- **Highway Commercial east of Laughlin Road.** Highway-oriented commercial buildings like hotels, restaurants, and gas stations would be planned for on both sides of Northfront Road. These buildings would be between one to four stories high with setbacks on all sides. The front and side setbacks and surface parking lots would be landscaped. Site design would place buildings as close to the front property line as possible. Buildings would be characterized as having either flat or sloped roofs, facades with modulation, and potential balconies. Buildings may have storefronts facing Northfront Road. The ground floor may feature awnings or overhands over primary entrances and promenades. Colors and materials may vary between buildings.
- **Streetscape.** Northfront Road along the general industrial area and the highway commercial area would feature landscaping, trees, and lights. The landscaped front setbacks of the buildings would add to the streetscape space. Laughlin Road would feature landscaping, trees, and wide sidewalks to create a pedestrian-friendly street.
- **Open Space.** The majority of the Focus Area would remain undeveloped open space. If public access were to be

allowed in the future, some small staging areas would be developed that would potentially include parking, signage, and restrooms. However, the majority of the open space would remain in its current appearance.

5.1.17 Las Positas Court Focus Area

The descriptions of possible urban design characteristics are based on the place types shown in **Figure 9, Las Positas Court Focus Area Alternatives**.

Residential Alternative

The Residential Alternative for the Las Positas Court Focus Area plans for focused development fronting Las Positas Court with the remainder of the area maintained as open space. Mixed-industrial and office development would be planned for north of Las Positas Court and low-density residential to the south. Open space would be planned for areas north and south of the development.

- **Industrial-Office north of Las Positas Court.** These developments would be one to two stories high surrounded by landscaped setbacks. Primary entrances would front Las Positas Court and parking would be located behind buildings to help create a pedestrian-oriented environment. Buildings would be characterized by flat or sloped roofs, building facades featuring modulation, and potential entrance canopies or promenades.
- **Low-Density Residential south of Las Positas Court.** These would be single-family homes or duplexes one to two stories high with landscaped setbacks on all sides. Parking would be provided in garages that would be set back to minimize visibility from the street. The homes

would be characterized by sloped roofs, porches, and variation in styles and colors between buildings.

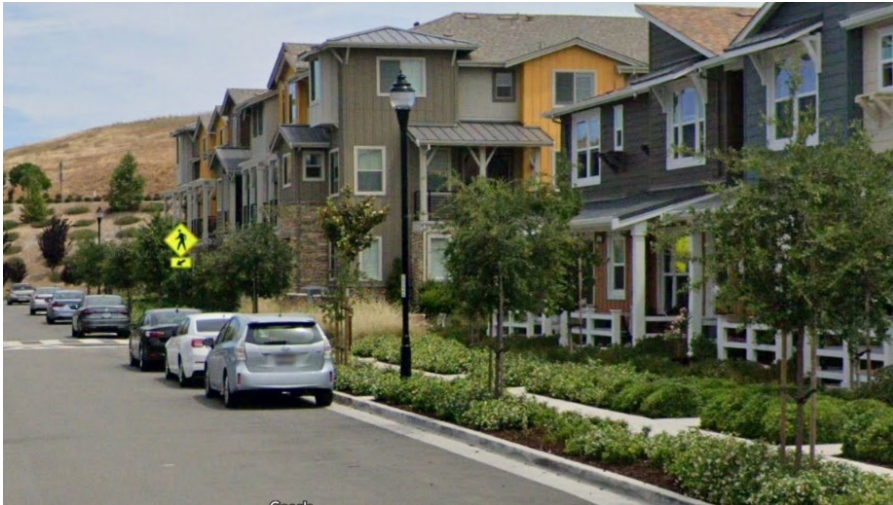
- **Streetscapes.** Las Positas Court would feature trees, landscaping, sidewalks, and lights to create the feeling of a residential street. The frontages and setbacks of the industrial-office developments would complement and support the residential feel of the street. The end of Las Positas Court towards the north would provide access to the open space around Arroyo Las Positas.

Neighborhood Center Alternative

The Neighborhood Center Alternative is similar to the Residential Alternative except it plans for medium-density residential and neighborhood commercial instead of low-density residential south of Las Positas Court. There would be mixed-industrial-office development north of Las Positas Court. Existing open space would be maintained along Arroyo Las Positas and along the southern edge of the Focus Area. The area between Arroyo Las Positas and I-580 would be planned for agriculture.

- **Industrial-Office north of Las Positas Court.** The industrial-office developments would be one to two stories high surrounded by landscaped setbacks, with minimal setbacks along Las Positas Court. Surface parking would be located behind buildings. Buildings would be characterized by flat or sloped roofs, modern architectural styling, building facades featuring modulation, and potential entrance canopies or promenades.
- **Medium-Density Residential and Neighborhood Commercial south of Las Positas Court.** The neighborhood commercial lots would front Livermore

Avenue and the medium-density residential developments would front Las Positas Court. The medium-density residential would be two- to three-story attached residential structures, which could be townhomes, low-rise garden apartments, or condominiums. The buildings would form a connected façade along Las Positas Court with potential porches overlooking the street and landscaped front yards. Parking may be in attached garages or provided as a common parking lot to the rear of the buildings. These buildings would be characterized by sloped roofs and variation in style and colors.



The recent Sage development in Livermore is an example of medium-density residential townhomes that could be allowed in the Medium Density Residential land use place type.

The neighborhood commercial developments would be one to two stories high and would likely be designed as a continuous frontage along Livermore Avenue. These buildings may have little to no setback from the front property line with the possibility of usable outdoor space at the front of these lots. Parking would be located at the

rear. The buildings would be characterized by flat or sloped roofs, storefronts, and awnings along Livermore Avenue.

- **Agricultural area along I-580.** This area would feature vineyards, a farm or community gardens with accessory one-story agricultural facilities. Trees would surround this area to buffer from surrounding uses and Highway 580.
- **Streetscapes.** Las Positas Court would feature trees, landscaping, sidewalks, and lights to create the feeling of a residential street. The frontages and setbacks of the industrial-office developments would complement and support the residential feel of the street. Livermore Avenue would be a pedestrian-oriented street with potential outdoor seating and dining space.

Highway-Oriented Alternative

The Highway-Oriented Alternative would plan primarily for general industrial and mixed industrial-office developments with medium-high-density residential, with open space woven through the development. General industrial and industrial-office buildings would be located both in the northern part of the Focus Area between Arroyo Las Positas and I-580; and between Arroyo Las Positas and Las Positas Court. Medium-high-density residential would be planned for south of Las Positas Court with industrial-office developments fronting Livermore Avenue.

- **General Industrial and Industrial-Office along I-580.** General industrial and industrial-office developments along I-580 would be grouped together and would be one- to two-story manufacturing or warehouse buildings surrounded by landscaped setbacks. This area would potentially be campus-like with landscaping, pedestrian

paths, open space, service areas, and surface parking lots organized around each building. The buildings would be visible from I-580 and be characterized by flat or sloped roofs, facades designed with reliefs, modern architectural styling, and variation in colors between buildings. A new roadway network connected to Las Positas Court and/or Livermore Avenue would be needed to provide access to this area. As noted in the description of this alternative in Chapter 2, developing land north of Arroyo Las Positas would likely be challenging due to the cost and difficulty of providing roadway access across the arroyo.

- **General Industrial, Industrial-Office, and Medium-High Density Residential on Las Positas Court.** The general industrial and industrial-office buildings would be north of Las Positas Court and the medium-high-density residential would be south of Las Positas Court. Both industrial-office and general industrial developments would be one- to two-stories high and front Livermore Avenue. The general industrial developments may feature larger landscaped setbacks along Livermore Avenue than the industrial-office developments to provide additional buffering. These buildings would be characterized by flat or sloped roofs, building facades with modulation, modern architectural styling, and variation in colors between buildings. Industrial-office buildings fronting Livermore Avenue may have potential storefronts. Parking for these buildings would be in the rear.

The medium-high-density residential homes would be three stories or higher. These would be apartment building structures with parking in a ground-floor podium, underground, or separate structure. These sites would be

designed to include common open spaces for residents along with landscaped setbacks. These buildings would be characterized by flat or sloped roofs, articulated building facades, potential balconies, and variation in colors between buildings.

- **Streetscapes.** Las Positas Court would feature trees, landscaping, sidewalks, and lights to create a pedestrian-friendly street. The frontages and landscaped setbacks of the industrial-office and residential developments would complement this streetscape. Livermore Avenue in front of the industrial-office developments would feature similar treatment with potential street frontage from the buildings. The potential new roadway system in the industrial area along I-580 would have pedestrian-oriented streetscapes.

5.1.18 Vasco Row Focus Area

The descriptions of possible urban design characteristics are based on the place types shown in Figure 11, Vasco Row Focus Area Alternatives.

Maker Village Alternative

The Maker Village alternative envisions medium-high-density residential development to the west of Research Drive, industrial development between Research Drive and South Vasco Road, and wine-country commercial development east of South Vasco Road. There would be a centrally located open space to serve as a common public space for this area.

- **Research Drive: Medium-High Density Residential and Mixed Commercial and Industrial.** Research Drive would feature medium-high density residential fronting the western and southern edges, and mixed commercial and

industrial fronting the east and northern edges. A new park would be located in the center of the Focus Area.

The medium-high-density residential developments would be three- to four-story apartment buildings with landscaped setbacks fronting the street. Each development would be designed with common open space for residents and parking located behind the buildings. Buildings would be characterized by sloped roofs, articulated building facades, and potential balconies. Colors and materials may vary between buildings.



Tin City in Paso Robles is an example of the type of development that could be allowed and encouraged within the new Mixed Commercial and Industrial land use place type.

The mixed commercial and industrial developments would be one- to two-story structures surrounded by landscaped setbacks. Site design would include features and trees to guide and invite visitors into customer-oriented tasting rooms or event spaces, as well as buffers surrounding private, production-oriented areas for machinery, equipment, and storage. Landscaping along Research Drive

would be designed to contribute to a pedestrian-oriented streetscape. Parking would be located to the side or behind the buildings with service and loading areas designed or placed to minimize visibility from the street. Buildings would be characterized with flat or sloped roofs, building facades with modulation, and modern architectural styling.

A new park would be located along Research Drive. Research Drive would be designed as a pedestrian-oriented streetscape with sidewalks, landscaping, trees, and lighting.

- **South Vasco Road: Mixed Commercial and Industrial and Wine-Country Commercial.** South Vasco Road would have mixed commercial and industrial developments to the west and wine-country commercial developments located to the east.

The mixed commercial and industrial developments would be one- to two-story buildings surrounded by landscaped setbacks. Parking would be located in the rear or at the sides. Site design would minimize the visibility of service and loading areas from the street. Buildings would be characterized with flat or sloped roofs, building facades with modulation, and modern architectural styling.

The wine-country commercial developments would be one- to two-story buildings that would front along South Vasco Road. These buildings may be designed to have outdoor seating and gathering areas in front or within the development, such as an interior courtyard. Parking would be at the side or behind the buildings. Buildings would be characterized by either flat or sloped roofs, storefronts

facing the street, articulated building facades, and potential awnings.

South Vasco Road would be designed to be a pedestrian-friendly environment with wide sidewalks, landscaping, trees, and lighting.

Production Alternative

The Production Alternative envisions mixed commercial and industrial facilities in the western half of the Focus Area and wine-country commercial buildings on the east. The industrial developments would front both sides of Research Drive, while the commercial buildings would mostly front South Vasco Road.

- **Mixed Commercial and Industrial along Research Drive.** The mixed commercial and industrial buildings would be one- to two-story structures surrounded by landscaped setbacks. Site design of each development would collectively create an attractive surrounding outdoor environment in the area to appeal to customers and visitors dining, tasting, or attending events. Landscaping in front of the buildings would contribute to creating a pedestrian-friendly streetscape along Research Drive. Additional landscaping on the sides would help create buffers with existing adjacent residential development immediately west of the Focus Area. Parking would be located to the side or behind the buildings. Buildings would be characterized with flat roofs and modern architectural styling. Colors and materials may vary between buildings.
- **Wine-Country Commercial along South Vasco Road.** The wine-country commercial developments along South Vasco Road would be one- to two-story buildings that would front

the along South Vasco Road. These buildings may be designed to have outdoor seating and gathering areas in front or within the development, such as an interior courtyard. Parking would be at the side or behind the buildings. Buildings would be characterized by either flat or sloped roofs, storefronts facing the street, articulated building facades, and potential awnings.

- **Streetscapes.** Both Research Drive and South Vasco Road would be designed to be a pedestrian-friendly environment with wide sidewalks, landscaping, trees, and lighting.

Wine Country Center Alternative

The Wine Country Center Alternative envisions medium density residential on the north area, wine-country commercial for remainder of the Focus Area, and a public open space providing a common connection between these two land uses.

- **Wine-Country Commercial Center:** The wine-country commercial developments would front both Research Drive and South Vasco Road. These would be one- to two-story buildings that may have outdoor seating and gathering areas in front or within the development, such as an interior courtyard. Parking would be at the side or behind the buildings. Buildings would be characterized by either flat or sloped roofs, storefronts facing the street, articulated building facades, and potential awnings.
- **Medium-Density Residential:** The medium-density residential on the north end of Research Drive would be two- to three-story attached residential structures, which could be townhomes, low-rise garden apartments, or condominiums. The buildings would have landscaped

setbacks fronting along the street. Parking may be in the form of individual garages or as a common parking lot to the rear of the buildings. Buildings would be characterized by sloped roofs, articulated building facades, balconies, and porches. Colors and materials may vary between buildings.

- **Streetscapes:** Both Research Drive and South Vasco Road would be pedestrian-oriented streetscapes with wide sidewalks, landscaping, trees, and lighting. The setbacks in front of the wine-country commercial uses may be wider to accommodate outdoor gathering or seating space.

5.1.19 East of Greenville Focus Area

The descriptions of possible urban design characteristics are based on the place types shown in Figure 13, East of Greenville Road Focus Area Alternatives.

Alternative A

Alternative A envisions majority of the Focus Area developed as industrial development, which would potentially be business park environments for research and development offices, lab spaces, and manufacturing facilities with ancillary supporting logistical and/storage capabilities. The northern area would include an open space buffer east against the hills. The southern area would include a wine catalyst agriculture use at the southern end.

- **North Industrial Business Parks.** The northern area (generally north of the intersection with Patterson Pass Road) would be developed into industrial business parks that would be one- to two-story industrial office facilities arranged with landscaping, trees, pedestrian paths,

vehicular circulation, and surface parking. Building architecture would likely be contemporary office buildings that could draw from and complement the styles of buildings in the Lawrence Livermore National Laboratory. Attention would be given to design of frontage of the industrial parks along Greenville Road and Patterson Pass Road to create a quality street environment with landscaping and visually interesting building facades. The open space buffer would buffer against the hills and Department of Water Resources (DWR) Reservoir and could be mostly passive open space with some areas planned for more active uses. It could contain trails that would traverse the hills in this area.

- **South Industrial Business Park and Research Campus.** The area south of Patterson Pass Road would have industrial business parks, a research campus component, and a wine catalyst agricultural site to the south. The industrial business parks and research campus would likely be similar to the north area with one- to two-story buildings arranged with landscaping and designed similar to the northern industrial campus area. Building architecture would look like contemporary office buildings that could draw from and complement the styles of buildings in the Lawrence Livermore National Laboratory. The wine catalyst site would have crop fields with one- to two-story facilities and buildings interspersed throughout. A buffer would likely be created between the research campus and wine catalyst site.



The University Research Park in Madison, Wisconsin is an example of the type of research campus use that could be allowed or encouraged in the East of Greenville Road Focus Area under all three alternatives.

Alternative B

Alternative B envisions the north area developed as industrial, the south area developed as a research campus with park and wine catalyst site, and commercial uses lining Patterson Pass Road.

- **North Industrial Business Parks.** North of Patterson Pass Road would be developed into industrial business parks similar to Alternative A with one- to two-story buildings arranged within landscaping, pedestrian paths, vehicular circulation, and surface parking throughout. Attention would be given to design of frontage of the industrial parks along Greenville to create a quality street environment with landscaping and visually interesting building facades. Building architecture would likely be contemporary office buildings that could draw from and complement the styles of buildings in the Lawrence Livermore National

Laboratory. There would be a dedicated wildlife corridor on the eastern edge running along the South Bay Aqueduct.

- **South Research Campus and Wine Catalyst Site.** South of Patterson Pass Road would include a research campus with one- to two-story buildings arranged as a pedestrian-friendly environment with landscaping, publicly accessible plazas, pedestrian paths, vehicular circulation, and surface parking. The southernmost and easternmost areas would be a wine catalyst site with a park bridging it with the research campus. Building architecture would likely be contemporary research buildings designed as if for a university campus. The park would be a space that could be used by research campus workers and agricultural workers and could also contain sports fields for Livermore residents. The design and programming of this space would likely respond to their needs.
- **Patterson Pass Road Commercial.** Alternative B includes commercial uses lining Patterson Pass Road, which would potentially create a retail environment of one- to two-story buildings along a walkable street with storefronts. These could be cafes, restaurants, shopping, services, and other similar commercial uses which would respond to the needs of the industrial business parks, research campus, and wine catalyst site.

Alternative C

Alternative C envisions industrial business park developments in the north, which would include a significant open space area; and a large research campus coupled with commercial and a park in

the south area. The southern end would have the wine catalyst agricultural site like the other two alternatives.

- **North Industrial Business Parks.** The north area would primarily be a series of industrial business parks with dedication of the northernmost hills as open space. The business parks would be one- to two-story buildings arranged with landscaping, pedestrian paths, vehicular circulation, and surface parking. Building architecture would likely be contemporary office buildings that could draw from and complement the styles of buildings in the Lawrence Livermore National Laboratory. Attention would be given to design of frontage of the industrial parks along Greenville Road and Patterson Pass Road to create a quality street environment with landscaping and visually interesting building facades.
- **South Research Campus and Wine Catalyst Site.** The south area would primarily be a research campus with the wine catalyst site south of it. The research campus would likely have one- to two-story buildings that could be research and education-related facilities, arranged in a campus environment with landscaping, trees, publicly accessible plazas, and surface parking. Building architecture would likely be contemporary research buildings designed as if for a university campus. Commercial development would be created west along Greenville Road, which would be a row of one- to two-story retail that would be accessible from both Greenville Road and the campus. A public park would be created to the east to provide usable open space for employees and possibly sports fields for Livermore residents. The wine catalyst site would be arranged similar to the other alternatives.

Scenic Corridor Policy

This section provides a qualitative analysis of how potential development of the Focus Areas could affect views along I-580 and consistency with the existing Scenic Corridor policy of the General Plan. This evaluation is based on an assessment of building massing simulations from four viewpoints along I-580 that correspond to the established Subareas of the Scenic Corridor policy. Figure 18 shows the Scenic Corridor subareas established under the General Plan.

This evaluation is not a quantitative evaluation that measures the exact height or scale of specific buildings against the established view planes and view angles of the policy, because the land use alternatives are conceptual, and no specific architectural drawings or site surveys have been developed. Similarly, the massing simulations are intended to provide a sense of scale and the potential extent of future building envelopes. This imagery does not represent specific buildings or proposals, and it does not include architectural or landscaping details that would be part of actual development. The colors of the building envelopes correspond to the colors of the place types and land use descriptions in Figure 3.

All viewpoints were captured using Google Streetview to simulate views as seen from a vehicle traveling along I-580. Therefore, the viewing elevation in these images differs from the viewpoint established in the General Plan Scenic Corridor policy. Each viewpoint was located such that the placement and view direction of each could best approximate any potential visual impacts that could result from development. Therefore, these images are

valuable for comparing the relative differences in building massing that could result from various development scenarios.

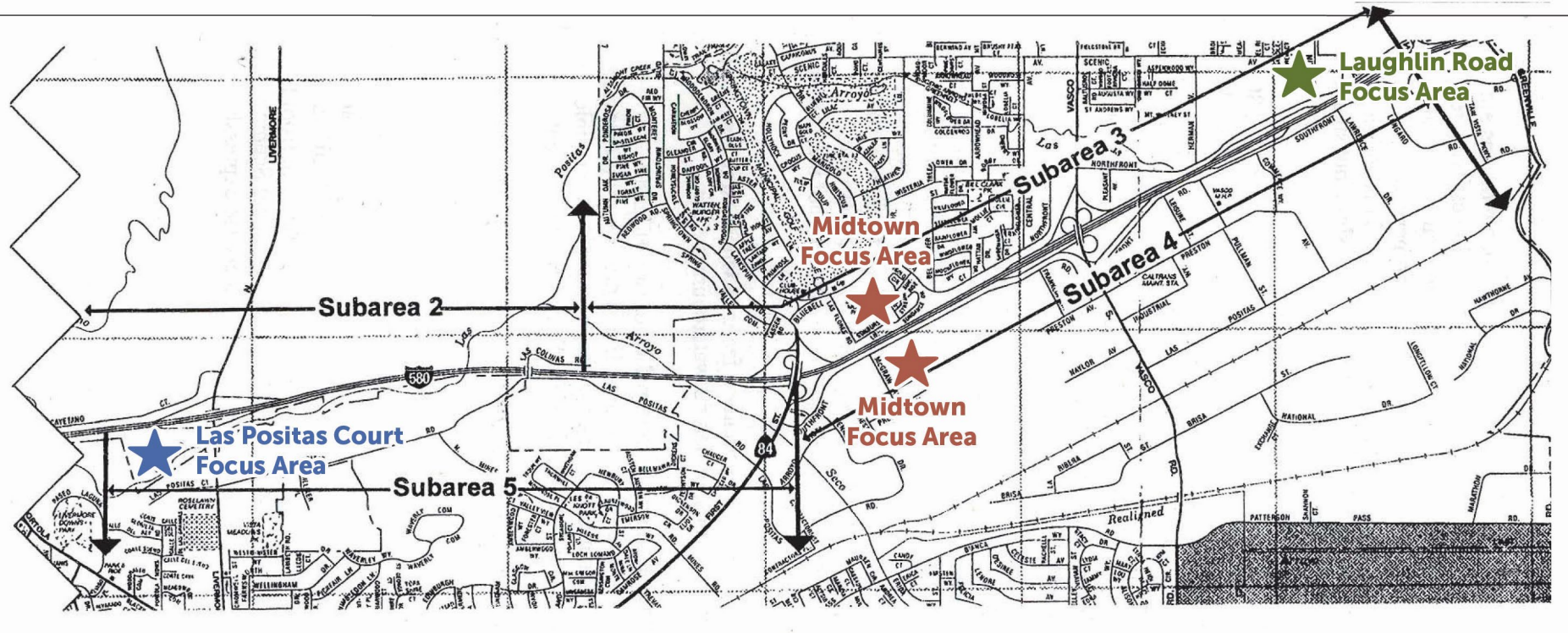
The I-580 Scenic Corridor is divided into six subareas. The General Plan provides policies and development standards for each subarea that reflect the unique visual resources in each area and are intended to preserve views to ridgelines and hillsides as seen from I-580.

Based on review of the Scenic Corridor policy, three Subareas could be affected by development of three of the five Focus Areas:

- The Midtown Focus Area north of I-580 is within Subarea 3, Subpart C.
- The Midtown Focus Area south of I-580 is within Subarea 4.
- The Laughlin Road Focus Area is within Subarea 3, Subpart A.
- The Las Positas Court Focus Area is within Subarea 5, Subpart A.

The Vasco Row Focus Area and the East of Greenville Road Focus Area are both outside the territory covered by the Scenic Corridor policy and are not considered in this evaluation.

Figure 18. Scenic Corridor Subareas Map



5.1.7 Midtown Focus Area (North)

Views established under Subpart C of Subarea 3 would be affected by development of the Midtown Focus Area north of I-580. The Scenic Corridor policy recognizes that there is an existing sound wall along the northern edge of the freeway within Subpart C.

