FINAL

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HERITAGE OAKS EQUESTRIAN COMMUNITY SPECIFIC PLAN

May 2007

City of Calimesa, CA

STORM WESTERN DEVELOPMENT, INC.

HERITAGE OAKS
CITY COUNCIL APPROVED 08/20/07
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DRAFT
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May 2007

CITY OF CALIMESA, CALIFORNIA

Prepared for

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SECTION 1.0

SPECIFIC PLAN OVERVIEW

1.1 Purpose and Intent

The Heritage Oaks Equestrian Community Specific Plan is intended to provide for the orderly development of the proposed residential project in such a manner as to create an equestrian community of forty-five (45) high-quality residential homes. A primary goal of the proposed community design is to preserve the existing native oak tree habitat and the existing site topography, while providing for on-site drainage detention and downstream storm drainage improvements which resolve the existing storm run-off problems for homeowners downstream (west) of the property.

The Heritage Oaks Equestrian Community Specific Plan has derived from studies and input by the applicant's civil engineer, land planners, architects and environmental consultants. As a result the Specific Plan provides the City of Calimesa with a set of development plans, standards and guidelines to ensure the future creation and long-term maintenance of a high-quality equestrian community reflecting to goals of the City and residents of Calimesa. A General Plan Amendment and Zone Change are still required to allow for the Specific Plan uses; the Amendment and Zone Change will be processed concurrently with the Heritage Oaks Equestrian Community Specific Plan. A Tentative Tract Map implementing the planning and design objectives of the Specific Plan will be prepared and processed either concurrently and following the adoption of the Heritage Oaks Equestrian Specific Plan, the General Plan Amendment and the Zone Change.

1.2 Project Location and Setting

The proposed Heritage Oaks Equestrian Community consists of over 54 acres located in the City of Calimesa, in the County of Riverside, and lying within the eastern portion of the Yucaipa Valley of the San Gorgornio Pass Area. The City of Calimesa is surrounded by the San Bernardino Mountains to the north, the Crafton Hills to the west, and by the San Jacinto Mountains to the east and the San Timoteo Badlands to the south. (See *Exhibit 1-1, Regional Location Map*).

The subject property is located on the south side of County Line Road east of Holmes Way in the City of Calimesa, and immediately adjacent to the City of Yucaipa in the County of San Bernardino. The proposed project site is bounded by the Whisper Ranch subdivision in City of Yucaipa to the north and by vacant, undeveloped properties to the east and south, and scattered residential homes to the west, in the City of Calimesa (see *Exhibit 1-2, Site Vicinity Map*). The legal description for the proposed Heritage Oaks property is contained in *Appendix "A" – Legal Description.*

The subject property is characterized by a combination of slopes, ravines and a plateau fronting on County Line Road, a seasonal drainage and oak habitat corridor running east to west through the central portion of the site, and rolling terrain to the east and south overlooking the central corridor. *Section 2.2 – Existing Site Features* identifies in more detail some of the more predominant features of the subject property and the surrounding environs.

1.3 Planning Objectives

The Heritage Oaks Equestrian Community Specific Plan establishes the planning concepts, design and development guidelines, and administrative procedures necessary to achieve the orderly development of the subject property. The Specific Plan is also intended to be consistent with and implement the goals, objectives and polices of the City of Calimesa General Plan. The General Plan goals and objectives are described in detail in *Section 3.0 – Relationship to Calimesa General Plan and Development Code.*

The following Planning Objectives, as outlined by the project proponent Storm-Western Development, Inc., specify the ground rules for what the Heritage Oaks Equestrian Community Specific Plan is attempting to accomplish and creates the framework for establishment of the new community.

Goal

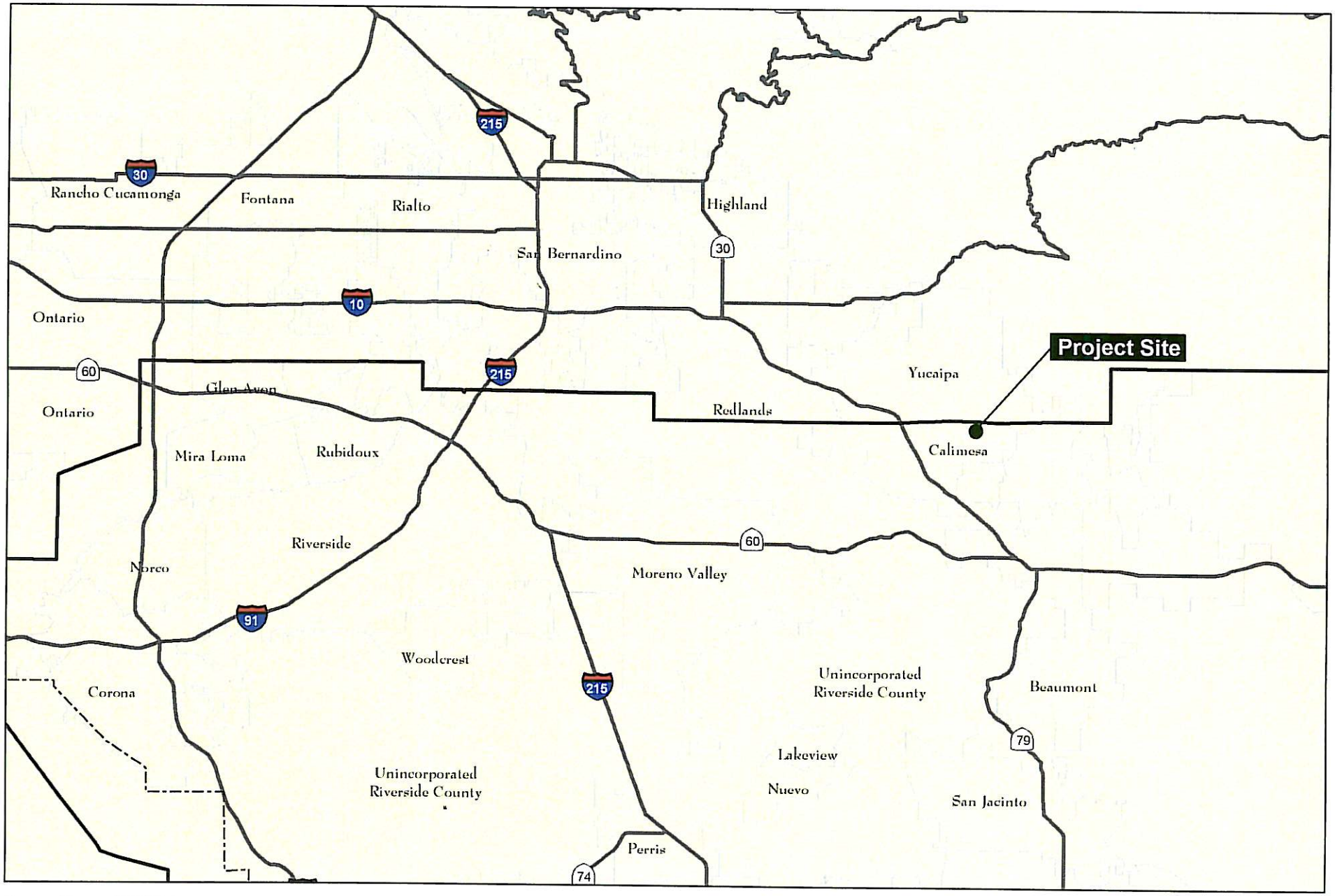
To create a livable, environmentally-sensitive equestrian neighborhood that captures the rural heritage of Calimesa.

Objectives

- Create a livable community which offers its residents opportunities for a variety of equestrian experiences.
- Provide high-quality housing at price ranges that meet the needs of the local market and community.
- Design the community in such a manner to act as a transitional buffer between existing surrounding residential uses and future planned land uses.
- Provide for a variety of open space, recreational and storm drainage infrastructure designs and improvements which service both on-site residents and surrounding community residents.

1.4 Project Summary

The 54-acre Heritage Oaks Equestrian Community is conceived as a high-quality rural neighborhood within the City of Calimesa. Oriented around and preserving the significant live oak woodland community found on the property, Heritage Oaks Equestrian Community will offer a distinctive neighborhood promoting a high-quality living environment and equestrian experience.



Source: Census 2000 Data.

NORTH

5 2.5 0 5 Miles

Michael Brandman Associates

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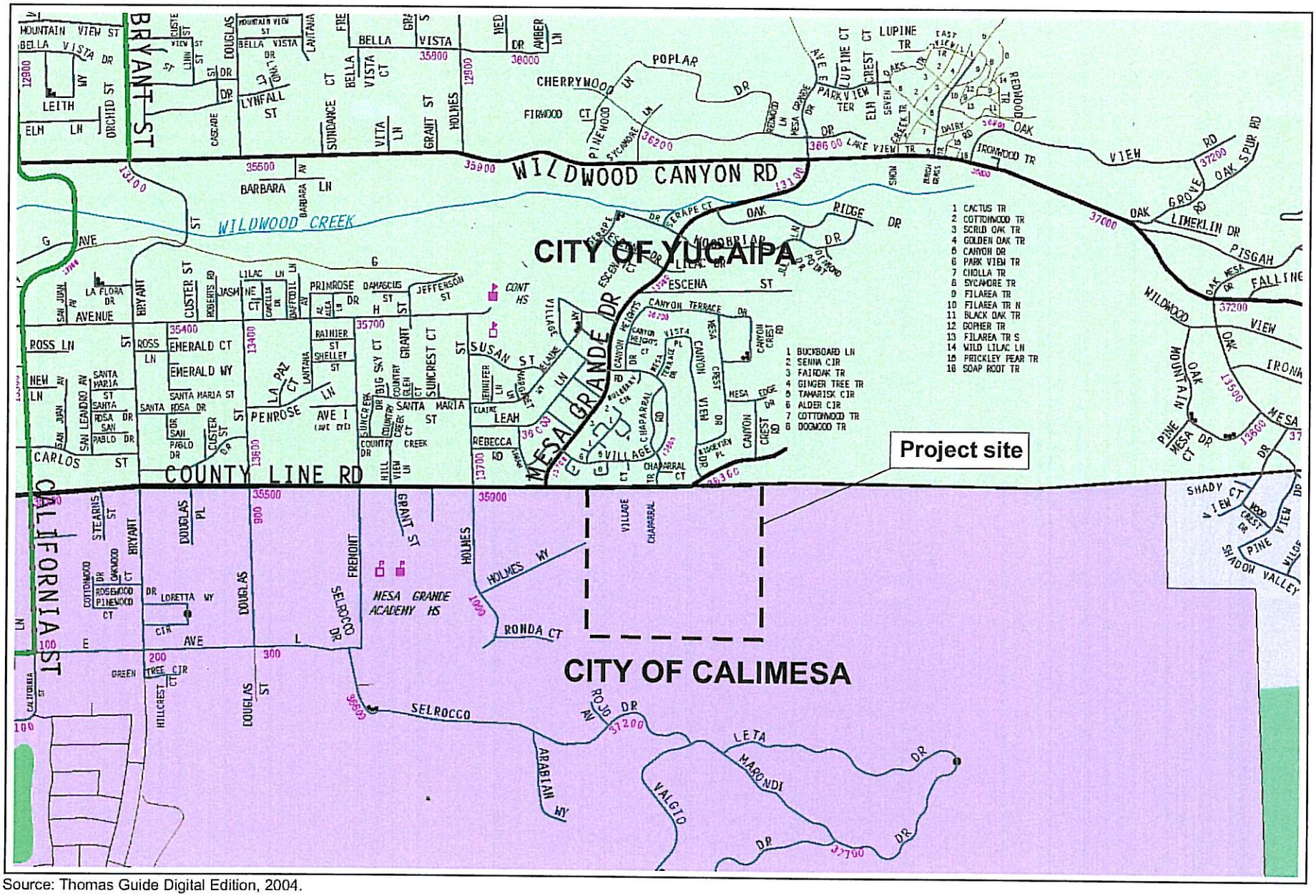
Exhibit 1-1
Regional Location Map



Source: Thomas Guide Digital Edition, 2004.

NORTH

1,600 800 0 1,600

SCALE IN FEET

Michael Brandman Associates

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Exhibit 1-2
Site Vicinity Map

With 45 single-family residences on the 54 acres, Heritage Oaks provides a low-density buffer and transition between the higher density single family homes and single family condominiums to the north in the City of Yucaipa and the larger rural lots in Calimesa to the south and west.

Table 1-1
Heritage Oaks Equestrian Community

Project Summary

Specific Plan Designation	Gross Acres	Percentage	Dwelling Units	Density (du/ac)
Heritage Residential (HR) [1]	29.3	54.2%	45	1.5 du/acre
Open Space (OS) [2]	22.5	41.6%		
Street Right-of-Way County Line Road "G" Street	2.3 - 1.0 - 1.3	4.2%		
Total	54.10	100.0%	45	0.8du/acre

1 – Acreage is calculated to the right-of-way lines of the perimeter streets, County Line Road and "G" Street., and includes all internal roads.
2 – Open Space acreage excludes internal roads

The residential lots have been designed around and integrated with the coast live oak trees and natural site drainage to preserve nearly all of the oak woodland. Over forty-one percent (41.6%) of the property will be maintained as natural open space, including the oak trees, and as on-site drainage and water quality treatment, offering amenities to community residents and protecting the public welfare and safety of Calimesa residents to the west.

Multi-purpose trails will be provided within the Heritage Oaks community, offering horse riding and walking opportunities to community residents. These proposed trails and an equestrian staging/parking area will provide opportunities to connect the City's larger future trail system currently being planned and created throughout the City of Calimesa.

1.5 Compliance with California Environmental Quality Act

A Final Initial Study/Mitigated Negative Declaration, dated February 2006, have been prepared for the Heritage Oaks Equestrian Community Specific Plan. The Initial Study and Mitigated Negative Declaration were prepared in accordance with the adopted guidelines of the State of California and the City of Calimesa. The Initial Study includes the Environmental Checklist form, a Project Description, Environmental Factors Potentially Affected, Evaluation of Environmental Impacts and description of the Environmental Checklist. The Mitigated Negative Declaration indicates that the

Heritage Oaks Equestrian Community should not create any significant negative impacts which cannot be mitigated. The Mitigated Negative Declaration accompanies this Specific Plan as a separate document.

The Initial Study covers the Heritage Oaks Equestrian Community Development Plan and Land Use Plan, the circulation and infrastructure plans, the design guidelines, land use regulations and implementation mechanisms of the Specific Plan. This Initial Study also is applicable to the accompanying General Plan Amendment and Zone Change for the Specific Plan, and for future development projects (i.e., parcel maps, tentative tract maps, conditional use permits, grading permits, building permits, etc.) which are processed in conformance with the Heritage Oaks Equestrian Community Specific Plan.

SECTION 2.0

SITE BACKGROUND & CHARACTERISTICS

2.1 Existing Site Features

The subject property is characterized by a combination of sloping terrain, multiple drainage courses running to and through a central "valley", an oak woodland community following the major drainage area and north-facing and south-facing slopes and a plateau fronting on County Line Road along the northern portion of the site, and rolling terrain to the east and south overlooking the central "valley". See *Exhibit 2-1, Existing Site Features* and *Exhibits 2-2A and 2-2B, Site Photographs.*

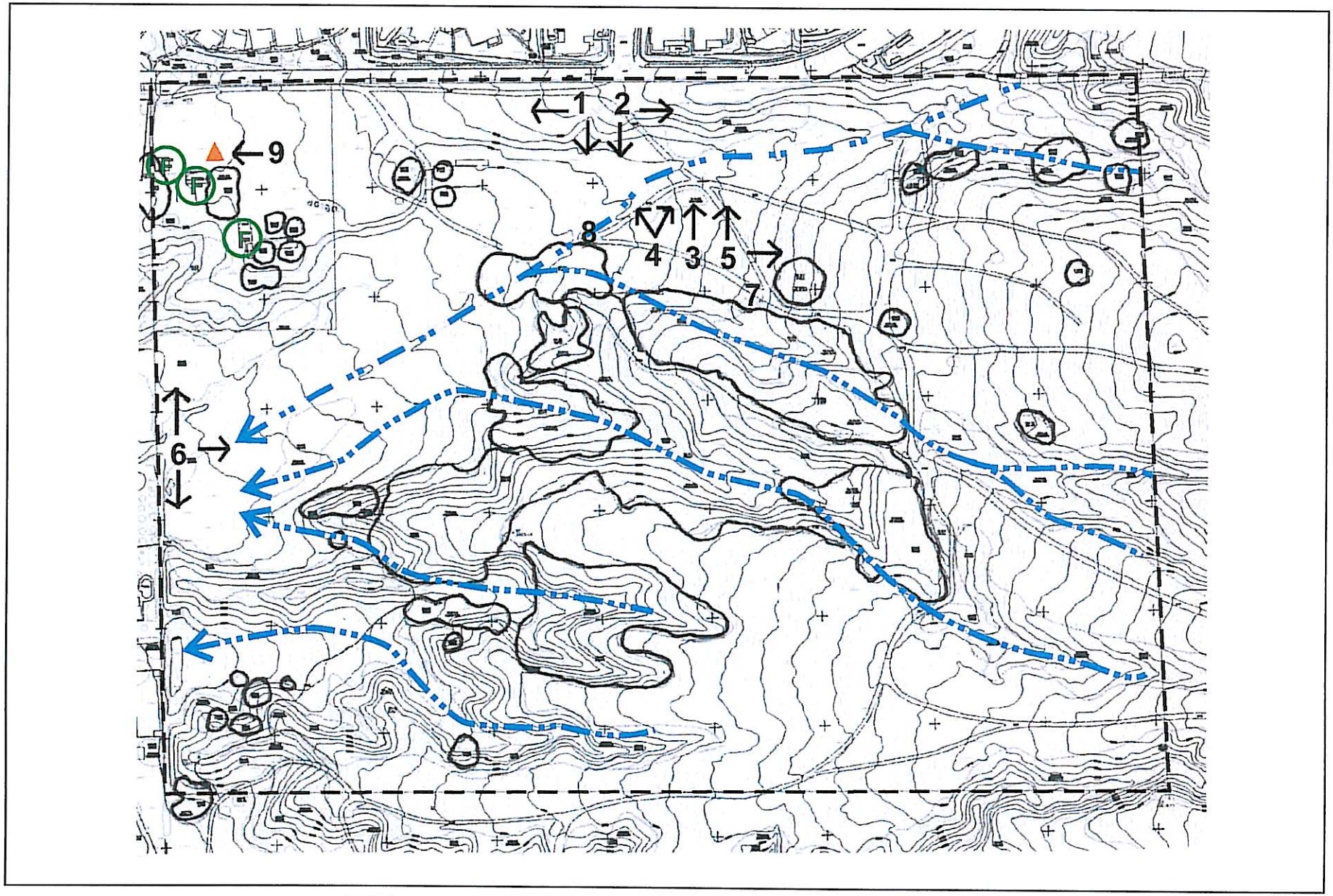
The subject property includes coast live oak woodland, consisting of moderate to densely vegetated woodlands. The coast live oak trees extend to heights ranging from 30 to 80 feet, and are a prominent visual feature within the project site. These trees typically occur on the cooler north-facing slopes or south-facing slopes within shaded ravines.

Elevations on the site range from 2,795 feet at the western end of the primary drainage course exiting the property to 2,930 feet at the southeastern corner of the property. Site access from County Line Road is at 2,815 feet at the northwestern corner of the property to 2,910 at the northwestern corner. The intersection of County Line Road and Chaparral Trail is at an elevation of 2,858 feet and then dropping to approximately 2,840 feet immediately south of the intersection at the central "valley" floor.

2.2 Existing Land Uses

2.2.1 Land Uses On-Site

The proposed development property is primarily vacant and undeveloped. There are signs of local dumping of debris and trash on the site, as well as evidence of motorcycle dirt trails and jumps, and several "forts" and targets used in paint-ball fighting. Also, there are several old foundations located in the northwest corner of the subject property.



1→ Site Photo Location

Drainage Courses

Oak Trees & Major Vegetation

Mono Pine - Telecommunication Facility

(F) Existing Foundations

NORTH

Michael Brandman Associates

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Exhibit 2-1
Existing Site Features

Photograph # 1 – View from County Line Road/Chaparral to South & West

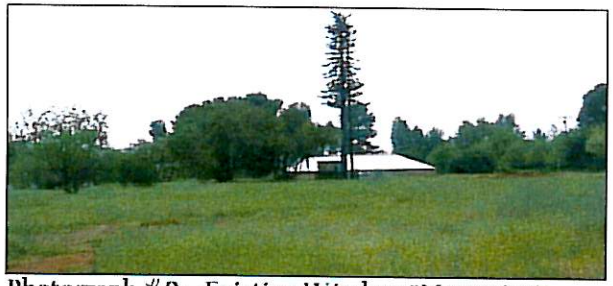
Photograph # 2 – View from County Line Road/Chaparral to South & East

Photograph # 3 – View from Central "Valley" to West

Photograph #4 – View from Central "Valley" to North (City of Yucaipa)

Photograph # 5 – View from Central "Valley" to East

Photograph #6 - View from West Property Line Looking at Existing Detention Area & Oaks



Photograph #9 – Existing Wireless "Monopine"

Photograph #7 – Debris & "Forts" in Oak Tree

Photograph #8 – More Debris

Additionally, a 50-foot tall telecommunication tower ("monopine") and equipment shelter has been erected recently in the northwestern corner of the site at County Line Road.

2.2.2 Surrounding Land Uses

Immediately surrounding the Heritage Oaks Equestrian Community property are mixtures of residential uses at various densities & types, and undeveloped properties. Most of the existing residential uses are to the north, located in the City of Yucaipa, and primarily consist of residential subdivisions. (*See Exhibit 2-3, Existing Land Uses*).

- North – Two (2) existing single family residential tracts. The first, Whisper Ranch, consists of single family homes on 10,000 square foot lots; the second is a single family condominium tract called Country Village.
- East - Vacant property.
- South – Vacant property.
- West – In the distance existing single family residential lots of one-half to one acre in size; and a covered-reservoir facility operated by the South Mesa Water Company.

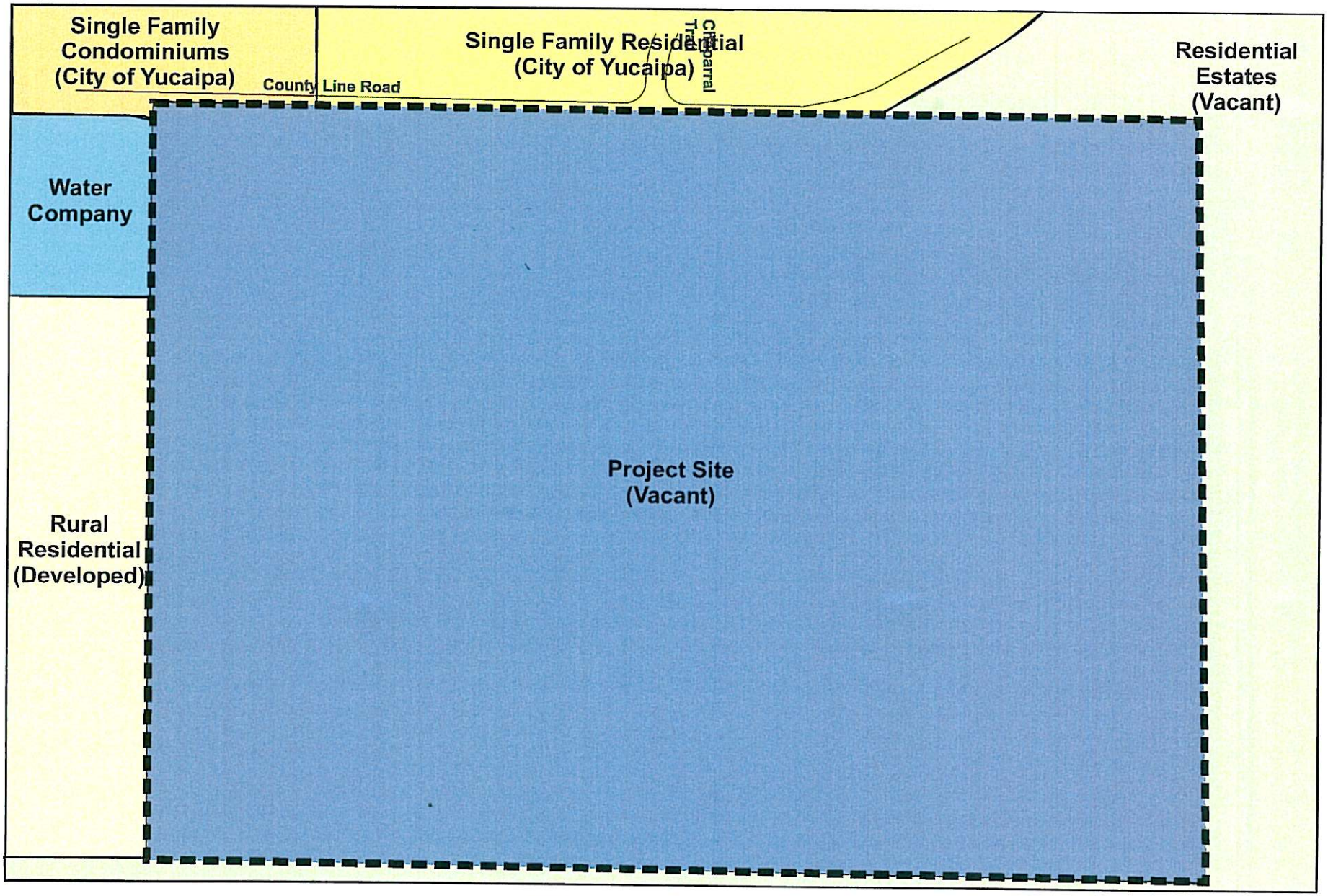
2.3 Existing and Surrounding Zoning Designations

The project property is currently zoned Residential Estate (RE) by the City of Calimesa. The Residential Estate zoning designation in intended to allow for development of single family detached homes at 5 acres per dwelling unit.

- Properties north of the project property are located in the City of Yucaipa and are zoned RS10, which permits single family dwellings on 10,000 square foot lots; the property known as Country Village, a condominium tract, is also designated as a legal non-conforming use.
- Properties east of subject property are located in the City of Calimesa and are zoned Residential Estate (RE), 5 acres per dwelling unit.
- Properties south of subject property are located in the City of Calimesa and are zoned Residential Estate (RE), 5 acres per dwelling unit.
- Properties west of subject property are located in the City of Calimesa and are zoned Residential Rural (RR), 20,000 square feet per dwelling unit.

2.4 Previous Property Reviews

In 2001 the previous project proponent and owner of the subject property, Bonita Properties, filed several development applications with the City of Calimesa for the creation of a forty-four (44)



Michael Brandman Associates

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Exhibit 2-3
Existing Land Uses

single-family lot subdivision and 20 acres of open space. The previous proposed applications included the following actions:

- Tentative Tract Map No. 29964 – 44 lots on 55 acres.
- General Plan Amendment 0011-002 from Residential Estate to Residential Rural
- Zone Change 0011-001 from Residential Estate to Residential Rural

Additionally, the City of Calimesa prepared and processed an Initial Study, Environmental Checklist and Mitigated Negative Declaration (SCH# 2001091155) for the proposed project applications.

The previous development proposal of the subject property included the re-grading of the majority of the site, the removal of most of the existing oak trees and their habitat, re-alignment of the existing on-site drainage, and creation of an on-site detention basin.

During the public review phase of the previously proposed project, the primary issues of discussion included traffic, drainage, oak trees, density and trails. Prior to any approvals by the City of Calimesa, all development applications were withdrawn by the project proponent.

2.5 Drainage and Topography

The subject property lies within an area of gentle slopes and wide ravines surrounding a central "valley" floor. The properties watershed area encompasses approximately 314 acres. The existing watershed and its characteristics are fully described in *Heritage Oaks Equestrian Community Hydrology Study by Fusco Engineering, dated December 6, 2005.* A major drainage course enters the property near the northeast corner of the site, traversing through the 'valley" floor and exiting the subject property at the center of the western property boundary. Additionally, several minor drainage courses flow from the higher hills to the east, meeting within the project property. Some of these drainage courses are well defined and cut into the terrain, others are less so. Additionally, the project site receives some flows from the existing Whisper Ranch residential community, located north of County Line Road. Storm drainage flows entering the subject property from both the major course and minor drainage courses ranged from a peak of 184 cubic feet per second for a 2-year event up to 541 cubic feet per second for a 100-year event storm.

The properties immediately west of the project property are raised above the elevation of the site, thereby creating a "levee" and a natural ponding area. Water flows above the capacity of this "levee" are directed around it and then sheet flows across numerous properties to the west on the paved street and in a discontinuous earthen channel adjacent to the street. During periods of significant rainfall the residential properties to the west can experience substantial flooding and depositing of silt and debris.

Elevations on the project property range from 2,795 feet at the western end of the primary drainage course exiting the property to 2,930 feet at the southeastern corner of the property. Site access from County Line Road is at 2,815 feet at the northwestern corner of the property and 2,910 feet at the northeastern corner. The intersection of County Line Road and Chaparral Trail sits at an elevation of 2,858 feet and then drops to an elevation of approximately 2,840 feet immediately south of the intersection at the central "valley" floor.

2.6 Geology and Soils

The City of Calimesa, and therefore the subject property, is located in a seismically active portion of Southern California. A geotechnical report was prepared by Inland Foundation Engineering (dated January 18, 2001) on the subject property for the previous project applications. According to this report, the subject property is located just over 1 mile east of the San Gorgonio Pass Fault with an estimated potential magnitude of 7.2; approximately 4.1 miles west of the San Andreas Fault with an estimated potential magnitude of 7.4; and approximately 8.2 miles east of the San Jacinto Fault with an estimated potential magnitude of 6.9.

Additionally, the geotechnical report indicates that groundwater is approximately 100 feet below the ground surface of the subject property. Therefore, the potential for liquefaction is extremely remote.

The subject property is underlain by granular soils in loose to medium dense conditions. The soils are primarily silty sands underlain granitic bedrock at depth. The subject property is crossed by several alluvial-filled ravines, with an alluvial plain present on the northwestern portion of the site. The previously prepared geotechnical report indicated the thickness of the recent alluvium to be up to twelve and one-half feet.

2.7 Cultural Resources

2.7.1 Historic Resources

According to the City of Calimesa General Plan, no historic structures listed by the National Register of Historic Structures are located within the City of Calimesa. Other historic structures or sites designated by the State of California and listed in the City's General Plan include Haskell Ranch, the Livatt House, the Old Post Office, the Humphrey House, the Singleton House and an Indian Village. None of these sites or structures occurs on the subject property.

During the cultural resource survey conducted by Michael Brandman Associates in 2005, several sets of historic features were detected, including a well shaft and cage surrounded by concrete footings, 2 fragments of structures of an old ranch complex, and abandoned well heads and concrete slabs. However, these features have been heavily impacted since their abandonment. Any further artifacts recovered during grading or construction activities shall be offered to the Yucaipa Historical Society or to another accredited museum repository, as determined by the City of Calimesa. Sacred Native American cultural items, if recovered, should be deeded to local tribal authorities after consultation with such authorities.

2.7.2 Archeological Resources

According to the City of Calimesa General Plan, several archeological sites have been identified. All of these sites are located in the area of the San Timoteo Canyon and San Timoteo Creek several miles southwest of the project property.

A cultural resource report was prepared on the subject property for the proposed project by Michael Brandman Associates (dated May 31, 2005). The cultural resource record search for Riverside County sites indicated that the subject property had not been surveyed for cultural resources. During the cultural resource survey conducted by Michael Brandman Associates, no cultural resources of potential significance were observed. The full findings of this cultural resource survey and report are contained the separate Initial Study/Mitigated Negative Declaration.

Should any cultural artifacts be recovered during grading or construction activities, such artifacts shall be offered to the Yucaipa Historical Society or to another accredited museum repository, as determined by the City of Calimesa. Sacred Native American cultural items, if recovered, should be deeded to local tribal authorities after consultation with such authorities.

2.7.3 Paleontological Resources

The City of Calimesa General Plan describes previous paleontological investigations conducted within the San Timoteo Badlands, including areas within Calimesa. The conclusion of the report was that the San Timoteo Badlands area and the western portion of Calimesa have high potentials for producing significant paleontological findings.

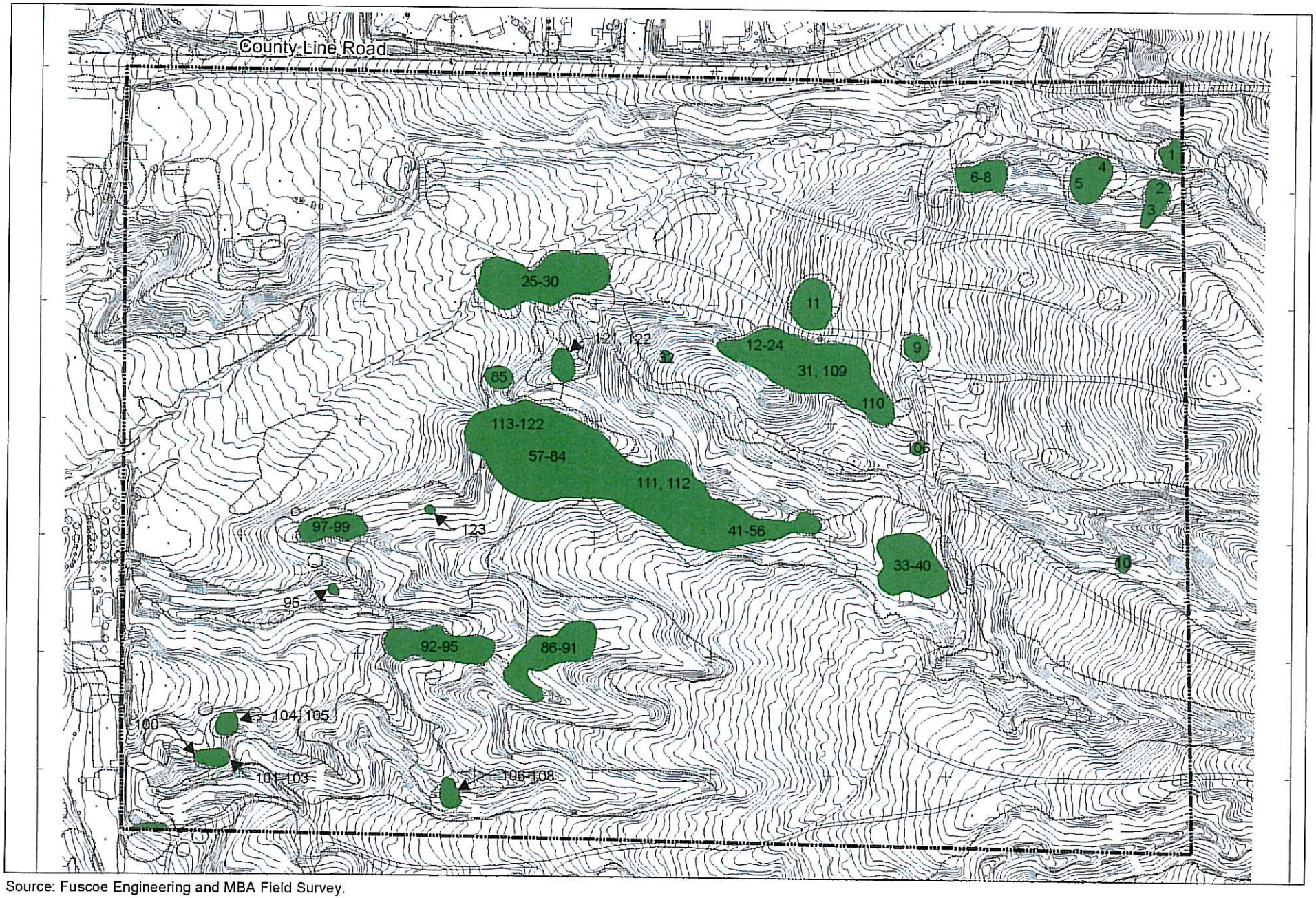
A cultural resource report was prepared on the subject property for the proposed project by Michael Brandman Associates (dated May 31, 2005). Attached to this document (as Appendix C) is a report from Dr. Scott of the San Bernardino County Museum's Division of Geological Sciences detailing aspects of the paleontology of the project vicinity. The report indicates that the project area is located on exposures of Pleistocene fan deposits, overlain by a thin veneer of Holocene sediments. The Pleistocene deposits have high potential to contain paleontological resources, and should be monitored during future grading and construction activities. Any artifacts recovered during grading or construction activities shall be offered to the Yucaipa Historical Society or to another accredited museum repository, as determined by the City of Calimesa. Sacred Native American cultural items, if recovered, should be deeded to local tribal authorities after consultation with such authorities.

2.8 Oak Trees and Habitats

The subject property includes a viable coast live oak woodland plant community, consisting of moderate to densely vegetated woodlands dominated by coast live oak trees (*Quercus agrifolia*). These trees reach 30 to 80 feet in height and usually occur on north-facing slopes or south-facing slopes within shaded ravines. Dominant plant species on the subject property include coast live oak, toyon (*Heteromeles arbutifolia*) scrub oak (*Quercus berberirdifolia*, or *Quercus dumosa*), laurel sumac (*Malosma laurina*), poison oak (*toxicodendron diversilobum*), and Mexican elderberry (*Sambucus mexicana*). Like most oak woodland area, the leaf litter layer below the canopy is fairly deep, which tends to inhibit growth of a dense shrub layer. Where openings occur among the live oak trees, the areas are typically occupied by the native shrubs noted above and non-native weedy plant such as ripgut brome grass (*Bromus diandrus*) and horehound (*Marrubium vulgare*).

Recent field inventories were conducted on the subject property by a certified arborist. By means of 123 numbered tags issued to the arborist, 121 coast live oak trees were tagged (excluding #69 and 76) during the survey and inventory. The one hundred twenty-one (121) individual coast live oak trees, excluding saplings, were identified and mapped, as illustrated on *Exhibit 2-4, Live Oak Woodland.* The surveyed outlines of the individual and tree stands include five (5) feet outside the oak tree's actual +canopy/drip-line A few of the oak trees are less than 30 feet in height, most are taller, with the majority of the oaks in excess of 40 feet in height. Several of the oak trees are considered to be quite mature (100 to 200 years old) and with canopy spreads of over 80 feet. While several of these trees occur as scattered stand-alone individuals, the majority of the coast live oak trees are found in one of several identifiable oak woodland community groups. These groups generally occur from northeast to southwest in association with the five small arroyos that traverse the project property. The oaks tend to concentrate around the lowest parts of the arroyos and on the cooler, moister north-facing slopes.

The majority of the oak trees on the subject property are considered to be in fair to good condition. However, several oaks located in the most southerly arroyo are in very poor condition or nearly dead. A full inventory and description of the coast live oak trees are included in the *Final Initial Study/Mitigated Negative Declaration* prepared by Michael Brandman Associates, dated February 2006.



Source: Fuscoe Engineering and MBA Field Survey.

Michael Brandman Associates

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Exhibit 2-4
Live Oak Woodland

SECTION 3.0

RELATIONSHIP TO CALIMESA GENERAL PLAN AND DEVELOPMENT CODE

3.1 Relationship of Heritage Oaks Equestrian Community Specific Plan to City of Calimesa General Plan

The City of Calimesa General Plan provides for the creation of Specific Plan Area(s), which "... may be prepared for any area in the City, but are best utilized when prepared for land which is environmentally constrained, has unique land use concerns, or requires the flexibility of a specific plan to design a development which is mutually beneficial to the City and the property owner. Specific plan are required to be consistent with all elements of the General Plan" [1]

The Heritage Oaks Equestrian Community Specific Plan, as stated above, is required to be consistent with all elements of the Calimesa General Plan, and will refine the policies contained in the General Plan. In particular, the specific plan focuses on the further refinement and implementation of the applicable goals contained in the City of Calimesa General Plan.

3.1.1 Land Use Element

Rural Atmosphere and Quality of Life

GOAL 1: Preserve and enhance the rural atmosphere and quality of life in Calimesa.

Growth Management

GOAL 2: In order to preserve the quality of life, the character of the community, and to manage growth in Calimesa, allow development which is contiguous or close to existing development and in conjunction with the availability of infrastructure, public facilities and services.

Land Use Compatibility

GOAL 3: Locate land uses to achieve maximum compatibility while improving or maintaining the desired quality of life.

Preservation of Natural Resources and Environmentally Sensitive Areas

GOAL 5: Preserve the natural beauty, minimize degradation of the Calimesa area, and provide protection of environmentally sensitive resources.

Storm Drainage

GOAL 9: Ensure that adequate flood control facilities are provided prior to or concurrent with development, in order to protect the lives and property of Calimesa residents.

The Heritage Oaks Equestrian Community Specific Plan will create a residential development which acts as a transition zone between Rural and Estate Residential land uses, at a density between these designations. Opportunities for a rural equestrian lifestyle will be

[1] City of Calimesa General Plan, April 4, 1994, page 1-20.

created, while the design of the Community Plan and the standards of the Specific Plan will ensure the preservation of the native live oak woodland community.

3.1.2 Transportation Element

Transportation System

GOAL 1: Provide a balance transportation system that ensures the safe and efficient movement of people and goods throughout the City, while minimizing the use of land for transportation facilities.

Transportation Planning

GOAL 2: Develop a transportation system integrated with land use planning and responsive to the needs of the community.

Trails and Bikeways

GOAL 7: Plan for and seek to establish an area-wide system of equestrian, hiking and bicycling trails, with linkages to parks and trail systems of adjacent jurisdictions.

Arterial Access

GOAL 8: Establish vehicular access control policies in order to maintain and insure the effectiveness and capacity of arterials.

The Heritage Oaks Equestrian Community Plan establishes an effective vehicular system design which minimizes impacts on surrounding land uses and whose design is coordinated with and within the capacity of the existing transportation facilities. Additionally, the Community Plan creates opportunities for new equestrian and pedestrian trails and linkages.

3.1.3 Housing Element

Housing Maintenance and Preservation

GOAL 1: Encourage the maintenance and rehabilitation of the existing housing stock.

Equal Opportunity

GOAL 2: Promote housing access and equal opportunity for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color or handicap.

Housing Production

GOAL 3: The City will work to provide opportunities for the development of new housing units to meet the housing needs of all economic segments of the population without disrupting the existing rural community feeling and without compromising environmental integrity.

Housing Opportunities

GOAL 4: Improve the housing supply and the choice of housing opportunities through private investment and, where necessary, through public assistance and financing.

The Heritage Oaks Equestrian Community Specific Plan will increase the number of rural, equestrian-oriented homes in the City of Calimesa rather than additional suburban housing. Homes within the community will be open to all persons, and will preserve the rural community feeling.

3.1.4 Resource Management Element

Water Resources

GOAL 1: Conserve and protect surface water, groundwater and imported water sources.

Geologic Resources

GOAL 2: Conserve and protect significant landforms and hillside areas.

Biological Resources

GOAL 3: Conserve and protect significant stands or mature trees, native vegetation, and wildlife habitat within the planning area.

Cultural Resources

GOAL 4: Promote cultural awareness through the preservation of the City's historical, archaeological and paleontological resources.

Energy Resources

GOAL 5: Conserve energy resources through the use of current energy conservation practices and technology.

Agricultural Land

GOAL 6: Conserve where appropriate, and avoid premature conversion of agricultural lands to urban development.

Open Space Areas

GOAL 7: Seek to provide a network of open space area to preserve natural resources and to provide visual and physical relief from urban development.

Recreational Facilities

GOAL 9: Develop and maintain recreational facilities as economically feasible, and that meet the needs of all segment of the community for recreational activities, relaxation and social interaction.

The Heritage Oaks Equestrian Community Specific Plan will preserve a considerable portion of the natural resources of the project property. Much of the existing native live oak woodland community will be preserved and integrated into the community. Further, the design and location of water drainage corridors and basins will preserve and/or create additional visual open space.

3.1.5 Safety Element

Seismic and Geologic Hazards

GOAL 1: Minimize injury and loss of life, property damage, and other impacts caused by seismic shaking, fault rupture, ground failure, and landslides.

Hillside Management

GOAL 2: Minimize grading and otherwise changing the natural topography, while protecting the public safety and property from geologic hazards.

Flood Hazards

GOAL 3: Minimize injury, loss of life, property damage, and economic and social disruption caused by flood and inundation hazards.

Fire Hazards

GOAL 4: Reduce threats to public safety and protect property from wildland and urban fire hazards.

Hazardous Materials

GOAL 5: Reduce the potential for hazardous waste contamination in the City.

The Heritage Oaks Equestrian Community Specific Plan incorporates existing terrain and site features into its design, thereby minimizing grading and disruption of natural features. Flood control and water drainage improvement are also incorporated into the community design, protecting on-site and down-stream residents and properties alike. Fuel Modification Zones will be incorporated into the design of the community, further protecting residents and property from fire hazards.

3.1.6 Noise Element

Land Use Compatibility

GOAL 1: Ensure that all land uses are protected from excessive and unwanted noise.

Noise Control

GOAL 2: Work towards the reduction of noise impacts from vehicular traffic and trains.

The Heritage Oaks Equestrian Community Specific Plan incorporates the design of community walls along County Line Road to protect residents from unwanted noise levels. Within the community vehicular traffic will be distributed to two access roads to minimize noise impacts on individual homes.

3.1.7 Air Quality Element

Alternative Travel

GOAL 1: Promote alternative travel arrangements.

Energy Consumption

GOAL 4: Reduce emissions associated with energy consumption.

Particulate Emissions

GOAL 5: Reduce fugitive dust emissions.

Building and Operational Emissions

GOAL 6: Reduce air pollution emissions and impacts through siting and building design.

The Heritage Oaks Equestrian Community Specific Plan incorporates the existing terrain into the community design, thereby eliminating unnecessary grading activities and the resulting dust and air pollution emissions. Further, alternative multi-purpose trail system is designed within the community to encourage non-vehicular travel.

3.2 Relationship of Heritage Oaks Equestrian Community Specific Plan to City of Calimesa Development Code

The Heritage Oaks Equestrian Community Specific Plan provides detailed development standards and design guidelines for the future development of the subject property. Upon adoption of the Heritage Oaks Equestrian Community Specific Plan by the City of Calimesa, this Specific Plan shall be the zoning document for the subject property. Unless otherwise stated in the specific plan, the development regulations, standards and procedures of the Heritage Oaks Equestrian Community Specific Plan supersede the relevant provisions of the City of Calimesa's Development Code. If not specifically addressed in this Specific Plan, the applicable provisions of the City of Calimesa Development Code and Municipal Code shall apply.

All development changes shall be subject to the appropriate review procedures and provisions of the City of Calimesa Development Code, in addition to the provisions of this Specific Plan. Subsequent development approvals, such as site plan reviews, tentative tract maps, parcel maps and other approvals, must be consistent with both the Heritage Oaks Equestrian Community Specific Plan and the City of Calimesa Development Code.

SECTION 4.0

COMMUNITY DEVELOPMENT PLAN

4.1 Community Development Concept

The overall development concept for the Heritage Oaks Equestrian Community Specific Plan envisions an equestrian-friendly residential community which captures and enhances the rural heritage of Calimesa. The Development Plan establishes the type, location and character of the development to take place within the project boundaries, while allowing for the creative design of individual homes and neighborhoods.

The design concept of Heritage Oaks Equestrian Community is derived from the preservation of the site's natural features and character. The residential and open space land uses, the street layouts, the extent of grading and the design of the storm drainage system are all based on the idea of preserving the existing coast live oak woodland and maintaining the supporting natural drainage courses. Adding to this unique site character is the proposal of high-quality equestrian lots. Heritage Oaks is conceived to be a long-term benefit to the City of Calimesa.

The Heritage Oaks Equestrian Community is intended and conceived to be an asset to the City of Calimesa and the surrounding neighborhoods. To guide this overall development concept and commitment to the City, the following primary development objectives are established within the Specific Plan:

- Create a livable community which offers its residents opportunities for a variety of equestrian experiences.
- Assure the long-term equestrian rights of Heritage Residential home owners in the community.
- Provide high-quality housing at price ranges that meet the needs of the local market and community.
- Maintain a rural atmosphere within the community through the use of appropriate landscaping, lighting and trail system.
- Design the community in a manner to act as a transitional buffer between existing surrounding residential uses and future planned land uses.
- Protect the site's natural attributes and aesthetic values, i.e. natural drainage courses, oak trees and terrain.

- Provide for a variety of public open space, recreational and infrastructure designs and improvements which will service both on-site residents and surrounding communities' residents.

4.2 Land Uses

The 54-acre Heritage Oaks Equestrian Community Specific Plan provides a mixture of equestrian and rural residential housing and public open space consistent with the overall objectives of the Calimesa General Plan. While preserving the existing oak tree stands, the development of the subject property is to provide a transition from the more dense single-family tracts to the north in the City of Yucaipa to the existing and future larger lot residences to the south and west.

The Heritage Oaks property is characterized by sloping terrain with several drainage courses running to and through the site. An oak woodland community follows the major drainage course and several minor tributaries, providing the predominant physical and environmental characteristics of the property. The majority of this oak woodland community and accompanying drainage courses are preserved within the Open Space designation.

As shown by the *Illustrative Development Plan, Exhibit 4-1*, and *Table 4-1, Development Summary*, the Heritage Oaks Equestrian Community has an overall density of less than one dwelling unit per gross acre, and a maximum unit allocation of 45 dwellings. The *Illustrative Development Plan* indicates two (2) land use categories, Heritage Residential (HR) and Open Space (OS). The HR residential category has been assigned a maximum density which may not exceed 45 lots. The Open Space areas are to preserve the existing live oak woodland communities found on the subject property, and for certain areas necessary to provide flood control and drainage to- and from-the subject property. The boundaries and acreage of each land use category, as shown on the *Illustrative Development Plan* and in the Development Summary table, are approximate, and will be precisely determined in the tentative tract approval process concurrent with the Specific Plan adoption process.

Table 4-1
Heritage Oaks Equestrian Community
Development Summary

Specific Plan Designation	Gross Acres	Percentage	Dwelling Units	Density (du/ac)
Heritage Residential (HR) [1]	29.3	54.2%	45	1.5 du/acre
Open Space (OS) [2]	22.5	41.6%		
Street Right-of-Way County Line Road "G" Street	2.3 - 1.0 - 1.3	4.2%		
Total	54.1	100.0%	45	0.8 du/acre

1 – Acreage is calculated to the right-of-way lines of the perimeter streets, County Line Road and "G" Street., and includes all internal roads.
2 – Open Space acreage excludes internal roads

4.2.1 Heritage Residential (HR)

Approximately 29.3 acres, or 54.2 percent, of the subject property, is designated for Heritage Residential (HR) development. The Heritage Residential category is intended for single-family detached homes on rural-sized lots of a minimum of 19,500 square feet, and averaging over 23,000 square feet, at a density of approximately one and one-half (1.5) dwellings per acre. The Heritage Residential lots offer homeowners the opportunity for a rural life-style, including keeping of animals and horses.

The *Land Use and Development Regulations (Section 7.0)* and the *Implementation and Administration (Section 9.0)* sections will provide the standards and mechanisms, including Covenants, Codes and Restrictions (CC&Rs), by which the lots will be developed and the keeping of horses will be permanently guaranteed by the Heritage Oaks Equestrian Community Specific Plan and CC&Rs.

The Heritage Residential lots are to act as a buffer and to transition between existing single-family lots (10,000 square feet) and condominium tracts in the City of Yucaipa to the north, and existing Rural Residential lots (20,000 square feet minimum) in the City of Calimesa to the west and south.

4.2.2 Open Space (OS)

Over twenty-two (22.5) acres of the Heritage Oaks Equestrian Community, 41.6 % of the total project property, is designated as Open Space (OS). The Open Space designation is intended to preserve the existing coast live oak woodland community, the existing terrain and the natural drainage courses. The existing plant communities and animal habitats within the Heritage Oaks Equestrian Community property were inventoried and documented in the "Draft Biological Resources Report" prepared by Michael Brandman Associates, November 2004.

Some re-contouring of terrain will be necessary to provide for re-aligned drainage corridors, debris basin and detention areas for off-site drainage and on-site water flow for the protection of downstream properties west of the subject property. All development activities, including but not limited to grading, landscaping, addition of equestrian trails, and storm drainage improvements within the Open Space classification shall be subject to City approval of the applicable Tentative Tract Map, grading plans, construction and improvement plans, and landscape plans.

All manufactured slopes within the Open Space classification will be contoured and re-vegetated with appropriate plant materials for a natural appearance, pursuant to the City-approved plant materials list on *Table 6-1, Recommended Plant Palette.*

The maintenance of the Open Space acreage will be the responsibility of a new Lighting and Landscape Maintenance District (LLMD) which will be established as part of the implementation of the Heritage Oaks Equestrian Community Specific Plan.

Oak Tree Preservation – The Heritage Oaks Equestrian Community contains 121 coast live oak trees, both in individual trees and large communities, creating the predominant visual and environmental setting on the subject property. Of the existing 121 coast live oak trees,

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Exhibit 4-1
Illustrative Development Plan

the Specific Plan will preserve 117-118 trees (approximately 96%). The largest groupings of live oak trees are contained in the central portion of the subject property. Smaller oak tree standing are included in the Open Space areas in the northeast corner and southwest corners of the property. No grading activities or man-made improvements are to take place within 5-feet of the remaining trees' drip-lines in order to preserve and maintain their natural condition, in accordance with the City of Calimesa's Oak Tree Ordinance. A full and detailed description of the individual coast live oaks found on-site is contained the "Oak Tree Evaluation" prepared by David Hayes, Consulting Arborist. Additionally, each live oak tree was tagged & number, with its drip-line and a 5-foot tree protection zone (TPZ) surveyed and mapped, as previously shown on *Exhibit 2-4, Live Oak Woodland.*

- *Drainage and Detention Facilities* – Located at the base of the Grafton Hills, the subject property lies within the headwaters of Garden Air Wash. The subject property is located in the streambed, and the ridgelines surrounding the wash experience significant water drainage. By utilizing the existing natural drainage corridors as much as possible, the off-site drainage flows will be picked up as they enter the subject property and directed to a combination of man-made flood control improvements and existing natural drainage courses, designated in the Open Space areas. Additionally, maintaining the natural drainage courses will provide an on-going, 'natural' supply of water to the coast live oak tree woodland area, preserving their natural condition. Drainage flows will be directed into the proposed detention basin, also designated as Open Space, which will be improved to protect down-stream properties and residents. From the detention basin, a 48-inch drainage pipe will connect to the existing storm drain outlet at Holmes Street. Refer to *Section 5.1, Storm Drainage* for a more detailed description of the drainage and detention facilities planned within the Open Space areas.

- *Water Quality and/or Water Treatment* - Some portion of the Open Space classification may be utilized for water quality and/or water treatment if the need for such uses is demonstrated to the City's satisfaction and no significant environmental impacts are created. No such use may occur adjacent to any existing coast live oak woodland and must have direct access from either County Line Road or "G" Street. Any such proposed use shall be subject to a Conditional Use Permit to be reviewed and approved by the City of Calimesa at a later date.

4.3 Circulation Concept

4.3.1 Existing Conditions

The proposed Heritage Oaks Equestrian Community project site is located on the south side of County Line Road near its current eastern terminus, generally east of Mesa Grande Drive. County Line Road is an east-west roadway extending from the San Bernardino Freeway (I-10) on the west to Chaparral Trail on the east. East of Chaparral Trail the road curves to the north into the City of Yucaipa and is known as Canyon View Drive. As the name implies, County Line Road runs along the Riverside County/San Bernardino County borderline, and is the city boundary line dividing the Cities of Calimesa and Yucaipa.

The City of Calimesa's street classification for County Line Road is as a Major Arterial near the Interstate 10 freeway, from 7th Place to Calimesa Boulevard. From Calimesa Blvd. east to Bryant Street, County Line Road is designated as a Secondary Arterial. Beyond Bryant Street (eastward to the project property) County Line Road has not been designated as an arterial at this time due to the low traffic volumes. The current right-of-way classification is 60 feet, having 2 travel lanes. A 'Focused Traffic Study' for Heritage Oaks was prepared by LSA Associates, Inc. and is included in the Initial Study/Mitigated Negative Declaration report. This report provides further in-depth description of the existing traffic conditions surrounding the project site.

4.3.2 Project Access and Internal Circulation

The *Circulation Plan, Exhibit 4-2*, illustrates the location and design for the proposed street system to and within the Heritage Oaks Equestrian Community. The Circulation Plan is consistent with the Calimesa General Plan Circulation Element through the proposed widening and construction of County Line Road to its full right-of-way. All streets within the Heritage Oaks Equestrian Community are public streets, which will be improved and dedicated to the City of Calimesa. The Heritage Oaks Equestrian Community is not a private gated community, but will be accessible to all residents of the Calimesa area.

The final street nomenclature shall reflect the historical background of the project site, and shall be determined in conjunction with both the Yucaipa Historical Society and the City of Calimesa Planning Department.

Access to Heritage Oaks will be provided by two (2) public streets off County Line Road. The primary community entry into Heritage Oaks will be via a public entry, "F" Street, which is aligned directly across from Chaparral Trail in the City of Yucaipa. "F" Street is proposed as a one hundred (100)-foot right-of-way, designed with a 4-lane divided roadway (24-foot roadway each direction), separated by a 20-foot median and a 16-foot landscaped parkway on both sides. "F" Street, as will all streets with Heritage Oaks, will be improved to city standards, and designed with rolled-curbs to maintain the rural atmosphere of the community.

The secondary entry from County Line Road will be via "G" Street, a public street, which is located along the western property boundary. "G" Street will be dedicated to the City and improved for its full length from County Line Road to its intersection with "A" Street near the southern boundary of the community. "G" Street is proposed as a sixty (60)-foot public right-of-way. There will be no direct vehicular access from either "F" Street or "G" Street to any future residential lots. "G" Street may be used to access the Open Space (OS) area adjacent to the street which contains the proposed detention basin.

Heritage Oaks' primary internal circulation system is laid out in a simple loop pattern, consisting of "A," "B," and "C" Streets. "A" Street will take access from "G" Street and "C" Street will connect to "F" Street. "A," "B," and "C" Streets are proposed with public street rights-of-way of sixty (60)-feet. The right-of-way is designed to include a 2-lane and parking roadway of 46-feet, with a 7-foot parkway on both sides and a 10-foot multi-use trail on interior side of street. The multi-use trail is intended primarily to accommodate equestrian riders, as well as users that walk and jog. No additional sidewalks are proposed, in keeping

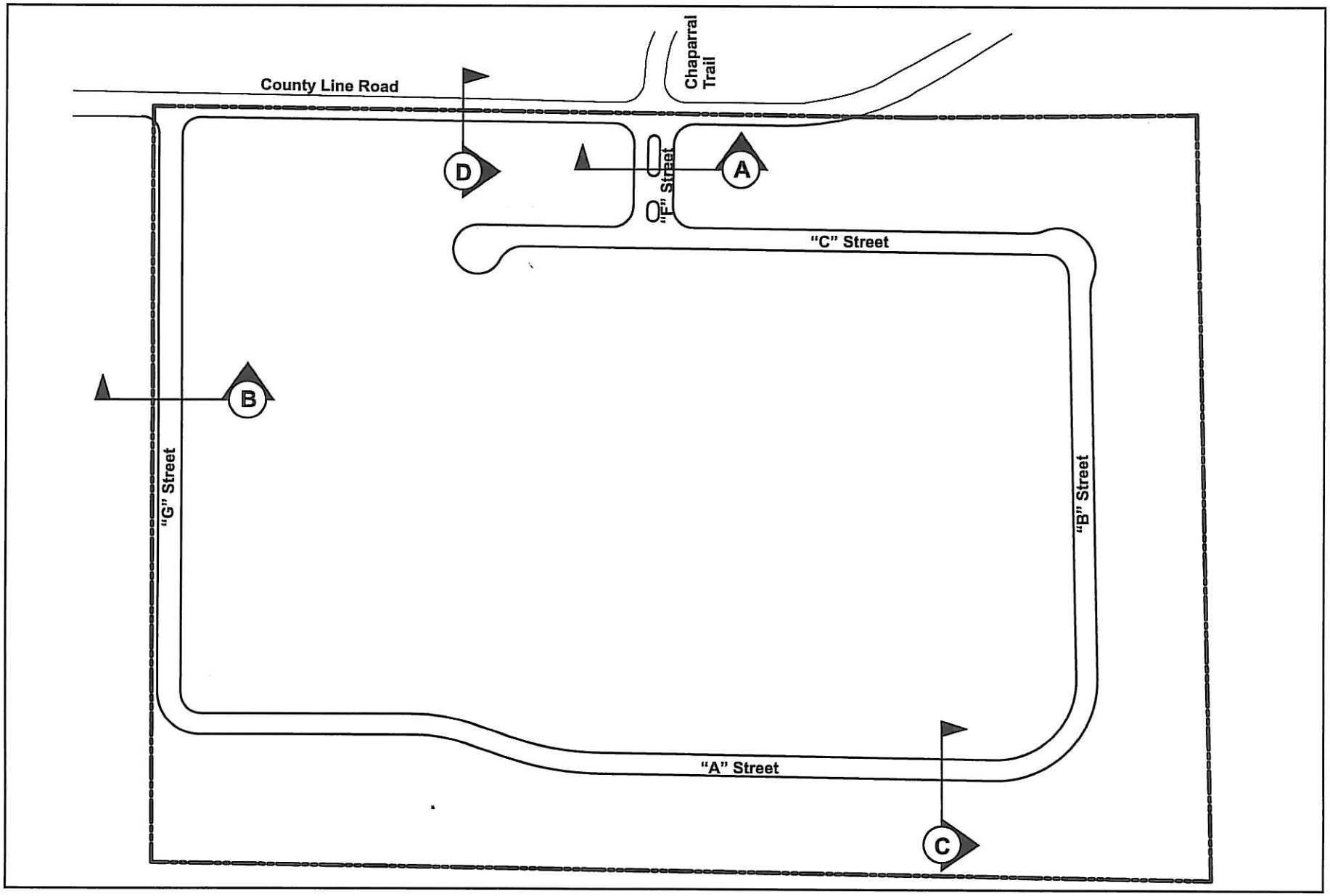

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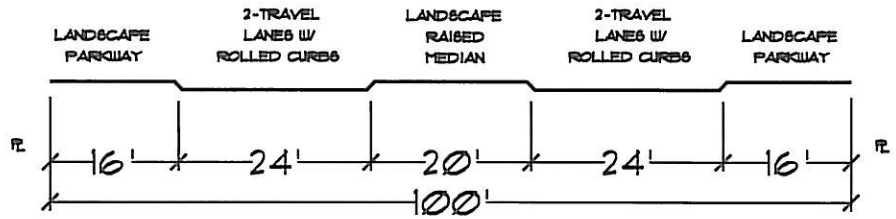
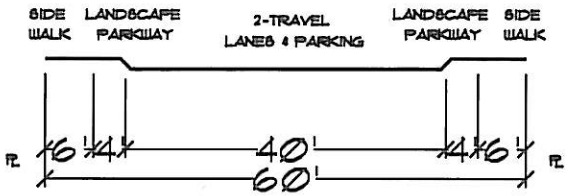
Exhibit 4-2
Circulation Plan

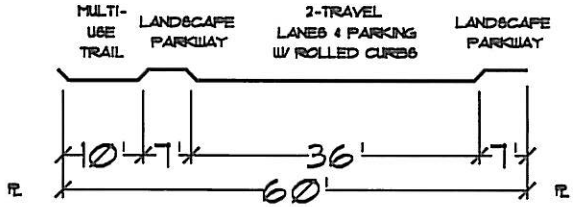
(A) PRIMARY ENTRY ROAD ("F" STREET)



(B) SECONDARY ENTRY ROAD ("G" STREET)



(C) INTERNAL RESIDENTIAL ROAD ("A", "B",AND "C" STREET)



(D) COUNTY LINE ROAD

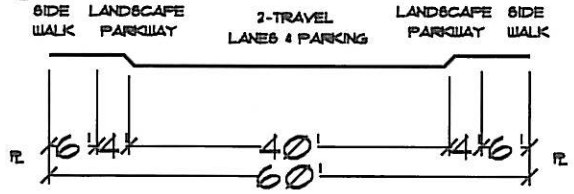


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Exhibit 4-3
Street Cross Sections

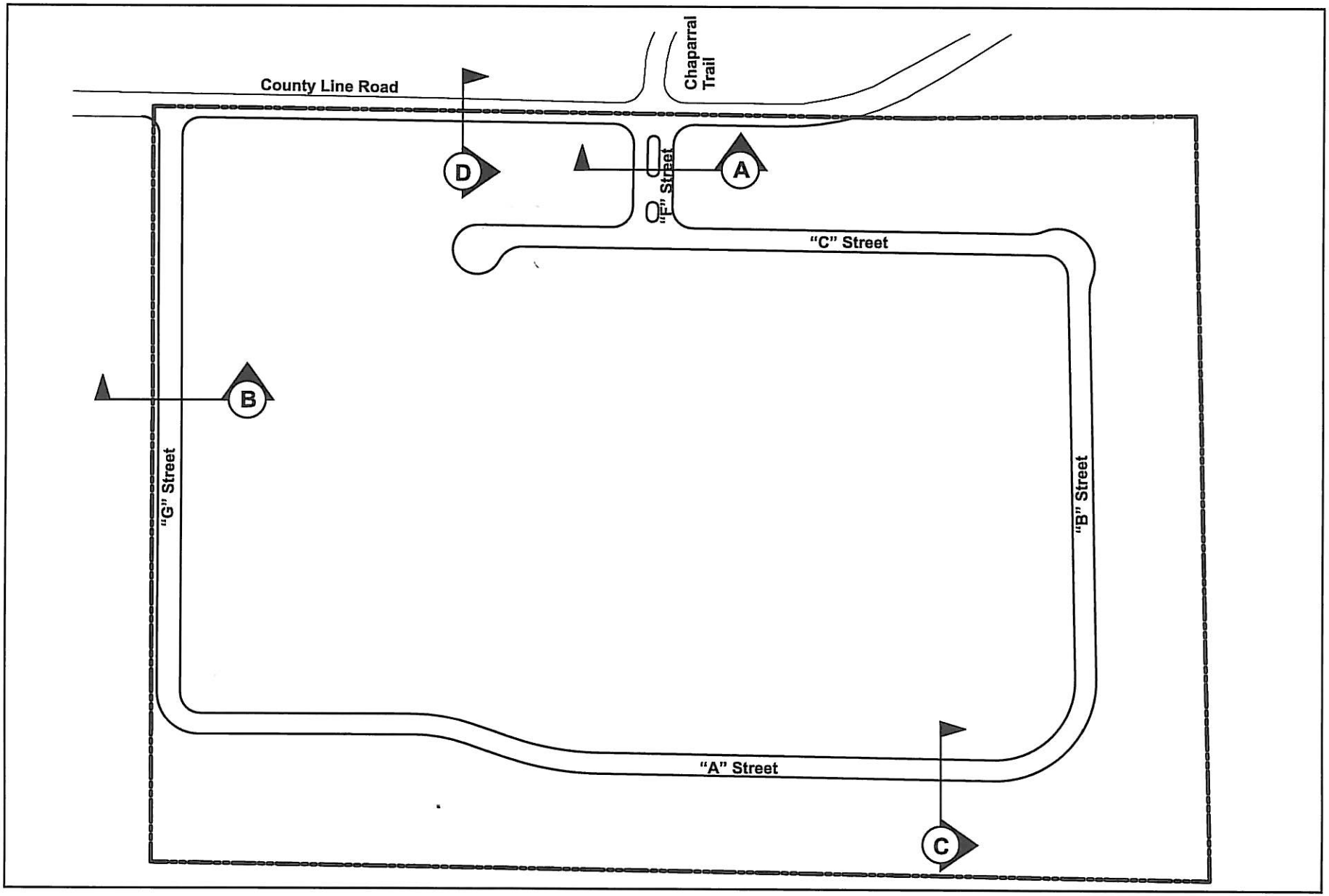

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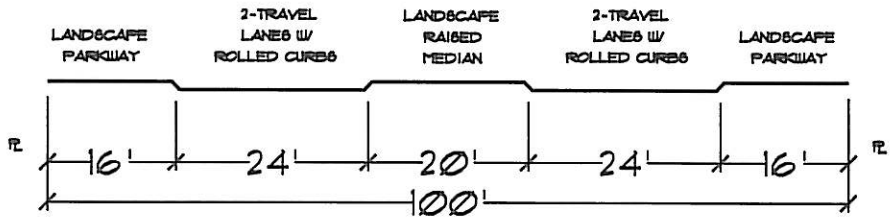
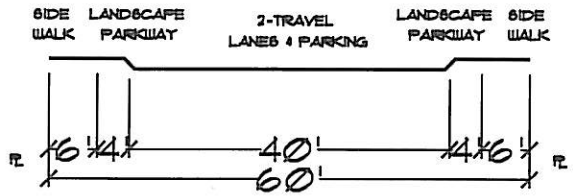
Exhibit 4-2
Circulation Plan

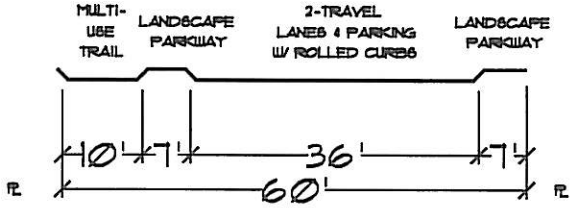
(A) PRIMARY ENTRY ROAD ("F" STREET)



(B) SECONDARY ENTRY ROAD ("G" STREET)



(C) INTERNAL RESIDENTIAL ROAD ("A", "B", AND "C" STREET)



(D) COUNTY LINE ROAD

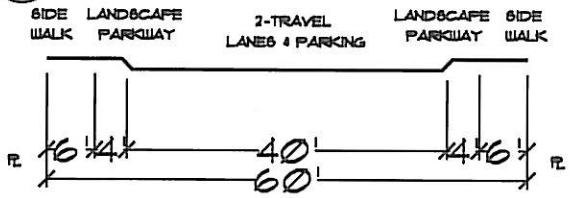


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Exhibit 4-3
Street Cross Sections

with the desired rural atmosphere. All residential lots take direct vehicular access from public streets "A" through "C."

The street cross-sections for each street are illustrated on *Street Cross-Section, Exhibit 4-3.* In keeping with the rural character planned for Heritage Oaks Equestrian Community, all streets are proposed with rolled-curbs, no speed-bumps and no sidewalks other than the multi-purpose trail.

4.4 Conceptual Grading Plan

The *Conceptual Grading Plan, Exhibit 4-4*, for Heritage Oaks illustrates the extent of grading necessary to achieve the design concept for the community. The overall grading concept is to produce buildable pads/lots while preserving the existing coast live oak trees and natural drainage courses. The grading plan will work with the existing natural drainage patterns to maintain the natural flows to the oak trees, while protecting downstream residents and properties from storm run-off.

Given that most of the property and the live oak trees are in a central "valley", most development, grading and remediation activities have been limited to the perimeter of the subject property. Grading for development areas will utilize variable slopes ranging from 2:1 to 4:1 so the graded area appear more natural and transition gradually to the existing site topography. While the graded portions of the site have been designed to minimize impacts on the natural terrain, the grading concept is also intended to maximize and promote views of the natural attributes of the subject property.

The earthwork quantities required to create the Heritage Oaks Equestrian Community is currently estimated to be about 232,000 cubic yards of cut and 142,900 cubic yards of fill. With shrinkage, subsidence, remedial work and minor adjustment of pad elevations (if necessary) the grading is expected to balance on-site. Additional geotechnical test borings and studies will be prepared prior to and/or during grading operations which may identify further geotechnical issues, such as unstable slope conditions, which will need to be resolved.

The overall grading plan will be regulated by the City of Calimesa grading, building and development ordinances. In compliance with the City of Calimesa's Oak Tree Ordinance requirements all grading activities will be kept a minimum of 5 feet outside the drip-line of the trees being preserved. All development and construction level grading plans will be submitted to and approved by the City of Calimesa prior to issuance of grading permits.

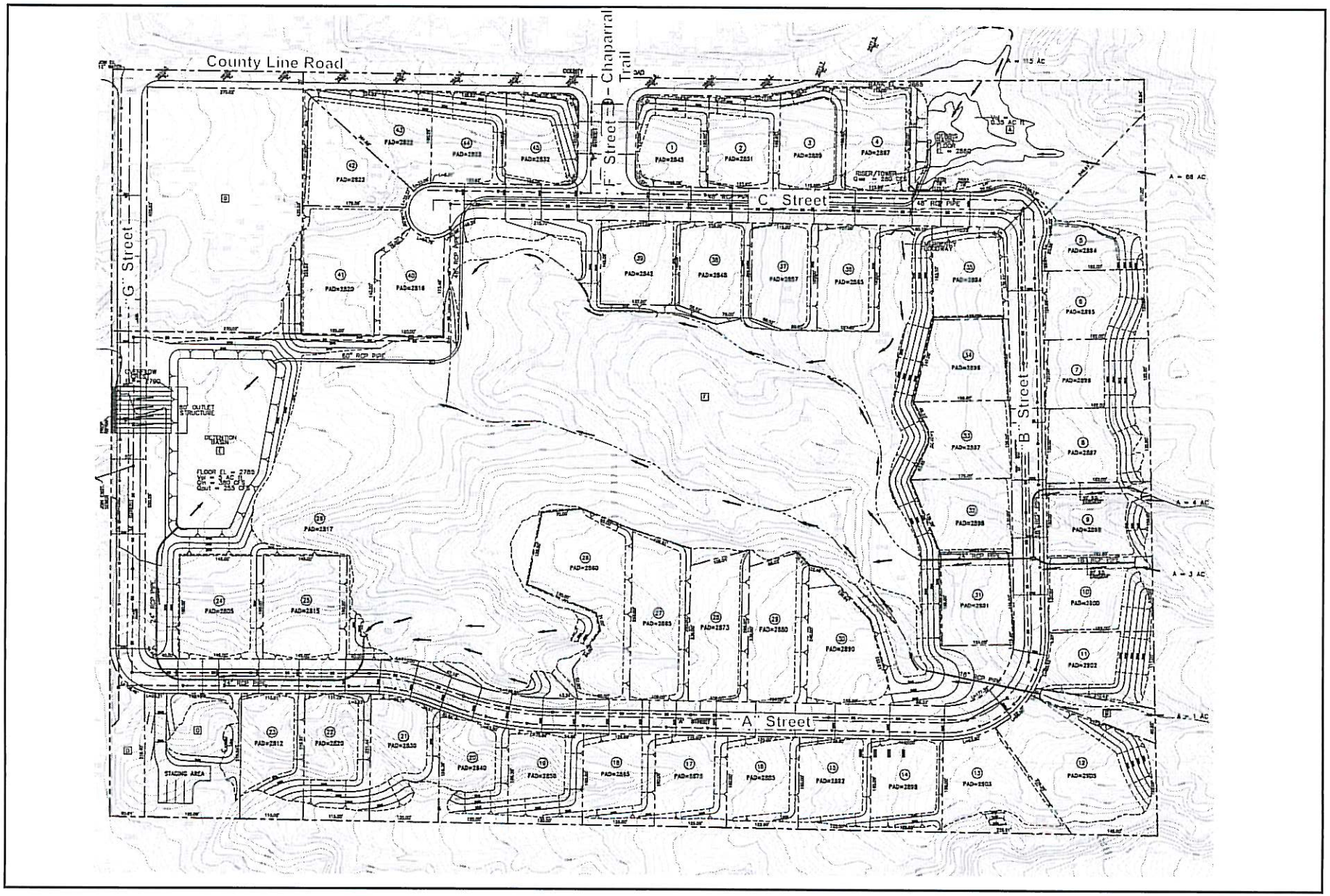

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Exhibit 4-4
Conceptual Grading Plan

4.5 Community Landscape Concept

The landscape design concept for Heritage Oaks Equestrian Community is demonstrated by *Exhibit 4-5, Conceptual Landscape Plan.* The landscape concept is intended to present a strong "Early California Ranch" theme through the use of consistent plant materials, walls, fences and signage as outlined in this section and described in detail in *Section 6.0, Community Design Guidelines.*

The community landscape concept for Heritage Oaks is intended to:

- Enhance the general "Early California Ranch" architectural theme throughout the community by promoting common landscape elements consistent with the character of the community, including the use of an informal mix of native California trees, shrubs and plant materials, the use of simple natural materials typical to ranches i.e., stone, brick & wood in community areas, and by the integration of existing live coast oaks into community fabric.

- Provide a visual and physical connection between the residential homes and the natural open space by preserving oak trees in close proximity to residential lots, creating views of trees from all lots, and by offering "view windows' into the natural open space from all community public streets.

- Enhance the visual quality of Heritage Oaks as viewed from off-site, both in the Cities of Calimesa and Yucaipa, while creating a pleasant living environment for residents.

- Promote a trail-oriented community with attractively landscaped horse riding and pedestrian trails along the community's central loop street, and within the natural open space areas, by providing an equestrian staging & parking area, and by providing trail connection opportunities to nearby existing paths and future City trails.

4.5.1 Community Landscape Character

The landscape theme for the Heritage Oaks Equestrian Community is of a native California landscape, including the native coast live oak trees that are a significant visual element of the subject property. The development and landscape concept for Heritage Oaks is shaped around the preservation and maintenance of the many existing coast live oaks. The landscape plays a significant role in establishing a distinctive character for the Heritage Oaks Equestrian Community. This is a community that has an individual identity, and at the same time, will promote a feeling of aesthetic continuity with the existing environment. Through the retention of the oak woodland and the enhancement of the strong existing site features this community will have a unique character. Refer to *Exhibit 4-5, Conceptual Landscape Plan.*

The landscape development concept for Heritage Oaks Equestrian Community has several main characteristics, including the retention of the existing coast live oak trees, the creation of extensive of open space connections throughout the community, the provision of a riding and walking trail system throughout the community with opportunities to connect to existing and future off-site trails, and the use of appropriate plant materials and entry monumentation to establish a distinct community identity.

The primary open space focus of the community is the existing native oak woodland and the establishment of physical and visual open space linkages. The open space linkages will allow

wildlife movement from the surrounding environs to the live oak woodland and drainage course. The open space linkages are laid out in such a manner as to allow wildlife escape routes, so as to not become nuisances to community residents. Additional native oak trees will be planted to replace any coast live oaks removed during construction of the project and to enhance the existing oak environment. On slopes within the open space shrubs compatible with the oak trees will used to stabilize the slopes as well as strengthen the oak woodland community (See *Table 6-1, Recommended Plant Palette*). This primary open space may be used for passive recreation with several picnic areas and trails bisecting the open space.

The internal open space area is surrounded by the community multi-purpose trail. The community trail is defined by the rail fence planted with flowering vines and ornamental shrubs. The core will be surrounded by fall accent color deciduous street trees and a secondary front yard tree that will be an accent flowering tree.

The community entry monument at the intersection of County Line Road and "F" Street will combine the elements of cultured stone walls, landscape and signage to establish an attractive, distinctive landscape character for the Heritage Oaks Equestrian Community. See *Exhibit 4-6, Community Entry Treatment.* The entry shall reflect the architectural style of the Heritage Oaks Equestrian Community, and shall include landscape space beyond the street right of way for the entry monument and thematic landscaping. The entry landscape shall incorporate fall foliage and other accent trees, shrubs, and groundcover with the minimum use of turf. See *Section 6.4.2 Community Entry Treatment* of additional details.

Maintenance of the Heritage Oaks Equestrian Community major entry monument, community landscape and multi-purpose riding trails is to be done by the Lighting and Landscape Maintenance District, subject to the review and approval of the Public Works Director.

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SCALE IN FEET

NATURAL OPEN SPACE

MANUFACTURED SLOPE

STREET ZONE

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Exhibit 4-5
Conceptual Landscape Plan

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Exhibit 4-6
Community Entry

SECTION 5.0

COMMUNITY INFRASTRUCTURE & PUBLIC SERVICES

5.1 Storm Drainage System

This section describes the overall Storm Drainage System that will be implemented for the development of the Heritage Oaks Equestrian Community Specific Plan. The conceptual storm drainage plan is illustrated on *Exhibit 5-1a, Storm Drainage System and Exhibit 5-1b, Detention Basin Cross-Section.* The final design of the drainage system will be in conformance with City of Calimesa drainage standards.

The implementation of the Storm Drainage System will require a combination of storm drainage improvements, including a debris basin, storm drain pipes, a detention basin and facilities, and integration of the existing natural drainage courses. Drainage flows will be directed into the existing natural drainage courses and thence into a new detention basin, also designated as Open Space, which will be improved to protect down-stream properties and residents in the City of Calimesa. An off-site drainage pipeline will connect the detention basin to the existing storm pipe outlet located at Holmes Street. Wherever feasible, the on-site natural drainage courses have been preserved, and will continue to function for carrying storm run-off and providing natural irrigation to the coast live oak trees. The main storm drainage lines within the public streets will be dedicated to the City of Calimesa.

