

APPENDIX D

AGRICULTURAL CONVERSION STUDY

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AGRICULTURAL CONVERSION STUDY

VILLAGE D SPECIFIC PLAN MADERA, CALIFORNIA

Submitted to:

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Project No. CMD1801



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LIST OF ABBREVIATIONS AND ACRONYMS

APN	Assessor's Parcel Number
CEQA	California Environmental Quality Act
CMGP	City of Madera General Plan
DOC	California Department of Conservation
FMMP	Farmland Mapping and Monitoring Program
GSP	Groundwater Sustainability Plan
LAFCC	Madera County Local Agency Formation Commission
LCC	land capability classification
LESA	Land Evaluation and Site Assessment
MCGP	Madera County General Plan
MID	Madera Irrigation District
NOP	Notice of Preparation
NRCS	Natural Resources Conservation Service
USDA	United States Department of Agriculture
ZOI	Zone of Influence

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1.0 INTRODUCTION

The City of Madera is considering the approval of the Village D Specific Plan (proposed project), an approximately 1,800-acre project site (Specific Plan Area) to be located on the western edge of the City of Madera. A majority of the Specific Plan Area is located within the City’s “Village D Urban Growth Boundary,” which is an area that was designated in the City of Madera’s 2009 General Plan to accommodate future population. Furthermore, in October 2018, the Madera County Local Agency Formation Commission (LAFCO) approved the expansion of the City’s Sphere of Influence to include the Specific Plan Area.¹ The proposed project would develop the Specific Plan Area into a new mixed-used community that includes residential units, commercial office spaces, industrial spaces, parks and recreation areas, and public facilities, including schools. The purpose of this Agricultural Conversion Study is to describe the existing agricultural conditions in the Specific Plan Area and its environs, to identify federal, State, regional, and local policies regarding agricultural resources applicable to the proposed project, identify the thresholds with which to measure impact significance, and to examine the potential for the proposed project to significantly impact agricultural resources.

1.1 PROJECT DESCRIPTION

1.1.1 Project Site Location and Setting

The City of Madera is located in Madera County, west of the Sierra Nevada Mountains. The City is located along California State Route 99, 13 miles southeast of Chowchilla and 15 miles northwest of Fresno (Figure 1).

1.1.2 Project Site

The project site (Specific Plan Area) is approximately 1,863 acres in size and is located on the western edge of the City of Madera. In October 2018, LAFCO approved the expansion of the City’s Sphere of Influence to include the Specific Plan Area. The Specific Plan Area is bounded by the Fresno River to the south, Road 24 to the east, Avenue 17 to the north, and Road 22 to the west.

The Specific Plan Area is surrounded by primarily agriculture uses on the northern and western boundaries, and the Fresno River and agriculture uses to the south. The Madera Municipal Golf Course, Madera Airport, and residential uses are north and east of the project site.

Assessor’s Parcel Numbers (APN) within the Specific Plan Area are listed below:

033-070-005	033-170-001	033-170-010
033-070-004	033-170-002	033-170-011
033-070-002	033-170-009	033-180-002
033-070-003	033-170-005	033-180-003

¹ Madera County Local Agency Formation Commission, Resolution No. 2018-009.

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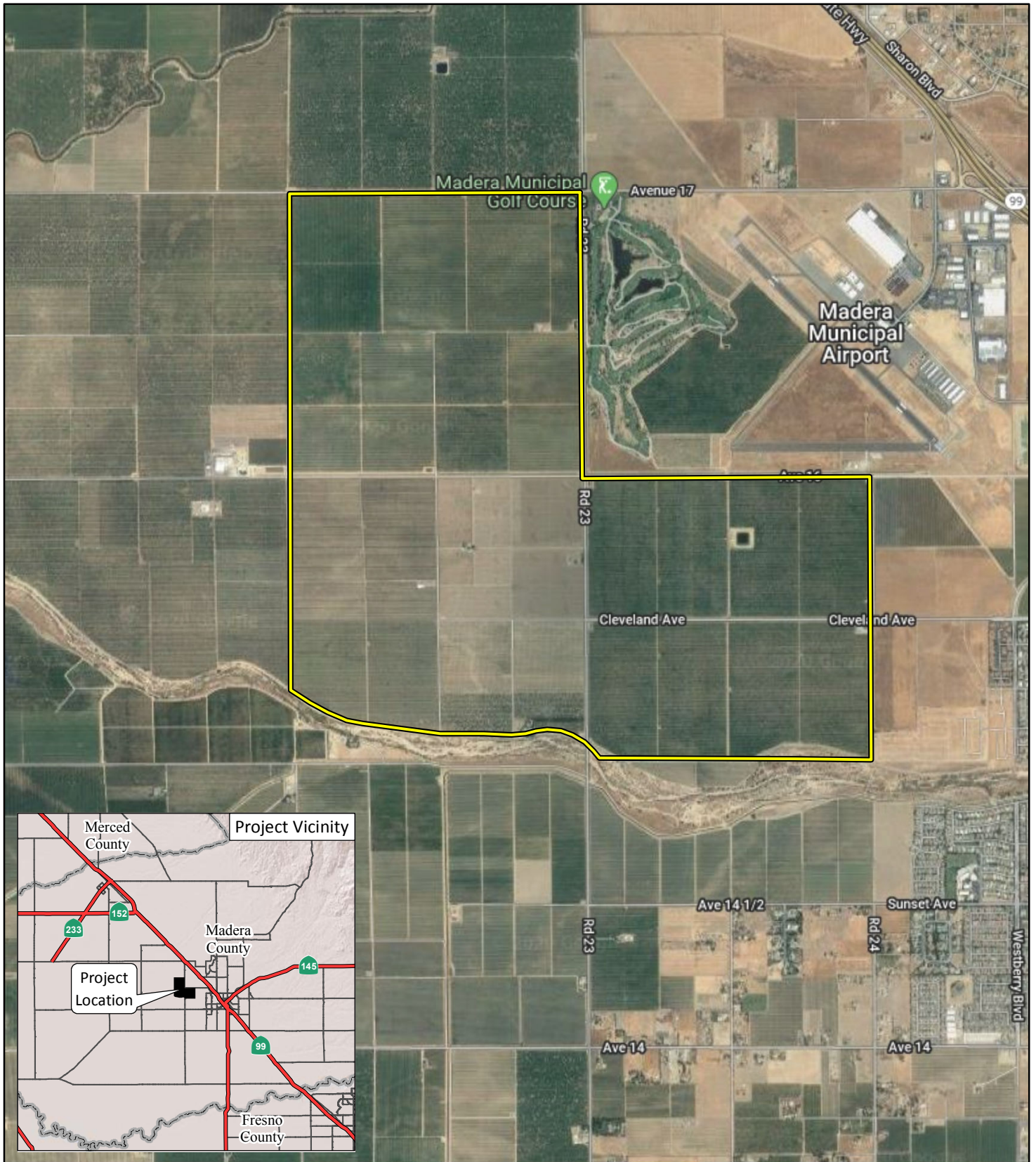


FIGURE 1

LSA

LEGEND

 Project Location



0 1250 2500
FEET

SOURCE: Google Earth (2018)

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The Specific Plan Area is designated Agriculture Exclusive (AE) and Agriculture (A) in the Madera County General Plan.

The Specific Plan Area is zoned Agricultural Rural Exclusive - 40 Acres (ARE-40) and Agricultural Rural Exclusive - 20 Acres (ARE-20) per the Madera County Zoning Code.

The Specific Plan Area is designated Village Reserve (VR), Village Mixed Use (VMU), High Density Residential (HD), Medium Density Residential (MD), Low Density Residential (LD), Neighborhood Mixed Use (NMU), Open Space (OS), Resource Conservation/Agriculture (RC) in the City of Madera General Plan. The City has not provided zoning for the Specific Plan Area; rather, detailed regulations/development standards will be included in and adopted as part of the Specific Plan approval process.

1.1.2.1 Existing Circulation Network

Major roadways in the vicinity of the Specific Plan Area are located 1 mile apart, with minor collector roadways located in between each major roadway. The Fresno River to the south, and the Madera Airport and Municipal Golf Course to the north limit continuity of the roadway network and connectivity to surrounding development and the City. As a result, the existing circulation network contains a limited number of roadways providing access to the Specific Plan Area. Avenue 17, Avenue 16 (Kennedy Street), and Avenue 15 ½ (Cleveland Avenue) provide direct east and west access to the Specific Plan Area. Road 23 provides direct north and south access.

1.1.2.2 Existing Land Uses and Infrastructure

The Specific Plan Area is predominantly characterized by active agricultural operations and a mix of irrigated crops. The Specific Plan Area contains three active Williamson Act contracts.² The Specific Plan Area also contains existing residential and agricultural support structures. The following irrigation canals and pipeline traverse the Specific Plan Area:

- Canal 24.2-14.2 is located in the southern portion of the Specific Plan Area and runs parallel to the Fresno River.
- Canal 24.2-13.2 is located along the north side of Avenue 16/Kennedy Avenue.
- The Airport Canal is located along Road 23.
- Airport 1.0 E. pipeline and Airport 1.0 W. canal and pipeline are located along the Avenue 17 alignment on the northern boundary of the Specific Plan Area.

1.1.2.3 Project Background

The City of Madera adopted a General Plan in 2009 that includes the concept of “Urban Growth” areas and identifies locations to focus future growth. The Village D Urban Growth area includes all of the Specific Plan Area as well as an area east of Avenue 16 within the City limits and outside of the

² Parcels 033-170-001, 033-170-009, and 033-170-005. These parcels are located south of Avenue 16 and west of Road 23 in the southwestern portion of the project site.

Specific Plan Area. The development of the Urban Growth areas is to be guided by specific plans, which would allow for orderly growth and adequate infrastructure and public facilities/services to support the future population within each area.

1.1.2.4 Project Objectives

The Specific Plan is designed to implement a series of project-specific objectives to ensure that the Specific Plan is implemented with quality residential, commercial, and light industrial development. The following is a list of project objectives:

- Address the City’s current and projected housing needs;
- Create mixed-use development to attract businesses and employment opportunities;
- Achieve the goals related to community character and pedestrian-friendly design of the General Plan’s Community Design Element and Land Use Element;
- Facilitate annexation of areas in the Specific Plan Area that are outside of the City limits of Madera;
- Create a transportation network to meet the objectives of the General Plan’s Circulation Element;
- Promote opportunities for water efficiency and incorporate sustainable building and operating practices;
- Incorporate sustainable practices, as practicable, in developing buildings and infrastructure; and
- Undertake development of the project site in a manner that is economically feasible and balanced to address both the Project Applicant’s and the City’s economic concerns.