This assessment is based on a vehicle traveling in the westbound direction and looking north. The Midtown Focus Area Land Use Alternatives are shown in Figure 5. Each alternative affects this visual quality in various ways.

- For the **Business Center Alternative**, travelers on I-580 would see the upper three to four stories of a few high-density residential developments above the sound wall, with remaining development of the Focus Area hidden by the sound wall.
- For the **Residential Neighborhood Alternative**, travelers on I-580 would see the upper four or more stories of multiple high-density residential developments in a row above the sound wall, with remaining development of the Focus Area hidden by the sound wall. Because this alternative dedicates more land to high-density residential development along the freeway, this alternative would affect views from I-580 the most.
- For the **Blended Alternative**, travelers on I-580 would have the same visual experience as the Business Center Alternative with views of the upper three to four stories of a few high-density residential developments above the sound wall, with remaining development of the Focus Area hidden by the sound wall.

Based on this assessment, new development of high-density residential, especially in the Residential Neighborhood Alternative, should be designed with visually interesting facades since they would be visible above the sound wall along I-580.



Existing viewpoint from I-580 in the westbound direction looking north at the part of the Midtown Focus Area North that is within Scenic Corridor Subarea 3, Subpart C.



View of potential development of the Business Center Alternative. The upper one to two stories of high-density residential development would likely be visible to travelers along I-580.



View of the massing envelopes of potential development of the Residential Neighborhood Alternative in the Midtown Focus Area North. The upper stories of multiple high-density residential developments would likely be visible to travelers along I-580.



View of the massing envelopes of potential development of the Blended Alternative in the Midtown Focus Area North. The upper stories of high-density residential development would likely be visible to travelers along I-580.

5.1.8 Midtown Focus Area (South)

Subarea 4 contains southern views from I-580 between First Street and Greenville Road Focus Area. The Scenic Corridor policy for Subarea 4 recognizes that existing development and infrastructure within Subarea 4 already limit views to the distant hills south of Livermore. Therefore, the policy assigns importance to the visual quality of the built environment and new development in addition to preservation of views to the south wherever possible. It is possible that a new sound wall would be constructed along with future development in this area.

This assessment is based on a vehicle traveling in the eastbound direction. The Midtown Focus Area Land Use Alternatives are shown in Figure 5. Each alternative affects this visual quality in various ways. This Focus Area includes the anticipated future development of a transit station along Southfront Road that would connect to the potential public plaza. For the purposes of the Scenic Corridor analysis, the design and details of the transit station and public plaza are not shown since their designs are not being evaluated in this report. They would be designed to be inviting spaces like other plazas in Livermore and would likely include planters, seating, lighting, public art, and other related features.

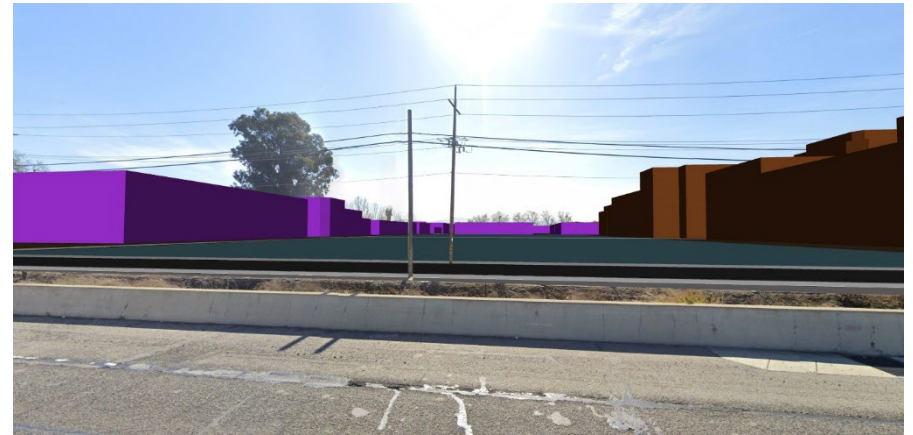
- **Business Center Alternative**, travelers on I-580 would first see one to two story industrial and the upper stories of four to six story residential development, followed by an opening with a rail station and public plaza, then views of the upper portions of one- to two-story industrial and commercial buildings.

- For the **Residential Neighborhood Alternative**, travelers on I-580 would first see Mixed Industrial-Office, including R&D, and life science buildings, followed by a view of a wide public plaza with high-density mixed-use development in the background, then views of neighborhood commercial buildings like restaurants, grocery stores, and salons. This alternative would add the greatest amount of development within Subarea 4. Although high-density residential development would parallel I-580 across much of Subarea 4 and could affect I-580 traveler views, high quality site and building design could have offsetting benefits compared to disturbance to viewsheds.
- For the **Blended Alternative**, travelers on I-580 would first see medium- and high-density residential such as townhomes, apartments, and condominiums, followed by a view of a wide public plaza with high-density mixed-use and residential development in the background, then views of one- to two-story industrial and manufacturing buildings. Mixed industrial buildings could potentially be up to 45 to 50 feet tall, but their distance from I-580 could increase the possibility of preserving views of the distant hills to the south within Subarea 4.

Based on this assessment, new development in the Midtown Focus Area south of I-580 should be designed with variation in building height and location to reduce the appearance of a uniform “wall” of development and to provide glimpses through the buildings to the distant hills. Under all alternatives, future development proposals would be evaluated individually against the Scenic Corridor policy provisions for Subarea 4 regarding building facades, development massing, parking lot layout, and landscaping.



Existing viewpoint from I-580 looking south at the Midtown Focus Area South within Scenic Corridor Subarea 4.



View of potential development of the Business Center Alternative in the Midtown Focus Area South. The high-density residential development is to the right, a public plaza in the center, and general industrial development to the left.



View of potential development of the Residential Neighborhood Alternative in the Midtown Focus Area South. There would be a wide public plaza in the center around the future Valley Link station, with mixed industrial buildings likely visible beyond the plaza and station, and service commercial development on the left.



View of potential development of the Blended Alternative in the Midtown Focus Area South. There would be medium- and high-density residential to the right (not visible in this frame), a wide public plaza in the center, and general industrial development on the left.

5.1.9 Laughlin Road Focus Area

Laughlin Road Focus Area is located in Subarea 3, which contains northern view angles from I-580 between approximately Las Colinas Road and Greenville Road. This Subarea effectively covers the eastern half of Livermore, north of I-580. Laughlin Road Focus Area development would be visible from I-580.

This assessment is based on a vehicle traveling in the eastbound direction and looking north in order to provide the widest field of view of potential development. The specific view angles established by the Scenic Corridor policy may differ. Each Focus Area alternative has different results based on land use place types. The Laughlin Road Focus Area Land Use Alternatives are shown in Figure 7.

- For the **Open Space Alternative**, travelers on I-580 would see one- to two-story low-density residential developments, followed by four- to five-story high-density residential developments, then one- to two-story industrial and commercial buildings. The lower heights of these buildings could preserve some views of the hills to the north.
- For the **Mixed Use Alternative**, travelers on I-580 would see one- to two-story commercial buildings throughout the segment with roads and spaces between development potentially preserving views of the hills to the north with occasional views of low- and medium-density residential behind the commercial developments. Since this alternative does not include any high-density residential, it would offer the most opportunities for potentially preserving views north toward the hills.

- For the **Industrial Alternative**, travelers on I-580 would first see one- to two-story industrial buildings backdropped by four- to five-story high-density residential buildings, followed by views of one- to two-story commercial development for the remainder of the segment.

Based on this assessment, new development in the Laughlin Road Focus Area should be designed with variation in building height and location to reduce the appearance of a uniform “wall” of development and to provide glimpses through the buildings to the northern hills.



Existing viewpoint of the Laughlin Road Focus Area from I-580 in the eastbound direction looking north at Scenic Corridor Subarea 3, Subpart A. This viewpoint is included to show a wider angle of potential development.



View of the massing envelopes of potential development in the Laughlin Road Focus Area Open Space Alternative. The low-density residential development is to the left, high-density residential in the center, and general industrial and service commercial development to the right.



View of the massing envelopes of potential development in the Laughlin Road Focus Area Mixed Use Alternative. Neighborhood commercial is in the front on the left and center with low- and medium-density residential behind, and service commercial development to the right.



View of the massing envelopes of potential development in the Laughlin Road Focus Area Industrial Alternative. General industrial with high-density residential behind is to the left and center, followed by service commercial development to the right.

5.1.10 Las Positas Court Focus Area

Subarea 5 contains southern views from I-580 between west of Livermore Avenue and First Street. Views established under Subpart A of Subarea 5 would be affected by development of the Las Positas Court Focus Area. This assessment is based on a vehicle traveling in the eastbound direction and looking south. The Las Positas Focus Area Land Use Alternatives are shown in Figure 9. Each alternative affects this visual quality in various ways.

- For the **Residential Alternative**, travelers on I-580 would see open space in the foreground with one- to two-story mixed-industrial and low-density residential developments in the background. Mixed industrial buildings could potentially be up to 45 to 50 feet tall, but their distance from I-580 would likely preserve some views of the hills to the south.
- For the **Neighborhood Center Alternative**, travelers on I-580 would have a visual experience similar to the Residential Alternative and see agriculture and open space in the foreground with one- to two-story mixed-industrial and medium-density residential in the background. Mixed industrial buildings could potentially be up to 45 to 50 feet tall, but their distance from I-580 would likely preserve some views of the hills to the south.
- For the **Highway Oriented Alternative**, travelers on I-580 would first see one- to two-story industrial and mixed-industrial buildings in the foreground with occasional potential views of other development and hills in between these buildings. This alternative places development

closest and parallel to I-580 and would be least likely to preserve views to the south.

Based on this assessment, new development in the Highway Oriented Alternative should be designed with variation in building height and location to reduce the appearance of a uniform “wall” of development along I-580 and to provide glimpses through the buildings to the distant hills.



Existing viewpoint from I-580 in the eastbound direction looking south at the Las Positas Focus Area within Scenic Corridor Subarea 5, Subpart A.



View of potential development of the Residential Alternative the Las Positas Focus Area. There would be open space in the foreground with mixed-industrial and residential development in the background.



View of potential development of the Neighborhood Center Alternative the Las Positas Focus Area. There would be agriculture and open space in the foreground with mixed-industrial and residential development in the background.



View of potential development of the Highway Oriented Alternative the Las Positas Focus Area. There would be general industrial development to the right (not visible in this frame) and mixed-industrial development to the left in the foreground, with potential views of other development in the background.

Historic Resources

In 2021, the City of Livermore completed an updated historic resource survey which identified approximately 70 historical resources and approximately 220 potentially historical resources as shown in Figure 19. Historic resources are those that have been professionally surveyed, using historic information and site visits, and documented. Potentially historic resources are those that have been flagged as relating to a historic theme in Livermore, but not yet surveyed. Key historical and potentially historical properties identified include:

- Ravenswood
- Hagemann Ranch
- Bank of Italy Building
- Old City Hall/jail building in the downtown
- Foresters Hall
- Schenone Building
- Carnegie Library
- Duarte Garage
- Rodeo grounds at Robertson Park
- Original Concannon winery building

About 1 percent of all approximately 30,000 properties in Livermore were found to be historic or potentially historic, which is typical for cities of Livermore's size and age. For a complete list of these resources, visit:

<https://www.livermoreca.gov/home/showpublisheddocument/7622/63763514792870000>

As shown in Figure 19, there are no known existing or potential historic resources in the five Focus Areas within the historic resource survey area. Although the East of Greenville Focus Area is outside the historic resource survey area, given this area is largely undeveloped the presence of historic resources is low. Therefore, all alternatives would perform the same in regard to preserving historic resources. However, the City should consider consulting the Alameda County Historic Preservation Commission and historic resource inventory and should update its historic resources inventory for new lands annexed into the City.

Archaeological Resources

This section describes how the alternatives could potentially affect archaeological resources in the five Focus Areas. This assessment is based on the 2022 Livermore Cultural Resources Existing Conditions Report which provides information on archaeological resources in the Livermore vicinity which can be reviewed at: https://imaginelivermore2045.org/wp-content/uploads/2022/03/08_Cultural_Mar2022.pdf

Although archaeological resources could be present throughout the city, there are federal and state laws that protect these resources. For purposes of comparison, this analysis assumes that land with an urban designation could disturb archaeological resources. However, when actual projects are proposed there are

many tools to avoid these potential disturbances. The General Plan EIR will analyze potential impacts to and mitigations to protect archeological resources.

Midtown Focus Area

Archaeological resources could occur anywhere within the Midtown Focus Area. The Arroyo Seco creek and its tributary intersect this Focus Area which could increase the chances of archaeological resources being present.

The urban designations under all three alternatives would have the potential to disturb archaeological resources during the construction of buildings and other supporting infrastructure such as roads, sidewalks, parking, etc.

Given ground disturbance could occur at similar levels under all three alternatives, they would all perform the same regarding the potential to disturb archaeological resources should they be present in this Focus Area.

Laughlin Road Focus Area

Although archaeological resources could be present anywhere within the Laughlin Road Focus Area. However, all three alternatives in the Laughlin Road Area dedicate a significant amount of open space, including the area surrounding Arroyo Las Positas, so the creek corridor would remain undisturbed under all three alternatives.

The urban designations under all three alternatives would have the potential to disturb archaeological resources during the construction of buildings and other supporting infrastructure such as roads, sidewalks, parking, etc.

All three alternatives would convert open space to residential, industrial and/or commercial uses and have similar potential to affect archaeological resources that could be present in this Focus Area, with both the Open Space and Industrial alternatives having the largest footprint of urban development and would therefore have a greater potential to disturb archaeological resources compared to the Mixed Use Alternative.

Las Positas Court Focus Area

The Las Positas Court Focus Area is largely undeveloped with the Arroyo Las Positas creek running through the northern half of the Focus Area. The Residential Alternative includes the most open space and would therefore be less likely to disturb archaeological resources compared to the Neighborhood Center and Highway Oriented Alternatives.

The Highway Oriented Alternative includes fewer urban designations compared to the Neighborhood Center Alternative that are more likely to disturb archaeological resources. However, the Highway Oriented Alternative includes agricultural uses that could affect archeological resources at the surface level and would therefore have a greater potential to disturb these resources compared to the Residential Alternative that proposes open space uses in this same area.

The Neighborhood Center Alternative would convert the most land to urban uses and would therefore have a greater potential to disturb archeological resources compared to the Residential and Highway Oriented Alternatives.

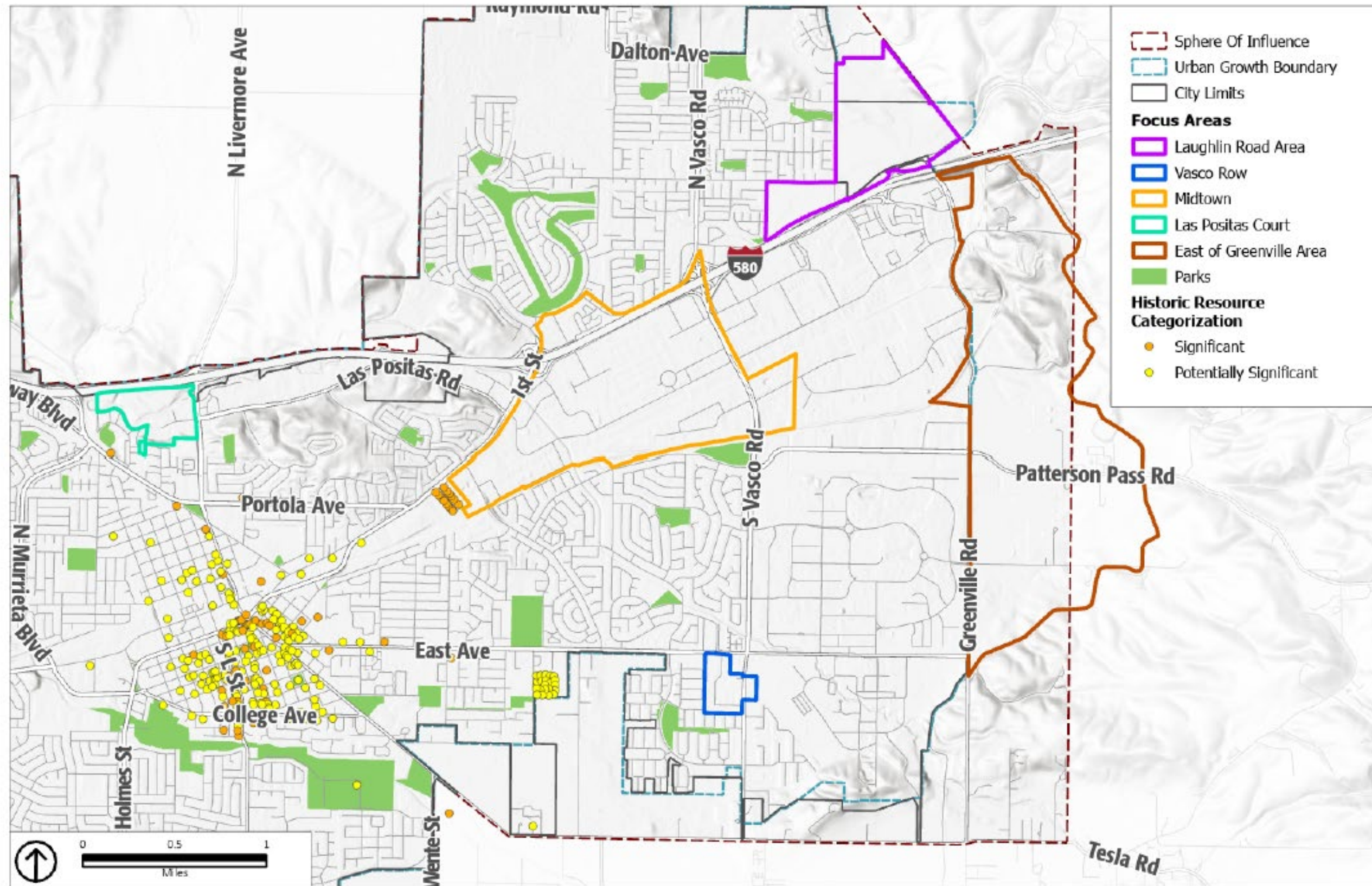
Vasco Row Focus Area

The Vasco Row Focus Area is a built-out infill area that does not include any open space. Ground disturbance could occur at similar levels under all three alternatives, so all alternatives perform the same regarding the potential to disturb archaeological resources should they be present in this Focus Area.

East of Greenville Road Focus Area

The East of Greenville Focus Area is largely undeveloped, which could result in higher chance of undisturbed and unidentified archaeological resources being present. Under all three alternatives, the development of commercial, industrial, park, and agricultural uses could disturb archaeological resources. Therefore, all alternatives perform the same regarding the potential to disturb archaeological resources should they be present in this Focus Area.

Figure 19. Known Historic Resources in Livermore



Source: City of Livermore, 2023; Esri, 2021; PlaceWorks, 2023

Agricultural Resources

Unincorporated areas to the north, east, and west of Livermore are currently used for rangeland, dry farmland, irrigated cropland, and uncultivated farmland. Agricultural uses south of Livermore include vineyards, orchards (mainly olives and nuts), rangeland, and uncultivated farmland. In addition to how the land is used, this evaluation of agricultural resources also considers how the alternatives would affect “farmlands of concern” as classified by the State Department of Conservation (DOC) and as protected by the California Environmental Quality Act (CEQA). In that classification system, the Livermore area includes Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Livermore also includes Farmland of Local Importance and Grazing Land; however, these are not considered “farmlands of concern” under CEQA. For these reasons, all the alternatives would not have a significant impact on agricultural resources. Department of Conservation data is based on factors such as soil type, slope, and irrigation, and may not reflect existing agricultural use of the property. For more information about agricultural resources in Livermore, see the Agricultural and Forestry Resources Existing Conditions Report prepared in March 2022 at: https://imagineLivermore2045.org/wp-content/uploads/2022/03/03_Agriculture-and-Forestry-Resources_Mar2022.pdf



Grazing land in the East of Greenville Focus Area.

As shown on Figure 20, the Las Positas Court, Laughlin Road, and East of Greenville Road Focus Areas all include grazing land as mapped by the DOC. The DOC defines grazing land as areas where the existing vegetation is suited to the grazing of livestock. As discussed above, grazing land is not protected by CEQA.

Las Positas Court Focus Area

The Midtown Focus Area includes no grazing land or “farmlands of concern.” Given there are no farmlands of concern in this Focus Area, all alternatives would perform the same in regard to agricultural resources.

Laughlin Road Focus Area

The Laughlin Road Focus Area is largely undeveloped and includes 243 acres designated as grazing land and no “farmlands of concern.” Given there are no farmlands of concern in this Focus

Area, all alternatives would perform the same in regard to agricultural resources.

Las Positas Court Focus Area

The Las Positas Focus Area includes 44 acres designated as grazing land and no “farmlands of concern.” Given there are no farmlands of concern in this Focus Area, all alternatives would perform the same in regard to agricultural resources.

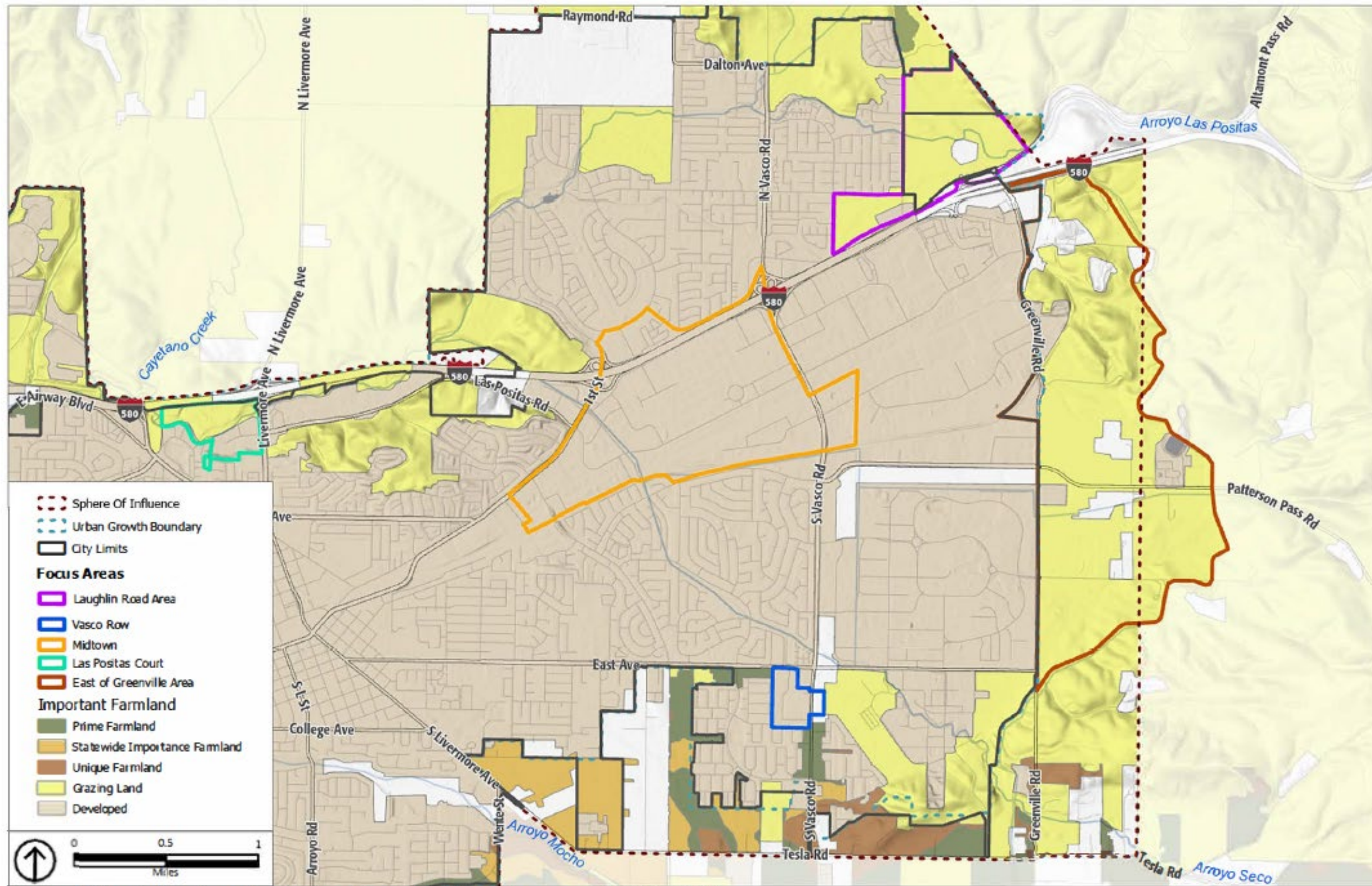
Vasco Row Focus Area

There are no agricultural resources in the Vasco Row Focus Area.