5.1.1 Existing Conditions

The subject property is located within the headwaters of Garden Air Wash at the base of the Grafton Hills. The property is located in the streambed and the ridgelines surrounding the Garden Air Wash and is currently in a natural condition, experiencing significant storm water drainage. The subject property has one large off-site drainage course flowing westerly onto and through the site from the northeastern corner, and three (3) minor drainage courses which enter the property along the eastern property boundary and flow west. The current watershed for the project site is approximately 314 acres to the north and east. It is the minor drainage courses which provide most of the water to the existing coast live oak woodland communities located on the subject property. Currently, the major and minor drainage courses, in combination with one another, flow approximately 184 cubic feet per second in a 2-year event storm and up to 541 cubic feet per second during a 100-year storm. On exiting the subject property the storm drainage currently sheet flows across the existing residential properties along Holmes Way to the west, only partially contained by the street's paved section and by the intermittent earthen channel adjacent to the street. These residents experience some flooding of their properties during heavy rains, as well as, substantial debris and siltation problems due to the lack of drainage improvements up-stream from Holmes Way. The subject property is not located within any of the flood hazard areas identified on

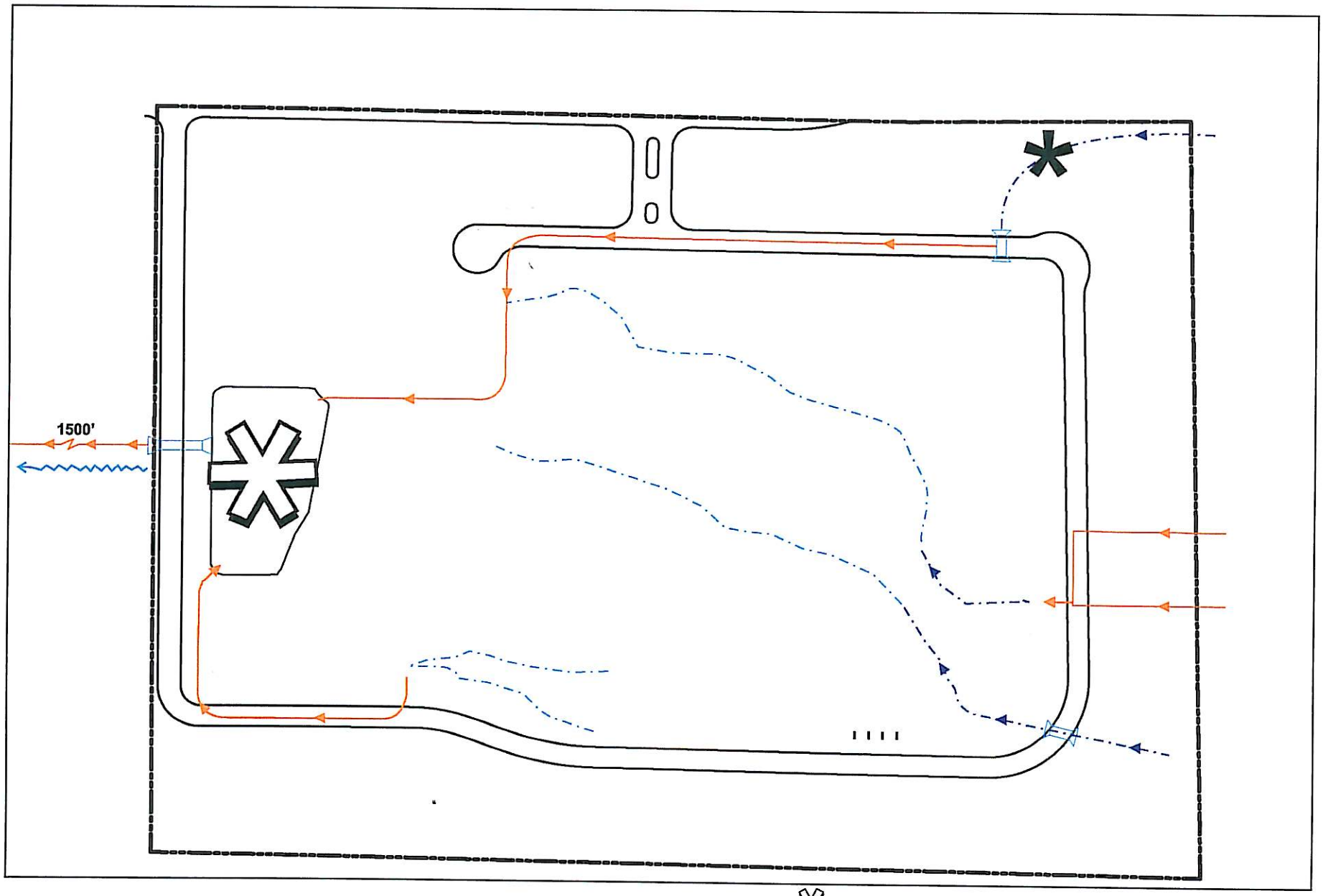

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Exhibit 5-1a
Storm Drainage

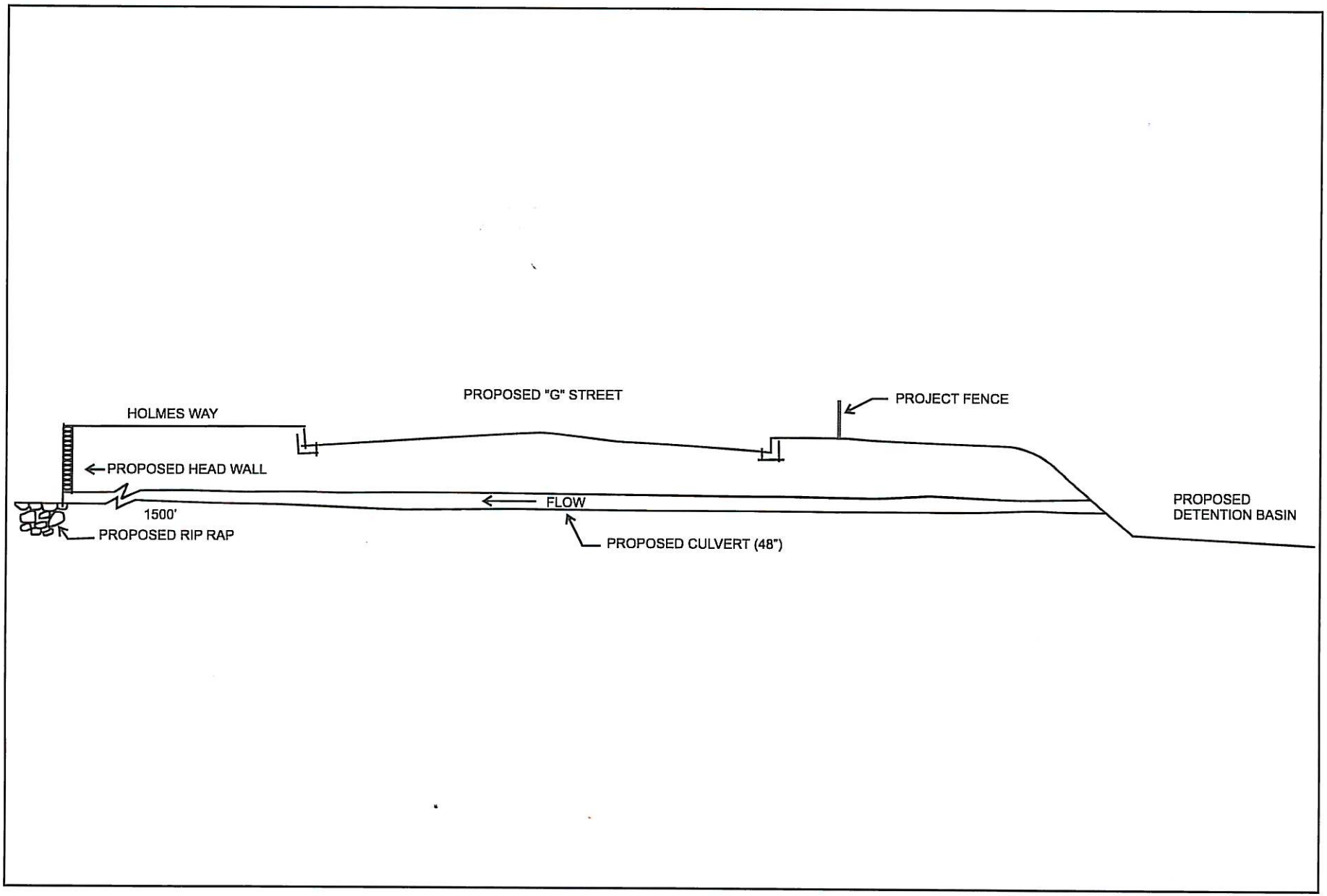

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Exhibit 5-1b
Detention Cross-Section

Exhibit 5-6, Flood and Inundation Hazards of the City of Calimesa General Plan, Profile Reports, Section 5.0, Safety.

Several storm drains are located in County Line Road within the City of Yucaipa. Due to the lower topographic elevation of the subject property these storm drains will not be used by the community.

5.1.2 Storm Drainage Concept

The storm drainage system for Heritage Oaks is conceived to integrate man-made drainage improvements with the existing natural drainage course to preserve the coast live oak trees and natural setting of the subject property. The off-site drainage flows will be picked up as they enter the subject property and directed to a combination of man-made flood control improvements, such as the proposed debris basin and culvert in the northeastern corner of the site, and pipelines located in the internal public streets, and to the existing natural drainage courses within designated Open Space areas. This drainage approach will maintain natural water flows to the coast live oak woodland communities. Refer to *Exhibit 5-1a, Storm Drainage System.*

Ultimately, the storm drainage flows will be directed into proposed detention basin, also designated as Open Space, located on the west side of the subject property. This detention area will have remedial improvements, including increasing depth to approximately four (4) feet and varying slopes from 2:1 to 4:1, which will better contain and direct the storm water flows. The proposed detention basin will have a footprint of over 1 acre and a storage volume of approximately 5 acre-feet, and will hold storm water run-off from the Heritage Oaks development and from the existing up-stream tributaries.

Additionally, a 48-inch storm drain line (approximately 1,500 feet in length) is proposed to connect the detention basin outlet and the existing downstream 46-inch pipe crossing located at Holmes Street. The proposed storm drain line will be located in the partial earthen channel along the north side of the paved section of Holmes Way.

This drainage detention and storm pipeline system will allow the water run-off to recharge the ground water basin, and will reduce the discharge of post-development storm waters to levels below the current existing storm flows. See *Exhibit 5-1b, Detention Basin Cross-Section.* By slowing and/or holding the storm drainage flows until after peak storm flow periods and by carrying storm flows underground in the proposed pipeline, the total quantity of drainage water flowing out of the subject property will be reduced. The proposed storm drainage system will act to protect down-stream properties and residents of the City of Calimesa. Particularly, those residents along Holmes Way immediately west of the Heritage Oaks community will benefit from reduced flooding and sedimentation on their properties.

A secondary function of the proposed debris basin and detention basin will be to serve as water quality facilities. By catching and/or holding drainage flows, these facilities will remove sediments and pesticides generated by the development of Heritage Oaks prior to their flowing downstream.

5.2 Wastewater System

This section describes the Wastewater System that will be implemented for the development of the Heritage Oaks Equestrian Community Specific Plan. The conceptual wastewater plan is illustrated on *Exhibit 5-2, Wastewater System*. Final design will be in conformance with City of Calimesa standards and the requirements of the Yucaipa Valley Water District (YVWD).

5.2.1 Off-Site System

The subject property is currently undeveloped and no sewer pipelines service the site. Sewer lines are located in County Line Road within the City of Yucaipa. Due to the lower topographic elevation of the subject property, and thereby the need to pump any wastewater to these pipelines, these sewer lines will not be used by Heritage Oaks.

Wastewater generated at Heritage Oaks Equestrian Community will be treated at the Henry M. Wochholtz municipal wastewater treatment plant (WTP), located at 880 West County Line Road in the City of Yucaipa. This facility is operated by the Yucaipa Valley Water District. The WTP has a current operating capacity of 4.5 million gallons per day (mgd) and is expected to easily service the wastewater requirements of Heritage Oaks without any significant impacts.

5.2.2 Wastewater System Concept

The on-site wastewater system for Heritage Oaks Equestrian Community, as shown on *Exhibit 5-2, Wastewater System*, is proposed to include an 8-inch main line sewer located in the internal public streets "A" thru "C" and a portion of "G" Street. The sewer line will loop through the community and then be routed to "G" Street. The sewer line will then exit the subject property within a proposed easement. From there it will route to a connection with the main sewer line located several hundred feet away at the end of the constructed portion of Holmes Way.

5.3 Water System

This section describes the Water System that will be implemented for the development of the Heritage Oaks Equestrian Community Specific Plan. The conceptual water plan is illustrated on *Exhibit 5-3, Water System*. Final design will be in conformance with City of Calimesa standards and the requirements of the Yucaipa Valley Water District (YVWD).

5.3.1 Off-Site Water System

The subject property lies within the water service area operated by the Yucaipa Valley Water District. The high and low elevations of the subject property fall just within the service boundaries of a single water pressure zone. Two (2) existing water lines currently service the developed areas adjacent to the subject property. The first water line (8-inch) is located in County Line Road within the City of Yucaipa immediately north of the subject property. The second water line (8-inch) is located within an easement running along the western boundary of the subject property, parallel with but outside the proposed right-of-way of "G" Street.

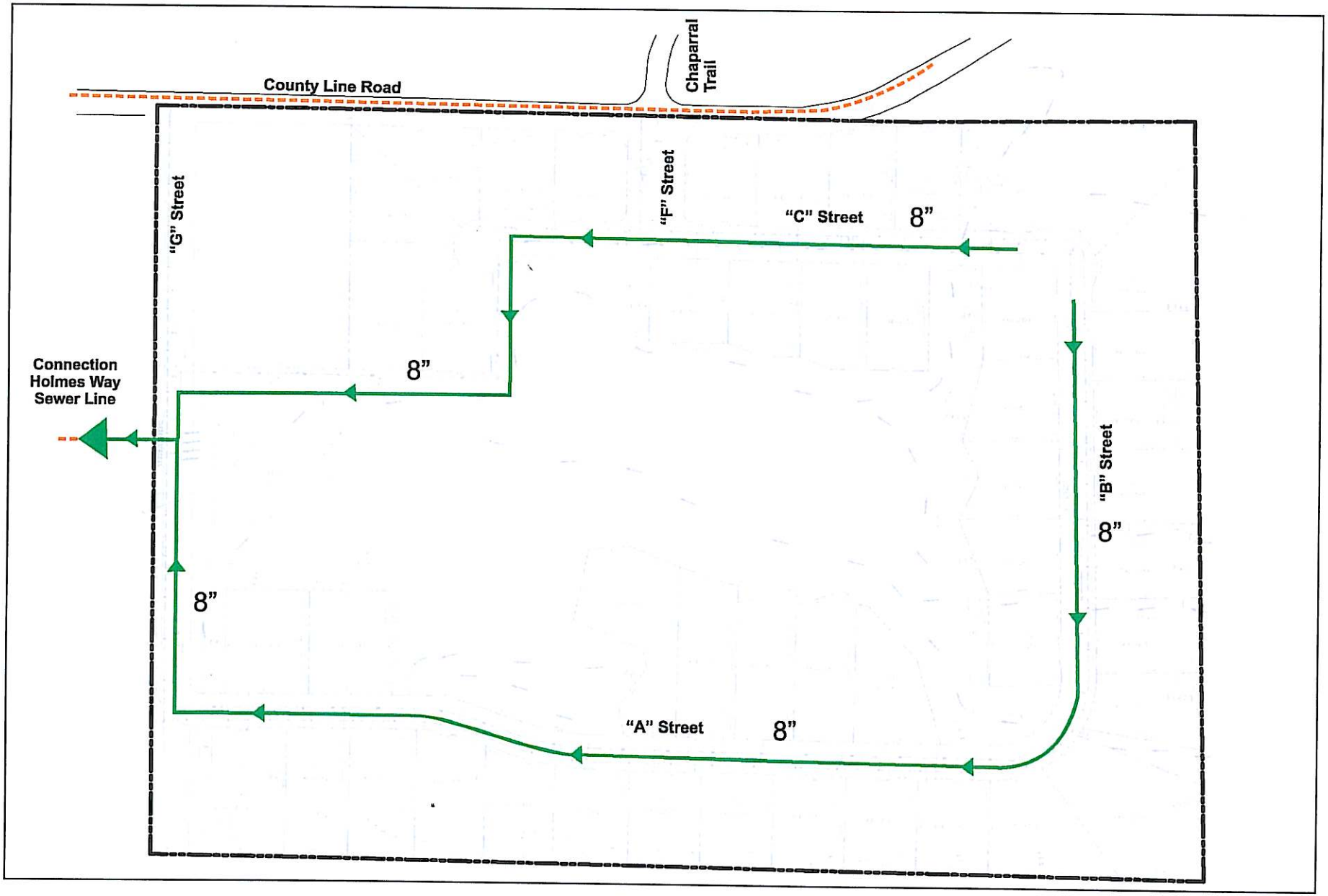

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Exhibit 5-2
Wastewater System

HERITAGE OAKS EQUESTRIAN COMMUNITY SPECIFIC PLAN

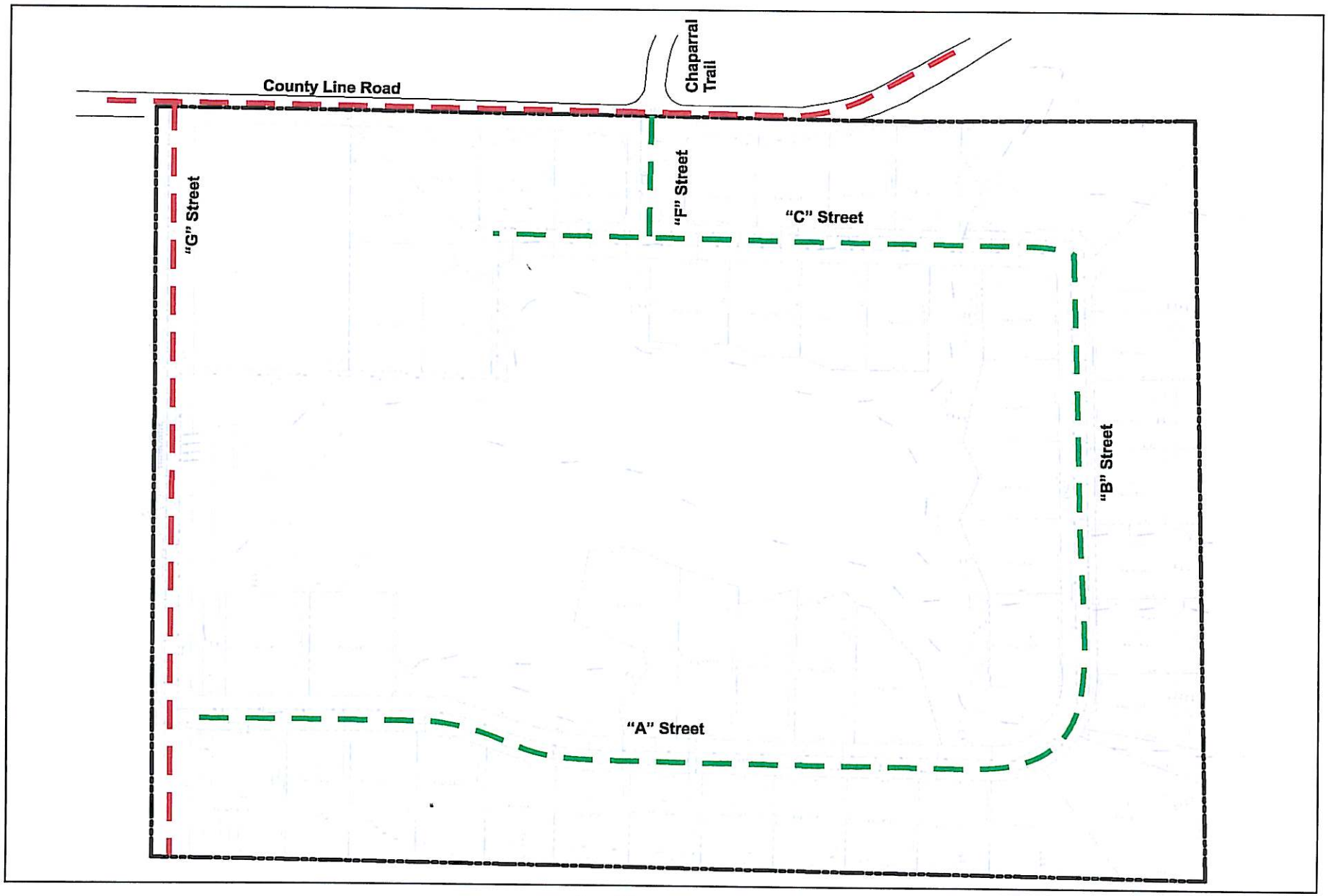

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Exhibit 5-3
Water System

5.3.2 Water System Concept

The on-site water system for Heritage Oaks Equestrian Community, as demonstrated by *Exhibit 5-3, Water System*, is proposed to include a looped 8-inch water line located in "A", "B" and "C" Streets and connected to the existing water lines within County Line Road and within the existing easement along the western boundary of the site.

The existing YVWD water line located in the easement along the western boundary of the subject property may be relocated into the "G" Street right-of-way, if it is determined by YVWD that the water line requires upgrading to service future development areas south of the Heritage Oaks Equestrian Community. The Heritage Oaks project proponent may construct the re-located water to the size necessitated by the development of the community, while YVWD would be responsible for any water line over-sizing needed to service future development.

5.4 Master Utilities Systems

5.4.1 Telephone

Verizon will provide telephone service to the Heritage Oaks Equestrian Community. The Verizon office is located at 1980 Orange Tree Lane, Redlands. All proposed on-site telephone wires/cables will be placed underground.

5.4.2 Natural Gas

The Southern California Gas Company will provide natural gas to the Heritage Oaks Equestrian Community. Service will be provided via a connection to the existing gas main located in County Line Road.

5.4.3 Electricity

Southern California Edison will provide electricity to the Heritage Oaks Equestrian Community from existing facilities in the vicinity of the subject property. The specific alignment for connection to the project will be determined at a later date in coordination with the Edison Company. All proposed on-site electrical facilities will be underground.

5.5 Public Services and Facilities

5.5.1 Fire

The Riverside County Fire Department will provide fire protection for Heritage Oaks. The City of Calimesa contracts with the Riverside County Fire Department for fire protection and paramedic services within the city limits, which includes the subject property. The Fire Station nearest the subject property is located at 906 Park Avenue, Calimesa, about 1 block south of County Line Road. Travel time from this fire station to Heritage Oaks is approximately 5 minutes.

Developer fees, in accordance with County Ordinance 659, will be collected at the issuance of building permits to offset the costs of providing fire protection services to Heritage Oaks.

5.5.2 Police

The Riverside County Sheriff Department will provide law enforcement services for Heritage Oaks. The City of Calimesa contracts with the Riverside County Sheriff Department for policing services within the city limits, which includes the subject property. The Sheriff's patrol station closest to the subject property is located at 155 E. Hays Street in the City of Banning, which is approximately 14 miles from the site.

Developer fees, in accordance with County Ordinance 659, will be collected at the issuance of building permits to offset the costs of providing law enforcement services to Heritage Oaks.

5.5.3 Public Schools

The Heritage Oaks Equestrian Community is located within the Yucaipa-Calimesa Joint Unified School District. The school district currently includes six elementary schools (K-6), two middle schools (7-8), one high school with a 9th grade campus and a 10th-12th grade campus, one continuation high school, one alternative school (7-12), one community day school (7-12) and an adult education program.

Students residing in Heritage Oaks will attend the following public schools; Wildwood Elementary School (K-6) and Canyon Middle School (7- 8), both located at 35948 Susan Street, approximately one-half mile north of Heritage Oaks, and the dual campus Yucaipa High School (9-12), located at 33000 Yucaipa Boulevard, approximately 2 miles northwest of the subject property.

The schools that serve the Heritage Oaks students are at or near capacity. While the District utilizes portable classrooms to alleviate capacity issues, some students from Heritage Oaks may need to be bussed to other elementary schools within the district with available space.

Construction within Heritage Oaks Equestrian Community will be subject to Community Facilities District (CFD) No.1. Development fees, based on the square footage of habitable, residential construction, will be collected at the issuance of building permits to offset the costs of new school construction. Additionally, homeowners within Heritage Oaks will be charged a CFD assessment of $288.00 per year, not to exceed 25 years, beginning in tax year 2004-05.

Due to requirements placed on districts participating in the State School Building Programs, the Yucaipa-Calimesa Joint Unified School District Board passed Resolution R-4/2004-05 adopting an alternative school fee schedule. Heritage Oaks will be subject to these alternative fees.

5.5.4 Public Street Lighting

It is the intent of both the project developer and the City of Calimesa to balance the goals of maintaining a rural atmosphere and eliminating undesirable light pollution with the need to

provide for the safe movement of vehicles and people within the Heritage Oaks Equestrian Community. To meet this goal, public street lighting within the Heritage Oaks Equestrian Community is recommended to be the minimum lighting levels necessary to protect the public safety and at the same time to achieve the desired rural atmosphere of the community. Street lighting should be provided only where specific safety conditions warrants, such as street intersections, street corners and trail crossings. See *Exhibit 5-4, Street Lighting.*

Street lighting is vital for traffic safety, for the convenience and comfort of residents, and for protection against theft and assault. The following lighting standards are intended to provide for a low intensity and low scale of lighting in order to maintain the rural atmosphere and to avoid light pollution of the night-sky. These lighting standards may vary, as necessary, and as approved by the City of Calimesa, to achieve the proper intensity of illuminance.

- Fixture Height – Street poles should be below the average height of the coast live oak trees within the community so the oaks can screen adjacent properties from street lighting. Street light poles shall not exceed thirty (30) feet in height as measured from finish grade to bottom of light fixture.

- Light Source – All lighting should be shielded where feasible and focused to minimize spill light into the night sky or onto adjacent properties. Low pressure sodium is permitted. Metal halide, high pressure sodium and similar sources shall be permitted if fully shielded

- Spacing of Fixtures – The distance separating lights shall be determined by the type of light source, the fixture height and the need to satisfy any lighting intensity provision established by the City. It is envisioned that fixtures will be limited to where safety conditions warrant them, specifically at street intersections, street corners and trail crossings. See *Exhibit 5-4, Street Lighting.* All electrical meter pedestals and light control equipment shall be located with minimum public visibility or shall be screened with appropriate plant materials or fencing.

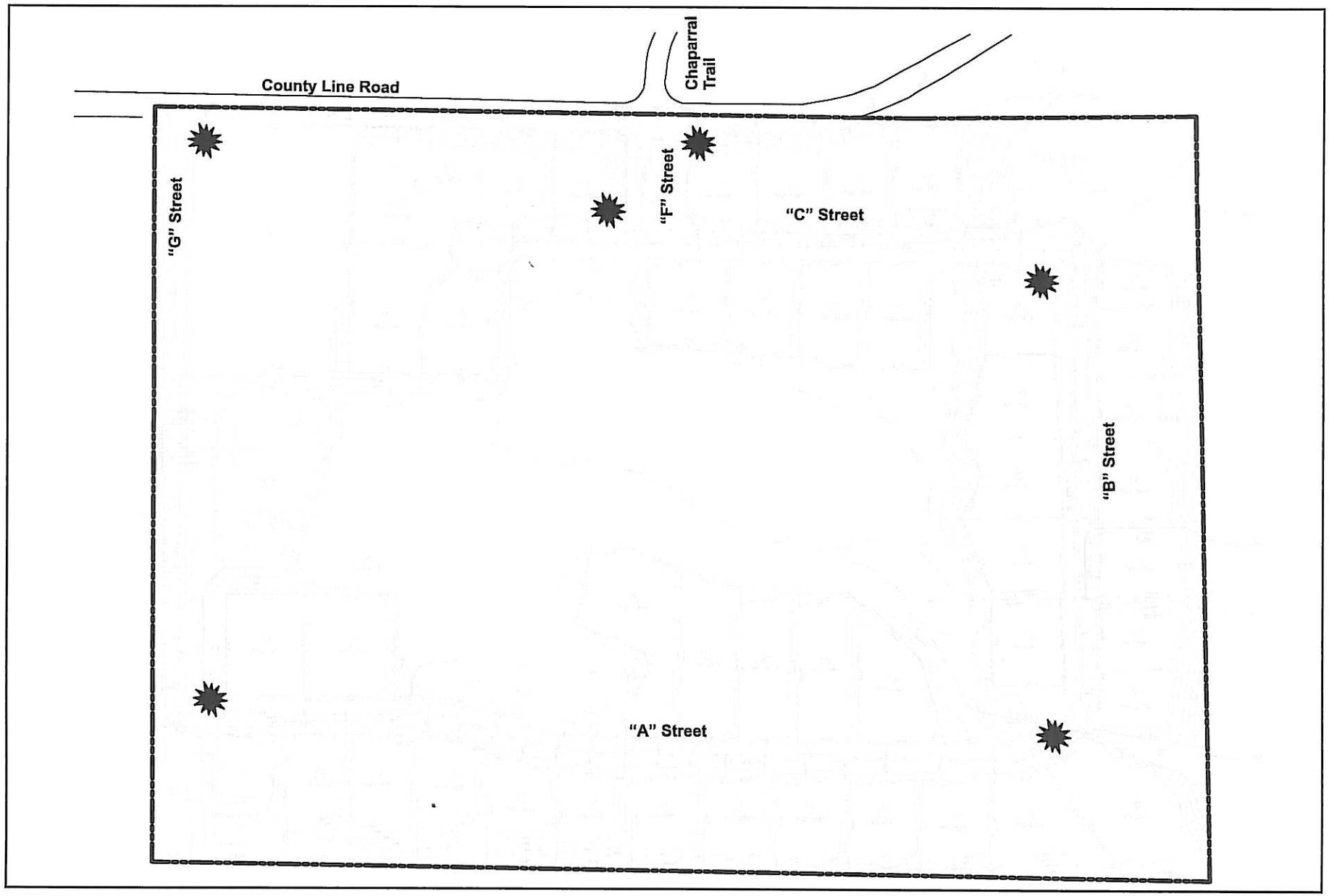

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Exhibit 5-4
Street Lighting

SECTION 6.0

COMMUNITY DESIGN GUIDELINES

6.1 Community Design Character

The purpose of the Community Design Guidelines for the Heritage Oaks Equestrian Community is to establish the architectural and landscape themes and the community identity for Heritage Oaks. The goal is to promote a harmonious and distinctive visual image for Heritage Oaks which reflects the rich rural heritage of Calimesa. By integrating the community with the existing natural setting and by ensuring a consistent design expression through site planning, architecture and landscape design, Heritage Oaks will become a welcoming home to its residents, an inviting community to visitors and a beneficial addition to the City of Calimesa.

These Community Design Guidelines shall form the basis and criteria for the review and evaluation of future plans submitted to the City of Calimesa for approval. The purpose of these guidelines is:

- To assure the City of Calimesa and the master developer that Heritage Oaks will develop in accordance with the approved design principles contained within this Specific Plan.
- To provide guidance to the City Council, Planning Commission and City staff in the review of future development and construction activities within Heritage Oaks.
- To provide guidance to builders, architects, engineers, landscape architects and other design professionals to maintain the design quality of Heritage Oaks.
- To build a community that will maintain its value over the years.
- To fully integrate the man-made community improvements with the natural resources and characteristics of the site.

All diagrams, sketches and other graphic representations contained in this section are for conceptual purposes only and do not depict final designs. They are not intended to depict any actual lot or specific building design, nor limit the range of expression by future builders.

6.2 Site Planning Guidelines

The site planning and design of single-family residential products created by the Heritage Oaks Equestrian Community Specific Plan shall be guided by the following criteria and development concepts:

- Individual lots, street alignments, trails and infrastructure improvements should be designed to integrate with the existing live oak woodland community. To the greatest extent feasible, individual oaks and oak groups will be preserved.
- Residential elevations should face public streets and open spaces.
- Convenient access to public trails and open space areas should be incorporated into the site design.
- Utilities shall be underground and/or screened from public view, as feasible. Mechanical equipment, meter cabinets, communication cable boxes, etc., shall be located to not block access to side or rear yards.
- Varied garage and driveway orientations should be utilized to break up repetitive curb cuts and yard patterns, thereby providing a diverse streetscape.
- Buffer residential uses from existing adjacent uses that may result otherwise in negative impacts.
- Residential design and site layouts should incorporate sufficient setbacks and lot orientation to optimize solar access.
- Buildings, including main residences and accessory buildings, should be appropriate in mass and scale to the site on which they are located.

6.3 Architectural Design Guidelines

The architectural style of the Heritage Oaks Equestrian Community shall be a contemporary interpretation of "Early California Ranch." Since the community will include only 45 homes, a mix of various styles would be inappropriate, and would dilute the distinctive architectural character envisioned for Heritage Oaks. At the same time, it is important that a variety of floor plans and alternative elevations are created to minimize duplication of residential design. Therefore, a minimum of four (4) floor plans and three (3) alternate elevations for each floor plan will be required to maximize the diversity of architectural appearances within the community.

The Early California Ranch architecture fits well with the rural character desired by the City of Calimesa. Early ranchers developed the initial Ranch style in response to climate and environmental conditions, lifestyles and building materials found in early California. These first Ranch homes borrowed from the various Spanish-Colonial, Monterey, and other traditional architectural styles found in early California, but simplified the detailing. Examples of early California Ranch architecture may be found throughout the City of Calimesa, and Counties of Riverside and San Bernardino due their strong agricultural heritage.

6.3.1 General Attributes

The chief architectural characteristics of Early California Ranch include the following attributes.

Building and Massing

- Simple rectilinear forms, horizontal massing and modest scale
- Simple gable roof forms

Roofs

- Gabled dormers
- Long horizontal gable roofs of 4:12 pitch
- Deep overhangs, typically with exposed rafter tails
- Barrel or flat roof tiles, or metal roofing material

Windows and Doors

- Plank shutters
- Divided pane windows

Details and Ornamentation

- Siding materials of stucco, board/batten, and horizontal wood siding
- Porches along front and rear facades typically with a 3:12 roof pitch.
- Decorative shutters at the windows with wood surrounds
- Simple wood column and rail detailing at porches

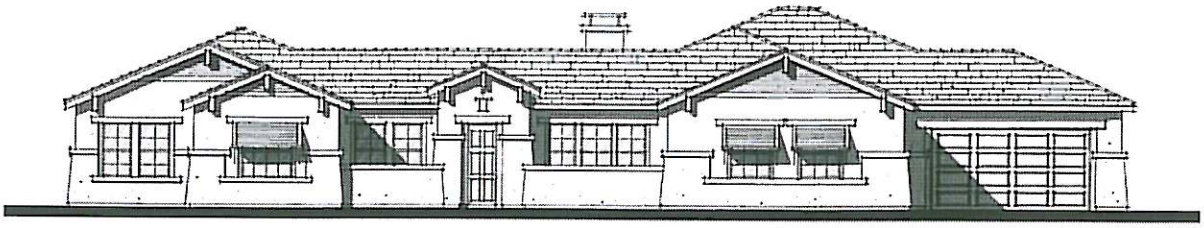


Exhibit 6-1
Architectural Style- Early California Ranch

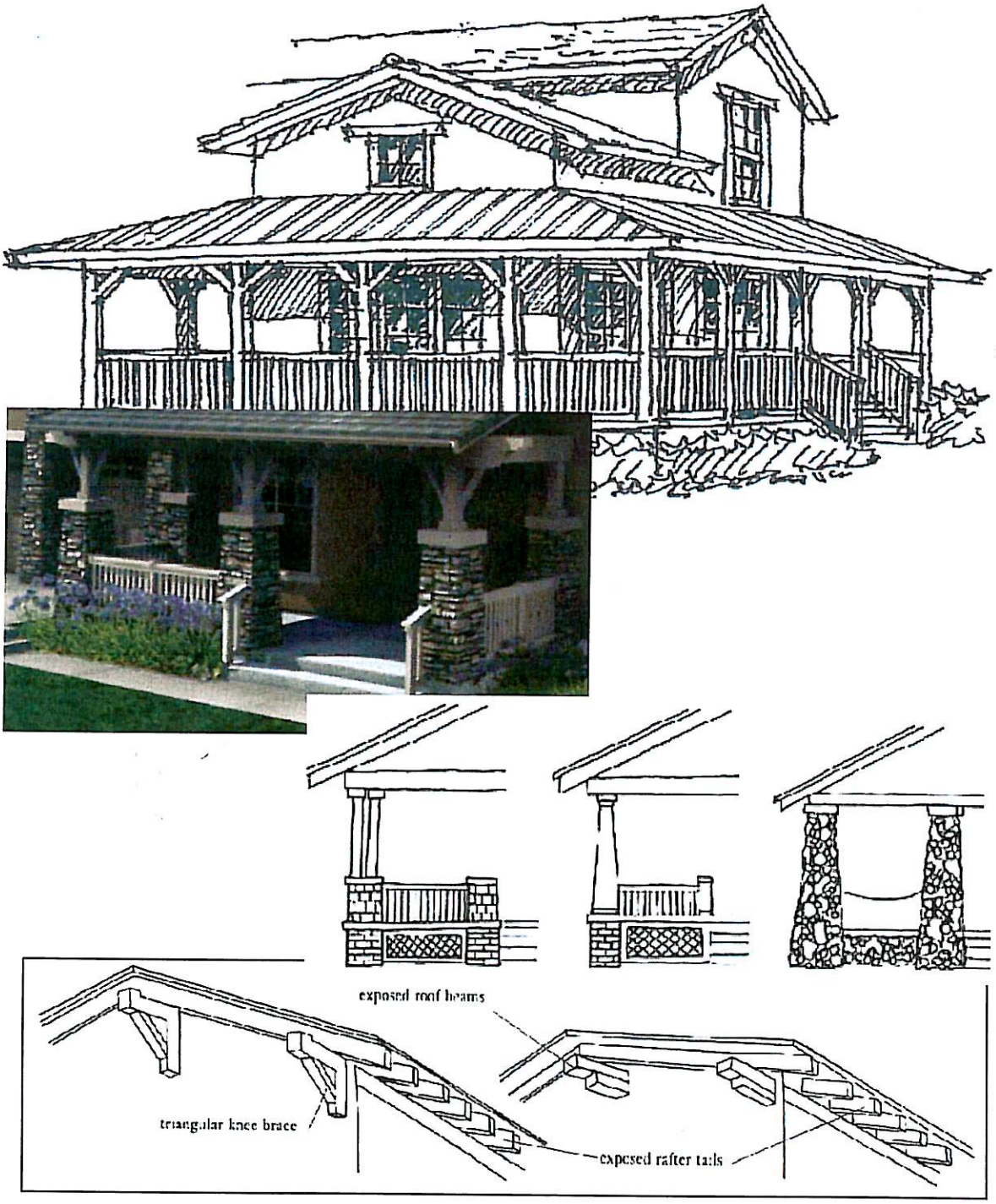
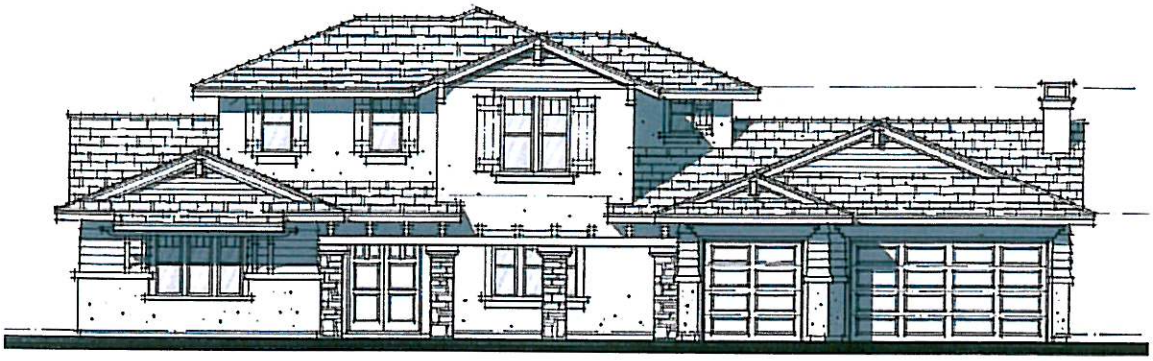


Exhibit 6-2
Architectural Details – Early California Ranch

6.3.2 Building Articulation and Massing

The building articulation and massing of the home are important elements in establishing the character of the community design as these are the primary view of the home from public streets.

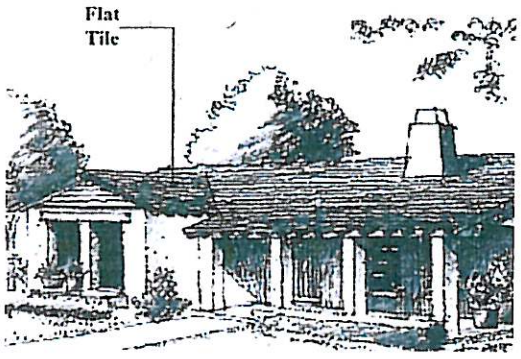
- Building massing should be appropriate to the Early California Ranch architectural style.
- Combinations of one- and two-story forms are encouraged.
- Details, such as porches, doors and windows, should be in proportion to the overall massing of the home.
- Architectural elements, such as chimneys, balconies or porches should be provided for visual relief. Porches and balconies should to a minimum of six (6) feet in depth to provide building articulation.
- Exterior building form should reflect the interior uses of the home.
- Front elevations with a single-story element are encouraged on 2-story homes to reduce massing at the "public" view.
- Building massing and front elevations should vary on adjacent homes to create a varied and attractive public streetscene.



6.3.3 Roof Forms and Materials

The roof form and its building material are primary design elements in the Early California Ranch style. The roof form and material is visible to both the neighborhood streetscene and from the surrounding external edges of the community.

- Roofs should appear to be made of a series of simple roof forms, including simple pitched, gable, hip or shed roofs.
- Attention shall be given to creating non-repetitious roof ridge heights and gable ends.
- Roofs should vary in massing along the public streetscenes and public open spaces.
- Roof forms and pitches shall reinforce the Early California Ranch architectural style, and shall be consistent on all four (4) sides.
- Barrel tile, flat tile, asphalt shingles and other appropriate roofing material shall be used to support the architectural style. Roof tiles should be of a color that is harmonious with the earth tone exterior colors of the homes.
- Roofs shall have exposed or boxed rafter tails, as appropriate to the design of the individual home.
- Skylights are not allowed on sloped roofs visible from public streets.
- Roofing materials shall be appropriate to use and design, i.e., metal seam roof may be appropriate to a porch or accessory building but not as primary residence roof.



6.3.4 Building Materials and Colors

Wall finishes and color provide a major visual impact of the home on the public view. Colors and materials inappropriate to the Early California Ranch style would create a negative visual impact on the community character. Building materials and color schemes should blend with the natural setting of the community.

- Wall finishes shall be appropriate to the Early California Ranch architectural style. Wall finishes should consist of combinations of the following materials:
  1. Stucco
  2. Board and Batten siding
  3. Horizontal wood siding
  4. Wood shingles
  5. Stone (River or Field are most appropriate)
  6. Brick

- A medium sand finish for exterior stucco shall be encouraged.

- Exposed footings shall be no higher than six (6) inches above finished grade.

- Stone and brick finishes should continue into grade.

- Colors should be appropriate to material and use, and to support the architectural style. Muted earth tones are encouraged on the exterior stucco portions of the homes. Contrasting color accents should be kept to a minimum, and will consist of whites, tans, browns and grays.

- Color and hue variation should be used to provide diversity in adjacent homes.

EXAMPLES OF ACCEPTABLE COLOR RANGES ARE AS FOLLOWS:

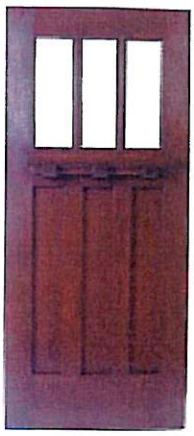
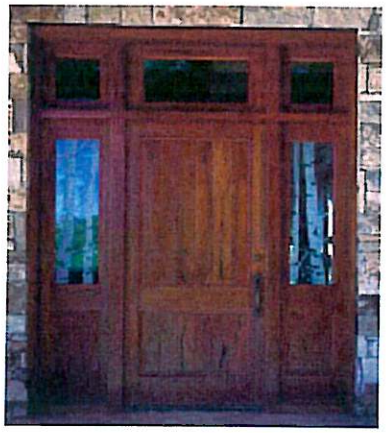
Main Stucco Colors – Earth Tones
- Examples of Acceptable Colors:
  - La Habra x-73, x-82, x-524, x-820, x-17

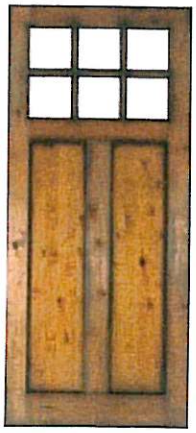
Trim Accent Colors – Whites, Tans, Browns, Grays
- Examples of Acceptable Colors:
  - Dunn Edwards 8734M, 8724M, 8765D
  - Frazee 8255D, CW039W

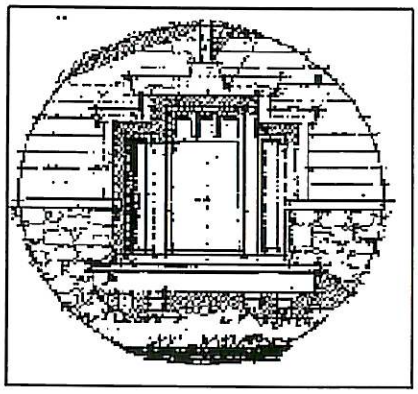
Roof Tiles – Flat Profile; Colors that create a homogenous blend between various earth tone stucco colors and neighboring homes.
- Examples of Acceptable Colors:
  - Eagle Roofing Topanga, Pewter Blend, Seattle, Rancho Cordova, Coastal Blend

6.3.5 Windows and Doors

- Recessed doors, windows and wall openings should be provided to convey appearance of thick exterior walls, as appropriate to Early California Ranch architectural style.
- The placement of doors and windows should consider the privacy of adjacent homes.
- Pot shelves and detailing around window openings should be provided for visual interest





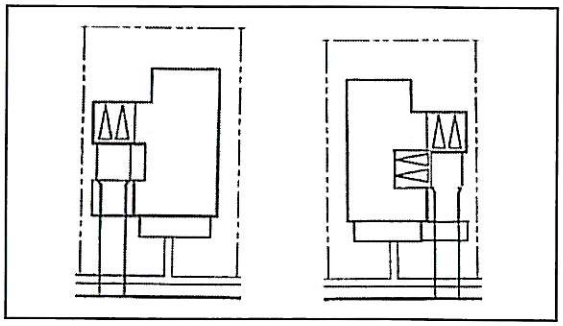
6.3.6 Garage Location and Garage Doors

The location and orientation of the garage is a major design element on residential lots, and a significant impact on the public streetscene. De-emphasizing the garage is an important design element within the community.

- Garage door patterns should support the Early California Ranch architectural style.
- Garage doors should vary from adjacent home elevations to encourage diversity in the local streetscene.
- Offset street-facing or swing-in garage configurations are encouraged.
- Garage doors should be recessed a minimum of eight (8) inches from adjacent wall planes.

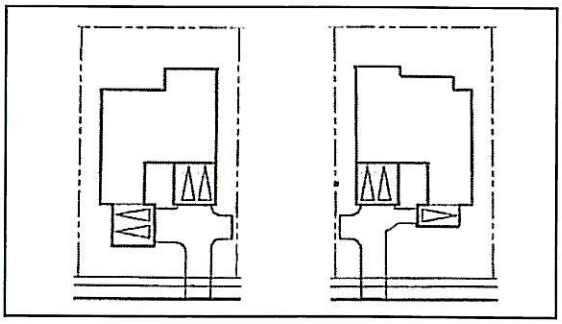
Garage - with Porte-Cochere

- Garage to be set back to rear of the lot.
- Create more usable living space towards front of house and at street.



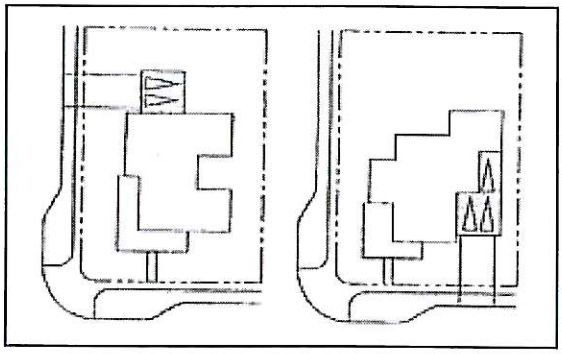
Garage – Split

- De-emphasizes garage by reducing width of garage face elevation.
- Provides additional articulation and variation in appearance of home.



Garage – Corner Lots

- Garages may take access from either street frontage, creating more variation in appearance of home.
- Most suitable from homes with wrap-around porches.
- Driveways must stay away from corner.



6.4 Landscape Design Guidelines

Landscape plays a pivotal role in the character of Heritage Oaks Equestrian Community, both in the preservation of the existing landscape, in the introduction of a new and distinctive landscape and in the transition between the two. The introduced plant palette, selected from plant varieties that are water conserving and drought-tolerant, will consist of traditional Southern California native and non-native plant species compatible with the existing native live oak woodland community. The purpose of the introduced plant palette will be to relate the existing natural landscape to the community open space, residential lots and streetscape. Use of water conserving/drought-tolerant varieties of plants suited to Calimesa climatic zones will help blend the new planting with the existing.

This section of the Community Design Guidelines describes the intent of the landscape design requirements for Heritage Oaks, providing design guidance and inspiration to builders and future residents.

6.4.1 General Landscape Principles

The following landscape principles are intended to guide the landscape design of the Heritage Oaks Equestrian Community:

- Preserve the existing significant stands of coast live oak trees and woodland community as a predominant visual and environmental component of the community.
- Create visual and physical connections between the natural open space and the public open space, infrastructure and residential elements of the community.
- Screen the community from County Line Road and adjacent residential tracts utilizing trees that provide fall foliage integrated with shrubs and plants along the street edge.
- Use traditional tree plantings compatible with Early California Ranch architectural style to shade streets, identify special areas (such as common open space) and to create a strong community identity.
- Provide Fuel Modification Zones the meet or exceed fire department requirements and provide a smooth visual transition between homes and adjacent open space.
- Use water conserving/drought-tolerant plants as a primary component of the community planting palette.
- Use appropriate shrubs and ground covers to provide landscape color, texture and accents.
- Use hardscape materials, such as fencing, barriers, street crossings, which are appropriate to the community and support the Early California Ranch theme.

6.4.2 Community Entry Treatment

A Community Entry Treatment will be used at the intersection of County Line Road and "F" Street entering the project. The community entry location is depicted on *Exhibit 4-5, Conceptual Landscape Plan* and *Exhibit 4-6 Community Entry Treatment*. The Community Entry Treatment will reinforce the community's "Early California Ranch" architectural style and boundaries, while defining the major gateway into the project.

The Community Entry Treatment will feature the following characteristics:

- The entry shall reflect the architectural style of the Heritage Oaks Equestrian Community.
- Entry monuments shall be constructed of stone, river rock or brick, with wood accent as appropriate.
- The entry shall include designated landscape space beyond the street right of way of adequate size for the entry monuments and thematic landscaping.
- The entry landscape shall incorporate fall foliage and other accent trees, shrubs, and groundcover with the minimum use of turf.

6.4.3 Streets and Parkways

The primary streets within Heritage Oaks Equestrian Community are "F" Street (major entry from County Line Road), "G" Street (western entry road from County Line Road), and "A" thru "C" Streets (community loop roads). The community streets will not only accommodate vehicular, pedestrian and riding circulation, but will emphasis the equestrian design and lifestyle character of the community.

Streets "A" thru "C" shall be improved with an enhanced landscape parkway which will contain a multi-use trail, thereby providing access for riding opportunities from equestrian lots to the city and regional equestrian trail system. See *Exhibit 6-3a, Community Trails*. The multi-use trail within the street right-of-way will link with the multi-use trail as it crosses between major oak tree stands through the major natural open space area in the center of the community. Where "A" Street connects with "G" Street the multi-use trail will connect to the proposed equestrian staging and parking area, and continue both north and south along "G" Street, allowing riders, walkers and/or joggers to connect to the various existing or proposed trails in the City of Calimesa. The staging area will be screened from the adjacent residential lots.

All streets will have street trees a minimum size of twenty-four (24") inch box and selected from *Table 6-1, Recommended Plant Palette*. Street trees on the residential streets shall be planted two (2) trees per lot, within the landscape parkway provided on residential streets and a minimum of ten (10) feet from all driveways. Corner lots and lots having additional frontage facing a public right of way shall have street trees on both frontages. A minimum seven (7) foot wide landscape parkway will be provided on all community streets. Street trees provided to residential lots by the builder shall be maintained by the applicable homeowner. A street tree may not be removed unless it has been destroyed or is dead, and the homeowner

has prior written approval of the Landscape and Lighting Maintenance District (LLMD). The homeowner is responsible for the cost of replacement and the street tree shall be the same species, a minimum size of a twenty-four inch (24 ") box and planted in the same location as the removed tree.

6.4.4 Community Trails

The Heritage Oaks Equestrian Community will include a system of equestrian staging area and multi-use riding/walking trails. These multi-purpose trails will be separate from the street right of way circulation system, located on one side of public streets "A" thru "C" and located within the natural open space area in the center of the community. These trails will egress the community at various points along the eastern, southern and northern property boundaries. A public equestrian staging and parking area will be provided in the southwestern corner of the community at the intersection of "G" Street and "A" Street. From this point, riders and walkers may connect in various directions to the existing trails and access roads and future trails in the City of Calimesa. *Exhibit 6-3a, Community Trails* indicates the proposed locations of the trails within the community, the staging area and the potential egress points. The intent of the multi-use trails is to provide community residents maximum opportunities for access from residential lots and opportunities to connect to surrounding City and regional trails.

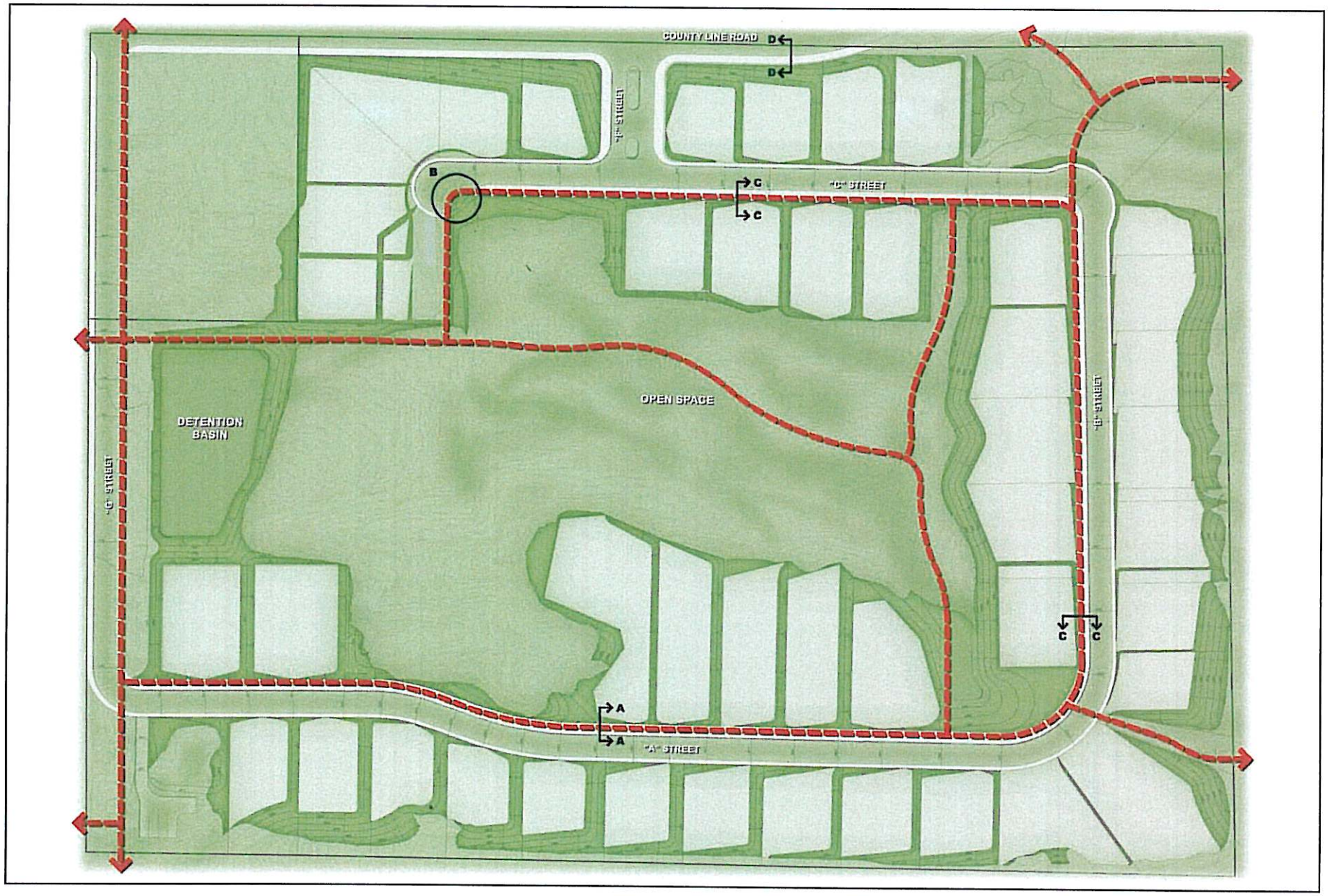
The multi-use trails will be well-designated by a horizontal wood-style fence, pilasters, flowering vines and signage. Native soils will be utilized for the trail except where it crosses driveways and streets. See *Exhibit 6-3b, Community Trails Sections* for details of the proposed trail and fencing under various conditions and locations.

6.4.5 Community Walls and Fences

The community wall along County Line Road shall provide an opportunity for creating community character and identity, and providing for privacy and noise control for lots adjacent to County Line Road. Additionally, this community wall will provide an interface between Heritage Oaks Equestrian Community and the existing residential tracts along the north side of County Line Road. The County Line Road community wall shall be constructed of stone, river rock, brick or block with wood used as an accent when appropriate. This wall will reinforce the community's "Early California Ranch" architectural style. Adjacent to the wall will be a minimum of six (6) feet of landscaping, which will provide a visual softening of the solid wall by selection of trees, shrubs and groundcover that offers a variety in color and plant material. See *Exhibit 6-4a, Community Walls and Fences and Exhibit 6-4b, Community Walls and Fences Details.*

The community walls and/or fences along the west, south and east boundaries of Heritage Oaks will be designed to provide security and privacy, while allowing for nearby or territorial views of surrounding hills and mountains. These community walls/fences shall be constructed of stone, brick, stone or wood, as appropriate. Any wall adjacent to a public right of way will be landscaped with a selection of trees, shrubs and groundcover.

A horizontal rail wood-style fence shall be constructed along one-side of "A", "B" and "C" Streets. This rail fence is intended to define the multi-use trail looping through the Heritage



NORTH

227 113.5 0 227

SCALE IN FEET

MULTI-PURPOSE TRAIL

Michael Brandman Associates

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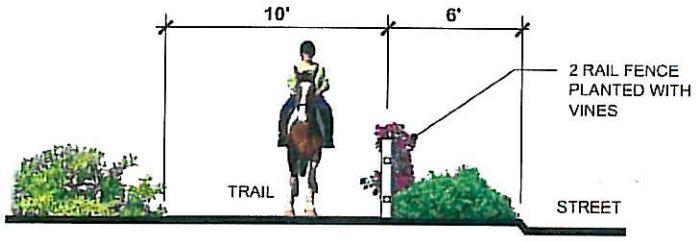
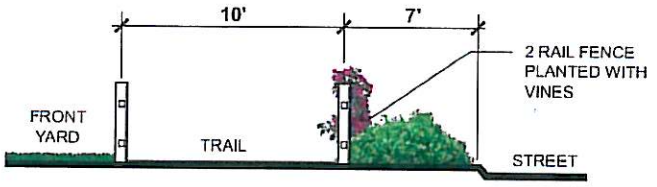
Exhibit 6-3a
Community Trails

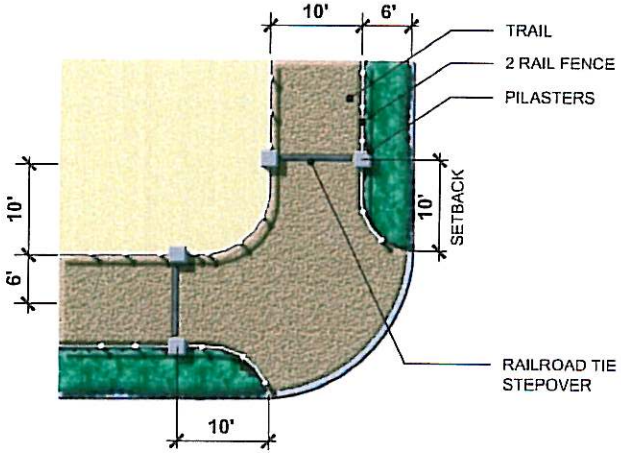
HERITAGE OAKS EQUESTRIAN COMMUNITY SPECIFIC PLAN



A-A OPEN SPACE TRAIL SECTION



C-C HOME FRONTAGE TRAIL PLAN



B-B TRAIL CORNER PLAN

D-D COUNTY LINE ROAD

NORTH

Michael Brandman Associates

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Exhibit 6-3b
Community Trails Sections

Oaks community, to provide safety for trail users, and to reinforce the "Early California Ranch" style of the community. See *Exhibit 6-4b, Community Walls and Fences Details*. The fence will have stone pilasters at accent locations and will be landscaped with flowering vines. When intersecting with a driveway or street, the fence will end an adequate distance from the driveway so as not interfere with visual clearance.

The proposed detention basin is not intended to be fenced since its depth will be less than four (4) feet and its side walls generally will be 3:1 or less. Where appropriate for safety and security, common open space, drainage easements, and the proposed debris basin may be fenced and landscaped.

6.4.6 Community and Private Slopes

Due to the rolling terrain of the Heritage Oaks project property, manufactured slopes of varying heights and gradients will be created. Some of these slopes will be within community open space lots, while other slopes will be within private residential lots.

All manufactured community slopes over three (3) feet in height shall be permanently landscaped, irrigated and maintained by the Landscape and Lighting Maintenance District. Landscape planting materials shall be as appropriate to the surrounding uses and existing landscape, and shall be selected from *Table 6-1, Recommended Plant Palette*. Landscape design shall incorporate a transition zone surrounding any live oak trees and community woodland and the introduced landscape materials.

All manufactured private slopes will be landscaped with drought tolerant plant materials and be maintained by the private lot owner. All plant materials will be selected from *Table 6-1, Recommended Plan Palette*.

6.4.7 Recommended Plant Materials

A predominance of the following plants, per *Table 6-1, Recommended Plant Palette*, shall be used to provide the intended landscape character for Heritage Oaks. These plants are consistent with the water conserving/ drought tolerant objectives of the City of Calimesa. The number and size of the plant materials will be consistent with Ordinance No. 94-4 of the City of Calimesa.

BLOCK WALL
WOOD FENCE
ENHANCED MULTI-PURPOSE FENCE
MULTI-PURPOSE FENCE
VIEW FENCE

NORTH

Michael Brandman Associates

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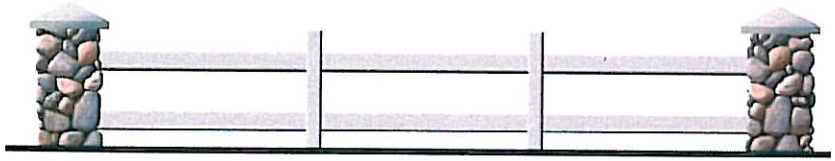
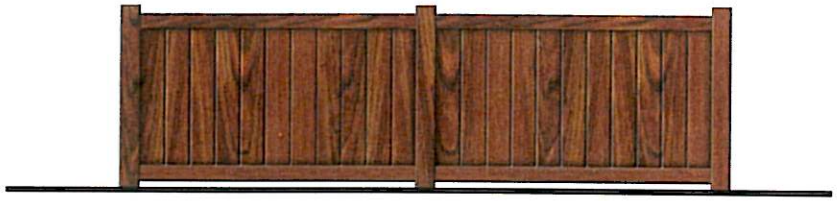
Exhibit 6-4a
Community Walls and Fences

HERITAGE OAKS EQUESTRIAN COMMUNITY SPECIFIC PLAN

DECORATIVE BLOCK WALL and PILASTERS

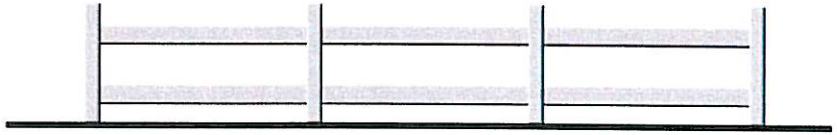


ENHANCED MULTI-PURPOSE FENCE



WOOD FENCE

VIEW FENCE



MULTI-PURPOSE FENCE

NORTH

Michael Brandman Associates

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Exhibit 6-4b
Community Walls and Fences Sections

Table 6-1
Recommended Plant Palette

Street Parkway and Community Entry Planting Palette

Trees – Deciduous		Shrubs	
Botanical Name	*Common Name*	*Botanical Name*	*Common Name*
Albizia julibrissin	Silk Mimosa	Abelia Edward Goucher	Edward Goucher Abelia
Alnus cordata	Italian Alder	Acacia longifolius	Barberry
Alnus rhombifolia	White Alder	Acacia redolens	Sidney Golden Wattle
Bauhinia Agave sp.	Purple Orchid Tree	Agave sp..	Agave
Fraxinus velutina "Modesto"	Modesto Ash	Aloe spp.	Aloe
Fraxinus uhdei 'Tomlinson'	Tomlinson Ash	Berberis sp.	N.C.N.
Jacaranda acutifolia	Jacaranda	Bougainvillea 'La Jolla'	Bougainvillea
Koelreuteria bipinnata	Chinese Flame Tree	Camellia species	Camellia
Koelreuteria panniculata	Golden Rain Tree	Cistus spp.	Rock Rose
Liquidambar styaciflua	American Sweet Gum	Cotoneaster species	Cotoneaster
Malus floribunda	Japanese Crabapple	Elaeagnus pungens	Silver Berry
Populus fremontii	Freemont Cottonwood	Euonymus Japonica	Evergreen Euonymus
Pyrus callerana	European Pear	Feijoa sellowiana	Pineapple Guava
Pyrus kawakamii	Ornamental Pear	Hetermeles arbutifolia	Toyon
Pistacia chinensis	Chinese Pistache	Lavendula spp.	Lavender
Platanus acerifolia	London Plane Tree	Leptospermum scoparium	New Zealand Tea Tree
Platanus racemosa	California Sycamore	Ligustrum japonicum	Japanese Privet
Prunus cerasifera	Purple Leaf Plum	Myoporum leaturm	Myoporum
Robinia ambigua "Idahoensis"	Idaho Locust	Nandina domestica	Heavenly Bamboo
Salix babylonica	Weeping Willow	Nerium oleander	Oleander
		Osmanthus fragrans	Sweet Olive
		Phominium tenax	Flax
		Photinia fraseri	Photinia
		Pittosporum tobira sp.	Mock Orange

Palms		Shrubs	
Botanical Name	*Common Name*	*Botanical Name*	*Common Name*
Chamaerops humilis	Mediterranean Fan Palm	Plumbago auriculata	Cape Plumbago
Phoenix canariensis	Canary Island Date Palm	Podocarpus macrophyllus	Yew Pine
Phoenix dactylifera	Date Palm	Prunus caroliniana 'Bright'n'Tight'	Carolina Laurel
Washingtonia robusta	Mexican Fan Palm	Prunus ilicifolia	Cherry Hollyleaf
		Pyracantha sp.	Cherry Firethorn
Sub Shrubs		Raphiolepis indica sp.	Pink Indian Hawthorn
Agapanthus africanus	Lily-of-the-Nile	Salvia greggii	Autumn Sage
Arctostaphylos species	Manzanita	Salvia lucantha	Mexican brush sage
Hemerocallis species	Day Lily	Tecomaria capensis	Cape Honeysuckle
Lonicera japonica	Hall's Honeysuckle	Viburnum tinus Lauretinus	Spring Bouquet
Moraea bicolor	Fortnight Lily	Xylosma congestum	Spring Bouquet
Trachelospermum jasminoides	Star Jasmine	Yucca spp.	Yucca
Vine/Espaliers		**Groundcovers**	
Bougainvillea 'Barbara Karst'	Bougainvillea	Baccharis pilularis Twin Peaks'	Coyote Brush
Calliandra inequilatera	Pink Powder Puff	Festuca ovina 'glauca'	Blue Fescue
Doxantha unguis-cati	Cat's Claw Vine	Fragaria chiloensis	Wild Strawberry
Ficus pumila	Creeping Fig	Gazania sp.	Gazania
Grewia caffra	Star Vine	Hedera helix	English Ivy
Gelsemium sempervirens	Carolina Jasmine	Limonium perezii	Statice
Jasminum polyanthum	N.C.N.	Lonicera japonica	Honeysuckle
Parthmociscus tricuspidada	Boston ivy	Mulenbergia rigens	Deer Grass
Wisteria floribunda	Wisteria	Myoporum parvifolium	Myoporum
		Optunia robusta	Optunia
		Potentilla verna	Spring Cinquefoil
		Rosemarinus officinalis	Rosemary
		Senicio mandraliscae	Senecio
		Verbina spp.	Verbina

Notes:
Some of the plants will freeze in unprotected exposure area, but will generally rejuvenate from undamaged parts. Use with caution.

Open Space Corridor Planting Palette

Botanical Name	*Common Name*
Acer Macrophyllum	Big Leaf Maple
Acer Macrophyllum	Big Leaf Maple
Arbutus Menziesii	Madrone
Cercis Occidentalis	Western Redbud
Juglans Californica	California Walnut
Platanus Racemosa	California Sycamore
Prunus Ilicifolia	Hollyleaf Cherry
Quercus Agrifolia	Coast Live Oak
Quercus Berberidifolia	Scrub Oak
Archostaphylos "Emerald Carpet"	Manzanita
Atriplex Lentiformis	Salt Bush
Baccharis Pilularis "Twin Peaks"	Dwarf Coyote Bush
Ceanothus Griseus Horizontalis	Carmel Mountain Lilac
Heteromeles Arbutifolia	Toyon
Keckiella Cordifolia	Heart Leaved Penstemon
Malacothamnus Fasciculatus	Chaparral Mallow
Mahonia Nevinii	Nevins Barberry
Ribes Aureum	Golden Current
Hrhamnus Crocea	Red Berry
Yucca Whipplei	Our Lords Candle
Yucca Schidegera	Mojave Yucca
Rosa Californica	California Wild Rose

Planting Seed mix for Open Space Corridors

Botanical Name	*Botanical Name*
Amsinckia Intermedia	Nassella Pulchra*(deawned)
Artemisia Californica	Salvia Apiana
Brickellia Californica	Salvia Mellifera
Delphinium Parryi	Species Legume
Encelia Farinose	Lotus Scoparius
Eriodictyon Trichocalyx	Lupinus Bicolor
Erigonum Fasciculatum Var.Polifolium	
Eucrypta Chrysanthemifolia	
Gnaphalium Caifornicum	
Lessingia Filaginifolia Filaginifolia	
Mimulus Aurantiacus	
Nassella Lepida (deawned)	

Open Space Corridor Chamise Chaparral Seed Mix

Botanical Name	*Botanical Name*
Acnatherum Coronatum	Eucrypta Chrysanthemifolia
Adenostoma Fasciculatum	Galium Angustifolium
Artemisia Californica	Mimulus Aurantiacus
Brickellia Californica	Salvia Apiana
Bromus Carinatus "Cucamonga"	Salvia Mellifera
Encelia Farinosa	Species Legume
Eriogonum Fasciculatum Var.Polifoium	Lotus Scoparius

Detension Basin Seed Mix

Botanical Name	*Botanical Name*
Achillea Millefolium	Koeleria Macrantha
Agrostis Pallens	Lotus Hamatus
Collinsia Heterophylla	Mimulus Guttatus
Deschampsia Cespitosa	Trifolium Obtusiflorum
Hordeum Intercedens	Vulpia Microstachys

Seeding for Fuel Modification Zones

Botanical Name	*Botanical Name*
Achillea Millefolium	Lotus Scoparius
Clarkia Purpurea	Lupinus Bicolor
Eriophyllum Confertiflorum	Mimulus Aurantiacus
Gnaphalium Californicum	Nassella Lepida
Gutierrezia Californica	Phacelia Distans
Layia Glandulosa	Plantago Ovata
Lessingia Filaginifolia Filaginifolia	Vulpia Microstachys

6.4.8 Fuel Modification Zones

Fuel Modification shall be required where residential lots abut natural open space. A Fuel Modification Zone is a strip of land in which highly flammable plant materials are removed and replaced by more fire resistant materials, or remaining vegetation is thinned to reduce fuel loads. Refer to *Exhibit 6-5, Fuel Modification Section* for typical relations of the Fuel Modification Zones to the residence and to one another. Plant materials required for the alternative zones shall be selected from *Table 6-1, Recommended Plant Palette.*

The following Fuel Modification Zones shall be implementation in the Heritage Oaks Equestrian Community:

- ***Zone A (Closest to Residence)*** – Consists of a minimum setback of twenty (20) foot between the home and the natural open space. Landscape shall be irrigated and maintained free of deadwood and combustible debris. No combustible structures may be built within this zone.

- ***Zone B (Wet Zone)*** – Adjacent to Zone A. In Zone B all highly flammable plant materials shall be removed and replaced with more fire resistant vegetation. All plant materials within Zone B shall be irrigated.

- ***Zone C (Thinning Transition Zone)*** – Adjacent to Zone B. All dead/dying plant materials shall be removed. Remaining natural vegetation shall be thinned to remove fifty (50) percent (coast live oaks are exempt from thinning). No irrigation is required in Zone C, except where a manufactured slope is also located, which shall be irrigated.

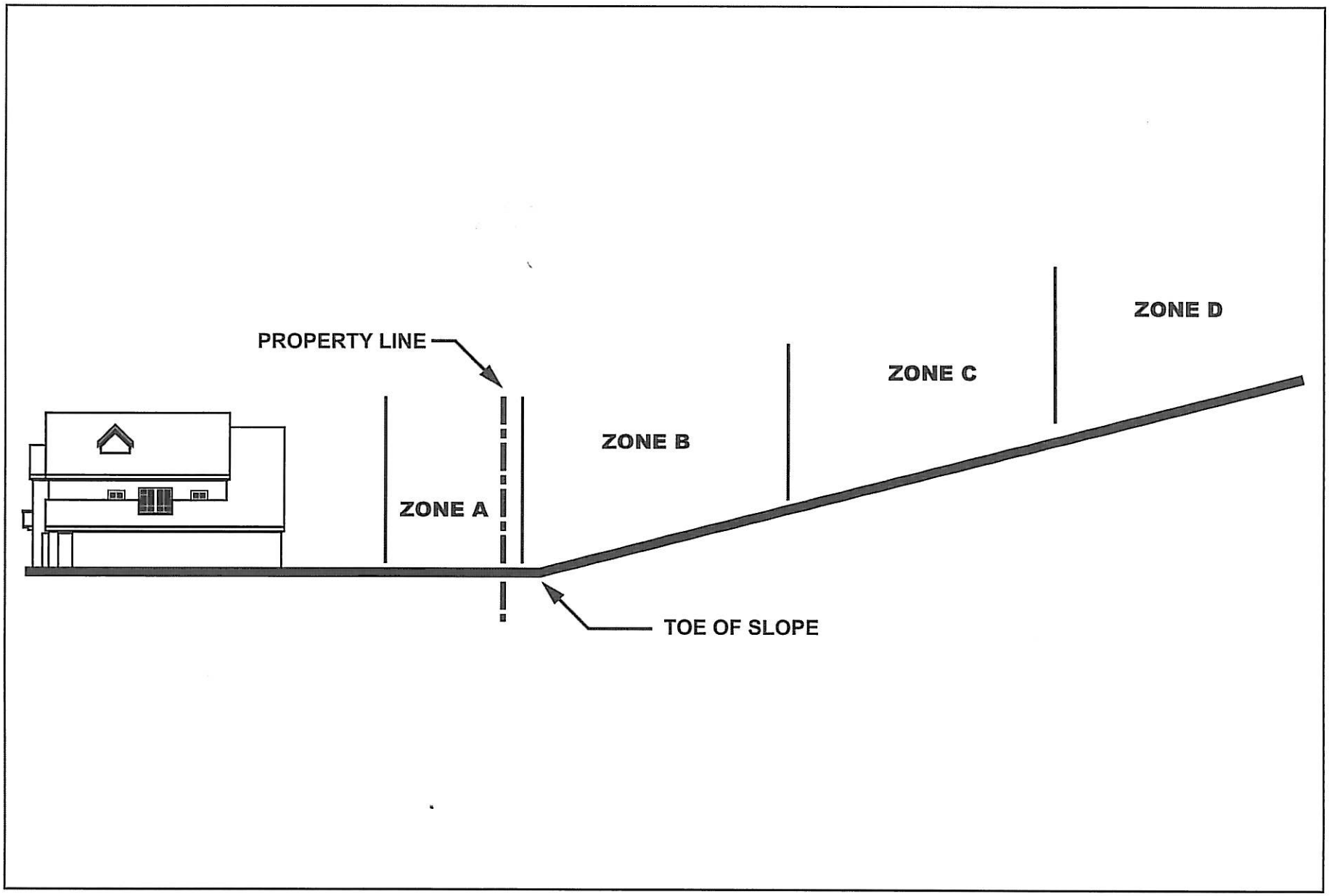
- ***Zone D (Thinning Transition Zone)*** – Adjacent to Zone C. All dead/dying plant materials shall be removed. Remaining natural vegetation shall be thinned to remove thirty (30) percent (coast live oaks are exempt from thinning). No irrigation is required in Zone C, except where a manufactured slope is also located, which shall be irrigated.

6.4.9 General

Modifications to specific requirements in these Landscape Design Guidelines may be applied for in writing and approved by the Community Development Department.

6.5 Oak Preservation and Treatment Guidelines

The Heritage Oaks Equestrian Community property includes a significant coast live oak tree woodland community. A major objective of this Specific Plan is the preservation of these coast live oak trees and the habitat that they represent. Therefore, the Oak Preservation and Treatment Guidelines will play a significant role in the development of the Heritage Oaks Equestrian Community. Adherence to these guidelines will promote a distinct visual image for Heritage Oaks, integrating the community with the existing



NORTH

Michael Brandman Associates

26040001 • 07/2005 | 6-5_fuel_mod.cdr

Exhibit 6-5
Fuel Modification

natural resources of the site and establishing compatibility with the surrounding natural environment.

6.5.1 Oak Tree Preservation

The Heritage Oaks Equestrian Community Specific Plan hereby incorporates by reference the City of Calimesa Oak Tree Ordinance (Ordinance No. 200), except where specifically superseded in this Specific Plan. Any coast live oak trees indicated to be removed by this Specific Plan are exempt from further permitting upon adoption of this Specific Plan.

6.5.2 Oak Tree/Development Interface

Generally coast live oak trees will be contained within areas designated as Open Space (OS), and thereby protected from further development activity, except as may be necessary to preserve the public welfare and safety. Individual coast live oak trees may be located on two-three residential lots. Removal or trimming of coast live oak trees by individual residents or by the Landscape and Lighting Maintenance District (LLMD) is not permitted except where a tree permit it first processed through the LLMD and then the Calimesa Community Development Department.

6.5.3 Oak Tree Setbacks

No "Encroachment", as defined in Ordinance No, 200, including, but not limited to, grading, excavation and construction, will take place within an area a minimum of five (5) feet outside the surveyed drip-line of a live oak tree, or a minimum of fifteen (15) feet from the trunk, whichever is greater.

6.5.4 Oak Tree Maintenance

"Routine maintenance," as defined in Ordinance No. 200, will be permitted pursuant to process provided for in Ordinance No. 200. Maintenance of coast live oak trees within areas designated as Open Space (OS) will be the responsibility of the Landscape and Lighting Maintenance District. Maintenance of coast live oak trees within lots designated as Heritage Residential (HR) will be the responsibility of the individual homeowner.

SECTION 7.0

LAND USE AND DEVELOPMENT REGULATIONS

7.1 Purpose and Intent

The purpose of the Land Use and Development Regulations section is to provide the specific development standards for the Heritage Oaks Equestrian Community Specific Plan. These land use and development standards will be applied to the land uses designated on *Exhibit7-1, Land Use Districts*, contained in this section.

Upon adoption of the Heritage Oaks Equestrian Community Equestrian Community Specific Plan by the City of Calimesa, this Specific Plan shall be the zoning document for the subject property, superseding all other zoning designations and development standards. If not specifically addressed in this Specific Plan, the applicable provisions of the City of Calimesa Development Code and Municipal Code shall apply.

7.2 Land Use Designations

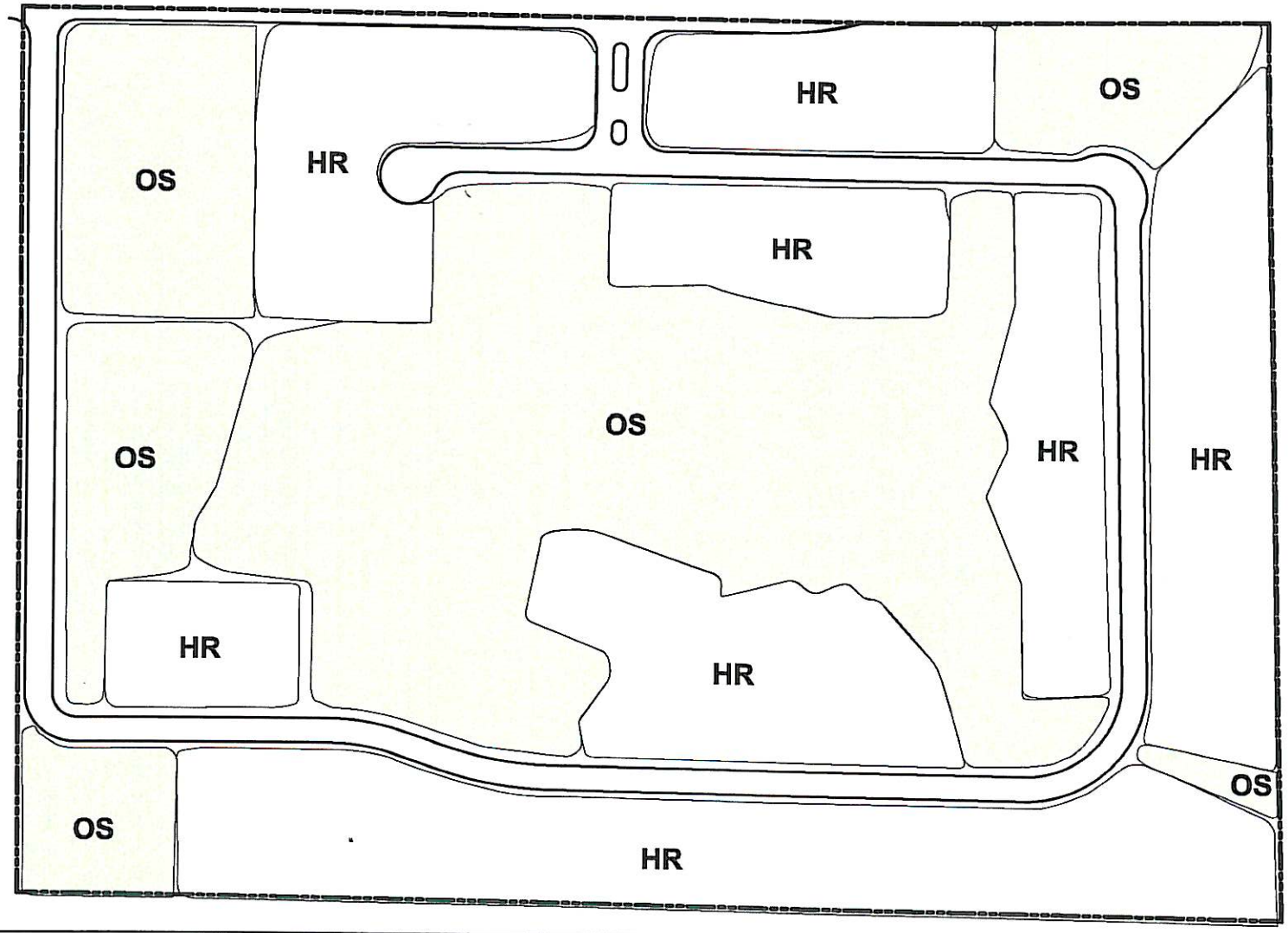
The following Land Use Districts, refer to *Exhibit 7-1, Land Use Districts*, are herein by established for and within the Heritage Oaks Equestrian Community Specific Plan:

7.2.1 Heritage Residential (HR)

The Heritage Residential neighborhood is intended for the development of single-family detached homes, while preserving and creating a rural atmosphere within the community. Residential development with a minimum 19,500 square-foot lot (and averaging 23,000 square feet) is permitted with the intention of creating large lots near the existing coast live oak tree at a density range of 0-2.0 dwelling units per acres, and as a buffer to surrounding residential uses outside of the community. The keeping of horses and related uses, such as barns, stables, etc., are allowed within the Heritage Residential district.

7.2.2 Open Space (OS)

The Open Space district designation is intended for the preservation of the existing Live Oak Woodland Community, arroyos and drainage courses, and for the development of flood control improvements (such as debris basins and detention basins) and water quality treatment programs (such as water spreading grounds) as appropriate to protect and serve the proposed Heritage Oaks residents, community and existing down-stream properties.



NORTH

250 125 0 250

SCALE IN FEET

Heritage Residential (HR)

Open Space (OS)

Michael Brandman Associates

26040001 • 05/2007 | 7-1_land_use_districts.cdr

Exhibit 7-1
Land Use Districts

7.3 General Provisions

The provisions of the Land Use and Development Regulations are intended to provide and create compatibility between land uses, to protect the health, safety and welfare to the community, and to perverse and maintain the natural resources and visual quality of the project property. The *Site Development Standards Summary* (Table 7-1) sets forth the standards for development of all uses within the Heritage Oaks Equestrian Community.

7.3.1 Definitions

For the purpose of the Heritage Oaks Equestrian Community Specific Plan, words, phases and terms shall have the meanings ascribed in the City of Calimesa Development Code in effect at the time of the adoption of this Specific Plan, except as may be specifically defined within this Specific Plan.

7.4 Land Use Development Standards

7.4.1 Heritage Residential (HR) District Regulations

The Heritage Residential land use designation is intended for the development of single-family detached homes on large lots, while preserving and creating a rural atmosphere within the community.

1. Permitted Uses
   a. Single-Family Detached dwellings, one (1) per lot.
   b. Garage sales in accordance with City Development Code.
   c. Recreational vehicle parking in accordance with City's Off-Street Parking Standards.
   d. Home Occupations, subject to provisions of Section 12-1009 of Calimesa Development Code and issuance of Home Occupation Permit.
   e. Keeping of domestic pets in accordance with City Development Code.
   f. Keeping of a maximum of two (2) animal units, as defined by the City of Calimesa, in accordance with the following criteria:
      - Lots to have a minimum area of 19,500 square feet and a minimum lot width of 100 feet. For non-rectangular lots, the width may be measured at the mid-point of the lot.
      - Animals shall be kept, fed and maintained not less than forty (40) feet from the primary residence on the same lot, and not less than fifty (50) feet from any primary residence on an adjacent lot.
      - A minimum of ten (10) feet shall be maintained the animal shelter and any property line. No animal keeping shall be allowed in the front yard setback.
   g. Accessory uses, including, but not limited to,
      - Equestrian Stables, Barns and Riding Rings,
      - Garages
      - Swimming pools and spas
      - Greenhouses (non-commercial), garden sheds, gazebos or similar structures.