1.1.2.5 Proposed Project

The Specific Plan includes approximately 10,800 residential units, 2,089,200 square feet of commercial and office space, 160 acres of parks and recreation areas, and 54 acres of public facilities, including schools. A summary of the project’s total buildout is provided in Table A below. The development described in the Specific Plan would occur as individual, site-specific applications that are brought forth by property owners. As each phase of development is proposed, improvements would include site grading and the demolition of on-site existing vegetation and structures.

The proposed land use is divided into the following three subareas:

- **Northwest Community.** This area is approximately 650 acres in size and is bounded by Avenue 17 to the north, Road 23 to the east, Avenue 16 to the south, and agriculture to the west.

- **Southwest Community.** This area is approximately 589 acres in size and is bounded by Avenue 16 to the north, Road 23 to the east, the Fresno River to the south, and agriculture to the west.
- **Southeast Community.** This area is approximately 645 acres in size and is bounded by Avenue 16 to the north, agriculture to the east, the Fresno River to the south, and Road 23 to the west.

Table A: Overall Land Use Summary

Land Use Type	Land Use Designation	Acreage (ac)	Target Density (du/ac)	Dwelling Units	Commercial/ Office/ Industrial (FAR)	Commercial/ Office/ Industrial (SF)
Residential						
Village Country Estates	VCE	36.00	1.5	54.0		
Village Low Density	VLDR	911.30	5.25	4,784.0		
Village Medium Density	VMDR	318.20	11.25	3,579.0		
Village High Density	VHDR	105.20	22.5	2,366.0		
Residential Subtotal		1,370.70		10,783.0		
Mixed Use						
Village Mixed Use	VMU	120.10			0.35	1,830,587.20
Village Parks and Recreation						
Community Parks	VPR	24.80				
Neighborhood Parks		92.50				
West Trail		2.25				
South Trail		3.25				
Pocket Parks/Basins		40.90				
Village Parks and Recreation Subtotal		163.70				
Natural Open Space						
Fresno River Area	VOS	16.78				
Industrial						
Village Business Park	VBP	29.69			0.2	258,659.30
Public Facilities						
Elementary School Sites	VES	53.85				
Major Roadways						
Major Roadways	ROW	128.45				
Total		1,883.27		10,783.0		2,089,246.50

Source: The Villages at Almond Grove Specific Plan (KTGY 2018).

The proposed Specific Plan would include infrastructure improvements, such as roadways and utilities. The City of Madera would provide potable water and wastewater services to the Specific Plan Area, Pacific Gas and Electric Company would provide electricity and natural gas, Mid Valley Disposal would provide solid waste disposal services, the Madera Fire Department would provide fire protection, paramedic, and emergency response services, the Madera Police Department would provide law enforcement services, and the Madera Unified School District would provide public school services.

1.1.2.6 Project Implementation and Phasing

The Specific Plan Area will be developed in phases. A Conceptual Phasing Plan would be implemented to provide the services and infrastructure required for each phase of development. In cases where development within a new phase is to begin prior to the completion of a phase in progress, all infrastructure improvements would be funded and designed for the phase in progress before any new phase may begin.

1.1.2.7 Discretionary Actions

A number of permits and approvals, including discretionary actions, would be required prior to implementation of the proposed project (Table B). As lead agency for the proposed project, the City of Madera would be responsible for the majority of the approvals required for development. Other agencies may also have some authority related to the project and its approvals.

Table B: Required Permits and Approvals

Agency	Permit/Approval
State Water Resources Control Board	National Pollutant Discharge Elimination System General Permit (with requisite Storm Water Pollution Prevention Plan, Conceptual Storm Water Pollution Prevention Plan, and Permanent Control Measures)
City of Madera	General Plan Amendment Specific Plan Precise Plan Municipal Code Amendments/Rezoning Parcel Maps, Lot Line Adjustments, Tentative and Final Subdivision Maps Development Agreement(s) Conditional Use Permits Encroachment Permits, Grading Permits, Building Permits
Madera County Local Agency Formation Commission	Annexation

Source: LSA (2019).

It is expected that the proposed project would require a General Plan Amendment, rezoning, and annexation of the Specific Plan Area into the City. Additionally, future development proposals within the Specific Plan Area would be required to be consistent with the Airport Land Use Compatibility Plan for Madera Municipal Airport, and three parcels would require removal of active Williamson Act contracts prior to development.

In addition, implementation of the project may require permits or approvals from the following local, regional, State, and federal agencies:

- Madera County
- San Joaquin Valley Air Pollution Control District
- Madera County Transportation Commission

- Madera Irrigation District
- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife, Central Region
- Caltrans, District 6
- State Department of Conservation
- State Department of Water Resources
- United States Fish and Wildlife Service
- United States Army Corps of Engineers
- United States Bureau of Reclamation

1.2 SCOPING COMMENTS

In August 2018, The City of Madera distributed a Notice of Preparation (NOP) for the Draft Environmental Impact Report for the Village D Specific Plan. Following the review period, the applicant refined the project, which resulted in changes to the overall buildout numbers of the Specific Plan. Therefore, in December 2018, the City re-issued the NOP with updated project information. In response to the December NOP, the California Department of Conservation (DOC) Division of Land Resource Protection submitted comments and recommendations pertaining to agricultural resources and recommended that the agricultural analysis discuss the following items:

- The type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project;
- Impacts on current and future agricultural operations in the vicinity of the proposed project;
- Cumulative impacts on agricultural land;
- Potential contract resolutions for land in agricultural preserves or enrolled in a Williamson Act Contract; and
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area. The conversion of agricultural land should be considered an impact of regional significance, and hence the search for replacement lands should not be limited strictly to lands within the project's surrounding area. Even though conversion of agricultural land is often considered as an unavoidable impact under California Environmental Quality Act (CEQA) analysis, all mitigation measures that are potentially feasible must be considered. The DOC recommends the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. The DOC

recommends easements because they are widely accepted and used by lead agencies as an appropriate mitigation measure under CEQA because they follow an established rationale similar to that of wildlife habitat mitigation. In addition, mitigation via easements can be implemented by at least two alternative approaches: (1) the outright purchase of easements; or (2) the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements.

2.0 REGULATORY SETTING

The following section describes the regulations applicable to analyzing the potential impacts to agricultural resources from development of the proposed project.

2.1 FEDERAL

Federal regulations regarding agricultural resources do not apply to the proposed project.

2.2 STATE

2.2.1 California Department of Conservation Farmland Mapping and Monitoring Program

In 1982, the DOC began coordinating with the United States Department of Agriculture (USDA) Soil Conservation Service in the preparation and completion of Important Farmland mapping for California through the establishment of the Farmland Mapping and Monitoring Program (FMMP). The FMMP created a greater level of mapping compared to the USDA Soil Conservation Service by modifying the federal criteria for use in California and incorporating irrigation criteria for farmland significance. The primary purpose of the FMMP is to monitor the conversion of California's agricultural lands. The DOC Division of Land Resource Protection works with landowners, local governments, and researchers to conserve California's farmland and open space resources based on information provided in the FMMP.

The DOC FMMP produces maps and statistical data used for analyzing impacts on agricultural resources. Agricultural land is categorized according to soil quality and irrigation status. The maps are updated every 2 years through review of aerial photographs, a computer mapping system, public review, and field reconnaissance. The latest statewide data available are for the period from 2014 to 2016. The FMMP categories are defined as follows:

- **Prime Farmland.** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some

counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance, but they are shown separately.

- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen’s Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- **Urban and Built Up Land.** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

2.2.2 California Land Conservation (Williamson) Act

The California Land Conservation Act, better known as the Williamson Act, has been the State’s most important agricultural land protection program since its enactment in 1965. Fundamentally, the Williamson Act is a State policy administered by local governments. Local governments are not mandated to administer the act, but those that do have some latitude to tailor the program to suit local goals and objectives.

Williamson Act contracts have a minimum term of 10 years, with renewal occurring automatically each year (local governments can establish initial contract terms for longer periods of time). The contracts run with the land and are binding on all successors in interest of the landowner. Only land located within an agricultural preserve is eligible for Williamson Act contracts. An agricultural preserve defines the boundary of an area within which a city or county would enter into contracts with landowners. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural uses would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit.

2.2.3 California Environmental Quality Act

CEQA was adopted in 1970 by the California State Legislature to identify, protect, and minimize impacts to the State’s environmental resources, and codified as Section 21000 of the State’s Public Resources Code. CEQA vests the primary responsibility of carrying out its objectives to local municipalities. In determining whether a proposed project may have a significant effect on agricultural resources, Madera County uses the thresholds provided in Appendix G of the CEQA Guidelines.

2.2.4 Public Resources Code 21095 - California Agricultural Land Evaluation and Site Assessment Model

Land Evaluation and Site Assessment (LESA) is a term used to define an approach for rating the relative quality of agricultural land based upon specific measurable features.

The formulation of a California LESA Model is the result of Senate Bill 850 (Chapter 812/1993), which charges the Resource Agency (in consultation with the Governor's Office of Planning and Research) with developing an amendment to Appendix G of the CEQA Guidelines concerning agricultural lands. Such an amendment is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process" (Public Resources Code Section 21095).

A LESA analysis is based on the following definition of agricultural land contained in CEQA, Public Resources Code Section 21060.1:

21060.1 (a) "Agricultural land" means prime farmland, farmland of statewide importance, or unique farmlands, as defined by the United States Department of Agriculture land inventory and monitoring criteria as modified for California.

21060.1 (b) In those areas of the state where lands have not been surveyed for the classifications specific in subdivision (a), "agricultural land" means land that meets the requirement of "prime agricultural land" as defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code [the Williamson Act].

2.3 COUNTY

2.3.1 Madera County General Plan

The Madera County General Plan (MCGP) is used as a blueprint to guide future development in the unincorporated areas of the County, including portions of the City Planning Area that are outside the Madera City limits. The County General Plan is applicable to areas outside the existing City limits of Madera until the area is annexed by the City.

2.3.1.1 Existing Land Use Designation

The Specific Plan Area is currently designated Agriculture Exclusive (AE) and Agriculture (A) in the Madera County General Plan.

The AE designation provides for agricultural uses, limited agricultural support service uses, agriculturally oriented services, timber production, mineral extraction, airstrips, public and commercial refuse disposal sites, recreational uses, public and quasi-public uses, and similar and compatible uses. The minimum parcel size shall be 36 to 640 acres. Allowable residential development in areas designated Agriculture Exclusive includes one to two single family homes per parcel, secondary residential units, caretaker/employee housing, and farmworker housing.

The A designation is identical to the AE designation except the minimum parcel size is 18 acres.

2.3.1.2 Agricultural Goals and Policies

The MCGP includes the following agricultural goals and policies relevant to the proposed project:

General Land Use

Goal 1.A. To promote the wise, efficient, and environmentally sensitive use of Madera County land to meet the present and future needs of Madera County residents and businesses.