East of Greenville Road Focus Area

The East of Greenville Focus Area includes 954 acres of grazing land. Given there are no farmlands of concern in this Focus Area, all alternatives would perform the same in regard to agricultural resources.

Figure 20. Agricultural Land in the Focus Areas



Source: California Department of Conservation, 2021; City of Livermore, 2021; Esri, 2021.

Biological Resources

This section describes how the alternatives could potentially affect biological resources in the five Focus Areas. This assessment is based on available information on biological and wetland resources in the Livermore vicinity.

This evaluation is based on data gathered from:

- the 2003-2025 Livermore General Plan;
- the East Alameda County Conservation Strategy (EACCS);
- environmental documents for recent development applications;
- California Natural Diversity Database maintained by California Department of Fish and Wildlife;
- Information for Planning and Consultation (IPac) from the United States Fish and Wildlife Services (USFWS) for Livermore;
- the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants; and
- available geographic information system (GIS) data.

GIS data on vegetation cover, wetlands, and streams was obtained from the EACCS baseline biological inventory.






The GIS data was used to map the existing vegetation cover, associated wildlife habitats, and the known distribution of aquatic features including wetlands and streams in Livermore. Designated critical habitat for federally listed special-status species was





obtained from the USFWS. For more information about biological resources in Livermore, see the Biological Resources Existing Conditions Report prepared in March 2022, at this link: https://imagineLivermore2045.org/wp-content/uploads/2022/03/05_Bio_Mar2022.pdf

Table 14 shows example images of the biological resources that have the potential to be present in the Focus Areas.




The alternatives evaluation highlights the potential or known presence of biological resources in the Focus Areas. The evaluation then compares the alternatives against one another to understand which alternative could potentially disturb the most or fewest biological resources. This desktop-level analysis relies on the best available information described above, but the presence of biological resources would need to be confirmed by site surveys. If biological resources are found to be present, there are federal, state, and local regulations that guide the protection and, in circumstances where negative outcomes cannot be avoided, ways to mitigate them. However, just because biological resources are present, it does not necessarily mean that they would be negatively affected by development. The laws governing the protection of biological resources and/or the site design of proposed projects could avoid potential risks. For purposes of comparison, this analysis assumes that land with an urban designation would disturb biological resources. However, when actual projects are proposed there are many tools to avoid these potential disturbances.




Table 14. Potential Biological Resources in the Focus Areas




Species Name	Focus Area(s)	Photos	Source
Special-status wildlife			
vernal pool fairy shrimp <i>(Branchinecta lynchi)</i>	Laughlin Road; Las Positas Court; Vasco Row; East of Greenville		https://www.fws.gov/media/481391
California tiger salamander <i>(Ambystoma californiense)</i>	Laughlin Road; Las Positas Court; Vasco Row; East of Greenville		https://www.biologicaldiversity.org/species/amphibians/California_tiger_salamander/
California red-legged frog <i>(Rana draytonii)</i>	Midtown; Laughlin Road; Las Positas Court; East of Greenville		https://www.fws.gov/media/147788
western spadefoot <i>(Spea hammondi)</i>	Laughlin Road; Las Positas Court; Vasco Row; East of Greenville		https://californiaherps.com/frogs/pages/s.hammondii.html
western pond turtle <i>(Actinemys marmorata)</i>	Laughlin Road; Las Positas Court		https://www.biologicaldiversity.org/species/reptiles/western_pond_turtles/


Species Name	Focus Area(s)	Photos	Source
burrowing owl <i>(Athene cunicularia)</i>	Midtown; Laughlin Road; Las Positas Court; East of Greenville		https://www.fws.gov/media/154067
San Joaquin kit fox <i>(Vulpes macrotis mutica)</i>	Laughlin Road		https://www.fws.gov/media/148010
American badger <i>(Taxidea taxus)</i>	Laughlin Road		https://www.fws.gov/media/469661
Swainson's hawk <i>(Buteo swainsoni)</i>	Laughlin Road; Vasco Row		https://fws.gov/media/467231

Species Name	Focus Area(s)	Photos	Source
<p>white-tailed kite <i>(Elanus leucurus)</i></p>	<p>Laughlin Road</p>		<p>https://www.audubon.org/field-guide/bird/white-tailed-kite</p>
<p>ferruginous hawk <i>(Buteo regalis)</i></p>	<p>Laughlin Road</p>		<p>https://www.audubon.org/field-guide/bird/ferruginous-hawk</p>
<p>Cooper's hawk <i>(Accipiter cooperii)</i></p>	<p>Vasco Row</p>		<p>https://www.audubon.org/field-guide/bird/coopers-hawk</p>

Species Name	Focus Area(s)	Photos	Source
Special-status plants			
California alkali grass <i>(Puccinellia simplex)</i>	Laughlin Road		https://www.calflora.org/app/taxon?crn=6947
San Joaquin spearscale <i>(Extriplex joaquinana)</i>	Laughlin Road		https://www.calflora.org/entry/occdetail.html?seq_num=mu23192
alkali milk vetch <i>(Astragalus tener var. Tener)</i>	Laughlin Road		https://www.calflora.org/entry/occdetail.html?seq_num=po155689

Species Name	Focus Area(s)	Photos	Source
stinkbells <i>(Fritillaria agrestis)</i>	Laughlin Road		https://www.calflora.org/app/taxon?crn=3626
caper-fruited tropidocarpum <i>(Tropidocarpum capparideum)</i>	Laughlin Road		https://www.calflora.org/app/taxon?crn=8168
salt grass <i>(Distichlis spicata)</i>	East of Greenville		https://www.calflora.org/entry/occdetail.html?seq_num=mu3081

Species Name	Focus Area(s)	Photos	Source
wild carrot <i>(Daucus pusillus)</i>	East of Greenville		https://www.calflora.org/app/taxon?crn=2623
palmate-bracted bird's-beak <i>(Cordylanthus palmatus)</i>	East of Greenville		https://wildlife.ca.gov/Conservation/Plants/Endangered/Chloropyron-palmatum
long-styled sand spurrey <i>(Spergularia macrotheca var. Longistyla)</i>	Las Positas Court		https://www.calflora.org/app/taxon?crn=7711

Species Name	Focus Area(s)	Photos	Source
hairless popcorn flower <i>(Plagiobothrys glaber)</i>	Las Positas Court		https://www.calflora.org/entry/plantchar.html?crn=6569

Midtown Focus Area

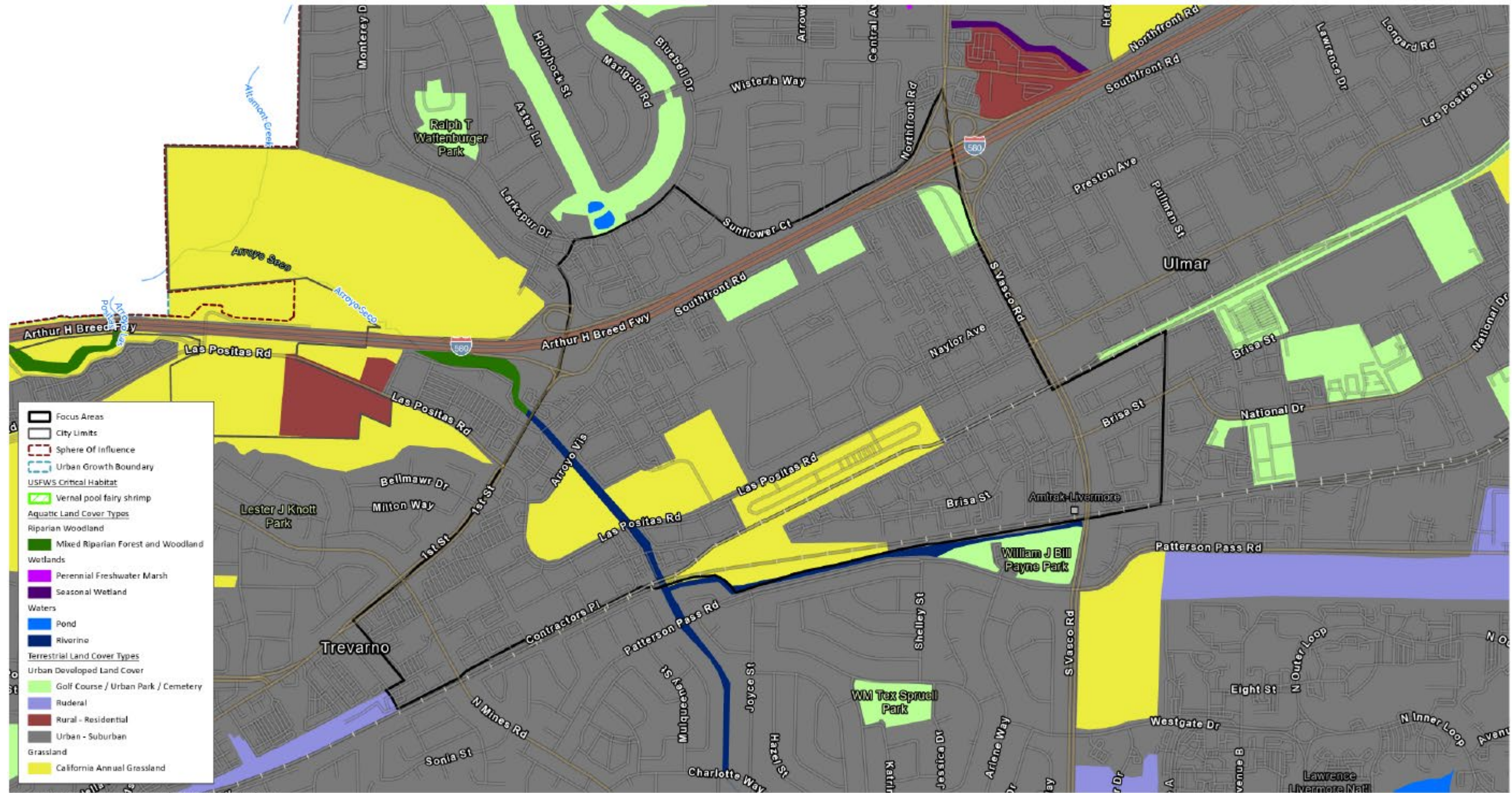
Although the majority of the Midtown Focus Area is characterized by existing commercial and industrial development, the area does include:

- Remnant patches of grasslands which, despite disturbed habitat conditions, could provide habitat for species tolerant to human disturbance, such as burrowing owl and non-status bird species that are protected while nesting.
- Channelized, concrete-lined segments of Arroyo Seco creek and its unnamed tributary. While this Focus Area is situated in an urbanized setting, Arroyo Seco and its tributary support a documented occurrence of California red-legged frog. Although potential development could occur near the creek corridor, the City’s creek setback requirements would protect biological resources in this area.

Figure 21 shows the potential biological resources in this Focus Area. All three alternatives could result in the same amount of grassland conversion to urban uses.

Given that all three alternatives could equally disturb grassland habitat, they would all perform the same in regard to biological resources.

Figure 21. Potential Biological Resources in the Midtown Focus Area



Sources: Esri, EACCS, WRA | Prepared By: LDIPierro, 9/29/2023

Laughlin Road Focus Area

The Laughlin Road Focus Area is largely undeveloped and bordered by open space to the north and east. This Focus Area includes or has the potential to support the following biological resources:

- Open expanses of grasslands, seasonal wetlands, and vernal pool complexes are located throughout the Focus Area. These habitats may provide habitat for a variety of federal and/or state listed species and state species of concern or fully protected species, including:
- vernal pool fairy shrimp,
- California tiger salamander (*Ambystoma californiense*; CTS),
- western spadefoot (*Spea hammondi*),
- burrowing owl (*Athene cunicularia*),
- San Joaquin kit fox (*Vulpes macrotis mutica*),
- American badger (*Taxidea taxus*),
- Swainson's hawk (*Buteo swainsoni*),
- white-tailed kite (*Elanus leucurus*),
- ferruginous hawk (*Buteo regalis*)
- Arroyo Las Positas creek runs through the Focus Area and supports known occurrences of the western pond turtle (*Actinemys marmorata*) and other species.

- USFWS-designated critical habitat for vernal pool fairy shrimp (*Branchinecta lynchi*) and California red-legged frog (*Rana draytonii*; CRLF) occurs in much of the Focus Area.
- Grasslands in this Focus Area may also support a suite of special-status plant species, such as:
- California alkali grass (*Puccinellia simplex*).
- San Joaquin spearscale (*Extriplex joaquinana*),
- alkali milk vetch (*Astragalus tener* var. *tener*),
- stinkbells (*Fritillaria agrestis*),
- caper-fruited tropidocarpum (*Tropidocarpum capparideum*).

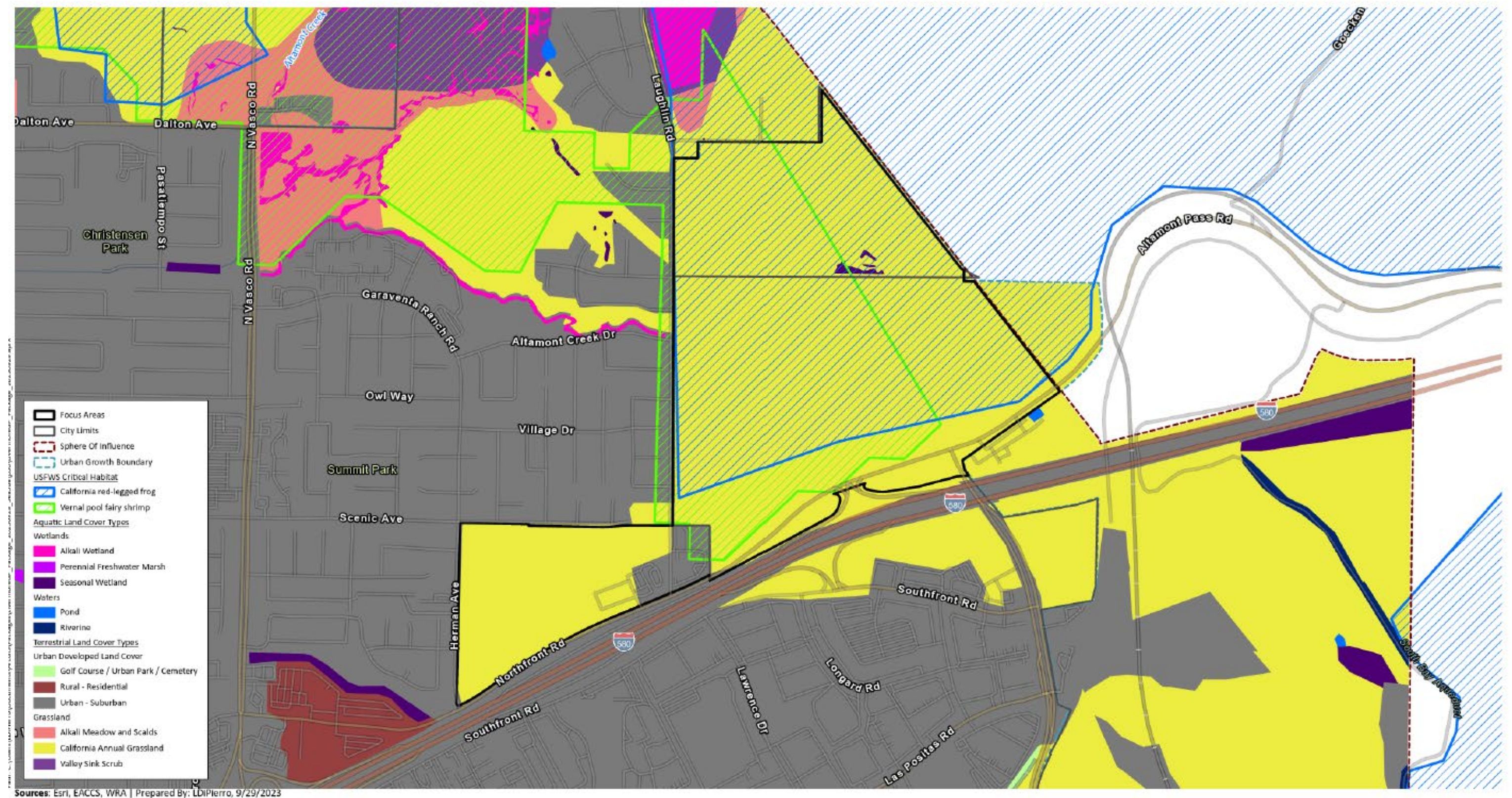
Figure 22 shows the potential biological resources in the Laughlin Road Focus Area.

Within the Laughlin Road Focus Area, all three alternatives would preserve 66 acres of open space to the north that supports grasslands, seasonal wetlands, Arroyo Las Positas creek, and USFWS-designated critical habitat for vernal pool fairy shrimp and California red-legged frog.

If realized, all three alternatives would convert grasslands to residential, industrial and/or commercial uses land uses, portions of which are designated critical habitat for vernal pool fairy shrimp and may also support burrowing owl and tiger salamander.

The Open Space and Industrial alternatives have the largest footprint of the urban development place types and would therefore be more likely to result in risks to sensitive species and habitats compared to the Mixed-Use Alternative.

Figure 22. Potential Biological Resources in the Laughlin Road Focus Area



Sources: Esri, EACCS, WRA | Prepared By: LDI/Pierro, 9/29/2023

Las Positas Court Focus Area

The Las Positas Court Focus Area includes mostly vacant land with commercial uses along Livermore Avenue and Las Positas Court. The following biological resources occur or have the potential to occur based on the types of habitats present and nearby species occurrence records:

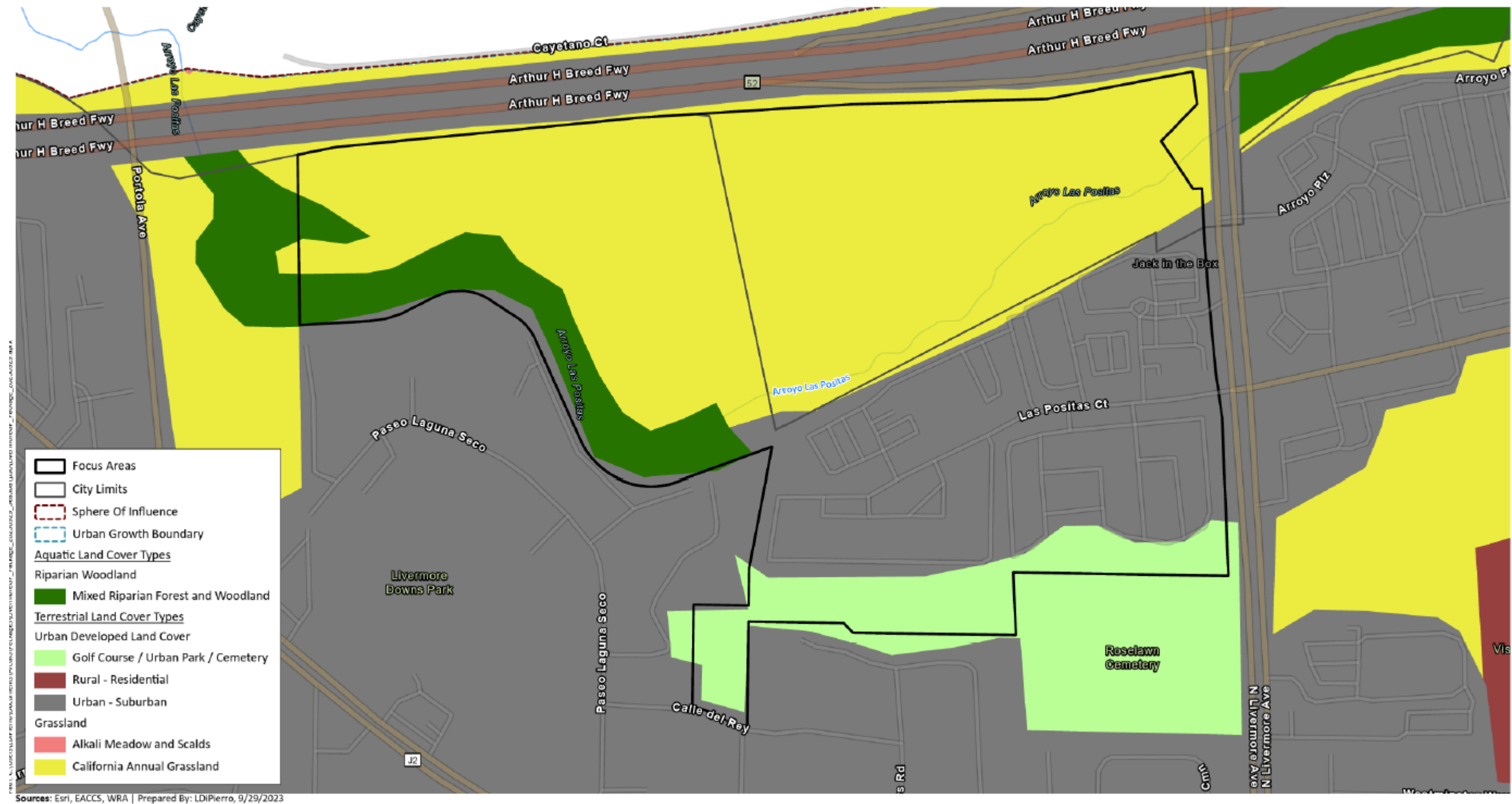
- Grasslands and seasonal wetlands provide potential habitat for burrowing owl, California tiger salamander, vernal pool fairy shrimp, western spadefoot, and suite of rare plant species, including long-styled sand spurrey (*Spergularia macrotheca* var. *longistyla*) and hairless popcorn flower (*Plagiobothrys glaber*).
- Arroyo Las Positas creek is a predominant aquatic feature in the Focus Area that is known to support occurrences of California red-legged frog and western pond turtle. All three alternatives would preserve the Arroyo Las Positas riparian corridor as open space.

Figure 23 shows the potential biological resources in the Las Positas Court Focus Area.

The Residential Alternative includes the largest area of open space which would preserve the most existing grassland and seasonal wetlands and the plant and animal species that could occur in these areas. The Neighborhood Center Alternative would convert grasslands to agricultural uses, which would result in the loss of seasonal wetlands and potential habitat for special-status wildlife and plant species. However, agricultural fields would provide the second-best benefit to biological resources, in that it would continue to provide foraging opportunities for raptors such as

white-tailed kite. The Highway Oriented Alternative would benefit biological resources the least, resulting in the greatest potential extent of disturbance to sensitive habitats and special-status species through conversion of undeveloped grasslands to industrial land uses.