- Guest Units or Senior Secondary Unit (Granny Flat) in accordance with City Development Code.
- Tennis courts
- Other accessory uses which are clearly incidental to the primary use of the property and for the exclusive use of the residents of the property.

h. Trailer to be used as a construction project office during the time of construction when a valid building permit is in-force.

i. Flood control improvements and debris basins appropriate to the development of the community.

j. Open space areas appropriate to preservation of significant Oak Woodland habitats, drainage courses and significant individual Coast Live Oak trees.

k. Other similar and appropriate uses, as approved by the Calimesa Community Development Department.

2. Development Standards

a.	Minimum Lot Size/Area:	19,500 square feet
b.	Minimum Lot Width:	100 feet measured at front setback
c.	Minimum Lot Depth:	120 feet
d.	Lot Coverage:	Not Applicable
e.	Front Yard Setbacks (minimum)	
	o Main Residence	30 feet (1 story); 35 feet (2 story)
	o Open Porch (if provided)	20 feet
	o Garage (front access)	20 feet
	o Garage (side-in access)	15 feet
f.	Rear Yard Setback (minimum)	30 feet
g.	Side Yard Setback (minimum)	
	o Interior	12 feet for side closest to driveway; 5 feet for other side yard
	o Corner/Street	15 feet adjacent to street 5 feet for other side yard
	o Garage	15 feet adjacent to street
h.	Building Height	
	o Main Residence	32 feet (2 stories)
	o Accessory Structure	25 feet

(See also Table 7-1, Site Development Standards Summary)

3. Parking

a. Parking shall be provided in accordance with Chapter 8 (Off-Street Parking Standards) of the City Development Code, expect as specifically provided in this Specific Plan.

b. Recreational vehicle (RV) parking may be provided either behind main residence or garage, screened by appropriate fencing. Long-term RV parking in front of main residence or garage is not permitted.

7.4.2 Open Space (OS) District Regulations

The Open Space district is intended for the preservation of the existing Live Oak Woodland Community, arroyos and drainage courses, and for the development of flood control improvements (such as debris basins and detention basins) and water quality treatment programs (such as water spreading grounds) as appropriate to protect and serve the residents of the Heritage Oaks Equestrian Community and existing down-stream properties.

1. Permitted Uses
   a. Conservation area (wildlife/natural habitats, habitat enhancement area)
   b. Trails, staging areas, interpretive areas and associated facilities, as appropriate.
   c. Flood control facilities and/or easements, including, but not limited to, debris basins, natural and man-made drainage channels, water retention basins.
   d. Equestrian facilities, including stables and riding rings, as appropriate, and as reviewed by City of Calimesa Community Development Department.
   e. Trailer to be used as a construction project office during the time of construction when a valid building permit is in-force.
   f. Other similar and appropriate uses, as approved by the Calimesa Community Development Department.
   g. Water quality treatment facilities and water spreading basins may be permitted on some portion of the Open Space district if the need for such uses is demonstrated to the City's satisfaction and no significant environmental impacts are created. No such use may occur adjacent to any existing coast live oak woodland and must have direct access from either County Line Road or "B" Street. Any such proposed use shall be subject to a Conditional Use Permit to be reviewed and approved by the City of Calimesa at a later date.

2. Development Standards

   Per approved Heritage Oaks Equestrian Community Specific Plan and Design Guidelines.

Table 7-1
Site Development Standards Summary

Description	Heritage Residential (HR)	Open Space (OS)
Permitted Uses	• Single-family, detached • Riding/pedestrian trails • Oak Habitat Preservation	• Oak Habitat Preservation • Flood control facilities • Riding/pedestrian trails
Conditional Uses	Not Allowed	Water Treatment & Spreading
Accessory Uses	• Home occupation • Keeping of domestic pets incidental to principal residential use • Non-commercial keeping of 2 animal units • Recreational vehicle storage • Incidental to permitted use	Not Applicable
Lot Size	19,500 s.f. minimum	Not Applicable
Street Frontage	110 ft. (interior lots) 120 ft. (corner lots)	Not Applicable
Lot Width	100 ft. measured at front setback line, or at lot mid-point for non-rectangular lots	Not Applicable
Lot Depth	120 ft.	Not Applicable
Front Setback	30 ft. (1 story) 35 ft. (2 story)	Not Applicable
Side Setback	12 ft. for side closest to driveway 5 ft. for other side	Not Applicable
Street Side Setback	15 ft. adjacent to street 5 ft. for other side	Not Applicable
Rear Setback	30 ft.	Not Applicable
Separation to Accessory Structure	6 ft.	Not Applicable
Maximum Building Height	Principal Use - 32 ft. (2 stories) Accessory Use – 25 ft.	Not Applicable
Maximum Projections into Setback	Chimney – 30 inches Stairs – 36 inches Eaves – 30 inches	Not Applicable
Off-Street Parking	3 spaces (enclosed) 2 visitor spaces (in driveway)	Not Applicable
Maximum Lot Coverage	Not Applicable	Not Applicable

SECTION 8.0

COMMUNITY PHASING

Approval of a subdivision tract map will occur concurrently with, or subsequent to, the adoption of the Heritage Oaks Equestrian Community Specific Plan by the City of Calimesa, thereby creating developable lots. Any and all future maps for development will be reviewed and approved pursuant to applicable provisions of the City of Calimesa Subdivision Ordinance, applicable provisions contained in this Specific Plan, and any applicable conditions of approval.

The phasing program for Heritage Oaks is based on the following objectives:

- Provide for the coherent, orderly build-out of the community within the context of market conditions.
- Ensure adequate public facilities and services concurrent with private development.
- Provide for on-site and off-site improvements which will protect the public health, safety and general welfare of current and future residents of the City of Calimesa.
- Ensure the completion of development activities which preserve and enhance natural open space areas within and adjacent to the community.

8.1 Development Phasing

The Heritage Oaks Equestrian Community is anticipated to be developed in several phases. The first phase will include the completion of major grading activities necessary for development of all streets, residential lot pads, and drainage and debris improvements. Construction of the 45 residential dwellings will occur over several phases, in response to current and future market conditions, and as the appropriate infrastructure and public facilities are made available.

Development Phasing will be implemented through the approval of tentative tract maps and development permits by the City of Calimesa.

8.2 Infrastructure Phasing

Public facilities and services will be provided appropriately in response to the community's development, and as required by the approved tentative tract map and applicable conditions of approval. It is anticipated that the major drainage, debris and detention facilities will be constructed concurrent with the initial grading activities due to the integrated design of the circulation, residential, open space and drainage improvements.

Infrastructure Phasing will be implemented through the approval of tentative tract maps and development permits by the City of Calimesa.

8.3 Phasing Adjustments

The sequence and exact timing of all Phasing are subject to change over time in response to various community, environmental and market factors. Individual Phases may overlap and develop concurrently with one another.

SECTION 9.0

IMPLEMENTATION AND ADMINISTRATION

9.1 Administration

Development of the Heritage Oaks Equestrian Community will be implemented in accordance with the regulations and provisions of this Specific Plan. This section contains the procedures for administration of these provisions and regulations.

9.1.1 Specific Plan Implementation

The Heritage Oaks Equestrian Community Specific Plan shall be implemented through the processing of tentative tract maps, site plans, grading permits, building permits, oak tree permits and other permits, as appropriate and as required by the Calimesa Development Code and this Specific Plan.

The City's Director of Community Development will be responsible for administering the provisions of the Heritage Oaks Equestrian Community Specific Plan in accordance with the provisions this Specific Plan, the State of California Government Code, the Subdivision Map Act, and the City of Calimesa General Plan, Development Code and Municipal Code.

9.1.2 Specific Plan Amendments

During the course of development and construction of the project, amendments to the Heritage Oaks Equestrian Community Specific Plan may be necessary. While this Specific Plan attempts to be comprehensive, not all events or issues may be envisioned during its initial preparation and adoption. Therefore, Specific Plan Amendments may be needed to keep the Specific Plan current with jurisdictional, environmental and market conditions.

The Heritage Oaks Equestrian Community Specific Plan may be amended in accordance with the provisions of the City of Calimesa Development Code.

a. Minor Amendments

Minor amendments include simple changes to Specific Plan text or graphics which are neither contrary to, not alter the meaning or intent of any provision of the Specific Plan. Minor Amendments may include, but are not limited to, the following:

- Minor changes in street alignment.
- Changes in precise location or acreage of infrastructure and public facilities.

- Minor changes in trail alignments, design or construction materials.

- Adjustment to Land Use boundaries provided the total acreage of any affected use does not increase or decrease by more than ten (10) percent of the total stated in the adopted Specific Plan, and the total number of residential dwellings does not exceed forty-five (45).

- Changes in landscaping materials and/or locations, wall materials, wall alignment, entry design and streetscape design which are consistent with the conceptual landscape design set forth in the Community Design Guidelines of this Specific Plan.

- Changes to any design element of this Specific Plan that improves circulation, infrastructure, drainage or natural open space.

- Other minor changes similar to those listed above and determined to be minor in scope by the Director of Community Development.

Minor amendments may be processed and implemented administratively by the Director of Community Development, and may be appealed to the Planning Commission and City Council. Plans and permits which reflect minor amendments will be found to be in substantial conformance with the adopted Specific Plan, subject to review and approval by the Director of Community Development.

b. Major Amendments

Major amendments are such changes to Specific Plan graphics or text which would changes development standards or other fundamental provisions of the Specific Plan. Major amendments require a Specific Plan Amendment which is reviewed and approved by the Planning Commission and City Council in accordance with the same process by which the Heritage Oaks Equestrian Community Specific Plan was adopted.

9.2 Applicability

The Heritage Oaks Equestrian Community Specific Plan is a regulatory plan, which upon adoption by ordinance will constitute the zoning for the project property. Development plans/agreements, tract or parcel maps, or any other action requiring ministerial or discretionary approval on the project property must be consistent with the Specific Plan. Actions determined to be consistent with the Heritage Oaks Equestrian Community Specific Plan shall be judged to be consistent with the City of Calimesa General Plan, pursuant to California Government Code, Section 65454.

All development and construction activity within the Heritage Oaks Equestrian Community area shall comply with applicable provisions of the Heritage Oaks Equestrian Community

Specific Plan, the City of Calimesa Municipal Code, the Calimesa Development Code, the Uniform Building Code, and the related mechanical, electrical, plumbing, grading and subdivision codes as adopted by the City of Calimesa. In case of a regulation difference between the Specific Plan and an adopted City code, the regulations of the Specific Plan shall take precedence.

9.3 Severability

In the event that any regulation, condition, program, portion or policy of the Heritage Oaks Equestrian Community Specific Plan or the applications thereof to any person or circumstance is held to be invalid or unconstitutional by any court of competent jurisdiction, such portions shall be deemed separate. Distinct and independent provisions and shall not affect the validity of the remaining provisions of this Specific Plan or applications thereof which can be implemented without the invalid regulation or provision.

9.4 Definitions

For the purposed of the Heritage Oaks Equestrian Community Specific Plan, words, phases and terms shall have the meanings ascribed in the City of Calimesa Development Code in effect at the time of the adoption of this Specific Plan, except as may be specifically defined within this Specific Plan.

9.5 Boundaries and Designations

The boundaries of individual land use designations are approximate. Precise boundaries and acreages shall be established in conjunction with the preparation of the subdivision map(s) for the project property. Minor land use boundary variations shall be permitted, subject to review by the Director of Community Development for conformance with the intent of the Heritage Oaks Equestrian Community Specific Plan, without an amendment to this Specific Plan.

9.6 Design Guidelines

Residential and open space development shall be designed and built in substantial conformance with the Architectural, Landscape and Oak Tree guidelines contained in this Specific Plan.

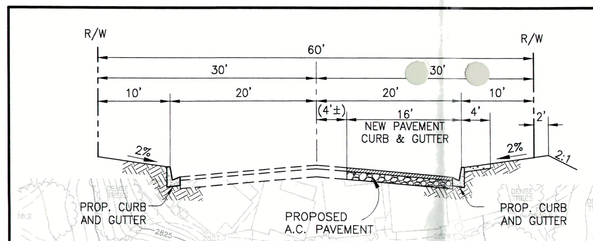
APPENDIX "A"

LEGAL DESCRIPTION

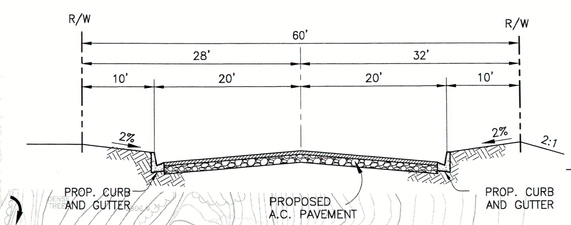
Government Lot 4 and the west 482.00 feet of Government Lot 3 in fractional Section 17, Township 2 South, Range 1 West, San Bernardino Meridian, in the City of Calimesa, County of Riverside, State of California, according to the official plat thereof.

Except one-half of all oil and mineral rights as reserved to Claud E. Halsell and Josephine Halsel in deed recorded March 2, 1945 in Book 668, Page 236, Official Records.

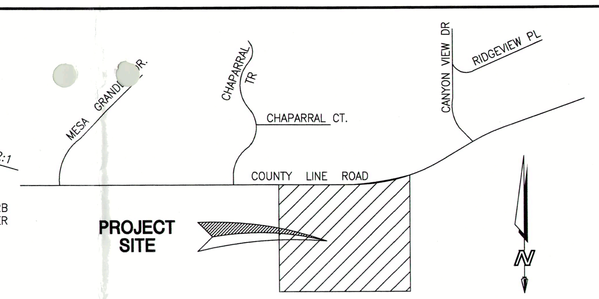
TENTATIVE TRACT MAP NO. 17351
CITY OF CALIMESA



TYPICAL SECTION
COUNTY LINE ROAD
NTS



TYPICAL SECTION
"G" STREET
NTS



VICINITY MAP
NOT TO SCALE

TOPO SURVEYED BY:
LEJA SURVEYING
13642 JIGHLAND OAKS DR.
JUCAIPA, CA. 92399
CONTACT: STEVE LEJA

HERITAGE OAKS EQUESTRIAN COMMUNITY

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1 inch = 60 ft.

LEGAL DESCRIPTION:

GOVERNMENT LOT 4 AND TH WEST 482.00 FEET OF GOVERNMENT LOT 3 IN FRACTIONAL SECTION 17, TOWNSHIP 2 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CALIMESA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPT ONE-HALF OF ALL OIL AND MINERAL RIGHTS AS RESERVED TO CLAUD E. HALSELL AND JOSEPHINE HALSEL IN DEED RECORDED MARCH 2, 1945 IN BOOK 668, PAGE 236, OFFICIAL RECORDS.

ASSESSOR'S PARCEL NO:

407-030-002-B, 003-9

ZONING:

EXISTING ZONING = RESIDENTIAL ESTATE (RE)
PROPOSED ZONING = ESTATE RESIDENTIAL (ER) & COUNTRY RESIDENTIAL (CR)
SOUTH OF SITE IS RE (VACANT)
EAST OF SITE IS RE (VACANT)
WEST OF SITE IS RR (SINGLE FAMILY)
NORTH OF SITE IS CITY OF YUCAIPA (SINGLE FAMILY)

PROJECT AREA:

54.1 GROSS ACRES
37.0 NET ACRES

DENSITY:

1 D.U. / GROSS AC.

NOTES:

WATER:
YUCAIPA VALLEY WATER DISTRICT
12770 SECOND STREET
YUCAIPA, CA. 92399
(909) 797-5117

SEWER:
YUCAIPA VALLEY WATER DISTRICT
12770 SECOND STREET
YUCAIPA, CA. 92399
(909) 797-5117

GAS:
SOUTHERN CALIFORNIA GAS COMPANY
1981 W. LUGONIA AVENUE
REDLANDS, CA. 92373
(909) 793-2686

TELEPHONE:
VERIZON
1500 CRAFTON AVENUE, BLDG. 125
MENTONE, CA. 92359
(909) 794-8227

ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
287 TENNESSEE STREET
REDLANDS, CA. 92373
(909) 793-2061

LOT AREAS:

LOT NO.	AREA (SF)
1	20,001
2	20,002
3	20,318
4	20,160
5	32,410
6	21,840
7	21,840
8	23,660
9	23,660
10	23,660
11	22,199
12	44,595
13	27,619
14	20,000
15	20,000
16	20,000
17	20,000
18	20,000
19	20,935
20	21,450
21	25,521
22	25,373
23	24,093
24	26,100
25	26,100
26	38,220
27	28,611
28	25,551
29	25,940
30	24,735

LOT NO.	AREA (SF)
31	20,000
32	19,500
33	21,053
34	21,158
35	20,842
36	19,795
37	20,725
38	20,075
39	19,865
40	20,205
41	31,378
42	22,143
43	21,862
44	20,628
45	20,001
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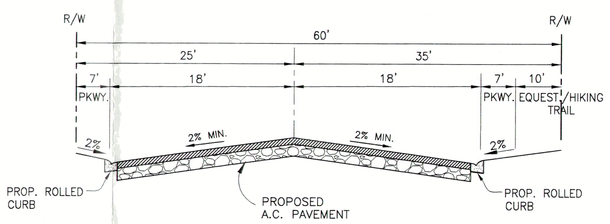
B	7,998
C	36,185
D	14,282
E	55,481
F	676,639
G	114,758
STREETS	324,166



TYPICAL STREET SECTION
NTS

PREPARED FOR:
STORM WESTERN DEVELOPMENT, INC.

STORM WESTERN DEVELOPMENT, INC.
23223 NORMANDIE AVE.
TORRANCE, CA. 90501-5050
CONTACT: KENT PHILLIPS

PREPARED BY:
FUSCOE ENGINEERING
full circle thinking

Job Number: 637.01.01

ATTACHMENT B
HERITAGE OAKS
SHEET 1 OF 2

R:\RANCHO CUCAMONGA\PROJECTS\637\01\ENTITLEMENTS\TENTATIVE MAP\637TTM01.DWG (28-14-07 8:46:36AM) Plotted by: Noel Jobson

FINAL
Heritage Oaks Equestrian Community Specific Plan
Initial Study/Mitigated Negative Declaration

Prepared for:

City of Calimesa
908 Park Avenue
Calimesa, CA 92320

Contact: Gabriel Elliot, City Planner

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Thomas F. Holm, AICP

February 2006

ATTACHMENT C
HERITAGE OAKS

Note regarding Final Heritage Oaks Equestrian Community Initial Study/Mitigated Negative Declaration (MND):

No public comment letters were received on the June 2005 Draft Mitigated Negative Declaration (MND) for the Heritage Oaks Equestrian Community Specific Plan. As a result, this Final MND contains no Responses to Comments section.

The Draft Specific Plan was modified in September 2005 to reflect a reduction in single family residential units from 54 to 49 units. In December, 2005 a Heritage Oaks Equestrian Community Hydrology Study was prepared by Fuscoe Engineering, Inc. The study is incorporated as an Appendix to the Final MND, and is separately reproduced and available at the City of Calimesa.

The Draft MND adequately described the impacts associated with the reduced density project, and no further changes to the Draft MND have been made with this Final MND.

FINAL

Heritage Oaks Equestrian Community Specific Plan
Initial Study/Mitigated Negative Declaration

Prepared for:

City of Calimesa
908 Park Avenue
Calimesa, CA 92320

Contact: Gabriel Elliot, City Planner

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Thomas F. Holm, AICP

February 2006

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INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM

Project Description

1.	**Project title:**	Heritage Oaks Equestrian Community Specific Plan
2.	**Lead agency name and address:**	City of Calimesa 908 Park Avenue Calimesa, CA 92320
3.	**Contact person and phone number:**	Gabriel Elliot, City Planner (909) 795-9801
4.	**Project location:**	Southwest corner of County Line Road, west of Holmes Way in the City of Calimesa, County of Riverside, California
5.	**Project sponsor's name and address:**	Storm Western Development 23223 Normandie Avenue Torrance, CA 90501-5050
6.	**General plan designation:**	Residential Estate
7.	**Zoning:**	1 Dwelling Unit/5 Acres

8. Surrounding Land Uses and Setting

The project site is surrounded by lands that are currently developed with residential land uses and/or are zoned for residential land uses. Specifically, to the north of the project site are the Whispering Ranch Subdivision and Country Condominiums in the City of Yucaipa, which consist of single homes that generally have lot sizes of one-quarter acre or smaller and are zoned as RS-10,000. To the south and east in the City of Calimesa are vacant undeveloped properties that are zoned as Residential Estate (RE) (5 acres per dwelling unit [du]), and to the west are scattered residential homes zoned as Rural Residential (RR) (20,000 square feet per du).

The 54.08-acre project site is characterized by varied topography, including steep slopes, ravines, and a plateau along County Line Road, a seasonal drainage, a dense oak woodland community through the central portion of the project site, and rolling terrain to the south and east.

Description of Project:

The proposed Heritage Oaks Equestrian Community Specific Plan would integrate equestrian and rural residential housing and open space, consistent with the overall objectives of the City of Calimesa General Plan. Specifically, the proposed project includes the development of an equestrian community with 54 single-family residential units at an overall density of 1 unit per gross acre. Home sizes will range from approximately 2,800 to 3,500 square feet with attached 3 or 4 car garages. The proposed development pattern is

intended to provide a buffer and transition between the higher density single-family homes to the north in the City of Yucaipa and the larger rural lots to the south and west in the City of Calimesa. Over 35 percent of the property will be maintained as open space and onsite drainage and water quality treatment, with at least 91 percent of the oak woodland habitat (in terms of aggregate canopy area) preserved. Multi-purpose horse riding and walking trails will be provided within the project site that will provide opportunities to connect the existing City of Calimesa trail system. The land use summary is provided in Table 1 below.

Table 1: Land Use Summary

Land Use	Acres	Percentage	Dwelling Units	Density du[1]/acre
Estate Residential (ER)[2]	27.77	51.30%	44	1.58 du/acre
Country Residential (CR) [2]	3.52	6.50%	10	2.84 du/acre
Open Space (OS)[3]	20.02	37.00%	—	—
Street Right-of-Way County Line Road "B" Street	2.79 - 1.04 -1.75	5.20%	—	—
Total	**54.10**	**100.00%**	**54**	**1.0 du/acre**

[1] du - dwelling unit
[2] Acreage is calculated to the right-of-way lines of the perimeter streets, County Line Road and "B" Street and includes all internal roads.
[3] Open Space acreage excludes internal roads.

As shown in Table 1, the overall density of the project is one dwelling unit per gross acre; in addition, the Estate Residential and Country Residential land uses have an established maximum density which may not be exceeded (1.58 du/acre and 2.84 du/acre respectively).

The areas designated as Open Space will allow for the preservation of the oak woodland communities and for flood control and drainage. Water quality treatment facilities and water spreading basins may be permitted on some portion of the open space lands, if the need for such uses is demonstrated to the City. Pursuant to Open Space District regulations in the Specific Plan, no such use may occur adjacent to any existing coast live oak woodland and any such use must have direct access from either County Line Road or "B" Street. Any such proposed used shall be subject to further City review and a Conditional Use Permit requirement.

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- State Water Resources Board - National Pollutant Discharge Elimination System (NPDES) Permit

- Santa Ana Regional Water Quality Control Board - Section 401 Permit certification of waiver
- U.S. Army Corps of Engineers - Section 404 Permit
- California Department of Fish and Game - Section 1601/1603 Permit
- Yucaipa Valley Water District

10. References

- City of Calimesa General Plan, April 1994.
- Draft Environmental Impact Report for the Calimesa General Plan; prepared by David Evans and Associates, Inc., September 1993.
- Dudek & Associates, Inc. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Prepared for County of Riverside Transportation and Land Management Agency.
- Focused Traffic Study prepared by LSA, June 2004.
- Heritage Oaks Equestrian Community Specific Plan; prepared by Michael Brandman Associates, June 2005.
- Oak Tree Evaluation, Heritage Oaks Specific Plan; prepared by David Hayes, Consulting Arborist, October 2004.
- Biological Resources A, Heritage Oaks Property, Calimesa, CA; prepared by Michael Brandman Associates, October 2004, updated June 2005.
- Initial Study, Environmental Checklist and Mitigated Negative Declaration for Tentative Tract 29964, City of Calimesa, June 2001.
- Preliminary Geotechnical Investigation, Proposed Residential Subdivision Tract No. 29964, Calimesa, CA; prepared by Inland Foundation Engineering, Inc., January 2001.
- Final Phase I Cultural Resources Survey, prepared by Michael Brandman Associates, May 2005.

11. Appendices

A Photographic Index
B Air Quality Analysis
C Biological Resources Assessment and Oak Tree Preservation Guidelines
D Geotechnical Investigation
E Traffic Impact Analysis
F Cultural Resources Survey
G Tentative Tract Map No. 17351 City of Calimesa

12. Report Preparers

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
Phone: 714.508.4100
Fax: 714.508.4110

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages:

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation / Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been address by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Printed Name _____ For _____

EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each questions. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

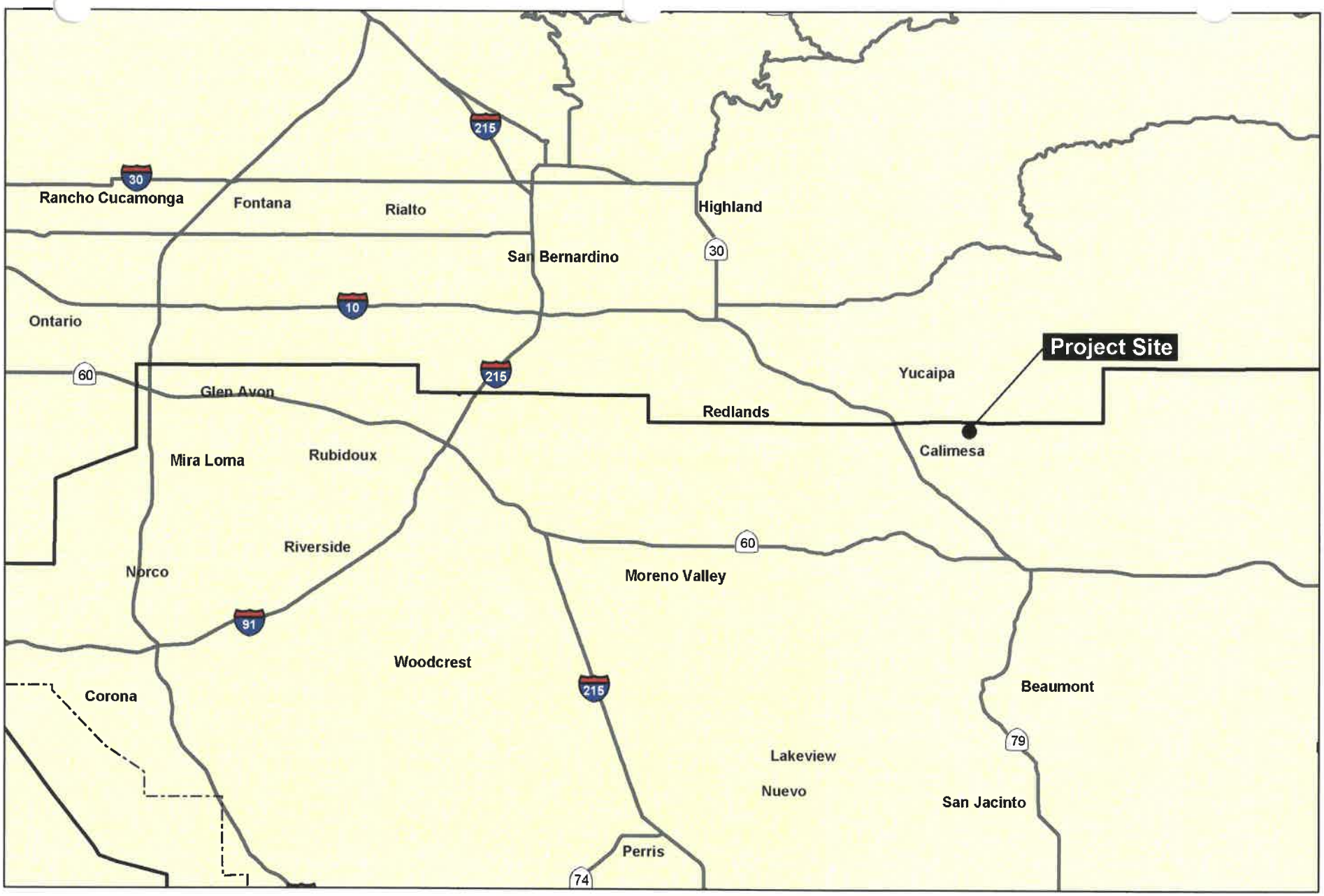
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significant.

Supporting Documentation

a) The City of Calimesa, *General Plan*, 1994.
b) The City of Calimesa, *General Plan Environmental Impact Report*, 1993.



Source: Census 2000 Data.

NORTH

5 2.5 0 5 Miles

Michael Brandman Associates

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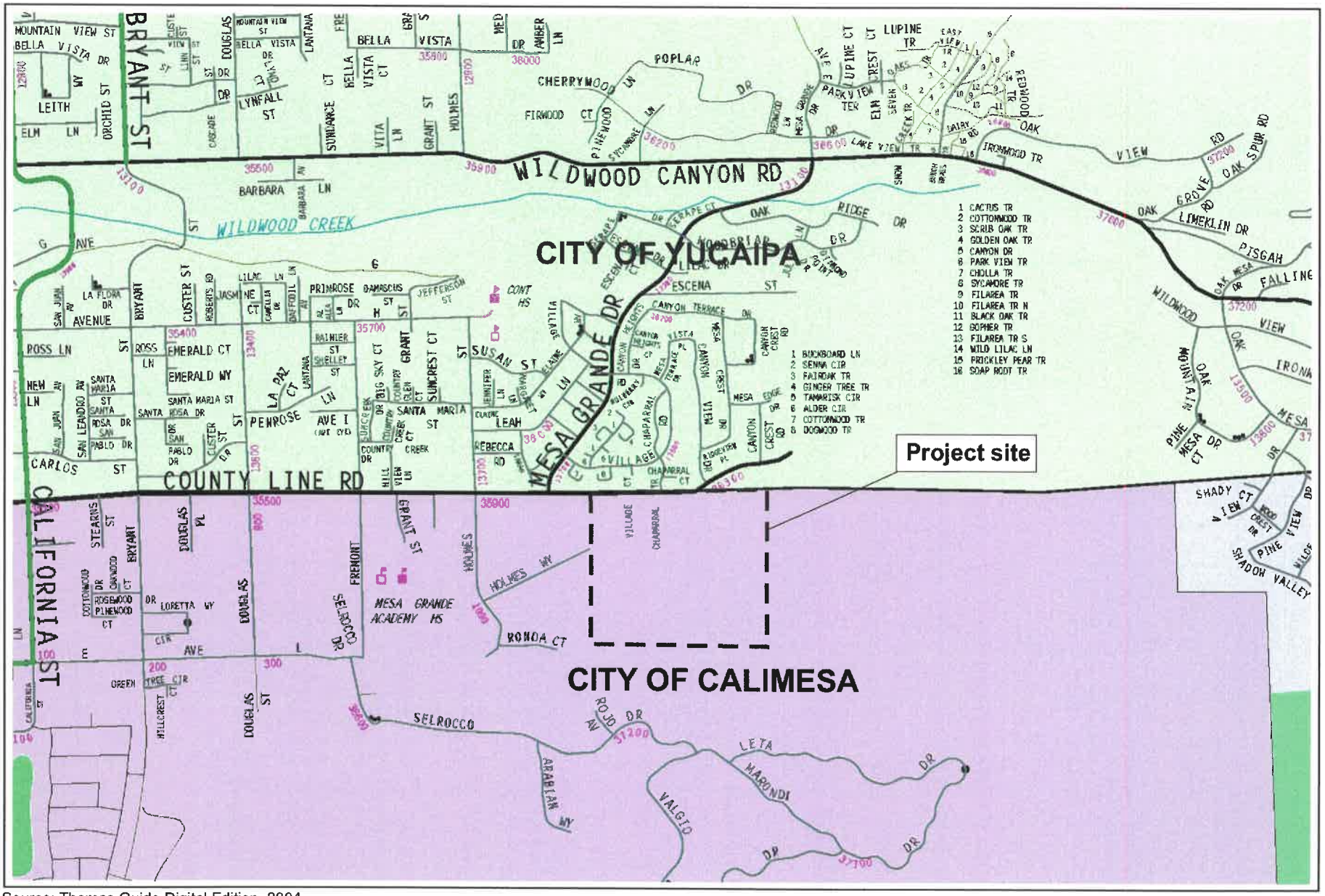
Exhibit 1
Regional Location Map



Source: Thomas Guide Digital Edition, 2004.

NORTH

1,600 800 0 1,600

SCALE IN FEET

Exhibit 2
Site Vicinity Map

Michael Brandman Associates

Source: James A. Rogers, 2005.

NORTH

250 125 0 250

SCALE IN FEET

Estate Residential (ER)
Country Residential (CR)
Open Space (OS)
Live Oaks - Preserved

Project Boundary
Major Drainage
Detention/Debris Basin
Hiking/Equestrian Trail

Exhibit 3
Land Use Plan

Michael Brandman Associates

26040001 • 06/2005 | 3_land_use_plan.cdr

ENVIRONMENTAL CHECKLIST

I Aesthetics		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:					
a)	Have a substantial adverse effect on a scenic vista?			X	
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Explanation of Checklist Responses:

I(a) **Less Than Significant -** The project site encompasses approximately 54 acres of undeveloped land in northeastern Calimesa. Typical of the southern California foothills and the Yucaipa Valley, the property supports an oak woodland population, which contributes to scenic views of the site and surrounding hillsides from County Line Road immediately adjacent the site (see Appendix A, Photographic Index). However, the proposed project is not visible from key portions of the City and would not substantially affect any scenic vistas in the area. The project site is an area planned for residential development. Residential developments are located north and west of the project site.

The Specific Plan indicates the coast live oak woodland community will be preserved virtually intact within the project site, thus retaining the most significant visual feature and natural amenity of the site, and providing a visual linkage and transition to natural open space to the south and east. Impacts are thus anticipated to be less than significant.

I(b) **Less Than Significant Impact -** There are no designated State Scenic Highways within or near the project area. An Oak Tree Evaluation prepared for the project site and Specific Plan (Appendix C) indicates that of the 121 Coast Live Oaks on the site, all but 7 isolated trees, 6 of which are in poor to fair condition and 1 of which is in good condition, will be retained. The Specific Plan incorporates the City's Oak Tree Ordinance (Ordinance No. 200) and includes guidelines for the preservation and treatment of oaks on the site. No substantial impact on oak tree scenic resources will occur with project implementation.

I(c) **Less Than Significant Impact -** The project will alter views into the project site through the development of 54 single-family residential units and associated infrastructure. Specific Plan residential development will have an overall density of 1 unit per gross acre, with lot sizes ranging from 20,000 square feet, no greater than 1.58 dwelling units per acre along the perimeter of the project site to lot sizes of 10,000 square feet, no greater than 2.84 dwelling units per acre within the central portions of the project site. The land use plan has been designed so as to create a residential community that acts as a buffer and transition between the single-family

residential land use tracts to the north of the site in the City of Yucaipa and the rural residential land uses in the City of Calimesa. Additionally individual lots, street alignments, trails, and infrastructure improvements are designed to be integrated with the existing live oak woodland community.

Virtually all of the healthy Coast Live Oaks on the site will be preserved. The oak trees range in heights from 30 feet to 80 feet, with most trees over 40 feet. Residential units are not to exceed 32 feet; thus, overall the rooflines will not extend beyond the oak canopy. Furthermore, proposed Specific Plan design features such as landscaping, community walls, and manufactured slopes of varying heights and gradients will soften and buffer views from the surrounding areas into the project site. Views of the site from County Line Road and adjacent residential tracts will include use of native and native compatible trees, shrubs, and plants along the street edge.

The project will be an extension of the existing pattern of residential development to the north and west of the site and the planned residential development south and east of the site. Specifically, one of the primary objectives of the Specific Plan is to, "Design a community in such a manner as to act as a transitional buffer between existing surrounding residential land uses and future planned land uses." Homes will be designed to be compatible with the rural character of the project area and the rural, equestrian character desired by residents of the City of Calimesa. As a result, project implementation will not result in a substantial degradation of the existing visual character or quality of the site and its surroundings.

I(d) **Less Than Significant Impact -** The proposed project will introduce new sources of light and glare into the project area through the use of street and security lighting, outdoor residential lighting, and light generated from project-related traffic. However, such lighting will be consistent with lighting typical of surrounding residential subdivisions, and no significant light or glare impacts are anticipated. Pursuant to Specific Plan guidelines, public street lighting within the Heritage Oaks Equestrian Community shall be kept to the minimum levels necessary to protect the public safety and at the same time to achieve the desired rural atmosphere of the community. Street lighting shall be provided only where specific safety conditions warrants, such as street intersections, street corners, and trail crossings.

The Specific Plan lighting standards identified below provide for a low intensity and low scale of lighting to maintain the rural atmosphere. These lighting standards may vary, as necessary, and as approved by the City of Calimesa, to achieve the proper intensity of illuminance.

- Fixture Height - Street poles should not exceed the average height of the coast live oak trees within the community; in no event shall they exceed thirty (30) feet in height as measured from finish grade to bottom of light fixture.

- Light Source - Low-pressure sodium is permitted. Metal halide, high-pressure sodium, and similar sources shall be permitted if fully shielded.

- Spacing of Fixtures - The distance separating lights shall be determined by the type of light source, the fixture height, and the need to satisfy the intensity provision established by the City. It is envisioned that fixtures will be limited to

where safety conditions warrant them, specifically at street intersections, street corners, and trail crossings.

II Agriculture Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) 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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

Explanation of Checklist Responses:

II(a) **No Impact -** According to the Department of Conservation State Farmland Mapping and Monitoring Program, the project site is not located on lands that are considered to be Prime Farmland, Unique Farmland, or Farmlands of Statewide Importance; therefore, project implementation will not result in the conversion of mapped farmlands to non-agricultural uses.

II(b) **No Impact -** The project site is not zoned for agricultural land uses and the site is not restricted under the provisions of a Williamson Act contract. Additionally, the lands surrounding the project site are not zoned for agricultural land uses.

II(c) **No Impact -** The project site is not located within the vicinity of any lands that are either in agricultural production or zoned for agricultural activities. The lands to the north and west of the project site are developed with residential land uses. The lands to the south and east of the project site are vacant and are zoned for residential land uses. As identified on Exhibit 4-2 of the City of Calimesa General Plan, lands surrounding the project site are designated as urban or built up or other lands (lands which do not meet the criteria of any other category [Prime or Unique Farmland, Farmland of Statewide or Local Importance, Grazing Lands], or Urban and Built Up Lands).

III Air Quality		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relief upon to make the following determinations. Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?			X	
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d)	Expose sensitive receptors to substantial pollutant concentrations?			X	
e)	Create objectionable odors affecting a substantial number of people?			X	

Explanation of Checklist Responses:

III(a) **Less Than Significant Impact -** MBA prepared an air quality analysis that in part analyzed the project's consistency with the applicable AQMP. This analysis can be referenced in Appendix B of this IS/MND.

The project is deemed inconsistent with the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP) if it 1) results in population and/or employment growth that exceeds growth estimates in the applicable AQMP, or 2) if project-related emissions exceed the SCAQMD recommended air emission thresholds.

To determine consistency with the first criteria, the AQMP utilizes population and employment forecasts as set forth in the City of Calimesa General Plan and by the Southern California Association of Governments (SCAG) for the buildout of Calimesa. As discussed under item XII(a) below, at buildout the City of Calimesa is projected to have a population of 27,688. The current population of the City of Calimesa as reported by the City is 7,272. The proposed 54-unit residential development is accommodated within the projected buildout and thus is within the planning parameters of both the City and SCAG.

The project is considered consistent with the second criteria if project-related emissions do not exceed the established SCAQMD thresholds as outlined in Appendix B of this IS/MND. As discussed in further detail below in item III(b), with mitigation the project will not exceed air pollution thresholds in the short-term during construction and the project's long-term emissions, primarily resulting from traffic generation, will not exceed establish thresholds and do not require mitigation. Therefore, since the project does not exceed either criterion, it is considered to be consistent with the AQMP.

III(b) **Less Than Significant Impact With Mitigation -** A project can violate air quality emission thresholds in both the short term during construction activities and in the long term, primarily as a project introduces new traffic into a study area. Appendix B of this IS/MND identifies the significance thresholds for both construction and operational emissions for the following criteria pollutants: reactive organic gases (ROG); oxides of nitrogen (NOx); carbon monoxide (CO) fugitive dust (PM10); and oxides of sulfur (Sox)

Short-Term Construction Emissions

Modeling data as presented in Table 1 of Appendix B identified that without mitigation, during construction, emission levels of NOx will exceed SCAQMD thresholds. The primary source of NOx emissions is from grading and construction equipment, with effective mitigation measures, NOx emissions can be reduced to levels that are considered less than significant, or rather levels that do not exceed SCAQMD thresholds (see Table 2 of Appendix B of this IS/MND).

Mitigation Measure III-1: Prior to construction of the proposed improvements, the project proponent will provide a traffic control plan that will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e., flag person) during transportation of materials, construction worker trips and other construction related truck hauling activities.

Mitigation Measure III-2: During construction of the proposed improvements, construction equipment will be properly maintained at an offsite location and includes proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on site during construction.

Mitigation Measure III-3: During construction of the proposed improvements, all contractors will be advised not to idle construction equipment on site for more than ten minutes.

Mitigation Measure III-4: During construction of the proposed improvements, contractors will be advised to fuel all diesel fueled construction equipment with aqueous diesel fuel.

Mitigation Measure III-5: During construction of the proposed improvements, only low volatility paints and coatings as defined in SCAQMD Rule 1113 shall be used. All paints shall be applied using either high volume, low-pressure (HVLP) spray equipment or by hand application.

Mitigation Measure III-6: During construction of the proposed improvements, the project applicant will provide on-site electrical hook ups for electric construction tools, such as saws, drills, and compressors to eliminate the need for diesel powered electric generators.

Implementation of these mitigation measures will reduce project-related short-term air quality impacts to less than significant.

Long-Term Construction Emissions

Long-term air quality impacts are those associated with the emissions produced from project-generated vehicle trips as well as from stationary sources related to the use of natural gas for heating, the use of electricity for lighting and ventilation, and the use of landscape maintenance equipment. Long-term emissions were calculated utilizing the URBEMIS 2002 model, assuming full occupancy by 2007. Traffic generation was determined by utilizing data provided by LSA as discussed in further detail under item XV, Transportation/Traffic and contained within Appendix E of this IS/MND. As identified in Table 3 of Appendix B of this IS/MND, project implementation will not result in exceeding SCAQMD thresholds for the long-term operation of the project.

III(c) **Less Than Significant Impact -** The project-specific evaluation of emissions supports a conclusion that air quality impacts for the proposed project are less than significant on an individual project basis. CEQA Guidelines § 15064 (i)(3) addresses evaluation of cumulative effects allowing the use of approved land use documents in a cumulative impact analysis. In addressing cumulative effects for air quality, the AQMP is the most appropriate document to use because the AQMP sets forth a comprehensive program that will lead the South Coast Air Basin (SCAB), including the project site, into compliance with all federal and state air quality standards and utilizes control measures and related emission reduction estimates based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Since with mitigation the proposed project is in conformance with the AQMP and the project is not significant on an individual basis, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable.

III(d) **Less Than Significant Impact -** The proposed project will have a less than significant impact on pollution concentrations. The analysis of short-term and long-term emissions previously described indicates that with mitigation on construction activities, all emissions are below the SCAQMD thresholds of significance. These emissions are anticipated to be further diluted as they mix with the surrounding air downwind of the proposed project. In addition, CO hotspots are not anticipated as a result of the proposed project. Considering the quantity and dissipation of emissions produced by the project in the project area, the project will not expose sensitive receptors to substantial pollutant concentrations. No additional impacts would result from this project.

III(e) **Less Than Significant Impact -** Odors are one of the most obvious forms of air pollution to the general public. Odors can present significant problems for both the source and the surrounding community. Although offensive odors seldom cause physical harm, they can cause agitation, anger, and concern to the general public. Most people determine an odor to be offensive (objectionable) if it is sensed longer than the duration of a human breath; typically 2 to 5 seconds.

The only potential odors associated with the project are from the diesel exhaust, and the application of asphalt and paint during the construction period. These odors, if perceptible, are common in the environment, would dissipate rapidly as they mix with the surrounding air, and would be of very limited duration. Therefore, any potential odor impacts would be considered as less than significant.

IV Biological Resources		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:					
f)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.		X		
g)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.		X		
h)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means?				X
i)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
j)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
k)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Explanation of Checklist Responses:

IV(a) **Less Than Significant With Mitigation -** Construction of the proposed residential development will result in a direct loss or modification of approximately 34.7 acres of natural habitat including annual grassland, buckwheat scrub, chamise and scrub oak chaparral, dry wash, and coast live oak woodland. Anticipated habitat modification is not expected to affect any species listed (or proposed for listing) as endangered or threatened by State or federal wildlife resource agencies. The project site's scrub, chaparral, woodland, and grassland plant communities are considered potentially suitable for several non-listed special status plant and animal species as described in the Biological Resources Assessment (see Appendix C). Loss of suitable habitat for special status plants and animals is considered a potentially significant project impact.

Mitigation Measure IV-1: The loss or adverse modification of potential habitat for special status species is mitigated to a less than significant level through the applicant's mandatory contribution to broad, ecosystem-level conservation efforts instituted by the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP). Contributions to the MSHCP's conservation goals involve payment of a Local Development Mitigation Fee to the

City of Calimesa in accordance with City Ordinance No. 212. Fees collected by the City pursuant to ordinance 212 are used to assist in the maintenance of biological diversity by financing the acquisition and protection of natural ecosystems as described or identified in the MSHCP.

Implementation of this mitigation measure will reduce project-related habitat loss and/or modification impacts to less than significant.

IV(b) **Less Than Significant Impact With Mitigation -** Two sensitive habitat types occur on the subject parcel, southern riparian scrub, and coast live oak woodland. The proposed development configuration will not impact the single small patch of sensitive riparian scrub on the site. Coast live oak woodland habitat on site includes approximately 3.7 acres of tree canopy area, consisting of 121 specimen trees (see Appendix C, Biological Resources Assessment). The project has been configured to avoid direct impacts to all but seven (7) of the trees, one of which may be preserved or relocated within Lot 25, and grading will avoid 91 percent of the woodland habitat (in terms of aggregate canopy area). Although direct project impacts to oak trees have been intentionally minimized by design, preliminary grading plans indicate that grading for slope stabilization may encroach within the dripline of trees in several limited areas. Loss or degradation of coast live oak woodland is considered a potentially significant impact. This impact is mitigated to a less than significant level by preservation of more than 94 percent of the trees by number and 91 percent of habitat acreage and further mitigated by implementation of additional measures to reduce or minimize impacts during construction.

Mitigation Measure IV-2: The Specific Plan incorporates Oak Tree Preservation Guidelines that shall be implemented to preserve and protect individual trees during and after construction. In addition, the Specific Plan must be implemented in accordance with City's Oak Tree Preservation Ordinance (Ordinance No. 200) which establishes strict provisions to assure preservation and protection of oak trees within the City, and requires that applicants obtain a permit from the City prior to any removal, cutting, or pruning of native oak trees.

Implementation of this mitigation measure will reduce project-related oak tree impacts to less than significant.

IV(c) **No Impact -** The project will not affect any federally protected wetlands. The project site contains only one limited patch of southern riparian scrub which may meet the federal definition of "wetlands." This limited patch of willow and cottonwood trees occurs upstream from the area proposed for project development and will not be affected by the project. The proposed project will affect segments of a single streambed feature that meets State and federal criteria for jurisdictional waters. This feature is referenced in the Biological Resources Assessment as a dry wash. It conveys flows only during and immediately after (< 2 days) after rainfall events and is therefore defined as an ephemeral wash. This drainage feature does not sustain flows for sufficient duration to support riparian habitat or wetland vegetation.

Although the site will not affect any wetlands, the proposed project will affect approximately 0.4 acres of jurisdictional waters which are subject to State and federal permitting requirements. Therefore, prior to grading, the applicant shall obtain the following permits as required and shall comply with the mitigation requirements set forth in the permits:

- Section 404 permit (Clean Water Act) from the U.S. Army Corps of Engineers to minimize impacts related to dredging, filling, or diversion of existing drainages.
- Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game to minimize impacts to State Waters.
- Section 401 permit, also known as Water Quality Certification Act, from the Regional Water Quality Control Board to ensure proper control of runoff into local drainages.

IV(d) **Less Than Significant Impact -** The proposed development is not situated in an area that provides any significant or biologically important habitat connections. Existing development lies adjacent to the north side of the parcel and limited open space areas of relatively low biological significance occur to the west. While terrestrial animals may move locally on and off the property from the east and south, development of the site will not interrupt any linkage between biologically significant habitat areas in the vicinity. Therefore, the utility of the site as a wildlife "movement corridor" is not considered biologically significant. However, the proposed project will introduce new constrictions that will partially impede local terrestrial wildlife movement across the parcel. This impact is considered less than significant.

Also, the configuration of the development will still preserve opportunities for local wildlife to move across the parcel, despite the presence of homes and local streets. The Specific Plan will preserve relatively large open space areas within the central, western, and northeast sections of the parcel which will be accessible and traversable by local animal species.

IV(e) **Less Than Significant Impact With Mitigation -** The project has been configured to avoid impacts to the great majority of coast live oak trees on site. 91 percent of the area canopy of coast Live oak woodland will be preserved and at least 114 of the 121 specimen trees (10" diameter at breast height [dbh] or larger) will be avoided by the development. Nevertheless, preliminary grading plans indicate that six (6) coast live oak trees will be removed and a seventh, relatively small specimen (tree no. 96), may also be lost on Lot 25, if it cannot be preserved or successfully relocated Grading for slope stabilization in limited areas may also involve some minor encroachment within the dripline of trees in limited areas. While these impacts are not considered biologically significant, any cutting, destruction, or removal of native oak trees is subject to the provisions of the City of Calimesa's Ordinance No. 200. This ordinance recognizes the need to conserve oak trees in Calimesa and establishes strict guidelines for preserving healthy oak trees. Removal or damage of oak trees associated with implementation of the Specific Plan is considered potentially significant unless mitigated. Therefore, in addition to complying with the City's Tree Removal Permit as required, the following mitigation measure has been incorporated into the Specific Plan:

Mitigation Measure IV-3: The applicant shall implement and strictly adhere to the Oak Tree Preservation Guidelines.

Compliance with the City's ordinance, including obtaining necessary permits as required and implementing all measures outlined in the Oak Tree Preservation Guidelines mitigates the projects impacts to oak trees to less than significant.

IV(f) **No Impact -** The Specific Plan is consistent with the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP). The site does not lie in a "criteria area" or an area designated for conservation by the MSHCP; thus, no special provisions are applicable. In order for the project to be "covered" under the broad take authorization issued under the MSHCP, the applicant must contribute to the conservation of habitat elsewhere in the region. This contribution is mandatory under City of Calimesa Ordinance No. 212, which requires the applicant to pay the applicable Local Development Mitigation Fee.

V Cultural Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Explanation of Checklist Responses:

V(a) **Less Than Significant Impact With Mitigation -** MBA conducted a Cultural Resources Survey (see Appendix F of this IS/MND) for the proposed project in May 2005. As part of this undertaking, MBA reviewed historical aerial photographs as well as conducted a site reconnaissance to determine the presence or lack thereof of historic resources. As identified in the 1953 aerial photograph, the project site consisted of large amount of unmodified ground cover exhibiting natural vegetation interspersed with modified areas of pasture land. Onsite structures consisted of a ranch complex, reservoir, shed structure, water complex, and water wells. A municipal water reservoir is located immediately west of the northern boundary of the project site. Fences and unpaved roads separate the parcels in the project area.

During the site reconnaissance, MBA staff detected several sets of historic features, which have been heavily impacted by the post-abandonment process. The historic localities of the well shaft and cage surrounded by concrete footings, two fragmentary remnants of historic structures of the ranch complex including a building foundation and landscaping features, and abandoned wellheads and concrete slabs remain present onsite.

Mitigation Measure V-1: The project proponent shall comply with the mitigation measure identified in Section 7 of Appendix F of this IS/MND, requiring that all historic isolated features identified during the Cultural Resources Survey be recorded on DPR523 isolate forms.

Implementation of this mitigation measure will reduce project-related historic resources impacts to less than significant.

V(b) **Less Than Significant Impact With Mitigation -** The Cultural Resources Survey included an archeological records search at the Eastern Information Center (EIC) at UC Riverside and the Archeological Information Center (AIC) and at the San Bernardino County Museum, a review of aerial photographs, and a site reconnaissance.

The cultural research records search conducted at the EIC indicated that the project site had not been previously surveyed for cultural resources. The search also indicated that one cultural property was recorded in the proposed grading footprint of the project. The site was once located a few hundred feet northwest of the old wells that are located in the northeastern quarter of the project site.

The record search conducted at AIC indicated that several cultural resource sites are known for Wildwood Canyon, north of the project site, but no recordation of sites directly adjacent to the project site.

During the site reconnaissance, MBA staff did detect two isolated artifacts located on a finger-ridge in the south-central portion of the project site. Located along a well-defined footprint on the crest of the ridge, it is possible that these artifacts represent a buried site or casual drops on the part of prehistoric travelers. Because the discoveries exhibit very minimal qualities, they were not recorded as a site, and isolates need not be tested for significance. The isolated prehistoric artifacts were recorded on DPR523 isolate forms.

While it is always possible that unknown buried cultural resources could be unearthed during development, the following measures would reduce potential impacts to less than significant.

Mitigation Measure V-2: The project proponent shall comply with the mitigation measure identified in Section 6 of Appendix F of this IS/MND, specifying that, if the recorded isolated artifacts cannot be avoided during construction, they should be collected prior to grading.

Mitigation Measure V-3: The project proponent shall comply with the mitigation measure identified in Section 7 of Appendix F of this IS/MND, requiring that an archeological monitor shall be present during all earth moving activities at the project site. If buried cultural materials are exposed during construction, work must be halted in the immediate vicinity of the find until the project archeologist can assess the significance of the find. If prehistoric artifacts and/or features are exposed, the archeologist shall remove the cultural remains in a timely and

professional manner in accordance with CEQA Section 15604.5 and Public Resources Code (PRC) 21082.

Implementation of these mitigation measures will reduce project-related archeological resources impacts to less than significant.

V(c) **Less Than Significant Impact With Mitigation -** As part of the Cultural Resources Survey, a paleontological records search was conducted. This consisted of an examination of paleontological records and geological maps that referenced rock outcrops exposed within the project site. The evaluation identified certain rock units within the project site that have a high potential to contain fossil resources. The units located onsite include the Holocene valley alluvium (Qof), fan deposits of the middle to later Pleistocene age (Qvya), and the basement cataclastic rock of the Mezozene age ($M_z$mg). Only the Pleistocene deposits are sensitive for fossil resources. However, it should be noted, that the evaluation did not identify any fossil resources that have been recorded within the project site; yet, due to the sensitivity of the Pleistocene rock unit, there is the potential for paleontological resources to be impacted during project implementation.

Mitigation Measure V-4: The project proponent shall comply with the mitigation measure Identified in Section 7 of Appendix F of this IS/MND, specifying that a paleontological monitor shall be present during all excavation activities at the project site. If buried fossil materials are exposed during construction, work must be halted in the immediate vicinity of the find until the project paleontologist can assess the significance of the find, and a recovery plan is implemented that assures the proper disposition and treatment of the paleontologic resource.

Implementation of this mitigation measure will reduce project-related paleontological impacts to less than significant.

V(d) **Less Than Significant Impact -** There are no known burial grounds on the project site. However, since the site is undeveloped there is always the potential for unknown human remains to be unearthed during construction.

The project proponent shall comply with the regulations set forth in the California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and the PRC 5097.98, relating to the unearthing of unknown remains on a project site. These regulations require that the Riverside County Coroner be contacted within 24 hours of the discovery of such remains, and that no further disturbance shall occur until the coroner has made the necessary findings as to origin and disposition of the remains. Additionally, CEQA stipulates guidelines by which consultation is to occur with the appropriate designated Native American tribal descendant(s).

Compliance with these regulations will reduce potential project-related impacts to unknown burial grounds to less than significant.

VI Geology and Soils	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Explanation of Checklist Responses:

VI(a) **Less Than Significant Impact -** California is a seismically active area. Generally, seismicity in Riverside County is related to faulting along well-defined fault zones. The nearest active fault zone in relation to the project site that has the potential to result in substantial seismic activity is the San Gorgonio Fault, which is 1.9 kilometers from the project site and has a potential magnitude of 7.2. In addition, the San Andreas Fault is 6.9 kilometers from the project site and the San Jacinto Fault is 13.1 kilometers from the project site. These faults have potential magnitudes of 7.4, and 6.9 respectively. Thus, it is likely that these faults will produce events that will result in strong groundshaking and seismic hazards that will affect the project site. Development is required to adhere to the appropriate seismic design criteria of the Uniform Building Code (UBC), which will reduce project-related seismic hazard impacts to less than significant.

A geotechnical report was prepared in 2001 by Inland Foundation Engineering for a similar residential project at the project site. According to the report, since the depth to groundwater is approximately 100 feet at the site, there is little to no potential for liquefaction to occur. Moreover, the potential for slope failure, lurching, seismic settlement, seiches, tsunamis, and surface rupture is not considered significant.

VI(b) **Less Than Significant Impact -** According to Fuscoe Engineering, the project will require approximately 225,000 cubic yards of cut and 166,000 cubic yards of fill. Taking into consideration shrinkage, subsidence, remedial work and pad adjustment (if necessary), Fuscoe Engineering has indicated that earthwork can be balanced on site. The project is located in an area that has been identified as having a moderate susceptibility to wind erosion. The project will be required to submit a grading plan that is subject to the review and approval of the City Engineer.

VI(c,d) **Less Than Significant With Mitigation -** Based upon geologic and hydrogeologic characteristics, the project site is located in an area that has been identified as being susceptible to subsidence, which is the sudden shrinking or gradual downward settling and compaction of soil and other surface materials with little or no horizontal motion. According to the Preliminary Geotechnical Investigation prepared by Inland Foundation Engineering, Inc. for the previous residential development proposal, no geologic conditions were encountered on site that will inhibit project construction. However, based upon the relative compaction, presence of porous soils on the easterly portion of the site, density/optimum moisture testing, low plasticity, and the presence of dry cohesionless soil within the recent alluvium the following mitigation measures are recommended:

Mitigation Measure VI-1: The northern portion of the site, consisting of lots 28 through 33, and the south central portion of the site, consisting of Lots 45 through 52, shall be footing base or one foot beneath the existing surface, whichever is greater.

Mitigation Measure VI-2: The alluvial plain area consisting of Lots 28 and 34 through 36 shall be over-excavated to a depth equal to the depth of the alluvium or one times the footing width beneath the footing base or one foot beneath the existing surface, whichever is greater.

Mitigation Measure VI-3: The eastern portion of the site consisting of the remaining lots contains porous soils. These shall be removed to their maximum depth. The over-excavation in these areas shall also extend a minimum of one times footing width beneath the footing base.

Mitigation Measure VI-4: All loose alluvial soils shall be removed from the swales and recompacted and removal and recompaction of soils shall be conducted within all building, slab, and pavement areas.

Implementation of these mitigation measures will reduce project-related geology and soils impacts to less than significant.

VI(e) **No Impact -** The proposed project will include the installation of a sewer system and connection to the sewer system maintained by the Yucaipa Valley Water District. According to the geotechnical report, the site does not contain any soils that cannot support this system.

VII Hazards and Hazardous Materials	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		X		

Explanation of Checklist Responses:

VII(a) **Less Than Significant Impact -** Hazardous materials are increasingly used in urban settings. Grading and construction activities may involve the limited transport, storage, usage, or disposal of hazardous materials, such as the fueling/servicing of construction equipment; however, such activity is short-term or one-time in nature and is subject to federal, state, and local health and safety requirements, including the State of California Hazardous Substances Control Law (Health and Safety Code Division 20, Chapter 6.5), which establishes regulations and incentives which ensure that the generators of hazardous waste employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal. Additionally, during the construction phase the proposed project will likely generate more than 27 gallons or 220 pounds monthly of hazardous wastes, such as paint; thus, the project will be subject to the County of Riverside Conditionally Exempt Small Quantity Generator Program, which will require that the project employs a licensed hazardous waste hauler to manifest and transport such waste. Typical of residential developments, after project implementation there will be an increase in the use and storage of common hazardous materials such as household cleaning and janitorial products, herbicides, insecticides, solvents, and fuel. The use of these household products is not considered to pose a significant hazardous materials threat; moreover, the County

Department of Environmental Health operates a mobile household hazardous waste collection program, which allows residents to deliver and dispose of their household hazardous wastes. While project implementation may introduce the use of some common household products that are classified as hazardous materials, this usage will be local to the project site and the project will not include any routine transport of hazardous materials.

VII(b) **Less Than Significant Impact -** As discussed in item VII(a), project implementation will result in introducing the use of common household products that are considered to be hazardous materials; however, a residential project, such as the Heritage Oaks project does not result in the types of substances and/or the magnitude of use that could create a significant hazard to the public or the environment through the reasonably foreseeable upset or accidental release.

VII(c) **No Impact -** The nearest school site is approximately a half mile from the northern boundary of the project site. A residential project, such as the proposed Heritage Oaks Equestrian Community would not involve the use or release of significant amounts of hazardous substances or wastes that would pose a risk to any surrounding uses or sensitive receptors.

VII(d) **No Impact -** The project site is not located on a site which is included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5.

VII(e) **No Impact -** The proposed project is not located within two miles of a public airport.

VII(f) **No Impact -** The proposed project is not located within the vicinity of a private airstrip.

VII(g) **No Impact -** As required, project implementation will be in accordance with County Fire Protection Ordinance (Ordinance 787), which identifies the design standards for emergency access during both the project's construction and operational phases. Project implementation will result in the installation of a new onsite circulation network that will be reviewed by the County of Riverside Fire Department (see XVIII(a)).

VII(h) **Less Than Significant Impact With Mitigation -** The project site is located in an area that is considered to be subject to wildland fire hazards (see General Plan Exhibit 5-8). Accordingly, the project site is subject to the County of Riverside Fire Department Fire protection measures and recognized fire protections standards. These measures and standards are discussed under item XIII(a) Public Services - Fire Protection.

VIII Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	

VIII	Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.			X	
f)	Otherwise substantially degrade water quality?			X	
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j)	Inundation by seiche, tsunami, or mudflow?				X

Explanation of Checklist Responses:

VIII(a) **Less Than Significant Impact -** The transformation of the project site from undeveloped land to residential uses will result in the generation of pollutants typical of household uses that may enter the storm drain system; however, the development of 55 residential units is not considered to affect water quality significantly. Moreover, the City has developed guidelines for storm water runoff that are consistent with the statutory requirements of the National Pollution Discharge Elimination System (NPDES). According to the City of Calimesa General Plan, these guidelines include regulation runoff from construction activity (the use of Best Management Practices), regular street sweeping, and the use of storm drain grates. Additionally, the proposed debris basin and detention basin will remove sediments and pesticides generated by activities on the Heritage Oaks site.

VIII(b) **Less Than Significant Impact -** The City of Calimesa has implemented a Water Conservation Ordinance, which requires the use of low flow irrigation systems and water efficient plumbing in all new developments and encourages the use of drought tolerant vegetation. The project's drainage system includes a detention basin that will allow water runoff to recharge the ground water basin.

VIII(c,d)**Less Than Significant Impact -** As discussed in the Specific Plan and in item XVI(c) below, the project's storm drainage system is designed to integrate man made improvements with the site's existing natural drainage course. Ultimately, storm drainage flows will be directed into the existing natural detention area in the western portion of the property. While the detention area will undergo remedial improvements to better contain and direct storm water flows, these improvements will serve to protect down-stream properties, which under present conditions are affected by uncontrolled storm water sheet flows. Moreover, the proposed debris basin and detention basin will serve to remove sedimentation, which will reduce the likelihood of downstream siltation

VIII(e,f)**Less Than Significant Impact -** Please refer to responses VIII(a), VIII(b), and VIII(c,d).

VIII(g-i)**No Impact -** The project site is not located within a designate flood hazard area.

VIII(j) **No Impact -** The project is not located in an area that is subject to seiches, tsunamis, or mudflows.

IX Land Use and Planning		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:					
a)	Physically divide an established community?				X
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Explanation of Checklist Responses:

IX(a) **No Impact -** The project will not disrupt, divide, or otherwise have a negative impact upon the adjacent properties. The project site as well as the surrounding properties, are zoned for residential land uses and there are existing residential land uses to the north and west of the project site. Thus, project implementation will be an extension of the existing and planned land use patterns in the project area.

IX(b) **Less Than Significant Impact -** Implementation of the Heritage Oaks project will require a zone change from Residential Estate (1 dwelling unit/5 acres) to Estate Residential and Country Residential and Open Space and to accommodate the proposed development intensity of one dwelling unit per acre. In addition, project implementation will require a General Plan amendment to change the site's land use designation from Residential Estate to Specific Plan.

The Heritage Oaks Equestrian Community Specific Plan establishes the planning concepts, design and development guidelines, and administrative procedures necessary to achieve the orderly development of the project site. The Specific Plan

is also intended to be consistent with, and to implement, the goals, objectives, and policies of the City of Calimesa General Plan. Upon the adoption of the Heritage Oaks Equestrian Community Specific Plan by the City of Calimesa, the Specific Plan shall be the zoning document for the project site.

While the project will require a zone change and General Plan amendment, project implementation will be in accordance with the intended residential land uses at the project site. In particular, the Heritage Oaks Equestrian Specific Plan will create a residential development which acts as a transition zone between the existing and future Rural and Estate Residential land surrounding the project site.

IX(c) **No Impact -** Please see response to Item IV(f).

X **Mineral Resources**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Explanation of Checklist Responses:

X(a) **No Impact -** The project site does not contain any significant mineral resources as identified by the California Geological Survey. The project site is not utilized for mineral extraction and it has not been identified as having important mineral resources.

X(b) **No Impact -** The City of Calimesa's General Plan does not identify the project area as containing any locally important mineral resources.

XI **Noise**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

XI	**Noise**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Explanation of Checklist Responses:

XI(a) **Less Than Significant Impact -** Noise exposure standards have been developed by the State of California and are recommended for inclusion into the Noise Element of local general plans. Generally, 45 dB Community Noise Equivalent Level (CNEL) is considered an acceptable interior noise standard for single-family residential land uses. Since, normal noise attenuation within residential structures with closed windows is about 20 dB, exterior noise levels of 65 dB CNEL or less are considered acceptable for single-family residential land uses. However, the City of Calimesa has adopted a modified version of the State guidelines for its Noise Ordinance and establishes an exterior standard of 50 dB CNEL for single-family residential land uses. The major sources of noise within the City of Calimesa are I-10 and Calimesa Boulevard. Fifty feet from the roadway centerlines, traffic from these roadways generate noise levels of 75 and 62 CNEL respectively. According to the City's General Plan, fifty feet from the roadway centerline, all other roadways have noise levels of 60 dB CNEL or less. The Heritage Oaks project is located approximately 5 miles from I-10 and 4.5 miles from Calimesa Boulevard. Thus, future residents of the Heritage Oaks project will not be subject to noise impacts from these two roadways. Additionally, as shown in Exhibit 6-4 of the City's General Plan, the project site is well outside of the 60 dB CNEL noise contour. Noise levels are typically reduced anywhere from 3 to 4.5 dB per the doubling of distance between the source and the receiver. Given the distance to the project site from the nearest reach of the 60 dB CNEL contour, existing noise levels at the project site do not exceed the 50 db CNEL exterior standard for single-family residential land uses.

When operational, the Heritage Oaks project will introduce approximately 526 new vehicle trips into the project area, which will be distributed throughout the local circulation system. Of these 526 trips, 41 are during the AM peak period and 56 are during the PM peak period. Since noise levels are logarithmic, it takes a doubling of traffic to produce a noticeable increase (3 dB) in traffic generated noise levels. The project will not result in a doubling of traffic during the AM and PM peak hours (see Appendix A of the Focused Traffic Study).

In addition, to protect future residents within the project area from noise related impacts, the Specific Plan incorporates the design of community walls along County Line Road. Once within the project site, vehicular traffic will be distributed between two access roads, which will minimize noise impacts on individual homes.

XI(b) **Less Than Significant Impact -** In the short-term during construction, there may be some noise generated from activities such as pile driving; however, such activities

are temporary in nature. As identified in Exhibit 3-1 of the City of Calimesa General Plan EIR, typical noise impacts from various construction activities ranges from 68 dBA to 105 dBA at a distance of 50 feet from impact. Lands to the south and east of the project site are vacant; however, there are residential land uses to the north and west, which are considered to be sensitive noise receptors. Generally, construction noise impacts are minimized by time restrictions placed on grading permits. Time limits on construction will be in accordance with the City of Calimesa Noise Ordinance; construction activities are limited to the hours of 7 AM to 7 PM during weekdays and 10 AM to 5 PM on weekends and specified holidays.

XI(c) **Less Than Significant Impact -** In the long-term, noise from automobile traffic is the primary source of noise generation. As discussed in item XI(a) above, project-related traffic is not anticipated to result in significant noise impacts.

XI(d) **Less Than Significant Impact -** Construction activities, especially from heavy equipment, may create short-term noise increases near the project site. Such impacts might impact nearby noise sensitive receptors, such as the single-family residential homes north and east of the project site. However, construction periods will be of short duration and subject to the City of Calimesa Noise Ordinance, which limits construction activities to the hours of 7 AM to 7 PM during weekdays and 10 AM to 5 PM on weekends and specified holidays.

XI(e,f) **No Impact -** The project is not located within the boundaries of an airport land use plan, nor within two miles of public or public use airport, nor within the vicinity of a private airstrip.

XII Population and Housing	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			**X**	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**

Explanation of Checklist Responses:

XII(a) **Less Than Significant Impact -** The Heritage Oaks project will result in the development of 54 residential units, which will directly induce growth within the project area. According to the 2000 Census, there is on average 2.36 persons per household in the City of Calimesa. Utilizing, this number, project implementation will result in introducing approximately 130 persons into the project area. Given the existing population of Calimesa (7,272) and the planned growth (27,688 residential units at buildout), this is not considered substantial. Additionally, project implementation will result in the extension of utilities and the installation of new

roadways, which may indirectly induce growth. However, the undeveloped areas to the south and east of the project site are designated for residential development; thus, the project will not induce growth into areas not planned for such growth.

XII(b) **No Impact -** The project site is vacant and supports no development; therefore, project implementation will not result in displacing any existing housing.

XII(c) **No Impact -** The project site is vacant and supports no development; therefore, project implementation will not result in displacing any existing populations.

XIII Public Services	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project: result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?				
a) Fire protection?		X		
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

Explanation of Checklist Responses:

XIII(a) **Less Than Significant Impact With Mitigation -** The Heritage Oaks project will introduce 54 residential units into the project area, which will increase the demand for fire services. The Riverside County Fire Department (RCFD) will provide fire services to the project site. County Ordinance 659 requires the payment of development impact fees to insure that new development bears its fair share of the cost of providing the facilities, open, space, and habitat reasonably needed to serve that development. In addition, the Fire Department has recommended the following fire protection measures which will ensure that the project is in compliance with adopted fire protection ordinances (Ordinance 787 and 460) and recognized fire protection standards:

Mitigation Measure XIII-1: Blue retroreflective pavement markers shall be mounted on all private streets and driveways to indicate the location of fire hydrants. Prior to installation, placement of markers shall be approved by the RCFD.

Mitigation Measure XIII-2: Schedule A fire protection approved fire hydrants (6" x 4" x 2.5") shall be installed at each intersection and spaced no more than 330 feet apart in any direction, with no portion of any lot frontage more than 165 feet from a hydrant. Minimum fire flow shall be 1,000 gallons per minute (gpm) for a 2-hour standard duration at 20 pounds per square inch (psi).

Mitigation Measure XIII-3: Any building constructed on lots created by this land division shall comply with the special construction provisions contained within Riverside County Ordinance 787.

Mitigation Measure XIII-4: All buildings shall be constructed with Class A materials per the California Building Code.

Mitigation Measure XIII-5: Prior to the issuance of a grading permit, the developer shall prepare and submit to the fire department for review and approval, a fire protection/vegetation management plan that shall include, but not be limited to the following items: a fuel modification plan to reduce fire loading; the location of appropriate fire breaks according to fuel load, slope, and terrain; the placement of non-flammable walls along common boundaries between rear yards and open space; the location of emergency vehicle access into open space areas, which shall be provided at intervals not to exceed 1,500 feet; the identification of a homeowner's association or appropriate district shall be responsible for maintenance of all fire protection measures within the open space.

Mitigation Measure XIII-6: The applicant shall prepare a water system plan, which shall be submitted to the RCFD for review and approval. The plans shall be prepared and signed by a registered civil engineer, contain a RCFD approval signature block, and shall conform to hydrant type, location spacing, and minimum fire flow. After the local water company approves the plan, the original shall be presented to the RCFD for approval.

Mitigation Measure XIII-7: The required water system, including fire hydrants shall be installed and approved by the appropriate water agency prior to the placement of any combustible and/or flammable materials on any lot.

Mitigation Measure XIII-8: Prior to the release of installation, site preparations, and/or the issuance of building permits, the fire hydrant system shall be installed per the Environmental Constraint Sheet Map filed with the Riverside County Surveyor's Office. The applicant shall contact the RCFD for installation verification guidelines for fire hydrants and tanks and the RCFD shall verify the fire hydrant and tank installation.

Mitigation Measure XIII-9: Prior to the issuance of building permits for lots 24 through 35, residential sprinklers shall be installed and the plans shall be submitted to the RCFD for approval and inspection.

Mitigation Measure XIII-10: Prior to the issuance of building permits, the onsite water service and sewer service shall be approved by the RCFD.

Implementation of these mitigation measures will reduce project-related fire service impacts to less than significant.

XIII(b) **Less Than Significant Impact -** Since the Heritage Oaks project will result in the construction of 54 residential units and introduce new populations into the project area, the project will result in creating an increased demand for police services. The Riverside County Sheriff Department will provide law enforcement services for Heritage Oaks. The City of Calimesa contracts with the Riverside County Sheriff Department for policing services within the city limits, which includes the subject property. The Sheriff's patrol station closest to the subject property is located at 155 E. Hays Street in the City of Banning, which is approximately 14 miles from the site.

Developer fees, in accordance with County Ordinance 659, will be collected at the issuance of building permits to offset the costs of providing law enforcement services to Heritage Oaks.

XIII(c) **Less Than Significant Impact -** The project site is within the service boundaries of the Yucaipa - Calimesa Joint Unified School District. The District is currently comprised of six elementary schools (Grades K-6), two middle schools (Grades 7-8), one comprehensive high school with a 9th grade campus and a 10th-12th grade campus, a continuation high school, an alternative school (Grades 7-12), a community day school (Grades 7-12), and an adult education program. Specifically, the project site is within the boundaries of Wildwood Elementary and Canyon Middle School both located at 35948 Susan Street, approximately a half mile north of the project site, and Yucaipa High School, located at 33000 Yucaipa Boulevard, approximately 2 miles northwest of the project site.

The schools that serve the project site are at or near capacity. Wildwood Elementary has a current enrollment of 790 and a capacity of 860, Canyon Middle School has an enrollment of approximately 450 students and a capacity of 450, the 9th Grade Campus has an enrollment of 790 students and a capacity of 910, and Yucaipa High School has an enrollment of 2,100 students with a capacity of 2,700. While the District utilizes portable classrooms to address capacity issues there is the potential that some of the students that will reside within the project site will be bussed to other elementary schools within the District.

Construction within the boundaries of the Yucaipa-Calimesa Joint Unified School District is subject to taxes assessed by Community Facilities District (CFD) No. 1, a voter approved community facilities district (Mello-Roos). The amount of the tax is based on the annual increase in the building cost index as reported in the Engineering News Record for Los Angeles County, June edition. Applicable tax payments are based upon a single payment tax at a set dollar amount per square foot of habitable, residential construction. This tax is due and payable upon the issuance of building permit. Additionally, homeowners will be taxed a property tax of $288.00 per year not to exceed 25 years beginning with tax year 2004-05. In addition to the above taxes, due to requirements placed on districts that participate in State School Building Programs, on July 20, 2004, the Yucaipa-Calimesa Joint Unified School District Board approved Resolution R-4/2004-05 adopting the an alternative school fee structure. The Heritage Oaks project is subject to these alternative fees.

In the event that new schools are constructed in the future to serve the project site, environmental impacts associated with construction of new or alterations to existing school facilities will be evaluated by the school district at the time such facilities are

planned. It is presumed that through the District's standard planning process, any significant impacts resulting from construction of such facilities will be avoided or mitigated to a less than significant level.

XIII(d) **Less Than Significant Impact -** Please refer to responses XIV(a) and XIV(b) below.

XIII(e) **Less Than Significant Impact -** Implementation of the proposed project will result in an increased demand for other public services; however, project implementation is within the planning parameters identified by the City and consistent within the City's General Plan.

XIV	**Recreation**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				**X**

Explanation of Checklist Responses:

XIV(a) **Less Than Significant Impact -** The State of California Quimby Act was instituted for the purpose of preserving open space and providing park facilities for California's growing population. In addition, the Quimby Act provides enabling authority to local governments to require land dedication or in-lieu fees in conjunction with approvals of residential subdivision projects to help fund acquisition of public parkland. This legislation sets a planning standard of a minimum of three acres of parkland per 1,000 persons. The City of Calimesa has adopted a Quimby Act Park-In-Lieu Ordinance.

Public recreational facilities in the City of Calimesa include the Norton Younglove Multipurpose Senior Center and the 18-hole public golf course at the Calimesa Golf and Country Club. There are no public parks within the City and no public school playgrounds; however the 400-acre Yucaipa Regional Park, the 600-acre Bogart Park, 63-acre Noble Creek Park, 11.29 Calimesa Park are all within the greater project area. Additionally, in conjunction with approved development, there are three new park sites, totaling 279 acres of developed parkland and open space, which will be located within the City of Calimesa. The current population of Calimesa is 7,272. According to the General Plan in the year 2010, the City is projected to have a population of 10,369 persons, and at buildout the City is projected to have a population of 27,688. Utilizing the Quimby Act standards, in 2010 the City will require approximately 31 acres and at buildout the City will require 83 acres of parkland to be in accordance with State law. Therefore, the planned and approved 279 acres of parkland will be adequate to meet the State Quimby Act standards. Moreover, the proposed project will provide approximately 20 acres of open space and a multi-purpose trail, which may connect into surrounding City of Calimesa regional trails.

XIV(b) **No Impact -** The proposed project does not include the construction of recreational facilities and as discussed in item XIV(a) above, the project will not require the construction of expansion of new or existing facilities.

XV Transportation/Traffic	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?		X		
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

Explanation of Checklist Responses:

XV(a-b)**Less Than Significant Impact With Mitigation -** LSA Associates prepared for a Focused Traffic Study for the proposed project in June 2004. In preparation for this study, LSA conducted an inventory of the study area street system (See Figure 3 of Appendix E of this IS/MND), which included an analysis of the roadway intersections that were determined to be most likely impacted by project implementation:

- 5th Street/County Line Road;
- Bryant Street/County Line Road;
- Mesa Grande Drive/County Line Road;
- New Road/County Line Road; and
- Chaparral Trail/Project Access/County Line Road

LSA's evaluation included a level of service (LOS) analysis, which defines roadway operations and the relationship between the capacity of a roadway and traffic volumes, expressed as a letter grade (A being free flowing traffic and F being highly congested). The City of Calimesa has established a roadway intersection LOS standard of LOS C. Presently, all project area roadway intersections operate at LOS C or better.

The project is anticipated to generate 526 daily vehicle trips, 41 of which are during the AM peak hour and 56 of which are during the PM peak hour (see Figure 4 in Appendix E of this IS/MND). The project's daily vehicle trips were distributed and assigned to the project area street system, by examining the location of the proposed project in relation to the regional commercial and employment opportunities (see Figures 7 and 8 of Appendix E of this IS/MND). Since, the project is not anticipated to be operational until the year 2006, LSA examined the roadway conditions of the project area with and without the project in 2006 (see Figures 9 and 10 of Appendix E of this IS/MND). Without project implementation, one intersection, Bryan Street/County Line Road, is anticipated to operate at an unacceptable LOS (LOS D in PM peak hour). With the addition of project-related traffic, all project area intersections operate at an acceptable LOS, with the exception of Bryant Street/County Line Road, which continues to operate at LOS D in the PM peak hour.

Mitigation Measure XV-1: The applicant shall be required to pay a fair share fee for a dedicated eastbound right-turn lane that shall be installed at the intersection of Bryant Street/County Line Road.

Implementation of this mitigation measure will reduce project-related roadway intersection level of service impacts to less than significant.

XV(c) **No Impact -** The proposed project will not result in altering air traffic patterns.

XV(d) **Less than Significant Impact -** As required, the proposed project will be in compliance with County Ordinance 787, through which the County implements the standards set forth in the Uniform Fire Code, the nationally recognized compilations of proposed rules, regulations, and fire safety standards. Ordinance 787, outlines design requirements such as, but not limited to roadway design and access. Thus, the project's required compliance with Ordinance 787 will assure that the circulation network will not contain design hazards.

XV(e) **Less Than Significant Impact -** See response to XV(d).

XV(f) **Less Than Significant Impact -** The proposed project has been designed to meet the standards set forth in the City of Calimesa parking provision requirements.

XV(g) **Less Than Significant Impact -** As discussed in the Specific Plan, the proposed project establishes an effective vehicular system design which minimizes impacts on surrounding land uses and the design is coordinated with and within the capacity of the existing transportation facilities. Additionally, the plan creates opportunities for new equestrian and pedestrian trails and linkages, which is consistent with all applicable City plans and programs.

XVI Utilities and Service Systems	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	

XVI	Utilities and Service Systems	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g)	Comply with federal, state, and local statutes and regulations related to solid waste?		X		

Explanation of Checklist Responses:

XVI(a) **Less Than Significant Impact -** Wastewater generated at the project site will be treated at the Henry M. Wochholtz municipal wastewater treatment plant (WTP), which is operated by the Yucaipa Valley Water District. Wastewater will be transported from the site via an 8-inch main line sewer that will loop through the specific plan area (see Exhibit 5-2 of the Specific Plan) that will connect to the main sewer line located within Holmes Way and be transported to the WTP, which is located at 880 West County Line Road in Yucaipa. The current operating capacity of the WTP is 4.5 million gallons per day (mgd). According to the Yucca Valley Water District (YVWD) Urban Water Management Plan 2000 (UWMP) collectively the City of Yucaipa and the City of Calimesa generated 4.2 mgd of wastewater. According to the Specific Plan, the WTP will be able to accommodate the wastewater treatment requirements of the Heritage Oaks Specific Plan.

XVI(b) **Less Than Significant Impact -** Please see response to XVI(a)

XVI(c) **Less Than Significant Impact -** As identified in the Specific Plan, the storm drainage system for Heritage Oaks is conceived to integrate man-made drainage improvements with the existing natural drainage course to preserve the coast live oak trees and natural setting of the subject property. The offsite drainage flows will be picked up as they enter the subject property and directed to a combination of man-made flood control improvements, such as the proposed debris basin and culvert in the northeastern corner of the project site (see Exhibit 3 of the Specific Plan), and pipelines located in the public "C" Street, and to the existing natural drainage courses within designated Open Space areas. This drainage approach will maintain natural water flows to the coast live oak woodland communities.

Ultimately, the storm drainage flows will be directed into the existing natural detention area, also designated as Open Space, located on the west side of the

subject property. This detention area will have remedial improvements, including increasing depth to approximately three (3) feet and varying slopes from 2:1 to 4:1, which will better contain and direct the storm water flows. The detention basin will hold storm water run-off from the Heritage Oaks development and from the existing up-stream tributaries. This drainage detention system will allow the water run-off to recharge the ground water basin, and will reduce the discharge of post-development storm waters to levels below the current existing storm flows. By slowing and/or holding the storm drainage flows until after peak storm flow periods and by reducing the total quantity of drainage water flowing out of the subject property the storm drainage system will act to protect down-stream properties and residents of the City of Calimesa. Thus, while the project will require the construction of new storm drain improvements that will be integrated with the site's natural drainage system, the improvements will enhance the existing drainage system and will not result in an adverse affect on the environment.