Policy 1.A.4. The County shall encourage infill development and development contiguous to existing cities and unincorporated communities to minimize premature conversion of agricultural land and other open space lands.

Goal 1.J. To foster cooperative planning and to address regional concerns on a regional basis.

Policy 1.J.3. The County shall coordinate its policies regarding conversion of agricultural lands with the County Local Agency Formation Commission (LAFCO) and the cities of Madera and Chowchilla.

Agricultural and Natural Resources

Goal 5.A. To designate adequate agricultural land and promote development of agricultural uses to support the continued viability of Madera County's agricultural economy.

Policy 5.A.1. The County shall maintain agriculturally-designated areas for agricultural uses and direct urban uses to designated new growth areas, existing communities, and/or cities.

Policy 5.A.2. The County shall discourage the conversion of prime agricultural land to urban uses unless an immediate and clear need can be demonstrated that indicates a lack of land for non-agricultural uses.

Policy 5.A.3. The County shall seek to ensure that new development and public works projects do not encourage further expansion of urban uses into designated agricultural areas.

Policy 5.A.5. The County shall allow the conversion of existing agricultural land to urban uses only within designated urban and rural residential areas, new growth areas, and within city spheres of influence where designated for urban development on the General Plan Land Use Diagram.

Policy 5.A.6. The County shall encourage continued and, where possible, increased agricultural activities on lands designated for agricultural uses.

Policy 5.A.9. The County shall encourage infill development in urban areas as an alternative to expanding urban boundaries into agriculturally-designated areas.

Land Use Conflict Policies

5.A.13. The County shall require development within or adjacent to designated agricultural areas to incorporate design, construction, and maintenance techniques that protect agriculture and minimize conflicts with adjacent agricultural uses.

5.A.14. The County shall continue to enforce the provisions of its Right-to-Farm Ordinance and of the existing state nuisance law.

2.3.2 Madera County Code of Ordinances – Title 18. Zoning

The Specific Plan Area is zoned Agricultural Rural Exclusive - 20 Acres (ARE-20) and Agricultural Rural Exclusive - 40 Acres (ARE-40):

- **ARE-20.** This zone allows a guest house and/or communications tower/wireless communications facilities and conditionally accommodates a wide range of agricultural uses. This zone is applied to lands that are in agricultural use. The minimum parcel size is 18 acres.
- **ARE-40.** This zone allows a guest house and/or communications tower/wireless communications facilities and conditionally accommodates a wide range of agricultural uses. This zone is applied to lands that are in agricultural use. The minimum parcel size is 36 acres.

2.3.3 Madera County Code of Ordinances – Title 6. Animals and Agriculture

Madera County adopted a right-to-farm ordinance in 1989 (Chapter 6.28 of the Madera County Code). The County recognizes that where nonagricultural land uses extend into agricultural areas or exist side-by-side, agricultural operations become the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail operations, others are discouraged from making investments in farm improvements, and efficient agricultural production is generally discouraged due to burdensome litigation against farmers. It is the intent of the County to conserve, protect, and encourage the development, improvement, and continued viability of its agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the County's residents. The right-to-farm policies are as follows:

1. No agricultural activity, operation or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than 1 year if it was not a nuisance at the time it began.
2. This section shall not invalidate any provision contained in Health and Safety Code, Fish and Game Code, Food and Agricultural Code, or Division 7 (commencing with Section 13000) of the Water Code of the State of California, if the agricultural activity, operation or facility, or appurtenances thereof, constitutes a nuisance, public or private, as specifically defined or described in any such provision.

3. This section is not to be construed so as to modify or abridge the State law set out in the California Civil Code relative to nuisances, but rather it is only to be utilized in the interpretation and enforcement of the provisions of county ordinances and regulations.

2.4 CITY

2.4.1 City of Madera General Plan

The City of Madera General Plan (CMGP) is the official policy statement of the City Council to guide private and public development of the City, as well as the City's own operations and decisions. The General Plan helps to ensure that land use decisions are in conformance with the long-range program designed to protect and further the public interest related to the City of Madera's growth and development.

2.4.1.1 Existing Land Use Designations

The existing City of Madera land use designations for the Specific Plan Area include Village Reserve (VR), Village Mixed Use (VMU), High Density Residential (HD), Medium Density Residential (MD), Low Density Residential (LD), Neighborhood Mixed Use (NMU), Open Space (OS), and Resource Conservation/Agriculture (RC).

2.4.2 Zoning Ordinance of the City of Madera

The City of Madera adopted a right-to-farm ordinance in 1998 (Chapter 10-3.148 of the Madera Municipal Code). This ordinance seeks to protect and encourage agricultural operations in the City, as long as proper and accepted customs and standards are met. The intent of the policy is for residents of property in or near agricultural districts to be prepared to accept the inconveniences and discomfort associated with normal farm activities. The policy also establishes that no agricultural operation conducted in a manner consistent with proper and accepted customs and standards shall be or become a nuisance due to any changed condition after the operation has been in operation for more than 1 year, if it was not a nuisance at the time it began. The ordinance also includes a provision to record a right-to-farm notice in conjunction with rezoning and subdivision applications within 300 feet of agricultural lands. The right-to-farm ordinance reads as follows:

Section 10-3.418 Right to Farm

- (A) *The City Council hereby finds that where nonagricultural land uses extend into agricultural areas or exist side-by-side, agricultural operations often become the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail operations, others are discouraged from making investments in farm improvements, and efficient agricultural production is generally discouraged due to burdensome litigation against farmers.*
- (B) *It is the intent of the city to conserve, protect and encourage the development, improvement and continued viability of its agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the city's and county's residents. It is also the intent of the city to balance the rights of farmers to produce food and other agricultural*

products with the rights of non-farmers who own, occupy or use land within or adjacent to agricultural areas. It is the intent of this chapter to reduce the loss to the city's and county's agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Nothing in this chapter shall be construed to limit the right of any owner of real property to request that the city consider a change in the zoning classification of his property in accordance with the procedures set forth in the Municipal Code.

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3.0 EXISTING ENVIRONMENTAL SETTING

3.1 GEOGRAPHIC SETTING

The City of Madera is located along California State Route 99, 13 miles southeast of Chowchilla and 15 miles northwest of Fresno and within Madera County (Figure 1). The proposed project is located in the unincorporated portion of Madera County on the western edge of the City of Madera. In October 2018, LAFCO approved the expansion of the City's Sphere of Influence to include the Specific Plan Area (Madera County Local Agency Formation Commission, Resolution No. 2018-009). In addition to being within the City's Sphere of Influence, the proposed project is within the City's "Village D Urban Growth Boundary," which is an area that was designated in the City of Madera's 2009 General Plan to accommodate future population growth. The Village D Urban Growth area includes all of the Specific Plan Area as well as area east of Avenue 16 within the City limits and outside of the Specific Plan Area. The development of the Urban Growth areas is to be guided by specific plans, which would allow for orderly growth and adequate infrastructure and public facilities/services to support the future population within each area.

The Specific Plan Area is approximately 1,863 acres in size and is bounded by the Fresno River to the south, Road 24 to the east, Avenue 17 to the north, and Road 22 to the west.

The Specific Plan Area is surrounded by agricultural uses to the north and west, the Fresno River and agricultural uses to the south, and the Madera Municipal Golf Course, Madera Airport, and residential uses to the north and east.

3.2 CLIMATE

Madera County is characterized by a semi-arid climate. Temperatures range from 51 degrees Fahrenheit (F) to 98 degrees F in the summer and from 35 degrees F to 66 degrees F in the winter. Annual rainfall is approximately 11 inches. The majority of the rainfall occurs from November to April (Western Regional Climate Center 2016).

3.3 AGRICULTURAL PRODUCTION

3.3.1 State of California

California produces more than 400 commodities (California Department of Food and Agriculture 2018). In 2017, California's farms and ranches yielded a market value of more than \$50 billion (California Department of Food and Agriculture 2018). Over a third of the country's vegetables and two-thirds of the fruits and nuts are grown in California. In addition, in 2017, California agricultural exports totaled \$20.56 billion (California Department of Food and Agriculture 2018).

3.3.2 Madera County Agricultural Production

Madera County is ranked 11th among the 58 California counties in total agricultural production (Madera County 2018). According to the 2018 Agricultural Crop Report (Madera County 2018), approximately 723,300 acres of land were harvested in Madera County in 2018 with a total gross value of \$2,058,474,000. Field crops made up the greatest percentage of Madera County's 2018

harvest at 453,360 acres (63%) of total crop production, followed by fruit and nut crops at 260,830 acres (36%), vegetables at 8,800 acres (1.2%), and nursery products at 310 acres (0.04%).

The top five commodities for 2018 in dollar value were almonds, grapes, pistachios, milk, and pollination. These top five commodities make up more than \$1.6 billion (81%) of the total value of Madera County’s agricultural production (Madera County 2018).

3.3.3 Village D Specific Plan and Adjacent Properties

3.3.3.1 Village D Specific Plan Area

The Specific Plan Area is currently being farmed for almonds. The Specific Plan Area also contains existing residential and agricultural support structures. The following irrigation canals and pipeline traverse the Specific Plan Area:

- Canal 24.2-14.2 is located in the southern portion of the Specific Plan Area and runs parallel to the Fresno River.
- Canal 24.2-13.2 is located along the north side of Avenue 16/Kennedy Avenue.
- The Airport Canal is located along Road 23.
- Airport 1.0 E. pipeline and Airport 1.0 W. canal and pipeline are located along the Avenue 17 alignment on the northern boundary of the Specific Plan Area.

Farmland Acres by Category. The Specific Plan Area contains the following acreages of farmlands (Table C and Figure 2) per the County and the California Department of Conservation’s Farmland Mapping and Monitoring Program. The total acreage of Important Farmlands, which includes Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance, is 1,852 acres.

Table C: Farmland Acres by Category in the Specific Plan Area

Land Mapping Category	Acres within the Specific Plan Area
Prime Farmland	943.5
Farmland of Statewide Importance	201.6
Unique Farmland	706.9
Farmland of Local Importance	N/A
Grazing Land	N/A
Urban and Built Up Land	1.2
Nonagricultural or Natural Vegetation	10.1
Total	1,863.3

Source: Madera County (2018); DOC Farmland Mapping & Monitoring Program (2016).