Figure 23. Potential Biological Resources in the Las Positas Court Focus Area



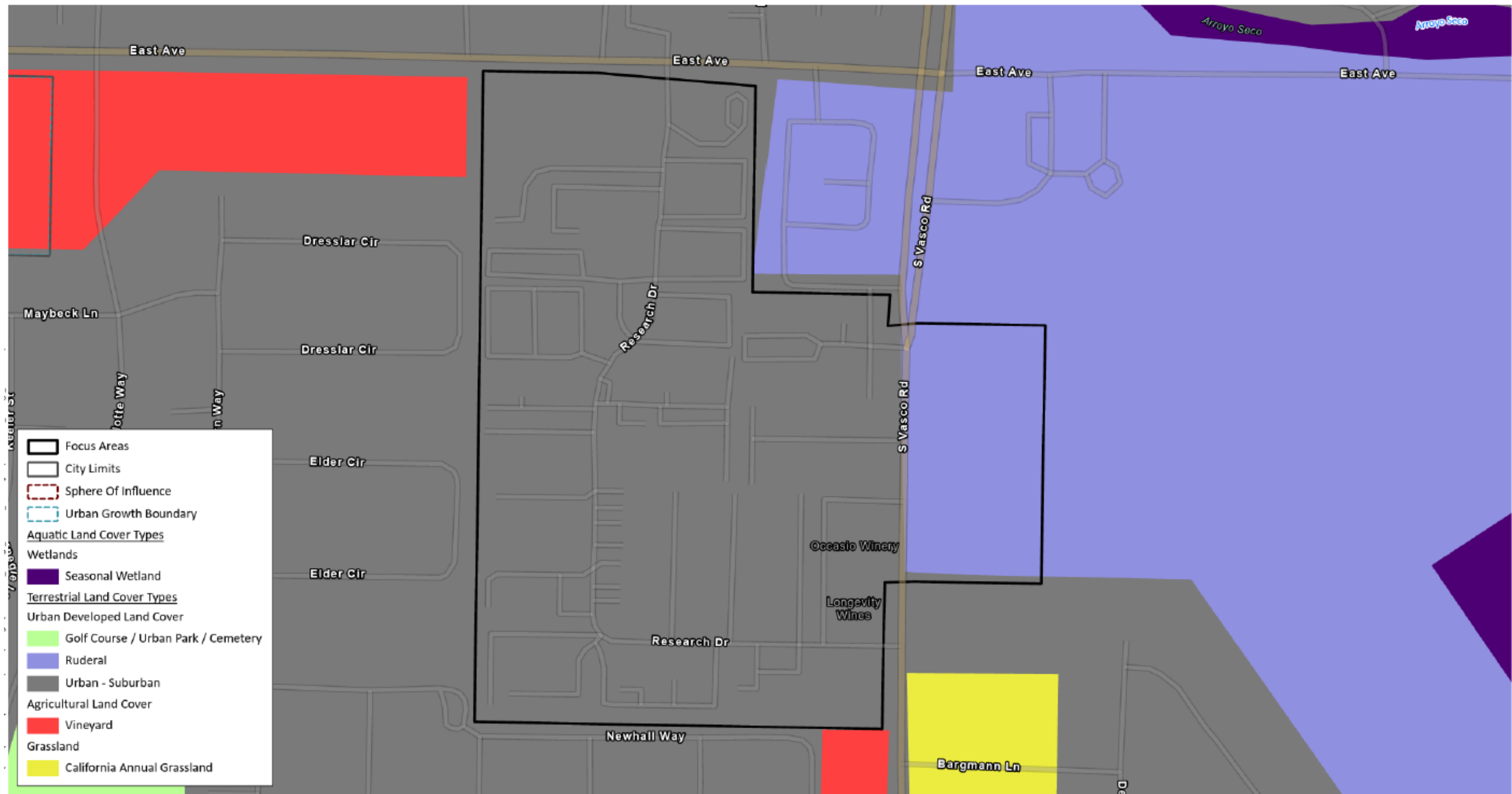
Vasco Row Focus Area

The Vasco Row Focus Area is almost entirely developed with the exception of a small area of undeveloped ruderal, or disturbed, grasslands at the east side of South Vasco Road. Figure 24 shows the potential biological resources in the Vasco Row Focus Area.

Ruderal grasslands provide potential habitat for burrowing owl and foraging opportunities for other raptors such as white-tailed kite, Cooper's hawk (*Accipiter cooperii*), and Swainson's hawk. Ruderal grasslands may also contain seasonal wetlands that could support western spadefoot, vernal pool fairy shrimp, and California tiger salamander.

All three alternatives for the Vasco Row Focus Area anticipate urban uses that would be achieved through primarily infill development. All three alternatives would also convert ruderal grassland to urban and/or park land uses, resulting in the same extent of disturbance to sensitive habitats and species that may be present.

Figure 24. Potential Biological Resources in the Vasco Row Focus Area



Sources: Esri, EACCS, WRA | Prepared By: LDIPierro, 9/29/2023

East of Greenville Road Focus Area

The East of Greenville Focus Area includes mostly undeveloped land. The following biological resources occur or have the potential to occur based on the types of habitats present and nearby species occurrence records:

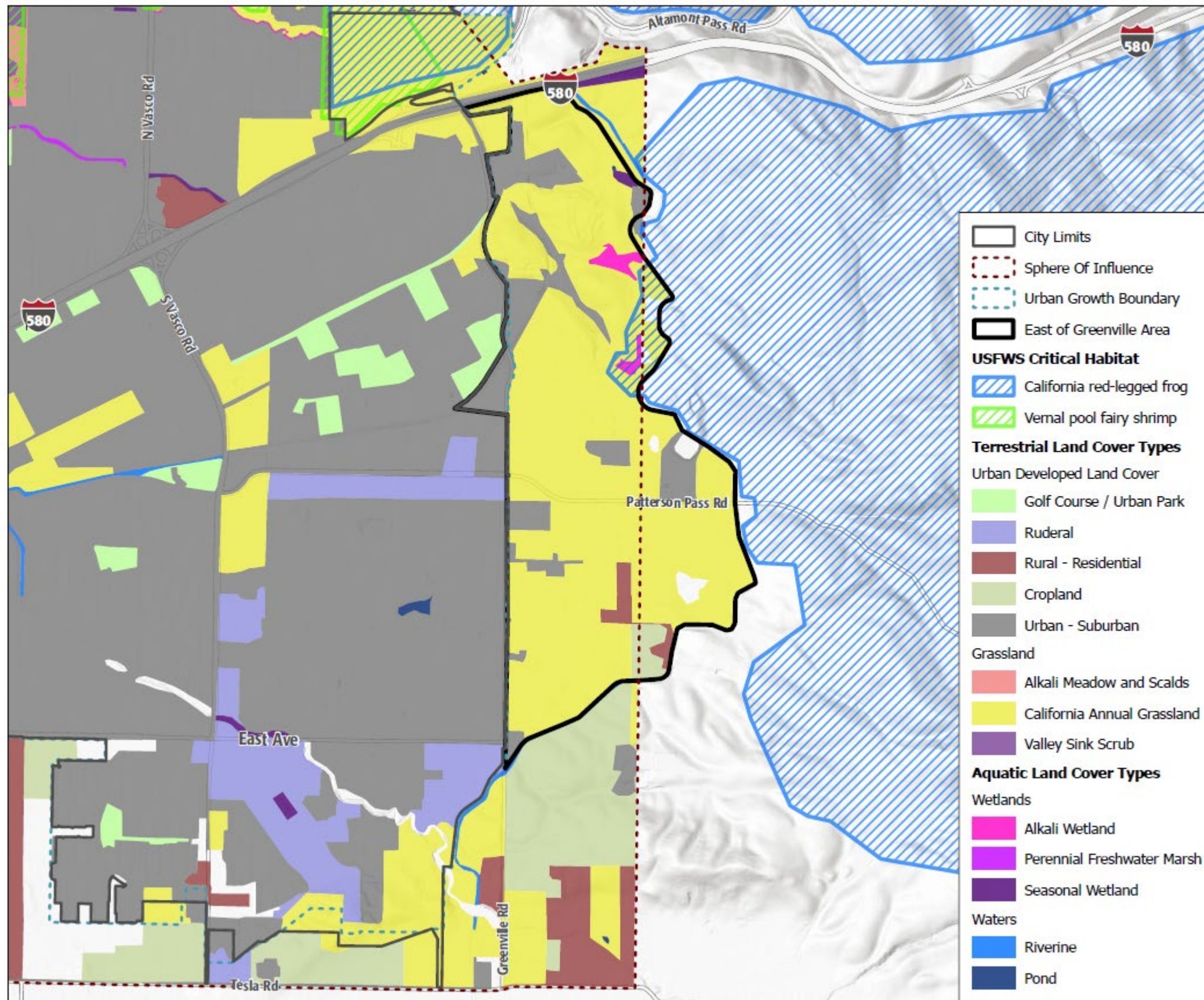
- Grasslands and alkali wetlands provide potential habitat for burrowing owl, California tiger salamander, vernal pool fairy shrimp, western spadefoot, and suite of rare plant species, including salt grass, wild carrot (*Daucus pusillus*), and palmate-bracted bird's-beak, a federally-listed and state-listed endangered plant.
- USFWS-designated critical habitat for California red-legged frog (*Rana draytonii*; CRLF) occurs mostly outside the Focus Area with the exception of a small area in the central/east portion of the Focus Area.

Figure 25 shows the potential biological resources in the East of Greenville Focus Area.

All three alternatives for the East of Greenville Road Focus Area anticipate urban uses that would disturb land classified as grassland. All three alternatives would convert grassland to urban and/or park land uses. However, both Alternative A and C would include approximately 160 acres of land for open space, which would result in less grassland disturbance compared to Alternative B.

Alternatives B and C have the potential to disturb more alkali wetland compared to Alternative A, which dedicates part of the area identified as having the potential for alkali wetland as Open Space.

Figure 25. Potential Biological Resources in the East of Greenville Road Focus Area



Source: City of Livermore, 2023; PlaceWorks, 2023; WRA, 2023

Climate Change and Natural Hazards

Climate change vulnerability is the degree to which the natural, built, and human systems are at risk of exposure to health and environmental hazards resulting from climate change impacts.³ Natural hazards are those risks inherently present in the environment that can cause death, injury, and property damage to communities. Natural hazards and climate change are related in that climate change can accelerate or worsen existing natural hazards present in the environment. Many climate and natural hazards affect the city as whole due to their broad nature. This section focuses on specific climate and natural hazards that could affect the five Focus Areas and assesses how vulnerable each Focus Area is to climate change and natural hazards. It evaluates the following risks:

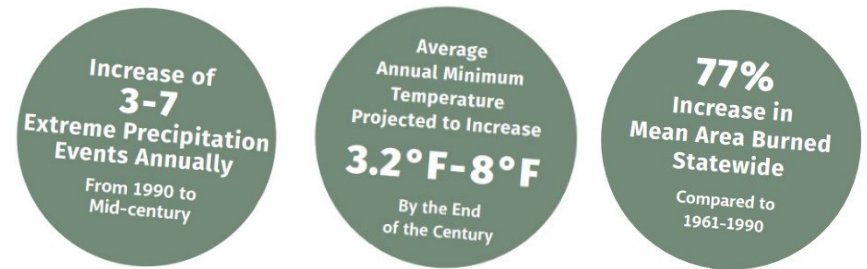
- Extreme Precipitation and Flooding
- Wildfire Risk
- Extreme Temperatures and Drought

For information about potential climate change related impacts to Livermore, see the Climate Change Vulnerability Assessment prepared in June 2022 at this link: <https://imagineLivermore2045.org/wp->

content/uploads/2023/02/Livermore-ClimateChange-VA_Summary_Revised_2022.pdf

The Livermore 2022 Climate Action Plan also acknowledges the hazards that climate change poses to Livermore and includes adaptation strategies to protect public health and the environment.

More information about potential natural hazard related impacts to Livermore, as well as strategies to prepare for, mitigate, and recover from disasters, are included in the City's Local Hazard Mitigation Plan (LHMP). The current LHMP was prepared in 2018 and an update is currently underway.



³ Governor's Office of Planning and Research (OPR). July 2018. Defining Vulnerable Communities in the Context of Climate Adaptation. OPR. https://opr.ca.gov/docs/20180723-Vulnerable_Communities.pdf

LIVERMORE'S CAP STRATEGIES AND OBJECTIVES

	STRATEGY	2030 OBJECTIVES
ADAPTATION	Extreme Heat	<ul style="list-style-type: none"> • Increase resilience to extreme heat events • Cool neighborhoods by expanding the urban canopy • Identify vulnerable areas and populations • Develop cooling centers that are energy-resilient
	Wildfire	<ul style="list-style-type: none"> • Mitigate wildfire risk • Facilitate building retrofits and operate clean air centers • Stockpile personal protective equipment • Reduce fire risk through fire-safe landscaping standards • Improve emergency alert systems
	Flooding	<ul style="list-style-type: none"> • Improve stormwater management • Harness Livermore's natural landscapes to improve stormwater management • Reduce the expansion of urban hardscapes

5.1.11 Extreme Precipitation and Flooding

Flooding risk in Livermore is higher with increased frequency and intensity of precipitation events. Extreme precipitation events are projected to increase in Livermore by the end of the century.⁴ Flooding in Livermore can result from overflowing of the arroyos across the city. Figure 26 shows the 100-year and 500-year flood zones in Livermore.

In this analysis, the risk of flooding is a concern primarily regarding development and the built environment. Therefore, alternatives proposing substantial open space and minimal development within and along flood zones would theoretically pose the least risk. Any new development within a flood zone will be required to include specific mitigation to reduce flood risk.

The following Focus Areas include floodplain areas.

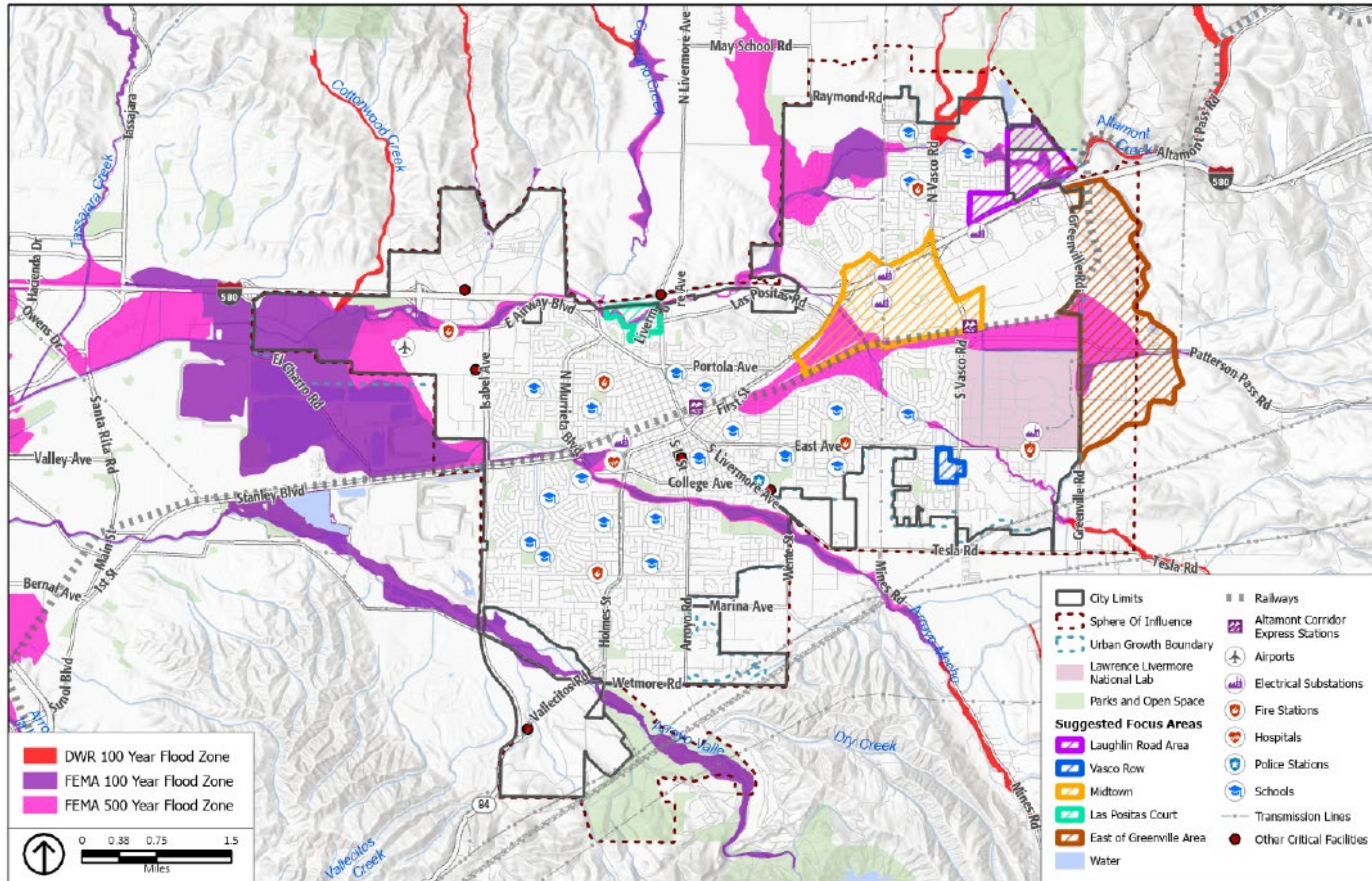
- **The Midtown Focus Area (500-year flood zone)** – Arroyo Seco runs north-south through the west of the Focus Area. Flooding here could potentially affect many developments in this Focus Area. All three alternatives include a linear greenway along Arroyo Seco that could help reduce flooding impacts in the event of a flood. The Business Center Alternative proposes the least extensive greenway and the Blended Alternative proposes the most extensive greenway as well as a park at the southern end. Therefore, the Blended Alternative would be the most resilient alternative.
- **Laughlin Road Focus Area (100-year flood zone)** – Arroyo Las Positas runs east-west through the northern section of this Focus Area. However, all three alternatives show open space and no development adjacent to the Arroyo, so flooding risk to development and population in this Focus Area is regarded as minimal.
- **Las Positas Court Focus Area (100-year flood zone)** – Arroyo Las Positas runs east-west through the center of this Focus Area. All alternatives show potential industrial and mixed-industrial development south of the arroyo which could be affected by flooding. The Highway Oriented Alternative also adds industrial and mixed-industrial development north of the arroyo, which could be at risk of flooding. The Residential Alternative would be most resilient out of the Las Positas Court Focus Area alternatives with the substantial open space planned north of the arroyo.
- **East of Greenville Focus Area (100-year flood zone)** – A tributary of Arroyo Seco runs east-west through this Focus Area south of Patterson Pass Road. All alternatives show various configurations of industrial, research campus, and commercial development adjacent to this arroyo that would likely be affected by flooding. Alternative A proposes a north-south open space that could help reduce the effects of flooding. Similarly, Alternative C includes a large park site south of Patterson Pass Road that could

⁴ City of Livermore. June 2022. Climate Change Vulnerability Analysis.

potentially serve as emergency flood storage. Alternative B is the least resilient against flooding.

The Vasco Row Focus Area is not located within a flood zone and therefore is determined to have no flooding risk in this analysis.

Figure 26. Flood Risks in Livermore



Source: DWR, 2021; FEMA, 2021; Cal OES, 2021; CEC, 2021; ACE, 2022; PlaceWorks, 2022.

5.1.12 Wildfire Risk

Risk of wildfire is affected by potential climate change to multiple elements of the wildfire system including fire behavior, ignitions, fire management, and availability of vegetation fuels. Increased temperatures may intensify wildfire danger by warming and drying out vegetation with hot dry spells creating the highest risk for fire.

The California Department of Forestry and Fire Protection (CAL FIRE) has determined that there are no Very High Fire Hazard Severity Zones in Livermore. However, Livermore does include areas of wildland-urban interface (WUI). A WUI is an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to the other.⁵ Development within the WUI not only increases the probability of wildfire ignition but also increases the probability that a wildfire will result in significant damage to property and loss of life. Wildfire risk could be reduced by creating buffers and fuel breaks that would prevent the spread of wildfires originating from wildland areas, such as through managed open space, open space corridor and buffers, and agriculture. Figure 27 shows the WUI areas in Livermore. WUI areas fall into three classifications:

- **WUI Zone:** The interface zone contains dense housing next to vegetation that can burn in a wildfire but is not dominated by wildland vegetation.

- **Intermix Zone:** The intermix zone contains housing development or improved parcels interspersed in an area dominated by wildland vegetation subject to wildfire.
- **Influence Zone:** The influence zone contains wildfire-susceptible vegetation within 1.5 miles from the WUI or intermix zones.

All five Focus Areas include or are adjacent to one or more of these WUI classifications and therefore are at potential risk from wildfires. Wildfire risk is created or heightened when development is placed close to or within flammable vegetation. Therefore, alternatives proposing the least development that is farthest away from WUI areas would be most resilient against wildfire risk:

- **Midtown Focus Area:** This Focus Area is an existing built area within the city, which limits its exposure to wildfire risk. However, the northwest boundary includes a WUI zone. All alternatives show commercial development along this edge and therefore assume equal wildfire risk.
- **Laughlin Road Focus Area:** This Focus Area would expand the built footprint of the city into the WUI and Influence Zones to the east. All alternatives can be assumed to have the same level of exposure to wildfire risk. The Open Space and Industrial Alternatives would introduce fewer structures adjacent to a Wildland Urban Interface Area

⁵ Diablo Fire Safe Council. 2015. *Community Wildfire Protection Plan Update Alameda County*.

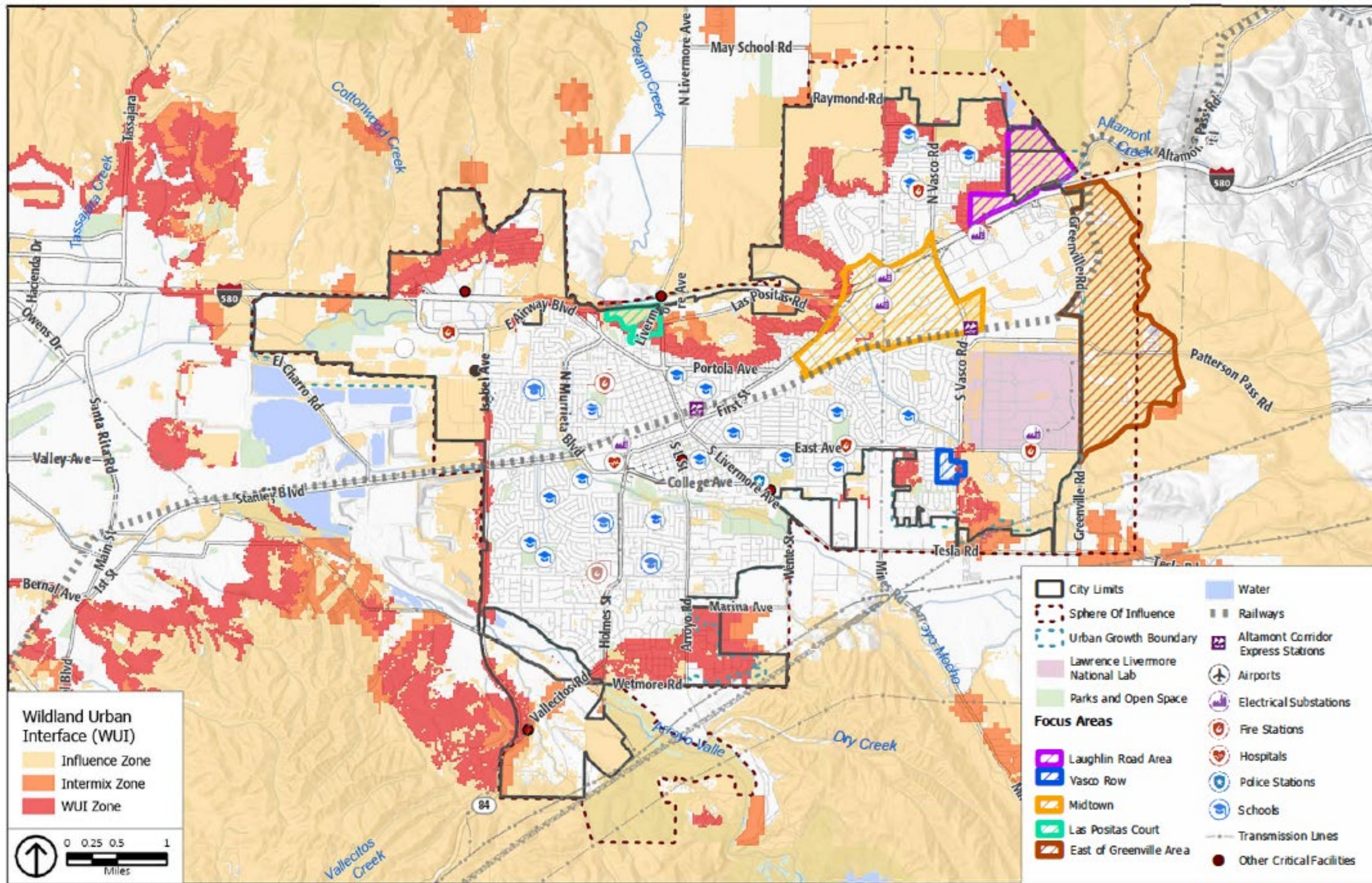
http://www.diablofiresafe.org/pdf/2015_Draft_AlCo_CWPP_Update.pdf, accessed on September 23, 2021.

compared to the Mixed Use Alternative and would have lower exposure to wildfire hazards.