XVI(d) **Less Than Significant Impact -** The YVWD will provide potable water to the project site trough a combination of resources including groundwater, surface water, and recycled water. According to the District's UWMP, the District utilizes the planning projections of its customers, including the City of Calimesa together with the demands of the current residents and businesses to ensure that a safe and reliable water supply is maintained. Current water demand within the District is 9,500 acre-feet per year, with single-family residential land uses accounting for the majority (72 percent) of water demands. The District utilizes a generation factor of 275 gallons (0.0009 acre foot) per day per capita; thus the proposed project is anticipated to have a demand for approximately 8,100 gallons (0.117 acre foot) per day. The calculated safe yield of the Yucaipa groundwater basin is 9,000 acre-feet. As noted the YVWD pumps 9,500 acre-feet to meet its service demands, in addition to the to the additional 4,800 acre-feet pumped collectively by the Western Heights Municipal Water Company and South Mesa Water Company; thus, the basin is in an overdraft situation. However, the YVWD is currently involved with development of a groundwater management plan (AB 3030 plan) to proscribe collective management of the basin. With ample storage, ability to recharge the basin by spreading surface waters and apparent flexibility in managing groundwater levels without subsidence problems, the Yucaipa basin could be conjunctively managed both to meet normal annual demands and to meet water resource needs in the event of a drought and curtailment or loss of inconsistent surface water supplies, resulting in a highly reliable water supply. Current goals are to secure agreements not to pump beyond the safe yield of the basin, supplementing supplies with imported surface or groundwaters. Additionally, The YVWD will also be able to receive water from the San Bernardino Basin via the East Branch extension of the State Water Project (SWP) pipeline.

The surface water supplies, which include local surface water supplies and supplies from the SWP, Mill Creek, Santa Ana River, and Seven Oaks Dam, are considered inconsistent in that the supplies will vary year to year based upon hydrology and other demands on these resources.

Recycled water meeting Title 22 requirements is available through the Wochholz water treatment plant and dual plumbing is required to be installed into new developments, including the Heritage Oaks project.

According to YVWD, ample opportunities exist to provide a reliable supply for the community through to its ultimate buildout. In the near term, the District will stabilize

its demands on the groundwater basins, continue developing recycled water and utilize surface waters for direct delivery to customers. Surface supply availability can be used interchangeably depending upon local and statewide hydrology to supplement a stable local groundwater yield. Additionally, the District will incorporate recycled water delivery systems into new development, focusing service of new irrigation demands on recycled water. Recycled water for irrigation and other non-potable water needs will reduce the demands upon the potable water supply.

The project will connect to the YVWD facilities via a looped 8-inch water line located in "C" Street that will connect to the existing water lines within County Line Road and within the existing easement along the western boundary of the site. An 8-inch water line in "D" Street will connect to the "C" Street line and service the proposed homes located on the cul-de-sac.

The existing YVWD water line located in the easement along the western boundary of the subject property may be relocated to "B" Street if it is determined by the YVWD that the water line requires upgrading to service future development areas south of the Heritage Oaks Equestrian Community. The Heritage Oaks project proponent may reconstruct the relocated water to the size necessitated by the development of the community, while YVWD would by responsible for any water line over-sizing needed to service future development.

XVI(e) **Less Than Significant Impact -** Please refer to response XVI(a).

XVI(f) **Less Than Significant Impact -** Solid waste generated by the residents of the project site will be disposed of at the Lamb Canyon Landfill, which is located between the Cities of Beaumont and San Jacinto at 16411 Lamb Canyon Road (State Route 79). The landfill is owned and operated by Riverside County. The landfill encompasses approximately 1,088 acres, of which 178 acres are permitted landfill acreage. From July 1, 2002 to June 30, 2003, the landfill received a total of 190,023 tons, with an average of 598 tons per day. The landfill is currently permitted to receive 1,900 tons per day of trash for disposal and has a remaining disposal capacity of approximately 5,236,958.82 tons as of January 1, 2003.

A proposal was recently approved to expand Lamb Canyon's current refuse footprint to encompass 144.6 acres and increase its maximum daily disposal capacity t o 3,000 tons. The expansion will result in a total landfill capacity of 6.2 million tons, which is estimated to be reached in approximately 2023; however, further landfill expansion potential exists at Lamb Canyon.

According to the California Integrated Waste Management Board, (CIWMB) the solid waste disposal generation rate for single-family residential units in the City of Calimesa is 0.41 tons per person per year. Utilizing an average 2.36 persons[1], the project site will dispose of approximately 53 tons of solid waste per year. According to the Riverside County Waste Management Department (RCWMD), the expansion plans for the Lamb Canyon Landfill were based upon an annual 4 percent growth rate in RCWMD's service area. As with any residential project, the Heritage Oaks project will have an affect on the RCWMD's ongoing solid waste planning efforts; however since the project is within the City's planning projections it is not anticipated

[1] According to the U.S. Census 2000, the City of Calimesa has an average of 2.36 persons per residential unit (see Section XII of this IS/MND)

that the development of 54 residential units will require the construction and/or expansion of any new solid waste facilities.

XVI(g) **Less Than Significant Impact With Mitigation -** In 1989, the California legislature enacted Assembly Bill 939, the California Integrated Waste Management Act (AB 939) with the intent to reduce the amount of solid waste that enters landfills throughout the state. AB 939 mandated a 50 percent reduction or diversion in the waste stream at the county and local levels by the year 2000. Additionally, the California Waste Reuse and Recycling Act of 1991 (AB 1327) was enacted to promote the recycling and diversion of solid waste from landfill disposal. This law requires every jurisdiction in California to adopt an ordinance mandating that space be allocated for the collection of recyclables in development projects. According to the most recent approved diversion rate summary prepared by CIWMB the City of Calimesa diverted 37 percent of its solid waste from landfills in the year 2000. The preliminary diversion rate summary for the year 2002 indicates that the City of Calimesa is diverting 43 percent of its solid waste from landfills. Additionally, according to the Riverside County Waste Management Department, the County has not adopted a specific ordinance to comply with AB 1327; however as a condition of approval the Department recommends mitigation measures that ensure compliance with AB 1327 (see Mitigation Measure XVI-1).

Mitigation Measure XVI-1 The Heritage Oaks project shall incorporate the following:

- Recycle construction waste through available methods, such as onsite grinders and/or wood waste recycling facilities.
- Coordinate with franchise waste hauler to provide for commercial recycling and curbside recycling within residential areas, for pickup of aluminum, paper, plastic, and green waste.
- Use mulch and/or compost in the development and maintenance of common landscaping areas.
- For green waste/woody waste generated from maintenance of common landscape areas, either compost onsite or send to a compost facility. For grass only, consider grass recycling, where lawn clippings from a mulching type mower are left on the lawn.
- Project-related public facilities shall provide an area for the loading and collection of recyclable materials. The design guidelines and plans shall identify these areas.

Implementation of this mitigation measure will reduce project-related solid waste impacts to less than significant.

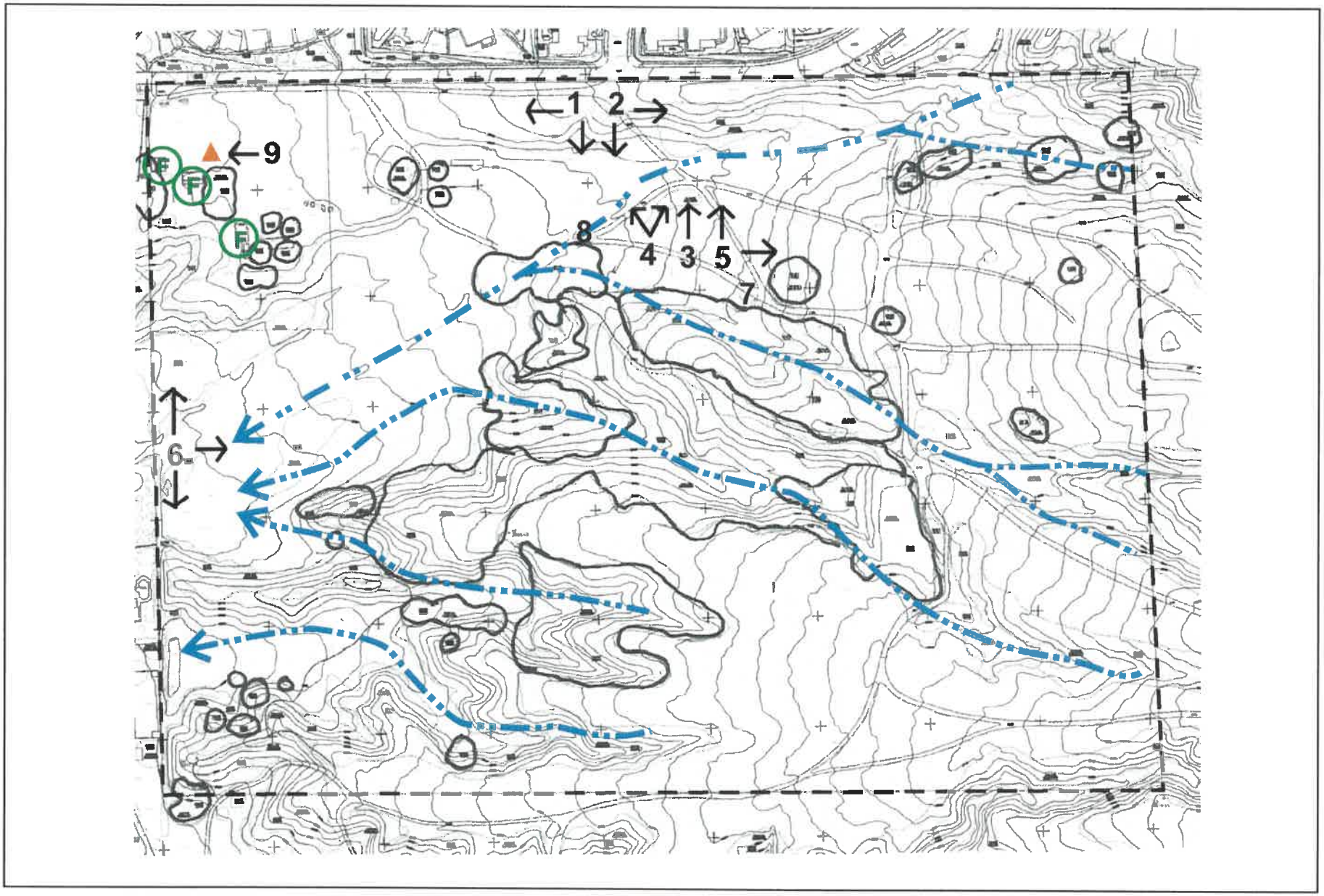
XVII	**Mandatory Findings of Significance**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Does the project:					
a)	Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b)	Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c)	Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Explanation of Checklist Responses:

XVII(a) **Less Than Significant Impact -** Please refer to responses to items IV(a-f) and V(a-d).

XVII(b,c) **Less Than Significant Impact -** Please refer to responses to items I(a) through XVI(g).

Appendix A: Photographic Index



1→ Site Photo Location

Drainage Courses

Oak Trees & Major Vegetation

Mono Pine - Telecommunication Facility

(F) Existing Foundations

NORTH

Michael Brandman Associates

26040001 • 06/2005 | photographic_index.cdr

Photograph #1 – View from County Line Road/Chaparral to South & West

Photograph # 2 – View from County Line Road/Chaparral to South & East

Photograph # 3 – View from Central "Valley" to West

Photograph #4 – View from Central "Valley" to North (City of Yucaipa)

Photograph # 5 – View from Central "Valley" to East

Source: Michael Brandman Associates, 2004.

Photograph #6 - View from West Property Line Looking at Existing Detention Area & Oaks

Photograph #9 – Existing Wireless "Monopine"

Photograph #7 – Debris & "Forts" in Oak Tree

Photograph #8 – More Debris

Source: Michael Brandman Associates, 2004.

Appendix B: Air Quality Analysis

DRAFT

Air Quality Analysis

Heritage Oaks Equestrian Community Specific Plan

Prepared for:

City of Calimesa
908 Park Avenue
Calimesa, CA 92320

Contact: Gabriel Elliot, City Planner

Prepared by:

Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408
909.884.2255

Contact: Michael Hendrix,

October 2004

AIR QUALITY

The following responses are based on the air quality data provided in Appendix A of this document. The air quality data includes an air quality assessment methodology, existing regional and local air quality data, and air emissions calculations.

Where available, the significance criteria established by the applicable air quality management or air pollution control district is relied upon to make the following determinations. Would the project:

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant Impact. The proposed project is subject to the requirements of the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the South Coast Air Quality Management District (SCAQMD). The SCAQMD has developed two criteria to evaluate a project's consistency with the Air Quality Management Plan (AQMP): 1) a project is deemed inconsistent with the applicable AQMP (i.e., the SCAQMD's Air Quality Management Plan for the South Coast Air Basin) if it results in population and/or employment growth that exceeds growth estimates in the applicable AQMP, and 2) a project is inconsistent with air quality plans if emissions resulting from the project exceed the SCAQMD recommended thresholds (SCAQMD thresholds are presented in IIIb).

In evaluating the first criteria for consistency, the proposed project does include residential development but does not include large local or regional employment growth. The proposed project is intended to accommodate 55 residential dwelling units on the project site. Projected population increase is in accordance with the City of Calimesa General Plan and Southern California Association of Governments (SCAG) projected population growth for the project site, which is consistent with the population projections for the project area in the AQMP. Since the project's population projections are consistent with those in the AQMP, the project meets the first criteria of consistency with the AQMP.

In regard to the second criteria for consistency with the AQMP, mitigation addressing oxides of nitrogen (NOx) and reactive organic gases (ROG) emissions during construction (mitigation measures are presented in IIIb) reduce project generated short-term emissions to below the SCAQMD thresholds (see Table 1), and long-term (operational phase) quantities of criteria pollutants are below the thresholds (see Table 3). The level of service (LOS) traffic measurements show that LOS levels are adequate to dissipate any accumulation of emissions. A CO microscale analysis was not warranted. The project meets the two criteria of consistency with the AQMP, and therefore, less than significant impacts would result from this project.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Less Than Significant With Mitigation. The proposed project does have the potential to contribute to the possible violation of an existing air quality standard or an existing or projected air quality violation, but these effects are less than significant as further described below.

The project contemplates the construction and operation of 55 residential dwelling units designed to provide housing for 157 people. Air pollutant emissions associated with the project could occur over the short-term for site preparation and construction activities to support the proposed land use. In addition, emissions could result from the long-term operation of the completed project.

Standards of Significance

The SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether a proposed project could result in a significant impact. If the lead agency finds that the proposed project has the potential to exceed these air pollution thresholds, the project should be considered significant. These thresholds have been defined by SCAQMD for the South Coast Air Basin based on scientific data the SCAQMD has obtained and factual data within the federal and state Clean Air Acts. Since the project is located within the South Coast Air Basin and current air quality in the project site is typical of the air basin as a whole, these thresholds are considered valid and reasonable. Each of these threshold factors is discussed below.

Thresholds for Construction Emissions

The following significance thresholds for construction emissions have been established by the SCAQMD:

- 2.5 tons per quarter or 75 pounds per day of reactive organic gases (ROG)
- 2.5 tons per quarter or 100 pounds per day of oxides of nitrogen (NOx)
- 24.75 tons per quarter or 550 pounds per day of carbon monoxide (CO)
- 6.75 tons per quarter or 150 pounds per day of fugitive dust (PM_{10})
- 6.75 tons per quarter or 150 pounds per day of oxides of sulfur (SOx)

Thresholds for Operational Emissions

Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD Handbook. The criteria include emissions thresholds, compliance with State and National air quality standards, and conformity with existing State Implementation Plan (SIP) or consistency with the current Air Quality Management Plan (AQMP). The daily operational emissions "significance" thresholds are:

Regional Emissions Thresholds

- 55 pounds per day of ROG
- 55 pounds per day of NOx
- 550 pounds per day of CO
- 150 pounds per day of PM_{10} and SOx

Projects in the South Coast Air Basin with operation-related emissions that exceed any of the emission thresholds should be considered to be significant.

Local Emission Standards

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

A project is considered to have significant impacts if project emissions result in an exceedance of one or more of these standards.

Short-Term Construction-Related Impacts

Air quality impacts may occur during site preparation and construction activities required to implement the proposed improvements. Major sources of emissions during construction include exhaust generated from the use of heavy equipment and on-road vehicles, fugitive dust generated as a result of soil disturbance during excavation and grading activities, and the emission of ROG during site paving and painting applications of the structures. Table 1 presents the projected short-term (construction) emissions as a result of the project.

Table 1: Construction Emissions

Source	Pollutants (lb/day)				
	NOx	CO	ROG	SOx	PM_{10}
2005 Grading Phase:					
Maximum Daily Emissions (lbs/day)	45.70	39.64	5.55	>0.01	30.13
Emission Totals (tons/quarter)	2.50	2.24	0.31	>0.01	0.48
Construction (2005) Foundation and Framing Phase:					
Maximum Daily Emissions (lbs/day)	97.51	88.24	12.31	>0.01	4.52
Emission Totals (tons/quarter)	3.17	2.87	0.40	>0.01	0.15
Construction:(Year 2006): Framing, Drywall and Finish Construction and Paving					
Maximum Daily Emissions (lbs/day)	93.56	93.92	124.93	0.06	4.30
Emission Totals (tons/quarter)	2.81	2.82	2.85	>0.01	0.13
Daily Thresholds	100.0	550.0	75.0	150.0	150.0
Quarterly Threshold	2.5	24.75	2.5	6.75	6.75
Exceeds Threshold	**Yes**	**No**	**Yes**	**No**	**No**
Source: Air Quality Data (Appendix A), September, 2004					

As Table 1 indicates, short term emissions of NOx are above the SCAQMD suggested quarterly thresholds. The primary source of NOx emissions is from grading and construction equipment. In an effort to reduce estimated short-term emissions of NOx, a range of reduction measures was considered. Effective emission reduction measures were narrowed to include properly timing and tuning all mobile construction equipment, prohibiting idling of grading and construction equipment for more than 5 minutes, provide temporary traffic control (i.e. flag person) during truck hauling activities provide onsite meals, fuel all grading equipment with aqueous diesel fuel, and extend the grading period over a 1 and one half month period.. As shown in Table 2, with implementation of mitigation the daily and quarterly emissions of all criteria pollutants are below the SCAQMD suggested thresholds.

Table 2: Mitigated Construction Emissions

Source	Pollutants (lb/day)				
	NOx	CO	ROG	SOx	PM_{10}
Grading Phase:					
Maximum Daily Emissions (lbs/day)	45.70	39.64	5.55	0.00	30.13
Emission Totals (tons/quarter)	1.33	1.26	0.17	0.00	0.43
Construction (2005) Foundation and Framing Phase:					
Maximum Daily Emissions (lbs/day)	37.98	38.41	5.11	0.05	1.75
Emission Totals (tons/quarter)	1.23	1.25	0.17	>0.01	0.06
Construction:(Year 2006): Framing, Drywall and Finish Construction and Paving					
Maximum Daily Emissions (lbs/day)	43.40	47.38	44.65	0.05	1.87
Emission Totals (tons/quarter)	1.37	1.50	1.05	>0.01	0.06
Daily Thresholds	100.0	550.0	75.0	150.0	150.0
Quarterly Threshold	2.5	24.75	2.5	6.75	6.75
Exceeds Threshold	**No**	**No**	**No**	**No**	**No**
Source: Air Quality Data (Appendix A), September, 2004					

Mitigation Measures

The following mitigation measures are considered feasible, practical, and effective and are recommended to reduce emissions from the proposed project:

AQ-1 **Traffic Control Plan**

Prior to construction of the proposed improvements, the project proponent will provide a traffic control plan that will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e., flag person) during transportation of materials, construction worker trips and other construction related truck hauling activities.

AQ-2 **Timing and Tuning of Construction Equipment**
During construction of the proposed improvements, construction equipment will be properly maintained at an offsite location and includes proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.

AQ-3 **Reduce Idling of Construction Equipment**
During construction of the proposed improvements, all contractors will be advised not to idle construction equipment on site for more than ten minutes.

AQ-4 **Use of Aqueous Diesel Fuel**
During construction of the proposed improvements, contractors will be advised to fuel all diesel fueled construction equipment with aqueous Diesel Fuel.

AQ-5 **Use of Low VOC Paints and HVLP Spray Equipment**
During construction of the proposed improvements, only low volatility paints and coatings as defined in SCAQMD Rule 1113 shall be used. All paints shall be applied using either high volume, low-pressure (HVLP) spray equipment or by hand application.

AQ-6 **Use of Temporary Construction Power On-Site**
During construction of the proposed improvements, the project applicant will provide on-site electrical hook ups for electric construction tools, such as saws, drills, and compressors to eliminate the need for diesel powered electric generators.

The project area is designated a non-attainment area for ozone, CO, and PM-10. The preceding analysis determined that with the mitigation measure in place short-term emissions are below the SCAQMD thresholds for all criteria pollutants. Long-term emissions are a net reduction from the existing land use. Therefore, the project generated emissions would not contribute to a violation of federal or state ambient air quality standards.

Long-Term Air Quality Impacts

Long-term air quality impacts are those associated with the emissions produced from project-generated vehicle trips as well as from stationary sources related to the use of natural gas for heating, the use of electricity for lighting and ventilation, and the use of landscape maintenance equipment.

Mobile Source Emissions

Emissions generated by project-related trips are based on the URBEMIS 2002 computer model assuming full occupancy in 2007.

Stationary Source Emissions

Stationary source emissions include both the use of natural gas for space and water heating as well as the use of landscape equipment. These values were determined using the URBEMIS 2002 computer model.

Projected emissions are included in Table 3. Note that all values are within the daily criteria levels and no significant impacts are projected. Model runs are included in Appendix A.

Table 3: Daily Operational Emissions

Source	Pollutants (lb/day)				
	NOx	CO	ROG	SOx	PM_{10}
Operational Total	8.11	6.46	64.13	0.06	5.62
Threshold	55.0	550.0	55.0	150.0	150.0
Exceeds Threshold	No	No	No	No	No
Source: Air Quality Data (Appendix A), September, 2004					

Implementation of mitigation measures incorporated above will ensure that the proposed project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Less Than Significant. The project-specific evaluation of emissions supports a conclusion that air quality impacts for the proposed project are less than significant on an individual project basis. CEQA Guidelines § 15064 (i)(3) addresses evaluation of cumulative effects allowing the use of approved land use documents in a cumulative impact analysis. In addressing cumulative effects for air quality, the AQMP is the most appropriate document to use because the AQMP sets forth a comprehensive program that will lead the SCAB, including the project site, into compliance with all federal and state air quality standards and utilizes control measures and related emission reduction estimates based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Since with mitigation the proposed project is in conformance with the AQMP and the project is not significant on an individual basis, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable.

d) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant Impact. The proposed project will have a less than significant impact on pollution concentrations. The analysis of short-term and long-term emissions previously described indicates that with mitigation on construction activities, all emissions are below the SCAQMD thresholds of significance. These emissions are anticipated to be further diluted as they mix with the surrounding air downwind of the proposed project. In addition, CO

hotspots are not anticipated as a result of the proposed project. Considering the quantity and dissipation of emissions produced by the project in the project area, the project will not expose sensitive receptors to substantial pollutant concentrations. No additional impacts would result from this project.

e) *Create objectionable odors affecting a substantial number of people?*

Less Than Significant Impact. Odors are one of the most obvious forms of air pollution to the general public. Odors can present significant problems for both the source and the surrounding community. Although offensive odors seldom cause physical harm, they can cause agitation, anger, and concern to the general public. Most people determine an odor to be offensive (objectionable) if it is sensed longer than the duration of a human breath; typically 2 to 5 seconds.

The only potential odors associated with the project are from the diesel exhaust, and the application of asphalt and paint during the construction period. These odors, if perceptible, are common in the environment, would dissipate rapidly as they mix with the surrounding air, and would be of very limited duration. Therefore, any potential odor impacts would be considered as less than significant.

Appendix A: Air Quality Modeling

BASELINE CONDITIONS IN THE PROJECT AREA

The project site is located in the City of Calimesa within the South Coast Air Basin (SCAB). Exhibits 1 and 2 in the Initial Study show the regional location and vicinity map for the proposed residential housing development. The SCAB consists of Orange County, together with the coastal and mountain portions of Los Angeles, Riverside, and San Bernardino Counties. Regionally, the interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area, while the pattern typically reverses in the evening, flowing from the inland areas to the ocean (SCAQMD, 1993). Air stagnation may occur during the early evening and early morning during periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. Locally, the prevailing wind is generally from northwest to the southeast (Exhibit 3, Wind Rose).

The most recent published data for the project area is presented in Table 1, Air Quality Monitoring Summary 1992-2002. This data shows that the baseline air quality conditions in the project area include occasional events of very unhealthful air. Even so, the frequency of smog alerts has dropped significantly in the last decade. The greatest recognized air quality problem in the SCAB is ozone. The yearly monitoring records document that prior to 1995, over 28 percent of the days each year experienced a violation of the state hourly ozone standard, with around ten days annually reaching first stage alert levels of 0.20 part per million (ppm) for 1 hour. It is encouraging to note that ozone levels have dropped significantly in the last few years with less than 3 percent of the days each year experiencing a violation of the state hourly ozone standard in 2001. Locally, no first stage alert (0.20 ppm/hour) has been called by SCAQMD in over 2 years, and no second stage alert (0.35 ppm/hour) has been called by SCAQMD in the last 10 years. Note that although ozone pollution decreased in recent years, this downward trend reversed slightly in 2002 with approximately 7 percent of the days that year experiencing a violation of the state hourly ozone standard.

TABLE 1-SOURCE RECEPTOR AREA 29
AIR QUALITY MONITORING SUMMARY- 1992-2002

	Pollutant/Standard Source: CARB 1/25/99	Monitoring Year										
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. Days Exceeded	**Ozone [a]:**											
	California Standard:											
	1-Hour - 0.09 ppm	66 [b]	38 [b]	63 [b]	48 [b]	47 [b]	34 [b]	57 [c]	55 [c]	52 [c]	63 [c]	64 [c]
	Federal Primary Standards:											
	1-Hour - 0.12 ppm	19 [b]	8 [b]	25 [b]	15 [b]	11 [b]	2 [b]	25 [c]	5 [c]	4 [c]	16 [c]	13 [c]
	8-Hour - 0.08 ppm [a]						9 [b]	52 [c]	33 [c]	39 [c]	49 [c]	52 [c]
	Max 1-Hour Conc. (ppm)	0.16 [b]	0.16 [b]	0.20 [b]	0.18 [b]	0.19 [b]	0.13 [b]	0.17 [c]	0.14 [c]	0.14 [c]	0.149 [c]	0.160 [c]
	Max 8-Hour Conc. (ppm) [a]						0.10 [b]	0.14 [c]	0.13 [c]	0.111 [c]	0.129 [c]	0.131 [c]
No. Days Exceeded	**Carbon Monoxide [d]:**											
	California Standard:											
	1-Hour - 20 ppm	0	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0	0	0	0
	Federal Primary Standards:											
	1-Hour - 35 ppm	0	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.5 ppm	0	0	0	0	0	0	0	0	0	0	0
	Max 1-Hour Conc. (ppm)	5.0	6.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
	Max 8-Hour Conc. (ppm)	2.4	2.0	1.9	1.5	1.6	1.4	1.6	1.8	1.6	1.5	1.2
No. Days Exceede	**Nitrogen Dioxide:**											
	California Standard:											
	1-Hour - 0.25 ppm	0 [d]	0 [d]	0 [d]	0 [d]	0 [d]	0 [d]	1 [c]	1 [c]	0 [c]	0 [c]	0 [c]
	Federal Standard:											
	Annual Standard - 0.053ppm	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]
	Max. 1-Hour Conc. (ppm)	0.09 [d]	0.15 [d]	0.08 [d]	0.09 [d]	0.08 [d]	0.07 [d]	0.23 [c]	0.31 [c]	0.21 [c]	0.24 [c]	0.15 [c]
No. Days Exceeded	**Sulfur Dioxide [e]:**											
	California Standards:											
	1-Hour – 0.25 ppm	0	0	0	0	0	0	0 [c]	0	0	0	0
	24-Hour – 0.04 ppm	0	0	0	0	0	0	0 [c]	0	0	0	0
	Federal Primary Standards:											
	24-Hour – 0.14 ppm	0	0	0	0	0	0	0 [c]	0	0	0	0
	Annual Standard – 0.03 ppm	No [g]	No [g]	No [g]	No [g]	No [g]	No [g]	No [e]	No [g]	No [g]	No [g]	No [g]
	Max. 1-Hour Conc. (ppm)	0.02	0.02	0.02	0.01	0.01	0.04	0.03 [c]	0.03	0.11	0.02	.0.02
	Max. 24-Hour Conc. (ppm)	0.026	0.010	0.005	0.006	0.004	0.007	0.010 [c]	0.011	0.041	0.011	0.002
No. Days Exceeded	**Inhalable Particulates (PM-10):**											
	California Standards:											
	24-Hour - 50 $\mu g/m^3$	8 [b]	10 [b]	14 [b]	7 [b]	10 [b]	14 [b]	2 [c]	4 [c]	5 [c]	7 [a]	6 [c]
	Annual Geometric Mean ($\mu g/m^3$)	29.5 [b]	26.0 [b]	27.3 [b]	24.5 [b]	26.8 [b]	30.1 [b]	23.5 [c]	29.8 [c]	24.7 [c]	25.7 [a]	23.7 [c]
No Days	Federal Primary Standards:											
	24-Hour – 150 $\mu g/m^3$	0 [b]	0 [b]	0 [b]	0 [b]	0 [b]	1 [b]	0 [c]	0 [c]	0 [c]	1 [a]	0 [c]
	Annual Arithmetic Mean ($\mu g/m^3$)	34.3 [b]	32.5 [b]	35.0 [b]	30.1 [b]	34.3 [b]	38.2 [b]	27.0 [c]	34.5 [c]	29.1 [c]	35.1 [a]	27.5 [c]
	Max. 24-Hour Conc. ($\mu g/m^3$)	89.0 [b]	87.0 [b]	96.0 [b]	138.0 [b]	122.0 [b]	227.0 [b]	62.0 [c]	88.0 [c]	69.0 [c]	218.0 [a]	70.0 [c]
No Days Exceeded	**Inhalable Particulates (PM-2.5):**											
	Federal Primary Standards:											
	Annual Standard – 15$\mu g/m^3$								No [g]	No [g]	Yes [g]	No [c]
	24-Hour – 65 $\mu g/m^3$								0 [f]	0 [f]	0 [f]	0 [f]
	Annual Arithmetic Mean ($\mu g/m^3$)								12.6 [f]	9.6 [f]	10.8 [f]	10.0 [f]
	Max. 24-Hour Conc. ($\mu g/m^3$)								29.6 [f]	28.5 [f]	44.7 [f]	42.3 [c]

Note: [a] 1997 is first year of SCAQMD records for federal 8-hour Ozone standard.
[b] San Gergonio Pass air monitoring station in Banning (SRA 29) data summaries for ozone and PM-10 during years 1991-97.
[c] Banning Airport air monitoring station (also in SRA 29) data summaries for ozone, NO_2 and PM-10 during years 1997-2002.
[d] Palm Springs air monitoring station (SRA 30) data summaries for NO_2, during years 1991-97 and CO during all years.
[e] Riverside air monitoring station (SRA 23) data summaries for SO_2 during all years.
[f] 1999 is first year of SCAQMD records for federal 24-hour PM-2.5 standard and was monitored at the Palm Springs Monitoring Station (SRA 30)
[g] Exceedance of the Annual Standards are expressed as either Yes or No indicating whether or not the standard has been exceeded for that year.

USE OF URBEMIS 2002 IN DETERMINING PROJECT EMISSIONS

URBEMIS is a computer program that can be used to estimate emissions associated with land use development projects in California. URBEMIS, which stands for Urban Emissions Model, was originally created by the California Air Resources Board in the early 1980s. Since that time it has undergone several revisions.

This version (URBEMIS 2002 for Windows version 7.4.2), distributed in May 2003 in coordination with the California Air Pollution Control Officers' Association (CAPCOA), is the most current version of the URBEMIS software available at this time. Several changes in the use and defaults of URBEMIS 2002 for Windows were initiated to reflect specific conditions unique to this project. The following discussion summarizes model use and model default modifications.

Short-term Emissions: Construction of the proposed project will require one year to complete. The length of time for construction differs from the model assumptions for normal construction projects. They are as follows:

Grading of approximately11-acres will take approximately 1.2 months to complete. Daily disturbance was changed to 2.8 acres per day to reflect the extended time to grade the site. The daily inventory of grading equipment includes 2 tractors, loaders, or backhoes and 2 water trucks.

Construction of facilities is also extended and will require approximately 10.8 months to complete. The daily inventory of equipment used during construction included 2 industrial saws, 2 fork lift, and 4 other construction equipment including concrete trucks, concrete pumps, compressors, small electric generators, welders etc.

Painting of the buildings was staggered over approximately 2.0 months to reflect the extended construction time and the fact that construction of many of the individual buildings within the facility will be staggered over the construction period.

Asphalt paving was expected to require approximately 0.5 months to complete. The daily inventory of paving equipment used during asphalt paving operations includes 1 grader, 1 paver, 1 roller, 1 other paving equipment and 1 tractor.

Long-term Emissions: The default vehicle mix was used. Trip generation rates determined by the focused traffic study prepared by LSA Associates and were identified as 9.57. The target year for operational emissions and landscape equipment was changed from 2004 to 2006 to reflect projected build-out of the proposed project.

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URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Heritage Oaks\Heritage Oaks A.urb
Project Name: Heritage Oaks II
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2005
Construction Duration: 12
Total Land Use Area to be Developed: 11 acres
Maximum Acreage Disturbed Per Day: 2.8 acres
Single Family Units: 55 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2005***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	28.00	-	28.00
Off-Road Diesel	5.45	45.58	37.31	-	2.12	2.12	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.10	0.12	2.33	0.00	0.01	0.00	0.01
Maximum lbs/day	5.55	45.70	39.64	0.00	30.13	2.12	28.01
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	12.04	97.36	85.05	-	4.47	4.47	0.00
Bldg Const Worker Trips	0.27	0.15	3.18	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	12.31	97.51	88.24	0.00	4.52	4.48	0.04
Max lbs/day all phases	12.31	97.51	88.24	0.00	32.49	4.48	28.01
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	12.04	93.28	87.88	-	4.22	4.22	0.00
Bldg Const Worker Trips	0.25	0.14	3.02	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	112.39	-	-	-	-	-	-
Arch Coatings Worker Trips	0.25	0.14	3.02	0.00	0.04	0.00	0.04
Asphalt Off-Gas	0.95	-	-	-	-	-	-
Asphalt Off-Road Diesel	6.88	47.63	54.49	-	2.02	2.02	0.00
Asphalt On-Road Diesel	0.22	3.41	0.79	0.06	0.09	0.09	0.00
Asphalt Worker Trips	0.04	0.02	0.43	0.00	0.01	0.00	0.01
Maximum lbs/day	124.93	93.56	93.92	0.06	4.30	4.22	0.08
Max lbs/day all phases	124.93	93.56	93.92	0.06	4.30	4.22	0.08

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Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jun '05
Phase 2 Duration: 1.2 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jul '05
Phase 3 Duration: 10.8 months
Start Month/Year for SubPhase Building: Jul '05
SubPhase Building Duration: 9.5 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Concrete/Industrial saws	84	0.730	8.0
4	Other Equipment	190	0.620	8.0
2	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Feb '06
SubPhase Architectural Coatings Duration: 2 months
Start Month/Year for SubPhase Asphalt: May '06
SubPhase Asphalt Duration: 0.5 months
Acres to be Paved: 4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Tractors	255	0.410	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

Page: 3

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.05	0.69	0.29	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.05	0.01	0.49	0.02	0.00
Consumer Prdcts	2.69	-	-	-	-
TOTALS(lbs/day,unmitigated)	2.80	0.70	0.79	0.02	0.00

Page: 4

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	5.31	5.76	63.34	0.04	5.62
TOTAL EMISSIONS (lbs/day)	5.31	5.76	63.34	0.04	5.62

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	10.06 trips / dwelling units	55.00	553.30

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential	Commercial

	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
rban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Page: 5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Changes made to the default values for Area

The landscape year changed from 2004 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2007.

Page: 1

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\October Heritage Oaks\Heritage Oaks mitigated(mikeEdits2).urb
Project Name: Heritage Oaks II
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2005
Construction Duration: 12
Total Land Use Area to be Developed: 11 acres
Maximum Acreage Disturbed Per Day: 2.8 acres
Single Family Units: 55 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2005***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	28.00	-	28.00
Off-Road Diesel	5.45	45.58	37.31	-	2.12	2.12	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.10	0.12	2.33	0.00	0.01	0.00	0.01
Maximum lbs/day	5.55	45.70	39.64	0.00	30.13	2.12	28.01
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.87	37.84	35.54	-	1.71	1.71	0.00
Bldg Const Worker Trips	0.24	0.13	2.86	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	5.11	37.98	38.41	0.00	1.75	1.71	0.04
Max lbs/day all phases	5.55	45.70	39.64	0.00	30.13	2.12	28.01
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00

Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	4.87	36.36	36.49	-	1.60	1.60	0.00
Bldg Const Worker Trips	0.22	0.13	2.72	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	39.34	-	-	-	-	-	-
Arch Coatings Worker Trips	0.22	0.13	2.72	0.00	0.04	0.00	0.04
Asphalt Off-Gas	0.95	-	-	-	-	-	-
Asphalt Off-Road Diesel	5.85	40.49	46.32	-	1.72	1.72	0.00
Asphalt On-Road Diesel	0.19	2.90	0.67	0.05	0.08	0.08	0.00
Asphalt Worker Trips	0.04	0.02	0.39	0.00	0.01	0.00	0.01
Maximum lbs/day	44.65	43.40	47.38	0.05	1.87	1.79	0.08
Max lbs/day all phases	44.65	43.40	47.38	0.05	1.87	1.79	0.08

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Construction-Related Mitigation Measures

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jun '05
Phase 2 Duration: 1.2 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jul '05
Phase 3 Duration: 10.8 months
Start Month/Year for SubPhase Building: Jul '05
SubPhase Building Duration: 9.5 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
2	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Feb '06
SubPhase Architectural Coatings Duration: 2.0 months
Start Month/Year for SubPhase Asphalt: May '06
SubPhase Asphalt Duration: 0.5 months
Acres to be Paved: 4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Tractors	255	0.410	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0

Page: 3

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.05	0.69	0.29	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.05	0.01	0.49	0.02	0.00
Consumer Prdcts	2.69	-	-	-	-
TOTALS(lbs/day,unmitigated)	2.80	0.70	0.79	0.02	0.00

Page: 4

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	5.31	5.76	63.34	0.04	5.62
TOTAL EMISSIONS (lbs/day)	5.31	5.76	63.34	0.04	5.62

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	10.06 trips / dwelling units	55.00	553.30

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial
	Home-	Home-	Home-	

	Work	Shop	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

Page: 5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time &Tune Engines-Reduce Idle TIme-Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Reduce Idle Time &Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Reduce Idle Time &Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Time &Tune Engines-Reduce Idle TIme-Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure On-Road Diesel Exhaust: Time &Tune Engines-Reduce Idle TIme-Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Reduce Idle Time &Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Offgassing: HVLP Spray or Hand Application with Low VOC Paint
has been changed from off to on.

Changes made to the default values for Area

The landscape year changed from 2004 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2007.

CO Hotspots

Carbon Monoxide (CO) is a localized problem requiring additional analysis beyond total project emissions quantification. Projects with sensitive receptors or projects that could negatively impact levels of service (LOS) of existing roads need to use the California Department of Transportation Carbon Monoxide Protocol (hereafter referred to as the CO protocol) to determine the potential to create a CO hot spot. A CO hot spot is a localized concentration of CO that is above the State or Federal 1-hour or 8-hour ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The proposed project is not anticipated to negatively impact the LOS on adjacent roadways and therefore, does not require a CO hotspot analysis.

Appendix C: Biological Resources Assessment and Oak Tree Preservation Guidelines

Biological Resources Assessment
Heritage Oaks Equestrian Community
City of Calimesa, Riverside County, CA

Prepared for:

Storm Western Development
23223 South Normandie Boulevard
Torrance, CA 90501

Contact: Kent Phillips, President

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Scott Holbrook, Project Manager

June 2005

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SECTION 1: INTRODUCTION

At the request of Storm Western Development, Michael Brandman Associates (MBA) conducted a study of the biological resources that occur on a 54-acre parcel (APN No. 407-030-002) in the City of Calimesa in Riverside County (Exhibits 1 and 2). Proposed development plans for this site, known as the Heritage Oaks Equestrian Community Specific Plan parcel, involve construction of up to 54 single-family homes, local streets, landscaping, utilities, and related infrastructure. This report describes the vegetation and wildlife observed, or potentially present, and other biological resources associated with the subject parcel. Relevant literature was reviewed and surveys of the site were conducted to identify and characterize the vegetation and habitat types present, determine the general condition of the site, and assess whether sensitive habitat types or species of animals or plants designated as having special status may occur thereon. Conclusions are presented regarding whether the proposed project could result in adverse affects on such resources, if present.

The property is located in Section 17, Township 2 South, Range 1 West, as depicted on the USGS 7.5 minute topographic quadrangle map for Yucaipa, Ca. (Exhibit 2). The property lies adjacent to the south side of County Line Road approximately 3 miles due east from Interstate 10 (Exhibit 2).

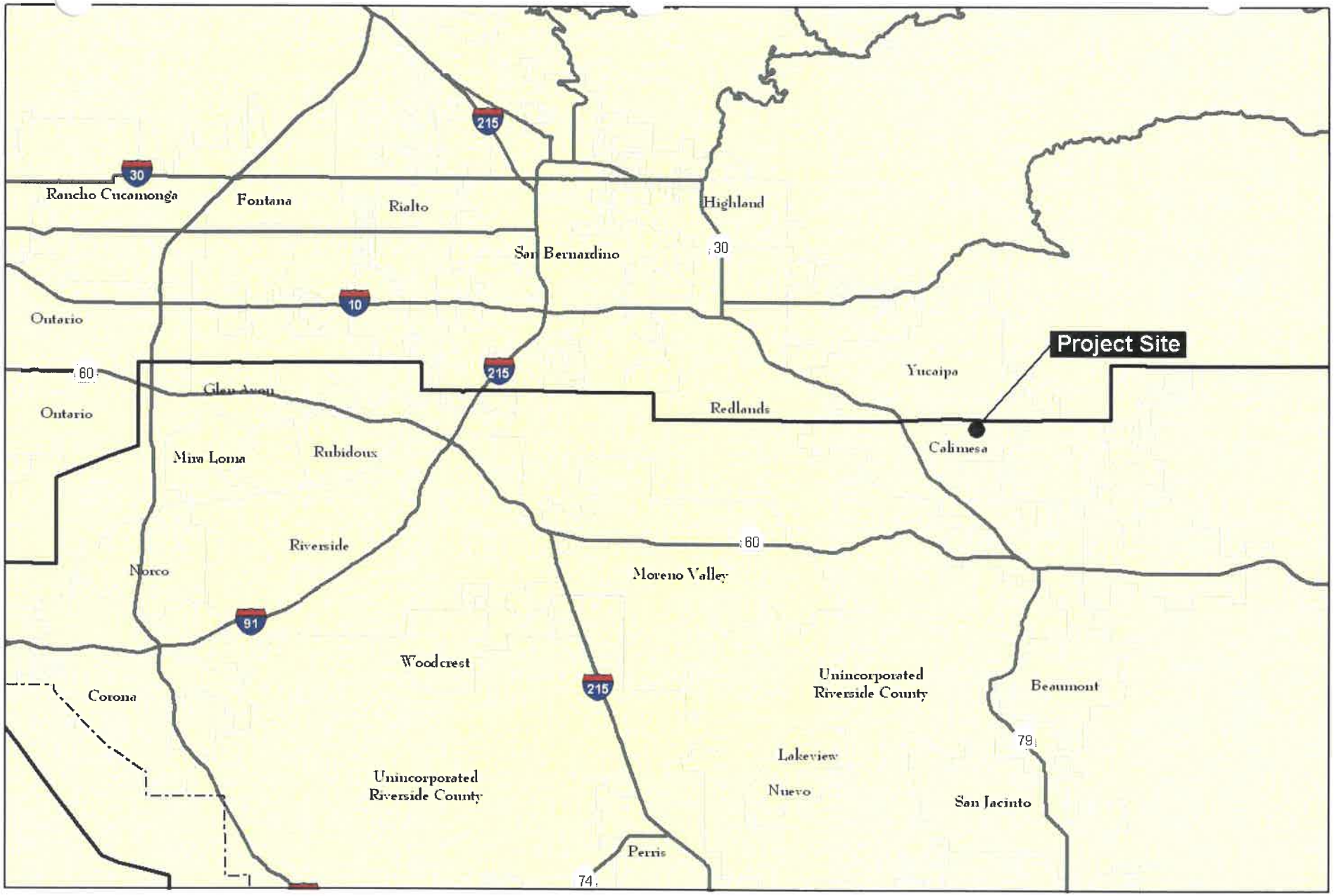
The City of Calimesa is a signatory agency and a participant in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Review of the site location with respect to the MSHCP concluded that the site does not fall within a "criteria area." However, the MSHCP does require habitat assessments and/or focused surveys for burrowing owls and Narrow Endemic Plant Species as part of the review of biological resources for the subject parcel. Furthermore, the City of Calimesa's Ordinance No. 212, institutes the MSHCP development fee requirement for new development within the City's jurisdiction. Therefore, in compliance with the MSHCP and the City's ordinance the project applicant is required to pay the applicable "local development mitigation fee" to the City. This fee program has been established "to ensure that all new development within the City pay its fair share of the costs of acquiring and preserving vegetation communities and natural areas within the City and the region which are known to support plant and wildlife species covered by the MSHCP."

1.1 - SITE PLAN RECONFIGURATION

This biological analysis has been revised to address changes to the Specific Plan that were made since the study was originally completed in November 2004. The project applicant and the representatives from the City of Calimesa conducted meetings with representatives from two natural resource environmental advocate groups (the Center for Biological Diversity and the Audubon Society) to

discuss a previous iteration of the Specific Plan. Both environmental group representatives accepted the proposed plan as being carefully configured so as to respect and retain the site's most significant natural resources, its oak woodlands but offered two suggestions that have been incorporated into the Specific Plan. One suggestion involved modifying the site's layout to improve open space connectivity and provide obvious "outlets" to promote ready escape for any terrestrial mammals that wander into the site. The other recommendation was to include a plant palette of predominantly native, drought tolerant species for planting along the interface between occupied lots and natural open space. The current Specific Plan incorporates the site plan modifications to improve connectivity and includes the suggested palette for residential/open space buffer plantings. It is intended that these modifications result in a net benefit to the natural resources retained within the parcel.

The modifications to the site plan and the associated minor changes in grading impacts have not resulted in any substantially different biological impacts as compared with the previous site plan. However, it should be noted that in all, the current plan would result in the loss of up to seven individual live oak specimens as compared with four trees removed under the previous site plan. This difference is not considered a significant additional loss, because at least 114 (and possibly 115) of the site's 121 trees (94 - 95 percent) will be preserved. The site's oak tree resources and the project impacts are discussed in the subsequent sections of this study.



Source: Census 2000 Data.

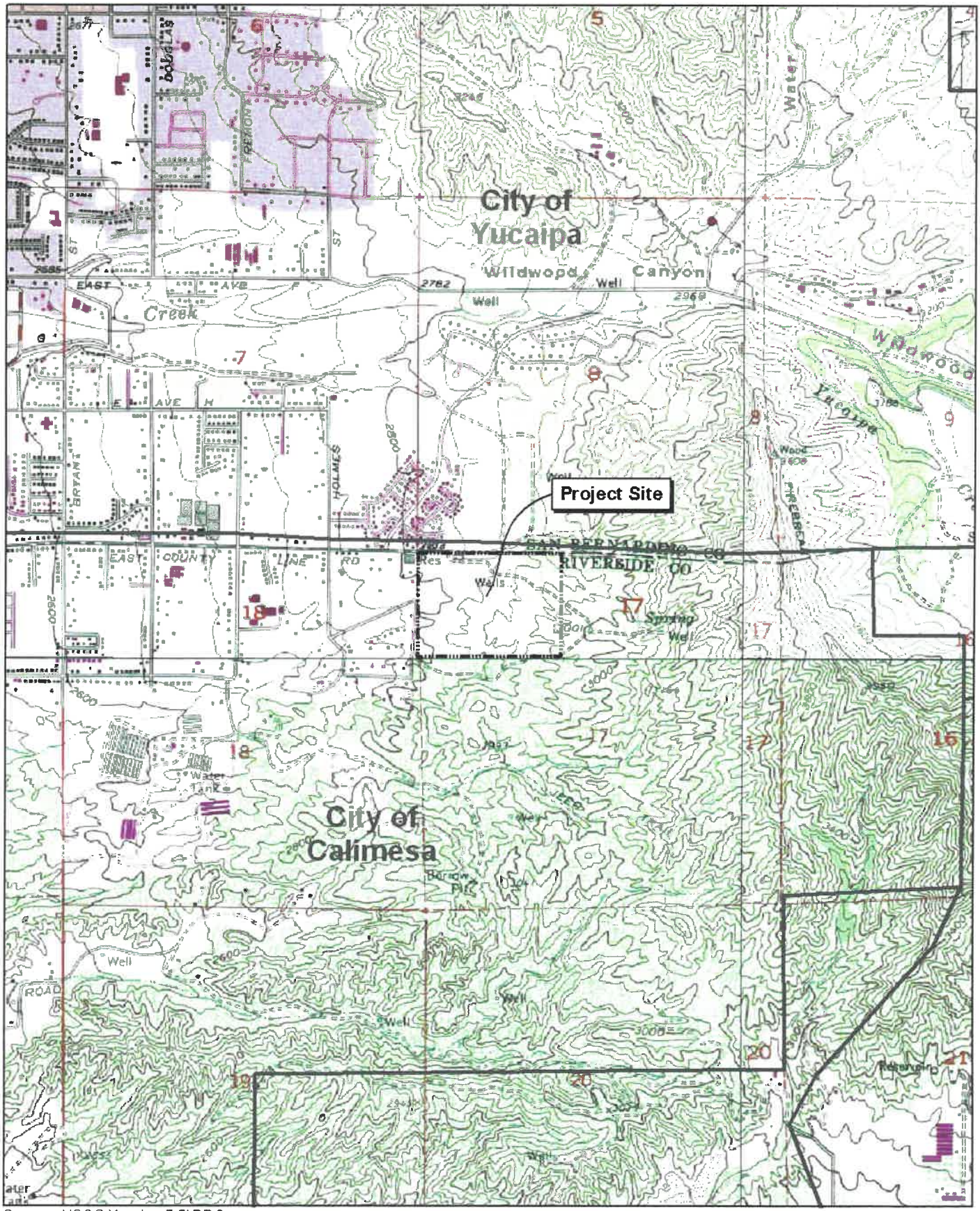
NORTH

5 2.5 0 5 Miles

Michael Brandman Associates

26040001 • 08/2004 | 1_regional.mxd

Exhibit 1
Regional Location Map



Source: USGS Yucaipa 7.5' DRG.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26040001 • 08/2004 | 2_local.apr

Exhibit 2
Local Vicinity Map

SECTION 2: METHODS

The study of biological resources associated with the property included a review of relevant literature and field surveys. MBA senior biologist Scott Crawford conducted a general pedestrian survey and habitat evaluation on March 30, 2004. MBA resource ecologist Scott Holbrook also performed field work on several days in March, April, June, and October 2004 to map vegetation, assess drainage features potentially subject to state or federal jurisdiction as "waters", and to precisely map locations and canopy (driplines) of coast live oak trees with the assistance of a surveying crew. Mr. David Hayes, a certified arborist also conducted a tree survey and evaluation of all mature coast live oak trees present on the parcel. The Oak Tree Location Map is included in Appendix B: Oak Tree Evaluation.

2.1 - LITERATURE REVIEW

A biological study of the parcel prepared in 2001 by A. Sanders for the prior property owner was thoroughly reviewed and the findings of that study are incorporated and referenced herein where relevant. A compilation of sensitive plant and wildlife species recorded in the vicinity of the property was obtained from the California Natural Diversity Database (CNDDB), a database of sensitive species and plant community accounts maintained by the California Department of Fish and Game (CDFG). Additional records of plant species found in the general vicinity of the site were obtained from the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California database. The CNDDB and CNPS searches were not limited to the property itself but included an area extending a reasonable distance away from the site (approximately 7 miles). This region encompassed the USGS 7.5-minute topographic quadrangle maps for Yucaipa, Beaumont, El Casco, and Forest Falls. Federal register listings, survey protocols, and species data provided by the U.S. Fish and Wildlife Service (USFWS) and CDFG were also reviewed with respect to federal and state listed or special status species potentially occurring in the vicinity. These and other references are listed in References Section.

2.2 - FIELD SURVEYS

The general biological survey of the subject parcel was conducted on foot and all exposed areas were inspected visually. The biologists referred to a USGS 7.5-minute topographic quadrangle, and aerial photographs for reference while conducting the survey. Survey objectives were to identify the site's plant communities and characteristics, inventory the site's general condition and existing vegetation, and assess the potential for sensitive species of plant or wildlife, or sensitive habitat designated as such by federal, state or local conservation agencies to occur on site. All common plant species observed on site were noted, except annual grass species, and all native species encountered were

identified. A compendium of plant and animal species identified on the property is included in Appendix A of this document.

Plant communities were mapped using 7.5-minute USGS topographic base maps, recent aerial photography (ca. 2003). Plant communities on the property were classified at a general level of detail using the widely accepted descriptions provided in Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986 and 1992 update).

Common plant species were readily identified by visual characteristics and morphology in the field. Unusual and less familiar plants were identified from sampling using taxonomical guides. Taxonomic nomenclature used in this study follows Hickman (1993). Common plant names, when not available from Hickman (1993), were taken from Munz (1974) or Roberts (1998). In this report, scientific names are provided immediately following common names of plant species (first reference only), because common names vary considerably among many botanical reference sources.

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys. Field guides were used to assist with identification of species during surveys and included Stebbins (1985) for amphibians and reptiles, National Geographic Society (1987) for birds, and Burt and Grossenheider (1980) for mammals. Since common names of wildlife species are fairly well standardized, scientific names are not generally used in this report but are provided in Appendix A for reference. Appendix A lists all vertebrate wildlife species observed or detected on the property during the survey.

A general wildlife survey of the property was conducted in appropriate habitats during daylight hours. The purpose of this reconnaissance-level effort was not to search exhaustively for every species occurring within the property, but to ascertain general conditions and identify habitat areas that could be suitable for various common and special status species. Common species are generally considered potentially present on the property if suitable habitat is present and the area lies within a species' geographic range. Habitat areas were investigated for diagnostic wildlife sign such as nests, burrows, tracks, vocalizations, and any direct observations of specimens or their sign were recorded. The surveyor also inspected surface litter and occasionally turned stones, fallen bark, and tree branches to look for secretive reptiles and amphibians. Many reptiles, amphibians, and mammals are secretive by nature and some are only nocturnally (nighttime) active, making diurnal (daytime) observations problematic. Observations of diagnostic signs may provide evidence of occurrence of these species. Otherwise, conclusions regarding potential occurrence are based on consideration of habitat suitability factors.

An effort to locate and identify raptor (birds of prey) nests was also conducted during the reconnaissance-level study. Such efforts include direct and incidental observation of raptor nests, owl pellets, and the identification of soaring or perched raptor species observed (if any).

2.3 - USACE AND CDFG JURISDICTIONAL AREAS

In general, surface drainage features indicated as blue-line streams on USGS maps and that are observed or expected to exhibit evidence of flow are typically subject to state and federal regulatory authority as "waters." The surveyor reviewed USGS topographic maps and recent aerial photography (2003) prior to conducting general surveys and used these references, as well as the topographic base map for the site to locate and inspect natural drainage features that may be considered jurisdictional by either USACE or CDFG. The on site drainage feature were re-inspected on October 30, 2004, following two significant rainfall events, to confirm the limits of potential jurisdictional areas based on current evidence of flows.

SECTION 3:
ENVIRONMENTAL SETTING

3.1 - GENERAL SITE DESCRIPTION

The rectangle-shaped property lies just southwest of the base of the foothills of the western San Bernardino Mountains near the westward limit of a mild east-trending downslope of a broad alluvial bajada. Site elevations range from 2780 to 2930 feet above sea level. The site is bounded to the north by County Line Road and medium-density residential development. Semi-rural development borders the site on the west. Undeveloped open space lies to the south and east. Several prominent arroyos (small deep canyons) dissect the site from west to east. Upland areas above the arroyos support annual grassland vegetation and exhibit evidence of historic use as dryland farming or grazing. The arroyos and sloped areas support stands of chamise and scrub oak chaparral and several substantial patches of coast live oak woodland. A single ephemeral drainage crosses the entire length of the site, draining from east to west.

Soils

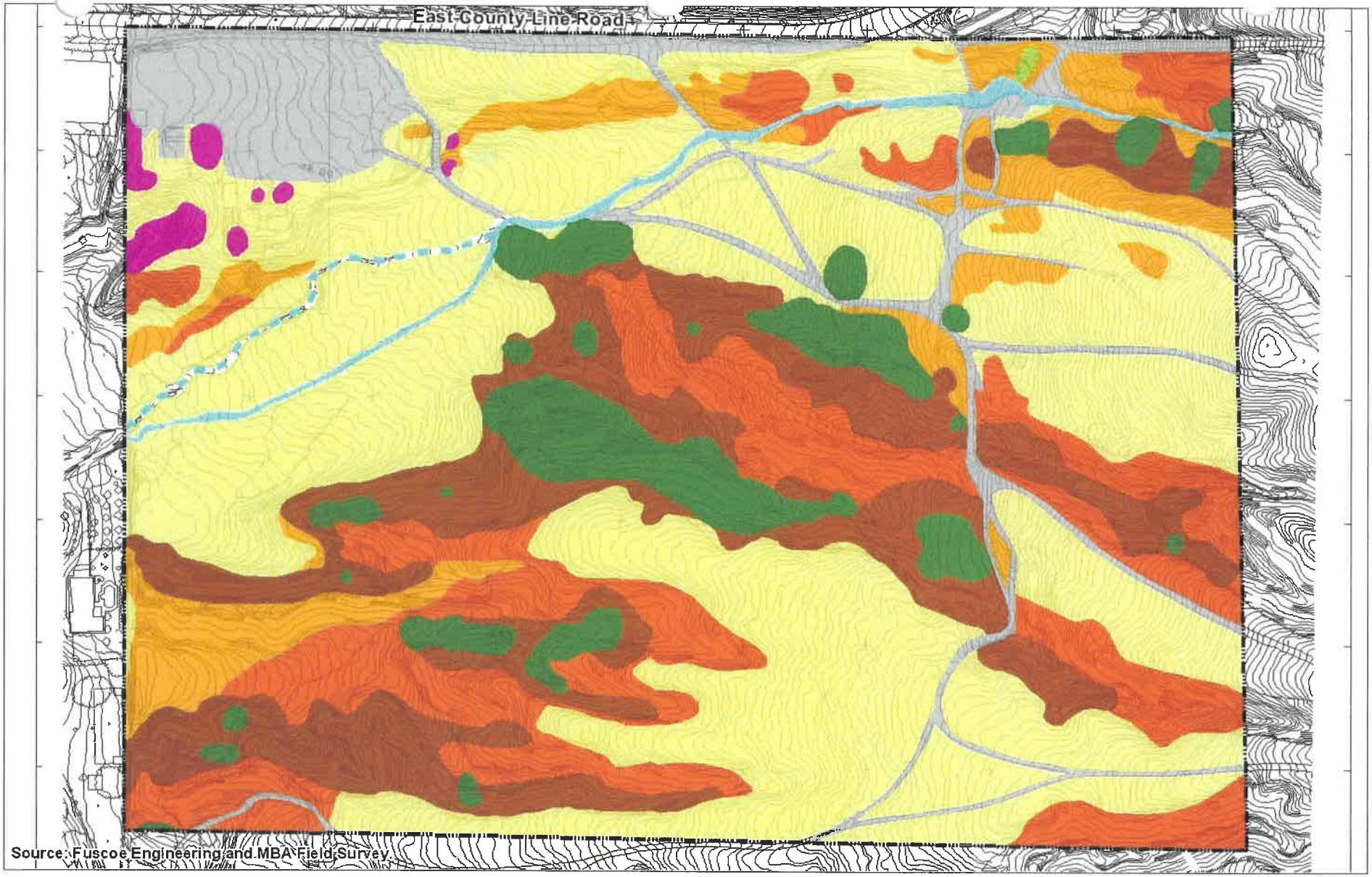
Soils on the project site are typical of the Southern California Coastal Plain that can be described in five soil series (USDA 1971). A soil series is a group of soils that have similar soil profiles (soils that have similar characteristics such as thickness, arrangement and other important characteristics). The five soil series located within the project site include terrace escarpments, Hanford coarse sandy loam, Ramona sandy loam, Gorgonio loamy sand, and Saugus sandy loam.

3.2 - VEGETATION COMMUNITIES

Eight plant communities occur on the 54.08-acre property including coast live oak woodland, scrub oak chaparral, chamise chaparral, buckwheat scrub, annual grassland, dry wash, a very small patch of southern riparian scrub, and ornamental trees consisting of several non-native eucalyptus, pepper and olive trees. Trails, dirt roads, and other areas that are barren or exhibit only very sparse cover by common ruderal (weedy) species, due to previous land use(s) are classified as "disturbed." Ornamental trees and shrubs are scattered around the northwest corner of the property that was previously occupied by residential structures. Exhibit 3 depicts the site's plant communities and disturbed areas. Brief descriptions of these communities are provided below.

Coast Live Oak Woodland

The coast live oak woodland plant community typically consists of moderate to densely vegetated woodland dominated by coast live oak trees (*Quercus agrifolia*). These evergreen trees reach 30



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Feet

NORTH

Michael Brandman Associates

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Legend

Proposed Project Boundary

On-site Topography

Vegetation Communities

Annual Grassland	29.1 acres
Buckwheat Scrub	04.0 acres
Chamise Chaparral	08.9 acres
Coast Live Oak Woodland	03.7 acres
Disturbed	04.8 acres
Dry Wash	0.57 acres
Ornamental Trees	0.4 acres
Scrub Oak Chaparral	08.4 acres
Southern Willow Scrub	0.03 acres

Remnant Wash

Exhibit 3
Plant Communities Map

to 80 feet in height and usually occur on north-facing slopes or south-facing slopes within shaded ravines. Dominant plant species in this community on the Heritage Oaks site include coast live oak, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*) [also known as *Quercus dumosa*], laurel sumac (*Malosma laurina*), poison oak (*Toxicodendron diversilobum*), and Mexican elderberry (*Sambucus mexicana*). Like most oak woodland areas, the leaf litter layer below the canopy is generally fairly deep, which tends to inhibit development of a dense shrub layer. Openings among the live oak trees are typically occupied by the native shrubs noted above and also include native herbaceous species as well as a few non-native ruderal (weedy) plants such as ripgut brome grass (*Bromus diandrus*) and horehound (*Marrubium vulgare*).

One hundred twenty-one (121) individual coast live oak trees, excluding saplings, have been identified and mapped within the site boundaries. Mapping of this plant community was conducted by outlining the entire canopy of all significant oaks on the site. The mapped limit of the canopy drip-line, as shown on Exhibits 3 and 4, includes the actual edge of the foliage plus an additional five (5) feet to incorporate a minimum "tree protection zone" (TPZ) extending outward from the edge of canopy. Several of trees occur as scattered stand-alone individuals. The majority of coast live oaks occur within one of the several discrete patches of the oak woodland community on site, where the canopy is more or less contiguous. These somewhat linear-shaped patches of oak woodland and scattered individual trees generally occur in association with five small arroyos that dissect the site from east to west. The oaks tend to occur in the lower parts of the arroyos and on the cooler, moister north-facing slopes. The area of individual live oak tree canopies and coast live oak woodland habitat patches amounts to approximately 3.7 acres within the subject property. Appendix B: Oak Tree Evaluation includes an exhibit that identifies the locations of the numbered trees.

A survey and evaluation of individual oak trees that exceed 10 inches in diameter at 4.5 feet above mean grade (dbh = diameter at breast height) performed on site in May and June 2004 (please see Appendix B), determined that the majority of coast live oaks are in fair to good condition. While a few of the trees are less than 30 feet in height, most are taller, with the majority at least 40 feet and some taller than 60 feet. Several specimens are quite mature (at least 100 to 200 years old), with trunks greater than 50 inches in diameter and canopy spreads of over 80 feet. Five (5) trees associated with the most southerly arroyo are in very poor condition or nearly dead.

Buckwheat Scrub

Buckwheat scrub exemplifies an early successional form of coastal sage scrub (CSS). This subtype of CSS is considerably lacking in floristic diversity and offers less habitat value than more diverse forms of CSS. Typical CSS consists of low-growing, soft-leaved, drought deciduous shrub species, with occasional taller evergreen shrubs and shrubby and succulents that typically occur on thin or rocky soils on mild to steep slopes throughout southern California below 3,000 feet in elevation. On site, patches of this low-growing scrub habitat dominated almost entirely by California buckwheat (*Eriogonum fasciculatum*) and annual grasses occurs on the slope below County Line Road and also

on the lower slopes of several of the site's arroyos. The relatively homogeneous patches of buckwheat scrub on site may be indicative of previous disturbance (e.g., clearing for grazing or dry farming) that has begun to recover an early successional scrub community. The project site contains approximately 4.0 acres of buckwheat scrub.

Southern Riparian Scrub

Riparian vegetation occurs in association with watercourses and water bodies. The representative plant species are typically well adapted to a hydrological regime ranging from semi-permanent inundation to occasional soil saturation on or near the surface during at least a portion of the growing season. This community typically consists of a relatively dense tangle of broad-leaved, winter-deciduous riparian thickets typically dominated by willow species. On site, this community occurs in one isolated location near the northwest corner of the parcel where a small tributary drainage feature enters the parcel from the northeast and connects to the relatively broad dry wash (described below) that crosses the site from east to west. The smaller tributary appears to conduct at least some dry season flows, presumably derived from runoff from the Whisper Ridge residential development to the north. The small patch of riparian scrub at the confluence apparently receives sufficient flow to support a cluster of arroyo willow (*Salix lasiolepis*) and a single cottonwood (*Populus fremontii*) tree. However, while saturated soils were observed off site in the tributary, no evidence of dry season flow was apparent in the dry wash downstream from the confluence, indicating that virtually all flows from the tributary are absorbed into the deep sandy alluvium in the main wash. The project site contains less than 0.1 acre of southern riparian scrub.

Dry Wash

The dry (sandy) wash habitat is directly associated with the single drainage feature that crosses the site from the northeast quadrant to the west side of the parcel. As this drainage feature approaches the west side of the parcel, the streambed becomes indistinct, flattening out over a broad, sandy swale. Observations made on October 30, 2004, right after two substantial rainfall events (October 23-24 ≈ 2.3 inches; October 27-28 ≈ 1.5 inches), indicated that flows were indeed carried over the length of the parcel and spread across the broad swale, then drained off site through a pipe located in a small "sump" (depression) located just east of the terminus of Holmes Way. No surface water was observed over the length of the entire drainage feature only two days after the second rainstorm, clearly indicating that the stream is ephemeral, flowing only during and immediately after significant precipitation. A second smaller dry wash, that once carried flows from the main wash, is no longer directly connected to the main wash. This now defunct remnant fork of the main wash exhibited little evidence of having conducted flows during the preceding storm events, apparently carrying only runoff from the immediately adjacent area through which it passes. Vegetation is very sparse within these drainage features due to scouring during high-flow periods, which eliminates most of the vegetation and leaves only sandy deposits. Sparse vegetation observed in the sandy wash includes

annual grasses and forbs, with California croton (*Croton californicus*), tarragon (*Artemisia dracunculus*), and occasional buckwheat shrubs occurring along the low stream banks. Tarragon, jimsonweed (*Datura stramonium*), western ragweed (*Ambrosia psilostachya*), and tree tobacco (*Nicotiana glauca*) dominate the low flat area where the dry wash fans out into a broad oval near the west side of the parcel. The entire dry wash habitat area, including both the active and defunct streambeds and the oval-shaped spreading area, cover approximately 0.6 acres on the site.

Chamise Chaparral

Chamise chaparral is typically a relatively dense, low-growing type of chaparral consisting predominantly of chamise (*Adenostema fasciculatum*), a drought-deciduous shrub that is particularly fire-prone. This non-sensitive habitat is very common in the foothills and valley slopes of the region, normally occurring in relatively dry, exposed areas. On site this community exhibits a mostly a homogeneous cover of chamise, but also intergrades with buckwheat scrub and scrub oak chaparral. On the subject parcel, this vegetation covers approximately 8.9 acres.

Scrub Oak Chaparral

The scrub oak chaparral community occurs on dry, often rocky slopes, below 5,000 feet from Tehama County south through the southern California mountains to Baja California. The typical scrub oak chaparral plant community is dominated by many species that are not found within the project site. Other plant species that occur within the project site that are commonly found in chaparral include Mexican elderberry (*Sambucus mexicana*) and laurel sumac (*Malosma laurina*). Scrub oak chaparral occupies approximately 8.4 acres on the subject parcel.

Annual Grassland

Annual grassland consists mainly of non-native, annual grasses often in association with ruderal herbs and occasional native annual forbs. These grasses begin to germinate with the fall rains, grow during the winter and spring, and wither in the early summer. The dominant plant species within the nonnative grassland habitat consists of black mustard (*Brassica nigra*), dove weed (*Eremocarpus setigerus*), bromes (*Bromus* sp.), wild oats (*Avena* spp), and unidentified grasses. The parcel contains approximately 23.1 acres of non-native annual grassland.

Ornamental Trees

Several small clusters and individual specimens of red gum (*Eucalyptus camaldulensis*), Peruvian pepper (*Schinus molle*) and olive (*Olea europa*) trees occur in the northwest quadrant of the site in association with a flat area previously occupied by a rural residence. These individual trees and small clusters of ornamental vegetation are not associated with any native vegetation and provide only

limited habitat value, primarily as cover and perching opportunities for birds and common terrestrial wildlife that are normally found in and associated with developed areas. In the aggregate, these scattered ornamental trees amount to approximately 0.4 acres of non-native tree canopy area.

Disturbed Areas

These areas are characterized by a lack of significant vegetative cover, usually as the result of previous human disturbance. Although such areas may exhibit patches of sparse ruderal vegetation and an occasional scattering of native plant specimens, this type of "habitat" is not a plant community and is considered to be of little or no value to wildlife. The remainder of the project site, approximately 4.8 acres, is comprised of disturbed areas.

3.3 - SENSITIVE BIOLOGICAL RESOURCES

Sensitive species are those plants and animals occurring or potentially occurring on the project site that are endangered or rare, as those terms are used by CEQA and its Guidelines, or are of current local, regional, or state concern. Plant communities are considered to be sensitive biological resources based on 1) federal, state, or local laws regulating their development, 2) limited distributions, and/or 3) the habitat requirements of sensitive plants or animals occurring on the site.

A review of the databases and pertinent literature determined that eight (8) special status plant communities, twenty-six (26) sensitive plant species, and twenty-four (24) sensitive wildlife species have been reported to occur within the Yucaipa, Beaumont, El Casco, and Forest Falls topographic quadrangles (CNDDB and CNPS). Based on this review and the findings of the surveys, MBA evaluated each of these special status resources for their potential to occur on site and/or be affected by the proposed project.

Tables 1 and 2, below, identify the plant and wildlife species, their status, habitat requirements, and their potential to occur within the property. It is important to note that, for the subject parcel, the MSHCP specifically requires biological assessment and consideration of only burrowing owl, many-stemmed dudleya and Marvin's onion to complete specific data requirements. Specific requirements are obtained on-line from Riverside Conservation Agency through their database using the site's Assessor's Parcel Number. Neither species is expected to occur on the subject parcel.

Sensitive Plant Communities

The CNDDB reports eight plant communities designated as having special status in the vicinity of the project (i.e., within seven miles) in the Yucaipa, El Casco, Beaumont, and Forest Falls topographic quadrangles. Of those listed, the site exhibits habitat consisting of several stands of coast live oak trees that is comparable in most respects to the type description of Southern Coast Live Oak Riparian

Forest. The site also contains one extremely small patch of Southern Riparian Scrub. However, none of the other sensitive habitat types known from the vicinity, as listed below, occur within the parcel or in immediately adjacent areas:

- Canyon Live Oak Ravine Forest (canyon live oak (*Quercus chrysolepis*) not present on site)
- Riversidean Alluvial Fan Sage Scrub
- Southern Cottonwood Willow Riparian Forest
- Southern Riparian Forest
- Southern Sycamore Alder Riparian Woodland
- Southern Willow Scrub

Riparian habitats are also generally regarded as sensitive and several state and federally administered permit programs advocate avoidance of impacts to riparian habitats and streambeds or require compensatory mitigation for unavoidable losses of these aquatic resources. The proposed project design has been configured to avoid direct impacts to the small patch of southern riparian scrub habitat and portions of the associated streambed that occur on the property.

Sensitive Plant Species

Twenty-seven (27) special status plant species were considered with regard for their potential to occur on the property due to their known occurrence in the region as reported by the CNDDB or because they were considered by Sanders (2001) or recognized as worthy of consideration by MBA biologists. Based on the habitat evaluation and available information regarding these species' range, distribution, and habitat requirements, nineteen (19) of these special status species were eliminated from consideration because the site lies outside the species' range (e.g., plants limited to high altitudes) or because the site does not contain any potentially suitable habitat (e.g., plants associated with vernal pools, fluvial terraces, conifer forest).

Table 1 provides specific information on the eight (8) special status plants considered in depth for their potential to occur on site. No special status plant species were observed within the property by MBA or reported by Sanders in 2001. Four species, Marvin's onion, Nevin's barberry, many-stemmed dudleya, and smooth tarplant, are considered absent or extremely unlikely to occur on the subject parcel. While the project site apparently occurs within the range of these species, either specimens should have been located (since they are conspicuous) or important/necessary habitat elements are lacking within the parcel. Four (4) sensitive plant species: Plummer's mariposa lily, Hall's monardella, Parry's spineflower, and Robinson's peppergrass are considered to have some potential to occur since the site lies within these species' known range and contains at least marginally suitable habitat. The likelihood that any of these species may occur on site is not particularly high because the areas of potentially suitable habitat are relatively limited, which logically reduces the chance that a population of an uncommon species might occur. None of these

species are listed as threatened or endangered by state or federal resource agencies. Furthermore, except for Robinson's peppergrass, each of these species is "covered" by the MSHCP.

Table 1: Special Status Plant Species Considered

Species		Status				Preferred Habitat	Life Form/ Blooming Period	Potential Presence/ Habitat Suitability
Scientific Name	Common Name	USFWS	CDFG	CNPS	MSHCP			
Allium marvinii	Yucaipa onion	--	--	1B	Covered (b)	Openings in chaparral, clay soils.	Bulbiferous herb/ Apr – May	**Not Expected.** Chamise chaparral habitat present but site lacks clay soils. Plant known only from two occurrences (Beaumont, Yucaipa).
Berberis nevinii	Nevin's barberry	FE	SE	1B	Covered (b)	Chaparral and alluvial scrub associated with rocky slopes and sandy washes.	Evergreen shrub/ Mar – Apr	**Not Expected.** Easily detected perennial but not found during surveys. Known from very few occurrences.
Calochortus plummerae	Plummer's mariposa lily	FSC	--	1B	Covered	Rocky and sandy areas, openings in chaparral and scrub.	Perennial bulbiferous herb/ May – Jul	**Low to Moderate.** Site contains suitable habitat but may have been too disturbed historically.
Centromadia pungens ssp. *laevis*	Smooth tarplant	--	--	1B	Covered (b)	Alkali scrub, alkali playas, alkali vernal plains/grasslands.	Annual herb/ Apr – Nov	**Not Expected.** Alkali associated vegetation absent, no marginally wet areas apparent.
Chorizanthe parryi var. *parryi*	Parry's spineflower	--	--	3	Covered	Dry slopes and flat areas, at interface between bush/grassland or woodland habitats	Annual herb/ May – Jun	**Low to Moderate.** Site contains potentially suitable habitat but may have been too disturbed historically. Plant is quite inconspicuous but was not observed during surveys.
Dudley multicaclis	Many-stemmed dudleya	--	--	1B	Covered (b)	Openings in coastal scrub and grassland associated with rocky outcrops	Annual herb/ May – Jul	**Low.** Site may contain marginally suitable habitat, but this plant is notknown to occur in this region
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	--	--	1B	Not Covered	Openings in chaparral and coastal scrub in foothill areas, generally away from the coast.	Annual herb/ Jan – Apr	**Low to Moderate.** Site contains potentially suitable habitat but may have been too disturbed historically. Species may be more common than CNPS listing suggests.

Table 1 (Cont): Special Status Plant Species Considered

Species		Status				Preferred Habitat	Life Form/ Blooming Period	Potential Presence/ Habitat Suitability
Scientific Name	Common Name	USFWS	CDFG	CNPS	MSHCP			
Monardella macrantha ssp. *halli*	Hall's monardella	--	--	1B	Covered	Lower montane coniferous forest and montane chaparral, near rocky rubble and boulders in exposed areas.	Subshrub/ Jun - Aug	**Low.** Not observed during surveys. Habitat marginal at best (no rocky areas). Recorded in general area only above 3,500 feet.

Legend:

U.S. Fish and Wildlife Service
- FE Federal Endangered
- FT Federal Threatened
- PE Proposed Endangered
- PT Proposed Threatened
- FC Federal Candidate
- FSC Species of Concern

California Department of Fish and Game
- SE California Endangered
- ST California Threatened

California Native Plant Society
- 1A Plants presumed extinct in California.
- 1B Plants rare, threatened, or endangered in California and elsewhere.
- 2 Plants rare, threatened, or endangered in California, but more common elsewhere.
- 3 Plants for which information is needed.
- 4 Plants of limited distribution.

MSHCP

Covered - No further mitigation is required

Covered (a): Surveys may be required as part of wetlands mapping (Section 6.1.2.)

Covered (b): Surveys may be required within Narrow Endemic Plant Species survey area (Section 6.1.3)

Covered (c.): Surveys may be required for this species within locations shown on survey maps (Section 6.3.2)

Covered (d): Surveys may be required within Criteria Area (Section 6.3.2)

Covered (e): These Covered Species will be considered Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species-specific objectives for these species are presented in Section 9.3 of the MSHCP for specific conservation objectives that must be met for these 16 species prior to including them on the list of Covered Species Adequately Conserved.

Covered (f): These covered species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the U.S. Forest Service that addresses management for these species on Forest Service Land.

Not Covered: There is currently insufficient information on the species' distribution within the MSHCP Area, and there is currently insufficient information on the species ecology (Section 4.0, Table 4D).

Not Expected - Species considered absent or highly unlikely to occur on site. No potentially suitable habitat exists on the property.

Low - Considered relatively unlikely that the species could occur on the property. Potentially suitable habitat occurs on or in the immediate vicinity of the project area, but existing conditions (e.g., density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation) substantially reduce the possibility that the species may occur.

Moderate - Potentially suitable habitat occurs on site and conditions are at least marginal to fair.

High - Habitat is well-suited and conditions are favorable for species to occur.

Present - The species was observed on the property at the time of the survey.

Sensitive Wildlife Species

Twenty-five (25) sensitive wildlife species were considered with regard for their potential to occur within the property. The site does not contain habitat that could be considered even marginally suitable for at least ten (10) of the species identified by the CNDDB in the general vicinity and these species do not warrant consideration due to the absence of potentially suitable habitat on the parcel. Table 2 provides information regarding the status and potential presence of the fifteen (15) species that were carefully reviewed.

Burrowing Owl

Under the MSHCP, the subject property must be evaluated regarding its potential suitability for burrowing owl. Burrowing owl (*Athene cunicularia*) is a California Species of Special Concern (CSC) and is currently being considered for listing with the state and federal wildlife agencies due to this species' alarming decline in the state over the past 30 years. Formerly common throughout California, this species' decline was noticeable as early as the 1940s. The burrowing owl is a gregarious owl that occupies open habitats such as grasslands, savannahs, and sparse brush lands. This owl nests in the abandoned burrows of ground squirrels and other burrowing animals. It is one of the few owl species often seen during the day and early evening hours, perched on fence posts or at the entrance to burrows.

There is a flat mesa area extending onto the site from the east. This area is highly degraded, appears to be annually disked and several trails cross the area that are frequently used often by dirt bikes. Although this area exhibits the grassland component of potential burrowing owl habitat within this part of the project site, burrowing owls were not observed during any of the field surveys conducted within the project site in 2001 by Sanders or by MBA in 2004. Based on the information gained from numerous site visits and the existing level of disturbance, it is MBA's opinion that the project site does not provided suitable habitat for burrowing owls. No further surveys are required for this species within the project site.

3.4 - USACE AND CDFG JURISDICTIONAL AREAS

The property contains a single drainage, described above as a dry wash, that is considered subject to both California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (USACE) jurisdiction because it exhibits bed and bank features and recent evidence (flow patterns and debris) indicating that it conveys ephemeral flows during and shortly after rainfall events.

3.5 - REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT CORRIDOR

Review of maps of wildlife movement corridor areas and special linkages contained in the Western Riverside County MSHCP indicated no habitat connections or linkages in the local vicinity of the

subject parcel. The site's natural drainage features, woodland and chaparral habitat areas, and other natural plant communities provide both habitat and cover for a variety of common terrestrial and avian species and locally indigenous wildlife are presently free to move across the parcel. The site does not, however, afford a regionally important connective linkage between tracts of natural habitat in the general area. While the parcel is contiguous with open space and natural habitat areas to the south and east, existing residential development encloses the site on the north and northwest. Less dense development exists to the west that partially encloses the site on that side. A narrow path of open space does continue westward from the subject parcel where the small dry wash flows off site to the west. However, this drainage feature and the band of grassland vegetation that it flows within offers only sparse, low cover and even this west-trending peninsula of "habitat" that extends off site rapidly diminishes in size and soon encounters more and more developed areas further west of the subject parcel. Moreover, this narrow extension of open space provides no significant connectivity for wildlife movement, since it does not connect to any large tracts of natural open space or significant wildlife habitat off site. Although local terrestrial wildlife and various avian species may occasionally forage on or traverse the property, the site offers no apparent linkage to any undisturbed natural areas in the vicinity.

Table 2: Special Status Wildlife Species

Species		Status			Required Habitat	Potential to Occur/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFG	MSHCP		
Reptiles						
Phrynosoma coronatum	coast horned lizard	None	CSC	Covered	Coastal sage scrub and chaparral with friable, rocky or shallow sandy soils.	**Moderate.** Suitable habitat present. None observed on site during surveys or reported by other sources.
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail	None	CSC	Covered	Low-elevation coastal scrub, chaparral, prefers sandy washes with patches of brush and rocks.	**Moderate.** Suitable habitat present. None observed on site during surveys or reported by other sources.
Charina trivirgata roseofusca	coastal rosy boa	FSC	None	Not covered (A)	Rocky shrub lands and desert.	**Low.** Site lacks rocky characteristics commonly associated with this species.
Lampropeltis zonata[1]	California kingsnake	None	CSC	Covered	Exposed canyons w/rocky outcrops or talus, bigcone spruce and chaparral vegetation at lower elevations; black oak, incense cedar, Jeffrey pine, ponderosa pine at higher elev.	**Low to Moderate.** Site contains at least marginally suitable habitat.
Salvadora hexalepis virgultea	coast patch-nosed snake	None	CSC	Not covered (A, B)	Shrubby vegetation (scrub, chaparral)	**Low to Moderate.** Suitable habitat present.
Birds						
Athene cunicularia	burrowing owl	None	CSC	Covered (b)	Open, dry grasslands, deserts and scrublands with low growing vegetation.	**Moderate.** Suitable habitat present. None observed on site during surveys or reported by other sources.
Eremophila alpestris actia	California horned lark	None	CSC	Covered	Open, sparsely vegetated habitats - grasslands, grazing lands, areas lacking trees or dense shrub cover.	**Low.** Marginally suitable grassland habitat present although area relatively small and somewhat isolated within surrounding chaparral. None observed on site during surveys or reported by other sources.

[1] San Bernardino Mountain population (assumed to be distinct).