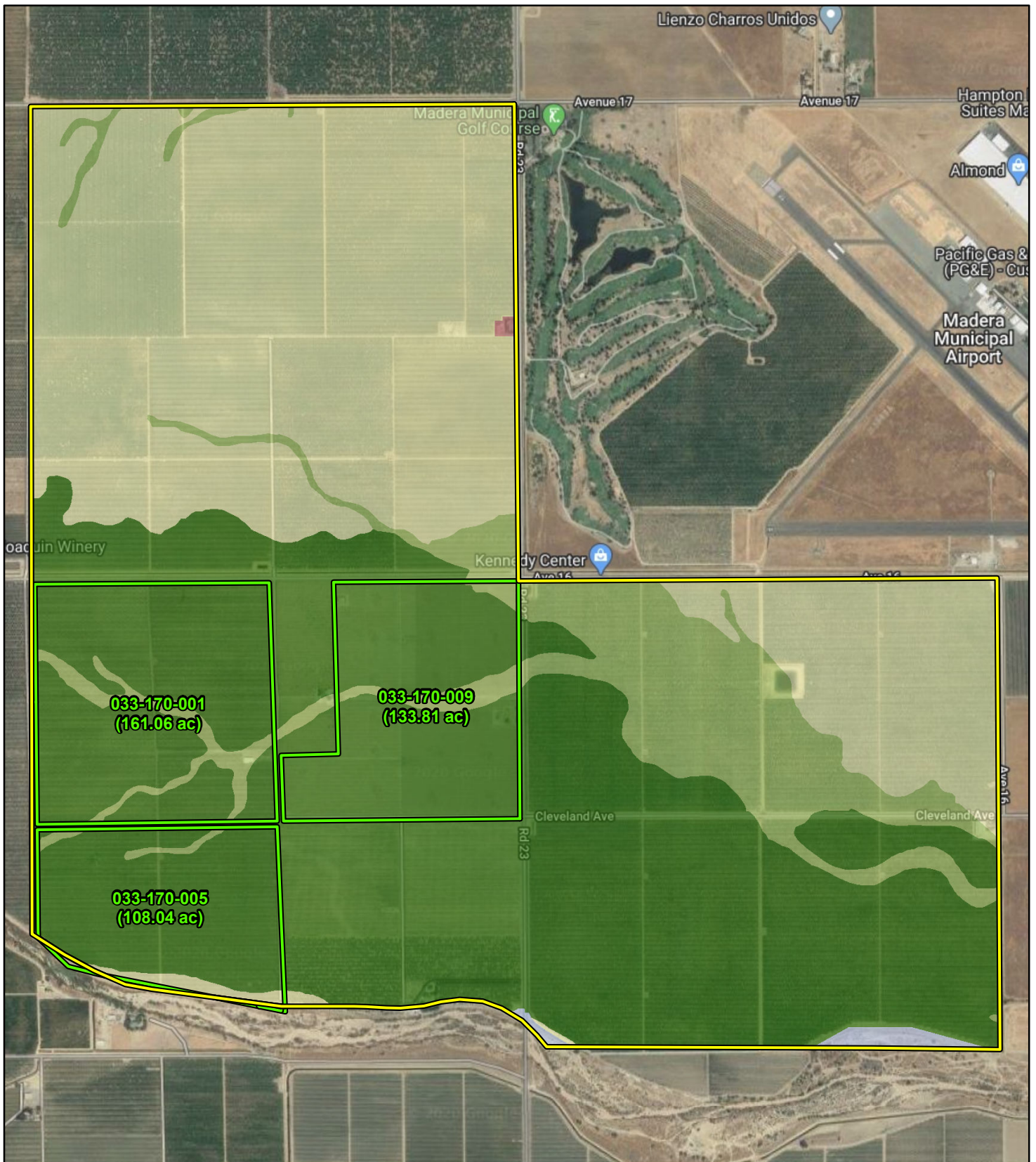
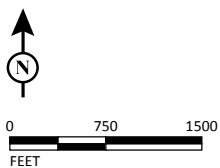


FIGURE 2

LSA

LEGEND

- Project Location
- Williamson Act Contract - Prime
- Farmlands**
- Prime Farmland (943.5 ac)
- Farmland of Statewide Importance (201.6 ac)
- Unique Farmland (706.9 ac)
- Nonagricultural or Natural Vegetation (10.1 ac)
- Urban and Built-Up Land (1.2 ac)



Village D Specific Plan EIR
Farmlands

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Williamson Act Contract Lands. The Specific Plan Area contains three active Williamson Act contracts, totaling 402.91 acres, on APNs 033-170-001, 033-170-009, and 033-170-005. The Williamson Act contract lands are generally in the center of the Specific Plan Area (Table D and Figure 2).

Table D: Williamson Act Contracts

APN under Williamson Act Contract	Acres
033-170-001	161.06
033-170-005	108.04
033-170-009	133.81
Total	402.91

Source: Madera County (2018).

Zone of Influence. The Specific Plan Area’s Zone of Influence (ZOI) is defined as all parcels that are within one quarter mile of the Specific Plan Area boundary and includes the entire acreage of any property intersected by the quarter mile boundary (Figure 3). The Specific Plan Area’s ZOI area contains approximately 4,152 total acres, approximately 2,667 acres of which are Important Farmland (Table E). The ZOI contains approximately 1,849 acres of Prime and Non-Prime land under a Williamson Act Contract (Table F and Figure 3).

Table E: Farmland Acres by Category in the Specific Plan Area’s Zone of Influence

Land Mapping Category	Acres within the Specific Plan Area’s Zone of Influence
Prime Farmland	1,271.7
Farmland of Statewide Importance	355.5
Unique Farmland	1,086.5
Farmland of Local Importance	7.3
Grazing Land	398.7
Urban and Built Up Land	576.9
Nonagricultural or Natural Vegetation	262.5
Semi-Agricultural and Rural Commercial Land	13.7
Rural Residential Land	41.7
Vacant or Disturbed Land	137.1
Total	4,151.6

Source: Madera County (2019); USDA Natural Resources Conservation Service (2018).

Table F: Williamson Act Contract Land in the Specific Plan Area’s Zone of Influence

Land Mapping Category	Acres within the Specific Plan Area’s Zone of Influence
Williamson Act Contract Prime Land	1,623.9
Williamson Act Contract Non-Prime Land	224.9
Total	1,848.8

Source: Madera County (2019); USDA Natural Resources Conservation Service (2018).

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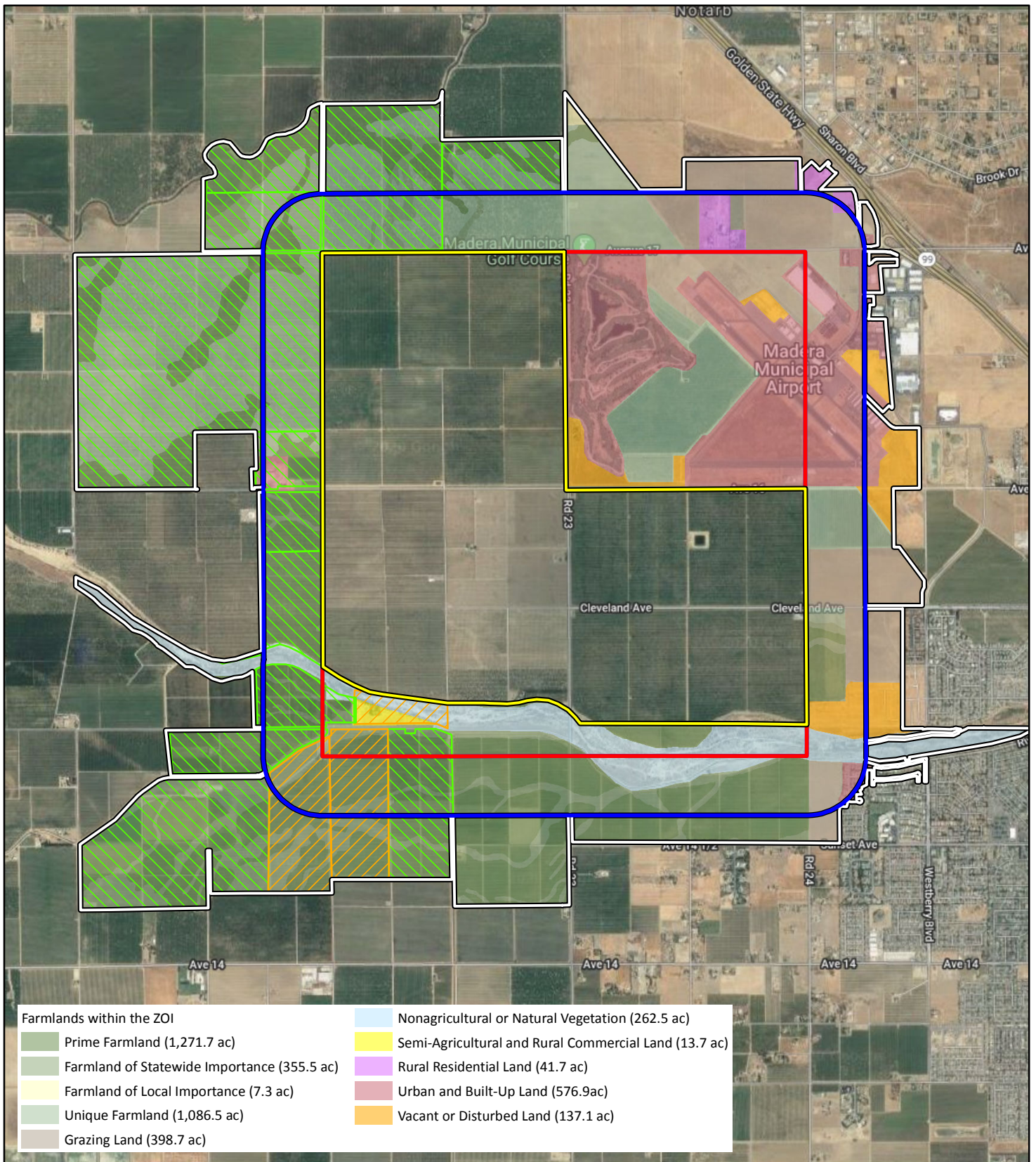








FIGURE 3

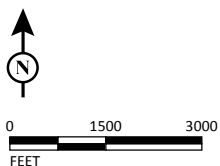
LSA

LEGEND

-  Project Location
-  Project area rectangle
-  Quarter-mile buffer of project area rectangle
-  Parcels intersected by the quarter-mile buffer

Williamson Act Contract Land within the ZOI

-  Prime (1,623.9 ac)
-  NonPrime (224.9 ac)



Village D Specific Plan EIR
Zone of Influence

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3.3.3.2 Adjacent Properties

The Specific Plan Area is bordered by active agricultural lands to the north, east, and west and the Fresno River to the south. The Madera Municipal Golf Course, the Madera Municipal Airport, and residential properties are located north and east of the Specific Plan Area. The agricultural land north of the Specific Plan Area (north of Avenue 17) is currently cultivating almonds. The agricultural land to the east of the Specific Plan Area, which is within the City of Madera, is planted with some grapes but it is predominantly fallow. The agricultural land to the west of the Specific Plan Area is cultivating grapes and almonds.