- **Las Positas Court Focus Area:** This is an undeveloped area of the city and is within the WUI. The grassy vegetation on the site has burned multiple times in recent years. All alternatives propose development within the WUI. However, the Residential Alternative proposes the least amount and intensity of development as well as open space north of Arroyo Las Positas and therefore would potentially expose the least amount of development to wildfire risk.
- **Vasco Row Focus Area:** This Focus Area is located adjacent to undeveloped areas southeast of the city. The parcels to the east of South Vasco Road are in the WUI area and would be exposed to wildfire risk. All alternatives propose wine-country commercial development in this exposed area and therefore can be assumed to have equal risk to wildfire.
- **East of Greenville Focus Area:** The East of Greenville Focus Area is in primarily undeveloped land outside the City Limits. Though no WUI is shown within this Focus Area, it would be entirely within an Influence Zone, and development could create new WUI zones on the eastern edge of the Focus Area where buildings meet grasslands. Alternative A shows a north-south open space corridor that connects to grazing land to the east, which could effectively function as a contiguous wildfire buffer and fuel break to mitigate the spread of wildfire. Alternative C also includes open space on the eastern edge of the Focus Area, but the shape would be shorter and wider and would not extend as far south as the DWR Patterson Reservoir. Alternative B

does not include a designated open space area on the eastern edge of the Focus Area. Therefore, Alternative A would likely be most resilient against wildfires out of all the alternatives.

Figure 27. Wildland Urban Interface



Source: CAL FIRE 2020; Cal OES, 2021; CEC, 2021; ACE, 2022; PlaceWorks, 2022.

5.1.13 Extreme Temperatures and Drought

Extreme temperatures are climate change events that affect a city as a whole. The Vulnerability Assessment identified a potential increase of average annual maximum temperature between 5.0°F and 7.8°F by the end of the century.⁶ Extreme heat could potentially affect community structures and functions, such as creating higher energy usage that can lead to electrical restrictions or even blackouts or reducing snowpack that provides part of Livermore's water supply. It also has direct effects on the agricultural economy and other local businesses, such as those that host outdoor dining or events. Finally, extreme heat will increase heat-related illness among individuals with disabilities or compromised immune systems, children playing outdoors, tourists, farm workers and others working outdoors. However, local conditions may influence how extreme temperatures and heat events could affect an area. For example, increased tree canopy and open space could help mitigate heat effects by reducing urban heat island effects and increasing passive cooling. Developments and uses that would introduce large building footprints, areas of hardscaping, and artificial landscaping would likely increase temperatures within a local area. This analysis focuses on how the features of each Focus Area alternative could increase or decrease risks from extreme temperatures.

- **Midtown Focus Area:** This Focus Area contains the highest intensity of development of all Focus Areas and therefore

could experience the greatest impacts from extreme temperatures to residents, employment areas, and community functions. A key facility that would be at risk is the planned Midtown Valley Link Station. Electrical restrictions and blackouts could affect this station. Both the Residential Alternative and Blended Alternative show an east-west linear green space that could potentially help with cooling. However, since all alternatives would intensify the urban environment in this Focus Area, it is likely that extreme temperatures would have similar effects under all three alternatives.

- **Laughlin Road Focus Area:** All three alternatives focus development in the south and southwest sections of the Focus Area along I-580 and designate the majority of the land to open space. The Mixed Use Alternative dedicates the most land to this open space. This level of open space could potentially mitigate extreme heat through reduced heat absorption and therefore could make this alternative most resilient against extreme temperatures.
- **Las Positas Court Focus Area:** All alternatives dedicate the land south of Arroyo Las Positas to development. The Highway Oriented Alternative would create the highest intensity development and therefore could both exacerbate and be most affected by extreme temperature events. The Neighborhood Center Alternative would create agricultural use north of the Arroyo, which could be

⁶ University of California, Berkeley and California Energy Commission (UC Berkeley & CEC). n.d. Cal-Adapt. Accessed May 2020 at: <https://cal-adapt.org/>

exposed to the risk of crop failure in extreme heat events. The Residential Alternative would create open space north of the Arroyo, creating the largest potential for passive cooling; it would therefore be the most resilient alternative.

- **Vasco Row Focus Area:** All alternatives configure development around a new park. The Wine Country Center Alternative includes medium-density residential and wine-country commercial uses. The Maker Village Alternative would create the highest volume of residential development, allowing for site designs that could incorporate robust landscaping to reduce urban heat island effects, as well as the largest park space, making it potentially most resilient against extreme temperatures.
- **East of Greenville Focus Area:** All alternatives show industrial development north of Patterson Pass Road, agricultural use in the southern area, and development in between. Industrial developments would likely create large hardscaped parking areas combined with large building footprints that could increase local temperature gains. Alternative C would create the most non-industrial uses by having the largest research campus and park combined with a significant open space on the north and agricultural site to the south. Therefore, this Alternative would potentially be most resilient against temperature gains in the Focus Area.

Equity and Public Health

Equity and public health are important considerations in land use planning and development. Environmental policies and activities do not affect everyone equally and their effects are not evenly

distributed across a city. For example, residents who live near sources of pollution, such as industrial uses or I-580, are subject to a higher proportion of air quality issues than residents who live safely away from such pollution sources.

The equity and public health analysis of the alternatives evaluates potential outcomes that could result from the buildout of each alternative in terms of pollution burden, physical activity and open space, and food equity. These topics were selected based on the requirements of SB 1000, a California State law that requires the consideration of environmental justice as part of the General Plan.

For more information about existing equity and public health conditions in Livermore, please refer to the Environmental Justice Existing Conditions Report:

https://imagineLivermore2045.org/wp-content/uploads/2022/03/10_EnviroJustice_CmtyHealth_Mar2022.pdf

5.1.14 Pollution Burden

This section highlights the potential or known presence of airborne pollutants or groundwater threats in the Focus Areas. It compares the alternatives against one another to understand which alternatives could result in the greatest or least exposure to these sources of pollution.

- **Air Quality.** Poor air quality has been linked to an increased risk of several negative health outcomes, including asthma, lung disease, cancer, birth defects, and poor cardiovascular health. There are five major sources of air quality pollution that pose risks to Livermore residents: ozone, fine particulate matter (PM_{2.5}), diesel particulate matter, pesticides, and toxic emissions from industrial facilities. Those most susceptible to the effects of PM exposure include children, the elderly, and persons suffering from cardiopulmonary disease, asthma, and chronic illness. Of the five criteria air pollutants, ozone and particulate matter pose the greatest widespread and significant health threats.

Groundwater Threats. Many activities can threaten groundwater quality, including the storage and disposal of hazardous materials on land and in underground storage tanks at various types of commercial, industrial, and military sites. Thousands of storage tanks in California have leaked petroleum or other hazardous substances into surrounding soil and groundwater. Storage tanks are of particular concern when they can affect drinking water supplies. Common groundwater pollutants include gasoline and diesel fuels, chlorinated solvents and other volatile organic compounds (VOCs), pesticides, nitrates, and heavy metals such as lead and arsenic. For the purposes of this evaluation, groundwater

threats in each Focus Area are evaluated based on data available through CalEnviroScreen 4.0, which compiles records of the State Water Quality Control Board of sites that impact, or have the potential to impact, water quality in California. Livermore includes several of these sites.

It is important to understand that there are a number of well-established practices monitoring and remediating groundwater contamination and for protecting workers and residents from contaminated groundwater and groundwater vapor both during construction and after a building is occupied, such as vapor barriers.

Midtown Focus Area

The Midtown Focus Area is adjacent to I-580, and therefore at high risk of exposure to diesel and fine particulate matter pollutants. The Business Center Alternative proposes the highest proportion of industrial land uses for the Focus Area, which could increase the risk of exposure to poor air quality for nearby residents. Vasco Road runs adjacent to the site and would likely be used for truck and van access to the commercial and industrial sections of the Focus Area, potentially increasing the risk of exposure to pollutants. The Residential Neighborhood Alternative proposes medium- to high-density housing adjacent to major thoroughfares. This alternative would place a higher proportion of residents than the other alternatives near potential pollutants. Mitigation measures would need to be taken to ensure healthy air quality.

This Focus Area is also at risk of groundwater contamination. There are three existing groundwater cleanup sites within the Focus Area.

Laughlin Road Focus Area

The Laughlin Road Focus Area is adjacent to I-580, a major truck route through the city and region, which exposes existing and future residents to diesel and fine particulate matter. The Open Space Alternative and Industrial Alternative each locate industrial adjacent to high-density housing, which would place a greater number of residents at risk of exposure to poor air quality from the nearby highway and industrial land uses. Furthermore, the inclusion of industrial in the Focus Area would likely result in increased truck and van traffic as the General Industrial land use type allows for warehouses, research and design, and recycling facilities. The Mixed-Use Alternative poses less of a risk for exposure to poor air quality as it proposes commercial land uses adjacent to the highway, potentially buffering the proposed low- and medium-density housing from I-580.

The Laughlin Road Focus Area is within a much larger Census tract that has been identified as having a high potential for groundwater contamination. Adding more housing to this Focus Area would increase the number of residents at risk of exposure to contaminated groundwater and could require cleanup or remediation of nearby groundwater contamination sites if they are near proposed housing or facilities with workers. However, as noted above, there are common and well-established methods for protecting workers and residents from contaminated groundwater and groundwater vapor both during construction and after a building is occupied.

Las Positas Court Focus Area

The Las Positas Court Focus Area is bound by I-580, a regional truck route, and two local delivery routes: Livermore Avenue and Portola Avenue. This Focus Area is therefore at risk of exposure to diesel and fine particulate matter pollutants. The Residential Alternative would add the fewest residents, the Neighborhood Center would add the second most new residents, and the Highway Oriented Alternative would add the most new residents who could be at increased risk of exposure, as well as new industrial uses which could have the potential to further increase air pollutant emissions.

This Focus Area is in an area identified as having a high potential for groundwater contamination, although there are no specific groundwater threat sites within the Focus Area itself. Any development in the Focus Area should consider this risk and any available remediation, or mitigation efforts, to protect future residents and workers from potential exposure.

Vasco Road Focus Area

The Vasco Road Focus Area is not near I-580, but South Vasco Road is a suggested roadway for local delivery routes. All three land use alternatives include Mixed Industrial – Commercial and Industrial and Commercial – Wine-Country land use place types, which would likely increase truck and van traffic along South Vasco Road over existing levels. Both the Maker Village Alternative and the Wine Country Center Alternative would add new residents to an area exposed to air pollution from South Vasco Road. The Maker Village Alternative would add more housing units than the Wine Country Center Alternative and would therefore have the potential

to expose more new residents to potential air quality risks related to industrial activities. The Production Alternative does not include residential uses and would not expose new residents to air pollution.

This Focus Area is in an area identified as having a high potential for groundwater contamination, although there are no specific groundwater threat sites within the Focus Area itself. Any development in the area should consider this risk and any available remediation, or mitigation efforts, to protect future residents and workers from potential exposure.

East of Greenville Road Focus Area

The East of Greenville Road area includes the active Livermore Oil Field. Monitoring, site investigation, and cleanup of soil contamination with petroleum hydrocarbon is being conducted under the regulatory oversight of the Local Oversight Program/Voluntary Remedial Action Program group within the Alameda County Department of Environmental Health (ACDEH). Groundwater samples collected from monitoring wells did not detect groundwater contamination.

The East of Greenville Road Focus Area does not introduce new housing and would, therefore, not expose new residents to potential air pollutants or groundwater threats.

5.1.15 Physical Activity and Access to Open Space

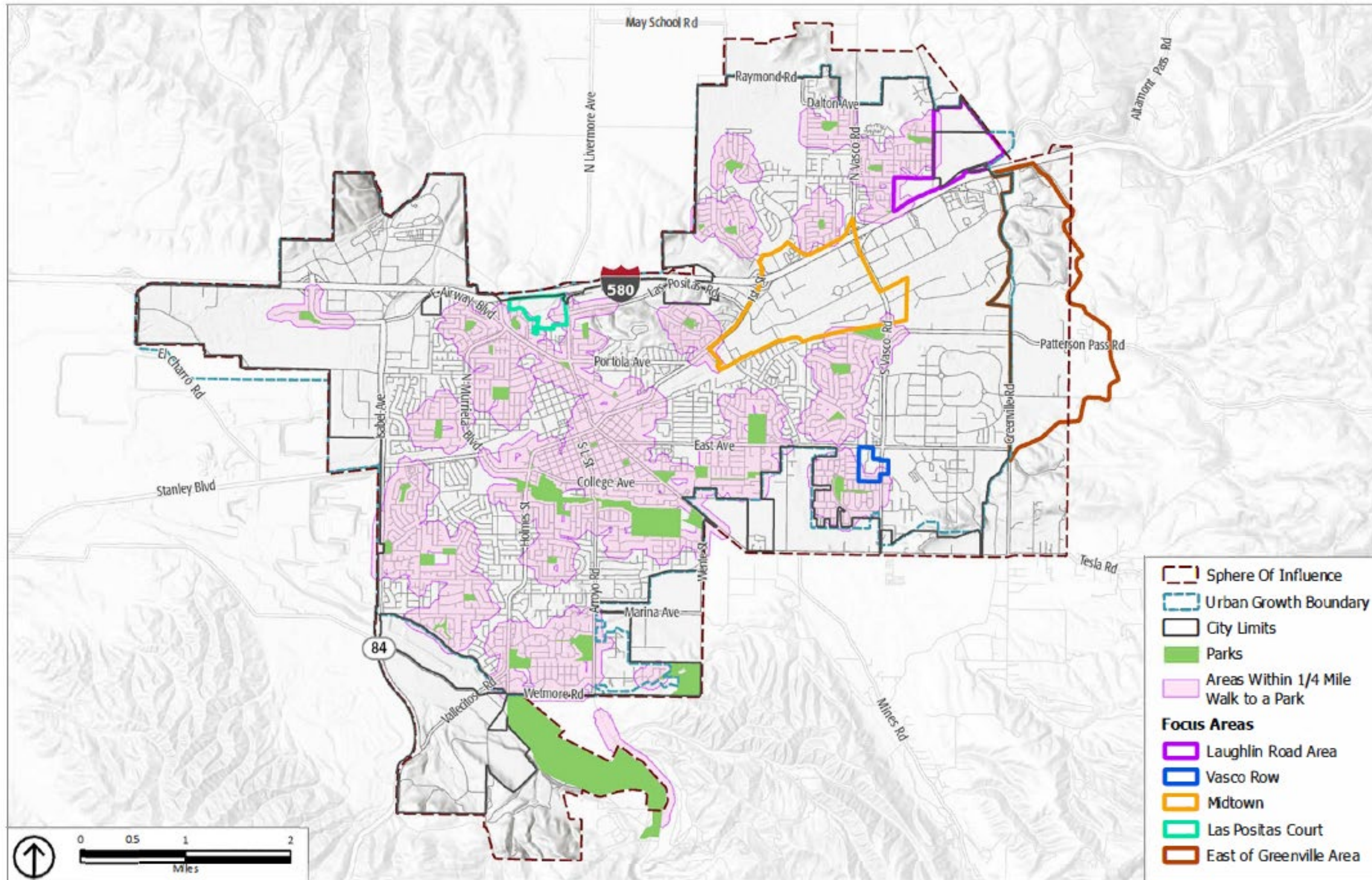
This evaluation considers whether the alternatives will affect existing and future residents' access to open space. Access to open space promotes physical activity, which benefits physical and mental health for residents. Being within one-quarter to a half-

mile of a park or open space is considered ideal access, though access within one mile is also helpful. Figure 28 shows areas in Livermore within one-quarter mile walking distance of a park. Lack of open space is an equity issue, especially if a neighborhood historically had access to, or lost access to, such resources.

Midtown Focus Area

Only a small portion of the Midtown Focus Area is within one-quarter mile walking distance of an existing park. Therefore, alternatives proposing open space in the form of buffers would help improve equitable park access. The Midtown Focus Area alternatives do not propose major increases in open space. The Residential Neighborhood Alternative and the Blended Alternative propose open space buffers that bisect the Focus Area, which will offer some opportunities for passive recreation and scenic areas to new residents in the area. The Business Center Alternative proposes the least amount of open space in its form with one buffer on the western side of the Focus Area.

Figure 28. Parks and Park Walkability



Source: City of Livermore, 2021; Esri, 2021; PlaceWorks, 2022

Laughlin Road Focus Area

A small portion of the Laughlin Road Focus Area is within one-quarter mile walking distance of an existing park.

Both the Open Space Alternative and the Mixed Use Alternative include a park centrally located in the new residential neighborhood. The Industrial Alternative includes a linear greenway running the length of the new residential neighborhood. Therefore, all three alternatives would add a new park or greenway within the Focus Area, increasing access to opportunities for physical activity.

All three Laughlin Road Focus Area alternatives also include a large open space site. However, an important reason for the open space designation is to protect sensitive biological resources such as vernal pools. Therefore, public access to the open space may be limited or prohibited. Future access decisions will be made by the East Bay Regional Parks District, who owns the land. The open space area has the potential to provide active and passive recreation space for new residents to the Focus Area as well as existing residents living adjacent to the Focus Area.

Las Positas Court Focus Area

Some areas in the Las Positas Court Focus Area are within one-quarter mile walking distance of an existing park. Each Las Positas Court Focus Area alternative proposes open space, although open space along Arroyo Las Positas may be restricted to protect sensitive habitat. The Residential Alternative proposes the largest amount of open space and is therefore most likely to offer improved opportunities for physical activity to the new residents of the proposed housing. The Neighborhood Center Alternative

proposes open space adjacent to a potential new agricultural area and the Highway Oriented Alternative proposes a similar amount of open space adjacent to industrial land uses. Both alternatives still propose a significant amount of open space that would have the potential to serve new residents of the proposed housing in the Focus Area and nearby existing residents.

Vasco Row Focus Area

Some areas in the Vasco Row Focus Area are within one-quarter mile walking distance of an existing park. Each Vasco Row Focus Area alternative proposes a new park. The Maker Village Alternative proposes the largest new park, but not by a significant margin. The Maker Village and Wine Country Alternatives propose medium-density housing as well. Given the size of the Focus Area, the proposed future park could adequately accommodate the proposed residential development and would serve as an amenity to nearby residents as well. The Production Alternative proposes industrial land uses and the smallest new park space, which would be located east of Vasco Road. Therefore, the Production Alternative is least likely to improve opportunities for physical activity since it proposes no additional housing and the smallest new park.

East of Greenville Road Focus Area

The East of Greenville Road Focus Area is completely outside of a quarter mile radius of any existing parks. None of the land use alternatives would add new housing or residents who would require access to parks and open space. However, Alternative B and Alternative C both include sizable new parks that would serve future workers in this area as well as existing and future residents elsewhere in Livermore.

5.1.16 Food Equity

The accessibility, availability, and affordability of healthy and varied food options in the community increase the likelihood that residents will have a balanced and nutritious diet. A diet composed of nutritious foods, in combination with an active lifestyle, can reduce the incidence of heart disease, cancer, and diabetes, and is essential to maintain a healthy body weight and prevent obesity. Low-income and underserved areas often have limited numbers of stores that sell healthy foods. People living farther away from grocery stores are less likely to access healthy food options on a regular basis and thus more likely to consume foods which are readily available at convenience stores and fast-food outlets.

The United States Department of Agriculture (USDA) has created a Food Access Research Atlas to measure both income and food access in Census tracts nationwide. Census tracts are considered to be low income if the tract's poverty rate is 20 percent or greater, or if the median household income is less than or equal to 80 percent of area median household income. Census tracts are considered to have low access to food stores if at least 500 people and at least 33 percent of people are a half-mile or more from the nearest food store. "Food stores" are considered to be supermarkets, supercenters, or large grocery stores. These types of stores may not be the only outlets where healthy food is available, but they are the easiest and most accurate to track and measure, and over 84 percent of Supplemental Nutrition

⁷ USDA Economic Research Service, "Introduction to the Food Access Research Atlas." <https://www.ers.usda.gov/data-products/food-access-research-atlas>. Accessed October 4, 2021.

Assistance Program (SNAP) redemptions were at these three types of stores in 2019.⁷

In Livermore, there is one Census tract identified as both low-income and low access by the Food Access Research Atlas as shown in Figure 29. The roughly triangular area that includes Arroyo Seco Elementary, bounded by Mines Road, East Avenue, and Arroyo Seco, is identified as over one mile from food stores, as shown in Figure 29.

Midtown Focus Area

The Midtown Focus Area would not affect food equity in Livermore.

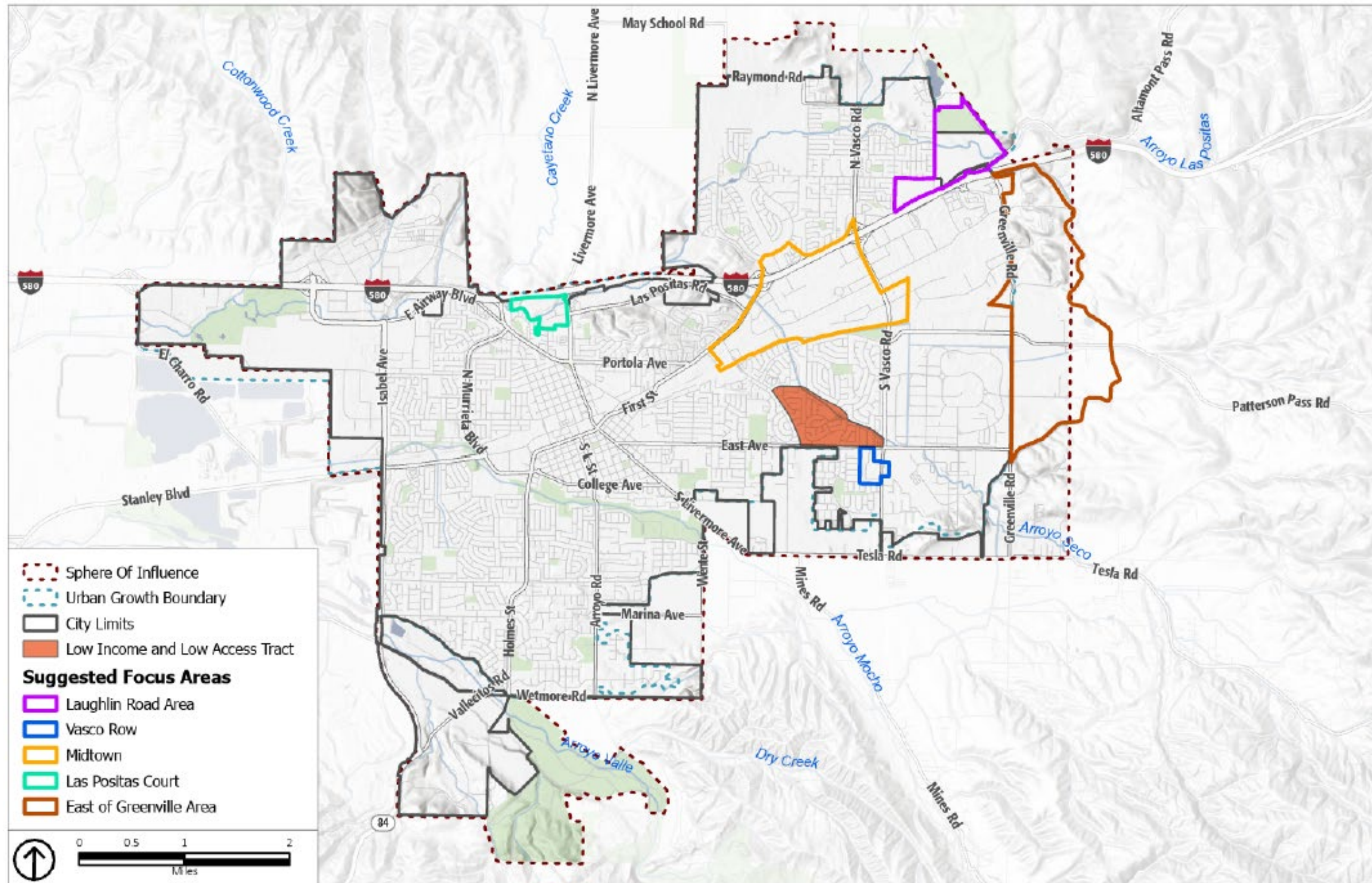
Laughlin Road Focus Area

The Laughlin Road Focus Area would not affect food equity in Livermore.