Table 2 (Cont.): Special Status Wildlife Species

Species		Status			Required Habitat	Potential to Occur/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFG	MSHCP		
Aimophila ruficeps canescens	Southern Cal. rufous-crowned sparrow	None	CSC	Covered	Coastal sage scrub, sparse mixed chaparral	**Moderate.** Suitable habitat present. Known to occur in the general vicinity (Beaumont).
Mammals						
Lepus californicus bennetti	San Diego black-tailed jackrabbit	None	CSC	Covered	Lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats.	**Moderate.** Suitable habitat present. Known to occur in the general vicinity.
Chaetodipus californicus femoralis	Dulzura (California) pocket mouse	None	CSC	Not covered (A)	Coastal scrub, chamise-redshank and montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats.	**Moderate.** Suitable habitat present.
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	None	CSC	Covered	Coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	**Moderate.** Suitable habitat present.
Dipodomys merriami parvus	San Bernardino Merriam's kangaroo rat	FE	CSC	Covered	Desert scrub and alkali desert scrub, sagebrush, Joshua tree, and pinyon-juniper habitats. Prefers sparse to moderate canopy on fine to coarse sands, with or without surface pavement or gravel in the subsoil.	**Not Expected.** On site, potentially suitable habitat areas appear to have been historically disturbed and are now isolated by chaparral and development.
Dipodomys stephensi	Stephens' kangaroo rat	FE	ST	Covered	Primarily in annual and perennial grassland habitats, but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas.	**Not Expected.** The property lies outside recognized limits of this species' distribution. Patches of potentially suitable habitat appear to have been historically disturbed and are surrounded by chaparral and development. Characteristic burrows not observed on site.

Table 2 (Cont.): Special Status Wildlife Species

Species		Status			Required Habitat	Potential to Occur/ Suitable Habitat
Scientific Name	**Common Name**	**USFWS**	**CDFG**	**MSHCP**		
Neotoma fuscipes intermedia	San Diego desert woodrat	None	CSC	Covered	Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Also found in a variety of other habitats. Most abundant in rocky areas with Joshua trees. Forest habitats of moderate canopy and moderate to dense understory. Can be abundant in chaparral habitats.	**High.** Woodrat nests observed in potentially suitable habitat. Presence not confirmed. Nests may be those of dusk-footed woodrat.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None	SCS	Covered	Lower elevation grasslands and coastal srub with open ground and fine sand.	**Low to Moderate.** Suitable habitat present. Site lies at the outer fringe of this species estimated elevational range limit.

U.S. Fish and Wildlife Service
FE Federal Endangered
FT Federal Threatened
FSC Federal Species of Concern

California Department of Fish and Game
SE State Endangered
ST State Threatened
CSC California Species of Concern

MSHCP
Covered- No further mitigation is required
Covered (a): Surveys may be required as part of wetlands mapping (Section 6.1.2.)
Covered (b): Surveys may be required within areas specified by the County of Riverside.
Covered (c.): Surveys may be required for this species within locations shown on survey maps (Section 6.3.2)
Covered (d): Surveys may be required within Criteria Area (Section 6.3.2)
Covered (e): These Covered Species will be considered Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species-specific objectives for these species are presented in Section 9.3 of the MSHCP for specific conservation objectives that must be met for these 16 species prior to including them on the list of Covered Species Adequately Conserved.
Covered (f): These covered species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the U.S. Forest Service that addresses management for these species on Forest Service Land.
Not Covered: (A) There is currently insufficient information on the species' distribution within the MSHCP Area, and (B) there is currently insufficient information on the species ecology (Section 4.0, Table 4D).

Not Expected - Species considered absent or highly unlikely to occur on site. No potentially suitable habitat exists on the property.
Low - Considered relatively unlikely that the species could occur on the property. Potentially suitable habitat occurs on or in the immediate vicinity of the project area, but existing conditions (e.g., density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation) substantially reduce the possibility that the species may occur.
Moderate - Potentially suitable habitat occurs on site and conditions are at least marginal to fair.
High - Habitat is well-suited and conditions are favorable for species to occur.
Present - The species was observed on the property at the time of the survey.

SECTION 4: IMPACTS

The proposed Heritage Oaks Equestrian Community Specific Plan involves development of an equestrian community that includes 54 single-family residential units at an overall density of 1 unit per gross acre. The proposed development pattern is intended to provide a buffer and transition between the higher density single-family homes to the north in the City of Yucaipa and the larger rural lots to the south and west in the City of Calimesa. More than 30 percent of the property will be maintained as natural open space and drainage, and more than 94 percent of the site's live oak specimens and more than 91 percent of the live oak woodland canopy will be preserved. Lettered lots A and B, in the northeast and southeast corners, respectively, C in the southwest corner, D on the west side, and E in the center of the parcel, are each proposed for permanent open space. Lot No. 55, in the northwest corner, is also proposed for permanent open-space as a local park site. Multi-purpose riding and walking trails will be provided within the project site that will provide opportunities to connect the existing City of Calimesa trail system.

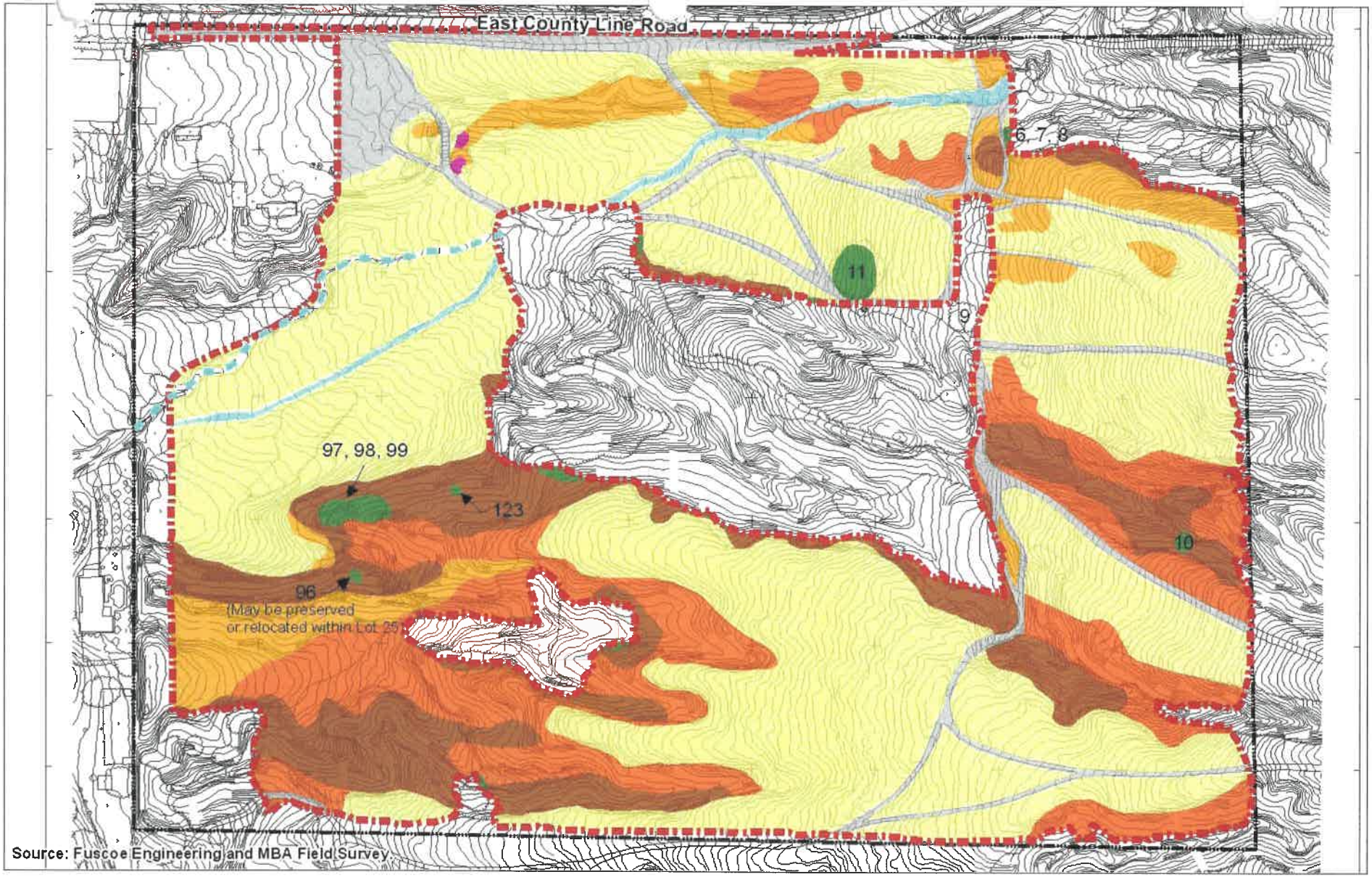
Exhibit 4 identifies the configuration and limits of project grading and shows the plant communities that would be directly affected by development, as identified by conceptual grading plans prepared by the project engineer (Fuscoe Engineering).

4.1 - PLANT COMMUNITIES

Conceptual grading plans for the proposed project indicate that grading will remove or displace a total of approximately 34.7 acres of existing plant communities including 20.6 acres of non-native Annual Grassland, 5.8 acres of Chamise Chaparral, 4.9 acres of Scrub Oak Chaparral, 2.7 acres of Buckwheat Scrub, up to 0.4 acres of Dry Wash, 0.3 acre of Coast Live Oak Woodland, and up to 0.05 acre of ornamental trees. Project grading will also affect 2.8 acres of previously disturbed (or barren) areas. The small patch of southern riparian scrub will not be impacted by the proposed project. Among these plant communities, only coast live oak woodland is considered a sensitive biological resource.

Coast Live Oak Woodland

The proposed project has been configured to avoid more than 91 percent of the site's coast live oak woodland although up to seven individual trees would be removed in areas planned for grading and construction. Approximately 3.4 acres of the site's 3.7 acres of coast live oak woodland, which includes the tree canopies plus a minimum five-foot wide additional buffer or tree protection zone, is proposed for preservation.



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NORTH

Michael Brandman Associates

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Legend

- Proposed Project Boundary
- Limits of Grading
- On-Site Topography

Vegetation Communities

Annual Grassland	20.6 acres
Buckwheat Scrub	2.7 acres
Chamise Chaparral	5.8 acres
Coast Live Oak Woodland	0.3 acres
Disturbed	2.8 acres
Dry Wash	0.4 acres
Ornamental Trees	0.1 acres
Scrub Oak Chaparral	4.9 acres

- Remnant Wash
- (9) Tree Number

Exhibit 4
Plant Communities Impact Map

The proposed Specific Plan development has been designed to preserve at least 114 of the 121 live oak specimens, nearly all of which will be retained in large clusters in the central, northeastern, and southwestern open space lots. The site plan and associated grading has been carefully configured to avoid as many of the existing oak trees as possible while also providing for appropriate drainage management and to promote connectivity between open space lots through the development area. Grading for the development will directly impact six individual live oak trees (numbered 10, 11, 97, 98, 99, and 123), three in one group and three in isolated locations separate from oak woodland habitat areas, as shown on Exhibit 4. One other tree (no. 96) may also be impacted in Lot 25. It may be possible to preserve this relatively small specimen in place within Lot 25, but because this tree occurs on a slope that may not be compatible with the requisite grading to establish sufficient flat area for residential development within the Lot, it cannot be assured that this tree will be preserved. Locations of all numbered trees are identified on the Oak Tree Location Map exhibit which is included in Appendix B. Among the directly impacted trees, three specimens (97, 99, and 123) are rated to be in "good" condition, the remaining four trees (10, 11, and 96, and 98) were evaluated to be "fair". The loss of coast live oak trees associated with the project constitutes a very small incremental loss of this habitat in the region. In addition to the loss of these specimens, preliminary grading plans indicate that grading for slope stabilization may also encroach within the dripline of trees in several limited areas.

Loss or degradation of Coast Live Oak Woodland may constitute a significant impact. In compliance with the City's Oak Tree Ordinance, the project also incorporates measures to minimize impacts during construction. Likewise, preserved coast live oak woodland (and individual trees) in the northeast and southwest corners and in the large central open space area of the property will be subject to stringent protective measures and management guidelines as described in the "Oak Tree Preservation Guidelines" contained in the Oak Tree Evaluation Report (Appendix B). The proposed Specific Plan intentionally limits impacts and incorporates protective measures to preserve existing coast live oaks to the extent feasible within the parcel while providing appropriate drainage improvements and open space connectivity. The proposed project's impact on oak trees and oak woodland resources is mitigated to a less than significant level by preservation of more than 94 percent of the trees by number and 91 percent of habitat acreage and further mitigated by implementation of additional measures to reduce or minimize impacts to live oak trees during construction.

Sensitive Plant Species/Narrow Endemic Plants

No special status plant species were observed on site but the possibility that sensitive plants may occur cannot be ruled out in the absence of focused surveys conducted during the appropriate season. Four special status plant species: Plummer's mariposa lily, Hall's monardella, Parry's spineflower, and Robinson's peppergrass are considered to have at least some potential to occur on the site in association with existing patches of buckwheat scrub habitat and in sparsely vegetated patches of

chaparral. However, none of these plants are listed by the state or federal resource agencies as endangered and thus are not specifically protected under current regulations and focused surveys are not typically required for these species. For this project, a habitat assessment is specifically required only for Marvin's onion, which is deemed "Not Expected" to occur on site due to the absence of clay soils, which that species apparently requires (see Table 1), and many-stemmed dudleya, deemed to have a "low" potential since it is not known to occur in the vicinity (e.g., within a 7-mile radius).

With respect to many-stemmed dudleya and the other "narrow endemic plant species" considered to have some potential to occur on site, Plummer's mariposa lily, Hall's monardella, and Parry's spineflower, each are covered (i.e., authorized for take by development consistent with the MSHCP) under the MSHCP. Therefore, the incremental loss of possibly suitable habitat is not considered significant since the MSHCP is designed to provide adequate mitigation through off site acquisition and conservation. Only Robinson's peppergrass is not a covered species under the MSHCP.

Robinson's Peppergrass

According to Reiser (2001) "Robinson's peppergrass is presumed stable in Southern California. This small annual was recently listed by the CNPS; however, it is likely more common than presumed by the R-E-D Code assigned to it. This species sometimes replaces both *Lepidium nitidum* and *Lepidium lasiocarpum* in the sage scrub and chaparral understory as the coastal plains give way to the foothills of southern San Diego County. Chamise Chaparral and a xeric sage scrub occupy most of this foothill zone, and it is an area which has not historically been intensively collected by botanists due to the paucity of endemic plants and distinctive microhabitats. A similar situation may occur on the western flanks of the San Jacinto Mountains of western Riverside County. Provisionally, protection is only recommended for portions of sizeable populations." If this species occurs on the parcel, which is not highly probable, it is virtually certain to occur in small numbers or it would not have escaped detection during surveys. The potentially suitable habitat affected by the proposed project includes a relatively small portion of the 13.4 acres of chaparral and scrub habitat impacted by grading, limited to the openings in the canopy of these plant communities. MBA concurs with Reiser, that only significant populations should warrant protection, particularly in light of the lack of information regarding whether this species is indeed rare or not. As the species has not been located on site, and the proposed project would not affect a large or significant area of its potential habitat, the project's potential impact on this species is not considered significant.

4.2 - SENSITIVE WILDLIFE SPECIES

Covered Species

Construction of the proposed residential development will result in a direct loss or modification of approximately 34.7 acres of natural habitat including annual grassland, buckwheat scrub, chamise and scrub oak chaparral, dry wash, and coast live oak woodland. Anticipated habitat modification is not

expected to affect any species listed (or proposed for listing) as endangered or threatened by state or federal wildlife resource agencies. Two listed species covered by the MSHCP, Stephen's kangaroo rat and Merriam's San Bernardino kangaroo rat, were considered for their potential to occur on site. Neither of these small rodents are expected to occur on site due to the limited area and disturbed condition of potential habitat available and the lack of connectivity of this property to occupied habitat areas in the region.

The project site's scrub, chaparral, woodland and grassland plant communities are considered potentially suitable for several non-listed special status reptiles, birds, and small mammals, as listed on Table 2, that are considered to have at least some potential to occur on site, although none were observed during site surveys. Loss of the dry wash, buckwheat scrub, grassland, chaparral and woodland habitats that will occur as result of project grading will reduce the available habitat on site for these species, if they are present in the vicinity. Loss of suitable habitat for special status animals is considered a potentially significant project impact.

However, none of the species considered potentially present are subject to legal protections and for those species designated as "covered species" under the MSHCP direct and indirect impacts to these animals are addressed and mitigated through habitat conservation measures instituted by MSHCP implementation agreement.

As discussed in the Setting Section above, burrowing owl was not observed during field surveys conducted by MBA in 2004, or previously by Sanders (2001). Due to the limited size and relatively isolated nature of the potential habitat areas on site, and the frequent exposure to noise and disturbance by off road vehicles (dirt bikes), the site is not considered to provide potentially suitable habitat for this species.

In light of the MSHCP and its conservation provisions, and with the applicant's compliance with MSHCP requirements and the City's Local Development Mitigation Fee Ordinance, none of these potential impacts are considered significant.

Species Not Covered by the MSHCP

Three species reported by the CNDDB as occurring in the general vicinity, coastal rosy boa, coast patch-nosed snake, and Dulzura (California) pocket mouse, may potentially occur in scrub, chaparral, or grassland habitat on the subject parcel. Each of these non-listed species is designated as a California Species of Special Concern (CSC). These species are not covered under the take authorization provisions of the MSHCP because insufficient information is available regarding their distribution to make a clear determination regarding whether MSHCP conservation measures adequately provide for the long term preservation of these species' populations.

Although the literature is lacking regarding these species' distribution, current knowledge indicates that these species occur over a relatively wide range in various habitats in the region. There are no specific legal protections for these non-listed species. The potential loss of limited areas of chaparral, scrub, and grassland constitutes a relatively small incremental contribution to cumulative loss of such habitats regionwide, and as such is not considered significant at the project level.

4.3 - USACE AND CDFG JURISDICTIONAL AREAS

The project will not affect any federally protected wetlands. The project site contains only one limited patch of Southern Riparian Scrub which may meet the federal definition of "wetlands." This limited patch of willow and cottonwood trees occurs upstream from the area proposed for project development and grading and will not be affected by the project. The proposed project will affect the single streambed feature that meets state and federal criteria for jurisdictional waters. This feature is described in the Environmental Setting Section as a Dry Wash. It conveys flows only during and immediately after rainfall events (e.g., within 2 days) and is therefore defined as an ephemeral wash. This drainage feature does not sustain flows for sufficient duration to support riparian habitat or wetland vegetation.

Although the site will not affect any wetlands, project grading is anticipated to result in the loss of approximately 0.4 acre of ephemeral jurisdictional waters consisting of two discrete segments of the Dry Wash. This loss is not considered biologically significant since the affected area is very limited in size and exhibits only sparse natural vegetation and no significant riparian habitat values. Nevertheless, alteration or discharge of fill material into the streambed itself is subject to state and federal permitting requirements. Therefore, prior to grading, the applicant shall obtain the following permits as required and shall comply with the mitigation requirements set forth in the permits:

- Section 404 permit (Clean Water Act) from the U.S. Army Corps of Engineers to minimize impacts related to dredging, filling, or diversion of existing drainages.
- Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game to minimize impacts to State Waters and associated wildlife resources.
- Section 401 permit, also known as Water Quality Certification Act, from the Regional Water Quality Control Board to ensure proper control of runoff into local drainages.

4.4 - REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT CORRIDORS

The proposed development is not situated in an area that provides any significant or biologically important habitat connections. Existing development lies adjacent to the north side of the parcel and limited open space areas of relatively low biological occur to the west. While terrestrial animals may move locally on and off the property from the east and south, development of the site will not

interrupt any linkage between biologically significant habitat areas in the vicinity. Therefore, the utility of the site as a wildlife "movement corridor" is not considered biologically significant. However, the proposed project will introduce new constrictions that will partially impede local terrestrial wildlife movement across the parcel. This impact is considered less than significant.

Also, the configuration of the development will still preserve opportunities for local wildlife to move across the parcel, despite the presence of homes and local streets. The Heritage Oaks Equestrian Community Specific Plan will preserve relatively large open space areas within the central, western, and northeast sections of the parcel which will be accessible and traversable by local animal species.

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Appendix A: Floral and Faunal Compendia

FLORAL AND FAUNAL COMPENDIUM

FLORA (PLANTS)

ANGIOSPERMAE	FLOWERING PLANTS
DICOTYLEDONES	**DICOTS**
Anacardiacae	**Sumac Family**
Malosma laurina	laurel sumac
Rhus integrifolia	lemonade berry
Rhus ovata	sugar bush
**Schinus molle*	Peruvian pepper
Toxicodendron diversilobum	poison oak
Asteraceae	**Sunflower Family**
Ambrosia psilostachya	western ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Artemisia dracunculus	tarragon
Baccharis salicifolia	mule fat
**Centaurea melitensis*	tocalote
**Chamomila suaveolens*	pineapple weed
**Cirsium vulgare*	bull thistle
**Conyza Canadensis*	horseweed
Ericameria pinifolia	pine goldenbush
Eriophyllum confertiflorum	golden yarrow
**Gazania sp.*	gazania
Gnaphalium californicum	California everlasting
Helianthus sp.	sunflower
Hemizonia fasciculata	fascicled tarweed
Heterotheca grandiflora	telegraph weed
Lessingia filaginifolia	California aster
**Xanthium strumarium*	cocklebur
Boraginaceae	**Borage Family**
Amsinckia intermedia	common fiddleneck
Pectocarya sp.	pectocarya
Plagiobothrys sp.	popcorn-flower
Brassicaceae	**Mustard Family**
**Brassica nigra*	black mustard
**Capsella bursa-pastoris*	shepherd's purse
Caprifoliaceae	**Honeysuckle Family**
Lonicera subspicata	southern honeysuckle
Sambucus mexicanus	Mexican elderberry
Caryophyllaceae	**Pink Family**
**Stellaria media*	common chickweed
Chenopodiaceae	**Goosefoot Family**
**Atriplex semibaccata*	Australian saltbush
**Salsola tragus*	Russian thistle

Convolvulaceae	**Morning-glory Family**
Cuscuta californica	California dodder
Cucurbitaceae	**Gourd Family**
Marah macrocarpus	wild cucumber
Euphorbiaceae	**Spurge Family**
Croton californicus	California croton
Eremocarpus setigerus	dove weed
Fabaceae	**Pea Family**
Lotus scoparius	deerweed
Lupinus sp.	lupine
**Medicago polymorpha*	bur clover
**Melilotus indica*	yellow sweet-clover
Vicia sativa	spring vetch
Fagaceae	**Oak Family**
Quercus agrifolia	coast live oak
Quercus berberidifolia	California scrub oak
Geraniaceae	**Geranium Family**
Erodium cicutarium	red-stem filaree
Hydrophyllaceae	**Waterleaf Family**
Nemophila menziesii	baby blue-eyes
Pholistoma auritum	fiesta flower
Juglandaceae	**Walnut Family**
Juglans californica var. *californica*	Southern California black walnut
Lamiaceae	**Mint Family**
**Marrubium vulgare*	horehound
Salvia mellifera	black sage
Trichostema lanceolatum	vinegar weed
Malvaceae	**Mallow Family**
Malacothamnus fasciculatus	bushmallow
Myrtaceae	**Myrtle Family**
Eucalyptus camaldulensis	river red gum
Oleaceae	**Olive Family**
Olea europa	European olive
Onagraceae	**Evening Primrose Family**
Camissonia sp.	primrose sp.

Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Polygonaceae	**Buckwheat Family**
Eriogonum gracile	slender buckwheat
Eriogonum fasciculatum	California buckwheat
Rumex crispus	curly dock
Portulacaceae	**Purslane Family**
Claytonia perfoliata	common miner's lettuce
Primulaceae	**Primrose Family**
Anagallis arvensis	scarlet pimpernel
Rhamnaceae	**Buckthorn Family**
Ceanothus crassifolius	thick-leaved lilac
Ceanothus megacarpus	bigpod lilac
Rosaceae	**Rose Family**
Adenostema fasciculatum	chamise
Heteromeles arbutifolia	toyon
Rubiaceae	**Madder Family**
Galium angustifolium	chaparral bedstraw
Salicaceae	**Willow Family**
Populus fremontii	Fremont's cottonwood
Salix lasiolepis	arroyo willow
Scrophulariaceae	**Figwort Family**
Keckiella sp.	bush penstemon
Solanaceae	**Nightshade Family**
**Datura stramonium*	jimson weed
**Nicotiana glauca*	tree tobacco
Tamaricaceae	**Tamarisk Family**
**Tamarix* sp.	tamarisk

MONOCOTYLEDONES	**MONOCOTS**
Agavaceae	**Agave Family**
Yucca whipplei	our Lord's candle
Poaceae	**Grass Family**
**Avena spp.*	wild oats
**Bromus diandrus*	ripgut grass
**Bromus madritensis* ssp. *rubens*	foxtail chess
**Bromus tectorum*	cheat grass

**Hordeum sp.*	barley
**Vulpia myuros*	rattail fescue
Iridaceae	**Iris Family**
Sisyrhinchium bellum	blue-eyed grass

FAUNA (ANIMALS)

INVERTEBRATES

Papilionidae	**Swallowtails**
Papilio rutulus	western tiger swallowtail
Pieridae	**Whites, Sulphurs, and Orangetips**
Anthocaris sara	Sara orangetip
Artogeia rapae	cabbage white
Colias eurytheme	alfalfa butterfly
Lycaenidae	**Gossamer-wing Butterflies**
Plebeius acmon	acmon blue
Nymphalidae	**Brush-Footed Butterflies**
Vanessa cardui	painted lady
Hesperiidae	**Skippers**
Erynnis funeralis	funereal duskywing
Formicidae	**Ants**
Pogonomyrmex rugosis	harvester ant

VERTEBRATES

REPTILIA	**REPTILES**
Iguanidae	**Iguanids**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	common side-blotched lizard
AVES	**BIRDS**
Accipitridae	**Hawks**
Buteo jamaicensis	red-tailed hawk
Falconidae	**Falcons**
Falco sparverius	American kestrel

Columbidae	**Pigeons and Doves**
Zenaida macroura	mourning dove
Tytonidae	**Barn Owls**
Tyto alba	barn owl
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Colaptes auratus	northern flicker
Tyrannidae	**Tyrant Flycatchers**
Tyrannus verticalis	western kingbird
Vireonidae	**Typical Vireos**
Vireo gilvus	warbling vireo
Corvidae	**Jays and Crows**
Cyanocitta stelleri	Steller's jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	northern mockingbird
Parulidae	**Wood Warblers and Relatives**
Dendroica coronata	yellow-rumped warbler
Fringillidae	**Finches**
Carpodacus mexicanus	house finch
MAMMALIA	**MAMMALS**
Sciuridae	**Squirrels**
Spermophilus beecheyi	California ground squirrel
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	desert cottontail
Muridae	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher
Heteromyidae	**Mice, Rats and Voles**
Neotoma fuscipes	dusky-footed woodrat

Canidae	**Foxes, Wolves and Relatives**
Canis familiaris	dog
Canis latrans	coyote
Mustelidae	**Weasels and Relatives**
Mustela frenata	long-tailed weasel
Equidae	**Horses and Burros**
Equus caballus	horse

* non-native species

Appendix B: Heritage Oaks Specific Plan Oak Tree Evaluation (Includes Oak Tree Location Map)

OAK TREE EVALUATION

HERITAGE OAKS SPECIFIC PLAN
Tentative Tract 17351
Calimesa, California
September, 2004

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ISA Certified Arborist WC-1053A

OAK TREE EVALUATION - HERITAGE OAKS

SUMMARY

The 54-acre Heritage Oaks site includes several stands of Coast Live Oak Woodland located in the northwest quadrant of Calimesa, California, on the south side of County Line Road, just east of Holmes Way. Grassland and chaparral habitat occupies most of the site which is characterized by low hills dissected by several small east - west trending valleys. Most of the 121 California Coast Live Oak (Quercus agrifolia) trees exist in the drainages surrounded by Scrub Oak and Chamise Chaparral. A few large specimens are growing in savannah locations.

Overall health of the existing natural community is good; 9 trees are rated poor and dead, 24 are rated fair, and the remaining 88 trees are in good condition. Regeneration is sparse, with few saplings and small trees observed.

Individual trees are tagged, and were surveyed and mapped. Maps of the coast live oak woodland habitat and individual tree locations are included in the biological assessment report prepared by others.

Preservation of Coast Live Oak trees is a primary planning goal. Oak Tree Preservation Guidelines are presented in the body of this report for the Planning and Design Phase, the Construction Phase, and the Post-Construction Phase. The intent of the guidelines is not only to preserve the oaks, but also to protect the public.

PURPOSE OF THIS REPORT

This report documents the existing condition of the Coast Live Oak Woodland community on the 54 acre parcel, portions of which are being considered for development. It also contains recommendations for mitigation and preservation measures to be implemented to protect oak tree resources during and after construction. No appraisal of landscape value of existing trees is included.

BACKGROUND

This site, in the northwest quadrant of the City of Calimesa, is proposed for development of single-family homes. Immediately to the north are expanding residential developments in the City of Yucaipa. Properties to the west have been developed for several years.

The rectangular property lies near the upper limit of a broad alluvial plain, draining to the west from the foothills of the San Bernardino Mountains. It is dissected by three small valleys and smaller tributary arroyos. Most of the existing Coast Live Oaks are growing in the lower portions of these small valleys or on the north-facing slopes where moisture is most plentiful, surrounded by patches of Scrub Oak Chaparral and Chamise Chaparral. A few large oak tree specimens are scattered in the grassland that is typical of the region.

OBSERVATIONS

Each tree was visually examined from the ground for size, vigor, and condition. Measurements were taken of each tree's diameter at breast height (DBH) with a measuring tape; and height and spread were visually estimated. All trees of 10-inch DBH and larger were recorded and subsequently tagged for location (mapping) and identification. Mapping by topographical survey was performed by others.

The results of this evaluation are shown below in Table 1 - HERITAGE OAKS, QUERCUS AGRIFOLIA.

A total of 121 trees exceeding 10 inch DBH were identified and tagged.1 Most, 88, are in good condition. Fair ratings apply to 24, 4 are in poor condition, and 5 are rated dead. Locations of numbered trees and groups are identified on the Oak Tree Location Map presented after the Table.

[1] Two tag numbers were not used. This accounts for 123 listings.

Condition ratings consider the following factors:

Overall vigor	Canopy Density	Dieback & deadwood	History of failure	Pests	Extent of decay
Dead	<20%	Large; major scaffold branches	More than one scaffold	Severe infestation	Major with cavities and conks
Poor	20 - 60%	Twig & branch dieback	Scaffold branch	Significant infestation	One or more conks; small cavities
Fair	60 - 90%	Small twigs	Small branches	Minor	Cavities at old pruning wounds
Good	90 - 100%	Little or none	None	Minor	Cavities at pruning wounds

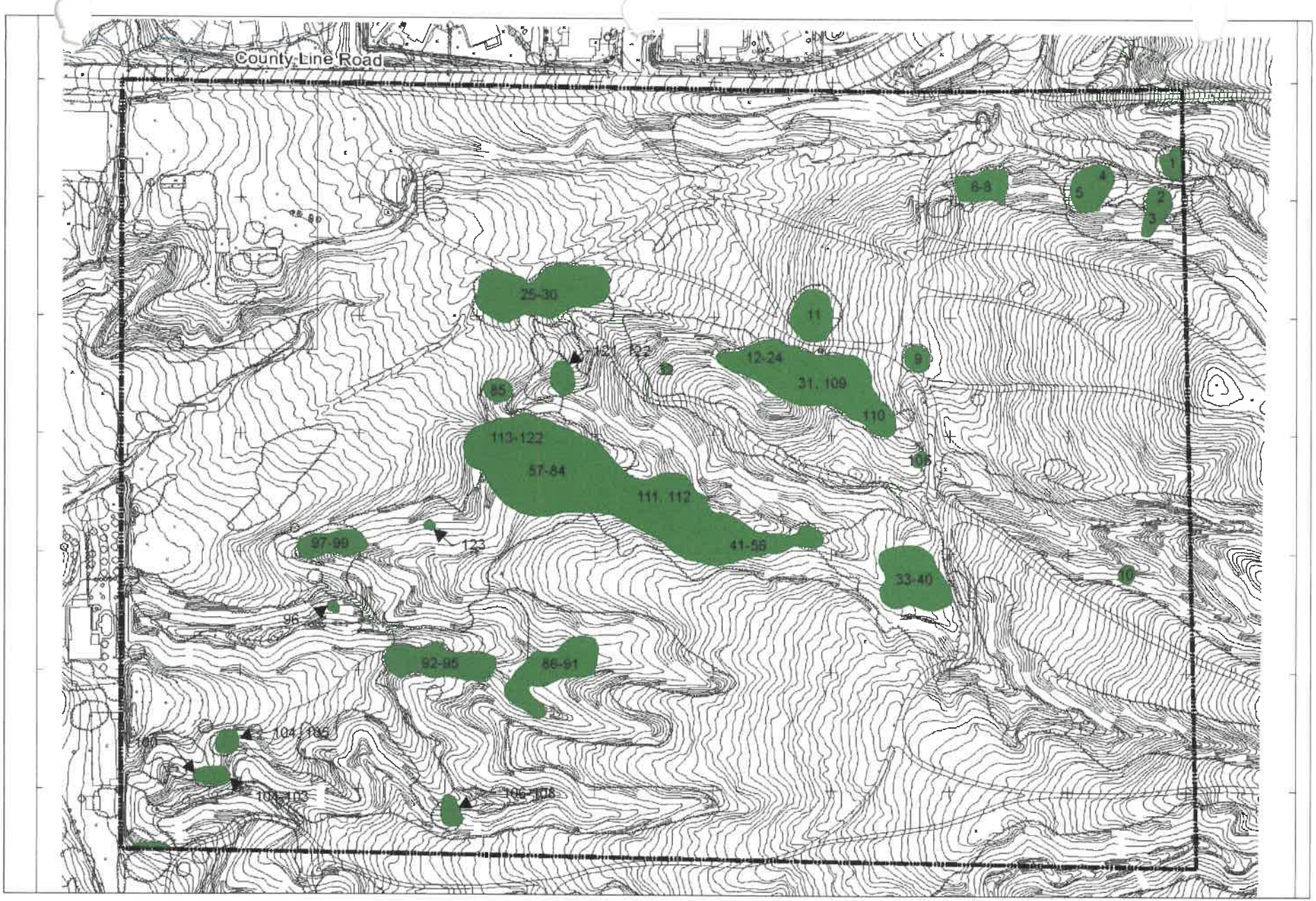
HERITAGE OAKS QUERCUS AGRIFOLIA

I.D. No.	HEIGHT	SPREAD	DBH	CONDITION	REMARKS
1	60'	80'	12", 13", 18", 12", 12", 13", 19", 20"	Fair	Grove-8
2	50'	40'	18", 8", 20"	Good	Low Branch
3	40'	50'	12", 9"	Fair	Double
4	50'	60'	31"	Good	
5	70'	70'	49"	Fair	
6	60'	60'	28"	Good	RR Spikes
7	25'	20'	14"	Fair	
8	60'	50'	19"	Good	
9	70'	50'	27"	Fair	RR Spikes Cavity
10	60'	40'	22"	Fair	Cavity
11	70'	80'	57"@36"H	Fair	Low Branch
12	70'	60'	40"	Good	
13	40'	25'	18"	Good	Leaner
14	70'	70'	25", 26"	Good	Double
15	20'	20'	23"	Poor	Leaner
16	60'	40'	25", 19"	Fair	Double
17	30'	30'	15"	Good	Leaner
18	60'	80'	39", 16"	Good	Low Branch
19	30'	20'	17"	Fair	Leaner
20	70'	90'	20", 26", 15", 19", 23"	Good	Multi-5
21	35'	20'	16"	Good	Leaner
22	40'	30'	15"	Good	
23	40'	30'	14"	Good	
24	70'	50'	26"	Good	
25	60'	45'	38"	Fair	
26	30'	40'	12"	Good	
27	60'	60'	22", 33"	Fair	Double
28	75'	75'	38", 28"	Fair	Low Branch

29	50'	35'	17"	Fair	Leaner
30	75'	120'	39", 62"	Good	Low Branch
31	40'	50'	24"	Good	
32	30'	20'	11.5"	Good	
33	40'	30'	17"	Fair	
34	60'	40'	22"	Good	
35	60'	70'	24"	Good	
36	40'	40'	19"	Good	Leaner
37	70'	60'	27"	Good	
38	50'	40'	25"	Fair	Codominant
39	45'	40'	21", 12"	Good	Low Branch Leaner
40	35'	15'	12", 10"	Fair	Double
41	50'	50'	18", 15"	Good	Double
42	60'	40'	17"	Good	
43	50'	40'	16"	Good	
44	50'	20'	13"	Good	Leaner
45	40'	30'	14"	Good	Leaner
46	60'	40'	17"	Good	
47	50'	50'	24"	Good	
48	60'	40'	19"	Good	
49	60'	80'	27", 29"	Good	Double
50	30'	30'	13"	Good	
51	70'	40'	13"	Good	
52	50'	40'	18"	Good	
53	50'	40'	18"	Good	
54	30'	30'	16"	Fair	
55	30'	20'	11"	Good	
56	30'	20'	10"	Good	
57	60'	60'	24"	Fair	Cavity
58	60'	50'	18"	Good	
59	70'	60'	22"	Good	
60	30'	30'	10"	Good	
61	30'	20'	12", 11"	Good	Double
62	40'	30'	13"	Good	Leaner
63	40'	30'	14"	Good	Leaner
64	60'	50'	16"	Good	
65	40'	40'	12"	Good	Leaner
66	40'	40'	15"	Good	
67	50'	40'	16"	Good	
68	60'	60'	18"	Good	
69					**Not Used**
70	35'	25'	12"	Poor	
71	60'	80'	53"	Fair	Double
72	40'	30'	12"	Good	
73	50'	40'	21"	Good	Leaner

74	70'	40'	20"	Fair	
75	50'	40'	20"	Good	
76					**Not Used**
77	60'	30'	19"	Good	
78	60'	40'	18"	Good	
79	60'	40'	26"	Good	
80	50'	40'	24"	Good	
81	60'	40'	22"	Good	
82	50'	40'	23"	Good	
83	70'	40'	17"	Good	
84	40'	40'	14"	Good	Leaner
85	60'	100'	15", 15", 20", 12"	Good	Multi-4
86	60'	80'	33"	Good	
87	60'	100'	62"	Good	
88	70'	90'	24", 26"	Good	Double
89	50'	60'	24", 22", 12"	Poor	Multi-3
90	40'	40'	22"	Good	
91	40'	20'	12", 14"	Good	Double
92	60'	40'	16", 18"	Good	Double
93	50'	40'	18"	Good	
94	60'	80'	36"@30"H	Fair	Low Branch
95	70'	70'	26"	Good	
96	20'	15'	11.5"	Fair	
97	25'	30'	12"	Good	Leaner
98	40'	40'	25"	Fair	
99	50'	50'	25", 13"	Good	Low Branch
100	30'	30'	18"	Dead	
101	50'	40'	18"	Good	
102	50'	20'	13"	Good	
103	50'	40'	20"	Dead	
104	70'	50'	20"	Good	
105	60'	40'	18"	Good	
106	60'	50'	20"	Dead	
107	60'	60'	24"	Dead	
108	20'	15'	18"	Dead	Snag
109	50'	30'	14.5"	Good	Leaner
110	30'	30'	7", 10", 9.5", 9.5", 7.5"	Good	Multi
111	35'	25'	10"	Good	
112	35'	25'	10"	Good	
113	70'	70'	23", 28"	Good	Double
114	60'	30'	15"	Good	Leaner
115	70'	70'	15", 23"	Good	Low Branch
116	50'	30'	19"	Good	Leaner
117	50'	30'	15"	Good	
118	40'	30'	18"	Good	Leaner

119	40'	30'	15"	Good	
120	70'	30'	14"	Good	
121	20'	15'	15"	Poor	Double w/Snag
122	30'	20'	10", 7"	Fair	Double
123	25'	15'	10"	Good	



Source: Fuscoe Engineering and MBA Field Survey.

NORTH

225 112.5 0

Feet

⑨ Tree Number

Coast Live Oak

Exhibit 1
Oak Tree Location Map

Michael Brandman Associates

26040001 • 11/2004 | 1_appB_oak_tree_location.mxd

Little regeneration of Coast Live Oak was observed. There are very few trees less than 10-inch DBH, and these occur among clusters of larger trees. Very few saplings were observed. Lack of regeneration among native oaks was noted as early as 1908 by dendrologist George B. Sudworth in his book "Trees of the Pacific Slope." Causes include grazing and cultivation, gophers and squirrels, lack of rainfall, and competition from grasses. It is a complex problem that can be traced back to the arrival of the Spanish fathers.[1]

OAK TREE PRESERVATION GUIDELINES

Preservation of California's native oaks has been a matter of increasing concern in recent decades. In November 2002, the Calimesa City Council adopted Ordinance No. 200, establishing prohibitions against destruction or removal of oak trees and establishing standards for issuance of permits for removal, repair or pruning of oaks within the City. The trees on the Heritage Oaks site give it a special identity. It is desirable to preserve this community for that identity, as well as human use and enjoyment.

However, the Coast Live Oak is susceptible to pests and disease that weakens the structural integrity of the tree. This presents a potential risk of liability at the interface of human habitation and oak habitat. Public safety must be a concern.

Oak trees are living organisms and are, therefore, not completely predictable. The following guidelines are presented to preserve the existing oak community and to protect the public by implementing best practice management principles.

[1] Oaks of California, Pavlik, Muick, Johnson and Popper, 1991, Cachuma Press, Inc.

HERITAGE OAKS

OAK TREE PRESERVATION GUIDELINES

I. PLANNING AND DESIGN PHASE

A. General Development Planning

1. Inspect the site to evaluate existing site conditions related to species, size, and current condition.
2. Identify tree groupings and individual specimens on concept plans and specific plans.
3. Depict on plans a Tree Protection Zone (TPZ) that extends a minimum of 5 feet beyond the tree and/or grove canopy dripline.

B. Site Design

1. Precisely identify the location of trees and their specific canopy. Actual dimensions to scale must be shown on site plans.
2. Establish the TPZ based on actual dimensions. Depict the TPZ on all construction drawings.
3. Restrict encroachments into the TPZ by utilities, drainage features, structures, and hardscapes.
4. Preserve natural drainage patterns into and within the TPZ. Should site grading alter the natural overland flow of rainfall to the tree, provide a supplemental means of water supply to the TPZ soil reservoir.
5. Landscape irrigation system design shall prevent the application of irrigation water within five (5) feet of the tree trunk from all directions.
6. The planting of understory plants under oaks is discouraged. If specific exceptions are allowed, the following rules must apply:
   a. No planting will be allowed within one-third (1/3) of the tree canopy as measured from the trunk.
   b. All plants shall be selected from the approved Oak Understory Plant List.
   c. All plant pits shall be hand dug. No oak tree root one and one-half (1-1/2) inches in diameter shall be cut; the plant pit shall be relocated to avoid interference.
   d. All irrigation of plants in the understory shall be by drip system.
7. In open or common areas, the natural oak duff shall remain on the soil surface.
8. On building lots, or open areas where the duff is lost, the tree root zone shall be protected by a layer of coarse mulch a minimum of two (2) inches in depth. No mulch shall be placed within three (3) feet of the tree trunk.

C. Public Safety

1. All trees on specific building lots, and trees along walks, trails, or streets, shall be inspected for liability assessment by a Certified Arborist. The liability assessment shall include the extent of crown deadwood and dieback, the presence and extent of internal decay, and structural integrity of the trunk and limbs, and an assessment of potential risk of failure of the tree or its significant parts.
2. Trees that pose a significant risk of failure shall be examined to determine possible remedial measures short of tree removal. Any tree assessed as an imminent potential risk shall be removed to prevent injury to persons or property.

D. Plan Notes

1. All site construction drawings shall contain the following note: "All trees noted on these plans as Existing Oak Trees shall be protected from injury and/or damage to the tree or its root zone during construction."

II. CONSTRUCTION PHASE

A. The Tree Protection Zone (TPZ)

1. The TPZ as noted on the drawings shall be field verified and staked prior to any clearing and grubbing, or other earth moving activity. The Arborist shall observe and verify the staking.

B. Protective Fencing

1. Temporary fencing shall be erected on the perimeter of the TPZ.
2. Signage and flagging noting "No Entry" shall be placed on the TPZ fencing at regular intervals not to exceed twenty (20) linear feet.

C. Prohibited Activities in TPZ

1. Equipment and vehicle storage and maintenance.
2. Material storage.
3. Soil and material stockpiling.
4. Grading.
5. Trenching.
6. Litter and trash container storage.
7. Temporary offices and amenities.

D. Root Protection

1. A two (2) inch layer of mulch shall be maintained where natural duff is not present. No mulch shall be placed within three (3) feet of the tree trunk.

2. Should special circumstances dictate that trenching is necessary, the following guidelines apply:
   a. No trench shall occur within five (5) trunk diameters of the trunk.
   b. All trenches shall be hand dug or excavated with an air spade.
   c. No root over one and one-half (1-1/2) inches in diameter shall be cut.
   d. All cuts shall be made with sharp pruning tools.
   e. Trenches shall be opened and closed in the shortest possible time.
   f. Trench backfill shall be the native soil removed from the trench, except for required pipe bedding. Compaction shall be by flooding.

E. Tree Care
   1. Refer to Section I-C "Public Safety."
   2. All trees to remain on specific building lots, along walks, trails, or streets, as identified in the Liability Assessment Report, shall be pruned, cabled and braced or otherwise cared for before public occupancy.
   3. At a minimum, all deadwood and broken and diseased branches shall be removed.

III. POST-CONSTRUCTION PHASE

A. Owner Notification
   1. All owners of building lots containing existing oak trees shall be notified of the restrictions pertaining to those trees. Restrictions include:
      a. No alteration of grading and drainage.
      b. No hardscape and/or structural encroachment.
      c. No structures on or within the tree.
      d. Understory planting of approved species only within the outer two-thirds (2/3) of the root zone.
      e. No pruning or removal of the tree without permit.

B. Safety
   1. No structure that encourages people to congregate under trees shall be allowed. Such structures include:
      a. Play structures
      b. Picnic tables
      c. Benches
      d. Drinking fountains

   2. Tree inspections shall be conducted annually for trees on building lots, along walks, trails, and streets. The Inspection Report shall include:

a. Current condition of the tree.
b. Need for required pruning or other care.
c. Maintenance of the mulch layer.
d. Understory planting.
e. Safety violations.

3. Pruning shall be performed on a five (5) year cycle and as needed. Such pruning shall be performed under the supervision of an ISA Certified Arborist by ISA Certified Tree Workers.

4. Pruning shall be limited to the removal of dead, diseased, or broken limbs, unless there is an imminent safety consideration.

Appendix D: Geotechnical Investigation

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL SUBDIVISION
TRACT NO. 29964
CALIMESA, CALIFORNIA

PREPARED FOR:

STEVE McCARTY
1515 Ohio Street
Calimesa, California 92374

PREPARED BY:

INLAND FOUNDATION ENGINEERING, INC.
1310 South Santa Fe Avenue
San Jacinto, California 92583

January 18, 2001

INLAND FOUNDATION ENGINEERING, INC.
Consulting Geotechnical Engineers
1310 South Santa Fe Avenue
San Jacinto, California 92583-4638
(909) 654-1555
FAX (909) 654-0551

January 18, 2001
Project No. M388-002

STEVE McCARTY
1515 Ohio Street
Redlands, California 92374

Re: Preliminary Geotechnical Investigation
Proposed Residential Subdivision
Tract No. 29964
Calimesa, California

Gentlemen:

We are pleased to submit the results of our preliminary geotechnical investigation conducted for the referenced project. The site is located south of and adjacent to County Line Road east of Holmes Street in the City of Calimesa, California.

Our investigation indicates that the proposed development is feasible from a Geotechnical Engineering standpoint. Our report includes design recommendations along with the field and laboratory data. We have also included recommendations for site grading.

We appreciate the opportunity of being of service to you on this project. If there are any questions, please contact our office.

Respectfully,
INLAND FOUNDATION ENGINEERING, INC.

Matt J. Stiefel, Staff Engineer

Lawrence E. Strahm, President
R.C.E. 26409/G.E. 959

MJS:LES:jg
Distribution: Addressee (3)

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INTRODUCTION

This report presents the results of a geotechnical investigation conducted at the proposed site of a residential subdivision. The site under consideration is located south of County Line Road east of Holmes Street in the City of Calimesa, California. A preliminary site plan entitled "Tentative Tract Map 29964" dated October 2000 and prepared by Focus Engineering, Inc. was used as a reference for our investigation. This report will provide preliminary design parameters that may be applied to the proposed development on the site.

SCOPE OF WORK

The purpose of the geotechnical investigation was to provide geotechnical parameters for design and construction of the proposed project. The scope of the geotechnical investigation included:

- *A review of the general geologic conditions and specific subsurface conditions of the project site.*
- *An evaluation of the engineering and geologic data collected for the project.*
- *Preparation of a formal report providing geotechnical conclusions and recommendations for design and construction.*

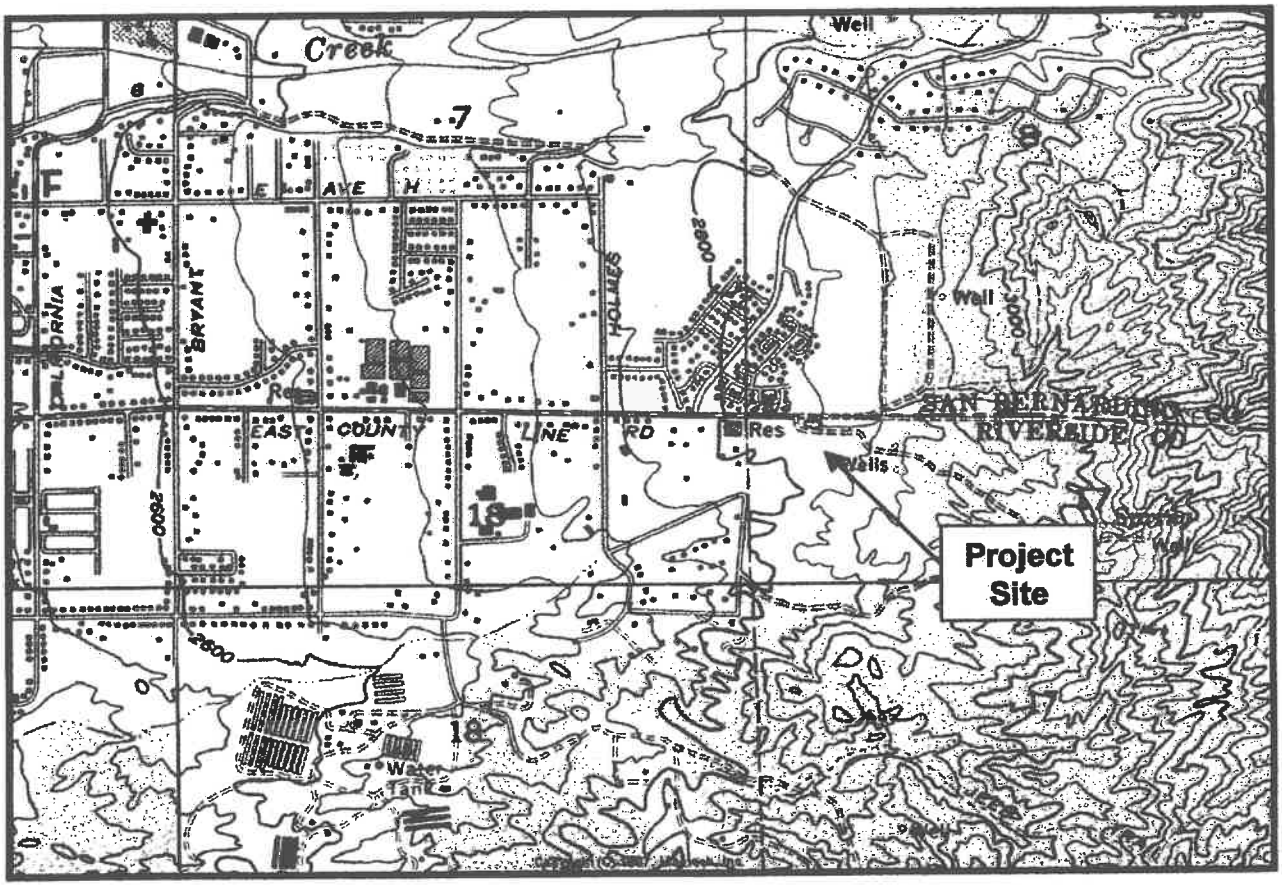
The tasks performed in order to achieve these objectives included:

- *The collection and review of data in order to develop an exploration program.*
- *Subsurface exploration to determine the nature and stratigraphy of the subsurface soils, and to obtain representative samples for laboratory testing.*
- *A visual reconnaissance of the site and surrounding area to ascertain the existence of any unstable or adverse geologic conditions.*
- *Laboratory testing of representative samples in order to establish the classification and engineering properties of the soils.*
- *Analysis of the data collected and the preparation of this report presenting our geotechnical conclusions and recommendations.*

Evaluation of seismic/geologic hazards and hazardous wastes was not within the scope of services provided. The information in this report represents professional opinions that have been developed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, either express or implied, is made as to the professional advice included in this report.

PROJECT DESCRIPTION

The Assessor's Parcel Nos. for the site are 407-030-002 and 003. The site rests in the northwest portion of Section 17, Township 2 South, Range 1 West, S.B.B.&M. The site is designated Tract No. 29964. The subject site rests south of and adjacent to County Line Road east of Holmes Street in the City of Calimesa, California. The site is located in a residential area of Calimesa with single-family residential properties north and west of the site and vacant land south and east of the site. The site consists of approximately 52.93 acres.



Vicinity Map

The topography of the site may be described as variable and sloping to the west. Several ravines cross the site in an east-west orientation. An alluvial flood plain rests on part of the northwest portion of the site. At the time of our investigation, a moderate growth of seasonal weeds and grasses were present on the site. Trees were located at various locations across the site. A three-sided block structure is present on the northwestern portion of the site in the area of the proposed Lots 9 and 10. To the southeast of the structure are remnants of former structures including concrete slabs and other debris. A

fire hydrant is also located in this vicinity. To the south of these former structures, it appears that artificial fill has been placed on and adjacent to the northerly portion of the existing ravine.

The proposed development of the site consists of a residential subdivision. The current plan indicates that the subdivision will consist of 44 residential lots and associated access streets. Single-family residential structures are proposed. We anticipate that the structures will be of wood frame construction and will have a maximum height of two-stories. Approximately 19.6 acres of open space are designated on the plan.

Grading for the project will include cuts of up to approximately ten feet and fills of up to approximately thirty feet. The grading will be performed in order to develop level building pads upon each of the lots as well as to construct roadways within the development. Cut and fill slopes will be necessary on many of the lots. We assume that these will be up to thirty feet in height and will be inclined at a gradient of 2:1 (Horizontal:Vertical) or flatter.

GEOLOGIC SETTING

The site is located in a seismically active area, typical for Southern California. According to maps compiled by the California Department of Conservation, Division of Mines and Geology (DMG) the major faults influencing the site, distances and maximum earthquake magnitudes are as follows:

FAULT ZONE	DISTANCE (km)	EARTHQUAKE MAGNITUDE (M_W)	SLIP RATE (mm/yr)
San Gorgonio (Banning)	1.9	7.2	20.0
San Andreas (Southern)	6.9	7.4	24.0
San Jacinto (San Jacinto Valley)	13.7	6.9	12.0

In our opinion, the primary geologic hazard affecting the project is that of ground shaking. Deterministic site parameters developed using EQFAULT (Blake, 1993) indicate that the maximum probable site acceleration for the subject site is 1.107g corresponding to a Magnitude 7.0 seismic event on the Banning Fault, located approximately 2 km to the southwest. Using the criteria set forth by the Uniform Building Code, the applicable seismic design criteria are based upon the Banning Fault, a Type A Fault.

Our exploratory borings were advanced to depths of up to 27 feet. On the basis of Standard Penetration Testing (SPT), it is our opinion that the Soil Profile Type may be assumed to be S_D for the purpose of developing seismic design criteria in accordance with the Uniform Building Code.

On the bases of the subsurface conditions and local fault characteristics, the Uniform Building Code provides the following seismic design parameters:

UBC-CHAP.16 TABLE NO.	SEISMIC PARAMETER	RECOMMENDED VALUE
16-I	Seismic Zone Factor Z	0.40
16-J	Soil Profile Type	S_D
16-Q	Seismic Coefficient (C_a)	0.66
16-R	Seismic Coefficient (C_v)	1.28
16-S	Near Source Factor N_a	1.5
16-T	Near Source Factor N_v	2.0
16-U	Seismic Source Type	A

It should be noted that these provisions are intended to be the minimum design condition and are often used as the maximum level to which structures are designed. The minimum

code criteria are designed to allow occupants to safely evacuate a structure after an earthquake. The structure may no longer be safe for inhabitants and may ultimately have to be demolished.

Groundwater data reviewed for this investigation indicates that groundwater is on the order of 100 feet beneath the ground surface. Therefore, the potential for liquefaction is considered nil. Other secondary effects and geologic hazards include slope failure, lurching, seismic settlement, seiches, tsunamis and surface rupture. These are not considered to be of significance to the project.

A copy of the International Building Conference Active Fault Near-Source Zones Map for this vicinity is appended. This map is intended to be used in conjunction with the 1997 Uniform Building Code, Tables 16-S and 16-T. The Banning Fault is not shown on this map.

SUBSURFACE CONDITIONS

The site is underlain by predominately granular soils in a loose to medium dense condition. On-site soils consist primarily of silty sands with some sands encountered. Our two exploratory borings excavated on the site indicate these soils are underlain granitic bedrock at depth. Highly to completely weathered granite was observed at depths of sixteen and nineteen feet beneath the surface in our exploratory borings.

Relative Compactions encountered in our exploratory trenches ranged from 62 to 89 percent with an average Relative Compaction of 78 percent. The Relative Compactions of the surface soils ranged from 62 to 73 percent with an average of 69 percent. In general, the consistency of the soils improve with depth.

Several alluvial-filled ravines cross the site and an alluvial plain is present on the northwestern portion of the site. The thicknesses of the recent alluvium within our exploratory borings in these areas were up to twelve and one-half feet. Relative Compactions within the alluvial plain vary from 84 to 86 percent.

We observed porous soils within our exploratory trenches on the eastern portion of the site. These porous soils extend to a depth of approximately five feet beneath the surface. Relative Compactions within the porous layers ranged from 69 to 78 percent.

Maximum density/optimum moisture testing performed on representative soil types indicates optimum moistures ranging from 9 to 11 percent. The overall in-situ moisture condition on the site at the time of our investigation was slightly dry to dry. Moisture contents varied from 1.1 percent in the alluvium to 10 percent at depth within our exploratory borings. The average moisture content across the site is on the order of 5 percent.

Laboratory testing indicates on-site soils have very low plasticity ranging from non-plastic to a Plasticity Index of two. Expansion testing of the slightly plastic sample indicates an Expansion Index of 12. This is considered very low expansion potential.

Analytical testing of a selected sample indicated the concentration of sulfates in the soil is 180 parts per million (0.018%).

One exploratory trench and two exploratory borings were excavated within the recent alluvium. Significant caving occurred within these excavations due to the dry cohesionless soils encountered.

Groundwater was not encountered in any of our exploratory trenches or borings. Groundwater data compiled by Western Municipal Water District reveals wells maintained by both the Yucaipa Valley Water District and the San Gorgonio Pass Water Agency are located in the vicinity of the site. The two wells located closest to the site could not be sounded. The closest well to the site with a measured groundwater level (2S1W08M01S) indicates groundwater was 142.2 feet beneath the site on June 11, 1998. Other wells located within one mile of the site have groundwater levels lower than 100 feet benath the surface.

CONCLUSIONS AND RECOMMENDATIONS

On the basis of our field and laboratory investigation, it is our opinion that the proposed construction will be feasible from a geotechnical engineering standpoint. We recommend removal and recompaction of the soils within all building, slab, and pavement areas. This is to provide uniformity in the underlying condition and to assure satisfactory compaction of any existing fill materials. The minimum recommended depth of removal and recompaction within the building areas will vary across the site depending on the conditions of the underlying soils.

The following recommendations are based on the preliminary site plan dated October 2000 and the conditions encountered during our investigation. Further review of the conditions encountered during grading may change the actual extents of the recommended overexcavations:

- The northern portion of the site consisting of Lots 4 through 9 and the south center portion of the site consisting of Lots 24 through 31 should be overexcavated a minimum depth of one times the footing width beneath the footing base or one foot beneath the existing surface, whichever is greater.

- The alluvial plain area consisting of Lots 10 through 21 should be overexcavated to a depth equal to the depth of alluvium or one times the footing width beneath the footing base or one foot beneath the existing surface, whichever is greater. We estimate the depth of alluvium will be up to approximately thirteen feet on the western end of the site. We expect it to be shallower to the east.

- The eastern portion of the site consisting of the remaining Lots contains porous soils. These should be removed to their maximum depth. We estimate this to be up to five feet beneath the existing surface. The overexcavation in these areas should also extend a minimum of one times the footing width beneath the footing base.

In addition to the recommended removals indicated above, all loose alluvial soils should be removed from the swales and recompacted.

On-site soils are observed to be predominately granular and non-plastic. Our testing indicates that these soils have a Very Low Expansive Index. Expansive soil design criteria will not be necessary for foundations and concrete slabs-on-grade.

Groundwater was not encountered within our exploratory trenches or borings. It is our opinion that groundwater will not influence the proposed construction. This includes the effects of soil liquefaction during a seismic event.

The following paragraphs present more detailed design criteria developed on the basis of our field and laboratory investigation.

Foundation Design: The results of our investigation indicate that either continuous wall or isolated square footings, supported upon properly recompacted native materials, may be expected to provide satisfactory support for the proposed residential and appurtenant structures. All footings should be underlain by a minimum compacted fill thickness equal to one times the width of the footing. This may be performed as described in the Site Grading Section of this report. Footings should have a minimum width of twelve inches and should be founded a minimum of twelve inches beneath the lowest adjacent final grade. Foundations supporting two floors should have a minimum width of fifteen inches and should be supported a minimum of eighteen inches beneath the lowest adjacent final grade. For design, we recommend an allowable soil bearing capacity of 1500 pounds per square foot.

The recommendations made in the preceding paragraph are based on the assumption that all footings will be supported upon properly compacted soil. All grading shall be performed under the testing and inspection of the Soil Engineer or his representative. Prior to the placement of concrete, we recommend that the footing excavations be inspected in order to verify that they extend into satisfactory soil and are free of loose and disturbed materials.

Settlements of properly designed and constructed footings are expected to be within tolerable limits for the proposed structure. Both continuous wall and isolated square footings carrying the design loads within the limits of the allowable bearing capacity are expected to experience a maximum settlement of less than one inch. Differential settlements of the proposed structure are expected to be less than one-half inch.

Lateral Design: The allowable bearing capacity provided in the preceding section is for the total of dead and frequently applied live loads. These may be increased by 33 percent to provide for lateral loads of short duration such as those caused by wind or seismic forces.

Resistance to lateral loads will be provided by a combination of friction acting at the base of the slab or foundation and passive earth pressure. A coefficient of friction of 0.39 between soil and concrete may be used with dead load forces only. A passive earth pressure of 275 pounds per square foot, per foot of depth, may be used for the sides of footings poured against recompacted or dense native material. Passive earth pressure should be ignored within the upper one foot except where confined as beneath a floor slab, for example.

Slope Stability: Our cursory analysis indicates that slopes inclined at a gradient of 2:1 (horizontal:vertical) with a height of 30 feet will have a factor of safety of 2.0. Fill slopes should be constructed with properly compacted fills having a minimum relative compaction of 90 percent.

The success of both cut and fill slopes will be dependent upon proper design, construction and maintenance. Slopes should be designed in such a manner that all surface water is directed away from the slope face and into satisfactory drainage devices. Terrace benching will be required for slopes in excess of thirty feet in height. The finished slopes may be highly susceptible to erosion and should be planted as soon as possible after construction. The moisture content of the soil exposed on the slopes should be maintained at a relatively constant level to avoid the problems related to shrinkage and swelling. Slopes must also be protected against rodent activity and other means of deterioration.

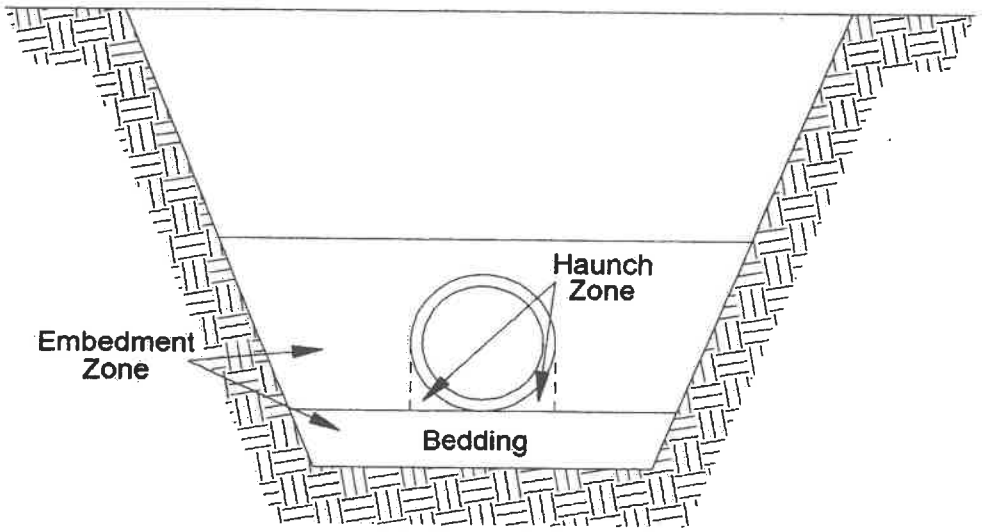
Further slope stability analysis may be warranted when a grading plan is available showing the actual heights, gradients, and locations of the proposed slopes.

Liquefaction Mitigation: Liquefaction is a phenomena where soil temporarily loses strength due to cyclic stresses such as those caused by an earthquake. The primary effects of liquefaction are loss of support of the foundation, sand boils, lateral spreading and seismically induced settlement. Liquefaction is generally considered a hazard in relatively loose sandy soils with the groundwater table within fifty feet of the surface. According to the Uniform Building Code Section 3309.7, a more detailed liquefaction study is not necessary due to the depth of groundwater beneath the site. It is noteworthy that Standard Penetration Test data compiled during drilling indicates that the soils are highly resistant to liquefaction on the basis of favorable consistencies.

Pipeline Design: The following recommendations have been developed for use in the design of pipelines on this project. We assume that pipelines will be installed

to a maximum depth of approximately twenty feet. We do not anticipate that native soils will pose difficulty to normal excavating equipment at this depth. However, if deeper excavations are required or if portions of the site are underlain by bedrock closer to the surface than at our boring locations, heavy-duty excavating equipment may be required.

Bedding: We recommend a minimum bedding thickness of 6 inches be placed to provide uniform and adequate longitudinal support under the pipe. The bedding material should not be compacted. Blocking should not be used to bring the pipe to grade. Bell holes at each joint should be provided to permit the joint to be assembled properly while maintaining uniform pipe support.



Embedment: Processed native materials should provide suitable support for the pipe where cover thicknesses are greater than three feet. On-site soils may be classified as Class III Embedment Material. A Lateral Modulus of Subgrade Reaction (E') of 1000 pounds per square inch may be assumed. If designs are based upon the use of imported granular embedment materials, we recommend that a granular free-draining soil be used. The actual thickness should be determined by the pipeline engineer or manufacturer. We recommend that if imported granular embedment material is used, it have a minimum Sand Equivalent (SE) of 30 and be free of particles greater than two inches diameter.

To provide protection from particle migration, imported pipe embedment material should be in accordance with the following criteria:

$$D_{15} < 0.5 \text{ mm, and } D_{50} < 2.0 \text{ mm,}$$

where D_{15} and D_{50} represent bedding material particle sizes corresponding to 15 and 50 percent passing by weight, respectively.

The most important factor affecting pipe performance and deflection is the haunching material and its density. Material should be placed and consolidated under the pipe haunch to provide adequate side support to the pipe while avoiding both vertical and lateral displacement of the pipe from proper alignment. Where coarse material with voids is used for bedding, the same coarse material should also be used for haunching and consideration given to native soil migration. Haunching is placed up to the pipe springline. We do not recommend jetting as a means of densifying the native soils in the bedding or haunching zone.

Lateral Design: On the basis of laboratory testing, we propose a lateral bearing capacity of 1000 pounds per square foot below a depth of four feet. This should be modified on the basis of the anticipated trench type. This modification may be based upon silty sand (SM), assuming native backfill. Thrust restraint may be provided by friction between the pipeline walls and the supporting soils. An ultimate soil-pipeline friction coefficient of 0.27 between compacted native soil and PVC pipeline is recommended for use in design. We recommend that cohesion be ignored.

Trench Wall Stability: Significant caving occurred within our exploratory trenches in the alluvium. All excavations should be configured in accordance with the requirements of CalOSHA. We would classify the soils as Type C. The classification of the soil and the shoring and/or slope configuration should be the responsibility of the contractor on the basis of the trench depth and the soil encountered. The contractor should have a "competent person" on-site for the purpose of assuring safety within and about all construction excavations.

Retaining Walls: Retaining walls may be necessary during residential construction and/or landscaping. The retaining walls may be designed for an active earth pressure equivalent to that exerted by a fluid weighing not less than that shown in the following table:

Surface Slope of Retained Material Horizontal:Vertical	If clean sand and/or gravel with $\phi = 38°$ is used to backfill	If native soils are used to backfill
Level	30	40
2 to 1	43	61

Any applicable construction and seismic surcharges should be added to the above pressures. At least 12 inches of granular material should be used in the backfill behind the walls and water pressure should not be permitted to build up behind retaining walls. The upper 12 to 18 inches of the backfill should consist of impervious soil. A subdrain should be constructed along the base of the backfill.

Concrete Slabs-on-Grade: All surfaces to receive concrete slabs-on-grade shall be underlain by a minimum compacted fill thickness of 12 inches, placed as described in the Site Grading Section of this report. Where slabs are to receive moisture sensitive floor coverings, we recommend the use of a polyethylene vapor barrier. Vapor barriers should have a minimum thickness of 6 mil and should be protected by two, one-inch thick layers of sand in order to reduce the possibility of puncture and to aid in obtaining a satisfactory concrete cure.

Shrinkage of concrete should be anticipated. Shrinkage cracks may be directed to saw-cut "control joints" spaced on the basis of slab thickness and reinforcement. The placement of reinforcing steel will help in reducing crack width and propagation as-well-as providing for an increase in the control joint spacing.

Expansive Soils: On-site soils are not considered to be significantly expansive. Laboratory testing indicates an Expansion Index of 12. According to Section 1803.2 of the Uniform Building Code, special design criteria for expansive soils will not be necessary. Specifically, reinforcement and thickening of foundations and slabs-on-grade in order to resist expansive soil pressures will not be necessary. Reinforcement may be required for other purposes related to structural properties. Nominal reinforcement is recommended for all foundations and concrete slabs-on-grade.

Tentative Pavement Design: All surfaces to receive asphalt concrete paving should be underlain by a minimum compacted fill thickness of 12 inches (excluding aggregate base). This may be performed as described in the Site Grading Section of this report. Although actual R-Value testing was not performed during our

investigation, we make the following tentative recommendations for structural street section design:

Service	Asphalt Concrete Thickness (in.)	Base Course Thickness (in.)
Interior Streets (Assumed T.I. = 5.5)	0.25	0.5
County Line Road (Assumed T.I. = 6.5)	0.3	0.75

These recommendations are provided for estimating purposes only. At the completion of rough grading, when the actual soils are more accurately defined, samples will be obtained for actual R-Value testing which will serve as a basis for the actual structural street section design. All work within the roadway area will be performed under the inspection of the City of Calimesa.

Shrinkage and Subsidence: Volumetric shrinkage of the material which is excavated and replaced as controlled compacted fill should be anticipated. We estimate that this shrinkage will be on the order of 15 to 20 percent. Subsidence of the surfaces that are scarified and compacted will be on the order of 0.15 feet per foot of recompaction. The effects of the recompaction of the soil "in-place" may extend up to two feet beneath the surface that is compacted. Therefore, subsidence due to such recompaction, may be up to 0.3 feet. This will vary depending upon the type of equipment used and the moisture content of the soil at the time of grading. These values for shrinkage and subsidence are exclusive of losses which will occur due to the stripping of the organic material from the site and the removal of trees, utility or irrigation lines, and other subsurface obstructions.

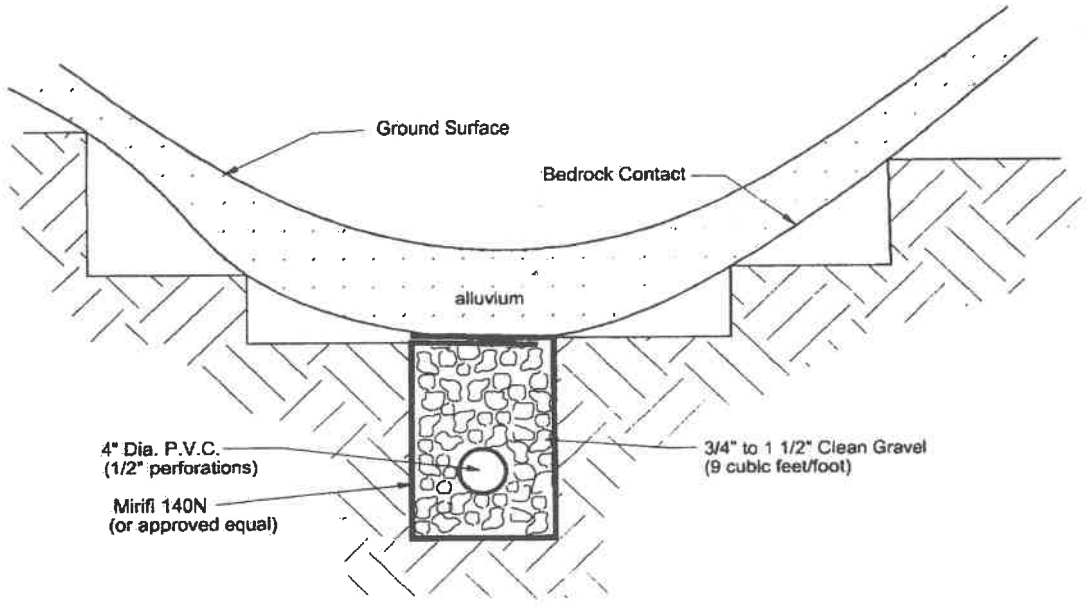
General Site Grading: All grading should be performed in accordance with the grading ordinance of the City of Calimesa. The following specifications have been developed on the basis of our field and laboratory testing:

1. **Clearing and Grubbing:** All surfaces to receive compacted fill should be cleared of existing vegetation, debris, alluvium, and other unsuitable materials. Artificial fill was observed on and adjacent to ravine slopes on the site. Removal of these materials will be necessary. It is likely that underground utilities, septic tanks and seepage pits or leach lines are present

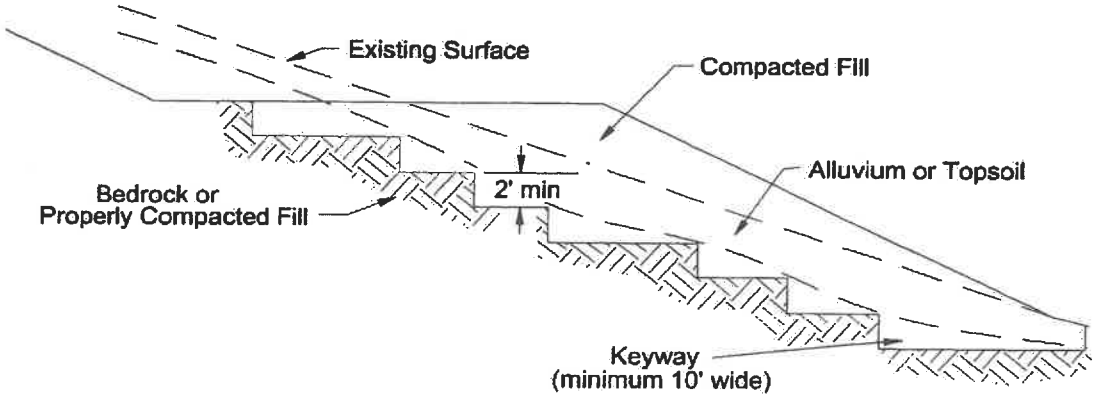
on the northwest portion of the site in the vicinity of the former structures. Abandoned underground utility lines should be traced out, securely capped at their entrance and exit to the site, and removed from the site. Concrete irrigation lines may be capped at their entrance and exit to the site, crushed in place and distributed throughout the fill as directed by the Soil Engineer. Soils loosened due to the removal of trees should be removed and replaced as controlled compacted fill under the direction of the Soil Engineer. Any abandoned septic tanks and/or seepage pits encountered during grading should be excavated and removed from the site or processed under the direction of the Soil Engineer.

2. **Preparation of Surfaces to Receive Compacted Fill:** All surfaces to receive compacted fill shall be cleared of loose alluvial soils. We estimate that this will involve removals of up to approximately thirteen feet. "Bottoms" should be approved by the Geotechnical Engineer or his representative. Upon approval, surfaces to receive fill shall be scarified, brought to near optimum moisture content, and compacted to a minimum of 90 percent Relative Compaction.

Where fills are placed over existing drainage swales, subdrains should be installed prior to fill placement. A typical Canyon Subdrain detail is presented as follows:



Where fills are placed at the bases of swale areas or upon slopes of 20% or steeper, a keyway excavation shall be made at the toe of the fill slope. The keyway shall extend into dense undisturbed soil or properly compacted fill. Level benches shall be excavated into dense undisturbed soil or properly compacted fill as the filling progresses. A typical detail is presented below:

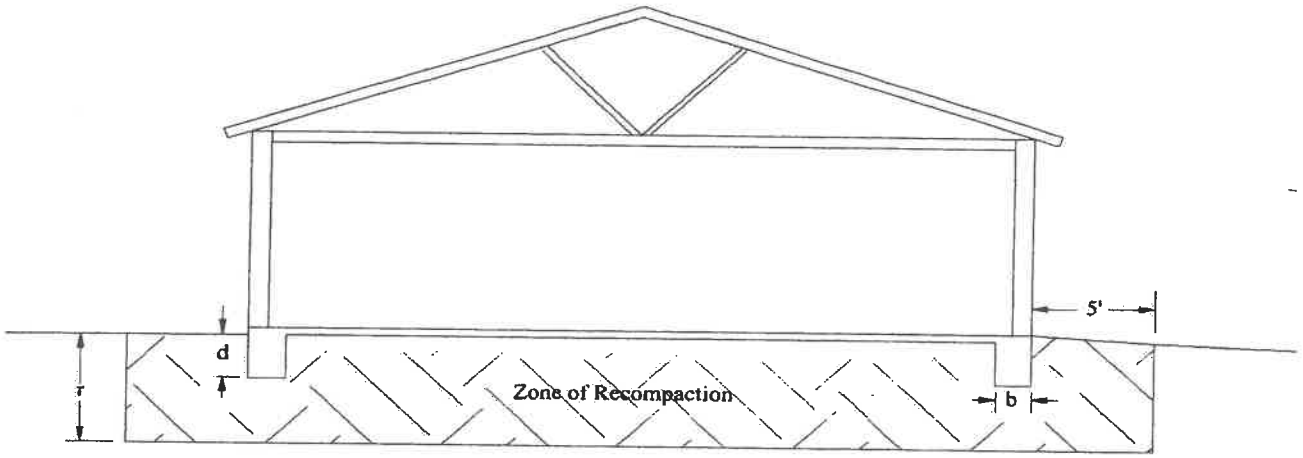


KEYING AND BENCHING - TYPICAL DETAIL

3. **Placement of Compacted Fill:** Fill materials consisting of on-site soils or approved imported granular soils, shall be spread in shallow lifts, and compacted at near optimum moisture content to a minimum of 90 percent Relative Compaction. Our observations of the material encountered during our investigation indicate that compaction will be most readily obtained by means of heavy rubber-wheeled or sheepsfoot compactors. If grading is performed during a dry period, pre-watering of the soil may provide a means of obtaining a more uniform moisture content through the soils which were encountered. This should be investigated by the grading contractor prior to the commencement of site grading.

4. **Preparation of Building Areas:** All building areas should be underlain by a minimum compacted fill thickness of one times the footing width beneath the footing base elevation. This zone of recompaction should extend outside of the building lines for a distance equal to the depth of overexcavation but not less than five feet. The overexcavation should also extend through any recent alluvium or porous soils as outlined in the Conclusions and Recommendations. The surface of the overexcavation should then be

scarified, brought to near optimum moisture content and compacted to a minimum of 90 percent Relative Compaction. An inspection should then be made by the Soil Engineer or his representative, in order to verify the depth of the overexcavation and the Relative Compaction obtained. The excavated material may then be replaced as controlled compacted fill. The removal depths indicated in this section will be greater if dictated by field conditions during alluvium removal.



r=Depth of Recompaction
= 1.0 X b + d (or as otherwise specified)

Where:
b = Footing Width
d = Footing Depth

5. **Preparation of Slab and Paving Areas:** All surfaces to receive asphalt concrete paving or concrete slabs-on-grade, should be underlain by a minimum compacted fill thickness of 12 inches. This may be accomplished by a combination of overexcavation, scarification and recompaction of the surface, and replacement of the excavated material as controlled compacted fill. Compaction of the slab areas shall be to a minimum of 90 percent Relative Compaction. Compaction within the proposed roadway areas shall be to a minimum of 95 percent Relative Compaction, or as otherwise required by the City of Calimesa.

6. **Utility Trench Backfill:** It is our opinion that utility trench backfill consisting of the on-site soil types should be placed by mechanical compaction to a minimum of 90 percent Relative Compaction. Jetting of the surficial soils present across the site may not be a feasible means of compaction and is not recommended. Use of clean granular shading material jetted to 90 percent Relative Compaction may be considered above non-structural conduits, if so indicated by the Civil Engineer.

7. **Testing and Inspection:** During grading tests and observations shall be performed by the Soil Engineer or his representative in order to verify that the grading is being performed in accordance with the project specifications. Field density testing shall be performed in accordance with the ASTM D1556-90 test method. The minimum acceptable degree of compaction shall be 90 percent of the maximum dry density as obtained by the ASTM D1557-91 test method. Where testing indicates insufficient density, additional compactive effort shall be applied until retesting indicates satisfactory compaction.

GENERAL

The findings and recommendations presented in this report are based upon an interpolation of the soil conditions between trench and boring locations. Should conditions be encountered during grading that appear to be different than those indicated by this report, this office should be notified.

Our investigation was performed prior to the preparation of a grading plan for the project. We recommend that a pre-job conference be held on the site prior to the initiation of site grading. The purpose of this meeting will be to assure a complete understanding of the recommendations presented in this report as they apply to the actual grading performed.

Our investigation was conducted for Steve McCarty for use in the design of the proposed subdivision. This report may only be used by Steve McCarty for this purpose. The use of this report by parties other than Steve McCarty or for other purposes is not authorized without written permission by Inland Foundation Engineering, Inc. Inland Foundation Engineering, Inc. will not be liable for any projects connected with the unauthorized use of this report.

The recommendations of this report are considered to be preliminary. The final design parameters may only be determined or confirmed at the completion of site grading on the basis of observations made during the site grading operation. To this extent, this investigation is not considered to be complete until the completion of both the design process and the site preparation.

APPENDIX A

FIELD EXPLORATION

For our field investigation, two exploratory borings were excavated by means of a truck mounted rotary auger rig at the approximate locations shown on Figure No. A-10. Continuous logs of the materials encountered were made on the site by a Staff Geologist. These are presented on Figure No. A-2 and A-3.

Representative undisturbed samples were obtained within our borings by driving a thin-walled steel penetration sampler with successive 30-inch drops of a 140-pound hammer. The number of blows required to achieve each six inches of penetration were recorded on our boring logs and used for estimating the relative consistencies of the subsoils. Two different samplers were used. The first sampler used was a Standard Penetration Sampler for which published correlations relating the number of hammer blows to the strength of the soil are available. The second sampler type was larger in diameter, carrying brass sample rings having inner diameters of 2.5 inches. Undisturbed samples were removed from the sampler and placed in moisture sealed containers in order to preserve the natural soil moisture content. They were then transported to our laboratory for further observations and testing.