3.4 WATER

The Specific Plan Area currently uses a mix of groundwater, water from the Fresno River, and surface water from the Madera Irrigation District (MID). The source of MID's water is the Hensley Lake and Millerton Lake reservoirs (Madera Irrigation District, Personal Communication, 2019).

The City of Madera plans to annex the Specific Plan Area. The City receives its potable water supplies exclusively from groundwater through 18 active wells. These wells all pump from the Madera Subbasin of the San Joaquin groundwater basin into the distribution system to meet the City's demands (City of Madera 2015).

3.5 SOILS

3.5.1 United States Department of Agriculture – Natural Resources Conservation Service

The USDA's Natural Resources Conservation Service (NRCS) Soil Survey Division is the lead agency for the National Cooperative Soil Survey, a joint effort of federal and state agencies, universities, and professional societies. The NRCS Soil Survey Division maps and describes soils by land area, such as a city or county, which are compiled into a document called a "Soil Survey." The soil surveys contain information about each soil including the acreage and extent of each soil type in a given area, its classification, its physical and chemical properties, its land capability classification (LCC), and the Storie Index.

3.5.1.1 Land Capability Classification

The LCC indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops and the risk of damage to soils when they are used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I) (Table G). Specific subclasses are also utilized to further characterize soils. Capability subclasses are designated by adding a letter (i.e., e, w, s, or c) to the class number (Table H). For example, the letter e indicates that the main limitation of the soil is erosion unless close-growing plant cover is maintained; w indicates that water in or on the soil interferes with plant growth or cultivation; s indicates that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, indicates that the chief limitation is climate that is very cold or very dry.

Table G: USDA Land Capability Classifications

Class	Definition
Class I (1)	Soils have slight limitations that restrict their use.
Class II (2)	Soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
Class III (3)	Soils have severe limitations that reduce the choice of plants or require special conservation practices, or both.
Class IV (4)	Soils have very severe limitations that restrict the choice of plants or require very careful management, or both.
Class V (5)	Soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
Class VI (6)	Soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
Class VII (7)	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife.
Class VIII (8)	Soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for esthetic purposes.

Source: United States Department of Agriculture, Soil Survey Madera Area, California (1962).

Table H: USDA Land Capability Subclass Units

Unit	Definition
e	Subclass e is made up of soils for which the susceptibility to erosion is the dominant problem or hazard affecting their use. Erosion susceptibility and past erosion damage are the major soil factors that affect soils in this subclass.
w	Subclass w is made up of soils for which excess water is the dominant hazard or limitation affecting their use. Poor soil drainage, wetness, a high water table, and overflow are the factors that affect soils in this subclass.
s	Subclass s is made up of soils that have soil limitations within the rooting zone, such as shallowness of the rooting zone, stones, low moisture-holding capacity, low fertility that is difficult to correct, and salinity or sodium content.
c	Subclass c is made up of soils for which the climate (the temperature or lack of moisture) is the major hazard or limitation affecting their use.

Source: United States Department of Agriculture, Soil Survey Madera Area, California (1962).

3.5.1.2 Storie Index

The Storie Index is another method used to rate soils and is also based on the soil characteristics and the lands potential utilization and productive capacity. The Storie Index rating system ranks soils on a 100-point scale and soils are combined into six grade classes as follows:

- Grade 1 Excellent: 81 to 100 points
- Grade 2 Good: 61 to 80 points
- Grade 3 Fair: 41 to 60 points
- Grade 4 Poor: 21 to 40 points
- Grade 5 Very Poor: 11 to 20 points
- Grade 6 Nonagricultural: 10 points or less

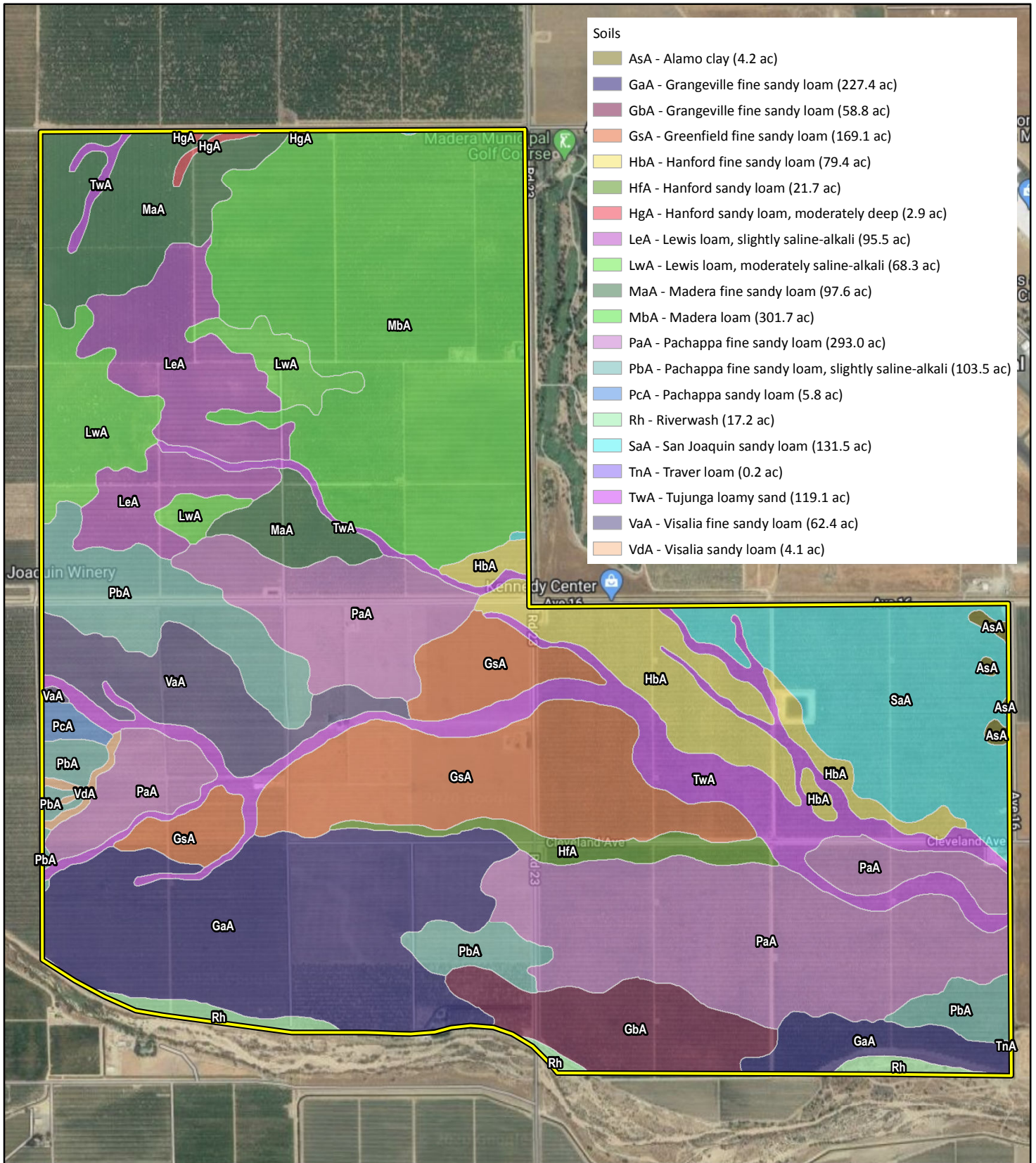
Four factors that represent the inherent characteristics and qualities of the soil are considered in the Storie Index rating: profile characteristics, texture of the surface layer, slope, and other factors (i.e., drainage, salinity). According to the USDA Soil Survey for Madera County, California, there are 20 different soil types that occur on the Specific Plan Area (Table I and Figure 4). A detailed description of each soil unit follows the table and figure.

Table I: Soil Types on the Specific Plan Area

Map Unit Symbol	Map Unit Name	Acres on Specific Plan Area	Land Capability Classification (LCC) Irrigated	Storie Index
AsA	Alamo clay, 0 to 1 percent slopes	4.2	IIIw-5	13
GaA	Grangeville fine sandy loam, 0 to 1 percent slopes	227.4	I-1	100
GbA	Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes	58.8	IIIs-6	79
GsA	Greenfield fine sandy loam, 0 to 3 percent slopes	169.1	I-1	95
HbA	Hanford fine sandy loam, moderately deep and deep over hardpan, 0 to 1 percent slopes	79.4	IIIs-3	70
HfA	Hanford sandy loam, 0 to 3 percent slopes	21.7	I-1	95
HgA	Hanford sandy loam, moderately deep and deep over hardpan, 0 to 3 percent slopes	2.9	IIIs-3	67
LeA	Lewis loam, slightly saline-alkali, 0 to 1 percent slopes	95.5	IIIs-8	17
LwA	Lewis loam, moderately saline-alkali, 0 to 1 percent slopes	68.3	IVs-8	10
MaA	Madera fine sandy loam, 0 to 3 percent slopes	97.6	IVs-3	28
MbA	Madera loam, 0 to 3 percent slopes	301.7	IVs-3	25
PaA	Pachappa fine sandy loam, 0 to 1 percent slopes	293.0	I-1	95
PbA	Pachappa fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes	103.5	IIIs-6	76
PcA	Pachappa sandy loam, 0 to 1 percent slopes	5.8	I-1	90
Rh	Riverwash	17.2	VIII	5
SaA	San Joaquin sandy loam, 0 to 3 percent slopes	131.5	IVs-3	27
TnA	Traver loam, moderately saline-alkali, 0 to 1 percent slopes	0.2	IIIs-6	38
TwA	Tujunganga loamy sand, 0 to 3 percent slopes	119.1	IIIs-4	56
VaA	Visalia fine sandy loam, 0 to 1 percent slopes	62.4	I-1	100
VdA	Visalia sandy loam, 0 to 3 percent slopes	4.1	I-1	95

Source: United States Department of Agriculture, Soil Survey Madera Area, California (1962); United States Department of Agriculture, Natural Resources Conservation Service (2018).