Las Positas Court Focus Area

The Las Positas Court Focus Area would not affect food equity in Livermore.

Figure 29. Food Access Research Atlas Low Income Low Access Census Tracts



Source: USDA, 2021; City of Livermore, 2021; Esri, 2021.

Vasco Row Focus Area

The Vasco Row Focus Area is adjacent to the Census tract identified as low income and low access by the Food Access Research Atlas. Each of the alternatives for this Focus Area proposes the addition of commercial land uses, which would allow for development of additional fresh food alternatives. The Wine Country Center Alternative proposes the largest amount of commercial space, therefore offering the greatest opportunity for the addition of fresh food, which could potentially serve new residents as well as those in the low-income, low-access Census tract nearby. The Maker Village Alternative proposes the largest amount of residential development along with commercial space, which could create a greater demand for fresh food and incentivize food services in the commercial area. Ultimately, the development of a market or grocery store in this Focus Area would be a decision by private parties based on specific factors including local demographics, parcel size, access and visibility, and retail competition. A specialty grocery store and/or a market oriented primarily to tourists and visitors would be less likely to meet the needs of low-income residents.

East of Greenville Road Focus Area

The East of Greenville Road Focus Area would not add new housing or residents and would not affect food equity in Livermore.

5.2 CITYWIDE EVALUATION TOPICS

Housing and Jobs

This section briefly reviews the City's housing stock and available housing options, as well as the balance between jobs and housing.

5.2.1 Ability to Accommodate Future State Housing Requirement Cycles

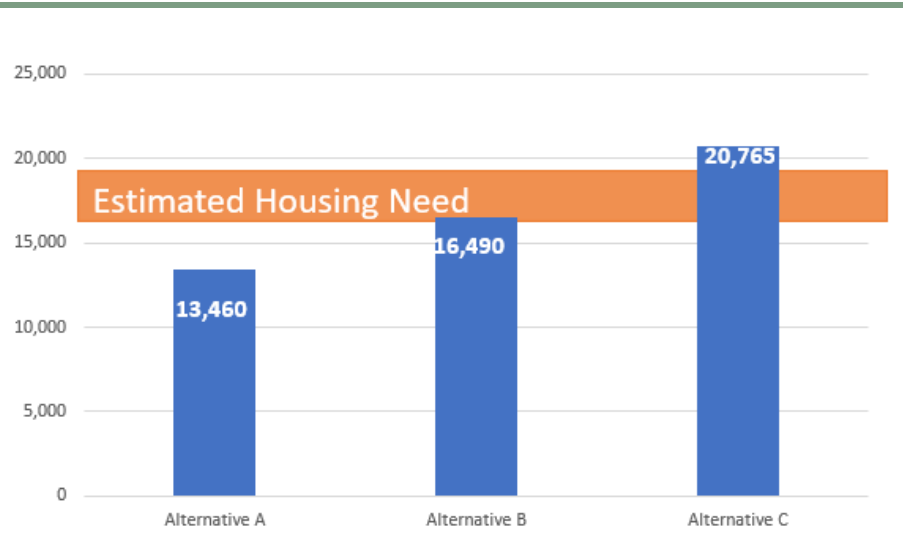
All alternatives will accommodate the 6th cycle of state housing requirements of 4,570 units covered in the adopted 2023-2031 Housing Element. These units are planned for but not yet built, so they are included in the calculations of future new homes under each alternative. The General Plan team evaluated each alternative to understand if the 7th and 8th state housing requirements cycles could also be accommodated under the Citywide Land Use Alternatives as shown in Figure 30. Note that this analysis is at a very high level and does not consider the specific income or density requirements for housing sites per state Housing Element Law (Government Code Section 65583.2); that analysis will be appropriate at the time the City receives the official allocation in future Housing Element cycles. In addition, a buffer is necessary to ensure that if the sites listed in the housing opportunity sites inventory are developed without housing, or are developed with less than the full amount of housing claimed in the inventory, there is remaining capacity to ensure an ongoing supply of sites for the full allocation during the eight years of the Housing Element cycle. HCD recommends a buffer of least 15% to 30%.

- **Alternative A** would add 13,460 net new housing units. This alternative would have sufficient housing sites for the 6th cycle (4,570 units) and likely the 7th cycle (estimated at

5,100 to 5,200 units, needed from 2031 to 2038). Based on the General Plan team estimates for the 8th Housing Cycle (5,900 to 6,000 units, needed from 2039 to 2047), Alternative A would not have enough housing sites and the City would need to revisit the General Plan land use map before the start of the 8th cycle in January 2039 to identify additional sites to redesignate to allow housing.

- **Alternative B** would add 16,490 net new housing units. This alternative would have sufficient housing sites for the 6th, 7th, and 8th Housing Element cycles, and an additional buffer of about 720 to 920 housing sites. This would be between a 6.5 to 8 percent buffer for the low and high State mandated housing unit scenarios.
- **Alternative C** would add 20,765 net new housing units. Alternative C would have sufficient housing sites for the 6th, 7th, and 8th Housing Element cycles and would provide for an additional buffer of between 4,995 housing sites to 5,195 housing sites. This would be between a 45 to 47 percent buffer for the low and high State mandated housing unit scenarios.

Figure 30. Citywide Land Use Alternatives Ability to Accommodate Estimated Future State Housing Requirements through 2047



5.2.2 Housing Supply and Variety of Housing Options

Ideally, a city should have a housing stock that aligns with the needs of its population by providing small and large units in a variety of forms, while offering affordable housing to its workforce and special needs populations. Unfortunately, the market often does not result in this alignment. Of the existing housing stock in Livermore, 78 percent of homes are single-family detached houses and 20 percent are multifamily units.⁸ The City of Livermore 2023-2031 Housing Element identified that extremely low- and very-low-income households in Livermore cannot afford market rental or

owner-occupied housing and that only above-moderate-income households can afford the typical median price for a home in Livermore.

All the draft alternatives would improve the diversity of housing options in Livermore as shown in Table 15. Alternative C would result in an almost even distribution of single family and multifamily units, Alternative B would have slightly more single family units than multifamily units, and Alternative A would add the fewest number of multifamily units.

⁸ The remaining 2 percent of units are mobile homes. California Department of Finance, E-5 series, 2020; *ABAG Data Packet, 2021*.

Table 15. Citywide Housing Units by Type, 2045

	Alternative A	Percent of Total	Alternative B	Percent of Total	Alternative C	Percent of Total
	2045 Total Units		2045 Total Units		2045 Total Units	
Single Family Units	26,775	56.8%	25,720	51.3%	27,005	49.6%
Multi-Family Units	20,325	43.2%	24,410	48.7%	27,400	50.4%
Total	47,100	100%	50,130	100%	54,405	100%

Source: City of Livermore, 2023; PlaceWorks, 2023.

5.2.3 Job-Housing Balance

Jobs-housing balance is a measure of how well the local economy provides jobs for the local labor force. Although this topic is often described as “jobs/housing” balance, comparing the number of jobs to the number of employed residents is a more direct comparison of individuals, rather than comparing people (workers at jobs) to homes (housing). It also reflects the fact that many residents are children, seniors, students, or otherwise not part of the workforce. The jobs-to-employed residents ratio is calculated by dividing the number of jobs in the community by the number of employed residents in the same area. A high number of jobs relative to employed residents typically indicates that workers are commuting into the community for work. A low number of jobs and high number of employed residents typically indicates that workers are commuting out of the community for work.

An ideal jobs-to-employed residents ratio for a city like Livermore would be 1.0, which indicates that there is a job in the community for every employed resident. It is important to note, even with an ideal jobs-to-employed residents ratio of 1.0, that there are many

reasons why some residents will continue to commute outside of Livermore while some workers that do not live in Livermore will continue to commute in. Although the City cannot control whether jobs within Livermore are filled by residents, striving for a jobs-to-employed residents ratio of 1.0 increases the opportunity for employed residents to find a job in Livermore.

Table 16 shows the jobs-to-employed residents ratio for the three land use alternatives. Based on existing conditions plus net new employees and new population projected through 2045 under each alternative, all alternatives would result in more local jobs than employed residents:

- Alternative A would result in more jobs than employed residents, with a ratio of 1.19.
- Alternative B would result in more jobs than employed residents, with a ratio of 1.12.
- Alternative C would result in about the same ratio of jobs as employed residents, with a ratio of 1.00.

As described previously, in- and out-commuting exists today and will continue under any alternative even at an ideal jobs-to-employed residents of 1.0.

Although a jobs-to-employed residents ratio of 1.0 is considered ideal, if there is a mismatch of the types of jobs available to the skills of the employed residents there could still be an imbalance of jobs and housing. As identified in the June 2022 Economics Existing Conditions Report⁹, the majority of Livermore workers were commuting outside of the city for work in 2018. To help improve quality of life and make it easier to afford the high cost of housing, the City is exploring land use changes that would bring higher wage jobs to Livermore.

Table 16. Citywide Jobs to Employed Residents Ratio

	Existing (2020)	Citywide Alternative A (Net New + Existing)	Citywide Alternative B (Net New + Existing)	Citywide Alternative C (Net New + Existing)
Population	90,555	126,785	134,945	146,470
Jobs	52,270	81,510	81,830	79,410
Est. Employed residents (54% of population)	48,900	68,464	72,870	79,094
Jobs-to-Employed Residents Ratio	1.07	1.19	1.12	1.00

⁹ https://imagineLivermore2045.org/wp-content/uploads/2022/06/09_Economics_06-2022.pdf

Source: City of Livermore 2020 Traffic Model and PlaceWorks, 2023.

Community Services

The way in which land use is developed can influence the efficiency and cost associated with providing basic community services; therefore, it is important to consider how the alternatives would affect those services when deciding on a Preferred Land Use Scenario. This section describes how the alternatives affect the city’s public schools, parks and open space, and recreational facilities.

5.2.4 Student Generation and School Capacity

The Livermore Valley Joint Unified School District (LVJUSD) is the sole school district in Livermore. There are 10 elementary campuses, 2 K-8 schools, 3 middle schools, 3 comprehensive high schools, and 2 alternative schools. The City does not have jurisdiction over LVJUSD and the planning of future school facilities. However, the City and LVJUSD work closely together. The City notifies LVJUSD about any potential major land use change that could affect future school enrollment. Using this information, LVJUSD assesses plans to determine whether any improvements are needed to accommodate future growth. In addition, the City collects development impact fees to help fund the construction of new school facilities.

As shown in Table 17, all schools in LVJUSD are operating within their existing capacity. However, there are three schools close to meeting school capacity: Joe Mitchell (K-8), Rancho Las Positas

Elementary, and Sunset Elementary; none of which are near or in any of the Focus Areas. As of the 2020-21 school year, these three

schools have over a 90-percent student enrollment to school capacity ratio.

Table 17. Livermore Valley Unified School District Schools, Student Enrollment, and School Capacity (2021)

Schools	Student Enrollment	School Capacity	Student Enrollment of School Capacity
Altamont Creek Elementary	563	680	83%
Arroyo Seco Elementary	596	708	84%
Christensen Elementary	628	965	65%
Del Valle High	131	185	71%
East Avenue Middle School	574	725	79%
Emma C. Smith Elementary	657	744	88%
Granada High School	2,306	2,850	81%
Jackson Avenue Elementary	480	668	72%
Joe Mitchell (K-8)	763	795	96%
Junction Avenue (K-8)	859	1,125	76%
Lawrence Elementary	369	520	71%
Leo R. Croce Elementary	641	828	77%
Livermore High	1,809	2,325	78%
Livermore Adult Education	160	384	42%
Marylin Avenue Elementary	350	525	67%
Rancho Las Positas Elementary	595	630	94%
Sunset Elementary	729	796	92%
Vineyard Alternative School	160	384	42%
William Mendenhall Middle School	896	1,175	76%

Source: Unified School District, Livermore Valley. 2021, September 7. 2021, Annual Capacity Analysis, Student Information System.

Table 18 shows the number of net new students for each citywide alternative based on the LVJUSD student generation rates. The number of new units proposed for all alternatives are primarily multifamily units in each alternative, so this analysis uses the LVJUSD student generation rate of .25 for apartments and 0.45 students for single family homes and townhomes. The schools within the Livermore Valley Joint Unified School District currently have a remaining capacity of 8,692 students. Based on the remaining capacity of LVJUSD, the district could accommodate new students under all citywide alternatives. However, it is difficult to predict how enrollment will change from year to year. While LVJUSD policies allow students to attend any school within the district, most families choose to attend a school close to their home, so it is likely that schools near the Focus Areas would see the greatest demand for new school capacity.

Table 18. New Students Under Each Citywide Alternative

	Alternative A	Alternative B	Alternative C
Net New 2045 Single Family Units	1,565	490	901
Net New 2045 Multi Family Units	11,895	16,000	19,864
Number of Net New 2045 Students	3,678	4,221	5,371

5.2.5 Park Service Standards

Parks are essential to the community and the quality of life in Livermore. The Livermore Area Recreation and Park District (LARPD) serves Livermore with parks, trails, recreation programs,

and facilities. LARPD is a special district that is a completely independent governmental agency and is governed by a five-person, elected Board of Directors, each of whom serves a four-year term. LARPD manages approximately 504 acres of public parks.

Under State law (known as the Quimby Act), the City has the authority to require the dedication of land for new park space, construction of new park facilities, and/or the payment of fees. Dedication of land is required when the General Plan identifies policies and standards for parks and recreation facilities and when the General Plan, a Specific Plan, Park Master Plan, or other relevant planning document designates land as a park. All new development pays a proportional share of park facilities fees that funds new park facilities and related improvements. Table 19 summarizes the LARPD park service standards. Based on a 2015 population of 92,705, LARPD’s 2016 Parks, Recreation and Trails Master Plan identified that the district is currently not meeting the established service standards for Neighborhood and Community Parks. In addition, LARPD also identified the need for six acres of additional baseball fields, softball fields, and multi-sport fields.

Table 20 shows the acres of open space and parks land each citywide alternative would add and Table 21 shows the number of park acres needed to meet the LARPD park service standards as shown on Table 21. Although the citywide alternatives would add open space designations, some open space will be primarily for natural resource protection and not recreational purposes. Open space would not qualify as a Neighborhood, Community, or Special-Use Park. Therefore, the citywide alternatives would impact parks and recreational facilities as follows:

- Since the current park acreage in the LARPD area is already below the established service standards for Neighborhood and Community Parks, all alternatives would further exacerbate the park land deficiency since each alternative introduces new population that would require additional park land. Therefore, all three land use alternatives would need to provide additional Neighborhood and Community parkland.
- All alternatives would further exacerbate the existing park land deficiency. Alternative A would generate the fewest new residents and would have the least demand for new parks compared to Alternatives B and C.
- Alternative B would generate more park demand than Alternative A, but less park demand compared to Alternative C.
- Alternative C would generate the most new residents and would result in the greatest demand for new parks.
- In addition to park land demand, greater population growth would require more recreational facilities and expanded programs to meet the needs of the residents. Alternative C has the greatest population growth; Alternative A has the least population growth.

Table 19. LARPD Park Service Standards

Park Category	Service Standard	2015 Total Acres	2015 Acres Surplus or Deficit
Neighborhood	2 acres per 1,000 residents	153.31	-32.10
Community	2 acres per 1,000 residents	152.40	-33.01
Special-Use	2 acres per 1,000 residents	199.02	13.61

Source: LARPD, 2016 Parks, Recreation and Trails Master Plan, June 29, 2016.

Table 20. Citywide Alternatives New Open Space and Parks

Land Use Category	Alternative A Net New Acres	Alternative B Net New Acres	Alternative C Net New Acres
Parks and Recreation	3	59	98

Source: PlaceWorks, 2023.

Table 21. Citywide Alternatives Park Acres Needed to Meet LARPD Park Service Standards

Citywide Alternative	Neighborhood Park	Community Park	Special-Use Park
2015 Park Acres	153.31	152.4	199.02
2015 Park Deficit	32.1	33.01	13.61
Alternative A	68.16	68.16	40.94
Alternative B	84.48	84.48	57.26
Alternative C	107.53	107.53	80.31

Source: PlaceWorks, 2023.

Traffic and Multimodal Circulation

5.2.6 Methodology

The section describes the transportation analysis and systemwide evaluation of the proposed land use alternatives developed for the City of Livermore general plan. The land use alternatives were evaluated using a travel model developed specifically for the City of Livermore to support the general plan process.

The Livermore travel demand model (“Livermore model”) was developed as a more detailed version of the Alameda Countywide travel demand model. The Livermore model represents a more detailed version of the countywide model with added transportation analysis zones (TAZs) and road network detail in the City.

Assumptions used in the modeling include land uses in each TAZ, road network, and transit services. The land uses for the existing General Plan and each of the three alternatives represent buildout of each land use alternative within the City of Livermore, which are evaluated for the 2045 forecast year. Outside of Livermore, the traffic model assumes the most current available future land use forecasts in the Alameda Countywide traffic model, which are consistent with MTC Plan Bay Area 2040. Future year transportation improvements are included consistent with the Metropolitan Transportation Commission (MTC) Plan Bay Area, the Alameda Countywide Transportation Plan (CTP) and City of Livermore future network assumptions.

The land use alternatives were evaluated with one common future 2045 circulation network that includes regional Plan Bay Area projects and local Livermore Capital Improvement Program (CIP) projects. Key forecasting results and performance metrics were extracted for the 2020 base year, 2045 No Build (Existing General

Plan), and three 2045 Citywide Alternatives. The performance of each 2045 Citywide Alternative is then compared to the base year 2020 model, the 2045 Existing General Plan (No-Build), and to each other. The purpose of the comparison to the 2045 (No-Build) is to demonstrate the potential net changes that would occur under cumulative conditions, if the Citywide Alternatives were adopted compared to the existing General Plan.

The model was used to extract systemwide and citywide metrics to compare the Citywide Alternatives and evaluate their performance from a transportation perspective. Metrics include Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT), Vehicle Hours of Delay (VHD), average travel speeds, mode shift, and estimates of delay and congestion.

5.2.7 Vehicle Miles Traveled

A common indicator used to quantify the amount of motor vehicle use is vehicle miles traveled (VMT). VMT represents the total number of miles driven per day by persons traveling to and from a defined area. VMT can include the total VMT for all Livermore travel, which is a useful comparative evaluation metric for the general plan, or it can include VMT per person (capita) and VMT per employee (job).

Many factors affect VMT, including the average distance people drive to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse mix of land uses within close proximity of each other, as well as accessible facilities for non-automobile modes—including transit, walking, and biking, tend to generate lower VMT per person than auto-oriented areas where land uses are more segregated. Further, cities and regions where the jobs/housing ratio is balanced generate a lower VMT than areas where most

residents travel long distances to work or services. From an environmental perspective, development that generates less VMT per capita reflects less auto usage, and correspondingly lower fuel consumption and production of GHG emissions.

In California, the use of VMT instead of delay-based metrics, like level of service (LOS), to assess transportation-related environmental impacts has been adopted as part of updates to CEQA. It should be noted that SB 743 pertains to CEQA environmental impacts only and that local jurisdictions are permitted to use other metrics, such as LOS and delay, to analyze the effects on a project on the local transportation network for other planning purposes outside the scope of CEQA. As a result, transportation-related environmental impacts are now based on the per capita miles of vehicle travel associated with a project instead of the project's effects on local traffic congestion. VMT allows for an analysis of a project's impact to be reviewed on a broader regional scale rather than only in the vicinity of the proposed project, allowing for a more comprehensive understanding of the full extent of a project's transportation-related impact. Since travel to and from Livermore occurs outside as well as inside the city, VMT was evaluated for three study areas, including the city, county, and Bay Area region.

Table 21 provides a summary of the total VMT, household VMT per resident, and commute VMT per employee for each Citywide Alternative for the City, Alameda County and the Bay Area region. Total VMT comprises of all trips including household-based, employee commute trips, customer and visitor trips, and non-home trips (workers going to lunch, trips between stores, deliveries, etc.). Only household-based trips are considered in the VMT per capita measure, while only employee commute trips are included in the VMT per employee measure.

For total daily VMT, all three Citywide Alternatives would increase VMT, to and from Livermore, compared to the existing General Plan. This is due to increased housing and/or employment allowed under the Citywide Alternatives compared to the existing General Plan. When the total VMT is normalized by dividing by the service population (population plus employees served by the transportation system), Citywide Alternative C would have a similar VMT per service population as the existing General Plan. Citywide Alternative A would increase VMT per service population by 1 percent and Citywide Alternative B would increase by 5.6 percent. The higher VMT per service population for Citywide Alternative B is primarily due to the greater amount of retail development and jobs. Retail jobs attract the most traffic per employee compared to other types of jobs. The additional retail jobs in Citywide Alternative B would primarily be located in the Focus Areas at the edges of the urbanized area requiring longer trips, rather than in the center of the urbanized area.

For household-based VMT per capita, all three Citywide Alternatives would reduce total household-based VMT as well as VMT per capita compared to the existing General Plan. Citywide Alternative B would provide the greatest reduction in household-based VMT as it would provide the most jobs and services within Livermore, allowing Livermore residents to make more of their trips within the community.

For jobs-based VMT per employee, all three Citywide Alternatives would increase total job-based VMT due to the increases in employment compared to the existing General Plan. When normalized by the number of employees, Citywide Alternative C would slightly reduce VMT per employee, while Citywide Alternatives A and B would increase VMT per employee compared to the existing General Plan.