In addition, six exploratory trenches were excavated by means of a tractor mounted backhoe at the approximate locations shown on Figure No. A-10. Continuous logs of the materials encountered were made on the site by a Staff Geologist. These are presented on Figure Nos. A-4 through A-9.

Field density testing was performed at frequent intervals within selected backhoe excavations in order to provide a means of estimating the consistency of the subsoils in its present condition. This is useful in estimating the strength and compressibility of the undisturbed natural soils. The results of this testing are presented on the Figure Nos. A-4 through A-9.

Representative bulk samples were obtained from the backhoe excavations and returned to our laboratory for further testing and observations. The results of this testing are discussed and presented in Appendix B.

APPENDIX B

LABORATORY TESTING

Representative bulk soil samples were obtained in the field and returned to our laboratory for additional observations and testing. Laboratory testing was generally performed in two phases. The first phase consisted of testing in order to determine the compaction of the existing natural soil and the general engineering classifications of the soils across the site. This testing was performed in order to estimate the engineering characteristics of the soil and to serve as a basis for selecting samples for the second phase of testing. The second phase consisted of soil mechanics and analytical testing. This testing included a direct shear test, an Expansion Index test, and testing to estimate the concentration of water-soluble sulfate. These tests were performed in order to provide a means of developing specific design recommendations based on the strength characteristics of the soil.

CLASSIFICATION AND COMPACTION TESTING

Unit Weight and Moisture Content Determinations: Each undisturbed sample was weighed and measured in order to determine its unit weight. A small portion of each sample was then subjected to testing in order to determine its moisture content. This was used in order to determine the dry density of the soil in its natural condition. The results of this testing are shown on the Boring Logs (Figure Nos. A-2 and A-3).

Maximum Density-Optimum Moisture Determinations: Representative soil types were selected for maximum density determinations. This testing was performed in accordance with the ASTM Standard D1557-91 test method A. The results of this testing are presented graphically on Figure No. B-3. The maximum densities are compared to the field densities of the soil in order to determine the existing Relative Compaction to the soil. This is shown on the Boring and Trench Logs, and is useful in estimating the strength and compressibility of the soil.

Classification Testing: Five soil samples were selected for classification testing. This testing consists of mechanical grain size analyses and Atterberg Limits determinations. These provide information for developing classifications for the soil in accordance with the Unified Classification System. This classification system categorizes the soil into groups having similar engineering characteristics. The results of this testing are very useful in detecting variations in the soils and in selecting samples for further testing. The results of this testing are presented on Figure No. B-4.

SOIL MECHANIC'S TESTING

Direct Shear Testing: One sample was selected for Direct Shear Testing. This testing measures the shear strength of the soil under various normal pressures and is used in developing parameters for foundation design and lateral design. Testing was performed using recompacted test specimens which were saturated prior to testing. Testing was performed using a strain controlled test apparatus with normal pressures ranging from 934 to 2230 pounds per square foot. The results of this testing are shown on Figure No. B-5.

Expansion Testing: One sample was selected for Expansion testing. Expansion testing was performed in accordance with the UBC Standard 18-2. This testing consists of remolding 4-inch diameter by 1-inch thick test specimens to a moisture content and dry density corresponding to approximately 50 percent saturation. The samples are subjected to a surcharge of 144 pounds per square foot and allowed to reach equilibrium. At that point the specimens are inundated with distilled water. The linear expansion is then measured until complete. The results of this testing are shown on Figure No. B-6.

ANALYTICAL TESTING

Soluble Sulfate: One sample was selected to determine the concentration of soluble sulfate in the soil. This testing was performed in accordance with the California Test 417, 1986. These results are used in determining the corrosive nature of the soils on concrete. In this test, the sulfate ions are precipitated with barium chloride to produce a suspension of barium sulfate. A turbidimetric reading is taken and compared with a known standardization curve. The result of this test indicates the concentration of soluble sulfate in the selected sample is 180 parts per million (0.018%).

GENERAL

All laboratory testing has been conducted in conformance with the applicable ASTM test methods by personnel trained and supervised in conformance with our QA/QC policy. Our test data only relates to the specific soils tested. Soil conditions typically vary and any significant variations should be reported to our laboratory for review and possible testing. The data presented in this report are for the use of Steve McCarty only and may not be reproduced or used by others without written approval of Inland Foundation Engineering, Inc.

APPENDIX C

NTERNATIONAL CONFERENCE OF BUILDING OFFICIALS MAPS OF KNOWN ACTIVE FAULT NEAR-SOURCE ZONES

Section 1629.4.2 of the 1997 *Uniform Building Code*™ (UBC) requires that in Seismic Zone 4, each site shall be assigned a near-source factor. To determine if the near-source factor is greater than 1.0, the designer must assess whether the site is located within 10 to 15 km of a known active fault. ICBO has published a volume of *Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada*. This map is intended to be used in conjunction with the 1997 Uniform Building Code, Tables 16-S and 16-T. The map of the project vicinity is appended.

It is important to note that ICBO has placed stated limitations on the interpretation of the maps. These limitations, in part stem from previous limitations made by the California Division of Mines and Geology (DMG) indicating that the DMG database was compiled for regional analysis and was not compiled at a scale appropriate for site-specific studies. The information presented may be useful for determining near-source parameter values, but is not of sufficient detail to accurately determine the distance of a site from a fault. The map(s) presented herein are not regulatory, but only provide guidance for the designer or code official in implementing the requirements of 1997 UBC.

We make no warranty as to the accuracy or completeness of the ICBO maps. All of the published ICBO limitations related to the referenced maps are applicable.

LOG OF BORING B-01

Elevation:	2796.0	Date(s) Drilled:	12/18/00	Logged by:	M. Sullivan
Drilling Method:	Rotary Auger			Hammer Type:	Cathead
Drilling Rig:	Mobile B-61			Hammer Weight:	140 lb.
Boring Diameter:	8-inches			Hammer Drop:	30-inches

SUMMARY OF SUBSURFACE CONDITIONS

This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered and is representative of interpretations made during drilling. Contrasting data derived from laboratory analysis may not be reflected in these representations.

DEPTH (ft)	USCS	Description	SAMPLES: DRIVE SAMPLE	SAMPLES: BULK SAMPLE	SAMPLES: SAMPLE TYPE	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
	SM	SILTY SAND, fine to coarse grained with trace gravel, light brown, dry, medium dense							
5			✓		SS	18 24	3		
10			✓		SS	18 20	2		
	SW	SAND, fine to coarse grained with gravel, light brown, slightly moist, dense							
15			✓		SS	26 30	5	114	
	BR	GRANITE, completely weathered, brown							
	BR	GRANITE, highly to moderately weathered, light brown							
20			✓		SS	20 23	4	115	
25			✓		SS	28 50	3	124	
		End of boring at 26.5 feet. No groundwater or mottling encountered.							

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa, CA
Project No. M388-002

Figure No. A-2

LOG OF BORING B-02

Elevation:	2824.0	Date(s) Drilled:	12/18/00	Logged by:	M. Sullivan
Drilling Method:	Rotary Auger			Hammer Type:	Cathead
Drilling Rig:	Mobile B-61			Hammer Weight:	140 lb.
Boring Diameter:	8-inches			Hammer Drop:	30-inches

SUMMARY OF SUBSURFACE CONDITIONS

This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered and is representative of interpretations made during drilling. Contrasting data derived from laboratory analysis may not be reflected in these representations.

DEPTH (ft)	USCS	Description	SAMPLES: DRIVE SAMPLE	SAMPLES: BULK SAMPLE	SAMPLE TYPE	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
	SW	SAND, fine to coarse grained with gravel, brown, slightly moist, medium dense			B				
5					SS	10 11	8	110	
	SM	SILTY SAND, fine to coarse grained with gravel, brown, moist, medium dense							
10					SS	20 24	7	116	
15					SS	12 13	10	116	
20	BR	GRANITE, completely weathered			SS	14 26	10	114	
	BR	GRANITE, highly weathered							
25					SS	21 21	6	118	
	BR	End of boring at 26.5 feet. No groundwater or mottling encountered.							

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa, CA
Project No. M388-002

Figure No. A-3

LOG OF TRENCH TR-01

Elevation: 2828.0 | Logged by: M. Sullivan

Excavation Method: Backhoe | Date Excavated: 12/14/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
1		SM	SILTY SAND, fine grained with clay, red-brown, slightly moist, very dense, highly cemented, porous		■	3	87	73
2		SM	SILTY SAND, fine to coarse grained with clay and trace gravel, red-brown, slightly moist, dense, moderately cemented		■	4	126	
3					■	5	115	
4		SM	SILTY SAND, fine grained with clay, red-brown, slightly moist, dense, highly cemented		■	7	112	
5			End of Trench. No groundwater, mottling or refusal encountered.					

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-4

LOG OF TRENCH TR-02

Elevation: 2801.0
Excavation Method: Backhoe
Logged by: M. Sullivan
Date Excavated: 12/14/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
1		SM	SILTY SAND, fine to coarse grained, brown, dry, medium dense					
2						2	103	84
3								
4						1	105	86
5								
6								
7								
8								
9								
10								
11			End of Trench. No groundwater, mottling or refusal encountered.					

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-5

LOG OF TRENCH TR-03

Elevation: 2836.0
Excavation Method: Backhoe
Logged by: M. Sullivan
Date Excavated: 12/14/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
		SM	SILTY SAND, fine grained with trace clay, light red-brown, slightly moist, medium dense, porous		■	4	81	
1		SM	SILTY SAND, fine to medium grained with coarse grained sand, trace clay and trace gravel, brown, slightly moist, loose		■			
2					■	5	110	
3		SM	SILTY SAND, fine grained with trace clay, brown, slightly moist, medium dense		■	6	91	69
4					■			
5					■	6	114	87
6		SM	SILTY SAND, fine to medium grained with trace gravel, brown, slightly moist, medium dense					
7								
8								
9								
10			End of Trench. No groundwater, mottling or refusal encountered.					

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-6

LOG OF TRENCH TR-04

Elevation: 2904.0
Excavation Method: Backhoe
Logged by: M. Sullivan
Date Excavated: 12/15/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
1		SM	SILTY SAND, fine grained with clay, red-brown, dry, medium dense, slightly porous, moderately cemented		■	3	85	71
2					■	5	100	84
3		SM	SILTY SAND, fine grained with medium grained sand and clay, red-brown, slightly moist, medium dense, cemented		■			
4					■	5	94	73
5					■			
6					■	4	105	82
			End of Trench. No groundwater, mottling or refusal encountered.					

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Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-7

LOG OF TRENCH TR-05

Elevation: 2910.0
Excavation Method: Backhoe
Logged by: M. Sullivan
Date Excavated: 12/15/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
0		SM	SILTY SAND, fine grained with medium grained sand and clay, red-brown, slightly moist, loose, porous, moderately cemented		■	4	79	62
1						5	96	74
2								
3						6	101	78
4		SM	SILTY SAND, fine grained with clay, red-brown, slightly moist, medium dense, moderately cemented					
5						7	108	
6								
7								
8								
9								
10								
11			End of Trench. No groundwater, mottling or refusal encountered.					

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-8

LOG OF TRENCH TR-06

Elevation: 2880.0
Excavation Method: Backhoe

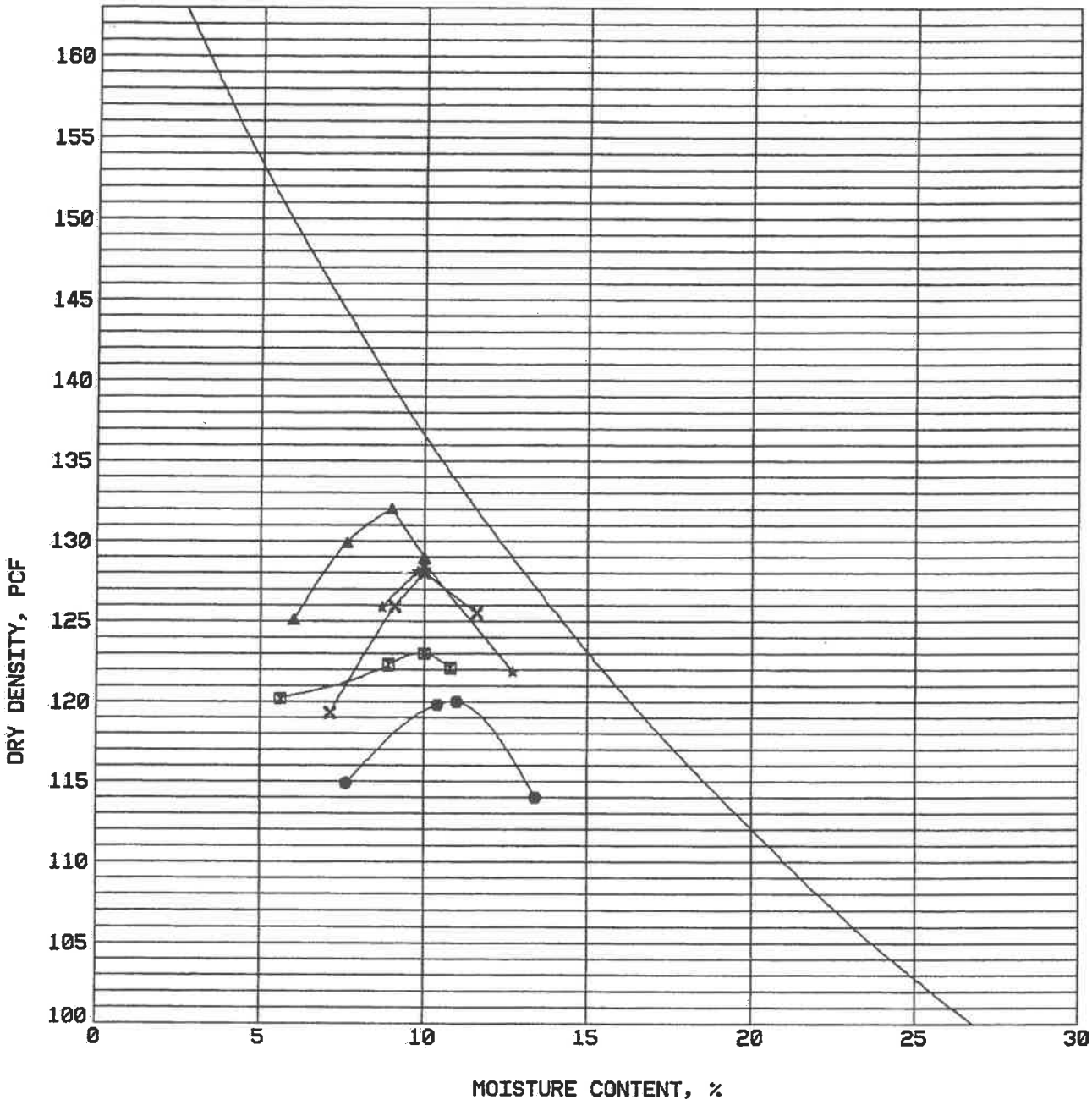
Logged by: M. Sullivan
Date Excavated: 12/15/00

DEPTH (ft)	GRAPHIC	USCS	SUMMARY OF SUBSURFACE CONDITIONS This summary applies only at the location of the trench and at the time of digging. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	DRIVE SAMPLE	BULK SAMPLE	MOISTURE (%)	DRY UNIT WT. (pcf)	RELATIVE COMPACTION (%)
1		SM	SILTY SAND, fine grained with medium grained sand and clay, light red-brown, slightly moist, mediun dense, porous, highly cemented		■	5	84	
2		SM	SILTY SAND, fine to medium grained with clay, red-brown, slightly moist, dense, blocky		■	7	109	86
3					■	6	113	89
4					■			
5		SM	SILTY SAND, fine grained with clay, red-brown, moist, dense, moderately cemented		■	7	115	
			End of Trench. No groundwater, mottling or refusal encountered.					

INLAND FOUNDATION ENGINEERING, INC.

Geotechnical Investigation
TR. NO. 29964
Calimesa CA
Project No. M388-002

Figure No. A-9



Specimen Identification			Classification	Max.Density	MC%
●	TR-01	0.0	SILTY SAND SM	120.0	11.0
⊠	TR-02	0.0	SILTY SAND SM	123.0	10.0
▲	TR-03	3.0	SILTY SAND SM	132.0	9.0
★	TR-05	0.0	SILTY SAND SM	128.5	10.0
✕	TR-06	1.3	SILTY SAND SM	128.0	10.0

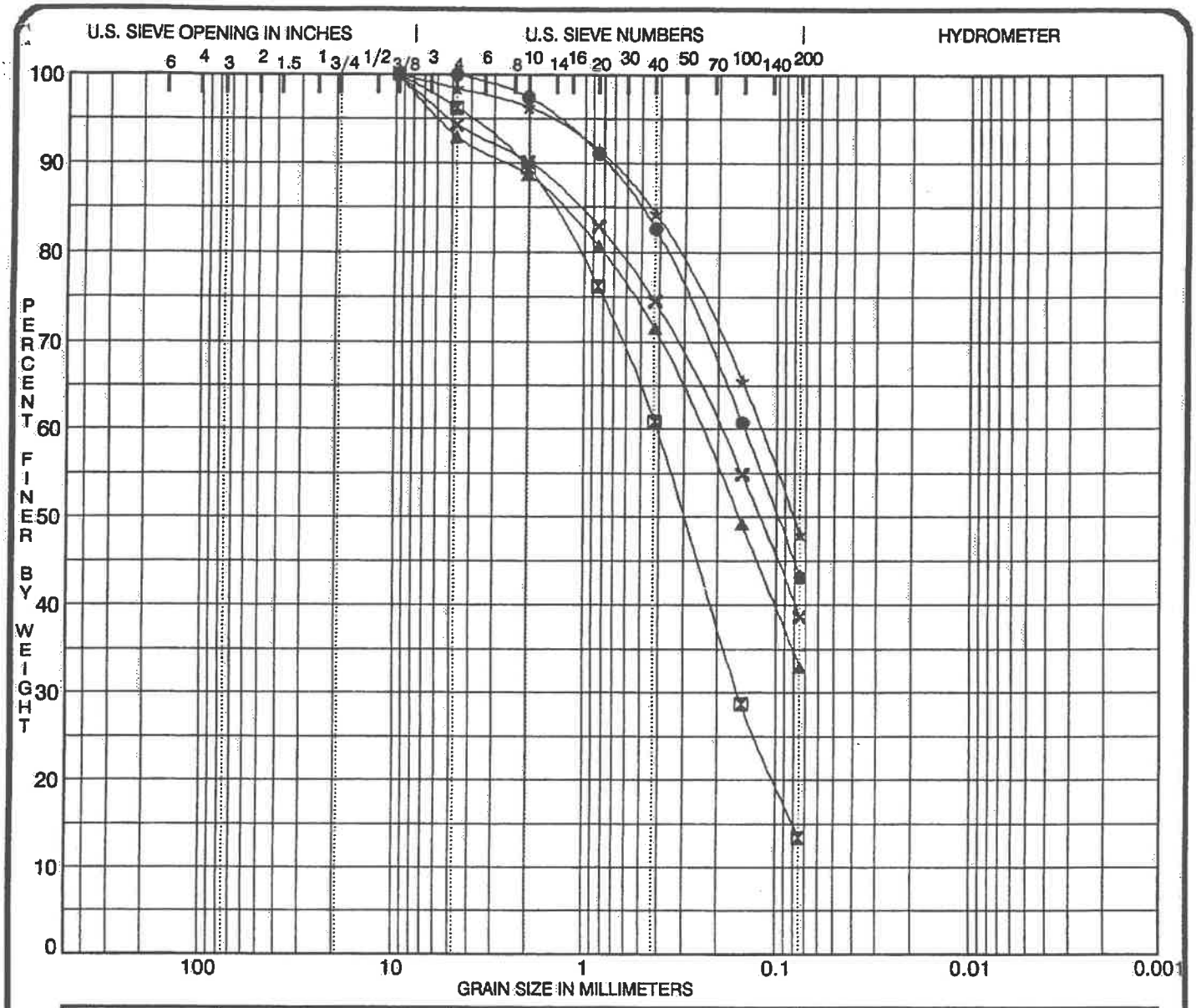
PROJECT Geotechnical Investigation
TR. NO. 29964

PROJECT NO. M388-002
DATE December 29, 2000

MAXIMUM DENSITY-OPTIMUM MOISTURE CURVES

Inland Foundation Engineering, Inc.
1310 S. Santa Fe San Jacinto, Ca

FIGURE NO. B-3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	S.G.	LL	PL	PI	Cc	Cu
●	TR-01	0.0	SILTY SAND SM		NP	NP	NP		
⊠	TR-02	0.0	SILTY SAND SM		NP	NP	NP		
▲	TR-03	3.0	SILTY SAND SM		NP	NP	NP		
★	TR-05	0.0	SILTY SAND SM		26	24	2		
✕	TR-06	1.3	SILTY SAND SM		NP	NP	NP		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	TR-01	0.0	4.75	0.15			0.0	56.9	43.1	
⊠	TR-02	0.0	9.50	0.41	0.156		3.8	82.8	13.4	
▲	TR-03	3.0	9.50	0.25			7.1	60.0	32.9	
★	TR-05	0.0	9.50	0.12			1.6	50.4	48.0	
✕	TR-06	1.3	9.50	0.20			5.7	55.6	38.7	

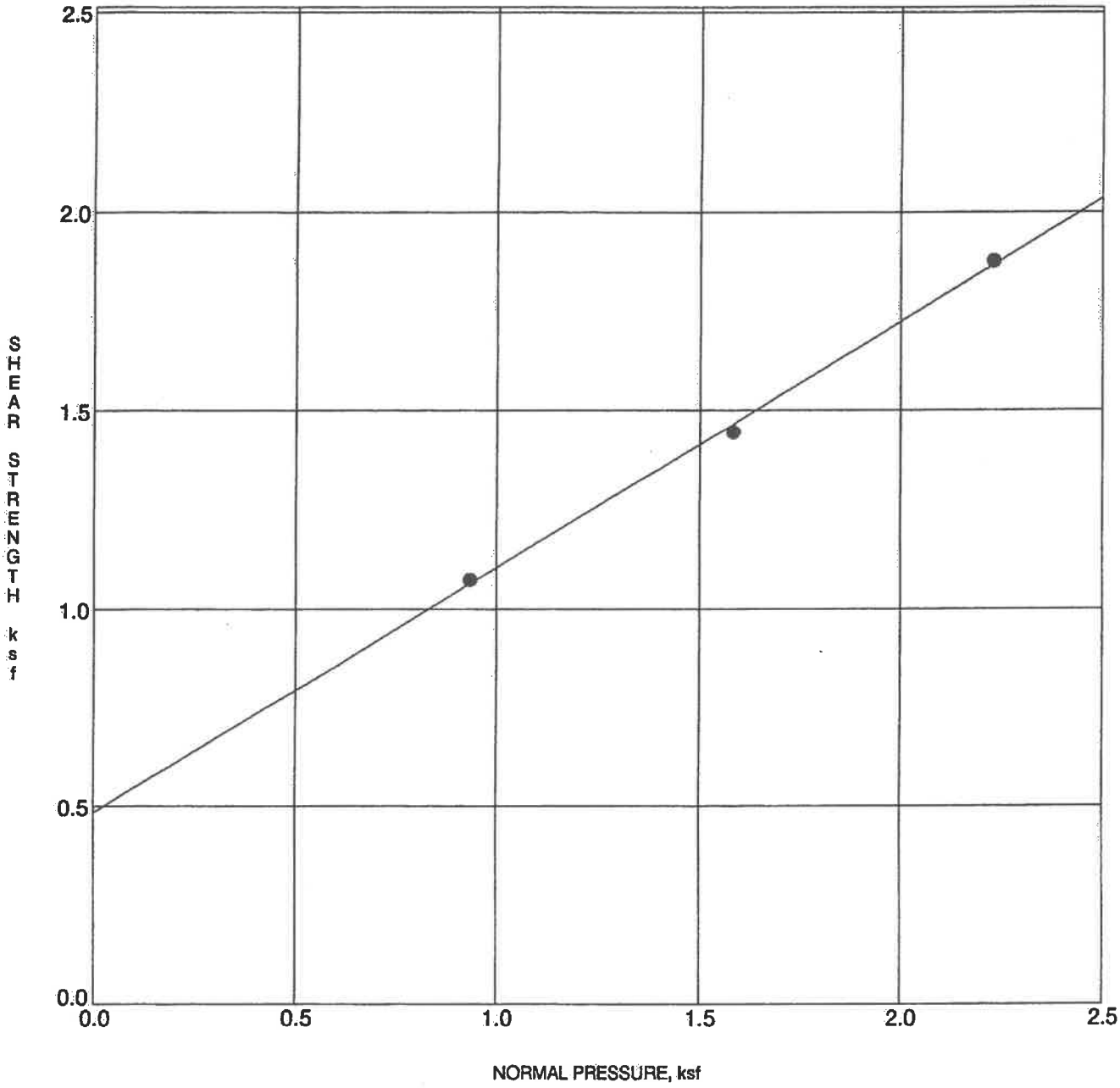
PROJECT Geotechnical Investigation
TR. NO. 29964

PROJECT NO. M388-002
DATE December 29, 2000

GRADATION CURVES

Inland Foundation Engineering, Inc.
1310 S. Santa Fe San Jacinto, Ca

FIGURE NO. B-4



Specimen Identification		Classification	Phi	Cohesion	DD	MC%
● TR-05	0.0	SILTY SAND SM	32	0.484	116	12

PROJECT Geotechnical Investigation
TR. NO. 29964

PROJECT NO. M388-002
DATE December 29, 2000

SHEAR TEST DIAGRAM

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FIGURE NO. B-5

EXPANSION TEST SUMMARY

Sample Location	Sample Depth	Initial Dry Density	Initial Moisture Content, %	Final Moisture Content, %	Expansion Index
TR-05	0.0	112.8	9.0	15.1	12 (Very Low)

Project No. M388-002
Figure No. B-6

Inland Foundation Engineering, Inc.

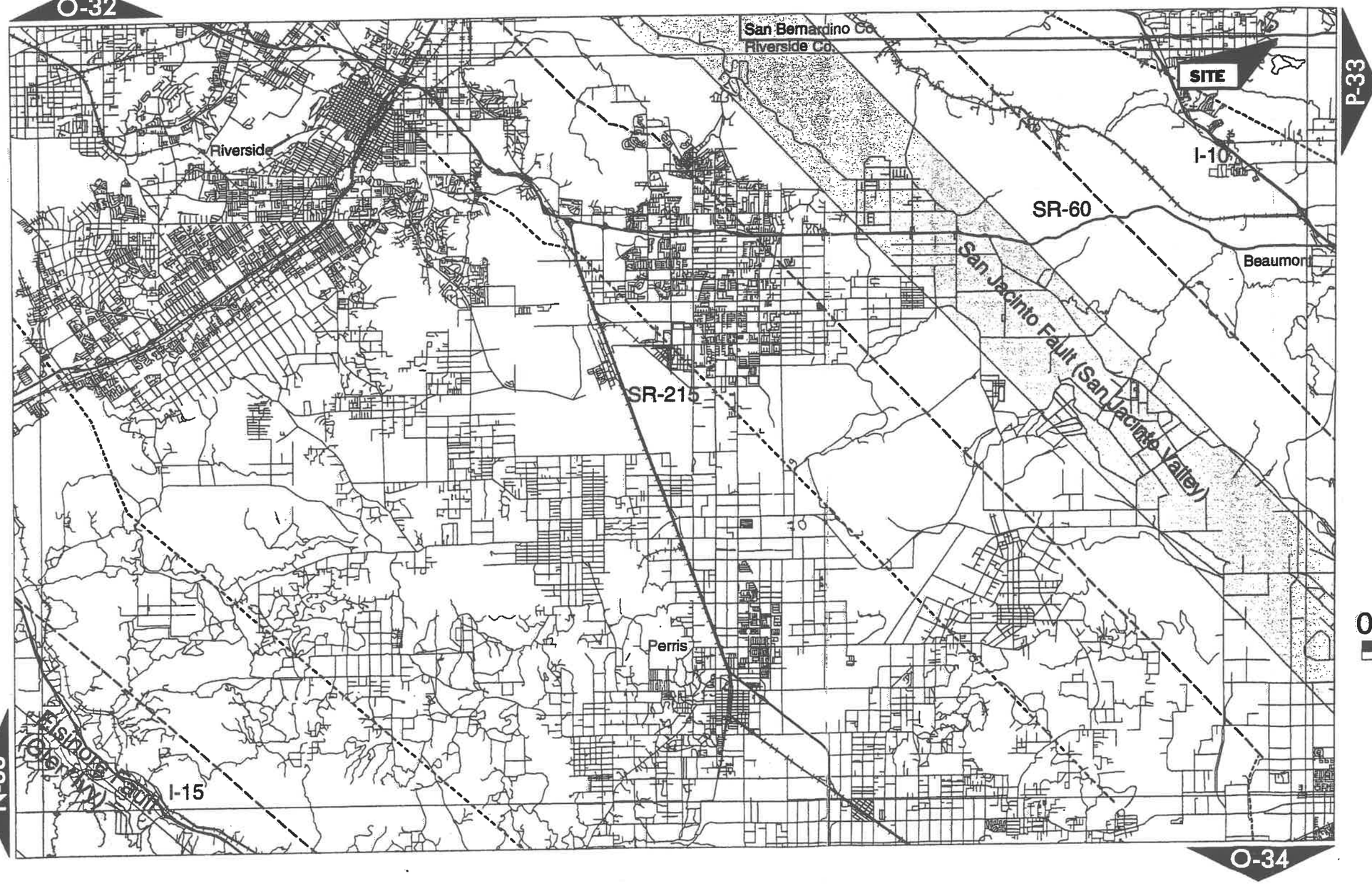
O-33

Active Fault Near-Source Zones

This map is intended to be used in conjunction with
the 1997 Uniform Building Code, Tables 16-S and 16-T

O-33

California Department of Conservation
Division of Mines and Geology



LEGEND

See expanded legend and index map

Shaded zones are within 2 km of known seismic sources.

- A fault
- B fault

Contours of closest horizontal distance to known seismic sources.

- 5 km
- 10 km
- 15 km

0 5 10

Kilometers

1/4" is approximately equal to 1 km

August, 1997

Appendix E: Traffic Impact Analysis

Note: LSA and Associates (LSA) prepared the following Focused Traffic Study for the proposed project in June 2004. LSA analyzed the existing traffic conditions and project-related traffic impacts for the completion and operation of the proposed project under opening year 2006 conditions. Although the project opening year is now estimated to be 2007, the City of Calimesa has determined that the existing traffic conditions in the vicinity of the project site, (i.e., the base from which the project impacts are established) have not significantly changed since preparation of the Focused Traffic Study. Thus, it is anticipated that the impacts, conclusions, or mitigation measures outlined in the Focused Traffic Study continue to be valid for the opening year 2007 scenario.

DRAFT

FOCUSED TRAFFIC STUDY

HERITAGE OAKS

CITY OF CALIMESA

RIVERSIDE COUNTY, CALIFORNIA

LSA

June 10, 2004

FOCUSED TRAFFIC STUDY

HERITAGE OAKS

CITY OF CALIMESA

COUNTY OF RIVERSIDE, CALIFORNIA

Prepared for:

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Prepared by:

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LSA Project No. MIB430

LSA

June 10, 2004

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INTRODUCTION

This focused traffic study has been prepared to assess the potential circulation impacts associated with the proposed development of the Heritage Oaks residential project located in the City of Calimesa in Riverside County.

This report analyzes existing traffic conditions and project-related traffic impacts for the anticipated completion and operation of the proposed project under opening year (2006) conditions. Specific issues addressed in this study include the following:

- Forecast future traffic volumes along roadways in the vicinity of the project site, and the impact of project traffic on these future traffic conditions; and
- Site access requirements and operations of the planned access roadways.

This traffic study analyzes a.m. and p.m. peak hour conditions. The a.m. peak hour is the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. on weekdays. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m. on weekdays.

PROJECT DESCRIPTION

The proposed Heritage Oaks residential project site is located on the south side of County Line Road, generally east of Mesa Grande Drive. Figure 1 shows the project location. The project site is currently vacant.

The proposed project consists of 55 single-family detached houses. Figure 2 presents a conceptual site plan for the proposed project. Access to the project will be provided via one new roadway abutting the western boundary of the site and via a second roadway that will align with Chaparral Trail at County Line Road. It is anticipated that the proposed project will be fully constructed in 2006.

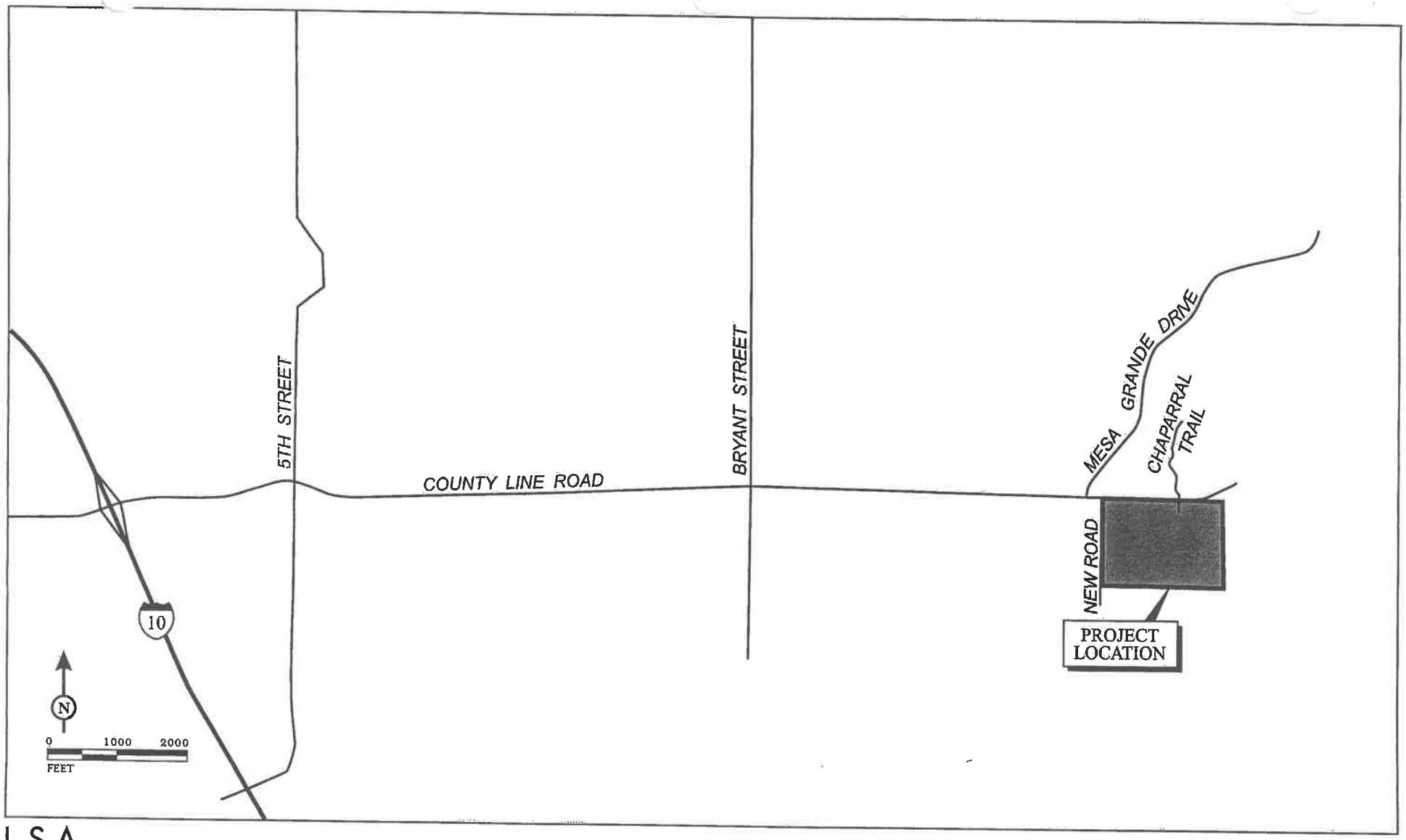
ANALYSIS METHODOLOGY

This traffic study was prepared consistent with the requirements of the City of Calimesa. This study evaluates existing conditions and opening year 2006 conditions in the vicinity of the proposed project, with and without project development. The analysis examines a.m. and p.m. peak hour traffic conditions in the vicinity of the proposed project.

Study Area

The study area includes intersections in the vicinity of the project at which project traffic is most likely to have an impact. The study area includes the following intersections:

1. 5th Street/County Line Road;
2. Bryant Street/County Line Road;
3. Mesa Grande Drive/County Line Road;



LSA

FIGURE 1

SOURCE: USGS 7.5' QUAD - YUCAIPA, CA. REV. 1996.

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Heritage Oaks
Project Location

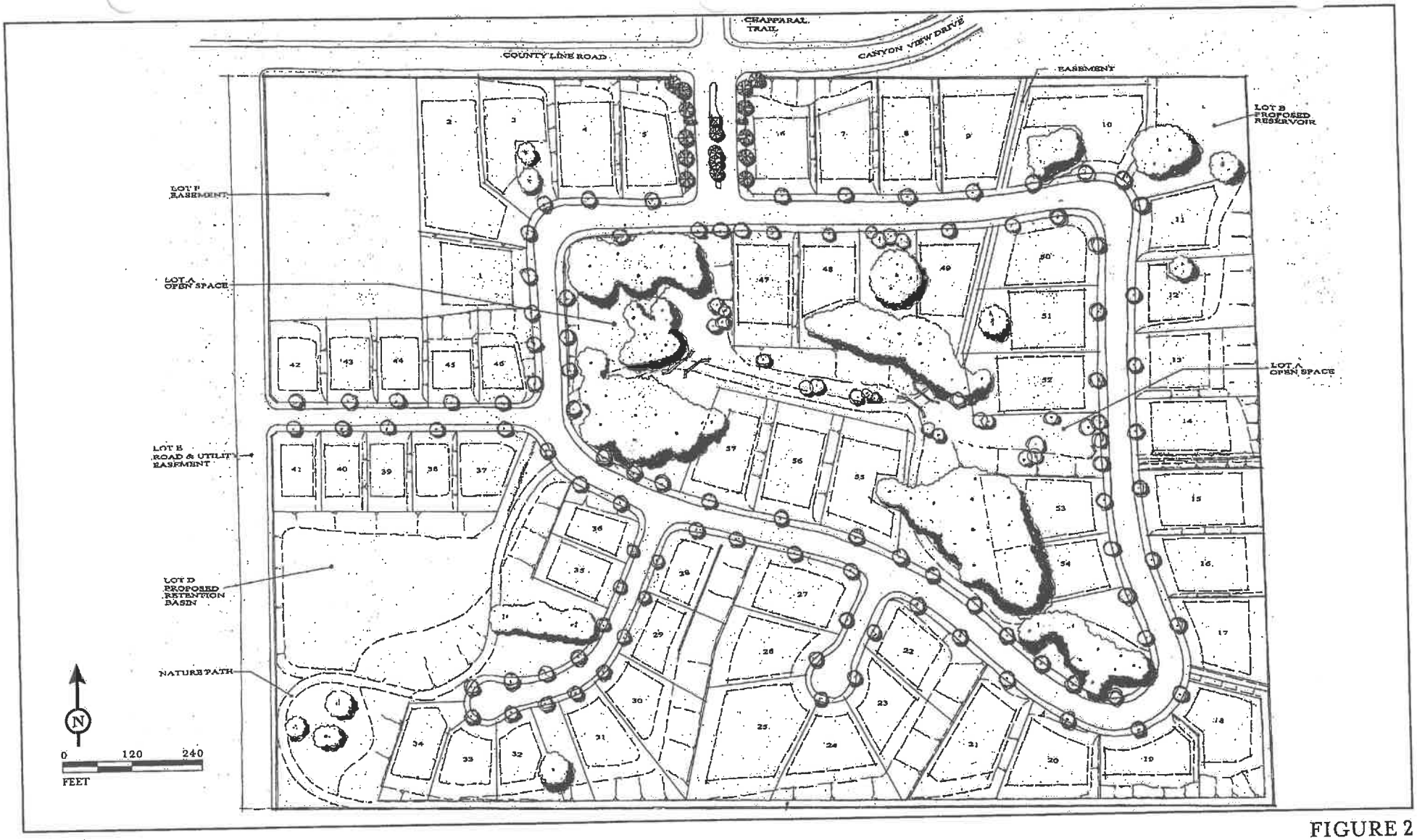

FIGURE 2

LSA

Heritage Oaks

Conceptual Site Plan

SOURCE: KNITTER AND ASSOCIATES, 1/27/04.

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4. New Road/County Line Road; and

5. Chaparral Trail/Project Access/County Line Road.

Figure 3 illustrates the locations of the analysis intersections.

Existing (2004) Traffic Volumes

Existing traffic conditions at the study intersections are based on a.m. and p.m. peak hour intersection turn movement counts collected by LSA Associates, Inc. (LSA) in April 2004. Count sheets are contained in Appendix A.

Development of Future Traffic Volumes

Year 2006 without project peak hour volumes were developed by applying an annual growth factor of 2 percent to existing volumes and adding traffic from approved and pending projects, as described below. Appendix B contains the worksheets used to develop year 2006 traffic volumes.

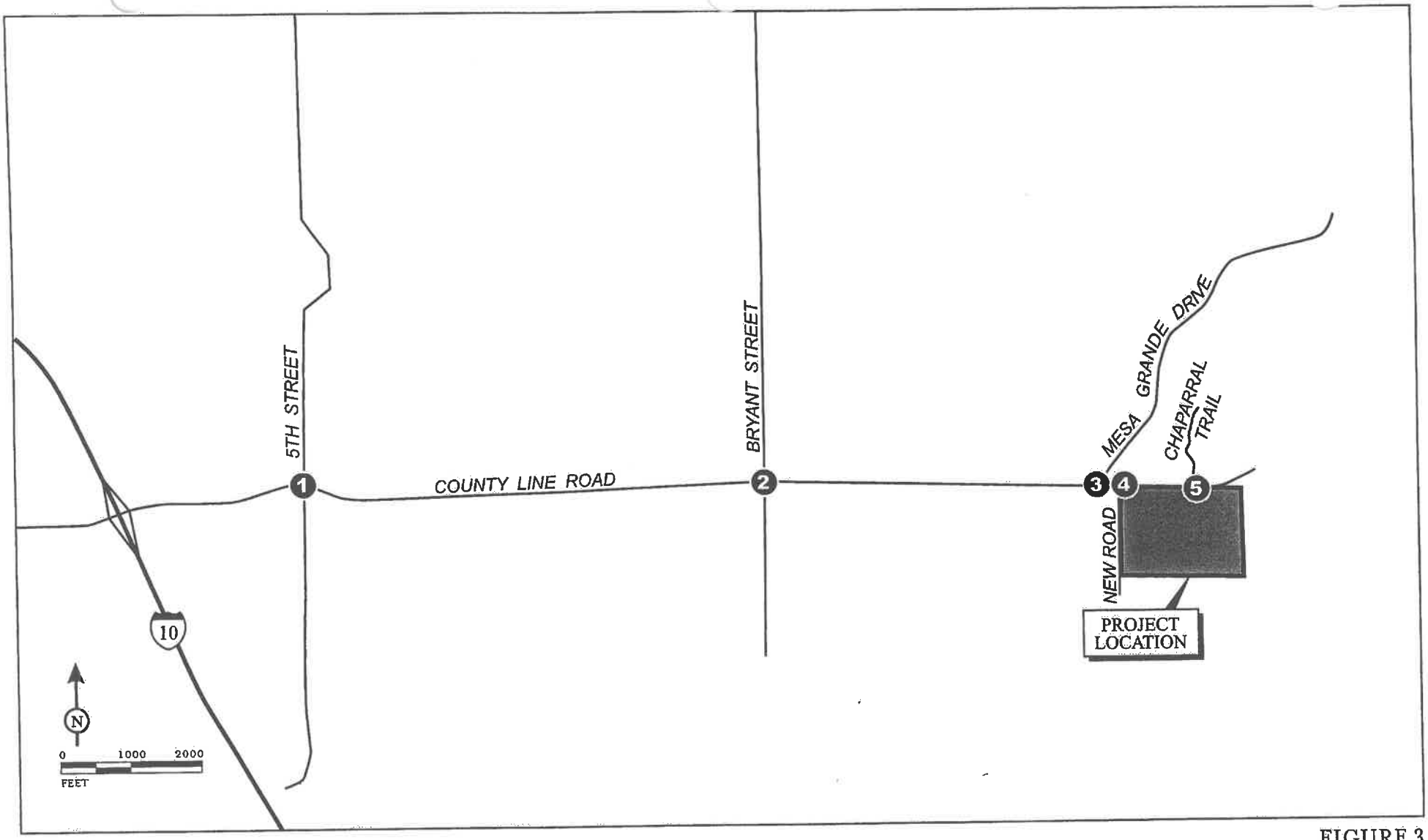
Approved and Pending Projects Traffic Volumes

City staff identified three approved projects in the vicinity. Trip generation for the Country Club Ridge (Tentative Tract 26811), J.P. Ranch (Tentative Tracts 30386 and 30387), and Brasswell (Tentative Tract 26925) projects were calculated using rates for Land Use 210 ("Single Family Detached Housing") from the Institute of Transportation Engineers (ITE), *Trip Generation*, 7th Edition. Trip distribution patterns were obtained from a traffic study prepared by Kunzman Associates for the J.P. Ranch project. As shown in Table A, these projects are expected to generate a total of 836 trips in the a.m. peak hour, 1,125 trips in the p.m. peak hour, and 10,661 daily trips. Figure 4 illustrates the total a.m. and p.m. peak hour traffic volumes for these projects at each of the study area intersections.

Level of Service Definitions and Procedures

Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (which are defined using the letter grades A through F). These levels recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. There is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled Level of Service (LOS) E. Beyond LOS E, capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. An upstream queue will then form and continue to expand in length until the demand volume again declines.

A complete description of the meaning of level of service can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual*. The Manual establishes levels of service A through F. Brief descriptions of the six levels of service, as abstracted from the Manual, are shown in Table B. The level of service criteria for unsignalized and signalized intersections are shown in Table C.



LSA

FIGURE 3

Heritage Oaks

Study Area Intersections

SOURCE: USGS 7.5' QUAD - YUCAIPA, CA. REV. 1996.

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Table A - Approved Project Trip Generation

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Trips/Unit[1]		0.19	0.56	0.75	0.65	0.36	1.01	9.57
Country Club Ridge (TTM 26811)	294 DU	56	165	221	191	106	297	2,814
Brasswell (TTM26925)	124 D.U.	24	69	93	81	45	125	1,187
J.P. Ranch (TTM 30386)	216 D.U.	41	121	162	140	78	218	2,067
J.P. Ranch (TTM 30387)	216 D.U.	41	121	162	140	78	218	2,067
Total		**162**	**476**	**638**	**553**	**306**	**859**	**8,135**

[1] Rates based on Land Use 210 - Single Family Detached Housing from Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition.

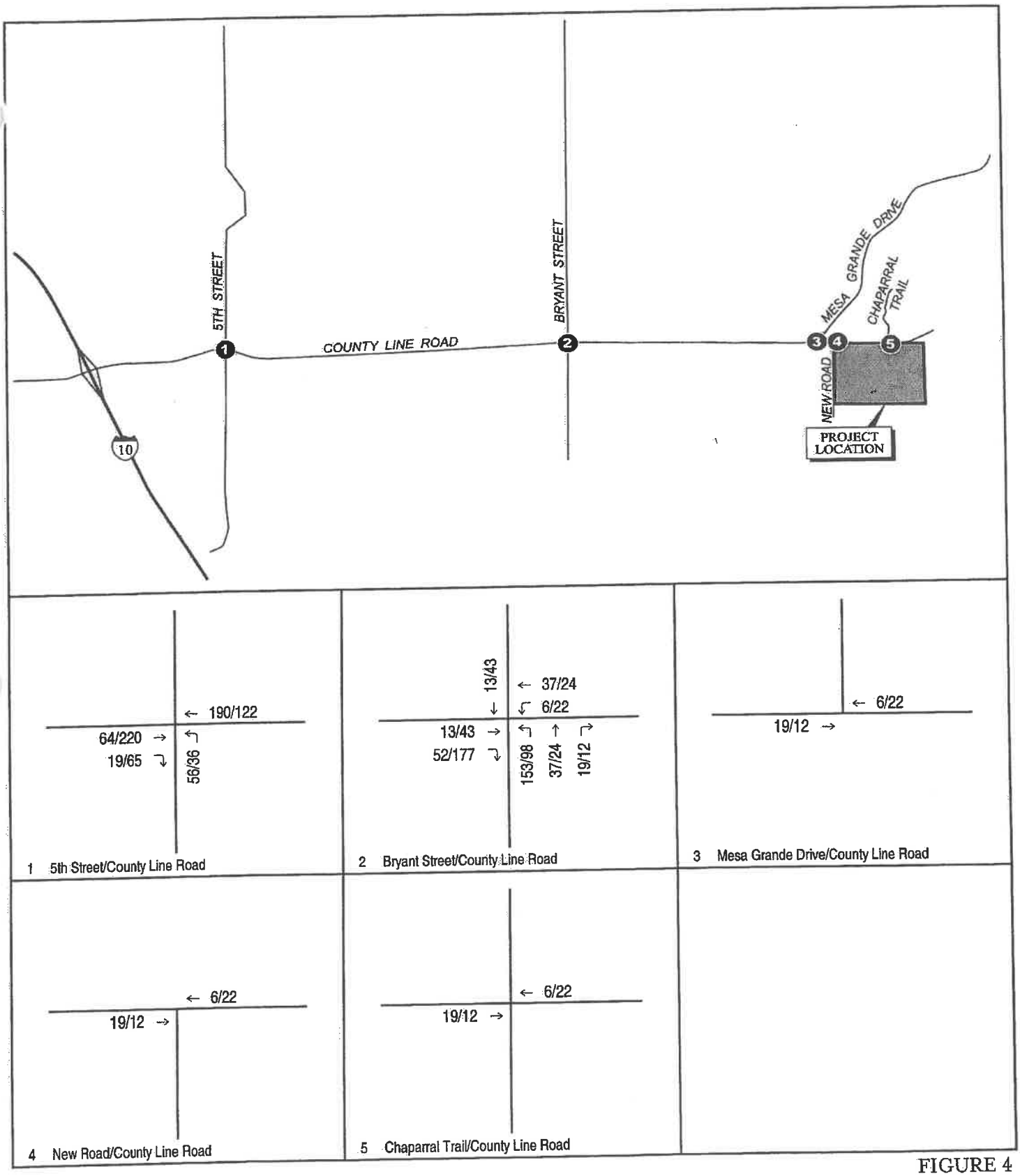

FIGURE 4

LSA

123/456 AM/PM Traffic Volumes

Heritage Oaks
Approved Project Trips

For all study area intersections, the *2000 Highway Capacity Manual* (HCM 2000) analysis methodologies were used to determine intersection levels of service. All levels of service were calculated using the Traffix version 7.6 software, which uses the HCM 2000 methodologies.

Table B - Intersection Levels of Service Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Table C - Intersection Levels of Service Criteria

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Level of Service Threshold Criteria

The City of Calimesa uses LOS C as a minimum level of service threshold. Roadways or intersections operating at LOS D or worse are required to be mitigated to LOS C or better.

EXISTING CONDITIONS

Existing Roadway System

LSA conducted an inventory of the study area street system in April 2004. Figure 5 illustrates the existing turn lanes at the study area intersections, as well as the proposed geometrics of the project access locations.

Interstate 10 provides regional access to the project via an interchange on County Line Road west of the project site.

Existing (2004) Traffic Conditions

Existing a.m. and p.m. peak hour traffic volumes for the analysis intersections are illustrated in Figure 6. An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. The existing conditions levels of service for the study area intersections are summarized in Table D. Level of service calculation worksheets are contained in Appendix C. As Table D indicates, all study area intersections are currently operating at LOS C or better, which meets the City of Calimesa's level of service standard.

PROJECT TRAFFIC

Project Trip Generation

Trip generation for the proposed project was calculated using rates for Land Use 210 ("Single Family Detached Housing") from the Institute of Transportation Engineers (ITE), *Trip Generation*, 7th Edition. Table E summarizes the trip generation for the project during the a.m. and p.m. peak hours. The project is expected to generate 41 trips during the a.m. peak hour, 56 trips during the p.m. peak hour, and a total of 526 daily trips.

Trip Distribution and Assignment

The distribution of project trips was developed by examining the location of the proposed project in relation to regional commercial and employment opportunities. Figure 7 illustrates the distribution of project trips.

Trip assignment for project trips is the product of project trip generation multiplied by the trip distribution percentages. Figure 8 illustrates the a.m. and p.m. peak hour project trip volumes at each of the study area intersections.

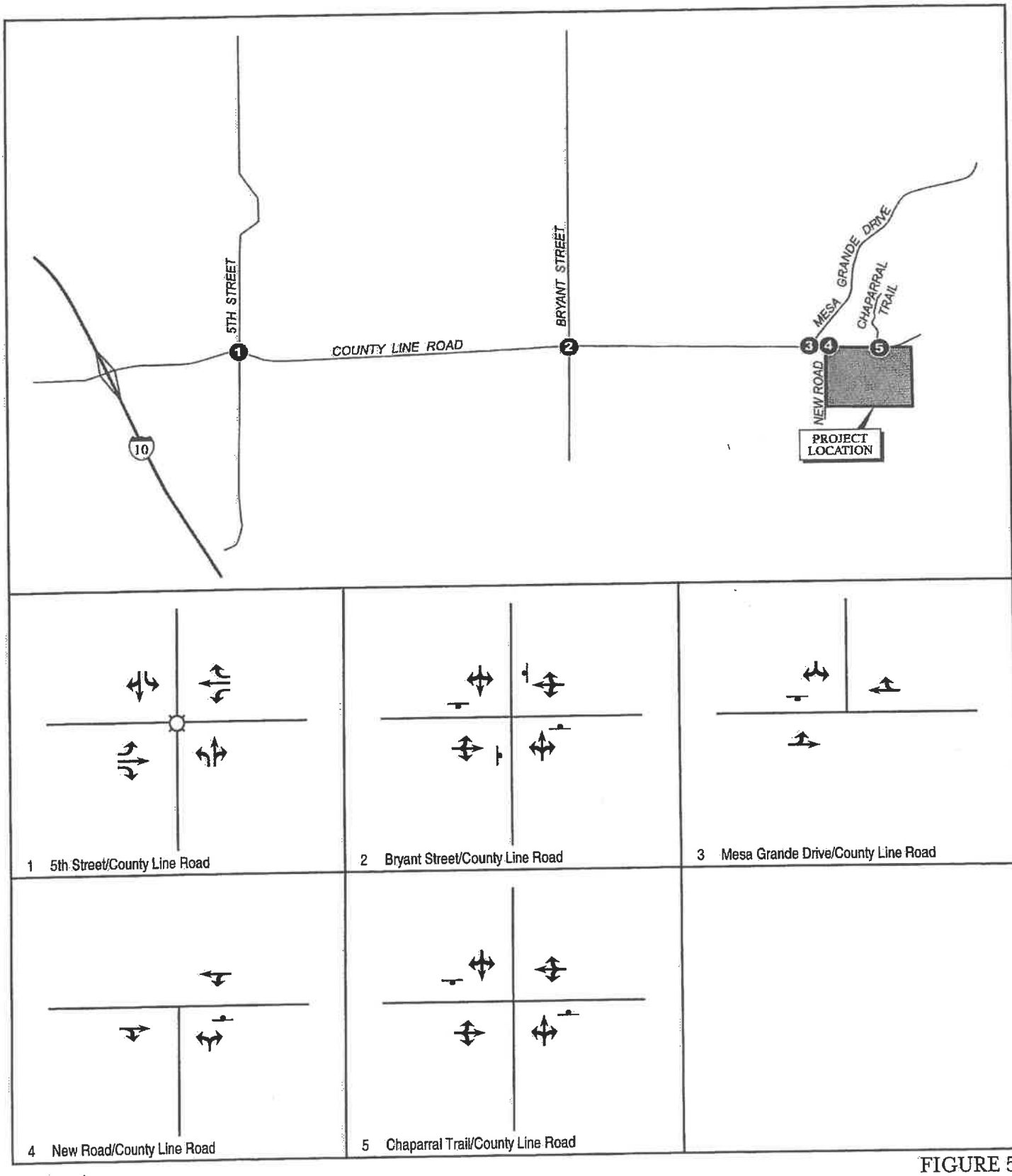

FIGURE 5

LSA

Legend

Signal

Stop Sign

Heritage Oaks

Existing and Proposed Lane Geometrics

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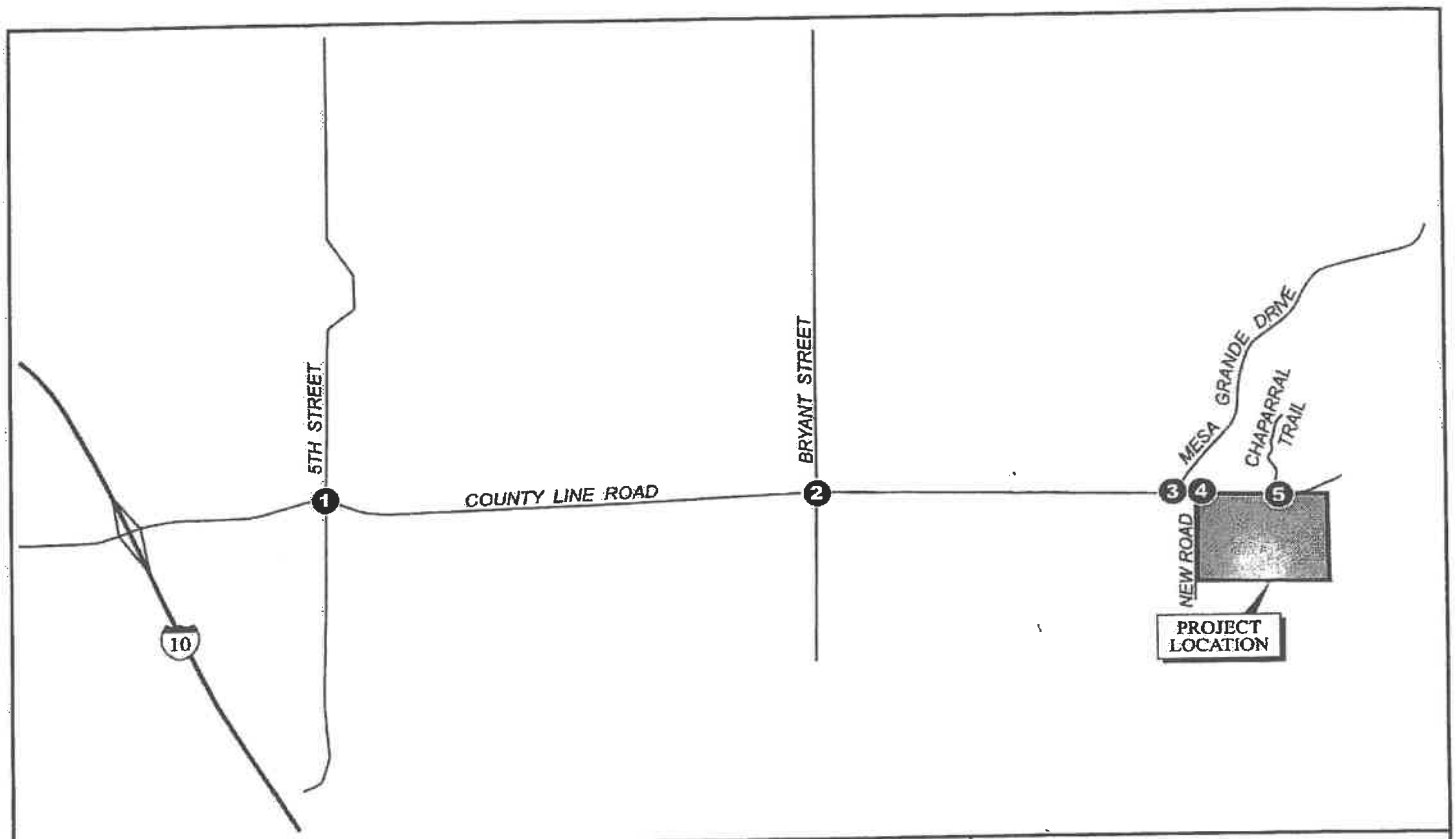


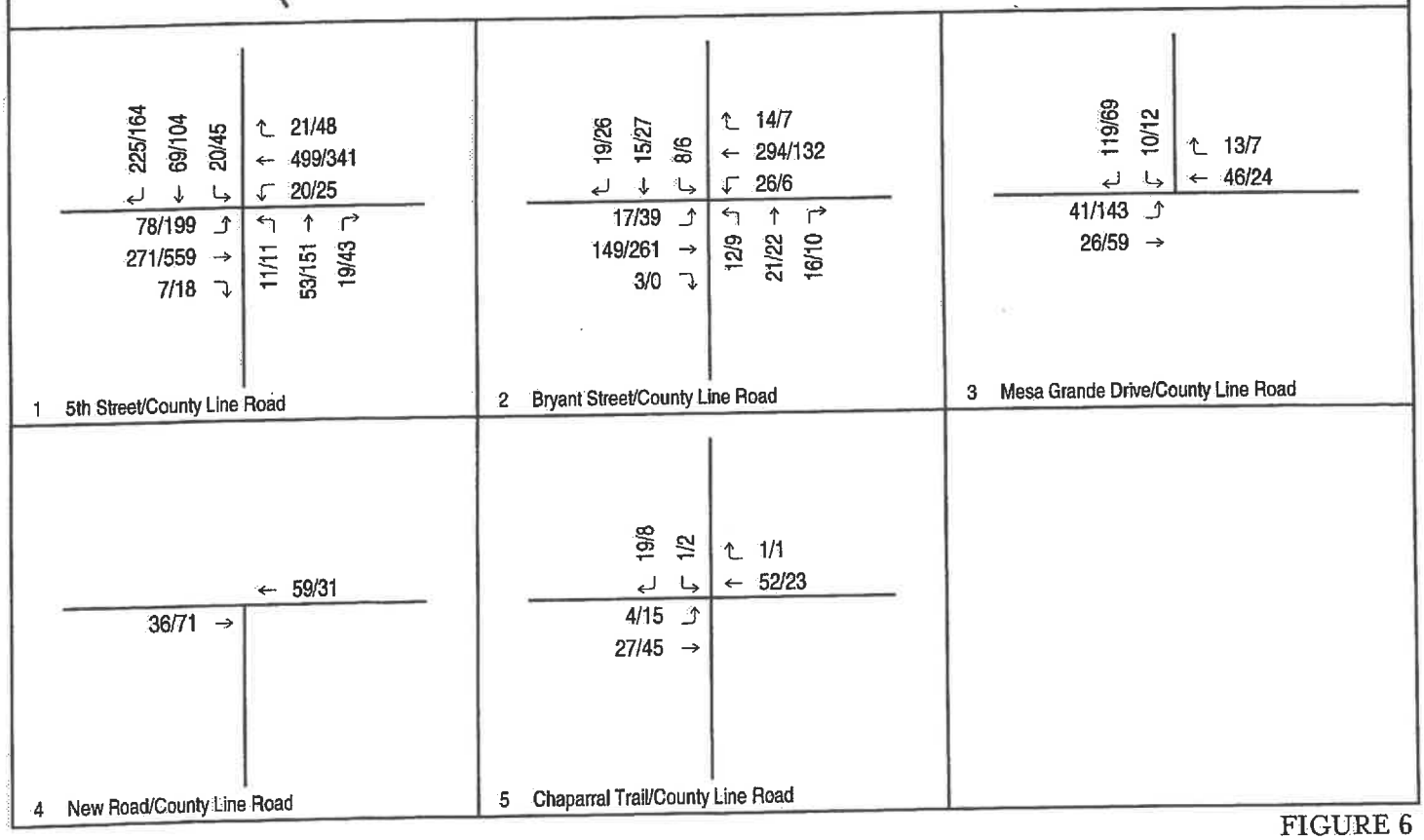


FIGURE 6

LSA

123/456 AM/PM Volume

Heritage Oaks
Year 2004 Traffic Volumes

Table D - Existing Intersection Levels of Service

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		V/C	Delay	LOS	V/C	Delay	LOS
1. 5th Street/County Line Road	Signal	0.51	21.9	C	0.49	24.0	C
2. Bryant Street/County Line Road	AWSC	0.41	9.4	A	0.37	9.1	A
3. Mesa Grande Drive/County Line Road	TWSC	-	9.1	A	-	9.2	A
4. New Road/County Line Road	*Future Intersection*						
5. Chaparral Trail/County Line Road	TWSC	-	8.6	A	-	8.6	A

Notes:

V/C = Volume/capacity ratio

Delay = Average control delay in seconds. At TWSC intersections, worst-case approach is reported.

LOS = Level of Service

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

Table E - Project Trip Generation

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Single Family Residential	55 D.U.							
Trips/Unit[1]		0.19	0.56	0.75	0.65	0.36	1.01	9.57
Trip Generation		10	31	41	36	20	56	526

[1] Rates based on Land Use 210 - Single Family Detached Housing from Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition.

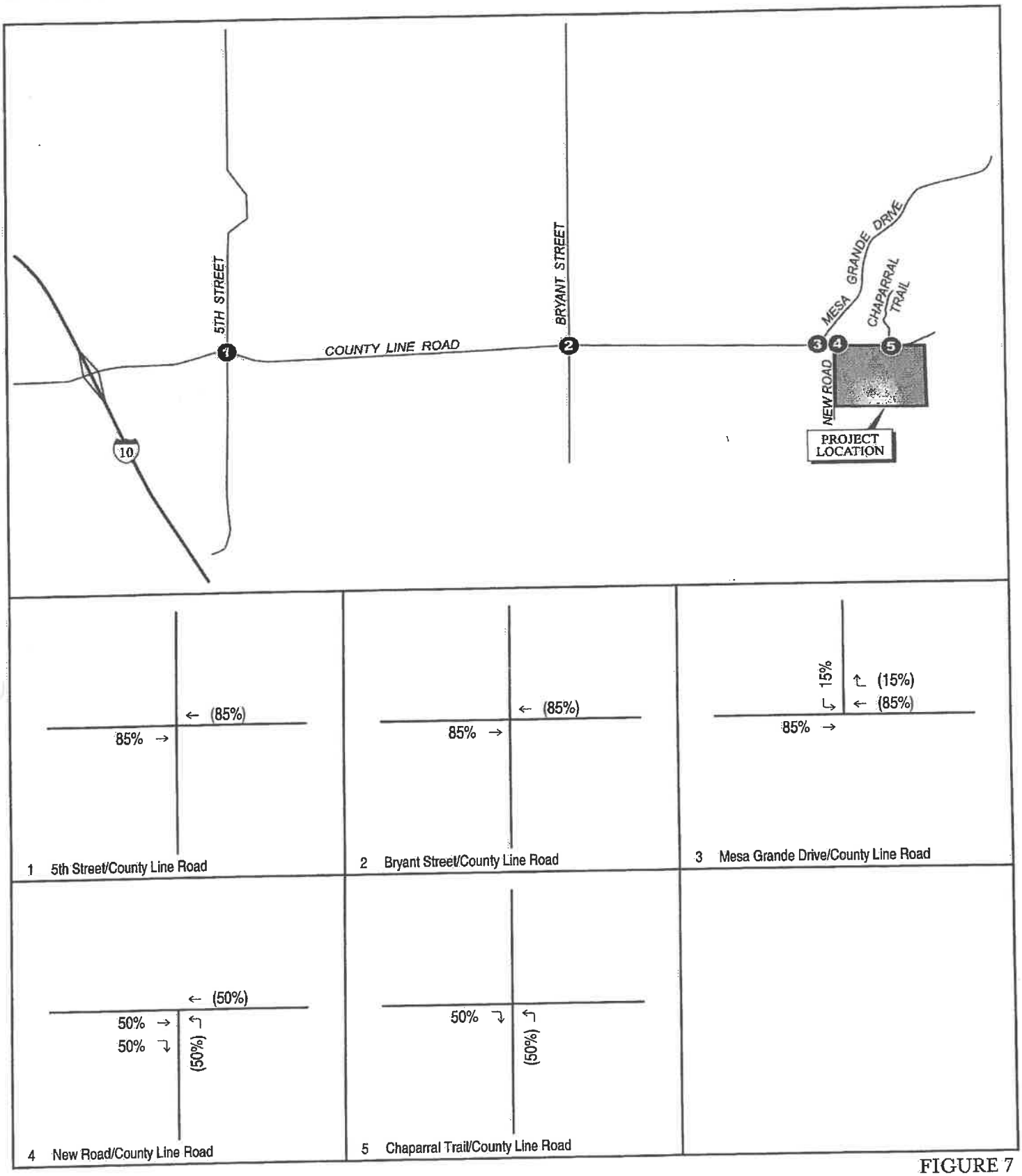


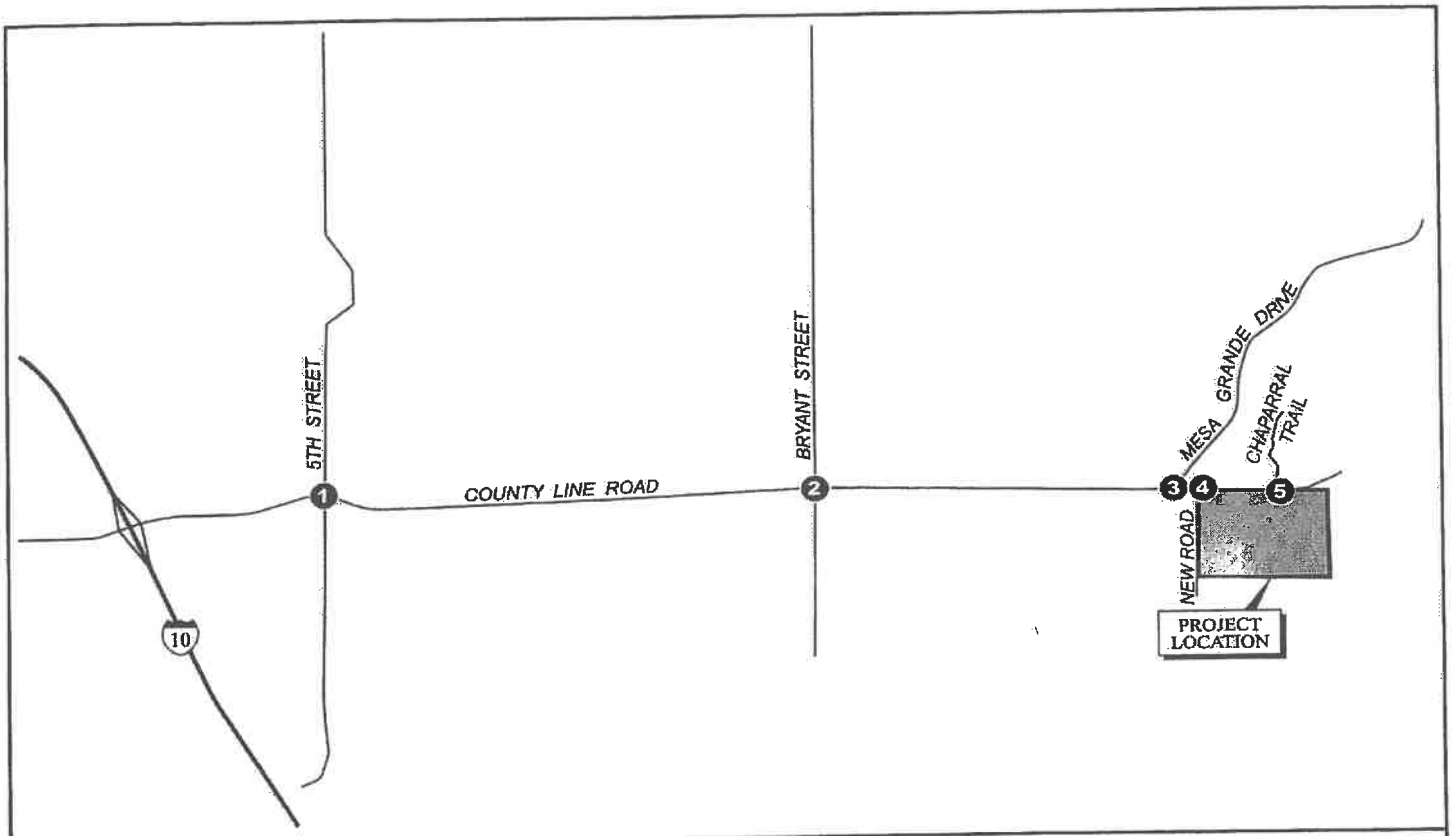
FIGURE 7

LSA

12% (34%) Inbound (Outbound) Distribution

Heritage Oaks
Project Trip Distribution

R:\MIB430\g-distribution.xls (6/9/2004)



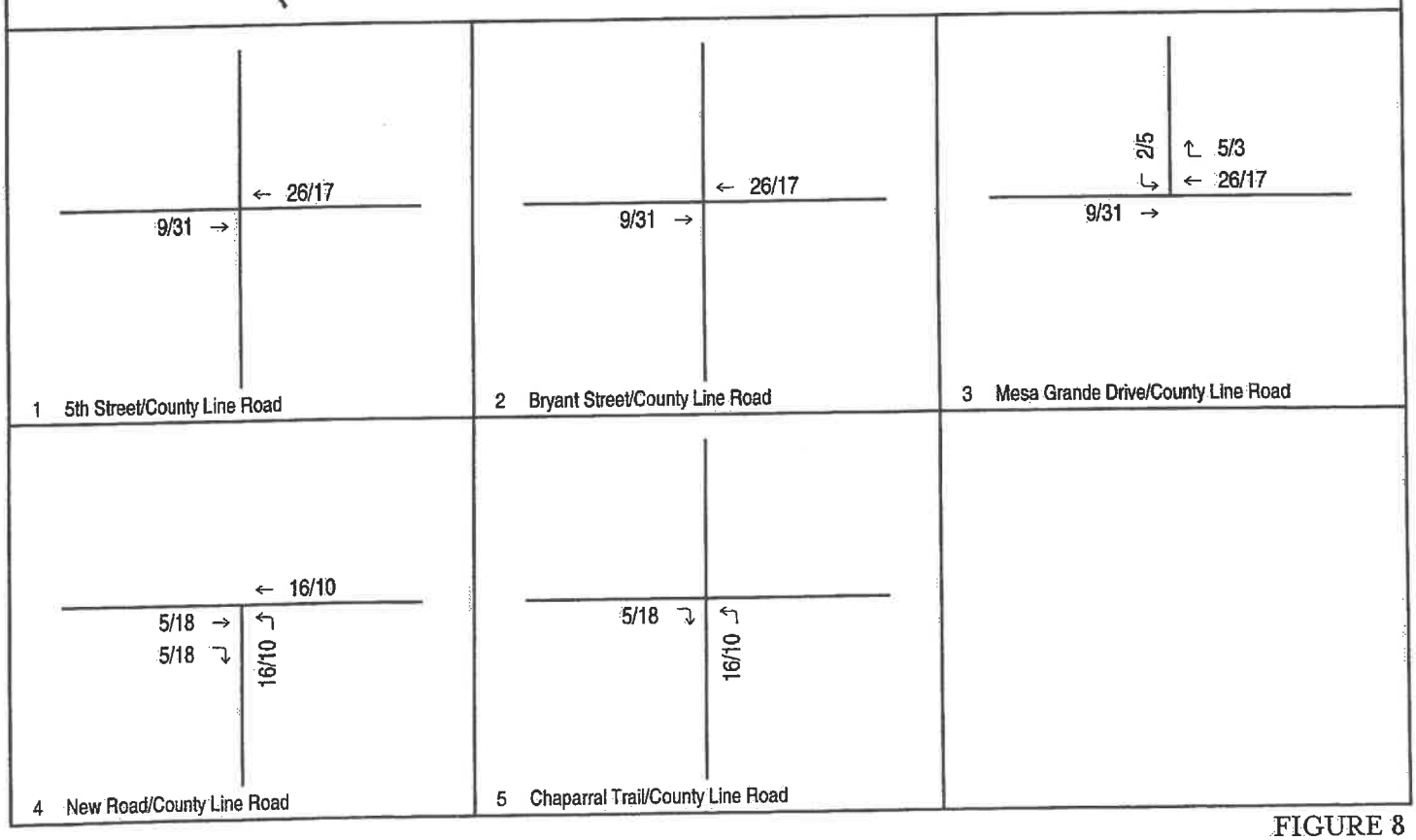


FIGURE 8

LSA

12/34 AM/PM Volume

Heritage Oaks
Project Trip Assignment

OPENING YEAR 2006 CONDITIONS

This section discusses forecast traffic conditions, with and without the proposed project, under year 2006 conditions. Year 2006 traffic volumes were developed using the approach discussed under the Analysis Methodology section. The analysis of year 2006 conditions is based on the existing circulation system.

Year 2006 Without Project Conditions

Year 2006 without project a.m. and p.m. peak hour turn volumes for study area intersections are illustrated in Figure 9. An intersection level of service analysis was conducted to determine projected intersection performance. The year 2006 without project levels of service for the study area intersections are summarized in Table F. The level of service calculation sheets are contained in Appendix C. As indicated in Table F, all intersections examined are projected to operate at satisfactory levels of service under year 2006 without project conditions except the following:

- Bryant Street/County Line Road (p.m. peak hour).

Year 2006 With Project Conditions

The year 2006 with project condition considers the addition of traffic generated by the proposed project to the roadways in the project vicinity on opening day. Year 2006 with project a.m. and p.m. peak hour turn volumes for study area intersections are illustrated in Figure 10. An intersection level of service analysis was conducted to determine projected intersection performance. The year 2006 with project levels of service for the study area intersections are summarized in Table G. The level of service calculation sheets are contained in Appendix C. As indicated in Table G, all intersections examined are projected to operate at satisfactory levels of service under year 2006 with project conditions except the following:

- Bryant Street/County Line Road (p.m. peak hour).

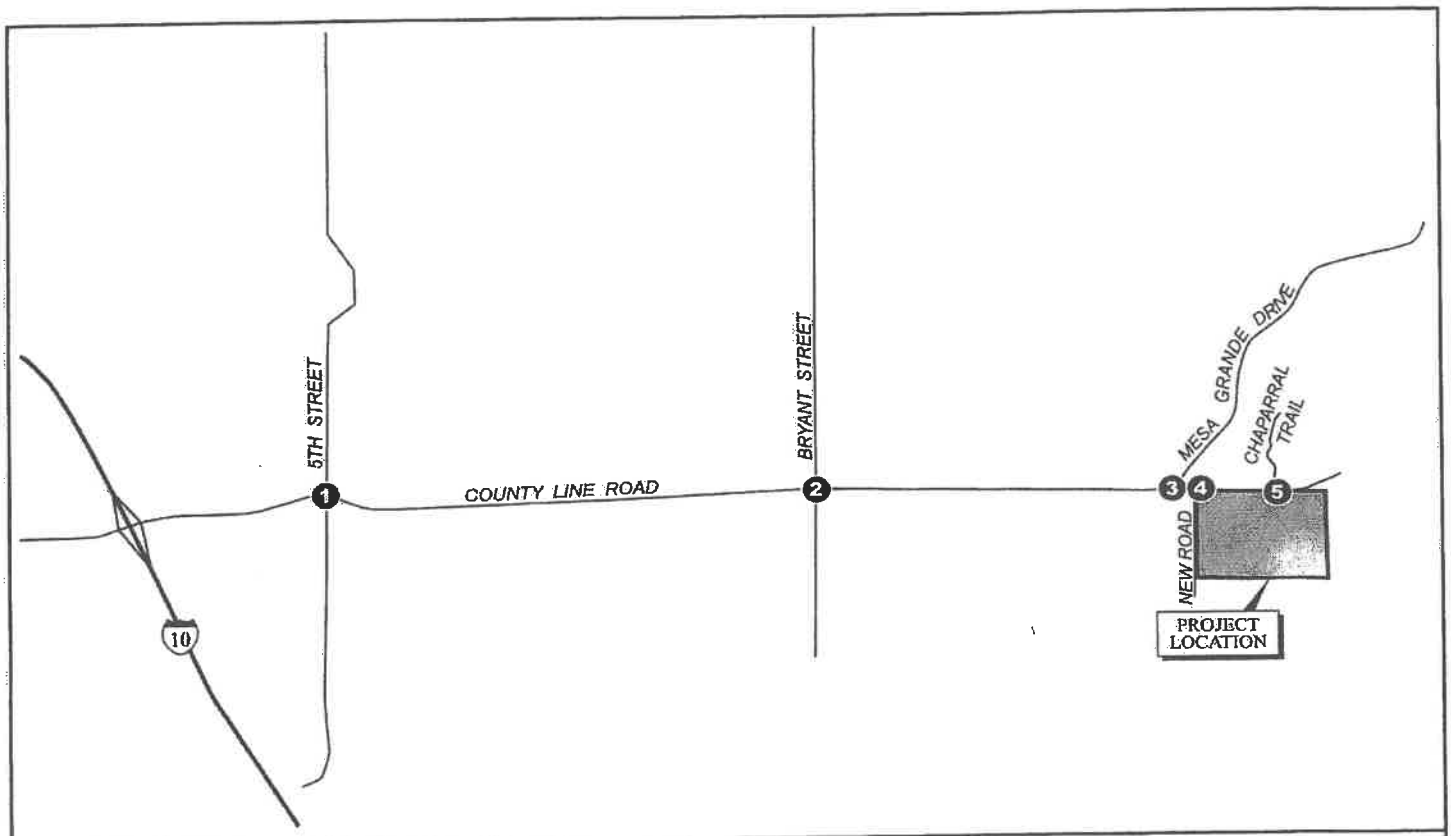
This intersection is projected to operate at LOS F under 2006 without project conditions. Addition of project traffic will contribute to this unsatisfactory condition.

CIRCULATION IMPROVEMENTS

At any intersection where project development is forecast to have an impact, the City requires that improvements be identified as mitigation measures. The following improvements are required to maintain a level of service of C or better.

- Bryant Street/County Line Road: Addition of a dedicated eastbound right turn lane.

The year 2006 with project with improvements levels of service for the study area intersections are summarized in Table H. With the required improvements, the City's level of service standard is maintained at all study area intersections. The level of service calculation sheets are contained in Appendix C.