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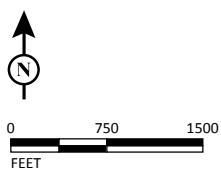


- Soils
- AsA - Alamo clay (4.2 ac)
 - GaA - Grangeville fine sandy loam (227.4 ac)
 - GbA - Grangeville fine sandy loam (58.8 ac)
 - GsA - Greenfield fine sandy loam (169.1 ac)
 - HbA - Hanford fine sandy loam (79.4 ac)
 - HfA - Hanford sandy loam (21.7 ac)
 - HgA - Hanford sandy loam, moderately deep (2.9 ac)
 - LeA - Lewis loam, slightly saline-alkali (95.5 ac)
 - LwA - Lewis loam, moderately saline-alkali (68.3 ac)
 - MaA - Madera fine sandy loam (97.6 ac)
 - MbA - Madera loam (301.7 ac)
 - PaA - Pachappa fine sandy loam (293.0 ac)
 - PbA - Pachappa fine sandy loam, slightly saline-alkali (103.5 ac)
 - PcA - Pachappa sandy loam (5.8 ac)
 - Rh - Riverwash (17.2 ac)
 - SaA - San Joaquin sandy loam (131.5 ac)
 - TnA - Traver loam (0.2 ac)
 - TwA - Tujunga loamy sand (119.1 ac)
 - VaA - Visalia fine sandy loam (62.4 ac)
 - VdA - Visalia sandy loam (4.1 ac)

LEGEND
 Project Location

FIGURE 4

LSA



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Map Unit Name: Alamo Clay, 0 to 1 Percent Slopes (AsA). The Alamo clay, 0 to 1 percent slopes, are poorly drained soils. The parent material consists of clayey alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to a root restrictive layer is 22 to 30 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 4.2 acres or 0.22 percent of the Specific Plan Area are in the Alamo clay, 0 to 1 percent slopes soil map unit.

Map Unit Name: Grangeville Fine Sandy Loam, 0 to 1 Percent Slopes (GaA). The Grangeville fine sandy loam, 0 to 1 percent slopes, are somewhat poorly drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high to very high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a farmland of statewide significance.

Approximately 227.4 acres or almost 12.21 percent of the Specific Plan Area are in the Grangeville fine sandy loam, 0 to 1 percent slopes soil map unit.

Map Unit Name: Grangeville Fine Sandy Loam, Slightly Saline-Alkali, 0 to 1 Percent Slopes (GbA). The Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes, are somewhat poorly drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 58.8 acres or 3.2 percent of the Specific Plan Area are in the Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes soil map unit.

Map Unit Name: Greenfield Fine Sandy Loam, 0 to 3 Percent Slopes (GsA). The Greenfield fine sandy loam, 0 to 3 percent slopes, are well drained soils. The parent material consists of alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 169.1 acres or 9.1 percent of the Specific Plan Area are in the Greenfield fine sandy loam, 0 to 3 percent slopes soil map unit.

Map Unit Name: Hanford Fine Sandy Loam, Moderately Deep and Deep over Hardpan, 0 to 1 Percent Slopes (HbA). The Hanford fine sandy loam, moderately deep and deep over hardpan, 0 to 1 percent slopes, are well drained soils. The parent material consists of alluvium derived from igneous rock. Depth to a root restrictive layer is from 40 to 60 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very low on this soil, and the hazard erosion is slight. The

soil is categorized as A in the Hydrologic Soil group and it is classified as a farmland of statewide importance.

Approximately 79.4 acres or 4.3 percent of the Specific Plan Area are in the Hanford fine sandy loam, moderately deep and deep over hardpan, 0 to 1 percent slopes soil map unit.

Map Unit Name: Hanford Sandy Loam, 0 to 3 Percent Slopes (HfA). The Hanford sandy loam, 0 to 3 percent slopes, are well drained soils. The parent material consists of alluvium derived from igneous rock. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 21.7 acres or 1.2 percent of the Specific Plan Area are in the Hanford sandy loam, 0 to 3 percent slopes soil map unit.

Map Unit Name: Hanford Sandy Loam, Moderately Deep and Deep over Hardpan, 0 to 3 Percent Slopes (HgA). The Hanford sandy loam, moderately deep and deep over hardpan, 0 to 3 percent slopes, are well drained soils. The parent material consists of alluvium derived from igneous rock. Depth to a root restrictive layer is from 36 to 60 inches to duripan. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as B in the Hydrologic Soil group and it is classified as a farmland of statewide importance.

Approximately 2.9 acres or 0.2 percent of the Specific Plan Area are in the Hanford sandy loam, moderately deep and deep over hardpan, 0 to 3 percent slopes soil map unit.

Map Unit Name: Lewis Loam, Slightly Saline-Alkali, 0 to 1 Percent Slopes (LeA). The Lewis loam, slightly saline-alkali, 0 to 1 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to a root restrictive layer is from 40 to 48 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 95.5 acres or 5.1 percent of the Specific Plan Area are in the Lewis loam, slightly saline-alkali, 0 to 1 percent slopes soil map unit.

Map Unit Name: Lewis Loam, Moderately Saline-Alkali, 0 to 1 Percent Slopes (LwA). The Lewis loam, moderately saline-alkali, 0 to 1 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to a root restrictive layer is from 40 to 48 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 68.3 acres or 3.7 percent of the Specific Plan Area are in the Lewis loam, moderately saline-alkali, 0 to 1 percent slopes soil map unit.

Map Unit Name: Madera Fine Sandy Loam, 0 to 3 Percent Slopes (MaA). The Madera fine sandy loam, 0 to 3 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is 18 inches to abrupt textural change and 25 to 28 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 97.6 acres or 5.2 percent of the Specific Plan Area are in the Madera fine sandy loam, 0 to 3 percent slopes soil map unit.

Map Unit Name: Madera Loam, 0 to 3 Percent Slopes (MbA). The Madera loam, 0 to 3 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is 18 inches to abrupt textural change and 25 to 28 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 301.7 acres or 16.2 percent of the Specific Plan Area are in the Madera loam, 0 to 3 percent slopes soil map unit.

Map Unit Name: Pachappa Fine Sandy Loam, 0 to 1 Percent Slopes (PaA). The Pachappa fine sandy loam, 0 to 1 percent slopes, are well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is 18 inches to abrupt textural change and 25 to 28 inches to duripan. Water movement in the most restrictive layer is moderately high to high. Runoff is low on this soil, and the hazard erosion is slight. The soil is categorized as B in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 293.0 acres or 15.7 percent of the Specific Plan Area are in the Pachappa fine sandy loam, 0 to 1 percent slopes soil map unit.

Map Unit Name: Pachappa Fine Sandy Loam, Slightly Saline-Alkali, 0 to 1 Percent Slopes (PbA). The Pachappa fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes, are well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is moderately high to high. Runoff is low on this soil, and the hazard erosion is slight. The soil is categorized as B in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 103.5 acres or 5.6 percent of the Specific Plan Area are in the Pachappa fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes soil map unit.

Map Unit Name: Pachappa Sandy Loam, 0 to 1 Percent Slopes (PcA). The Pachappa sandy loam, 0 to 1 percent slopes, are well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is moderately high to high. Runoff is low on this soil, and the hazard erosion is slight. The soil is categorized as B in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 5.8 acres or 0.3 percent of the Specific Plan Area are in the Pachappa sandy loam, 0 to 1 percent slopes soil map unit.

Map Unit Name: Riverwash (Rh). The Riverwash are excessively drained soils. The parent material consists of sandy and gravelly alluvium. Water movement in the most restrictive layer is high to very high. Runoff is very low on this soil.

Approximately 17.2 acres or 1.0 percent of the Specific Plan Area are in the Riverwash soil map unit.

Map Unit Name: San Joaquin Sandy Loam, 0 to 3 Percent Slopes (SaA). The San Joaquin sandy loam, 0 to 3 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is about 15 inches to abrupt textural change; 19 to 25 inches to duripan. Water movement in the most restrictive layer is very low. Runoff is very high on this soil, and the hazard erosion is slight. The soil is categorized as D in the Hydrologic Soil group and it is not classified as a prime farmland.

Approximately 131.5 acres or 7.1 percent of the Specific Plan Area are in the San Joaquin sandy loam, 0 to 3 percent slopes soil map unit.

Map Unit Name: Traver Loam, Moderately Saline-Alkali, 0 to 1 Percent Slopes (TnA). The Traver loam, moderately saline-alkali, 0 to 1 percent slopes, are moderately well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is moderately high to high. Runoff is low on this soil, and the hazard erosion is slight. The soil is categorized as B in the Hydrologic Soil group and it is classified as a farmland of statewide importance.

Approximately 0.2 acres or 0.01 percent of the Specific Plan Area are in the Traver loam, moderately saline-alkali, 0 to 1 percent slopes soil map unit.

Map Unit Name: Tujunga Loamy Sand, 0 to 3 Percent Slopes (Twa). The Tujunga loamy sand, 0 to 3 percent slopes, are somewhat excessively drained soils. The parent material consists of sandy alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high to very high. Runoff is negligible on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a farmland of statewide importance.

Approximately 119.1 acres or 6.4 percent of the Specific Plan Area are in the Tujunga loamy sand, 0 to 3 percent slopes soil map unit.

Map Unit Name: Visalia Fine Sandy Loam, 0 to 1 Percent Slopes (VaA). The Visalia fine sandy loam, 0 to 1 percent slopes, are well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 62.4 acres or 3.3 percent of the Specific Plan Area are in the Visalia fine sandy loam, 0 to 1 percent slopes soil map unit.

Map Unit Name: Visalia Sandy Loam, 0 to 3 Percent Slopes (VdA). The Visalia sandy loam, 0 to 3 percent slopes, are well drained soils. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is more than 80 inches. Water movement in the most restrictive layer is high. Runoff is very low on this soil, and the hazard erosion is slight. The soil is categorized as A in the Hydrologic Soil group and it is classified as a prime farmland if irrigated.

Approximately 4.1 acres or 0.2 percent of the Specific Plan Area are in the Visalia sandy loam, 0 to 3 percent slopes soil map unit.

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4.0 METHODS

The potential impacts associated with implementation of the proposed project were evaluated on a qualitative and quantitative basis. Qualitative impacts were assessed by evaluating the project’s potential for impacting agricultural activities within the City and County. Quantitative impacts were assessed by using geographic information system tools to calculate the exact acreage of Important Farmlands and Williamson Act contract lands that would be impacted by development of the proposed project as well as completing the LESA Model.

The LESA Model (1997) is a State of California process for assessing and quantifying potential impacts that may result from converting agricultural land to nonagricultural uses. LESA is intended “to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process.”

The LESA Model, developed by the California Department of Conservation, is a point-based approach that is used for rating the relative value of agricultural land resources and thereby helps guide the assessment of the impacts to agricultural resources, based upon specific measurable features. In basic terms, a given LESA Model is created by defining and measuring two separate sets of factors. The first set, Land Evaluation, includes factors that measure the inherent soil-based qualities of land as they relate to agricultural suitability. The second set, Site Assessment, includes factors that are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land.