Table 22. Vehicle Miles Traveled

Metric	2020	2045 Existing General Plan	2045 Citywide Alternative A	2045 Citywide Alternative B	2045 Citywide Alternative C
Service Population					
Population	89,242	136,079	126,785	134,945	146,470
Jobs	51,795	62,499	81,510	81,830	79,410
Service Population (Population + Jobs)	141,037	198,578	208,295	216,775	225,880
Total VMT to/from Livermore	4,522,200	5,667,300	6,015,100	6,534,100	6,340,300
VMT per Service Population:					
Livermore	32.1	28.5	28.8	30.1	28.5
Alameda County	26.4	25.2	25.3	25.4	25.3
Bay Area	29.1	28.3	28.3	28.3	28.3
Household VMT to/from Livermore	2,478,000	3,177,800	2,780,900	2,750,200	2,964,200
VMT per Capita:					
Livermore	27.8	23.4	21.3	19.9	20.5
Alameda County	19.1	17.1	17.0	16.9	16.9
Bay Area	19.8	18.9	18.9	18.9	18.9
Employee Commute VMT to/from Livermore	781,300	865,100	1,121,000	1,117,400	1,064,000
VMT per Employee:					
Livermore	15.1	13.8	14.3	14.1	13.7
Alameda County	15.8	15.9	15.9	15.9	15.9
Bay Area	18.1	18.0	17.9	17.9	17.9

Source: Kittelson & Associates, inc., 2023 and Livermore Citywide Model

5.2.8 Travel Modes

The General plan team also forecasted travel modes for the Citywide Land Use Alternatives. Mode choice utilizes probabilities calibrated from household surveys and predicts how they shift in response to changes in transportation supply, auto ownership, delay, and congestion. In transportation planning, “mode” means how people get around. The most common modes are auto (which may include shared ride), transit, bike, and walk.

Table 23 displays daily Livermore trips and trip percent by mode. With future conditions, higher percentages of trips within as well as to and from Livermore are expected to use transit, bikes and walking compared to existing conditions. Higher rates of transit use could be associated with the addition of future service, such as Valley Link. Higher bike and walk percentages are typically associated with denser development patterns, which place more complementary land uses within reasonable distances for biking and walking. Additional improvements that enhance the safety and quality of non-motorized travel, such as protected bike facilities and improved pedestrian crossings, can encourage additional use of bike and walk modes; however, the travel model may not be sensitive to these more qualitative improvements.

Citywide Alternatives A and B are both projected to increase the numbers of bike and walk trips compared to the existing General Plan, but the percent of total transit, bike, and walk trips are projected to decrease. This is most likely due to a larger proportion of development proposed in the Focus Areas, which are not well served by current transit and bicycle facilities. Citywide Alternative C results in increases in the walk mode share compared to the existing General Plan, due to a larger proportion of development proposed in denser configurations.

For comparison, Alameda County mode shares, which include trips in denser and more transit rich cities like Berkeley and Oakland are:

- Year 2020: Auto (81.9%), Transit (6.2%), Walk-Bike (11.7%), Total (100%)
- Year 2045: Auto (80.5%), Transit (7.2%), Walk-Bike (12.3%), Total (100%)

Table 23. Livermore Daily Person Trips by Mode

Travel Mode	2020		2045 Existing General Plan		2045 Citywide Alternative A		2045 Citywide Alternative B		2045 Citywide Alternative C	
	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent
Auto - Drive Alone	273,200	52.8%	370,000	49.6%	392,700	50.5%	426,500	50.3%	425,500	49.8%
Auto – Shared Ride	189,600	36.6%	276,400	37.1%	286,500	36.8%	316,500	37.3%	314,300	36.8%
Transit	9,300	1.8%	21,100	2.8%	19,200	2.5%	19,600	2.3%	21,900	2.6%
Bike	6,200	1.2%	9,900	1.3%	10,000	1.3%	10,800	1.3%	11,100	1.3%
Walk	39,500	7.6%	68,500	9.2%	69,200	8.9%	74,900	8.8%	81,300	9.5%
Total	517,800	100.0%	745,900	100.0%	777,600	100.0%	848,300	100.0%	854,100	100.0%

Source: Kittelson & Associates, inc., 2023 and Livermore Citywide Model

5.2.9 Vehicle-Hours Traveled (VHT)

This model was used to estimate vehicle hours of travel (VHT) for 2020 and the Citywide Alternatives in 2045. This metric is computed for all roadway travel to and from, and within, Livermore by summing vehicle travel multiplied by travel time --- including congestion delay for four time periods of the day: AM and PM peak periods, midday and night periods. Similar to how VMT measures the number of vehicle miles, or the distance driven to and from, and within, Livermore; VHT is a metric that represents the total number of vehicle hours driven per day by persons traveling to and from, and within, Livermore. Similar to VMT, there are many factors that affect VHT, including the amount of travel by automobiles during peak commute periods when driving takes longer, due to congestion. Therefore, VHT is another way of

describing how travel times are affected by changes in land use and density. Increasing VHT may also suggest increasing economic activity as more people may travel to/from Livermore to shop, dine, and work. Increased VHT could also indicate there is insufficient transit, pedestrian, and bicycle infrastructure to support these mods, making driving the more viable transportation option. While total VHT may increase with increased housing and jobs, VHT per capita may be lower if housing and jobs are located near transit and pedestrian and bicycle infrastructure.

As shown in Table 24, VHT is projected to increase from 2020 to 2045 (as expected from population increases). The VHT analysis demonstrates that when more housing and jobs are located near transit and non-motorized infrastructure, as in Citywide

Alternatives B and C, it could contribute to slower growth in VHT per service population (per resident plus employee). The VHT analysis shows that:

- Citywide Alternative A would produce the lowest total VHT, since it represents the lowest density alternative, and would have the lowest citywide VHT per service population compared to Citywide Alternatives B and C.
- All three Citywide Alternatives represent a slight improvement of VHT in 2045 as compared to the existing General Plan.

Table 24. Livermore Daily Vehicle Hours Traveled

Scenario	Daily Vehicle Hours Traveled		
	VHT	Service Pop	VHT/Service Pop
2020	36,087	141,037	0.26
2045 Existing General Plan	77,868	198,578	0.39
Citywide Alternative A	71,896	208,295	0.34
Citywide Alternative B	78,406	216,775	0.36
Citywide Alternative C	85,274	225,880	0.38

Source: Kittelson & Associates, inc., 2023 and Livermore Citywide Model

5.2.10 Vehicle-Hours of Delay (VHD)

Similar to VHT, VHD is a systemwide metric that represents the total amount of time motorists throughout the city are delayed in traffic, or waiting at intersections during congestion, compared to

travel times without traffic. VHD is a measure that compares the amount of time a driver is delayed during their trip between 2020 and between each 2045 Citywide Alternative.

Usually, VHD increases with added housing and jobs. As more development occurs, congestion and delay would be expected to increase. However, as shown in Table 25, the total VHD for Citywide Alternatives A and B is lower than the existing General Plan, as the higher density land use pattern creates a better housing/jobs balance, shorter trip lengths, and the transportation system provides options for non-auto travel. The longer the auto trips take, it can become a less attractive mode choice and some users might shift to non-auto options--- if the infrastructure and land use patterns allow. Citywide Alternative C results in the highest total VHD due to higher amounts of development and additional loading of the roadways.

Table 25. Livermore Daily Vehicle Hours of Delay

Scenario	Daily Vehicle Hours Delay		
	VHD	Service Pop	VDT/Service Pop
2020	5,355	141,037	0.04
2045 Existing General Plan	28,255	198,578	0.14
Citywide Alternative A	21,158	208,295	0.10
Citywide Alternative B	25,418	216,775	0.12
Citywide Alternative C	31,712	225,880	0.14

Source: Kittelson & Associates, inc., 2023 and Livermore Citywide Model

When VHD is compared per service population, the Citywide Alternatives show lower, or similar VHD per service population as the 2045 existing General Plan. This is likely because trips between home, work, and/or services are shorter. People may be more likely to choose other modes such as transit, walk, or bike under the alternatives than they would under the existing General Plan. For example, Citywide Alternative C would accommodate 27,300 more people (service population, i.e. housing and jobs) than the existing General Plan without an increase in VHD per service population.

5.2.11 Average Speed

The average speed of the roadway system is a comparative indicator of how the road network responds to changing land use density, mode shift, and traffic congestion. This metric represents the average 24-hour and peak hour speeds on all key roadway segments in Livermore that are represented in the Livermore travel model.

Table 26 provides average systemwide daily and peak hour speeds for all non-freeway roads in Livermore. As expected, average daily and peak hour traffic speeds are projected to decrease between 2020 and the 2045 Citywide Alternatives, due to growth in Livermore as well as additional growth outside Livermore resulting in more congestion. Citywide Alternative A would have the highest average speeds when compared to Citywide Alternatives B and C by a small margin. This is due to lower amounts of new development. Citywide Alternative B has the highest number of jobs, which particularly impacts the AM peak hour with commute trips resulting in slower speeds. Citywide Alternative C is projected to have the lowest daily and PM peak hour speeds, but higher speeds in the AM peak hour. Citywide Alternative C has a higher proportion of residential development than the other alternatives,

and residential trips are spread more throughout the day than trips associated with non-retail jobs.

Table 26. Livermore – Average Speeds on Non-Freeway Roads (MPH)

Scenario	Average Speeds (MPH)		
	Daily	AM Peak 1-hour	PM Peak 1-hour
2020	31.8	25.2	25.6
2045 Existing General Plan	23.7	13.0	14.3
Citywide Alternative A	26.3	16.7	16.2
Citywide Alternative B	25.1	14.9	18.0
Citywide Alternative C	23.3	15.7	14.8

Source: Kittelson & Associates, inc., 2023 and Livermore Citywide Model

Utilities

This section describes the potential impacts of the three Citywide Land Use Alternatives to water supply, wastewater services, and stormwater services.

5.2.12 Water Supply

This section analyzes the projected supply and demand for the impacts of projected growth of each of the alternatives relating to Water services. The City of Livermore has two primary water providers:

- Cal Water Livermore District, which primarily serves the central downtown and southern regions of the city.
- Livermore Municipal Water (LMW), which serves the northwest, northeast, and eastern portions of the City.

Figure 31 shows the water district service boundaries.

The Lawrence Livermore National Laboratory and Sandia National Laboratory's water is provided by the City and County of San Francisco's Hetch Hetchy supply system and is not part of this analysis.

The 2020 Urban Water Management Plans from both LMW and Cal Water estimate that there are sufficient supplies to meet currently projected future demands within each water provider's service area. The UWMP water demand projections were completed before the City of Livermore initiated the General Plan Update. Table 27 shows the comparison of the estimated population increase from the UWMPs and the alternative buildout scenarios.

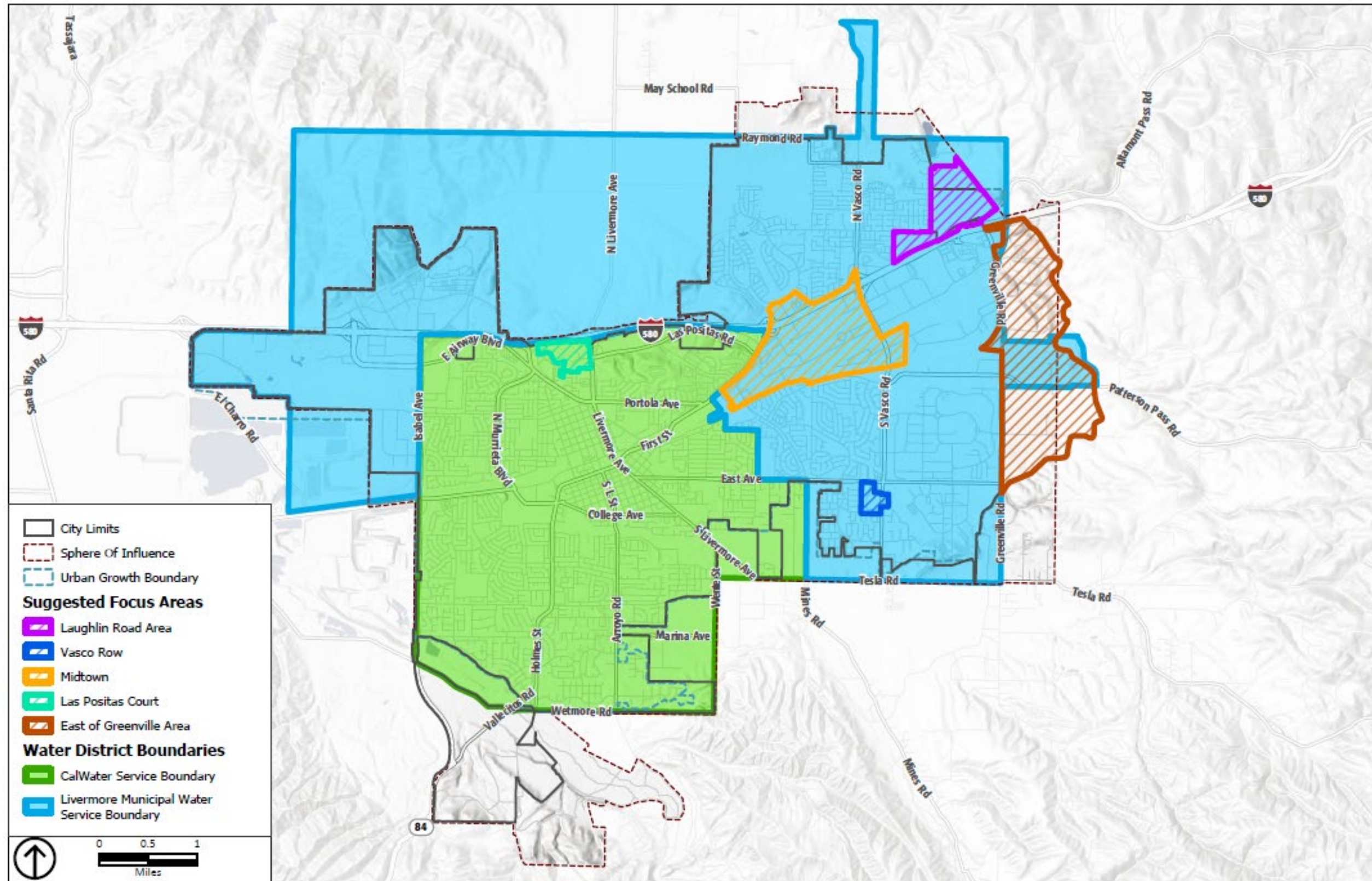
As would be expected, since the UWMP is based on the existing General Plan, the 2045 population estimates under all three Citywide Land Use Alternative exceed the total projected 2045 population for both water purveyors:

- Citywide Land Use Alternative A exceeds UWMP population projections by 14,980 people.
- Citywide Land Use Alternative B exceeds UWMP population projections by 22,770 people.
- Citywide Land Use Alternative C exceeds UWMP population projections by 29,310 people.

Table 27. Projected Population Comparison (2020 LMW UWMP, 2020 Cal Water WMP vs. Citywide Land Use Alternatives)

Population Projection Source	2020	2045
2020 Livermore Municipal Water UWMP	30,830	47,371
2020 Cal Water Livermore District UWMP	59,814	68,176
Total UWMP Projected Population	90,644	115,547
Citywide Land Use Alternative A	90,555	130,525
Citywide Land Use Alternative B	90,555	138,315
Citywide Land Use Alternative C	90,555	144,855

Figure 31. City of Livermore Water Service Districts



Source: City of Livermore, 2023; Esri, 2023; PlaceWorks, 2023; CalWater, 2023

Tables 28 through 30 show projected 2045 water usage for the three Citywide Land Use Alternatives compared to normal year projected water supply, single dry year projected water supply, and multiple dry years projected water supply. These projections use different factors to calculate the residential and non-residential uses. In order to provide a conservative analysis, the residential and non-residential water usage estimates do not include additional reduction factors that would take account for future water conservation.

Residential water usage is based on the average residential gallons per capita data from May 2020 to May 2023 from the California Water Boards Water Conservation Portal. The average monthly daily per capita water usage over the last three years equates to approximately 91 gallons per day per capita within the Livermore Municipal Water boundary and approximately 100 gallons per day per capita within the Cal Water Livermore District boundary.

For non-residential water usage, water use coefficients for non-residential development were derived from the San Francisco Bay Area Cal Water District for both Livermore Municipal Water and Cal Water Livermore District for consistency.

For the Cal Water Livermore District, which only includes the Las Positas Court Focus Area, there would be sufficient supply to meet projected 2045 demand from Citywide Land Use Alternatives A and B, but insufficient supply to meet projected 2045 demand from Citywide Land Use Alternative C during a normal year as

shown in Table 28. However, in single dry years and multiple dry years, due to conservation measures that would come into effect under a drought scenario, all three alternatives would have sufficient water supply to meet projected demand as shown in Tables 29 and 30.

Although the current projection comparison shows that there is insufficient supply for Citywide Land Use Alternative C during a normal year, the demand on the water supply per capita should decrease over time. According to the Cal Water UWMP, the implementation of new laws, ordinances, and regulations, for example, requiring replacement of older water fixtures with more efficient fixtures, will continue to help reduce demand per capita. In addition, recent research into regional water supply and capacity for future development has indicated that it is theoretically possible to offset water use from future residential and job growth by continuing to improve indoor and outdoor water use efficiency and by focusing on infill development in urbanized areas rather than developing raw land elsewhere in the Bay Area.¹⁰

¹⁰ Laura Feinstein and Anne Thebo, Water for a Growing Bay Area: How the region can grow without *increasing water demand*, SPUR Regional Strategy,

October 2021. Accessed online at <https://www.spur.org/publications/spur-report/2021-10-21/water-growing-bay-area>, August 9, 2023.

Cal Water has indicated that they calibrate water supply closely to demand so as not to put ratepayers in the position of paying for supplies years or decades before they are actually needed. The next update of the UWMP, which will happen in 2025, will be created with reference to the projected development allowed under Livermore’s updated General Plan 2045. The Preferred Land Use Scenario and updated General Plan will be an important input for Cal Water into ongoing future supply planning efforts.

Table 28. Water Usage - Cal Water Livermore District - Normal Year Projected Demand and Supply

	Alternative Water Demand (AFY)	Cal Water Livermore District Projected 2045 Supply (AFY)	Difference (AFY)
Citywide Land Use Alternative A	9,403	9,632	229
Citywide Land Use Alternative B	9,506	9,632	126
Citywide Land Use Alternative C	9,729	9,632	(97)

Source: BKF, August 2023.

Table 29. Water Usage - Cal Water Livermore District - Single Dry Year Projected Demand & Supply

	Alternative Water Demand (AFY)	Cal Water Livermore District Projected 2045 Supply (AFY)	Difference (AFY)
Citywide Land Use Alternative A	9,403	9,938	535
Citywide Land Use Alternative B	9,506	9,938	432
Citywide Land Use Alternative C	9,729	9,938	209

Source: BKF, August 2023.

Table 30. Water Usage - Cal Water Livermore District - Multiple Dry Years Projected Demand & Supply

	Alternative Water Demand (AFY)	Cal Water Livermore District Projected 2045 Supply - Year 1 (AFY)	Difference (AFY)	Cal Water Livermore District Projected 2045 Supply - Year 2 (AFY)	Difference (AFY)	Cal Water Livermore District Projected 2045 Supply - Year 3 (AFY)	Difference (AFY)	Cal Water Livermore District Projected 2045 Supply - Year 4 (AFY)	Difference (AFY)	Cal Water Livermore District Projected 2045 Supply - Year 5 (AFY)	Difference (AFY)
Citywide Land Use Alternative A	9,403	10128	725	10,128	725	10,128	725	10,128	725	10,128	725
Citywide Land Use Alternative B	9,506	10128	622	10,128	622	10,128	622	10,128	622	10,128	622
Citywide Land Use Alternative C	9,729	10128	399	10,128	399	10,128	399	10,128	399	10,128	399

Source: BKF, August 2023.

For Livermore Municipal Water, there would be insufficient water supply to meet the projected demand from all three Citywide Land Use alternatives for normal and multiple dry years as shown in Tables 31 through 33.

Zone 7, the primary water supplier for the Livermore Municipal Water District, will initiate the next update of their UWMP in summer 2024 which will take into account the growth projections associated with the preferred land use scenario ultimately selected by the City Council. The General Plan Update may need to consider policy solutions to ensure sufficient water supply will be available to meet future demand such as:

- Requiring applicants to provide will-serve letters from water purveyors prior to issuing building permits for new development to demonstrate that water supply is available.
- Requiring that all residences and commercial properties that apply for a building permit for alternations or renovations provide proof of water-conserving plumbing fixtures.
- Expanding the use of recycled water. This would be a major capital investment that would require extensive study, engineering, and City resources.

The policy solutions identified above are examples of the kinds of strategies the City could consider to ensure sufficient water supply. These ideas will be explored with the community after the selection of the preferred land use scenario and the costs of each (especially expanding the use of recycled water) will need to be carefully considered. Future water conservation in Livermore will come from a combination of strategies.

Table 31. Water Usage - Livermore Municipal Water - Normal Year Projected Demand and Supply

	Alternative Water Demand (AFY)	Livermore Municipal Water Projected 2045 Supply (AFY)	Difference (AFY)
Citywide Land Use Alternative A	15,544	9,004	(6,540)
Citywide Land Use Alternative B	13,886	9,004	(4,882)
Citywide Land Use Alternative C	14,867	9,004	(5,863)

Source: BKF, August 2023.

Table 32. Water Usage - Livermore Municipal Water - Single Dry Year Projected Demand and Supply

	Alternative Water Demand (AFY)	Livermore Municipal Water Projected 2045 Supply (AFY)	Difference (AFY)
Citywide Land Use Alternative A	15,544	9,004	(6,540)
Citywide Land Use Alternative B	13,886	9,004	(4,882)
Citywide Land Use Alternative C	14,867	9,004	(5,863)

Source: BKF, August 2023.

Table 33. Water Usage - Livermore Municipal Water - Multiple Dry Years Projected Demand and Supply

	Alternative Water Demand (AFY)	Livermore Municipal Water Projected 2045 Supply - Year 1 (AFY)	Difference (AFY)	Livermore Municipal Water Projected 2045 Supply - Year 2 (AFY)	Difference (AFY)	Livermore Municipal Water Projected 2045 Supply - Year 3 (AFY)	Difference (AFY)	Livermore Municipal Water Projected 2045 Supply - Year 4 (AFY)	Difference (AFY)	Livermore Municipal Water Projected 2045 Supply - Year 5 (AFY)	Difference (AFY)
Citywide Land Use Alternative A	15,544	9004.446	(6,540)	9,004	(6,540)	9,004	(6,540)	9,004	(6,540)	9,004	(6,540)
Citywide Land Use Alternative B	13,886	9004.446	(4,882)	9,004	(4,882)	9,004	(4,882)	9,004	(4,882)	9,004	(4,882)
Citywide Land Use Alternative C	14,867	9004.446	(5,863)	9,004	(5,863)	9,004	(5,863)	9,004	(5,863)	9,004	(5,863)

Source: BKF, August 2023.

5.2.13 Wastewater Treatment

This section analyzes the existing and proposed sanitary sewer demands and capacities for the impacts of projected growth of each of the alternatives relating to wastewater treatment by focusing on flow capacity at the wastewater treatment plant. This analysis does not analyze needed upgrades, if any, to the wastewater conveyance system. Potential impacts to the wastewater conveyance system will be analyzed for the Preferred Land Use Scenario as part of the EIR.

The City of Livermore owns and maintains its wastewater collection system and wastewater treatment plant. Table 33 shows projected flow capacities at the Livermore Water Reclamation Plant (LWRP) based on the ultimate buildout of the plant at the LWRP Phase V expansion. The LWRP's currently permitted average dry weather flow (ADWF) is 8.5 mgd. As of 2023, average daily influents to the LWRP are declining despite growth, due to ongoing water conservation measures and regulations.

Table 34. Existing Sewer Design Flow Capacity

Flow Type	Total Flow (mgd)
Average Dry Weather Flow (ADWF)	8.5
Peak Day Dry Flow	11.1
Peak Hour Wet Weather Flow	15.5

Source: 2012 Livermore Water Reclamation Plant (LWRP) Master Plan.

Table 35 summarizes the estimated net increase in sewage generation between 2020 and 2045 for the three Citywide Land Use Alternatives, based on the amount of new residential and non-residential development and coefficients from the 2017 City of Livermore Sewer Master Plan and assuming that the composition

of future wastewater flows is generally similar to existing flows. The net new 2045 growth under Citywide Land Use Alternatives B and C could be accommodated within the permitted 8.5 mgd ADWF capacity of the wastewater plant, but Citywide Land Use Alternative C would exceed the permitted capacity by 0.36 mgd ADWF. In that scenario, upgrades to the plant would be required and could be funded through development impact fees. Increased contributions from food and beverage production facilities such as wineries and/or breweries will affect the organics/solids loading capacity of the treatment plant. The amount and timing of these potential changes are not possible to predict accurately given the theoretical nature of the land use alternatives and are not captured in the flow analysis.