1 5th Street/County Line Road

234/171 ↙ 72/108 ← 21/47 ↘ | ↱ 22/50 ← 709/477 ↰ 21/26
81/207 ↳
346/801 ↓
26/84 ↲
67/47 ↰ 55/157 → 20/45 ↱

2 Bryant Street/County Line Road

20/27 ↲ 29/71 ↓ 8/6 ↘ | ↱ 15/7 ← 343/161 ↰ 33/28
18/41 ↳
168/314 →
55/177 ↲
165/107 ↰ 59/47 ↑ 36/22 ↱

3 Mesa Grande Drive/County Line Road

124/72 ↲ 10/12 ↳ | ↱ 14/7 ← 54/47
43/149 ↳
46/73 →

4 New Road/County Line Road

← 61/54
37/86 →

5 Chaparral Trail/County Line Road

20/8 ↲ 1/2 ↳ | ↱ 1/1 ← 54/24
4/16 ↳
28/47 →

FIGURE 9

LSA

123/456 AM/PM Volume

Heritage Oaks

Year 2006 Without Project Traffic Volumes

Table F - Year 2006 Without Project Intersection Levels of Service

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour			
		V/C	Delay	LOS	V/C	Delay	LOS	
1. 5th Street/County Line Road	Signal	0.73	26.2	C	0.73	25.5	C	
2. Bryant Street/County Line Road	AWSC	0.66	15.9	C	0.93	27.0	D	*
3. Mesa Grande Drive/County Line Road	TWSC	-	9.2	A	-	9.4	A	
Future Intersection								
4. New Road/County Line Road	TWSC	-	8.6	A	-	8.6	A	
5. Chaparral Trail/County Line Road								

Notes:

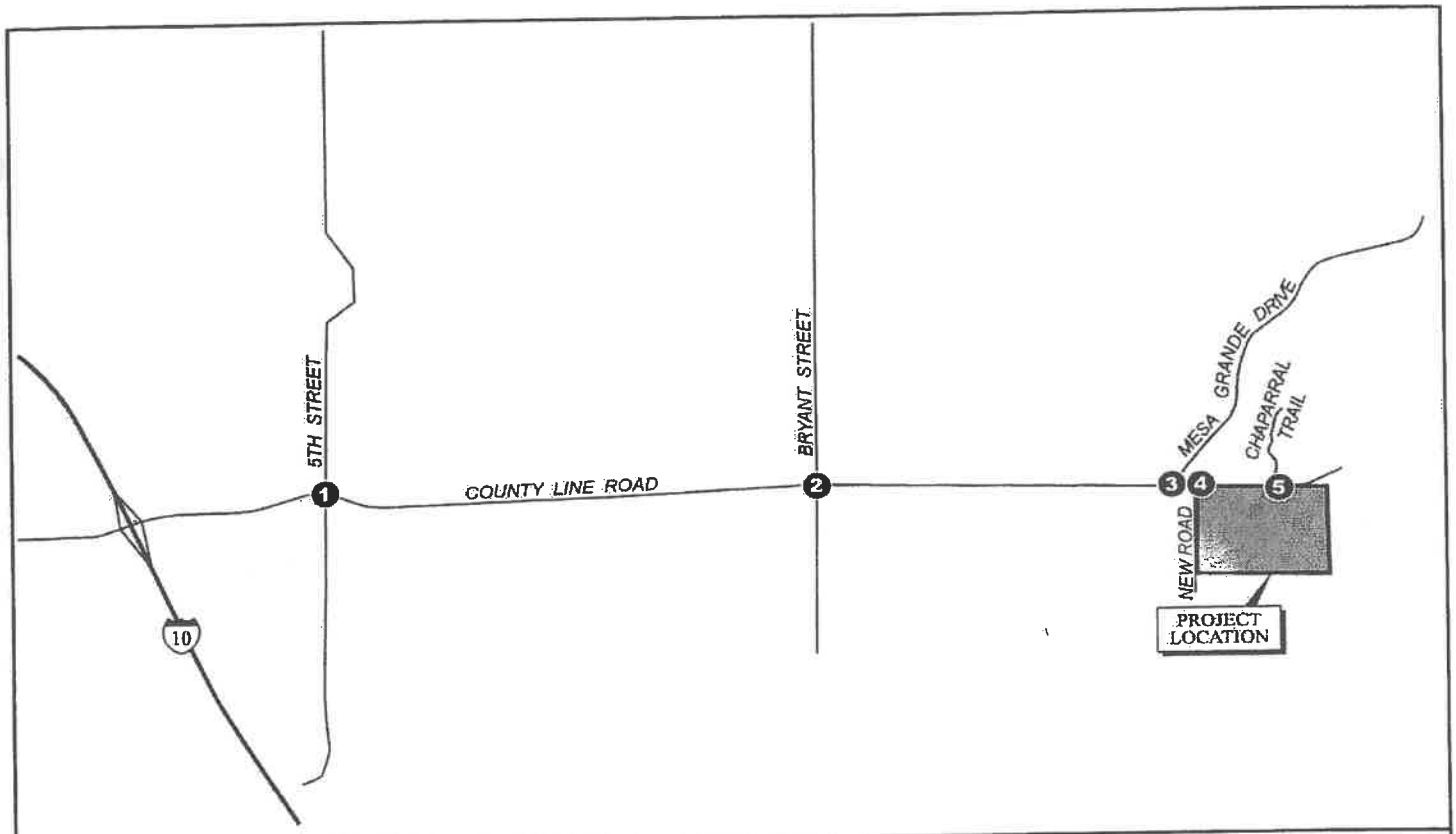
V/C = Volume/capacity ratio

Delay = Average control delay in seconds. At TWSC intersections, worst-case approach is reported.

LOS = Level of Service

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control



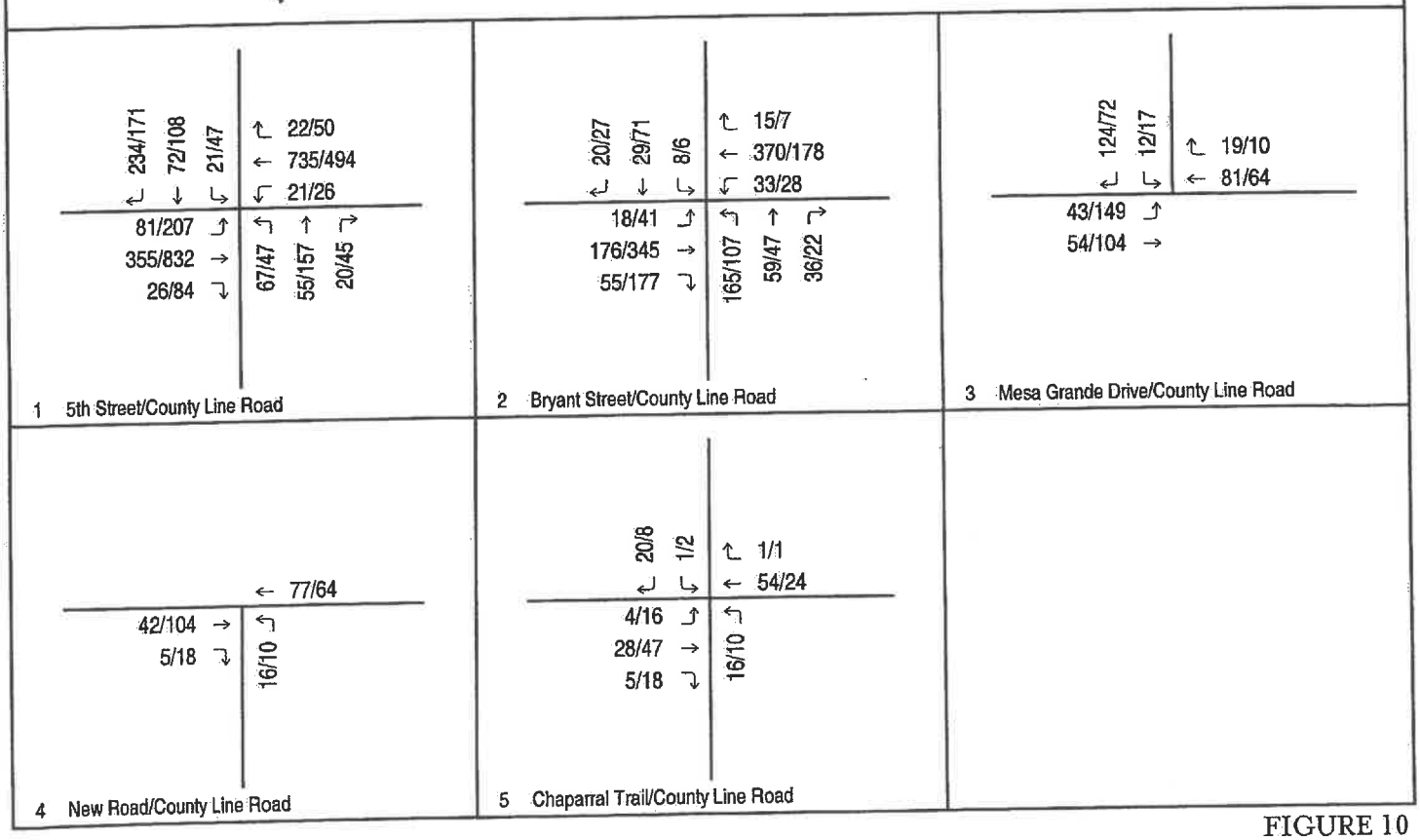


FIGURE 10

LSA

123/456 AM/PM Volume

Heritage Oaks

Year 2006 With Project Traffic Volumes

Table G - Year 2006 With Project Intersection Levels of Service

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour			
		V/C	Delay	LOS	V/C	Delay	LOS	
1 . 5th Street/County Line Road	Signal	0.75	26.5	C	0.75	25.8	C	
2 . Bryant Street/County Line Road	AWSC	0.71	17.0	C	0.98	33.8	D	*
3 . Mesa Grande Drive/County Line Road	TWSC	-	9.5	A	-	9.8	A	
4 . New Road/County Line Road	TWSC	-	9.2	A	-	9.6	A	
5 . Chaparral Trail/County Line Road	TWSC	-	9.2	A	-	9.3	A	

Notes:

V/C = Volume/capacity ratio

Delay = Average control delay in seconds. At TWSC intersections, worst-case approach is reported.

LOS = Level of Service

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

Table H - Year 2006 With Project With Improvements Intersection Levels of Service

Intersection	Control	A.M. Peak Hour			P.M. Peak Hour		
		V/C	Delay	LOS	V/C	Delay	LOS
1 . 5th Street/County Line Road	Signal	0.75	26.5	C	0.75	25.8	C
2 . Bryant Street/County Line Road	AWSC	0.72	16.9	C	0.69	14.9	B
3 . Mesa Grande Drive/County Line Road	TWSC	-	9.5	A	-	9.8	A
4 . New Road/County Line Road	TWSC	-	9.2	A	-	9.6	A
5 . Chaparral Trail/County Line Road	TWSC	-	9.2	A	-	9.3	A

Notes:

V/C = Volume/capacity ratio

Delay = Average control delay in seconds. At TWSC intersections, worst-case approach is reported.

LOS = Level of Service

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

SUMMARY AND CONCLUSIONS

This section of the report summarizes the results and conclusions of the traffic analysis for the Heritage Oaks Residential project. The key results are summarized below.

1. The study area includes four intersections. This report analyzed a.m. and p.m. peak hour traffic operations for all study area intersections. The analysis included examination of the following conditions:
   a. Existing conditions;
   b. Year 2006 without project conditions; and
   c. Year 2006 with project conditions.

2. The existing a.m. and p.m. peak hour intersection turn volumes for analysis locations were collected by LSA. All analysis intersections are currently operating at acceptable levels of service (LOS C or better).

3. The proposed project is estimated to generate 41 a.m. peak hour trips, 56 p.m. peak hour trips, and a total of 526 daily trips.

4. Under 2006 without project conditions, all study area intersections are projected to operate at satisfactory levels of service (LOS C or better) except the intersection of Bryant Street/County Line Road in the p.m. peak hour.

5. With the addition of traffic generated by the project to year 2006 conditions, all intersections examined are projected to operate at satisfactory levels of service (LOS C or better) except the intersection of Bryant Street/County Line Road in the p.m. peak hour.

6. To maintain a satisfactory level of service, addition of a dedicated eastbound right turn lane is required at the intersection of Bryant Street/County Line Road.

APPENDIX A

EXISTING PEAK HOUR INTERSECTION TURN MOVEMENT COUNTS

CITY OF CALIMESA
5TH STREET / COUNTY LINE ROAD

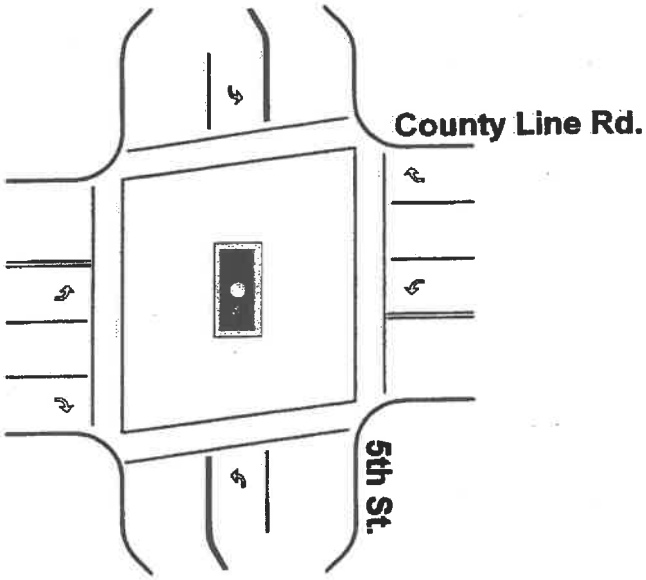
Turning Movement Count
April 2004

Counts Unlimited, Inc. ▪ 25424 Jaclyn Avenue ▪ Moreno Valley, CA 92557 ▪ T 909 247 6716 ▪ F 909 924 8604

Counts unlimited

N
W E
S

NOT TO SCALE



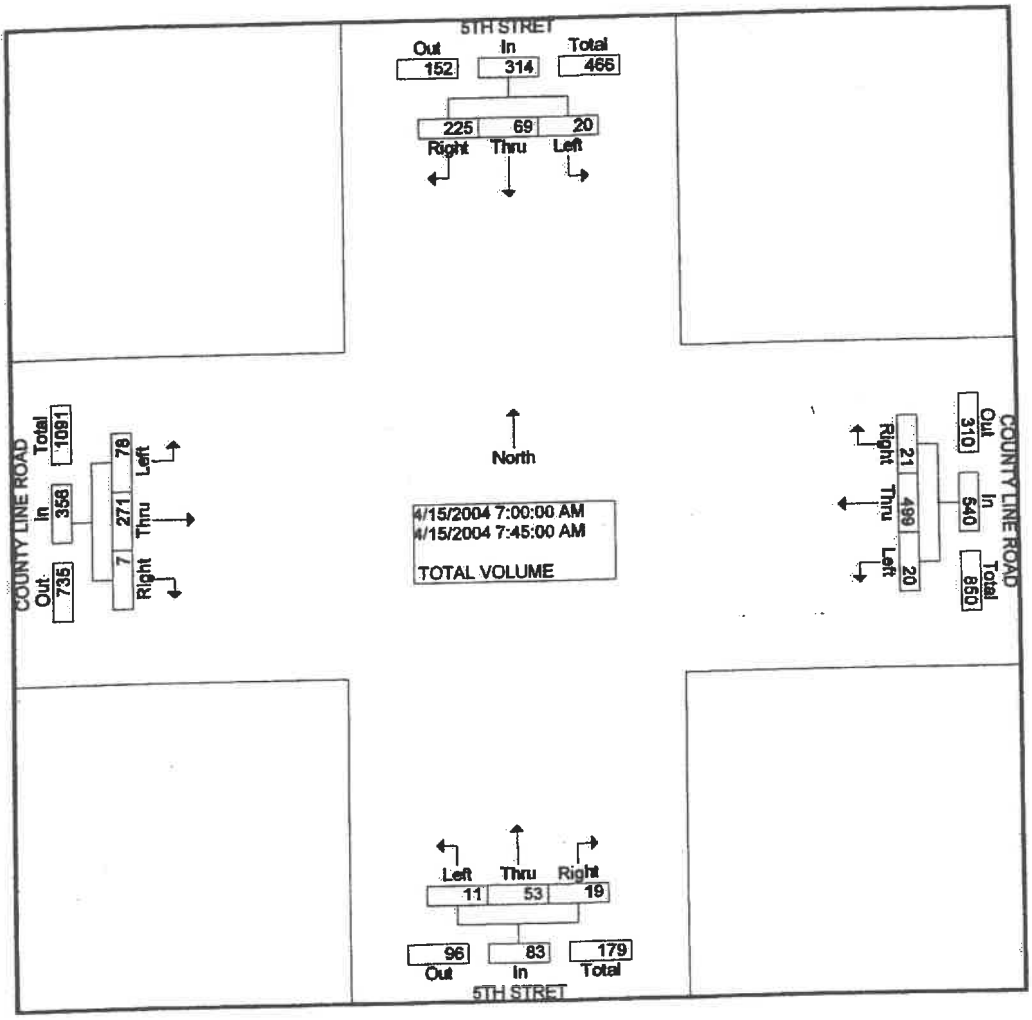
City of Calimesa
5th Street and County Line Road

4/15/2004 - 0649_5th_CountyLir

COUNTS UNLIMITED INC.
25424 JACLYN AVENUE
MORENO VALLEY CA 92557
909-247-6716

CITY OF CALIMESA
N/S: 5TH STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CAFICLAM
Site Code : 00032738
Start Date : 4/15/2004
Page No : 2



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

By Approach	07:00 AM				07:00 AM				08:00 AM				07:45 AM			
Volume	20	69	225	314	20	499	21	540	16	68	28	112	81	300	7	388
Percent	6.4	22.0	71.7		3.7	92.4	3.9		14.3	60.7	25.0		20.9	77.3	1.8	
High Int.	07:00 AM				07:00 AM				08:30 AM				07:45 AM			
Volume	3	21	73	97	4	156	10	170	6	21	7	34	19	81	0	100
Peak Factor				0.809				0.794				0.824				0.970

COUNTS UNLIMITED INC.
25424 JACLYN AVENUE
MORENO VALLEY CA 92557
909-247-6716

CITY OF CALIMESA
N/S: 5TH STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CAFICLAM
Site Code : 00032738
Start Date : 4/15/2004
Page No : 1

Groups Printed- TOTAL VOLUME

	5TH STRET Southbound				COUNTY LINE ROAD Westbound				5TH STRET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	3	21	73	97	4	156	10	170	5	14	8	27	18	61	3	82	376
07:15 AM	7	19	53	79	6	137	3	146	1	10	7	18	25	64	3	92	335
07:30 AM	7	19	59	85	5	119	2	126	3	14	2	19	16	65	1	82	312
07:45 AM	3	10	40	53	5	87	6	98	2	15	2	19	19	81	0	100	270
Total	20	69	225	314	20	499	21	540	11	53	19	83	78	271	7	356	1293
08:00 AM	6	14	39	59	5	103	9	117	0	20	13	33	20	71	4	95	304
08:15 AM	7	9	38	54	13	133	5	151	4	12	4	20	20	74	1	95	320
08:30 AM	7	27	50	84	5	124	9	138	6	21	7	34	22	74	2	98	354
08:45 AM	4	20	44	68	12	98	4	114	6	15	4	25	21	70	1	92	299
Total	24	70	171	265	35	458	27	520	16	68	28	112	83	289	8	380	1277
Grand Total	44	139	396	579	55	957	48	1060	27	121	47	195	161	560	15	736	2570
Apprch %	7.6	24.0	68.4		5.2	90.3	4.5		13.8	62.1	24.1		21.9	76.1	2.0		
Total %	1.7	5.4	15.4	22.5	2.1	37.2	1.9	41.2	1.1	4.7	1.8	7.6	6.3	21.8	0.6	28.6	

	5TH STRET Southbound				COUNTY LINE ROAD Westbound				5TH STRET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	20	69	225	314	20	499	21	540	11	53	19	83	78	271	7	356	1293
Percent	6.4	22.0	71.7		3.7	92.4	3.9		13.3	63.9	22.9		21.9	76.1	2.0		
07:00 Volume	3	21	73	97	4	156	10	170	5	14	8	27	18	61	3	82	376
Peak Factor																	0.860
High Int.	07:00 AM				07:00 AM				07:00 AM				07:45 AM				
Volume	3	21	73	97	4	156	10	170	5	14	8	27	19	81	0	100	
Peak Factor				0.809				0.794				0.769				0.890	

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
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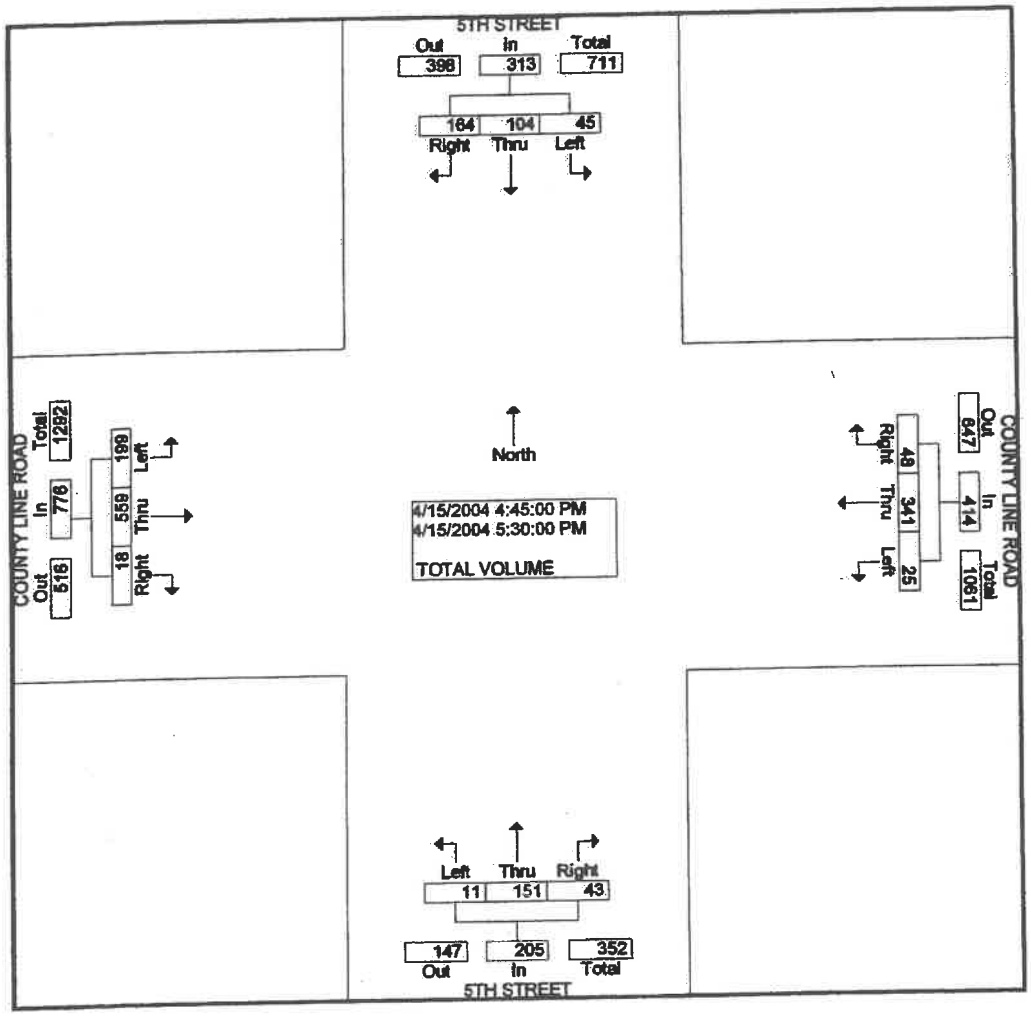
CITY OF CALIMESA
N/S: 5TH STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CA5CLPM
Site Code : 00032701
Start Date : 4/15/2004



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	05:00 PM				04:00 PM				04:45 PM				04:45 PM			
Volume	45	105	166	316	29	350	36	415	11	151	43	205	199	559	18	776
Percent	14.2	33.2	52.5		7.0	84.3	8.7		5.4	73.7	21.0		25.6	72.0	2.3	
High Int.	05:15 PM				04:45 PM				05:30 PM				04:45 PM			
Volume	13	28	50	91	1	98	10	109	4	44	14	62	50	151	3	204
Peak Factor				0.868				0.952				0.827				0.951

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: 5TH STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CA5CLPM
Site Code : 00032701
Start Date : 4/15/2004
Page No : 1

Groups Printed- TOTAL VOLUME

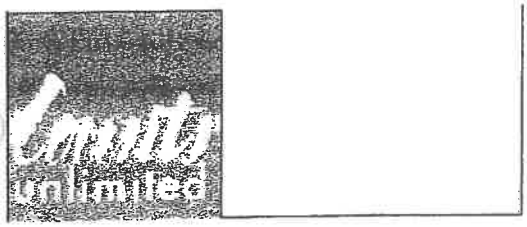
	5TH STREET Southbound				COUNTY LINE ROAD Westbound				5TH STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	11	26	32	69	9	89	10	108	7	30	15	52	41	134	7	182	411
04:15 PM	9	26	41	76	11	89	7	107	3	39	13	55	39	116	1	156	394
04:30 PM	9	29	34	72	8	74	9	91	1	30	13	44	43	111	3	157	364
04:45 PM	11	27	34	72	1	98	10	109	2	37	11	50	50	151	3	204	435
Total	40	108	141	289	29	350	36	415	13	136	52	201	173	512	14	699	1604
05:00 PM	9	28	41	78	4	73	16	93	2	33	6	41	53	130	3	186	398
05:15 PM	13	28	50	91	8	82	9	99	3	37	12	52	43	146	4	193	435
05:30 PM	12	21	39	72	12	88	13	113	4	44	14	62	53	132	8	193	440
05:45 PM	11	28	36	75	13	83	12	108	2	29	15	46	38	153	1	192	421
Total	45	105	166	316	37	326	50	413	11	143	47	201	187	561	16	764	1694
Grand Total	85	213	307	605	66	676	86	828	24	279	99	402	360	1073	30	1463	3298
Apprch %	14.0	35.2	50.7		8.0	81.6	10.4		6.0	69.4	24.6		24.6	73.3	2.1		
Total %	2.6	6.5	9.3	18.3	2.0	20.5	2.6	25.1	0.7	8.5	3.0	12.2	10.9	32.5	0.9	44.4	

	5TH STREET Southbound				COUNTY LINE ROAD Westbound				5TH STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	45	104	164	313	25	341	48	414	11	151	43	205	199	559	18	776	1708
Percent	14.4	33.2	52.4		6.0	82.4	11.6		5.4	73.7	21.0		25.6	72.0	2.3		
05:30 Volume	12	21	39	72	12	88	13	113	4	44	14	62	53	132	8	193	440
Peak Factor																	0.970
High Int.	05:15 PM				05:30 PM				05:30 PM				04:45 PM				
Volume	13	28	50	91	12	88	13	113	4	44	14	62	50	151	3	204	
Peak Factor				0.860				0.916				0.827				0.951	

CITY OF CALIMESA
BRYANT STREET / COUNTY LINE ROAD

Turning Movement Count
April 2004

Counts Unlimited, Inc. ▪ 25424 Jaclyn Avenue ▪ Moreno Valley, CA 92557 ▪ T 909 247 6716 ▪ F 909 924 8604



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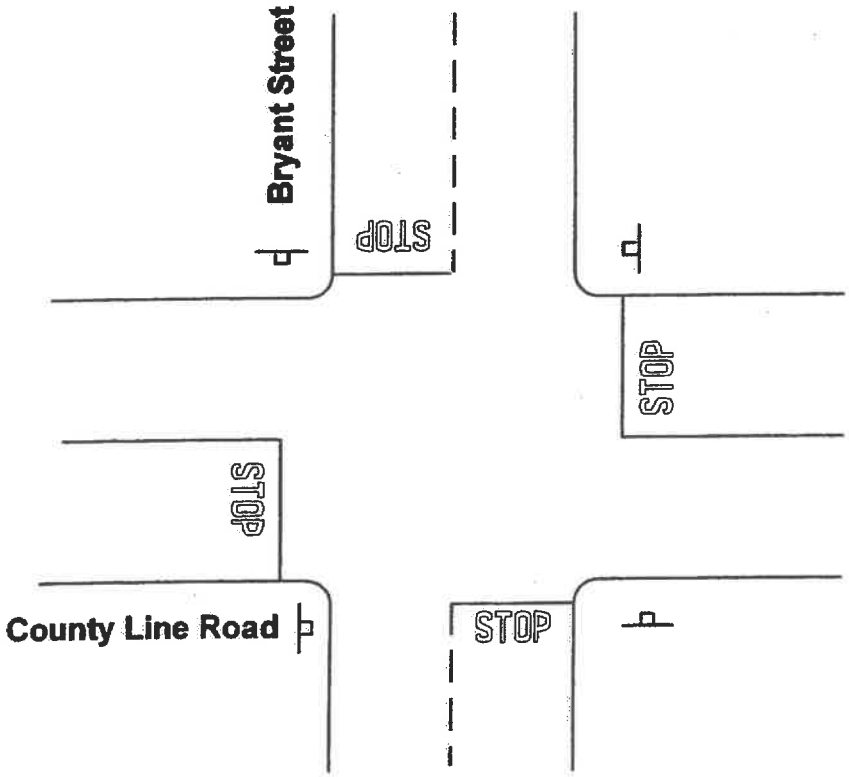
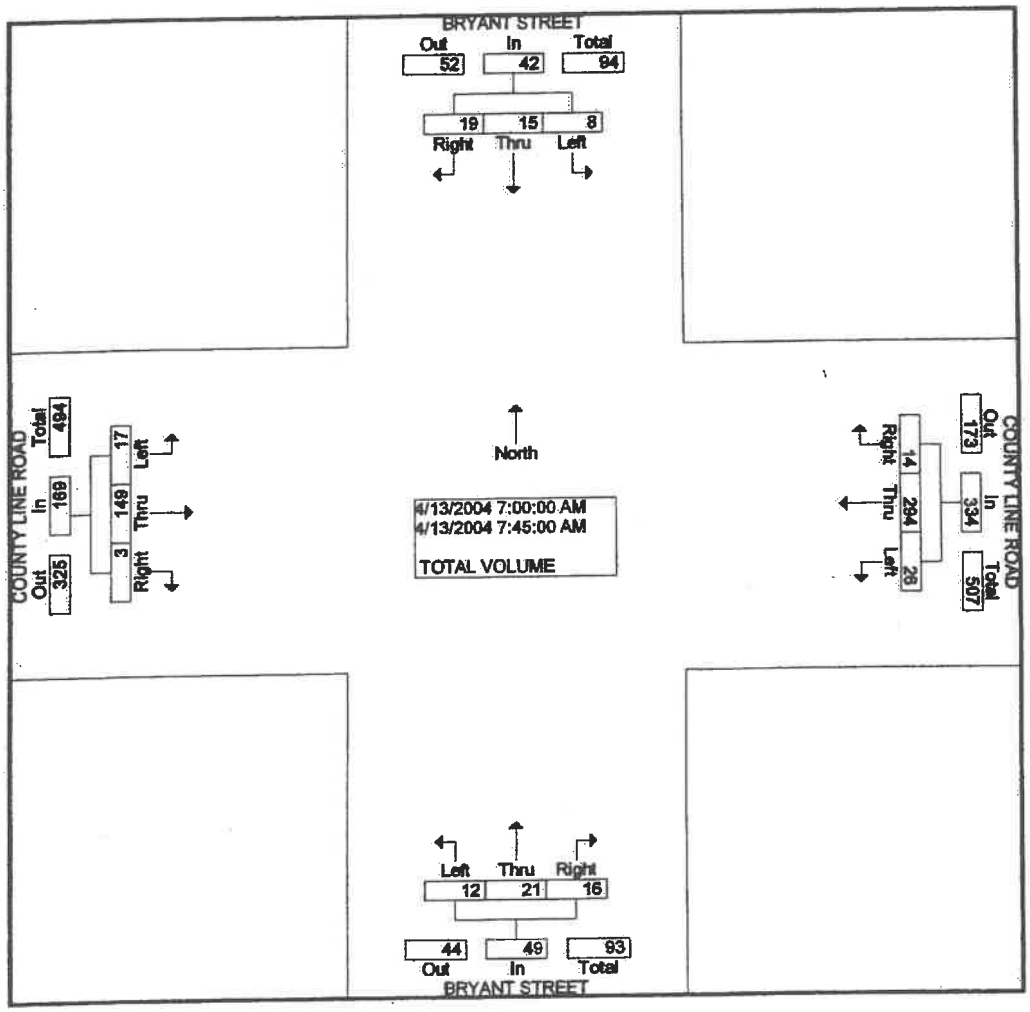


City of Calimesa
Bryant St / County Line Rd

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: BRYANT STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CABRCLAM
Site Code : 00032752
Start Date : 4/13/2004
Page No : 2



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

By Approach	08:00 AM				07:00 AM				07:00 AM				07:30 AM			
Volume	7	14	31	52	26	294	14	334	12	21	16	49	19	149	5	173
Percent	13.5	26.9	59.6		7.8	88.0	4.2		24.5	42.9	32.7		11.0	86.1	2.9	
High Int.	08:45 AM				07:30 AM				07:15 AM				07:45 AM			
Volume	4	5	8	17	13	81	3	97	4	7	7	18	6	46	0	52
Peak Factor				0.765				0.861				0.681				0.832

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: BRYANT STREET
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CABRCLAM
Site Code : 00032752
Start Date : 4/13/2004
Page No : 1

Groups Printed- TOTAL VOLUME

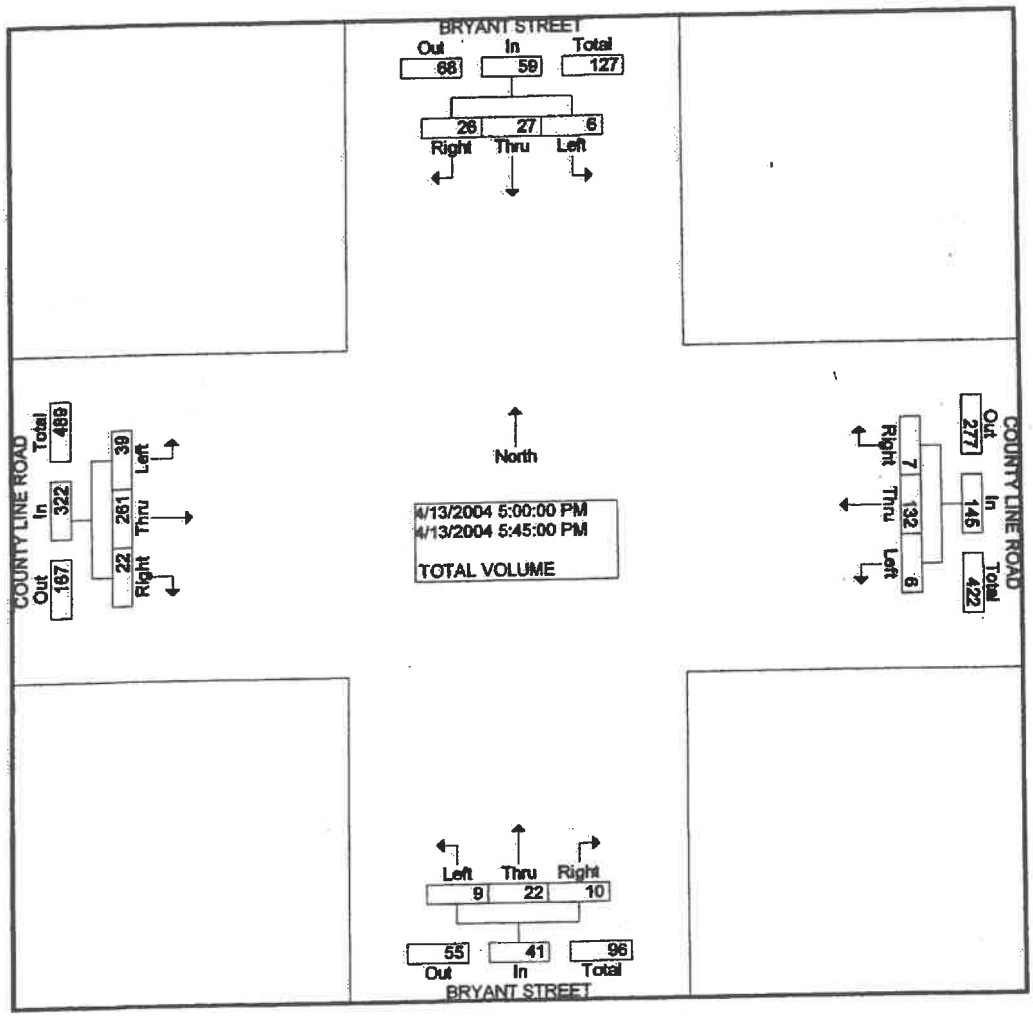
	BRYANT STREET Southbound				COUNTY LINE ROAD Westbound				BRYANT STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	2	2	8	12	5	82	3	90	1	8	4	13	4	38	0	42	157
07:15 AM	3	5	5	13	3	70	3	76	4	7	7	18	3	30	1	34	141
07:30 AM	1	5	2	8	13	81	3	97	3	1	4	8	4	35	2	41	154
07:45 AM	2	3	4	9	5	61	5	71	4	5	1	10	6	46	0	52	142
Total	8	15	19	42	26	294	14	334	12	21	16	49	17	149	3	169	594
08:00 AM	0	2	7	9	2	81	2	85	1	6	3	10	5	32	2	39	143
08:15 AM	2	3	6	11	4	65	2	71	2	8	8	18	4	36	1	41	141
08:30 AM	1	4	10	15	4	76	3	83	1	5	5	11	2	23	4	29	138
08:45 AM	4	5	8	17	3	39	2	44	4	5	1	10	1	21	3	25	96
Total	7	14	31	52	13	261	9	283	8	24	17	49	12	112	10	134	518
Grand Total	15	29	50	94	39	555	23	617	20	45	33	98	29	261	13	303	1112
Apprch %	16.0	30.9	53.2		6.3	90.0	3.7		20.4	45.9	33.7		9.6	86.1	4.3		
Total %	1.3	2.6	4.5	8.5	3.5	49.9	2.1	55.5	1.8	4.0	3.0	8.8	2.6	23.5	1.2	27.2	

	BRYANT STREET Southbound				COUNTY LINE ROAD Westbound				BRYANT STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	8	15	19	42	26	294	14	334	12	21	16	49	17	149	3	169	594
Percent	19.0	35.7	45.2		7.8	88.0	4.2		24.5	42.9	32.7		10.1	88.2	1.8		
07:00 Volume	2	2	8	12	5	82	3	90	1	8	4	13	4	38	0	42	157
Peak Factor																	0.946
High Int.	07:15 AM				07:30 AM				07:15 AM				07:45 AM				
Volume	3	5	5	13	13	81	3	97	4	7	7	18	6	46	0	52	
Peak Factor				0.808				0.861				0.681				0.812	

CITY OF CALIMESA
N/S: BRYANT ROAD
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

File Name : CABRCLPM
Site Code : 00032752
Start Date : 4/13/2004
Page No : 2



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	05:00 PM				04:00 PM				04:00 PM				05:00 PM			
Volume	6	27	26	59	13	147	5	165	17	31	9	57	39	261	22	322
Percent	10.2	45.8	44.1		7.9	89.1	3.0		29.8	54.4	15.8		12.1	81.1	6.8	
High Int.	05:15 PM				04:00 PM				04:15 PM				05:45 PM			
Volume	1	10	7	18	6	39	0	45	4	9	4	17	12	85	2	99
Peak Factor				0.819				0.917				0.838				0.813

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: BRYANT ROAD
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : CABRCLPM
Site Code : 00032752
Start Date : 4/13/2004
Page No : 1

Groups Printed- TOTAL VOLUME

	BRYANT STREET Southbound				COUNTY LINE ROAD Westbound				BRYANT STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	5	8	14	6	39	0	45	7	9	0	16	6	48	4	58	133
04:15 PM	5	6	1	12	2	39	0	41	4	9	4	17	5	41	1	47	117
04:30 PM	0	3	2	5	1	37	3	41	2	4	1	7	7	47	7	61	114
04:45 PM	0	5	4	9	4	32	2	38	4	9	4	17	11	52	4	67	131
Total	6	19	15	40	13	147	5	165	17	31	9	57	29	188	16	233	495
05:00 PM	1	5	11	17	4	30	3	37	2	5	1	8	9	47	6	62	124
05:15 PM	1	10	7	18	2	33	2	37	2	1	2	5	12	73	5	90	150
05:30 PM	1	7	5	13	0	35	0	35	2	12	5	19	6	56	9	71	138
05:45 PM	3	5	3	11	0	34	2	36	3	4	2	9	12	85	2	99	155
Total	6	27	26	59	6	132	7	145	9	22	10	41	39	261	22	322	567
Grand Total	12	46	41	99	19	279	12	310	26	53	19	98	68	449	38	555	1062
Apprch %	12.1	46.5	41.4		6.1	90.0	3.9		26.5	54.1	19.4		12.3	80.9	6.8		
Total %	1.1	4.3	3.9	9.3	1.8	26.3	1.1	29.2	2.4	5.0	1.8	9.2	6.4	42.3	3.6	52.3	

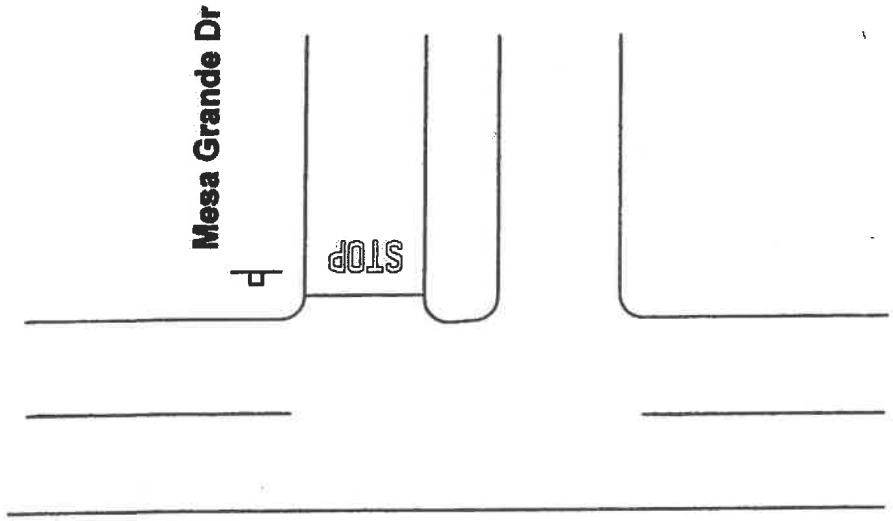
	BRYANT STREET Southbound				COUNTY LINE ROAD Westbound				BRYANT STREET Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	6	27	26	59	6	132	7	145	9	22	10	41	39	261	22	322	567
Percent	10.2	45.8	44.1		4.1	91.0	4.8		22.0	53.7	24.4		12.1	81.1	6.8		
05:45 Volume	3	5	3	11	0	34	2	36	3	4	2	9	12	85	2	99	155
Peak Factor																	0.915
High Int.	05:15 PM				05:00 PM				05:30 PM				05:45 PM				
Volume	1	10	7	18	4	30	3	37	2	12	5	19	12	85	2	99	
Peak Factor				0.819				0.980				0.539				0.813	

CITY OF CALIMESA
MESA GRANDE DRIVE / COUNTY LINE ROAD

Turning Movement Count
April 2004

Counts Unlimited, Inc. ▪ 25424 Jaclyn Avenue ▪ Moreno Valley, CA 92557 ▪ T 909 247 6716 ▪ F 909 924 8604

NOT TO SCALE

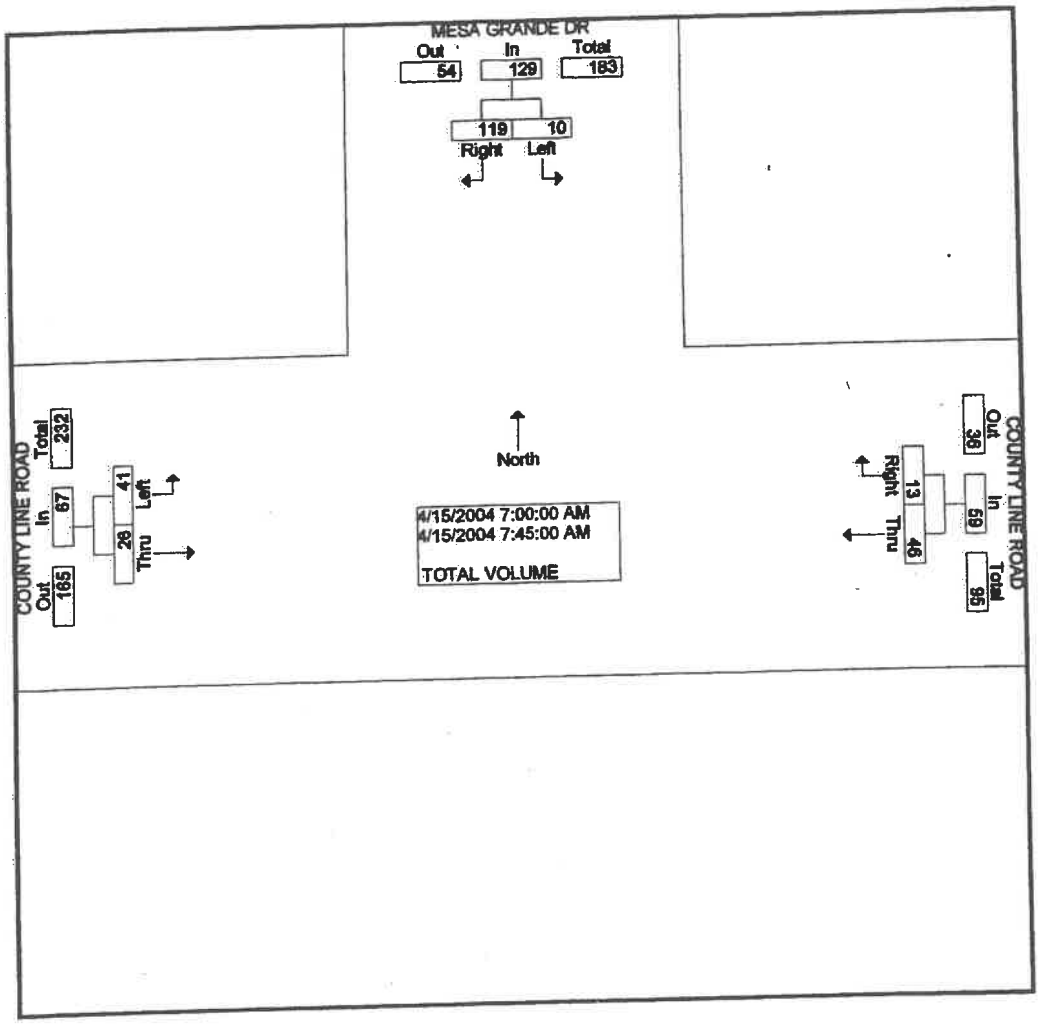


City of Calimesa
Mesa Grande Dr / County Line Rd

CITY OF CALIMESA
N/S: MESA GRANDE DRIVE
E/W: COUNTY LINE ROAD
WEATHER: PARTLY SUNNY

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

File Name : CAMGCLAM
Site Code : 00032709
Start Date : 4/15/2004



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

By Approach																
	07:00 AM				07:00 AM				07:00 AM				07:45 AM			
Volume	10	0	119	129	0	46	13	59	0	0	0	0	63	24	0	87
Percent	7.8	0.0	92.2		0.0	78.0	22.0		-	-	-		72.4	27.6	0.0	
High Int.	07:00 AM				07:00 AM								08:15 AM			
Volume	3	0	33	36	0	11	4	15	-	-	-	-	19	4	0	23
Peak Factor				0.896				0.983				-				0.946

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: MESA GRANDE DRIVE
E/W: COUNTY LINE ROAD
WEATHER: PARTLY SUNNY

File Name : CAMGCLAM
Site Code : 00032709
Start Date : 4/15/2004
Page No : 1

Groups Printed- TOTAL VOLUME

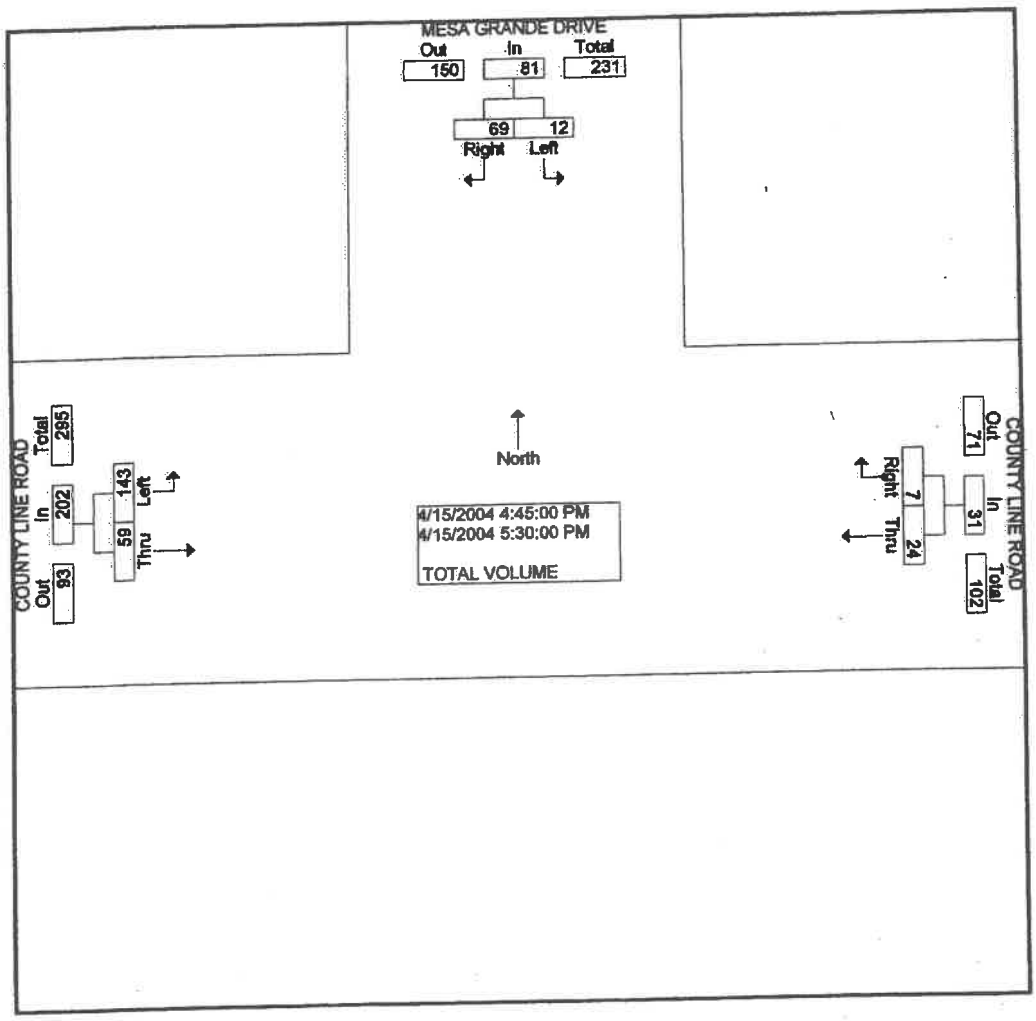
	MESA GRANDE DR Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	3	0	33	36	0	11	4	15	0	0	0	0	9	7	0	16	67
07:15 AM	2	0	29	31	0	12	3	15	0	0	0	0	8	5	0	13	59
07:30 AM	3	0	28	31	0	11	4	15	0	0	0	0	11	6	0	17	63
07:45 AM	2	0	29	31	0	12	2	14	0	0	0	0	13	8	0	21	66
Total	10	0	119	129	0	46	13	59	0	0	0	0	41	26	0	67	255
08:00 AM	4	0	21	25	0	5	2	7	0	0	0	0	15	6	0	21	53
08:15 AM	3	0	23	26	0	11	1	12	0	0	0	0	19	4	0	23	61
08:30 AM	0	0	28	28	0	13	3	16	0	0	0	0	16	6	0	22	66
08:45 AM	2	0	20	22	0	8	2	10	0	0	0	0	15	5	0	20	52
Total	9	0	92	101	0	37	8	45	0	0	0	0	65	21	0	86	232
Grand Total	19	0	211	230	0	83	21	104	0	0	0	0	106	47	0	153	487
Apprch %	8.3	0.0	91.7		0.0	79.8	20.2		0.0	0.0	0.0		69.3	30.7	0.0		
Total %	3.9	0.0	43.3	47.2	0.0	17.0	4.3	21.4	0.0	0.0	0.0	0.0	21.8	9.7	0.0	31.4	

	MESA GRANDE DR Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	10	0	119	129	0	46	13	59	0	0	0	0	41	26	0	67	255
Percent	7.8	0.0	92.2		0.0	78.0	22.0		0.0	0.0	0.0		61.2	38.8	0.0		
07:00 Volume	3	0	33	36	0	11	4	15	0	0	0	0	9	7	0	16	67
Peak Factor																	0.951
High Int.	07:00 AM				07:00 AM				6:45:00 AM				07:45 AM				
Volume	3	0	33	36	0	11	4	15	0	0	0	0	13	8	0	21	
Peak Factor				0.896				0.983								0.798	

CITY OF CALIMESA
N/S: MESA GRANDE DRIVE
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

COUNTS UNLIMITED INC.
25424 JACLYN AVENUE
MORENO VALLEY CA 92557
909-247-6716

File Name : camgclpm
Site Code : 00032738
Start Date : 4/15/2004
Page No : 2



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	04:30 PM				05:00 PM				04:00 PM				04:45 PM			
Volume	8	0	76	84	0	31	5	36	0	0	0	0	143	59	0	202
Percent	9.5	0.0	90.5		0.0	86.1	13.9		-	-	-		70.8	29.2	0.0	
High Int.	05:00 PM				05:45 PM								05:15 PM			
Volume	3	0	21	24	0	11	0	11	-	-	-	-	38	23	0	61
Peak Factor				0.875				0.818				-				0.828

COUNTS UNLIMITED INC.
25424 JACLYN AVENUE
MORENO VALLEY CA 92557
909-247-6716

CITY OF CALIMESA
N/S: MESA GRANDE DRIVE
E/W: COUNTY LINE ROAD
WEATHER: SUNNY

File Name : camgclpm
Site Code : 00032738
Start Date : 4/15/2004
Page No : 1

Groups Printed- TOTAL VOLUME

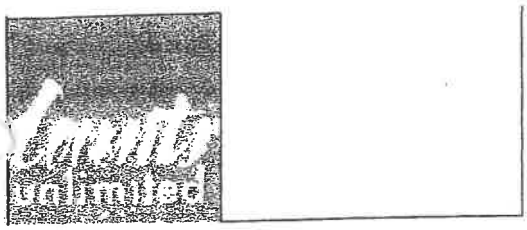
	MESA GRANDE DRIVE Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	0	14	15	0	11	1	12	0	0	0	0	25	10	0	35	62
04:15 PM	3	0	17	20	0	1	1	2	0	0	0	0	33	12	0	45	67
04:30 PM	0	0	18	18	0	10	2	12	0	0	0	0	23	9	0	32	62
04:45 PM	3	0	17	20	0	4	2	6	0	0	0	0	34	10	0	44	70
Total	7	0	66	73	0	26	6	32	0	0	0	0	115	41	0	156	261
05:00 PM	3	0	21	24	0	5	2	7	0	0	0	0	29	15	0	44	75
05:15 PM	2	0	20	22	0	6	3	9	0	0	0	0	38	23	0	61	92
05:30 PM	4	0	11	15	0	9	0	9	0	0	0	0	42	11	0	53	77
05:45 PM	0	0	13	13	0	11	0	11	0	0	0	0	29	14	0	43	67
Total	9	0	65	74	0	31	5	36	0	0	0	0	138	63	0	201	311
Grand Total	16	0	131	147	0	57	11	68	0	0	0	0	253	104	0	357	572
Apprch %	10.9	0.0	89.1		0.0	83.8	16.2		0.0	0.0	0.0		70.9	29.1	0.0		
Total %	2.8	0.0	22.9	25.7	0.0	10.0	1.9	11.9	0.0	0.0	0.0	0.0	44.2	18.2	0.0	62.4	

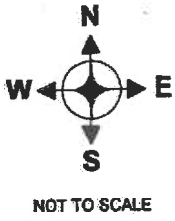
	MESA GRANDE DRIVE Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	12	0	69	81	0	24	7	31	0	0	0	0	143	59	0	202	314
Percent	14.8	0.0	85.2		0.0	77.4	22.6		0.0	0.0	0.0		70.8	29.2	0.0		
05:15 Volume	2	0	20	22	0	6	3	9	0	0	0	0	38	23	0	61	92
Peak Factor																	0.853
High Int.	05:00 PM				05:15 PM				3:45:00 PM				05:15 PM				
Volume	3	0	21	24	0	6	3	9	0	0	0	0	38	23	0	61	
Peak Factor				0.844				0.861								0.828	

CITY OF CALIMESA
CHAPPARAL TRAIL / COUNTY LINE ROAD

Turning Movement Count
April 2004

Counts Unlimited, Inc. ▪ 25424 Jaclyn Avenue ▪ Moreno Valley, CA 92557 ▪ T 909 247 6716 ▪ F 909 924 8604





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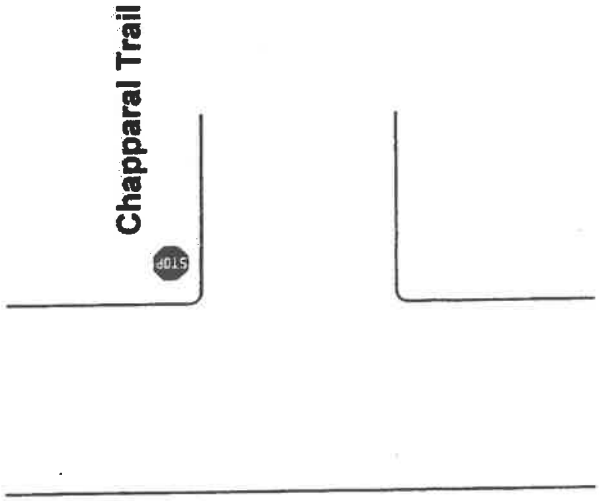


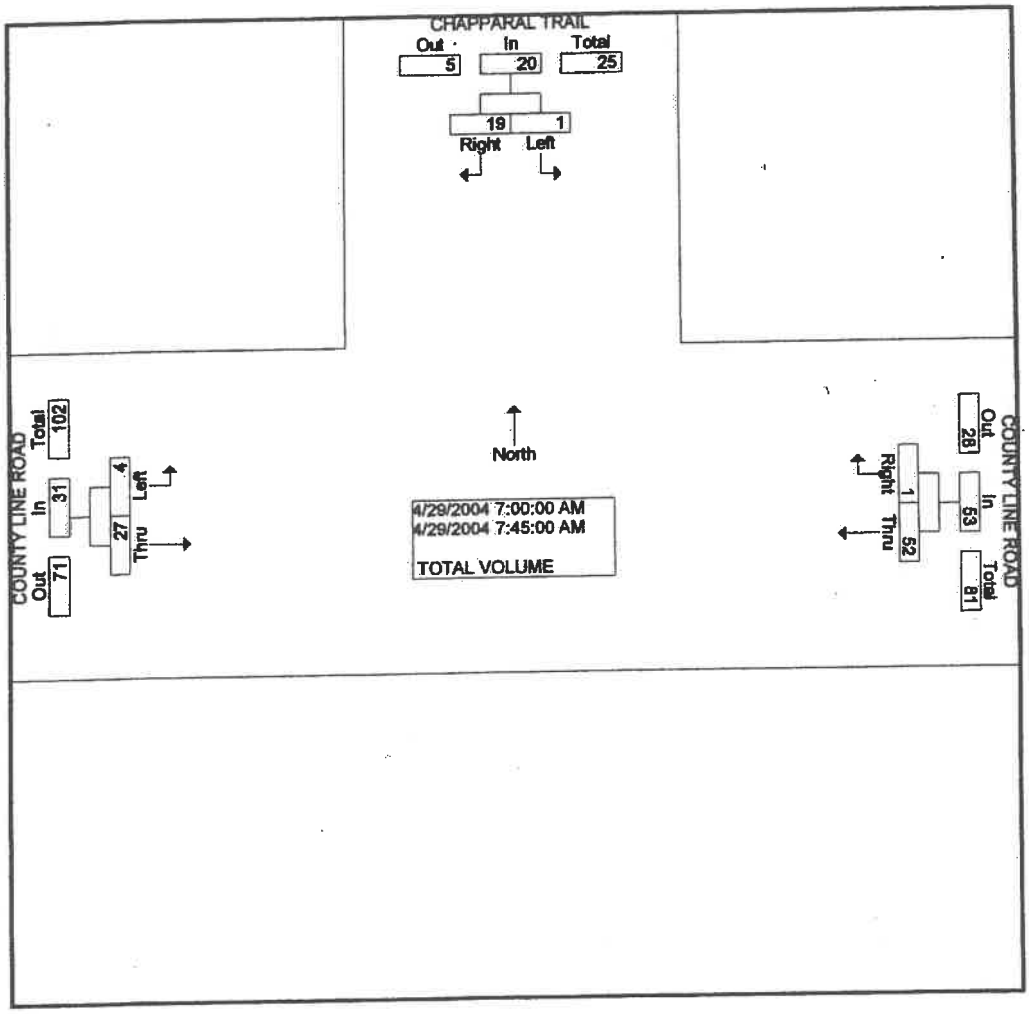
County Line Road

Note: No striping on any legs / 1 lane each direction

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: CHAPPARAL TRAIL
E/W: COUNTY LINE ROAD
WEATHER: PARTLY SUNNY

File Name : CMCHCLAM
Site Code : 00035509
Start Date : 4/29/2004
Page No : 2



Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1

By Approach	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
Volume	1	0	19	20	0	52	1	53	0	0	0	0	0	33	0	33
Percent	5.0	0.0	95.0		0.0	98.1	1.9		-	-	-		0.0	100.0	0.0	
High Int.	07:00 AM				07:00 AM				-				08:00 AM			
Volume	0	0	6	6	0	22	0	22	-	-	-	-	0	13	0	13
Peak Factor				0.833				0.602				-				0.635

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: CHAPPARAL TRAIL
E/W: COUNTY LINE ROAD
WEATHER: PARTLY SUNNY

File Name : CMCHCLAM
Site Code : 00035509
Start Date : 4/29/2004
Page No : 1

Groups Printed- TOTAL VOLUME

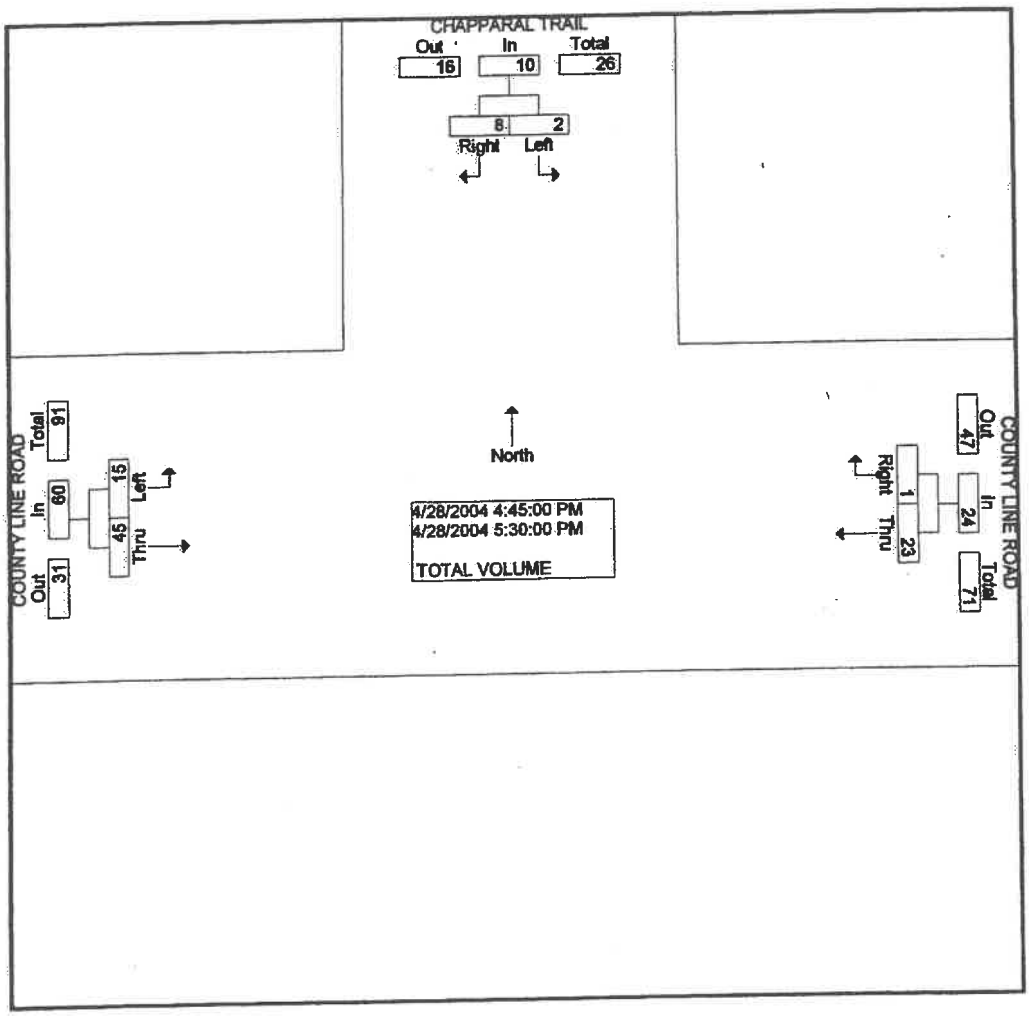
	CHAPPARAL TRAIL Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	0	0	6	6	0	22	0	22	0	0	0	0	2	12	0	14	42
07:15 AM	0	0	6	6	0	14	1	15	0	0	0	0	1	5	0	6	27
07:30 AM	1	0	4	5	0	11	0	11	0	0	0	0	1	7	0	8	24
07:45 AM	0	0	3	3	0	5	0	5	0	0	0	0	0	3	0	3	11
Total	1	0	19	20	0	52	1	53	0	0	0	0	4	27	0	31	104
08:00 AM	1	0	0	1	0	6	0	6	0	0	0	0	0	13	0	13	20
08:15 AM	0	0	2	2	0	8	1	9	0	0	0	0	0	3	0	3	14
08:30 AM	0	0	2	2	0	13	0	13	0	0	0	0	0	8	0	8	23
08:45 AM	1	0	1	2	0	11	0	11	0	0	0	0	0	9	0	9	22
Total	2	0	5	7	0	38	1	39	0	0	0	0	0	33	0	33	79
Grand Total	3	0	24	27	0	90	2	92	0	0	0	0	4	60	0	64	183
Apprch %	11.1	0.0	88.9		0.0	97.8	2.2		0.0	0.0	0.0		6.2	93.8	0.0		
Total %	1.6	0.0	13.1	14.8	0.0	49.2	1.1	50.3	0.0	0.0	0.0	0.0	2.2	32.8	0.0	35.0	

	CHAPPARAL TRAIL Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	1	0	19	20	0	52	1	53	0	0	0	0	4	27	0	31	104
Percent	5.0	0.0	95.0		0.0	98.1	1.9		0.0	0.0	0.0		12.9	87.1	0.0		
07:00 Volume	0	0	6	6	0	22	0	22	0	0	0	0	2	12	0	14	42
Peak Factor																	0.619
High Int.	07:00 AM				07:00 AM				6:45:00 AM				07:00 AM				
Volume	0	0	6	6	0	22	0	22	0	0	0	0	2	12	0	14	
Peak Factor				0.833				0.602								0.554	

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: CHAPPARAL TRAIL
E/W: COUNTY LINE ROAD
Weather: SUNNY

File Name : CMCHCLPM
Site Code : 00035552
Start Date : 4/28/2004
Page No : 2



Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	04:45 PM				05:00 PM				04:00 PM				04:30 PM			
Volume	2	0	8	10	0	24	1	25	0	0	0	0	16	45	0	61
Percent	20.0	0.0	80.0		0.0	96.0	4.0		-	-	-		26.2	73.8	0.0	
High Int.	04:45 PM				05:30 PM								04:30 PM			
Volume	0	0	3	3	0	6	1	7	-	-	-	-	5	15	0	20
Peak Factor				0.833				0.893				-				0.762

Counts Unlimited, Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

CITY OF CALIMESA
N/S: CHAPPARAL TRAIL
E/W: COUNTY LINE ROAD
Weather: SUNNY

File Name : CMCHCLPM
Site Code : 00035552
Start Date : 4/28/2004
Page No : 1

Groups Printed- TOTAL VOLUME

	CHAPPARAL TRAIL Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	1	0	0	1	0	5	0	5	0	0	0	0	1	5	0	6	12
04:15 PM	0	0	2	2	0	4	0	4	0	0	0	0	2	4	0	6	12
04:30 PM	0	0	0	0	0	6	0	6	0	0	0	0	5	15	0	20	26
04:45 PM	0	0	3	3	0	6	0	6	0	0	0	0	7	8	0	15	24
Total	1	0	5	6	0	21	0	21	0	0	0	0	15	32	0	47	74
05:00 PM	1	0	0	1	0	5	0	5	0	0	0	0	2	13	0	15	21
05:15 PM	1	0	2	3	0	6	0	6	0	0	0	0	2	9	0	11	20
05:30 PM	0	0	3	3	0	6	1	7	0	0	0	0	4	15	0	19	29
05:45 PM	0	0	2	2	0	7	0	7	0	0	0	0	5	10	0	15	24
Total	2	0	7	9	0	24	1	25	0	0	0	0	13	47	0	60	94
Grand Total	3	0	12	15	0	45	1	46	0	0	0	0	28	79	0	107	168
Apprch %	20.0	0.0	80.0		0.0	97.8	2.2		0.0	0.0	0.0		26.2	73.8	0.0		
Total %	1.8	0.0	7.1	8.9	0.0	26.8	0.6	27.4	0.0	0.0	0.0	0.0	16.7	47.0	0.0	63.7	

	CHAPPARAL TRAIL Southbound				COUNTY LINE ROAD Westbound				Northbound				COUNTY LINE ROAD Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	2	0	8	10	0	23	1	24	0	0	0	0	15	45	0	60	94
Percent	20.0	0.0	80.0		0.0	95.8	4.2		0.0	0.0	0.0		25.0	75.0	0.0		
05:30 Volume	0	0	3	3	0	6	1	7	0	0	0	0	4	15	0	19	29
Peak Factor																	0.810
High Int.	04:45 PM				05:30 PM				3:45:00 PM				05:30 PM				
Volume	0	0	3	3	0	6	1	7	0	0	0	0	4	15	0	19	
Peak Factor				0.833				0.857								0.789	

APPENDIX B

TRAFFIC VOLUME DEVELOPMENT WORKSHEETS

Table B - Development of Year 2006 Background Volumes

	A.M. Peak Hour						P.M. Peak Hour					
	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2006 Total	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2,006 Total
1 5th Street/County Line Road												
NBL	11		56	67	0	67	11		36	47	0	47
NBT	53	2		55	0	55	151	6		157	0	157
NBR	19	1		20	0	20	43	2		45	0	45
SBL	20	1		21	0	21	45	2		47	0	47
SBT	69	3		72	0	72	104	4		108	0	108
SBR	225	9		234	0	234	164	7		171	0	171
EBL	78	3		81	0	81	199	8		207	0	207
EBT	271	11	64	346	9	355	559	22	220	801	31	832
EBR	7		19	26	0	26	18	1	65	84	0	84
WBL	20	1		21	0	21	25	1		26	0	26
WBT	499	20	190	709	26	735	341	14	122	477	17	494
WBR	21	1		22	0	22	48	2		50	0	50
North Leg												
Approach	314	13	0	327	0	327	313	13	0	326	0	326
Departure	152	6	0	158	0	158	398	16	0	414	0	414
Total	466	19	0	485	0	485	711	29	0	740	0	740
South Leg												
Approach	83	3	56	142	0	142	205	8	36	249	0	249
Departure	96	4	19	119	0	119	147	6	65	218	0	218
Total	179	7	75	261	0	261	352	14	101	467	0	467
East Leg												
Approach	540	22	190	752	26	778	414	17	122	553	17	570
Departure	310	13	64	387	9	396	647	26	220	893	31	924
Total	850	35	254	1,139	35	1,174	1,061	43	343	1,447	48	1,494
West Leg												
Approach	356	14	83	453	9	462	776	31	286	1,093	31	1,123
Departure	735	29	246	1,010	26	1,036	516	21	158	695	17	712
Total	1,091	43	329	1,463	35	1,498	1,292	52	444	1,788	48	1,835
Total Approaches												
Approach	1,293	52	329	1,674	35	1,709	1,708	69	444	2,221	48	2,268
Departure	1,293	52	329	1,674	35	1,709	1,708	69	444	2,221	48	2,268
Total	2,586	104	659	3,349	70	3,419	3,416	138	887	4,441	95	4,536

Table B - Development of Year 2006 Background Volumes

	A.M. Peak Hour						P.M. Peak Hour					
	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2006 Total	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2,006 Total
2 Bryant Street/County Line Road												
NBL	12		153	165	0	165	9		98	107	0	107
NBT	21	1	37	59	0	59	22	1	24	47	0	47
NBR	16	1	19	36	0	36	10		12	22	0	22
SBL	8			8	0	8	6			6	0	6
SBT	15	1	13	29	0	29	27	1	43	71	0	71
SBR	19	1		20	0	20	26	1		27	0	27
EBL	17	1		18	0	18	39	2		41	0	41
EBT	149	6	13	168	9	176	261	10	43	314	31	345
EBR	3		52	55	0	55			177	177	0	177
WBL	26	1	6	33	0	33	6		22	28	0	28
WBT	294	12	37	343	26	370	132	5	24	161	17	178
WBR	14	1		15	0	15	7			7	0	7
North Leg												
Approach	42	2	13	57	0	57	59	2	43	104	0	104
Departure	52	3	37	92	0	92	68	3	24	95	0	95
Total	94	5	50	149	0	149	127	5	67	199	0	199
South Leg												
Approach	49	2	209	260	0	260	41	1	134	176	0	176
Departure	44	2	71	117	0	117	33	1	242	276	0	276
Total	93	4	279	376	0	376	74	2	376	452	0	452
East Leg												
Approach	334	14	44	392	26	418	145	5	46	196	17	213
Departure	173	7	31	211	9	220	277	10	55	342	31	373
Total	507	21	75	603	35	638	422	15	101	538	48	586
West Leg												
Approach	169	7	64	240	9	249	300	12	220	532	31	563
Departure	325	13	190	528	26	554	167	6	122	295	17	312
Total	494	20	254	768	35	803	467	18	343	828	48	875
Total Approaches												
Approach	594	25	329	948	35	983	545	20	444	1,009	48	1,056
Departure	594	25	329	948	35	983	545	20	444	1,009	48	1,056
Total	1,188	50	659	1,897	70	1,967	1,090	40	887	2,017	95	2,112

Table B - Development of Year 2006 Background Volumes

	A.M. Peak Hour						P.M. Peak Hour					
	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2006 Total	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2,006 Total
3 Mesa Grande Drive/County Line Road												
NBL	0			0	0	0	0			0	0	0
NBT	0			0	0	0	0			0	0	0
NBR	0			0	0	0	0			0	0	0
SBL	10			10	2	12	12			12	5	17
SBT	0			0	0	0	0			0	0	0
SBR	119	5		124	0	124	69	3		72	0	72
EBL	41	2		43	0	43	143	6		149	0	149
EBT	26	1	19	46	9	54	59	2	12	73	31	104
EBR	0			0	0	0	0			0	0	0
WBL	0			0	0	0	0			0	0	0
WBT	46	2	6	54	26	81	24	1	22	47	17	64
WBR	13	1		14	5	19	7			7	3	10
North Leg												
Approach	129	5	0	134	2	136	81	3	0	84	5	89
Departure	54	3	0	57	5	62	150	6	0	156	3	159
Total	183	8	0	191	6	197	231	9	0	240	8	248
South Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
East Leg												
Approach	59	3	6	68	31	99	31	1	22	54	20	74
Departure	36	1	19	56	10	66	71	2	12	85	36	121
Total	95	4	25	124	41	165	102	3	34	139	56	195
West Leg												
Approach	67	3	19	89	9	97	202	8	12	222	31	253
Departure	165	7	6	178	26	205	93	4	22	119	17	136
Total	232	10	25	267	35	302	295	12	34	341	48	388
Total Approaches												
Approach	255	11	25	291	41	332	314	12	34	360	56	416
Departure	255	11	25	291	41	332	314	12	34	360	56	416
Total	510	22	50	582	82	664	628	24	67	719	112	831

Table B - Development of Year 2006 Background Volumes

	A.M. Peak Hour						P.M. Peak Hour					
	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2006 Total	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2,006 Total
4 New Road/County Line Road												
NBL	0			0	16	16	0			0	10	10
NBT	0			0	0	0	0			0	0	0
NBR	0			0	0	0	0			0	0	0
SBL	0			0	0	0	0			0	0	0
SBT	0			0	0	0	0			0	0	0
SBR	0			0	0	0	0			0	0	0
EBL	0			0	0	0	0			0	0	0
EBT	36	1		37	5	42	71	3	12	86	18	104
EBR	0			0	5	5	0			0	18	18
WBL	0			0	0	0	0			0	0	0
WBT	59	2		61	16	77	31	1	22	54	10	64
WBR	0			0	0	0	0			0	0	0
North Leg												
Approach	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
South Leg												
Approach	0	0	0	0	16	16	0	0	0	0	10	10
Departure	0	0	0	0	5	5	0	0	0	0	18	18
Total	0	0	0	0	21	21	0	0	0	0	28	28
East Leg												
Approach	59	2	0	61	16	77	31	1	22	54	10	64
Departure	36	1	0	37	5	42	71	3	12	86	18	104
Total	95	3	0	98	21	119	102	4	34	140	28	168
West Leg												
Approach	36	1	0	37	10	47	71	3	12	86	36	122
Departure	59	2	0	61	31	92	31	1	22	54	20	74
Total	95	3	0	98	41	139	102	4	34	140	56	196
Total Approaches												
Approach	95	3	0	98	41	139	102	4	34	140	56	196
Departure	95	3	0	98	41	139	102	4	34	140	56	196
Total	190	6	0	196	82	278	204	8	67	279	112	391

Table B - Development of Year 2006 Background Volumes

	A.M. Peak Hour						P.M. Peak Hour					
	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2006 Total	2004 Volume	Growth	Approved Proj.	2006 Back	Project Trips	2,006 Total
5 Chaparral Trail/County Line Road												
NBL	0			0	16	16	0			0	10	10
NBT	0			0	0	0	0			0	0	0
NBR	0			0	0	0	0			0	0	0
SBL	1			1	0	1	2			2	0	2
SBT	0			0	0	0	0			0	0	0
SBR	19	1		20	0	20	8			8	0	8
EBL	4			4	0	4	15	1		16	0	16
EBT	27	1		28	0	28	45	2		47	0	47
EBR	0			0	5	5	0			0	18	18
WBL	0			0	0	0	0			0	0	0
WBT	52	2		54	0	54	23	1		24	0	24
WBR	1			1	0	1	1			1	0	1
North Leg												
Approach	20	1	0	21	0	21	10	0	0	10	0	10
Departure	5	0	0	5	0	5	16	1	0	17	0	17
Total	25	1	0	26	0	26	26	1	0	27	0	27
South Leg												
Approach	0	0	0	0	16	16	0	0	0	0	10	10
Departure	0	0	0	0	5	5	0	0	0	0	18	18
Total	0	0	0	0	21	21	0	0	0	0	28	28
East Leg												
Approach	53	2	0	55	0	55	24	1	0	25	0	25
Departure	28	1	0	29	0	29	47	2	0	49	0	49
Total	81	3	0	84	0	84	71	3	0	74	0	74
West Leg												
Approach	31	1	0	32	5	37	60	3	0	63	18	81
Departure	71	3	0	74	16	90	31	1	0	32	10	42
Total	102	4	0	106	21	127	91	4	0	95	28	123
Total Approaches												
Approach	104	4	0	108	21	129	94	4	0	98	28	126
Departure	104	4	0	108	21	129	94	4	0	98	28	126
Total	208	8	0	216	41	257	188	8	0	196	56	252

APPENDIX C

INTERSECTION LEVELS OF SERVICE WORKSHEETS

EXISTING (2004) CONDITIONS

County Line Road Residential
Year 2004 (Existing)
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #1 5th Street/County Line Road

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.505
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 21.9
Optimal Cycle: 32 Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	11	53	19	20	69	225	78	271	7	20	499	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	53	19	20	69	225	78	271	7	20	499	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	53	19	20	69	225	78	271	7	20	499	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	53	19	20	69	225	78	271	7	20	499	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	53	19	20	69	225	78	271	7	20	499	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.74	0.26	1.00	0.23	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1900	1399	501	1900	446	1454	1900	1900	1900	1900	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.01	0.15	0.15	0.04	0.14	0.00	0.01	0.26	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.01	0.25	0.25	0.07	0.31	0.31	0.08	0.56	0.56	0.04	0.52	0.52
Volume/Cap:	0.50	0.15	0.15	0.15	0.50	0.50	0.50	0.25	0.01	0.25	0.50	0.02
Delay/Veh:	66.9	29.5	29.5	44.3	29.1	29.1	46.7	11.4	9.7	48.1	16.0	11.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.9	29.5	29.5	44.3	29.1	29.1	46.7	11.4	9.7	48.1	16.0	11.6
HCM2kAvg:	1	2	2	1	8	8	3	4	0	1	10	0

****

Traffix 7.6.0715 (c) 2003 Dowling Assoc. Licensed to LSA, RIVERSIDE, CA

County Line Road Residential
Year 2004 (Existing)
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

****

Intersection #2 Bryant Street/County Line Road

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.405
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	12	21	16	8	15	19	17	149	3	26	294	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	21	16	8	15	19	17	149	3	26	294	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	21	16	8	15	19	17	149	3	26	294	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	21	16	8	15	19	17	149	3	26	294	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	12	21	16	8	15	19	17	149	3	26	294	14
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	0.43	0.33	0.19	0.36	0.45	0.10	0.88	0.02	0.08	0.88	0.04
Final Sat.:	165	289	220	130	244	309	79	691	14	64	727	35
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.06	0.06	0.06	0.22	0.22	0.22	0.40	0.40	0.40
Crit Moves:			****	****				****			****	
Delay/Veh:	8.2	8.2	8.2	8.1	8.1	8.1	8.6	8.6	8.6	10.1	10.1	10.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	8.2	8.2	8.1	8.1	8.1	8.6	8.6	8.6	10.1	10.1	10.1
LOS by Move:	A	A	A	A	A	A	A	A	A	B	B	B
ApproachDel:		8.2			8.1			8.6			10.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.2			8.1			8.6			10.1	
LOS by Appr:		A			A			A			B	

****

County Line Road Residential
Year 2004 (Existing)
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #3 Mesa Grande Drive/County Line Road

****

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A[9.1]

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	10	0	119	41	26	0	0	46	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	10	0	119	41	26	0	0	46	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	119	41	26	0	0	46	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	119	41	26	0	0	46	13
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	161	xxxx	53	59	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	835	xxxx	1021	1558	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	818	xxxx	1021	1558	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	0.12	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1002	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

County Line Road Residential
Year 2004 (Existing)
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 New Road/County Line Road

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	36	0	0	59	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	36	0	0	59	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	36	0	0	59	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	36	0	0	59	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

County Line Road Residential
Year 2004 (Existing)
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #5 Chapparal Trail/Highway 79

****

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: A[8.6]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	1	0	19	4	27	0	0	52	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	19	4	27	0	0	52	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1	0	19	4	27	0	0	52	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	19	4	27	0	0	52	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	88	xxxx	53	53	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	918	xxxx	1021	1566	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	917	xxxx	1021	1566	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	0.02	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	1015	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.6			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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County Line Road Residential
Year 2004 (Existing)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

****

Intersection #1 5th Street/County Line Road

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.494
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 24.0
Optimal Cycle: 32 Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	11	151	43	45	104	164	199	559	18	25	341	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	151	43	45	104	164	199	559	18	25	341	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	151	43	45	104	164	199	559	18	25	341	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	151	43	45	104	164	199	559	18	25	341	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	151	43	45	104	164	199	559	18	25	341	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.78	0.22	1.00	0.39	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1900	1479	421	1900	737	1163	1900	1900	1900	1900	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.02	0.14	0.14	0.10	0.29	0.01	0.01	0.18	0.03
Crit Moves:	****				****			****		****		
Green/Cycle:	0.01	0.24	0.24	0.06	0.29	0.29	0.23	0.60	0.60	0.03	0.39	0.39
Volume/Cap:	0.49	0.42	0.42	0.42	0.49	0.49	0.46	0.49	0.02	0.49	0.46	0.06
Delay/Veh:	65.3	32.7	32.7	48.3	30.4	30.4	33.9	11.9	8.2	55.4	22.9	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.3	32.7	32.7	48.3	30.4	30.4	33.9	11.9	8.2	55.4	22.9	18.9
HCM2kAvg:	1	5	5	2	7	7	6	10	0	1	8	1

****

County Line Road Residential
Year 2004 (Existing)
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

****

Intersection #2 Bryant Street/County Line Road

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.366
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.1
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	9	22	10	6	27	26	39	261	0	6	132	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	22	10	6	27	26	39	261	0	6	132	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	22	10	6	27	26	39	261	0	6	132	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	22	10	6	27	26	39	261	0	6	132	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	9	22	10	6	27	26	39	261	0	6	132	7
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.22	0.54	0.24	0.10	0.46	0.44	0.13	0.87	0.00	0.04	0.91	0.05
Final Sat.:	151	368	167	72	325	313	107	713	0	33	720	38
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.06	0.08	0.08	0.08	0.37	0.37	xxxx	0.18	0.18	0.18
Crit Moves:	****				****			****				****
Delay/Veh:	8.1	8.1	8.1	8.0	8.0	8.0	9.7	9.7	0.0	8.4	8.4	8.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.1	8.1	8.1	8.0	8.0	8.0	9.7	9.7	0.0	8.4	8.4	8.4
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	A
ApproachDel:		8.1			8.0			9.7			8.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.1			8.0			9.7			8.4	
LOS by Appr:		A			A			A			A	