A single LESA score is generated for a given Specific Plan Area after all of the individual LESA factors have been scored and weighted. Final project scoring is based on a scale of 100 points, with a given project being capable of deriving a maximum of 50 points from the Land Evaluation factors and 50 points from the Site Assessment factors. Scoring thresholds are based upon both the total LESA score, and the component subscores. In this manner, the scoring thresholds are dependent upon the minimum score for the LESA subscores so that a scoring decision is not the result of heavily skewed subscores (i.e., a site with a very high Land Evaluation score, but a very low Site Assessment score, or vice versa). Table J presents the California Agricultural LESA scoring thresholds.

Table J: California LESA Model Scoring Thresholds

Total LESA Score	Scoring Decision
0-39 Points	Not Considered Significant
40-59 Points	Considered Significant <u>only</u> if Land Evaluation <u>and</u> Site Assessment subscores are each <u>greater</u> than or equal to 20 points
60-79 Points	Considered Significant <u>unless</u> either Land Evaluation <u>or</u> Site Assessment subscore is <u>less</u> than 20 points
80-100 Points	Considered Significant

Source: Department of Conservation. California Agricultural Land Evaluation and Site Assessment Model Instruction Manual. 1997.

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5.0 THRESHOLDS OF SIGNIFICANCE

The thresholds for agricultural impacts used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Agricultural impacts associated with implementation of the proposed project would be considered significant if the agricultural impacts exceeded the Thresholds of Significance identified below:

- Threshold 4.2.1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use**
- Threshold 4.2.2: Conflict with existing zoning for agricultural use, or a Williamson Act contract**
- Threshold 4.2.5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use**

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6.0 PROJECT IMPACTS

The proposed project’s potential impacts are discussed below using the above referenced methodology.

Threshold 4.2.1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

The project site is currently being farmed for almonds. The project site also contains agricultural support structures and residences.

Table K contains the total acreage of Farmland as designated by the California Department of Conservation’s Farmland Mapping and Monitoring Program that would be directly impacted by the proposed project.

Table K: Farmland Acres by Category on the Specific Plan Area

Land Mapping Category	Acres within the Specific Plan Area
Prime Farmland	943.5
Farmland of Statewide Importance	201.6
Unique Farmland	706.9
Farmland of Local Importance	N/A
Grazing Land	N/A
Urban and Built Up Land	1.2
Nonagricultural or Natural Vegetation	10.1
Total	1,863.3

Source: Madera County (2018); DOC Farmland Mapping & Monitoring Program (2016).

The proposed project would permanently convert 1,863 acres of Important Farmland to accommodate a new mixed-use community that includes residential units, commercial office spaces, industrial spaces, parks and recreation areas, and public facilities, including schools. The loss of 1,863 acres of Important Farmlands is approximately 0.5 percent of the total acres of Important Farmland in Madera County. Although the proposed project would convert a small percentage of Madera County’s total farmland to a nonagricultural use, Madera County is California’s 11th largest agricultural producer and the conversion of any Important Farmland is considered a significant impact.

The California LESA Model was prepared as a method for quantitatively assessing project impacts on Important Farmlands.

The California LESA Model worksheets that were completed for the proposed Specific Plan Area are provided in Appendix A. The final score for the Specific Plan Area is provided below in Table L.

Table L: Madera Village D Project Land Evaluation and Site Assessment Scoring

Factor Name	Factor Rating (0-100 Points)	×	Factor Weighting (Total = 1.00)	=	Weighted Factor Rating
Land Evaluation					
1. Land Capability Classification	70.70	×	0.25	=	17.68
2. Storie Index Rating	62.82	×	0.25	=	15.71
Land Evaluation (LE) Subscore					33.38
Site Assessment					
1. Project Size	100	×	0.15	=	15
2. Water Resource Availability	100	×	0.15	=	15
3. Surrounding Agricultural Land	60	×	0.15	=	9
4. Protected Resource Lands	0	×	0.05	=	0
Site Assessment (SA) Subscore					39.00
Total LESA Score (LE + SA)					72.38

Source: LSA Associates, Inc. Land Evaluation and Site Assessment Model. 2020.

The Specific Plan Area achieved a Final LESA score of 72.38. According to the LESA Model instructions, a final score between 60 and 79 points is considered significant unless either the LE or SA subscore is less than 20 points. Both the LE subscore and the SA subscore are above 20 points. Therefore, converting approximately 1,852 acres of Important Farmlands to a nonagricultural use would be considered a significant impact.

Agriculture plays a significant role in the economy of Madera County and the City of Madera. The lands in the Specific Plan Area are designated and zoned for agriculture by the City and County General Plans, and are designated Prime and Unique Farmlands by the Farmland Mapping and Monitoring Program (FMMP).

As listed above in Section 2.3, the Madera County General Plan includes numerous polices that seek to conserve agricultural lands and uses. However, the Madera County Local Agency Formation Commission (LAFCO) approved the expansion of the City’s Sphere of Influence to include the proposed Specific Plan Area. The Madera County General Plan includes policies that allow for existing agricultural land to be converted to urban uses only within designated urban and rural residential areas and new growth areas that are within city spheres of influence where urban development has been designated on the General Plan Land Use Diagram (Policy 5.A.5). Therefore, it can be assumed that LAFCO understood that this land would be used for urban uses when it approved the City’s SOI expansion in the proposed Specific Plan Area. The Madera County General Plan also includes Policy 1.A.4 and Policy 5.A.3 that encourage infill development in order to avoid the premature conversion of agricultural land to non-agricultural land uses, and discourages the expansion of urban uses into designated agricultural areas.

The City’s General Plan includes the following policy:

Policy LU-10 The Growth Boundary is considered by the City to define the physical limits of development in Madera. The City shall direct all future growth in Madera and in the unincorporated area outside the city limits to occur inside the Growth Boundary shown on the Land Use Map in this General Plan. Within the City's Planning Area, the City encourages the County to assist the City in maintaining an agricultural greenbelt around the Growth Boundary by limiting the use of land designated for Agriculture on the City's General Plan Land Use map to agriculture.

In March 2020, Madera County staff expressed concern regarding the establishment of new agricultural easements within the county in order to offset potential environmental impacts resulting from the conversion of agricultural land.³ County staff stated that there are several factors that affect the use of agricultural easements, one of which is maintaining and achieving sustainable groundwater management in the Madera Subbasin. Due to substantial groundwater needed for agriculture uses, the continued use and preservation of agriculture prevents sustainable groundwater management. The Madera Subbasin Joint Groundwater Sustainability Plan (GSP), which was adopted in January 2020, states that the City relies only on groundwater for its water supply and, by expanding the City's services as population grows, the City would use more groundwater for urban uses when compared to current water use. Although large projects such as the proposed Specific Plan would result in urban development that would extend primarily into agricultural lands, water use requirements would decrease when compared to agricultural uses, thereby benefitting subbasin sustainability.⁴ Based on the net decrease in groundwater use that would result from converting agricultural land uses to non-agricultural land uses under the proposed Specific Plan, the use of agricultural easements within the County would not be considered a feasible mitigation measure. Preserving agricultural land and allowing continued use of groundwater would not allow for maintaining and achieving sustainable groundwater management. Therefore, the use of agricultural easements would preserve agricultural land, but those agricultural lands would not be provided sufficient groundwater if the Madera Subbasin is to be managed sustainably. As a result, there are no feasible mitigation measures available to reduce impacts associated with conversion of agricultural lands to nonagricultural uses, and this would be considered a significant and unavoidable impact pursuant to CEQA.

Threshold 4.2.2: Conflict with existing zoning for agricultural use, or a Williamson Act contract

The Specific Plan Area is currently zoned Agricultural Rural Exclusive – 20 Acres (ARE-20) and Agricultural Rural Exclusive – 40 Acres (ARE-40) in the Madera County Zoning Code. These zones are applied to lands that are in agricultural use. The City has not provided zoning for the Specific Plan Area; rather, detailed regulations/development standards will be included in and adopted as part of the Specific Plan approval process. The proposed project intends to develop the lands currently zoned for agricultural uses for nonagricultural uses (i.e., a mixed-use community) including residential units, commercial office spaces, industrial spaces, parks and recreation areas, and public facilities (e.g., schools). None of the proposed uses are consistent with the existing agricultural

³ Madera County Community and Economic Development. Treber, Matthew, Chief of Development Services. March 24, 2020. Personal communication with Norman Allinder.

⁴ Madera Subbasin Coordination Committee. 2020. *Joint Groundwater Sustainability Plan*. Page 2-17 and 2-18. January.

zoning. Therefore, the proposed project would conflict with the existing zoning for agricultural use. There are no feasible mitigation measures available to reduce impacts associated with zoning conflicts to a less than significant level. Therefore, the proposed project's conflicts with existing agricultural zoning are significant and unavoidable.

The Specific Plan Area contains three active Williamson Act contracts (APNs 033-170-001, 033-170-009, and 033-170-005) in the southwest area of the project site totaling 402.9 acres. The intended use of the entire Specific Plan Area, including the portion governed by Williamson Act contracts, is to develop a new mixed-used community that includes residential units, commercial office spaces, industrial spaces, parks and recreation areas, and public facilities, including schools. The proposed project would conflict with the 402.9 acres of agricultural land currently under a Williamson Act contract, which is a conflict pursuant to CEQA. Canceling the Williamson Act contract can be an option pursuant to conditions set forth in Government Code Section 51280 et seq. Nevertheless, the lands are currently under Williamson Act contracts and there is no feasible mitigation measures available to reduce impacts associated with a project's conflict with an existing Williamson Act contract. Therefore, the proposed project's conflicts with Williamson Act contracts would be significant and unavoidable.

Threshold 4.2.5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use

No changes to the existing environment other than those analyzed as part of the proposed project (e.g., mixed-used community with a variety of uses) would result in the direct conversion of agricultural uses to nonagricultural uses. The Specific Plan Area is being developed as an active urban center, which could create an incompatible urban interface with the adjacent agricultural land to the north, west, and south of the project site. The project site's eastern boundary is already adjacent to the City's urban boundary. Developing existing agricultural land with high density urban development could induce adjacent landowners to convert agricultural land for urban or suburban uses for economic reasons or because of nuisance complaints. The Specific Plan Area is expanding into an agriculturally designated area. However, because the Specific Plan Area is adjacent to the existing City boundary, developing it would shift the City boundary westward but would not isolate any existing agricultural lands such that they would prompt the conversion of surrounding agricultural lands to nonagricultural uses. Also, both the County and City implement Right-to-Farm Ordinances to prevent agricultural operations from being the subject of nuisance complaints and being forced to cease or curtail operations. The objective of the County and City is to conserve, protect and encourage the development, improvement, and continued viability of its agricultural land and industries for the long-term production of food and other agricultural products. In addition, the City's General Plan proposes 10 other urban growth areas that are spread throughout the City of Madera and on the boundary of the City and Madera County. Because the County General Plan includes numerous policies that support agricultural areas and encourages infill development as an alternative to developing agricultural lands, these 10 urban growth zones would be more intensively developed before future development expands into agricultural lands. As such, implementation of the proposed project would not influence the conversion of farmland to nonagricultural uses and

impacts associated with changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use would be less than significant.