Table 35. Projected 2045 Sewage Demand

Citywide Land Use Alternative	Existing Sewage Flow	Net New Residential Sewage Flow Increase	Net New Non-Residential Sewage Flow (mgd)	Total ADWF (mgd)	Difference from Permitted ADWF (mgd)
Alternative A	5.75	1.95	0.22	7.92	0.58
Alternative B	5.75	2.33	0.16	8.24	0.26
Alternative C	5.75	2.94	0.17	8.86	(0.36)

5.2.14 Stormwater Runoff

This section analyzes how the buildout of the Citywide Land Use Alternatives may impact storm drainage systems maintained by the City. The City of Livermore maintains their own storm drain systems citywide. The system consists of 7,000 storm drains, miles of drainage ditches, and approximately 280 miles of stormwater pipes. The stormwater typically drains from the City system to a canal or natural arroyo before ultimately discharging to the San Francisco Bay.

In general, most development projects are not allowed to discharge more stormwater into the storm drain systems than the existing site conditions, per the Alameda Flood Control District Hydrology and Hydraulics Manual. Redevelopment projects where post-development stormwater drainage runoff exceeds pre-development drainage runoffs are required to retain stormwater through mitigations such as detention facilities, or to meter stormwater flow to be the same or less than existing stormwater flow rates. This helps reduce the impacts to downstream drainage systems which may not be adequately sized for additional runoff

and could flood. These downstream drainage systems, such as major creeks and channels are, for the most part, outside of the City's control.

The anticipated growth in the Citywide Land Use Alternatives is located in both high- and low-density areas. New development and redevelopment of existing parcels in all areas would require stormwater treatment and mitigation. The type of stormwater mitigation needed depends on each project's existing and proposed site conditions. The stormwater requirements outlined in the City's drainage manuals, City municipal code, as well as conditions of approvals for each specific project would help ensure that the City's stormwater infrastructure can support each development over time. Therefore, all three Citywide Land Use Alternatives would perform equally in respect to ensuring sufficient stormwater infrastructure.

5.2.15 Utility Infrastructure in the East of Greenville Road Focus Area

Livermore Municipal Water utility maps indicate there are existing City water mains within the East of Greenville Road Focus Area, including one along Greenville Road from north of Old Patterson Pass Road, as well as the Altamont Pump Station and Altamont tanks. Zone 7 water utility maps show an existing water transmission line owned by Zone 7 along Patterson Pass Road from the Patterson Pass Water Treatment Plant into the City of Livermore. In addition, there are several domestic wells serving parcels in the Focus Area, most typically used by single family homes for private use and consumption.

Prior to new development in the East of Greenville Road Focus Area, studies would be required to identify future water supplies and identify the appropriate water provider(s). In addition, significant water infrastructure extensions, upgrades, and/or new sources will be required to serve new development in the East of Greenville Road Focus Area.

There are existing sewer lines along small segments of Greenville Road. East of Greenville Road along Patterson Pass Road, there is an existing sewer main that travels from Greenville Road to the Patterson Pass Water Treatment Plant. Sewer main extensions and/or upgrades will be required to serve new development in the East of Greenville Road Focus Area, and a sewer study would be needed to understand how new development in the East of Greenville Focus Area could impact downstream sewer systems.

The Focus Area generally slopes from east to west towards Greenville Road, and stormwater either drains to local ditches or low points and eventually infiltrates into the surrounding soil or is

routed towards storm drainage systems. There are some existing storm drain mains along small segments of the west side of Greenville Road, and there appear to be existing earthen storm conveyance systems at Greenville Road that accept some stormwater generated from within the Focus Area. The stormwater appears to drain towards local ditches south of Patterson Pass Road and north of Lupin Way prior to discharging into the City's storm drainage system. Like all new development, future development in the Focus Area would be required to provide stormwater improvements that follow federal, state and local regulations. A more detailed study of stormwater drainage in the East of Greenville Road Focus Area would need to be prepared as part of the City's Storm Drain Master plan or a separate document.

PG&E provides electrical service in a portion or all of the areas within the East of Greenville study area. Overhead electrical lines travel along Greenville Road, Patterson Pass Road, and Lupin Way and serve existing development in the area.

Expanded electrical infrastructure would be required to serve future development, and overhead electrical lines may be required to be undergrounded as development occurs in this area.

There is also a PG&E gas main that runs along the majority of Greenville Road. Lupin Way also has a small segment of gas services that appear to serve the existing parcels. Additional gas utilities and gas main extensions and/or upgrades will be required if future development east of Greenville Road requires gas services.

Fiscal Impacts

The primary goal of the fiscal impact analysis is to compare the impact of the three Alternatives on the City's long-term fiscal health, at full buildout of the General Plan. Fiscal analysis may also help identify policies, growth patterns, and public service standards that improve fiscal sustainability. The analysis is focused on the City's General Fund budget. It compares the ongoing costs of providing public services and maintaining public facilities with the tax revenue sources available to cover these expenditures.

In order to offer a simplified and consistent comparison among all alternatives, this fiscal evaluation assumes that every place type in every alternative will be fully built by 2045 and analyzes the net new development that would result. It also includes net new development that would be anticipated to occur outside the Focus Areas under the existing General Plan and Specific Plans, including downtown and the Isabel Neighborhood Specific Plan. However, throughout Livermore, market conditions and other external factors will influence private development, demand, and individual decision making. Current market studies prepared for the General Plan Update indicate a limited capacity for land uses such as commercial retail or office. (See the Economics existing conditions report at https://imagineLivermore2045.org/wp-content/uploads/2022/06/09_Economics_06-2022.pdf for more detail.) As such, these place types are likely to be adjusted as the community works together to create the Preferred Land Use Scenario, which in turn will alter build out projections, fiscal results, and ability to meet civic goals. The reasonably foreseeable buildout of the ultimate Preferred Land Use Scenario will be calculated and studied in depth as part of the General Plan

Environmental Impact Report (EIR) in an upcoming phase of the General Plan Update.

5.2.16 Methodology

This fiscal impact analysis relies on a computational model designed to compare the Citywide Land Use Alternatives that also may be used to test how City policies, service standards, growth patterns, and socio-economic changes affect the City's General Fund costs and revenues over time. The analysis is focused primarily on the City's General Fund expenditure and revenue items that (1) represent a substantive component of the overall budget and (2) are likely to be affected by the General Plan policies and growth trends. To determine municipal service costs, the analysis relies on Livermore's Fiscal Year 2023-24 budget, the most recent budget adopted by the City. This municipal service "baseline" is the basis of service cost projections attributed to the General Plan Alternatives.

It is important to stress that this analysis seeks to compare the relative fiscal implications of the three General Plan Alternatives and is not intended for City budgeting purposes. The results will not and should not be used as a basis for making actual, department-level staffing decisions or annual revenue estimates. The fiscal results (annual surpluses or deficits) are estimated indicators of fiscal effect. In actuality, the City will seek to have a balanced budget each year. Revenue shortfalls identified in a fiscal analysis may indicate the need to reduce service levels or obtain additional revenues. Revenue surpluses may indicate available resources to reduce liabilities such as deferred maintenance, improve service levels, or build up cash reserves.

The fiscal impact analysis is based on a set of existing conditions and assumptions related to the key factors that affect General Fund costs and revenues, such as property assessed value, sales tax levels, state and federal budget and tax policy and other factors. The fiscal impact analysis results are shown for a single year that demonstrates the full buildout of each Citywide Land Use Alternative, and the revenues and expenditure impacts on the City's General Fund. It does not define or project a year that the Citywide Land Use Alternatives buildout may occur. The results represent net new revenue and expenditures resulting from net new development under each Citywide Land Use Alternative, meaning they show the fiscal change from current existing conditions, not the total General Fund impact that includes current conditions and growth. The analysis presents impact estimates in constant 2023 dollars. Actual fiscal impacts will depend on a variety of factors that cannot be predicted with certainty, including future changes in the City or state budgeting practices, the efficiency of various City departments in providing services, and other factors. To the degree that these conditions change, the fiscal performance of new growth will differ from the estimates provided.

5.2.17 Summary of Findings

Over time, and assuming full buildout, all three of the Citywide Land Use Alternatives are estimated to generate more General Fund revenues than expenditures under the City's current cost structure and service levels. Citywide Land Use Alternative B reflects the most fiscally advantageous outcome for the City's General Fund while Citywide Land Use Alternatives A and C are still fiscally favorable, but less so than Citywide Land Use Alternative B. These additional annual General Fund net surpluses range from

\$34.7 million to \$46.1 million, as illustrated in Table 36. Thus, implementation of any of the General Plan alternatives may allow the City to improve its service levels and standard by varying degrees over time.

The improved fiscal performance projected to result from the implementation of each of the General Plan alternatives stems, in varying degrees, from (1) an increasing orientation towards higher-value development and (2) economies of scale in the provision of public services. Accordingly, for each of the Citywide Land Use Alternatives, the highest revenue sources are related to Property Tax. Simply put, newer and larger buildings tend to be worth more than older and smaller buildings and, therefore, generate more property tax revenue. In terms of department-level costs, Police and Fire make up the majority of General Fund costs (approximately 82 percent of total expenditures).

This analysis assumes current public service staffing service standards (i.e., sworn officers per resident equivalent) and operating cost ratios are maintained as the number of residents and employees increase in response to the growth in the service population. However, this analysis does not estimate one-time capital costs associated with new facilities. Typically, one-time capital improvements are paid for through development impact fees, CFD special taxes, and other infrastructure financing mechanisms.

The relative performance of various Citywide Land Use Alternatives is driven by a variety of complex factors, the most notable of which is the type and amount of development envisioned in each and the resulting service populations. Non-residential development performs better than residential

development as residents and residential uses generate higher demand for public services than do businesses and their employees. Housing units valued at or above \$1.0 million exhibit a marginally positive fiscal impact, whereas the full breadth of housing types included in the alternatives would result in a slightly negative fiscal impact. However, in all three Citywide Land Use Alternatives, the commercial components substantially increase the net fiscal benefit resulting in net positive fiscal benefits for the General Fund.

Most notably, sales tax is a significant source of revenue and makes up approximately 29 to 35 percent of estimated General Fund revenues across the three Citywide Land Use Alternatives. While household and worker spending accounts for 6.5 to 9.0 percent of all sales tax revenue, the majority of sales tax revenue is directly attributed to the amount of net new retail space. Given these factors, Citywide Land Use Alternative B is anticipated to produce the highest net fiscal impact, primarily due to its 7.9 million square feet of net new retail space and the second-lowest number of housing units among the three Citywide Land Use Alternatives.

The buildout for each Citywide Land Use Alternative is expected to yield 5.2 to 7.9 million square feet of net new retail, nearly doubling or more than doubling the City's existing estimated 7.7 million square feet retail inventory. In comparison, population and employment growth are projected to increase by a rate

approximately half of the retail growth estimates (population and employment growth ranges from 44 to 60 percent). Livermore would need to continue growing as a retail destination to capture demand from outside of the city by attracting significant numbers of shoppers and visitors. Since this outcome would depend on a number of volatile market forces, this fiscal impact analysis also considered a scenario that removed retail entirely from the land use program of all three alternatives (i.e., including all revenue and cost sources attributable to retail uses). That sensitivity analysis demonstrated that even without retail, all three Citywide Land Use Alternatives still maintain fiscal neutrality to positivity.

Maintaining strong property values will require that the City continue to plan the City's growth, facilitate high quality design in new development, and invest in community amenities that will maintain a high quality of life.

Given that the analysis shows positive fiscal results for all three citywide alternatives, the primary factors influencing the City's land use decision-making should be maintaining quality development and a balance of place types.

Table 36. Fiscal Impact Summary of General Plan Alternatives

Item	Annual Fiscal Impact		
	Alternative A	Alternative B	Alternative C
General Fund Revenues			
Property Tax	\$33,126,000	\$37,736,000	\$38,648,000
Property Tax in Lieu of Vehicle License Fees	\$9,747,000	\$11,103,000	\$11,372,000
Property Transfer Tax	\$609,000	\$654,000	\$679,000
Sales Tax	\$22,206,000	\$33,218,000	\$26,091,000
Licenses and Permits	\$1,754,000	\$2,034,000	\$2,224,000
Fines and Forfeitures	\$185,000	\$215,000	\$235,000
Franchise Fees	\$3,137,000	\$3,638,000	\$3,978,000
Business License	\$5,073,000	\$5,309,000	\$4,982,000
Total Revenues	\$75,837,000	\$93,907,000	\$88,209,000
General Fund Expenditures			
General Government	\$865,000	\$1,004,000	\$1,099,000
Police	\$21,133,000	\$24,520,000	\$26,835,000
Fire	\$12,724,000	\$14,764,000	\$16,158,000
Innovation and Economic Development	\$394,000	\$457,000	\$501,000
Library Services	\$868,000	\$1,037,000	\$1,179,000
Community Development	\$2,573,000	\$2,986,000	\$3,268,000
Public Works	\$2,562,000	\$2,973,000	\$3,254,000
Total Expenditures	\$41,119,000	\$47,741,000	\$52,294,000
Net Annual Fiscal Impact	\$34,718,000	\$46,166,000	\$35,915,000

Source: EPS, 2023.

This page intentionally left blank.

6. Policy Implications

This section identifies an initial list of potential policies the General Plan Update could consider incorporating to minimize any potential negative effects of future growth. Chapter 5 presents the results of the Alternatives Evaluation, often identifying issues that have the potential to arise from potential land use changes. In many cases, issues that result from new housing and jobs can be resolved through policy direction. This list of policy topics will be refined and expanded through future community outreach on the draft goals, policies, and actions.

6.1 SPECIFIC PLANS

- Prepare Specific Plans for the Midtown and East of Greenville Road Focus Areas to provide additional detail about and regulation of:
 - Land uses
 - Circulation, access, and mobility
 - Infrastructure, utilities, and services
 - Urban design and development standards
 - Financing and implementation

6.2 AESTHETICS

- Consider natural topography and the design of new development.
- Establish urban design policies for each Focus Area to ensure the implementation of identifiable and pedestrian-friendly streetscapes and development street frontages.

6.3 SCENIC CORRIDOR

- Consider the constraints the Scenic Corridor policy places on new development and the most appropriate policy response to balance community priorities of view and landform preservation, affordable housing, and job growth.

6.4 HISTORIC AND ARCHAEOLOGICAL RESOURCES

- Consider new sources of funding for historic preservation.
- Create incentives to preserve historic and cultural resources.
- Create objective design standards for development within historic districts or adjacent to historic structures and/or culturally important sites to maintain the historic character of these resources.
- Complete and maintain the City's Historic Resources Inventory.
- Explore implementing the Mills Act and applying for Certified Local Government Status.

- Assess existing Historic Resources for inclusion on the State or National Register of Historic Places.
- Codify California’s tribal notification laws in local policies, procedures, and standards to ensure sufficient tribal notification for new development.
- Consult the Alameda County Historic Preservation Commission and historic resource inventory and update City historic resources inventory for new lands annexed into the City.

6.5 AGRICULTURAL RESOURCES

- Strengthen both agricultural land preservation and Livermore’s agricultural economy.

6.6 BIOLOGICAL RESOURCES

- Continue to collaborate with regulatory agencies and tribal governments and enforce state and federal laws protecting biological resources.

6.7 CLIMATE AND NATURAL HAZARDS

- Require preservation or replacement of mature trees and robust new fire-safe landscaping and swales as part of new development to help mitigate extreme heat and reduce or slow runoff and flooding.
- Ensure that new or retrofitted stormwater infrastructure is sized to accommodate larger flood events.
- Work with neighborhood associations, realtors, community-based organizations, and property owners to

provide information about potential property risks and mitigation options for increased flooding due to climate change.

- Require all development in and adjacent to designated wildlands fire areas to provide access and defensible space in accordance with California Codes and local ordinances.
- Maintain the City’s Continuity of Government and Continuity of Operations Plans to ensure that the City government can operate during and after hazard events to provide resources and guidance for recovery and reconstruction.
- Provide or incentivize infrastructure improvements such as cool pavements, green roofs, and trees and vegetation in disadvantaged communities, along active transportation corridors, and at bus stops.
- Promote development of community centers within developments, parks or open spaces that could function as community resiliency facilities.
- Ensure systems to communicate hazard warning information and appropriate responses to the public, especially to the most vulnerable members of the community.
- Provide community cooling and clean air centers in areas with low-income, elderly, and young populations.
- Increase distributed energy resources and electricity security, for example, through microgrids and battery storage.

- Regularly update the Livermore Climate Action Plan to reduce greenhouse gas emissions and build resilience to climate impacts.
- Continue to require utility undergrounding and onsite stormwater management for new development and prioritize capital projects for existing development.
- Continue to update the city's Local Hazard Mitigation Plan and continue coordination with agency partners.
- Continue to participate in the National Flood Insurance Program, improve the City's insurance rating, and ensure staffing for city Floodplain Manager.
- Explore participating in Fire Insurance reduction plan.
- Prioritize Capital Improvement projects that reduce natural hazard risk.
- Map all natural hazard areas in and around Livermore and consider code updates to lessen future impacts.
- Support staffing needs of the City's Office of Emergency Services.
- Explore federal grant opportunities for emergency management, mitigation, preparation, response, and recovery.

6.8 EQUITY AND PUBLIC HEALTH

- Consider requirements for health risk assessments, including consideration of diesel particulate matter and

other air pollutants, when a project potentially affects sensitive receptors.

- Require the cleanup of contaminated sites when the site is developed or redeveloped.
- When planning for future development in areas that are more than ½ mile walking distance from a park, the City should consider ways to improve connections to existing parks and work with applicants to include publicly accessible public or private open space as part of their projects.
- Explore opportunities for joint use agreements with the Livermore Joint Union School District to increase access to playgrounds and fields.
- Map areas with minimal food, park, or hospital access.
- Modify objective subdivision and development standards to ensure adequate park and grocery access for new development.
- Modify zoning map or zoning districts to allow for more grocery store, park, and health-supporting uses.
- Consider adopting universal design or family friendly design guidelines.

6.9 HOUSING AND JOBS

- Encourage uses that provide job opportunities for City residents.

- Establish land use designations that support a range of housing types and sizes, including rental, for-sale, market-rate and affordable.

6.10 COMMUNITY SERVICES

- Support close communication and collaboration with the Livermore Valley Joint Unified School District on population projections and facilities planning, as well as issues such as transportation to and from school sites and needed infrastructure upgrades.
- Increase the number of parks and/or parkland acreage in the city.
- Work with the Livermore Area Recreation and Park District to upgrade and enhance any aging recreation facilities and pools to ensure they meet or exceed safety, accessibility and health codes, and facilitate the provision of desired recreation programs and services while conserving surrounding open space.

6.11 TRAFFIC AND MULTIMODAL NETWORK

- Collect appropriate development impact fees to fund transportation improvements that help mitigate impacts on the circulation network.
- Require new and existing developments to include transportation demand management strategies as well as trip reduction targets and monitoring.

- Establish the policy framework and infrastructure improvements necessary to support emerging transportation technologies.
- Work with regional partners to identify and fund transportation demand management strategies.
- Require new developments to make specific types of bicycle, pedestrian, trail and roadway improvements to ensure the safety of all users.

6.12 UTILITIES

- Support efforts by Cal Water, and Zone 7 to develop supplemental water sources.
- Require new major multifamily and commercial developments to evaluate sewer conveyance and treatment capacity and fund or make any improvements necessary to convey additional sewage flows from the project.
- Incentivize low impact development in the city in order to reduce stormwater runoff that can cause flooding.
- Performing a treatment capacity study for the treatment plant. The study would focus on existing and required capacity to treat biochemical oxygen demand (BOD), total suspended solids (TSS), and, potentially, nutrients.

6.13 FISCAL IMPACTS

- Plan for a balance of land uses that supports fiscally sustainable City operations.

- Maintain and enhance the City’s jobs/housing match to ensure adequate revenues.
- Explore creative capital infrastructure and service funding mechanisms to remain fiscally responsible (e.g. CFD, DA, EIFD, etc.).

6.14 EAST OF GREENVILLE ROAD POLICY CONSIDERATIONS

Given the East of Greenville Focus Area is outside the City Limits and lacks the necessary infrastructure to support future development, the General Plan could consider a combination of funding strategies and development requirements to support future growth.

- **Community Benefit Funding.** The Focus Area could capture economic value from increased land prices that would occur from the conversion of open space and agricultural to urban uses and municipal services (beyond increases in property or sales tax revenues). This value could be captured through ordinance, pre-annexation or development agreements, or other mechanisms, and could be used to fund community services, economic incentives, or other public facilities or benefit programs.
- **Tax Increment Financing.** Tax increment Financing is a locally administered financing tool that leverages the rise in economic value and associated increase in property tax receipts that accompanies successful urban investments. These financing districts allow local governments to invest in public infrastructure and other improvements up-front and capture the future anticipated increase in tax revenues generated by new development. This tool is generally

feasible for new development of sufficiently large scale and results in a large increase in the value of surrounding real estate such that the resulting incremental local tax revenues generated by the new project can support bond issuance. These bonds can be used to fund land acquisition, sewer and water upgrades, environmental remediation, construction of parks and roads, among other public facilities.

- **Transfer Development Credit Programs.** A Transfer Development Credit (TDC) program is a conservation tool and funding program, which could be used to invest in the protection of the working landscapes within the Altamont Range for biological, agriculture ranching, and recreation purposes. An Altamont Range TDC program could be built on a similar model to the North Livermore TDC program. As part of comprehensive planning for the Focus Area, the General Plan could identify the baseline conditions, designate “receiver sites” for non-residential development and “sending sites” in the Altamont Range whereby development rights (or credits) could transfer from one area to another. The sending sites development rights would be extinguished, resulting in the conservation of land for agricultural and open space purposes.
- **Mitigation Program or Fee Equivalent.** The South Livermore Valley Specific Plan (SLVSP) required an acre preserved per acre developed and an acre preserved per residential unit developed. The East of Greenville Focus Area could consider similar ratios for conservation mitigation in South Livermore for the development of commercial/industrial land uses. Or, an equivalent fee could be established, planting requirements could be

implemented, or capital investments in re-planting reserves (i.e. endowments funds) could be considered. Revenues could be utilized to support improvements to further enhance and protect open space and agricultural areas surrounding the focus area including South Livermore.

7. Next Steps

The goal of this alternatives evaluation is to help inform community input on the pros and cons of the draft alternatives and what characteristics the preferred land use should ultimately include. The results of the alternatives evaluation will be shared with the community at workshops, through pop-up events, meetings with community organizations, and an online activity in October and early November. To register for the workshops or participate in the online activity visit www.ImagineLivermore2045.org.

In addition, the General Plan Advisory Committee will meet as part of the community engagement process to review the outcomes of the alternatives evaluation, receive and review initial community input on the Preferred Land Use Scenario, and provide feedback on the Preferred Land Use Scenario. All General Plan Advisory Committee meetings are open to the public.

Following the General Plan Advisory Committee meeting, the Planning Commission will review community and General Plan Advisory Committee feedback and make a recommendation on the Preferred Land Use Scenario to the City Council.

The City Council will review community and General Plan Advisory Committee input and the Planning Commission recommendation and provide final direction on the Preferred Land Use Scenario.

Once the Council provides direction on the Preferred Land Use Scenario, the General Plan team will prepare the Draft General Plan and analyze its potential environmental impacts of the preferred scenario. Both of these documents will be available for extensive public review and comment after they are published.

To follow the progress of the General Plan Update throughout the project, or to reach City staff with a question or comment at any time, visit:

<https://imagineLivermore2045.org/>

This page intentionally left blank.