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7.0 REFERENCES

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APPENDIX A

LESA WORKSHEETS

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Appendix A. California Agricultural LESA Worksheets

NOTES

The Village D Project is a **1,863.4** acre site located on the western edge of the City of Madera in Madera County. The site is currently being cultivated for almonds, and once the specific plan is approved, the project will be developed into a mixed-used community. The soils include: AsA 4.2 acres; GaA 227.8 acres; GbA 58.8 acres; GsA 169.1 acres; HbA 79.4 acres; HfA 21.7 acres; HgA 2.9 acres; LeA 95.5 acres; LwA 68.3 acres; MaA 97.6 acres; MbA 301.7 acres; PaA 293.0 acres; PbA 103.5 acres; PcA 5.8 acres; Rh 17.2 acres; SaA 131.5 acres; TnA 0.2 acres; TwA 119.1 acres; VaA 62.4 acres; and VdA 4.1 acres.

The LCCs for the twenty soil types were found in the Madera County Soil Survey and are identified as follows: AsA LCC IIIw; GaA LCC I; GbA LCC IIs; GsA LCC I; HbA LCC IIIs; HfA LCC I; HgA LCC IIIs; LeA LCC IIIs; LwA LCC IVs; MaA LCC IVs; MbA LCC IVs; PaA LCC I; PbA LCC IIs; PcA LCC I; Rh LCC VIII; SaA LCC IVs; TnA LCC IIIs; TwA LCC IIIs; VaA LCC I; and VdA LCC I.

The portion of each soil type represented is multiplied by its point rating in Column E to determine the LCC Score in Column F. The LCC Scores are then summed in Column F to get a total LCC score of 70.70, which has been entered in Box <1> of the Final LESA Score Sheet.

Storie Index Ratings (SIR) for each soil type was obtained from the Madera County Soil Survey are as follows: AsA SIR 13; GaA SIR 100; GbA SIR 79; GsA SIR 95; HbA SIR 70; HfA SIR 95; HgA SIR 67; LeA SIR 17; LwA SIR 10; MaA SIR 28; MbA SIR 25; PaA SIR 95; PbA SIR 76; PcA SIR 90; Rh SIR 5; SaA SIR 27; TnA SIR 38; TwA SIR 56; VaA SIR 100; and VdA SIR 95. The Storie Index ratings are multiplied by the proportion of each soil type in the project area and the score is entered in Column H.

Column H is summed to get a total Storie Index Score of 62.82 points, which has been entered in Box <2> of the Final LESA Score Sheet.

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

- (1) Determine the total acreage of the project.
- (2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A and 2-B
- (3) Calculate the total acres of each soil type and enter the amounts in **Column B**.
- (4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**.
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**.
- (6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	I	Ile	IIs,w	IIle	IIIs,w	IVe	IVs,w	V	VI	VII	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**.
- (8) Sum the LCC scores in **Column F**.
- (9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A.

Part 2. Storie Index Score:

- (1) Determine the Storie Index rating for each soil type and enter it in **Column G**.
- (2) Multiply the proportion of each soil type (**Column C**) by the Storie Index rating (**Column G**) and enter the scores in **Column H**.
- (3) Sum the Storie Index scores in **Column H** to gain the Storie Index Score.
- (4) Enter the Storie Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A.

Land Evaluation Worksheet

Land Capability Classification
(LCC)
and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
AsA	4.2	0.002	IIIw	60	0.1	13	0.03
GaA	227.4	0.122	I	80	9.8	100	12.55
GbA	58.8	0.032	IIs	80	2.5	79	2.49
GsA	169.1	0.091	I	100	9.1	95	8.62
HbA	79.4	0.043	IIIs	60	2.6	70	2.98
HfA	21.7	0.012	I	100	1.2	95	1.11
HgA	2.9	0.002	IIIs	60	0.1	67	0.10
LeA	95.5	0.051	IIIs	60	3.1	17	0.87
LwA	68.3	0.037	IVs	40	1.5	10	0.37
MaA	97.6	0.052	IVs	40	2.1	28	1.47
MbA	301.7	0.162	IVs	40	6.5	25	4.05
PaA	293.0	0.157	I	100	15.7	95	14.94
PbA	103.5	0.056	IIs	80	4.4	76	4.22
PcA	5.8	0.003	I	100	0.3	90	0.28

Site Assessment Worksheet 1.

Project Size Score

I	J	K
LCC Class I - II	LCC Class III	LCC Class IV - VIII
	4.2	
227.4		
58.8		
169.1		
	79.4	
21.7		
	2.9	
	95.5	
		68.3
		97.6
		301.7
293		
103.5		
5.8		

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
Rh	17.2	0.009	VIII	100	0.9	5	0.05
SaA	131.5	0.071	IVs	40	2.8	27	1.91
TnA	0.2	0.0000	IIIs	60	0.01	38	0.004
TwA	119.1	0.064	IIIe	70	4.5	56	3.58
VaA	62.4	0.033	I	100	3.3	100	3.35
VdA	4.1	0.002	I	100	0.2	95	0.21
Totals	1863.4	(Must Sum to 1.0)		LCC Total Score	70.70	Storie Index Total Score	62.82

Project Size Score

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV - VIII
			17.2
			131.5
		0.2	
		119.1	
	62.4		
	4.1		
Total Acres	945.8	301.3	616.3
Project Size Scores	100	100	100

Highest Project Size Score

100

NOTES

Column I sums to 620 acres of Class I or II soils
 Column J sums to 230 acres of Class III soils
 Column K sums to 160 acres of Class IV to VIII soils.

Column I - 945.8 acres of Class I or II soils corresponds to a score of 100 points.

Column J - 301.3 acres of Class III soils corresponds to a score of 100 points.

Column K - 616.3 acres of Class IV to VIII soils corresponds to a score of 100 points.

The highest score is for Columns I and J (100 points), which has been entered in box <3> of the Final LESA Score Sheet

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:

- (1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
- (2) Sum **Column I** to determine the total amount of class I and II soils on the project site.
- (3) Sum **Column J** to determine the total amount of class III soils on the project site.
- (4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

- (6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

The project site is currently irrigated from three different sources of water including groundwater, the Fresno River, and the Madera Irrigation District (MID). The entire project site is served by all three water sources. Therefore, the project site includes one portion.

Portion 1: A mix use of three different water sources are used on 100% of the project site. Irrigated production is feasible during both Non-Drought and Drought years. There are typically no physical restrictions or economic restrictions onsite during Non-Drought or Drought years.

Portion 1: (100 points) (1.0) = 100 points

Portion 1 = 100 points has been entered in Box <4> of the Final LESA Score Sheet

Part 2. Water Resource Availability Score:

(1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.

(2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. - Water Resources Availability**.

(3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.

(4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.

(5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.

(6) Sum the scores for all portions to determine the project's total Water Resources Availability Score

(7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Groundwater, Fresno River and Madera Irrigation District (MID)	1.0	100	100
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	Total Water Resource Score	100

Water Resource Availability Scoring Table

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	-- --	-- --	50
9	YES	NO	YES	NO	-- --	-- --	45
10	YES	YES	NO	NO	-- --	-- --	35
11	YES	YES	YES	NO	-- --	-- --	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

NOTES

The project site is surrounded by 115 parcels totaling approximately 4,151.7 acres. The ZOI is composed of these parcels and as such is 4151.7 acres in size.

After reviewing images from Google Earth, parcels to the north, south, and west of the ZOI look to be under agricultural uses, and the parcels to the east of the ZOI look to be under urban uses. Review of the United States Department of Agriculture Natural Resources Conservation Service, Web Soil Survey website (<https://websoilsurvey.nrcs.usda.gov>) and County of Madera GIS website (<https://www.maderacounty.com/government/gis>) indicates that the ZOI contains 1,271.7 acres of Prime Farmland, 1,086.5 acres of Unique Farmland, 355.5 acres of Farmland of Statewide Importance, and 7.3 acres of Farmland of Local Importance. As such, the percent of the ZOI in agriculture is 2721.0 acres divided by 4151.7 acres, or 66 percent. This percentage (66 percent) corresponds to a score of 60 points.

60 points is entered in box <5> of the Final LESA Score Sheet.

Part 3. Surrounding Agricultural Land Use Score:

- (1) Calculate the project's Zone of Influence (ZOI) as follows:
 - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.
 - (b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle.
 - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.
- (2) Sum the area of all parcels to determine the total acreage of the ZOI.
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.
- (5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

- (5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 3.

Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		
4151.7	2721.0	1623.9	66	39	60	0

NOTES

Review of the California Department of Conservation California Land Conservation Act of 1965 2016 Status Report indicates that in 2015 Madera County (https://www.conservation.ca.gov/dlrp/wa/Pages/stats_reports.aspx) showed that there are established Williamson Act Contract lands within the Zone of Influence of the project site.

Data from the County of Madera GIS website (www.maderacounty.com/government/gis) indicates that the ZOI contains a total of 1,623.9 acres of Williamson Act Contract land in the ZOI. As such, the percent of ZOI in the surrounding protected resource land is 1,623.9 divided by 4151.7 acres, or 39 percent. This percentage (39 percent) correspond to a score of 0 points.

0 points has been entered in Box <6> of the Final LESA Score Sheet.

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

- (1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
- (4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

- (5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A.

NOTES

The component LE and SA Scores have been entered into the Final LESA Score Sheet. The LE factor scores were multiplied by the factor weights to determine the weighted score for each. The weighted LE factor scores were summarized to determine the LE portion of the Final LESA score.

The SA factor scores were multiplied by the factor weights to determine the weighted score for each. The weighted SA factor scores are summed to determine the SA portion of the Final LESA score. The LE and SA subtotals are summed to determine the Final LESA score.

The Final LESA Score for the project is 72.38. This score is considered significant since the LE and SA subscores are each greater than or equal to 20 points. For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the LESA Instruction Manual

Final LESA Score Sheet

Calculation of the Final LESA Score:

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
- (4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

	Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors			
Land Capability Classification	<1> 70.70	0.25	17.68
Storie Index	<2> 62.82	0.25	15.71
<i>LE Subtotal</i>		0.50	33.38
SA Factors			
Project Size	<3> 100	0.15	15.0
Water Resource Availability	<4> 100	0.15	15.0
Surrounding Agricultural Land	<5> 60	0.15	9.0
Protected Resource Land	<6> 0	0.05	0.0
<i>SA Subtotal</i>		0.50	39.0
Final LESA Score			72.38

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