****

County Line Road Residential
Year 2004 (Existing)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Mesa Grande Drive/County Line Road

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A[9.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		0 0 1!	0 0		0 1	0 0 0		0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	12	0	69	143	59	0	0	24	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	0	69	143	59	0	0	24	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	12	0	69	143	59	0	0	24	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	0	69	143	59	0	0	24	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	373	xxxx	28	31	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	632	xxxx	1054	1595	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	585	xxxx	1054	1595	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	0.07	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	942	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

County Line Road Residential
Year 2004 (Existing)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #4 New Road/County Line Road

****

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	71	0	0	31	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	71	0	0	31	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	71	0	0	31	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	71	0	0	31	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

County Line Road Residential
Year 2004 (Existing)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #5 Chapparal Trail/Highway 79

****

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: A[8.6]

****

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0	0	0			2	0	8			15	45	0			0	23	1		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	0	0			2	0	8			15	45	0			0	23	1		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	0			2	0	8			15	45	0			0	23	1		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Final Vol.:	0	0	0			2	0	8			15	45	0			0	23	1		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	xxxx	6.2			4.1	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	xxxx	3.3			2.2	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			99	xxxx	24			24	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			905	xxxx	1059			1604	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			899	xxxx	1059			1604	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx			0.00	xxxx	0.01			0.01	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx					7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*					A	*	*	*	*	*				
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		0	xxxxx		xxxx		1023	xxxxx		xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx		0.0	xxxxx				0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx		8.6	xxxxx				7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*		A	*				A	*	*	*	*	*				
ApproachDel:	xxxxxx					8.6					xxxxxx					xxxxxx				
ApproachLOS:	*					A					*					*				

OPENING YEAR (2006) WITHOUT PROJECT CONDITIONS

County Line Road Residential
Year 2006 Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 5th Street/County Line Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.732
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	26.2
Optimal Cycle:	53	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	94	55	20	21	72	234	81	377	35	21	799	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	55	20	21	72	234	81	377	35	21	799	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	55	20	21	72	234	81	377	35	21	799	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	55	20	21	72	234	81	377	35	21	799	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	94	55	20	21	72	234	81	377	35	21	799	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.73	0.27	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1900	1393	507	1900	447	1453	1900	1900	1900	1900	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.04	0.01	0.16	0.16	0.04	0.20	0.02	0.01	0.42	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.22	0.22	0.06	0.22	0.22	0.06	0.60	0.60	0.03	0.57	0.57
Volume/Cap:	0.73	0.18	0.18	0.18	0.73	0.73	0.73	0.33	0.03	0.33	0.73	0.02
Delay/Veh:	65.1	31.5	31.5	45.1	42.8	42.8	68.3	10.2	8.2	50.3	18.2	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.1	31.5	31.5	45.1	42.8	42.8	68.3	10.2	8.2	50.3	18.2	9.2
HCM2kAvg:	4	2	2	1	10	10	4	6	0	1	19	0

County Line Road Residential
Year 2006 Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.662
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.9
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	237	77	45	8	35	20	18	174	79	36	361	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	77	45	8	35	20	18	174	79	36	361	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	77	45	8	35	20	18	174	79	36	361	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	77	45	8	35	20	18	174	79	36	361	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	237	77	45	8	35	20	18	174	79	36	361	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.66	0.21	0.13	0.13	0.55	0.32	0.07	0.64	0.29	0.09	0.87	0.04
Final Sat.:	385	125	73	60	265	151	40	384	174	54	546	23
Capacity Analysis Module:												
Vol/Sat:	0.62	0.62	0.62	0.13	0.13	0.13	0.45	0.45	0.45	0.66	0.66	0.66
Crit Moves:		****			****			****			****	
Delay/Veh:	16.8	16.8	16.8	10.1	10.1	10.1	12.8	12.8	12.8	17.9	17.9	17.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.8	16.8	16.8	10.1	10.1	10.1	12.8	12.8	12.8	17.9	17.9	17.9
LOS by Move:	C	C	C	B	B	B	B	B	B	C	C	C
ApproachDel:		16.8			10.1			12.8			17.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		16.8			10.1			12.8			17.9	
LOS by Appr:		C			B			B			C	

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County Line Road Residential
Year 2006 Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Mesa Grande Drive/County Line Road

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A[9.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	0 0 1!	0 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	124	43	55	0	0	57	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	10	0	124	43	55	0	0	57	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	124	43	55	0	0	57	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	124	43	55	0	0	57	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	205	xxxx	64	71	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	788	xxxx	1006	1542	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	771	xxxx	1006	1542	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	0.12	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	984	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.2		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

County Line Road Residential
Year 2006 Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 New Road/County Line Road

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 0	
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	37	0	0	61	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	37	0	0	61	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	37	0	0	61	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	37	0	0	61	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

County Line Road Residential
Year 2006 Without Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Chapparal Trail/Highway 79

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: A[8.6]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:			Include						Include						Include						Include			
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	1	0	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	0	0	0				1	0	20				4	28	0				0	54	1			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	0	0	0				1	0	20				4	28	0				0	54	1			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	0	0	0				1	0	20				4	28	0				0	54	1			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	0	0	0				1	0	20				4	28	0				0	54	1			
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				6.4	xxxx	6.2				4.1	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx				3.5	xxxx	3.3				2.2	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				91	xxxx	55				55	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx				915	xxxx	1018				1563	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx				913	xxxx	1018				1563	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx				0.00	xxxx	0.02				0.00	xxxx	xxxx				xxxx	xxxx	xxxx			
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*							A	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		0	xxxxx			xxxx		1013	xxxxx			xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx			0.1	xxxxx					0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx			8.6	xxxxx					7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	*	*	*			A	*					A	*	*	*	*	*						
ApproachDel:	xxxxxx						8.6						xxxxxx						xxxxxx					
ApproachLOS:	*						A						*						*					

County Line Road Residential
Year 2006 Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 5th Street/County Line Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.729
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.5
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	1	0	0	1	0		1	0	0	1	0		1	0	1	0	1		1	0	1	0	1	
Volume Module:																								
Base Vol:	64	157		45			47	108		171			207	906		115			26	535		50		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	64	157		45			47	108		171			207	906		115			26	535		50		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Volume:	64	157		45			47	108		171			207	906		115			26	535		50		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	64	157		45			47	108		171			207	906		115			26	535		50		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Final Vol.:	64	157		45			47	108		171			207	906		115			26	535		50		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Lanes:	1.00	0.78		0.22			1.00	0.39		0.61			1.00	1.00		1.00			1.00	1.00		1.00		
Final Sat.:	1900	1477		423			1900	735		1165			1900	1900		1900			1900	1900		1900		
Capacity Analysis Module:																								
Vol/Sat:	0.03	0.11		0.11			0.02	0.15		0.15			0.11	0.48		0.06			0.01	0.28		0.03		
Crit Moves:	****							****						****					****					
Green/Cycle:	0.05	0.20		0.20			0.05	0.20		0.20			0.19	0.65		0.65			0.02	0.48		0.48		
Volume/Cap:	0.73	0.53		0.53			0.53	0.73		0.73			0.58	0.73		0.09			0.73	0.58		0.05		
Delay/Veh:	73.5	37.1		37.1			52.5	44.4		44.4			39.4	13.7		6.4			103.4	19.4		13.7		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	73.5	37.1		37.1			52.5	44.4		44.4			39.4	13.7		6.4			103.4	19.4		13.7		
HCM2kAvg:	3		6		6		2		9		10		7		19		1		2		12		1	

County Line Road Residential
Year 2006 Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.927
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	27.0
Optimal Cycle:	0	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	154	58	28	6	92	27	41	335	261	38	172	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	58	28	6	92	27	41	335	261	38	172	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	58	28	6	92	27	41	335	261	38	172	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	58	28	6	92	27	41	335	261	38	172	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	154	58	28	6	92	27	41	335	261	38	172	7
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.64	0.24	0.12	0.05	0.73	0.22	0.06	0.53	0.41	0.18	0.79	0.03
Final Sat.:	342	129	62	24	376	110	44	362	282	99	446	18
Capacity Analysis Module:												
Vol/Sat:	0.45	0.45	0.45	0.24	0.24	0.24	0.93	0.93	0.93	0.39	0.39	0.39
Crit Moves:		****			****				****			****
Delay/Veh:	14.1	14.1	14.1	11.4	11.4	11.4	39.9	39.9	39.9	12.5	12.5	12.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.1	14.1	14.1	11.4	11.4	11.4	39.9	39.9	39.9	12.5	12.5	12.5
LOS by Move:	B	B	B	B	B	B	E	E	E	B	B	B
ApproachDel:		14.1			11.4			39.9			12.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		14.1			11.4			39.9			12.5	
LOS by Appr:		B			B			E			B	

County Line Road Residential
Year 2006 Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Mesa Grande Drive/County Line Road

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A[9.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	12	0	72	149	79	0	0	57	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	0	72	149	79	0	0	57	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	12	0	72	149	79	0	0	57	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	0	72	149	79	0	0	57	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	438	xxxx	61	64	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	580	xxxx	1010	1551	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	534	xxxx	1010	1551	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	0.07	0.10	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	896	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.4	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

County Line Road Residential
Year 2006 Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 New Road/County Line Road

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	92	0	0	64	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	92	0	0	64	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	0	92	0	0	64	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	92	0	0	64	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

County Line Road Residential
Year 2006 Without Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #5 Chapparal Trail/Highway 79

****

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: A[8.6]

****

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled					
Rights:	Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	1	0	0	0	
Volume Module:																		
Base Vol:	0	0	0				2	0	8				16	47	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	0	0	0				2	0	8				16	47	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	0	0	0				2	0	8				16	47	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0			
Final Vol.:	0	0	0				2	0	8				16	47	0			
Critical Gap Module:																		
Critical Gp:	xxxxx	xxxx	xxxxx				6.4	xxxx	6.2				4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx				3.5	xxxx	3.3				2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:																		
Cnflict Vol:	xxxx	xxxx	xxxxx				104	xxxx	25				25	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx				899	xxxx	1058				1603	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx				893	xxxx	1058				1603	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx				0.00	xxxx	0.01				0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:																		
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*							A	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		0	xxxxx			xxxx		1020	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx			0.0		xxxxx				0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx			8.6		xxxxx				7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*			A		*				A	*	*	*	*	*
ApproachDel:	xxxxxx						8.6						xxxxxx				xxxxxx	
ApproachLOS:	*						A						*				*	

OPENING YEAR (2006) WITH PROJECT CONDITIONS

County Line Road Residential
Year 2006 With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 5th Street/County Line Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.747
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 26.5
Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	94	55	20	21	72	234	81	386	35	21	825	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	55	20	21	72	234	81	386	35	21	825	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	55	20	21	72	234	81	386	35	21	825	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	55	20	21	72	234	81	386	35	21	825	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	94	55	20	21	72	234	81	386	35	21	825	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.73	0.27	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1900	1393	507	1900	447	1453	1900	1900	1900	1900	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.05	0.04	0.04	0.01	0.16	0.16	0.04	0.20	0.02	0.01	0.43	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.22	0.22	0.06	0.22	0.22	0.06	0.61	0.61	0.03	0.58	0.58
Volume/Cap:	0.75	0.18	0.18	0.18	0.75	0.75	0.75	0.34	0.03	0.34	0.75	0.02
Delay/Veh:	67.4	31.9	31.9	45.3	44.1	44.1	70.9	9.9	7.9	50.4	18.4	8.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.4	31.9	31.9	45.3	44.1	44.1	70.9	9.9	7.9	50.4	18.4	8.9
HCM2kAvg:	5	2	2	1	10	10	4	6	0	1	20	0

County Line Road Residential
Year 2006 With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.706
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.0
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	237	77	45	8	35	20	18	182	79	36	387	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	77	45	8	35	20	18	182	79	36	387	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	77	45	8	35	20	18	182	79	36	387	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	77	45	8	35	20	18	182	79	36	387	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	237	77	45	8	35	20	18	182	79	36	387	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.66	0.21	0.13	0.13	0.55	0.32	0.06	0.66	0.28	0.08	0.89	0.03
Final Sat.:	378	123	72	58	256	146	38	385	167	51	548	21
Capacity Analysis Module:												
Vol/Sat:	0.63	0.63	0.63	0.14	0.14	0.14	0.47	0.47	0.47	0.71	0.71	0.71
Crit Moves:		****		****				****			****	
Delay/Veh:	17.4	17.4	17.4	10.2	10.2	10.2	13.2	13.2	13.2	20.0	20.0	20.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.4	17.4	17.4	10.2	10.2	10.2	13.2	13.2	13.2	20.0	20.0	20.0
LOS by Move:	C	C	C	B	B	B	B	B	B	C	C	C
ApproachDel:		17.4			10.2			13.2			20.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		17.4			10.2			13.2			20.0	
LOS by Appr:		C			B			B			C	

County Line Road Residential
Year 2006 With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Mesa Grande Drive/County Line Road

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: A[9.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	12	0	124	43	63	0	0	84	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	0	124	43	63	0	0	84	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	12	0	124	43	63	0	0	84	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	0	124	43	63	0	0	84	19
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	242	xxxx	94	103	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	750	xxxx	969	1502	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	733	xxxx	969	1502	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	0.13	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	942	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.5			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

County Line Road Residential
Year 2006 With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 New Road/County Line Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0	0 0	0	0 0	0 0	0	0 0	0 1	0	0 0	1 0	0
Volume Module:												
Base Vol:	16	0	0	0	0	0	0	42	5	0	77	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	0	0	0	0	0	0	42	5	0	77	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	0	0	0	0	0	0	42	5	0	77	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	16	0	0	0	0	0	0	42	5	0	77	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	122	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	879	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	879	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		9.2			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

County Line Road Residential
Year 2006 With Project
AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #5 Chapparal Trail/Highway 79

****

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: A[9.2]

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	16		0		0		1		0		20		4		28		5		0		54		1	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00
Initial Bse:	16		0		0		1		0		20		4		28		5		0		54		1	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00
PHF Volume:	16		0		0		1		0		20		4		28		5		0		54		1	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	16		0		0		1		0		20		4		28		5		0		54		1	
Critical Gap Module:																								
Critical Gp:	7.1	xxxx	xxxxx				7.1	xxxx			6.2		4.1	xxxx	xxxxx				xxxxx	xxxx	xxxx	xxxxx		
FollowUpTim:	3.5	xxxx	xxxxx				3.5	xxxx			3.3		2.2	xxxx	xxxxx				xxxxx	xxxx	xxxx	xxxxx		
Capacity Module:																								
Cnflict Vol:	103	xxxx	xxxxx				93	xxxx			55		55	xxxx	xxxxx				xxxx	xxxx	xxxx	xxxxx		
Potent Cap.:	882	xxxx	xxxxx				895	xxxx			1018		1563	xxxx	xxxxx				xxxx	xxxx	xxxx	xxxxx		
Move Cap.:	863	xxxx	xxxxx				894	xxxx			1018		1563	xxxx	xxxxx				xxxx	xxxx	xxxx	xxxxx		
Volume/Cap:	0.02	xxxx	xxxx				0.00	xxxx			0.02		0.00	xxxx	xxxx				xxxx	xxxx	xxxx	xxxx		
Level Of Service Module:																								
Queue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Stopped Del:	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	A	*	*	*	*	*							A	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1011	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*												
ApproachDel:		9.2			8.6			xxxxxx			xxxxxx													
ApproachLOS:		A			A			*			*													

County Line Road Residential
Year 2006 With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 5th Street/County Line Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.747
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	25.8
Optimal Cycle:	55	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	T	R	L	T	T	R	L	T	T	R	L	T	T	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0
Volume Module:																
Base Vol:	64	157	45		47	108	171		207	937	115		26	552	50	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	64	157	45		47	108	171		207	937	115		26	552	50	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	64	157	45		47	108	171		207	937	115		26	552	50	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	64	157	45		47	108	171		207	937	115		26	552	50	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	64	157	45		47	108	171		207	937	115		26	552	50	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	0.78	0.22		1.00	0.39	0.61		1.00	1.00	1.00		1.00	1.00	1.00	
Final Sat.:	1900	1477	423		1900	735	1165		1900	1900	1900		1900	1900	1900	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.11	0.11		0.02	0.15	0.15		0.11	0.49	0.06		0.01	0.29	0.03	
Crit Moves:	****					****				****			****			
Green/Cycle:	0.05	0.20	0.20		0.05	0.20	0.20		0.19	0.66	0.66		0.02	0.49	0.49	
Volume/Cap:	0.75	0.54	0.54		0.54	0.75	0.75		0.59	0.75	0.09		0.75	0.59	0.05	
Delay/Veh:	77.0	37.8	37.8		53.6	45.9	45.9		39.9	13.9	6.2		109.3	19.1	13.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	77.0	37.8	37.8		53.6	45.9	45.9		39.9	13.9	6.2		109.3	19.1	13.2	
HCM2kAvg:	4	6	6		2	10	10		7	20	1		2	12	1	

Traffix 7.6.0715 (c) 2003 Dowling Assoc. Licensed to LSA, RIVERSIDE, CA

County Line Road Residential
Year 2006 With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.982
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 33.8
Optimal Cycle: 0 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	154	58	28	6	92	27	41	366	261	38	189	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	58	28	6	92	27	41	366	261	38	189	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	58	28	6	92	27	41	366	261	38	189	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	58	28	6	92	27	41	366	261	38	189	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	154	58	28	6	92	27	41	366	261	38	189	7
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.64	0.24	0.12	0.05	0.73	0.22	0.06	0.55	0.39	0.16	0.81	0.03
Final Sat.:	340	128	62	24	371	109	42	373	266	91	455	17
Capacity Analysis Module:												
Vol/Sat:	0.45	0.45	0.45	0.25	0.25	0.25	0.98	0.98	0.98	0.42	0.42	0.42
Crit Moves:		****		****				****			****	
Delay/Veh:	14.6	14.6	14.6	11.7	11.7	11.7	52.0	52.0	52.0	13.2	13.2	13.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.6	14.6	14.6	11.7	11.7	11.7	52.0	52.0	52.0	13.2	13.2	13.2
LOS by Move:	B	B	B	B	B	B	F	F	F	B	B	B
ApproachDel:		14.6			11.7			52.0			13.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		14.6			11.7			52.0			13.2	
LOS by Appr:		B			B			F			B	

County Line Road Residential
Year 2006 With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #3 Mesa Grande Drive/County Line Road

****

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: A[9.8]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	17	0	72	149	109	0	0	74	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	17	0	72	149	109	0	0	74	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	17	0	72	149	109	0	0	74	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	17	0	72	149	109	0	0	74	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	486	xxxx	79	84	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	544	xxxx	987	1526	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	500	xxxx	987	1526	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	0.07	0.10	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	832	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.8		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

County Line Road Residential
Year 2006 With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #4 New Road/County Line Road

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.6]

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	0	0		0	0	0	0	0		0	0	0	1	0		0	0	1	0	0	
Volume Module:																								
Base Vol:	10		0		0		0		0		0		0		110		18		0		74		0	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	10		0		0		0		0		0		0		110		18		0		74		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	10		0		0		0		0		0		0		110		18		0		74		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	10		0		0		0		0		0		0		110		18		0		74		0	
Critical Gap Module:																								
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	193	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Potent Cap.:	800	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Move Cap.:	800	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx												
Level Of Service Module:																								
Queue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Stopped Del:	9.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*		*		*	*		*		*		*		*		*		*		*		*	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*		*		*	*		*		*		*		*		*		*		*		*	
ApproachDel:		9.6					xxxxxx						xxxxxx						xxxxxx					
ApproachLOS:		A					*						*						*					

County Line Road Residential
Year 2006 With Project
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Chapparal Trail/Highway 79

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[9.3]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	10		0		0		2		0		8		16		47		18		0		24		1	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	10		0		0		2		0		8		16		47		18		0		24		1	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	10		0		0		2		0		8		16		47		18		0		24		1	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	10		0		0		2		0		8		16		47		18		0		24		1	
Critical Gap Module:																								
Critical Gp:	7.1	xxxx		xxxxx			7.1	xxxx			6.2		4.1	xxxx		xxxxx			xxxxx		xxxx		xxxxx	
FollowUpTim:	3.5	xxxx		xxxxx			3.5	xxxx			3.3		2.2	xxxx		xxxxx			xxxxx		xxxx		xxxxx	
Capacity Module:																								
Cnflict Vol:	117	xxxx		xxxxx			113	xxxx			25		25	xxxx		xxxxx			xxxx		xxxx		xxxxx	
Potent Cap.:	865	xxxx		xxxxx			870	xxxx			1058		1603	xxxx		xxxxx			xxxx		xxxx		xxxxx	
Move Cap.:	851	xxxx		xxxxx			863	xxxx			1058		1603	xxxx		xxxxx			xxxx		xxxx		xxxxx	
Volume/Cap:	0.01	xxxx		xxxx			0.00	xxxx			0.01		0.01	xxxx		xxxx			xxxx		xxxx		xxxx	
Level Of Service Module:																								
Queue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Stopped Del:	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	A	*		*	*	*							A	*		*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx		xxxxx			xxxx	1012		xxxxx			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx		0.0			xxxxx			xxxxx	xxxx		xxxxx	xxxxx		xxxxx	xxxx		xxxxx		
Shrd StpDel:	xxxxx	xxxx		xxxxx	xxxxx		8.6			xxxxx			xxxxx	xxxx		xxxxx	xxxxx		xxxxx	xxxx		xxxxx		
Shared LOS:	*	*		*	*		A			*			*	*		*	*		*	*		*		
ApproachDel:		9.3						8.6						xxxxxx						xxxxxx				
ApproachLOS:		A						A						*						*				

OPENING YEAR (2006) WITH PROJECT CONDITIONS WITH IMPROVEMENTS

County Line Road Residential
Year 2006 With Project With Improvements
AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.715
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	16.9
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	237	77	45	8	35	20	18	182	79	36	387	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	77	45	8	35	20	18	182	79	36	387	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	77	45	8	35	20	18	182	79	36	387	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	77	45	8	35	20	18	182	79	36	387	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	237	77	45	8	35	20	18	182	79	36	387	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.66	0.21	0.13	0.13	0.55	0.32	0.09	0.91	1.00	0.08	0.89	0.03
Final Sat.:	379	123	72	60	263	150	48	480	593	50	541	21
Capacity Analysis Module:												
Vol/Sat:	0.63	0.63	0.63	0.13	0.13	0.13	0.38	0.38	0.13	0.72	0.72	0.72
Crit Moves:		****			****			****			****	
Delay/Veh:	17.5	17.5	17.5	10.3	10.3	10.3	12.7	12.7	9.2	20.8	20.8	20.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.5	17.5	17.5	10.3	10.3	10.3	12.7	12.7	9.2	20.8	20.8	20.8
LOS by Move:	C	C	C	B	B	B	B	B	A	C	C	C
ApproachDel:		17.5			10.3			11.7			20.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		17.5			10.3			11.7			20.8	
LOS by Appr:		C			B			B			C	

County Line Road Residential
Year 2006 With Project With Improvements
PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Bryant Street/County Line Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.689
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.9
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	154	58	28	6	92	27	41	366	261	38	189	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	58	28	6	92	27	41	366	261	38	189	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	154	58	28	6	92	27	41	366	261	38	189	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	58	28	6	92	27	41	366	261	38	189	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	154	58	28	6	92	27	41	366	261	38	189	7
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.64	0.24	0.12	0.05	0.73	0.22	0.10	0.90	1.00	0.16	0.81	0.03
Final Sat.:	348	131	63	25	379	111	60	531	674	93	462	17
Capacity Analysis Module:												
Vol/Sat:	0.44	0.44	0.44	0.24	0.24	0.24	0.69	0.69	0.39	0.41	0.41	0.41
Crit Moves:		****			****			****			****	
Delay/Veh:	13.6	13.6	13.6	11.1	11.1	11.1	20.4	20.4	11.1	12.7	12.7	12.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	13.6	13.6	11.1	11.1	11.1	20.4	20.4	11.1	12.7	12.7	12.7
LOS by Move:	B	B	B	B	B	B	C	C	B	B	B	B
ApproachDel:		13.6			11.1			16.8			12.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		13.6			11.1			16.8			12.7	
LOS by Appr:		B			B			C			B	

Appendix F: Cultural Resources Survey

Final
Phase 1 Cultural Resource Survey
Positive Results, Heritage Oaks Specific Plan: APN#407-030-002 and -003, City of Calimesa, Riverside County, California

Prepared for:

Storm-Western Development Corp.
23223 South Normandie
Torrance, CA 90501

Contact: Kent M. Phillips, Executive Vice President

Prepared by:

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May 31, 2005

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SECTION 1:
SUMMARY PUBLIC INFORMATION STATEMENT

At the request of Storm-Western Development Corporation, Michael Brandman Associates (MBA) has conducted a cultural resource survey on approximately 55.21 acres within in the City of Calimesa, Riverside County, California. The subject property consists of a two adjoining parcels (APN #470-030-002 and 470-030-003), which are located along the south edge of County Line Road east of Mesa Grande Drive. This project footprint is considered the full cultural resource study area. Development of a single-family residential community is currently proposed.

The purpose of this report is to delineate the location of the study area, identify all potentially significant cultural and paleontological resources situated within the study area, and, if impacted by the proposed development, propose recommendations for mitigation where necessary. Completion of this investigation fulfills the requirements of the National Environmental Policy Act (NEPA), protocols associated with the California Environmental Quality Act (CEQA), the National Historic Preservation Act (NHPA) as Amended, and Executive Order 11593 requirements.

This report follows the California State Historic Preservation Office (SHPO) recommended ARMR archaeological reporting format and fulfills all protocols associated with CEQA and NEPA-level archaeological studies. Letter consultations with local Native American tribal entities have taken place as a part of this study, but the City of Calimesa may undertake additional consultations to fulfill SB18 (Burton).

This report is organized into sections and appendices, which are summarized as follows:

- Section 2 reviews the goals of this study.
- Section 3 summarizes the environmental and cultural setting.
- Section 4 presents the investigative methods.
- Section 5 reviews background information.
- Section 6 provides cultural resource survey and paleontological records search results.
- Section 7 summarizes the project and provides management recommendations.
- Section 8 presents a reference list.
- Section 9 contains the project certification.
- Appendix A provides recent photographs of the Study Area.
- Appendix B provides personnel qualifications.
- Appendix C provides required cultural resource compliance documents.

Staff archaeologist Marnie Aislin-Kay conducted a records search at the Eastern Information Center (AIC), U.C.-Riverside, in January 2005. Because the project footprint is located on the County border, an additional search was undertaken by staff of the Archaeological Information Center (AIC), San Bernardino County Museum. The paleontological records check took place in February 2005. MBA also purchased a 1953 aerial photograph for the purposes of a review of historic resource structural remnants found in the project footprint.

The Riverside County research indicated that one prehistoric cultural resource is located inside the project footprint. No additional cultural resources are known within a ¼-mile of the project footprint on the Riverside County side of County Line Road. The known site has never been investigated in the field for the occurrence of subsurface cultural deposits. No additional recorded historic and prehistoric resource sites lay inside the Riverside County search radius.

The San Bernardino County research indicated that there are three known cultural resource sites within ½ mile of the project footprint on the San Bernardino County side of County Line Road. Additional map research showed that one set of well heads and a dirt road were shown in the project area by at least 1898.

MBA senior archaeologist Michael Dice and MBA staff archaeologist Marnie Aislin-Kay surveyed the project area on February 16, 2005. During the cultural resources survey, two heavily damaged historic cultural resources were detected in the study area. A previously recorded prehistoric site could not be relocated, and two isolated prehistoric artifacts were observed. Review of a 1953 archival aerial showed much of the project area was grazed with a large dairy(?) complex positioned along the north main of the primary drainage channel.

The isolated prehistoric artifacts do not constitute an archaeological site following SHPO guidelines, but they do indicate that the area was used in the prehistoric past. Additional materials may be exposed during grading. The historic site remnants are too fragmentary and the loss of original historic site elements too great to suggest that these are significant resources under CEQA guidelines. The known archaeological site could not be relocated, possibly because of changes to the landscape on the San Bernardino County side of the project area (ie: construction of County Line Road). The existence of cultural resources within the project footprint, along with the exhaustive map and records review, indicates that there is a high likelihood of impacts to cultural resources during construction. Cultural resource monitoring is recommended during earthmoving phases of site development, because there is a high chance that buried cultural materials will be uncovered during grading.

In addition, it is always possible that cultural resources will be uncovered without a monitor present. In this case, should potentially significant buried cultural resources become uncovered during construction, such resources (excluding isolated artifacts) should be tested for *historical significance* prior to continued impact. In addition, California State Health and Safety Code Section 7050.5 dictates that if human remains are unearthed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to CEQA regulations and Public Resources Code Section 5097.98.

The paleontological review showed that the project footprint rests on three different layered rock units. These are Holocene deposits, fan deposits of middle to later Pleistocene age, and basement cataclastic rock of Mesozoic age. The Pleistocene rock units have high potential for impacts to significant fossil resources during grading, while the remaining rock units have low potential. Monitoring is recommended.

SECTION 2:
INTRODUCTION

Michael Brandman Associates has conducted a cultural resource field survey and cultural records search for a parcel set located in the far northwest corner of Section 17, T.2S R.1W (SBBM) as shown on the U.S.G.S. *Yucaipa, CA*. 7.5' USGS topographic map. Located in the eastern portion of the City of Calimesa, California (Exhibit 1 below), the study area is under City jurisdiction. This report is associated with a plan to construct a new residential community. The project encompasses parcels APN #407-030-002 and #407-030-003 and totals approximately 55.2 acres (Exhibit 2).

The cultural resource fieldwork took place in mid-February 2005, while the cultural records search took place in January and early February, 2005. The study area was surveyed for cultural resources utilizing procedures noted in Section 4.0. The paleontological records search took place in February 2005.

The cultural resource assessment was performed to comply with CEQA and 36CFR800 (Section 106), implementing regulations found in the National Historic Preservation Act (NHPA 2004), the National Register of Historic Places (NRHP 2004), and the National Environmental Policy Act (NEPA). This report closely follows the ARMR reporting format as is currently recommended by the California State Office of Historic Preservation (SHPO).

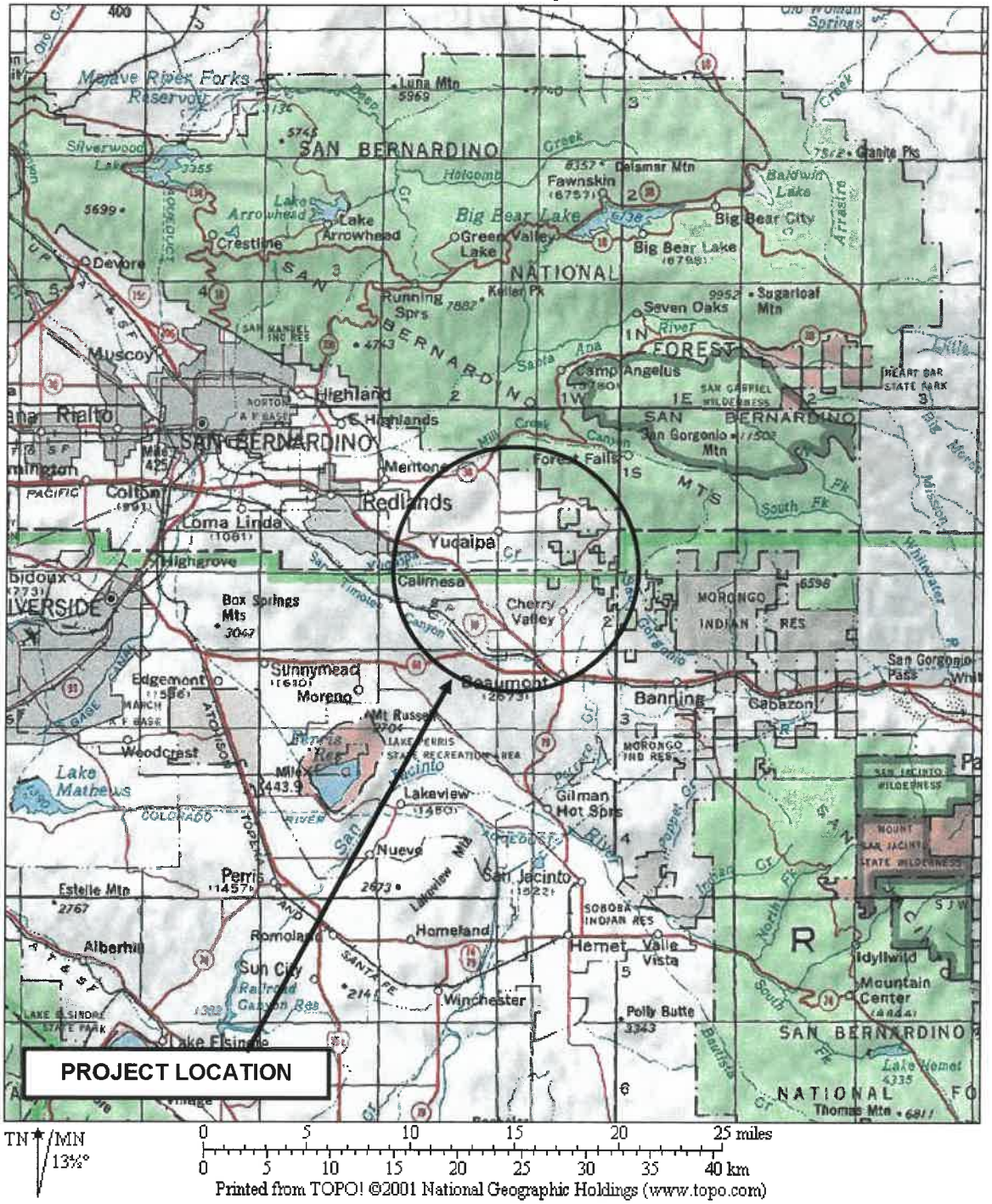
2.1 - RESOURCE ASSESSMENT GOALS

The goal of this project was to identify any significant cultural resources and/or fossil resources situated within the boundaries of the defined study area.

The resource study consisted of five distinct efforts:

1. Cultural resource record search conducted to determine whether any previously recorded cultural materials are present within the boundaries of the study area, or within a quarter mile radius of the study area.
2. A protocol block-transect survey of the entire project area.
3. Examination of archived aerial photographs, topographic maps, and road maps that might reveal historic land use.
4. Review of paleontological records by the San Bernardino County Museum.
5. Development of mitigation recommendations.

26040001: Heritage Oaks

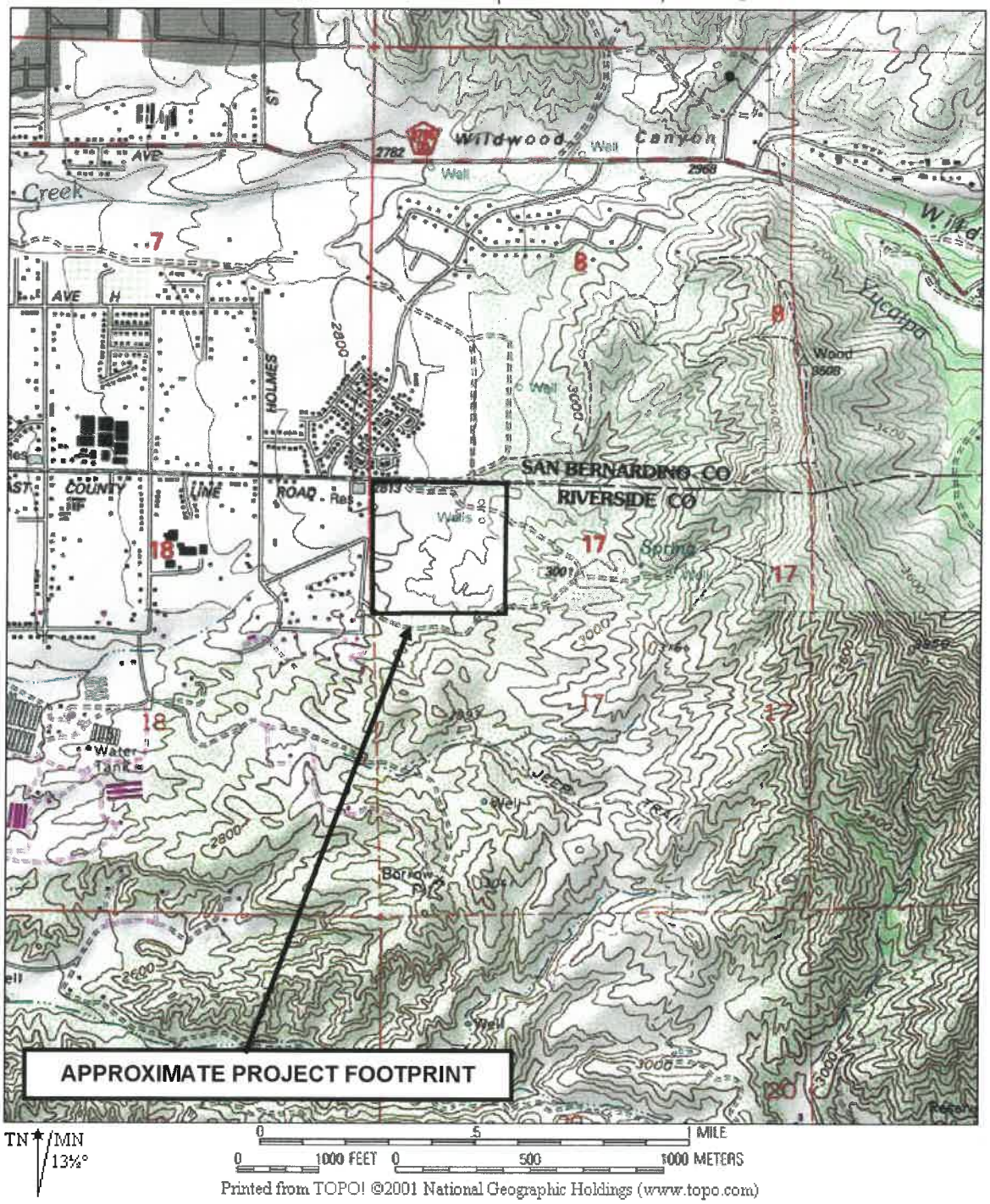


Source: Topo! @National Geographic Holdings.

Michael Brandman Associates

Exhibit 1
Project Location Map

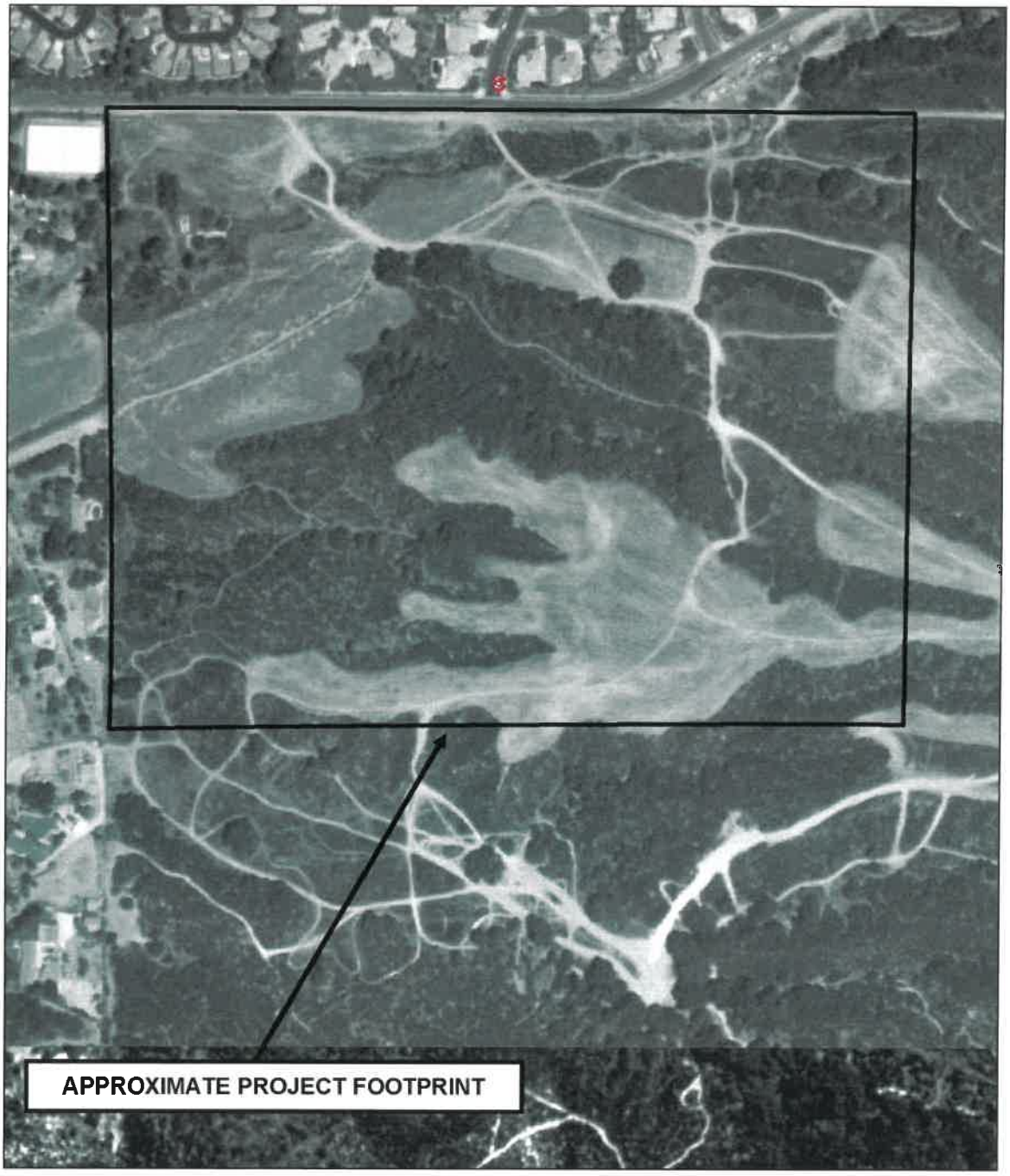
26040001 ES703F: Yucaipa and El Casco, CA. 7.5'



Source: Topo! @National Geographic Holdings.

Michael Brandman Associates

Exhibit 2
Project Footprint Map



Source: www.terraserver.com. Dated June 2, 2002

Michael Brandman Associates

Exhibit 3
2002 Aerial Photograph

SECTION 3:
ENVIRONMENTAL AND CULTURAL SETTING

3.1 - PHYSIOGRAPHY, GEOLOGY, VEGETATION

The project footprint lies just southwest of the base of the foothills of the western San Bernardino Mountains near the westward limit of a mild east-trending downslope of a broad alluvial bajada. Site elevations range from 2780 to 2930 feet above sea level. The footprint is bounded to the north by County Line Road and a medium-density residential development tract. Semi-rural development borders the footprint to the west. Undeveloped open space lies to the south and east, and several prominent arroyos dissect the site from west to east. Upland areas above the arroyos support annual grassland vegetation and exhibit evidence of historic use as dryland farming or grazing. The arroyos and sloped areas support stands of chamise and scrub oak chaparral and several substantial patches of coast live oak woodland. A large ephemeral drainage crosses the entire length of the site, draining from east to west (Holbrook 2004), and another drainage is located in the southwest corner of the property, but our archival aerial photo research (see below) reveals that this drainage was dammed before 1953 along the western margin of the footprint, forming a basin or reservoir. The basin did not exhibit water at the time of survey.

The five soil series located within the footprint include terrace escarpments, Hanford coarse sandy loam, Ramona sandy loam, Gorgonio loamy sand, and Saugus sandy loam. The topsoils were formed during the Holocene (recent) era (Scott 2005). Pleistocene rocks lie beneath: some of the Pleistocene deposits are probably outcropping on the shoulders of the drainages.

Eight plant communities occur in the footprint, including coast live oak woodland, scrub oak chaparral, chamise chaparral, buckwheat scrub, annual grassland, dry wash, a very small patch of southern riparian scrub, and ornamental trees consisting of several non-native eucalyptus, pepper and olive trees. Trails, dirt roads, and other areas that are barren or exhibit only very sparse cover by common ruderal (weedy) species, due to previous land use(s) are classified as "disturbed." Ornamental trees and shrubs are scattered around the northwest corner of the property that was previously occupied by residential structures. One hundred twenty-one (121) individual coast live oak trees, excluding saplings, have been identified and mapped within the footprint (Holbrook 2004).

3.2 - PREHISTORIC AND ETHNOGRAPHIC BACKGROUND

Generally accepted by archeologists is that the peopling of the New World occurred at least 13,000 to 12,000 years before present (Fagan 2000). This period has been tested in its multiplicity through a varied number of material dating techniques. During this time people crossed over the land bridge of

Beringia, which connected Siberia to Alaska. As the onset of a warming period approached and as the temperature change instigated the subsequent melting of Beringia, the oceans rose and the Bering Strait was created. Many coastal sites between the Channel Islands and the mainland have been covered by the Pacific Ocean (Fagan 2000, Jennings 1989).

The general area exhibits archaeological evidence of extensive cultural activity, intermittent occupations and an increasing level of complexity and technological development over time. Although temporal prehistoric traditions vary greatly according to location, a brief overview of prehistoric cultural development for the California desert can be characterized in four stages (Forbes 1989; Jennings 1989; Warren 1968). The documented stages are as follows: Desert Culture (12,000-10,000 B.P.), Western Hunting Culture or Lake Mohave (9000-5000 B.P.), the Pinto (5,000 B.P.-A.D. 2,500), and the Protohistoric (2,500 B.P.- A.D. 1769).

3.2.1 - Desert Culture (12,000-10,000 B.P)

Comparatively, little is known of Paleo-Indian peoples in the California archaeological record, although highly documented archaeological village sites in the Southwest have revealed associated bones of now extinct large mammals, as well as Clovis and Folsom tool traditions (Fagan 2000). However, this period is noted for an increase in drier weather, consequently most of the known California Late Paleo-Indian/early Archaic sites are located near extinct desert valley lakes, rock shelters and on the Channel Islands off the coast (Chartkoff and Chartkoff 1984; Forbes 1989). These consist of occupation sites, butchering stations and burials. This period ends with a marked extinction of large game native to North America and a distinct change in prehistoric tools kit used to prepare of plant foods. Small projectile points, choppers, flat scrapers, drills, and digging sticks are common (Forbes 1989).

3.2.2 - Western Hunting Culture (~9,000-5,000 B.P)

It is thought that as the hunting of large mammals became less available as a food resource due to drier weather conditions, the West and Southwest shows an increased reliance in using small game, such as squirrels and rabbits and wild plants to sustain the small tribal bands (Jennings 1989; Oswalt 1988). This period is also marked by the absence of food grinding stone implements. However, the period ends when stone grinding implements become increasingly more prevalent in the archaeological record (Forbes 1989; Jennings 1989; Oswalt 1988).

3.2.3 - The Pinto Culture (5,000-2,500 YBP)

This period highlights a combination of both Desert culture and Western Hunting Cultures, where an increase in grinding tools appears in the archaeological record. Such tools suggest an increased level

of reliance on wild plants and small animals (Forbes 1989; Jennings 1989; Oswalt 1988). The Pinto spear-point tool tradition is the hallmark of this period. This tradition is characterized by small coarsely chipped points, which tend to be triangular and sometimes are found with parallel sides. These points may have tipped the atlatl. A slight variation in tool type appears towards the end of this period, which is represented by Gypsum points and Elko points. The Gypsum point is typified by its contracting stem, whereas Elko points are corner notched (Jennings 1989).

3.2.4 - Protohistoric Culture (~2,500 YBP- A.D.1769)

In the southwestern Great Basin, this period is characterized as having cooler and wetter conditions than that previously experienced, an environment similar to that of today. Sites appear in previously unoccupied areas of California. The numbers of sites in some regions, especially near ephemeral lakes, seem to have risen dramatically. In the Owens Valley, permanent village sites were utilized, along with the addition of upland dry-environment sites. These changes reflect a phenomenon found throughout the western United States where an increase in population and changes in tool kits and living arrangements resulted in more specialized uses of materials and landscapes. Diagnostic artifacts associated with this period consist of Elko and Gypsum projectile points.

Late Prehistoric Period, Desert Regions (Saratoga Springs Period): 2,500-800 YBP)

This period is environmentally similar to earlier periods. In the southwest Great Basin, this period is characterized by the introduction of the bow and arrow, exploitation of the pine nut and an increase in logistical complexity relative to landscape use. With these changes came a diversification of resource use and a more sedentary settlement pattern in the Owens Valley. The nature and number of sites attributed to this time period changed such that the "winter villages" became larger, numbers of such villages were reduced, and base camps in the upland areas became larger, more diversified and more numerous.

The abandonment of village sites at the end of the Late Prehistoric Period is attributed to a change in climate, and is an event mirrored in other parts of the American Southwest, California and in Mexico. Trade of Coso obsidian in southern California apparently ended during this period.

Late Prehistoric Period, Coastal Regions (~2,500 YBP to A.D.1769)

The late prehistoric period was characterized by the increasing importance of acorn processing, in addition to other hunting and gathering activities. Meighan (1954) identified the period after AD 1400 as the San Luis Rey complex. San Luis Rey I (AD 1400 - 1750) is associated with bedrock mortars and millingstones, cremations, small triangular projectile points with concave bases, and Olivella beads. The addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners, and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6) mark

the San Luis Rey II (AD 1750-1850) period. The San Luis Rey complex most likely represents the forebearers of the Luiseño (Bean and Shipek 1978:550) in inland areas. Work at Cole Canyon and other sites suggests that the origins of this complex, and the ethnographically described lifeway of the native people of the region, is believed to have been well established by at least AD 1000 (Keller and McCarthy 1989:80).

3.2.5 - Indigenous Native American Presence: Cahuilla and Serrano

The Cahuilla

According to several researchers (Kroeber 1925, Bean 1978), the Cahuilla Indians occupied the San Timoteo valley prior to contact with Spanish Mission padres and military personnel. Bean (1972, 1978) forms the primary modern reference for this cultural group. Bean notes that of all the southern California Indians, the Cahuilla existed within the most geographically diverse region, constrained only by water supplies and topography.

Currently, it is thought that a migration of Shoshonean peoples from the Great Basin occurred approximately 1000-600 years ago, with populations moving into much of desert and coastal Southern California. Included among these migrants were the forebearers to the modern Cahuilla. The Cahuilla spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family (a language family that includes the Shoshonean groups of the Great Basin).

The prehistoric Cahuilla were characterized by the occupation of sedentary villages in subsistence territories that permitted them to reach the majority of their resources within a day's walk. Villages were commonly located near reliable sources of water. During October to November, much of the village population moved to temporary camps in the mountains to harvest acorns and hunt game. Inland groups also had fishing and gathering spots on the coast that they visited annually. In comparison with the Gabrieliño and Luiseño, the Cahuilla appear to have had a lower population density and a less rigid social structure. The Cahuilla patterns may have been relatively stable until mission secularization in 1834, due to the policy of the Catholic Mission fathers or padres to maintain imported European traditional style settlement and economic patterns (see Bean and Shipek 1978:588).

The Serrano

According to Bean and Smith (1978), the project area lies near the southern edge of an area utilized by the Serrano. The Spanish decimated all indigenous groups adjacent to the eastern San Bernardino Mountains, especially after a Spanish outpost was built in Redlands in 1819, but some Serrano survived intact for many years in the far eastern San Bernardino mountains due to the ruggedness of

the terrain and the dispersed population. Kroeber (1925) and Bean and Smith (1978) form the primary historical sources for this group.

The Serrano spoke a language that also belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family (a language family that includes the Shoshonean groups of the Great Basin). The total Serrano population at contact was roughly 2,000 persons. Their range is generally thought to have been located in and east of the Cajon Pass area of the San Bernardino Mountains, north of Yucaipa, west of Twenty-Nine Palms and south of Victorville. The range of this group was limited and restricted by reliable water sources.

Serrano populations studied in the early part of the last century were a mere remnant and a shadow of their cultural form prior to contact with the Spanish Missionaries. Nonetheless, the Serrano are viewed as clan and moiety-oriented, or local lineage-oriented group tied to traditional territories or use-areas. Typically, a "village" consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching. Considered hunter-gatherers, Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers and seeds of various kinds. Today, Serrano descendants are found mostly on the Morongo and San Manuel reservations.

3.2.6 - Historic Calimesa and Yucaipa

The historic background of both cities is linked to Redlands and the Redlands-Yucaipa Land Company, which held many acres of former *Rancho San Bernardino* lands for years. The project footprint may have been located a few miles east of the original *Rancho San Bernardino* in the mid-19th Century. The Yucaipa Adobe was constructed in the 1850's and represents the first incursion of American homesteaders in the area. Mormon families soon followed, with a temporary village settled on the central *Rancho San Bernardino* in the late 1850's. Too high in altitude to grow citrus successfully, the eastern Calimesa and Yucaipa areas exhibited numerous water extraction facilities (wells, reservoirs, and small dams) associated with historic Redlands citrus production and domestic use. One historic well is known for the project area. This is plotted on the 1898 Lippincott water paper provided to us for review by Robin Laska of the AIC.

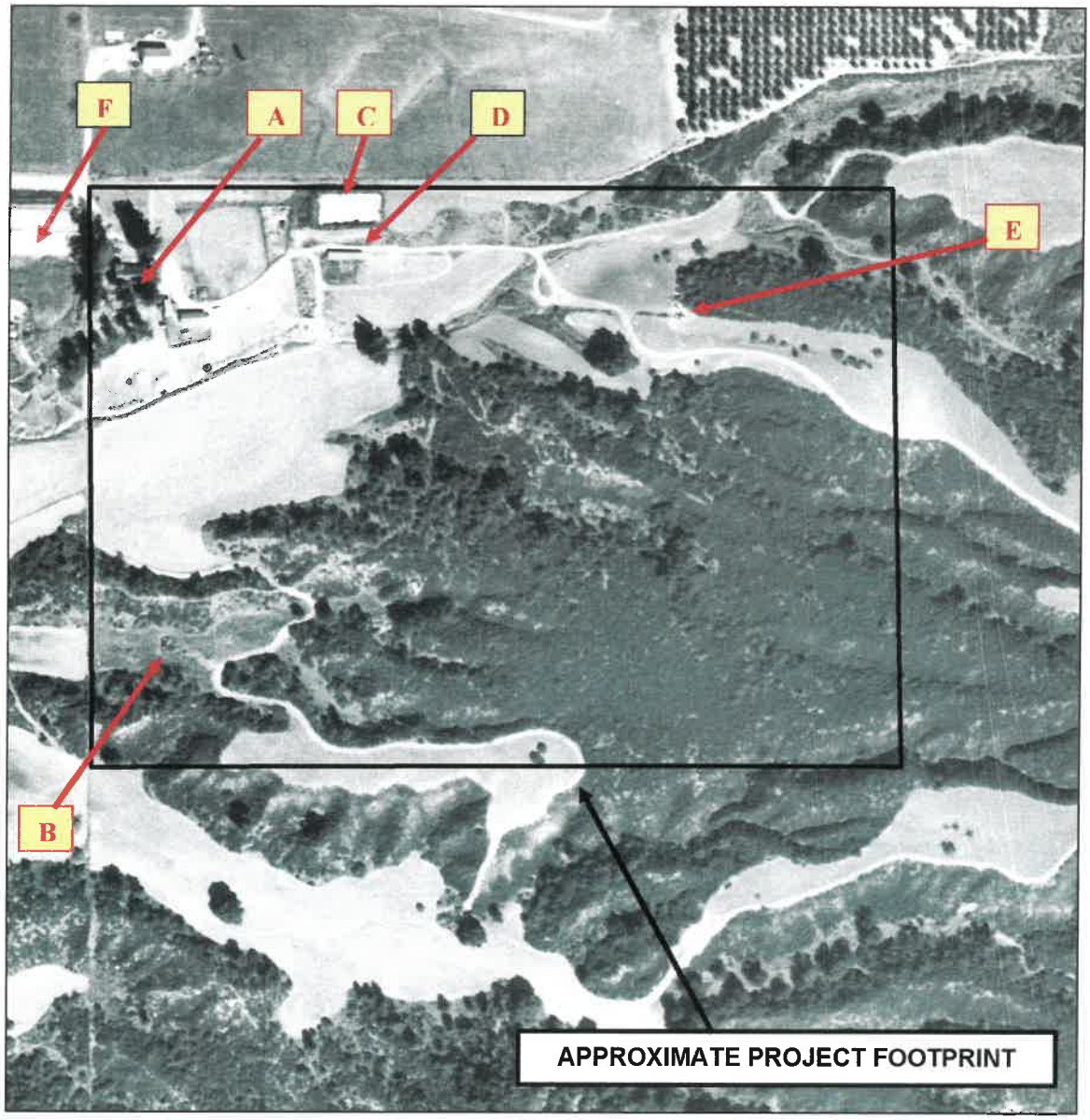
The City of Calimesa was incorporated in December 1990 from County lands lying between Redlands and Banning, and the City of Yucaipa was incorporated in 1989. The name Yucaipa is taken from the Serrano dialect meaning "wet or marshy land", and was the name of an important village (Yukaip'at) located in the area.

3.3 - AERIAL PHOTOGRAPH REVIEW

MBA purchased an aerial photograph of the project area from Rupp Aerial Photography, Inc. of Corona. Exhibit 4 reproduces this photo, which was taken on February 16, 1953. The project area consisted of a large amount of unmodified ground exhibiting natural vegetation interspersed with modified areas of pasturage. The pasture in this image are light tan-colored with adjacent linear dirt roads in pure white. Ranch complex "A" is located in the far upper corner of the project footprint, with a reservoir "B", and an elongated shed-like structure "C" just to the south. A dammed area and water pump complex is found at "D", and water wells are found at "E". Review of this photo compared to that taken during modern times (Exhibit 3) shows reveals differences in land use that can have an effect on the current preservation of existing prehistoric and historic resources.

This photo suggests to us that the old ranch complex may have been associated with animal agriculture such as horse raising. Dairying was unlikely here, because large milk houses typical of dairying were not located on the property. A large municipal water reservoir, "F", is located just west of the former ranch house complex, and is still in existence. Fences and unpaved roads separate the various parcels in this area, and it likely that the pavement on County Line Road stopped several miles to the west. This photo reveals that much of the ground surface was, at least in 1953, in a natural state, but that the drainages and flatter areas had been modified somewhat. Slopes are covered in native, unburned, vegetation.

Of the observed historical resources in this image, only the foundation of the pump complex, "D", well foundations "E" and the foundations of the elongated building "C" still remain. Although small remnants of landscaping in the ranch complex "A" still exist, the fact that so much of the original historic structure complex is now gone indicates that these historic resources are no longer intact. This fact precludes them from being considered a significant cultural resource under CEQA guidelines. Recordation of the noted historic features can take place as part of a construction-related mitigation measure.



Source: Rupp Aerial Photograph, flight AXL-42-86 (2-16-1953)

Michael Brandman Associates

Exhibit 4
1953 Archival Aerial Photograph

SECTION 4:
INVESTIGATIVE METHODS

Procedures utilized to produce the data for this report were relatively straightforward. Protocol guidelines for performing the cultural resource field survey and any site or isolate recordations were previously downloaded from state and federal websites. The California Office of Historic Preservation (SHPO: see OHP 1995) archaeological recordation guidelines and procedures follow National Park Service recordation guidelines (1983, 1985) and fulfill CEQA requirements. MBA authors follow the Archaeological Research Management Report (ARMR) format recommended by SHPO.

4.1 - RECORD SEARCH PROCEDURE

MBA staff archaeologist Marnie Aislin-Kay conducted the records search at the Eastern Information Center (EIC), U.C.-Riverside in January 2005. The records search consisted of examining topographic maps for previous survey or study locations, as well as locations of previously recorded archaeological sites. Photocopies of positive-finding reports (exhibiting any analytical information) and regional overviews were made, and cumulative lists of all negative-finding reports generated. A ¼-mile search radius around the project footprint was used during the analysis. This allowed us to estimate the potential for finds during grading should no on-site site records exist.

Additional research was undertaken by Robin Laska of the AIC, who was asked to review a ½ mile area about the northern margin of the project footprint. The paleontological records search was undertaken by Dr. Eric Scott of the San Bernardino County Museum in February 2005. This consisted of an examination of paleontological records and geological maps that referenced rock outcrops exposed in the project footprint.

4.2 - CULTURAL RESOURCE FIELDWORK AND MITIGATION

The authors undertook a pedestrian survey of the project area on February 16 2005. The entire project footprint was examined for cultural resources and photographed at key points. The California OHP recommends that all potentially significant or important cultural resources (sites or isolates) discovered during a survey be documented utilizing modern State of California Department of Parks and Recreation Archaeological Site Forms (DPR523 series). Phase 2 testing of sites is typically required once the resources are described at the survey level. MBA did not test resources found during the survey because the resources we detected were either 1) isolated artifacts (exempt from testing), or 2) heavily decomposed historic structural remnants that can be documented as part of the

mitigation-monitoring process. The isolated artifacts were recorded on DPR523 isolate forms (see attached).

4.2.1 - State-Level Evaluation Processes

California cultural resource evaluation processes are rather straightforward and have good basis in law. The following narrative has been taken from the California Office of Historic Preservation (OHP) website. A site may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (PRC § 5020.1(j)) or if it meets the criteria for listing on the CR (14 CCR § 4850). CEQA provides somewhat conflicting direction regarding the evaluation and treatment of archeological sites. The most recent amendments to the CEQA guidelines try to resolve this ambiguity by directing that lead agencies should first evaluate a site to determine if it meets the criteria for listing in the CR. If an archeological site is determined to be a historical resource (i.e., listed or determined eligible for listing in the California Register) potential adverse impacts to it must be considered, just as for any other historical resource (PRC § 21084.1 and 21083.2(l)). If the site is not yet considered a historical resource, but meets the definition of a "unique archeological (historical) resource" as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section.

California Code of Regulations, Title 14, Chapter 3 15064.5 is associated with determining the significance of impacts to archeological and historical resources. Here, the term "historical resources" **includes** the following:

1) *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).*
2) *A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.*
3) *Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS 5024.1, Title 14 CCR, Section 4852) including the following:*
    - *A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
    - *B) Is associated with the lives of persons important in our past;*
    - *C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or*

D) Has yielded, or may be likely to yield, information important in prehistory or history.

Typically, archaeological sites exhibiting intact and buried features qualify for the CR under Criterion D because such features will hold information important to the prehistory of California. It is important to note that the fact that a resource is not listed in, or determined to be eligible for listing in the CR, not included in a local register of historical resources (pursuant to § 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in § 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

4.2.2 - Federal-Level Evaluations

Criteria for establishing the significance of a cultural resource following Federal guidelines are similarly straightforward. National Register Bulletin #15 (NPS 2002) serves as the primary NR evaluation reference. The following has been taken from this publication:

Criteria for Evaluation

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A) That are associated with events that have made a significant contribution to the broad patterns of our history; or
B) That are associated with the lives of significant persons in our past; or
C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D) That have yielded or may be likely to yield, information important in history or prehistory.

Criteria Considerations

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, buildings that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NR. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

A) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

B) A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

C) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life; or

D) A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

E) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

F) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

G) A property achieving significance within the past 50 years if it is of exceptional importance.

For a property to qualify for the NR it must meet one of the four National Register Criteria for Evaluation by: 1) being associated with an important historic context or theme and 2) retaining historic integrity necessary to convey its significance.

Information about the property based on physical examination and documentary research is necessary to evaluate a property's eligibility for the NR. Evaluation of a property is most efficiently made when following this sequence:

1) Categorize the property. A property must be classified as a district, site, building, structure, or object for inclusion in the National Register.

2) Determine which prehistoric or historic context(s) the property represents. A property must possess significance in American history, architecture, archeology, engineering, or culture when evaluated within the historic context of a relevant geographic area.

3) Determine whether the property is significant under the National Register Criteria. This is done by identifying the links to important events or persons, design or construction features, or information potential that make the property important.

4) Determine if the property represents a type usually excluded from the National Register. If so, determine if it meets any of the Criteria Considerations.

5) Determine whether the property retains integrity. Evaluate the aspects of location, design, setting, workmanship, materials, feeling, and association that the property must retain to convey its historic significance.

4.2.3 - Thresholds of Significance

If a professional is asked to determine if a site is a "unique archaeological (historic) resource" under CEQA and therefore subject to mitigation prior to development, a threshold of significance should be developed prior to testing/evaluation. This is a procedure recommended to professionals by SHPO. The threshold of significance is simply a point where the qualities of significance are defined during

the analysis and the resource is believed to be a "unique archaeological (historic) resource" under CEQA. An adverse effect to a "unique resource" is regarded as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource will be reduced until it no longer meets the significance criteria. In lay terms, should an analysis show that the development will destroy the unique elements of a site, but leave non-unique elements intact, then the significance of the site will be lost and the loss of the unique elements must be mitigated for.

If a prehistoric site is tested, it is traditionally held that buried features (hearths, burials, middens, etc.) will hold analytical information that will pass the significance threshold and make the site eligible for listing on the CR under Criterion D. For historic archaeological sites, analysis of the condition and integrity of the architecture at the modern ground surface level may cause the site to pass the threshold under Criterion A, B and/or D. For historic buildings, the completeness and integrity of the structural architecture may cause the site to pass the threshold under Criterion A, B and/or C.

SECTION 5:
PREVIOUS RESEARCH AND RECORDS REVIEW RESULTS

The cultural resource record search for Riverside County sites indicated that the study area had not been previously surveyed for cultural resources. The search also indicated that one cultural property was recorded within the footprint of the project. This site, discovered in March 1973 by San Bernardino County Museum staff, was once located a few hundred feet northwest of the old wells that are located in the northeastern quarter of the project footprint. According to EIC files, just one known survey investigation has occurred near the study area (Leonard 1978).

The records review by AIC staff indicated that several cultural resource sites are known for Wildwood Canyon to the north, but no sites directly adjacent to the project area have been recorded. Map reviews showed that a road and a probable well were located on the property by 1898. This probably reflects the efforts of the Redlands-Yucaipa Land Company to sell water from their property to communities to the west. A reservoir is located in the far northeast corner of Section 18 on several of the old AIC maps: this reservoir is still in place and constitutes an unrecorded historic site that is outside the project footprint.

Dr Scott's evaluation of the potential paleontological resources within the project footprint is found in Appendix C. This shows that certain rock units inside the project footprint have high potential for impacts to fossil resources. Three units are located in the project area: Holocene valley alluvium (**Qof**), fan deposits of middle to later Pleistocene age (**Qvya**), and basement cataclastic rock of Mesozoic age (**$M_z$mg**). Only the Pleistocene deposits are sensitive for fossil resources, although none have been found previously in the project footprint. As noted in Section 7.2, a mitigation-monitoring plan is recommended if the Pleistocene deposits are impacted during construction.

SECTION 6:
CULTURAL RESOURCE FIELD SURVEY RESULTS

During the survey, no cultural resources of potential significance were observed. We did detect two isolated artifacts located on a finger ridge in the south-central portion of the project area. Located along a well-defined footprint on the crest of the ridge, it is possible that these artifacts represent a buried site or casual drops on the part of prehistoric travelers. Because the discovery exhibits very minimal qualities, they were not recorded as a site, and isolates need not be tested for significance.

We also detected several sets of historic features, but these have been so heavily impacted by post-abandonment processes that no further mitigative work is recommended during the pre-grading phase of environmental compliance. The historic localities consist of a well shaft and cage surrounded by concrete footings (Exhibit 4: Arrow D, also see Appendix A photographs), two fragmentary remnants of historic structures on the old ranch complex including a building foundation (Exhibit 4: Arrow B, also see Appendix A photographs) and landscaping features (Exhibit 4: Arrow A, also see Appendix A photographs). A third historic locality includes abandoned well heads and concrete slabs (Exhibit 4: Arrow E, also see Appendix A photographs). These should be recorded as isolated historic features if it is determined that they will be disturbed by development.

It is always possible that buried cultural resources will be detected during development. For this reason, cultural resource monitoring is recommended (see Section 7.1 below). The isolated prehistoric artifacts have been recorded on DPR523 isolate forms, and may be avoided during construction. If the artifacts cannot be avoided during construction, they should be collected before grading begins and the area carefully monitored during construction.

SECTION 7:
PROJECT SUMMARY AND RESOURCE ASSESSMENTS

7.1 - CULTURAL RESOURCE MANAGEMENT RECOMMENDATIONS

We have concluded that there are no resources located within the area of direct effect that qualify as *significant* under CEQA cultural resource criteria, or under criterion A, B, C or D of the NEPA-level 36CFR part 63 criteria for listing. Because two isolated prehistoric artifacts and one previously recorded site is known for the project footprint, the area has "high" sensitivity for cultural resources. The following limited archaeological monitoring program is recommended:

- *The archaeological mitigation plan shall include monitoring all excavation activities on the project site. The archaeological survey data suggests all portions of the project footprint may possibly exhibit significant buried cultural resources. The project footprint shall be monitored full-time (40 hours per 40 hours of grading time) until the monitoring effort shows that the cultural resource sensitivity of the project footprint is reduced to "low"*
- *If the archaeologist determines that there are no prehistoric cultural resources in the upper ten feet of virgin soil, cultural resource monitoring can be discontinued.*
- *All historic isolated features detected during the Phase 1 survey report for the project (Dice and Aislin-Kay 2005) shall be recorded on DPR523 isolate forms as part of the monitoring effort. The recordation includes two features associated with a former ranch complex, a set of isolated well features in a drainage bottom, and isolated well heads in the central-north portion of the project footprint. This work should be undertaken even if the historic resources are not directly impacted by construction.*
- *If the archaeological monitor discovers buried cultural deposits during the monitoring effort, earthmoving shall be diverted temporarily around the deposits until the deposits have been evaluated, recorded, excavated and/or recovered, as necessary. A Lead Agency-approved Phase 2/Phase 3 data recovery plan should be developed prior to any Phase 2/Phase 3 fieldwork. Earthmoving shall be allowed to proceed through the area after the archaeologist determines the artifacts are recovered and/or site mitigated to the extent necessary.*
- *The Phase 2/Phase 3 discovery plan must include recovery and subsequent analysis of any archaeological or historical remains and associated data uncovered by brushing, grubbing or excavation. The plan must also provide procedures for the curation of any detected cultural specimens. Any recovered cultural resources shall be identified, sites recorded, mapped and artifacts catalogued as required by standard professional archaeological practices. Examination by an archaeological specialist shall be included where necessary, dependent upon the artifacts, features, or sites that are encountered. Specialists will identify, date and/or determine significance potential.*
- *If and only if cultural resource materials are detected during monitoring, a final report of findings will be prepared by the Project Archaeologist for submission to the Proponent, the Lead Agency, and the Eastern Information Center, U.C.-Riverside. The report will describe the history of the project area, summarize field and laboratory methods used, if applicable, and include any testing or special analysis information conducted to support the resultant findings.*
- *In the event of an accidental discovery or recognition of any human remains, Public Resource Code 5097.98 must be followed. In this instance, once project-related earthmoving begins and*

in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Riverside County Coroner is contacted to determine if the remains are [either historic or] prehistoric and that no investigation of the cause of death is required. If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the "most likely descendant" from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the property in a location not subject to further subsurface disturbance:

- *The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.*
- *The descendant identified fails to make a recommendation; or*
- *The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner*

7.1.1 - Native American Commentary

We understand that concern from a previous archaeological study and a previous Tract proposal with the City of Calimesa has surfaced. In a letter dated June 17 2002 to the City regarding the project footprint, formerly known as Tract 29964, Dr. Clifford Trafzer has indicated that the project area:

> *"...contained a large, old grove of Coastal Live Oaks...[and] it is a cultural landscape, and it likely contains cultural resources."* (Trafzer 2002: see Appendix C)

It must be noted that Dr. Trafzer is a Professor of History at the University of California-Riverside and was commissioner with the NAHC in 2002. Dr. Trafzer further indicated that he had notified the NAHC and other tribal entities about the sensitive nature of this project footprint, and that Cahuilla elder Alvino Siva had addressed the City Council with regard to the older Tract proposal associated with the project parcels. Thus, we note that the project footprint may exhibit a cultural resource that is not listed with the California Historic Resource Inventory System (CHRIS).

A recently adopted bill, SB18 (Burton) requires that governments in California undertake consultations with Native American tribal entities under certain conditions. Archaeologists are not mandated to perform these consultations for governments, but we have attempted to gather this type of information as part of a scoped-for data collection process agreement with the Proponent. In February 2005, MBA sent a request to the NAHC for the purposes of obtaining information related to known Native American sacred sites in the area. In anticipation of the NAHC letter, MBA sent consultation letters to 32 tribal entities listed by the NAHC for this section of Riverside County on February 23. Return responses to our inquiries will be saved in our files and, if necessary, can be included in future versions of this document.

7.2 - PALEONTOLOGICAL RESOURCE MANAGEMENT RECOMMENDATIONS

A report from Dr. Scott of the San Bernardino County Museum's Division of Geological Sciences, details aspects of the paleontology in the project vicinity. This report has been attached to this document (see Appendix C). In sum, geologic mapping indicates that the project area is situated upon exposures of Pleistocene fan deposits, overlain by a thin veneer of Holocene sediments. The Pleistocene deposits have high potential to contain paleontologic resources. A program to mitigate for adverse impacts to fossils is recommended.

Potentially significant non-renewable Pleistocene fossiliferous resources may be impacted if the fan deposits are encountered during construction, at shallow depth (more than 1 foot below the modern ground surface). Monitoring for such deposits should take place during all earthmoving activities within the project footprint. The following mitigation measures are recommended (paraphrased herein. The full text can be found in Scott (2005, or Appendix C):

- *Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Based upon the results of this review (Scott 2005), areas of concern include all undisturbed older Pleistocene alluvium present within the project footprint. Pleistocene sediments may be found below the Holocene alluvium, at a depth of one (1) foot below the original ground surface. Paleontologic monitors should be equipped to salvage fossils, as they are unearthed, to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced at the discretion of the paleontologist if fossils are not recovered, the Pleistocene fan deposits are not encountered, or if monitoring reduces the potential for fossil resources to "low" sensitivity.*
- *Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.*
- *Identification and curation of specimens into a professional, fully accredited museum repository with permanent retrievable storage (e.g., SBCM). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources would not be considered complete*

until such curation into an established museum repository had been fully completed and documented.

- *Preparation of a report of findings with an appended itemized inventory of specimens. The report and the inventory, when submitted to the appropriate lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontologic resources.*

SECTION 8:
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2000 *Ancient North America: The Archaeology Of A Continent.* Thames and Hudson, Inc. New York.

Holbrook, S.

2004 *Draft Biological Resources Report, Heritage Oaks Equestrian Community, City of Calimesa, California.* On file, Michael Brandman Associates.

Jennings, J.D.

1989 *Prehistory of North America..* Mountain View, Mayfield Publishing Co.

Keller, J.K. and D.F. McCarthy

1989 Data Recovery at the Cole Canyon Site (CA-RIV-1139), Riverside, California. *Pacific Coast Archaeological Society Quarterly*, Vol. 25, No. 1.

Kroeber, A.L.

1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin 78.* Smithsonian Institution, Washington, D.C.

Meighan, C.W.

1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10:215-227.

National Park Service (NPS)

1983 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Washington, D.C.

1985 Guidelines for Local Surveys: A Basis for Preservation Planning. *National Register Bulletin 24.* Washington, D.C.

National Register of Historic Places (NRHP)

2004 *Listing a Property: What is the Process?* Website: Downloaded May 26, 2004. http://www.cr.nps.gov/nr/listing.htm.

(OHP) California Office of Historic Preservation

1995 *Instructions for Recording Historical Resources.* Office of Historic Preservation, Sacramento.

Oswalt, W.H.
1988 The Cahuilla: Gatherers of the Desert. *This Land Was Theirs, A Study of North American Indians,* Mayfield Publishing Co., Mountain View.

Scott, E.
2005 *Paleontology Literature and Records Review, Heritage Oaks Specific Plan, Yucaipa Region, Riverside County, California.* On file, Michael Brandman Associates, Inc.

Warren, C.N.
1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In: *Archaic Prehistory in the Western United States*, C. Irwin-Williams, editor. Eastern New Mexico University Contributions in Archaeology, Vol. 1, No. 3, pp. 1-4. Portales.

SECTION 9:
CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: _____ Signed: _____

Michael Dice, M.A.
Michael Brandman Associates
Irvine, CA

Appendix A: Photographs of the Study Area

Typical view of the landscape on ridgetops near the east margin of the project footprint.

Photo of isolated primary stone flake detected during the survey.

View of isolated broken mano detected during the survey.

View of the location of an isolated historic well feature.

View of the location of an isolated historic structure foundation remnant near County Line Road.

View of isolated historic landscaping feature near the northwest corner of the project footprint.

View of large oak tree near the main drainage in the northwest portion of the study area.

View toward the northwest corner from the alluvium-filled drainage.

Appendix B: Personnel Qualifications

MICHAEL H. DICE, M.A.
PROJECT SCIENTIST/SENIOR ARCHAEOLOGIST

EDUCATION

M.A.., Anthropology - Arizona State University, Tempe, Arizona
B.A., Anthropology - Washington State University, Pullman, Washington
Anthropology Track, University of Washington, Seattle, Washington

Professional Affiliations
Member, California Historical Society
Member, National Trust for Historic Preservation

REGISTERED PROFESSIONAL ARCHAEOLOGIST (RPA 2000)

Professional History
Michael Brandman Associates, Tustin, California - Senior Archaeologist
L&L Environmental, Inc. Corona, California - Senior Archaeologist
National Park Service (Pipe Spring National Monument) - Archaeologist

NATIONAL PARK SERVICE (MESA VERDE NATIONAL PARK) - ARCHAEOLOGIST

CRMC, Inc., Farmington, New Mexico - Archaeological Project Manager
LaPlata Archaeological Consultants, Dolores, Colorado - Archaeologist
CASA, Inc. Cortez, Colorado - Archaeologist, Human Skeletal Analyst

Mr. Dice is a Certified Archaeologist with more than 16 years of experience performing records searches, archaeological surveys, archaeological site testing (Phase 2) and data collection (Phase 3) projects on private and public lands in the Southwestern United States and Southern California. During his career, he has authored or co-authored more than 50 CEQA and/or NEPA level documents including several manuscripts for the National Park Service. Mr. Dice is a member of the California Historical Society, a Registered Professional Archaeologist (RPA), and is a member of the National Trust For Historic Preservation.

Professional Experiences
Project Scientist/Archaeologist for CEQA-level Phase 1, Phase 2 and Phase 3 archaeological mitigation for the Temecula Marketplace Project in the City of Temecula, California. Performed the field survey, recorded a large historic ranch complex remnant, developed testing procedures for the historic and prehistoric components of the site, then gathered a crew and performed the Phase 2 test in the field. Responsible for developing the Phase 3 data collection plan.

Project Scientist/Archaeologist for Section 106 level review of archaeological testing at Pipe Spring National Monument, Fredonia, Arizona. Produced complete report synthesizing a series of excavations (1996-1998) on an historic Mormon Fort within the Monument. Also wrote a draft plan for any future archaeological mitigation.

Project Archaeologist/Database Manager for the emergency Chapin-5 Fire Rehabilitation Project, Mesa Verde National Park, Colorado (1996-1999). Began as field crew chief (GS-7) and finished with the Park as a GS-9 Database manager. Created an ACCESS 6.0 database for the recordation or re-recordation of more than 500 archaeological sites within the rehabilitation area.

Project Scientist/Archaeologist for CEQA-level Phase 1 and Phase 4 archaeological mitigation for the "The Club at Big Bear Lake" Project in the City of Big Bear Lake, California. Performed the field survey, recorded a large historic tourist complex remnant, wrote mitigation-monitoring recommendations for the City, then supervised the monitoring, analyzed the historic artifacts and wrote the final report. Performed more than 40 CEQA-level Phase 1 archaeological surveys in Southern California, which included evaluating more than 30 historic and prehistoric archaeological sites per California SHPO protocol. The reports fulfill ARMR reporting guidelines, while the County of Riverside reports fulfilled both ARMR and County of Riverside protocols.

MARNIE AISLIN-KAY B.A..
STAFF ARCHAEOLOGIST

EDUCATION

Bachelor of Arts, Anthropology — Fall 2002
California State University at Long Beach

ORGANIZATIONS

- San Diego Museum of Man
- San Diego Archaeological Society
- Society for California Archaeology

PROFESSIONAL EXPERIENCE

- March 2003-present: Michael Brandman Associates (MBA) San Bernardino office-Staff Archaeologist. Responsibilities include extensive knowledge in regards to cellular telecommunications site evaluations and document writing. Phase I report writing, DPR writing, cultural resource record searches at the SCIC, EIC, SIC, and the AIC, which involves analysis and write-up of record search results for NEPA level letter documents. In addition, pedestrian surveys of both prehistoric and historic properties. Excavation and significance testing including stratigraphic and level data recovery, screening, note keeping, artifact collection and sorting, and unit profile drawing, site recordation, use of GPS and topographic maps, communication with numerous Southern Californian tribes, private residences and businesses, project area photographic documentation and construction monitoring.
- May-August 2003: Chambers Group, Irvine. Otay River Toll Road Construction Project. Responsibilities included educating all project participants and their field representatives, about cultural resources both historic and prehistoric. This included both project procedures for dealing with unanticipated discoveries and the known cultural sites in accordance with the law.
- February 2003-March 2003: SAIC, Santa Barbara office. Archaeological Field Assistant for a Phase I field survey. Responsibilities involved 20 meter transects, use of GPS and topographic maps, photography and site recordation in the Quakenbush section of Twenty Nine Palms U.S. Military Marine Base.
- November 2002-February 2003: Independent contractor to MBA. Responsibilities involved construction monitoring and numerous Phase I field surveys to locate, draw, photograph, and assess historic and prehistoric features for proposed future development projects, followed by a write up of results.
- July 2002 –September 2002: EDAW, San Diego office-Archeological Field Assistant. Hellman Ranch development in Seal Beach, CA., for CA-ORA-260, CA-ORA-261, CA-ORA-262, CA-ORA-263/852, CA-ORA-264, and CA-ORA-1472. Responsibilities included archaeological monitoring of construction grading, artifact collection, and numerous burial excavations for removal and repatriation, while working along side several families of the Tongva/Gabrielino tribe.
- June 2002- July 2002: EDAW San Diego office-Archeological Field Assistant. Responsibilities included data recovery excavation and significance testing, screening, note keeping, artifact collection and sorting, and unit profile drawing at Camp Pendleton Marine Base.
- June 2002: L & L Environmental-Archeological Field Assistant. The scope of work included data recovery for prehistoric sites CA-RIV-6485 and 6486, located in South Corona, Riverside. Responsibilities included screening, note keeping, and artifact collection.
- March 2002: Earth Tech Environmental Services-Archaeological Field Assistant. The scope of work included Phase I data recovery and testing of numerous prehistoric sites at Edwards Air Force Base, CA. Responsibilities included excavation of units and test pits, screening, note keeping, artifact collection, and unit profile drawing.
- February 2002-March 2002: L&L Environmental-Archaeological Field Assistant. Significance testing and data recovery at CA-RIV-3410/H located in Temecula, CA. Responsibilities included stratigraphic excavation, screening, note keeping, artifact collection, and unit profile drawing. As well as working along side Pechanga Reservation Cultural Resource Consultants.
- July 2001-December 2001: L&L Environmental–Office Assistant. Reading of biological report results for use in preparation of permits for USFWS, CAFG, Army Corp of Engineers, and CA Water Regulatory Board.

- February 2001- July 2001: L&L Environmental-Cultural Resource Monitor and Paleontological Field assistant, Field and survey Assistant. Responsibilities included work on over 25 prehistoric and historic sites within Riverside and San Bernardino Counties. Specifically, Corona, Canyon Heights/Quail Valley, Murrieta, Hemet, Temecula and Big Bear, CA.
- November 2000 – February 2001: Chambers Group, Inc.-Cultural Resources Field Monitoring Coordinator, Level 3 Long Haul Fiber Optics Project, California Loop Segment WS06: San Luis Obispo to Burbank. Responsibilities include coordination of field monitors, scheduling, and logistics.
- September 2000: Chambers Group, Inc.–Cultural Resources Field Assistant. Located, field survey and a summary write-up of a proposed Cellular Telecommunications Facility site, Ventura County, CA.
- December 1999 – November 2000: Chambers Group, Inc. – Cultural Resources Field Monitor, Field Assistant, and report contributor of Salvage Excavation of a burial feature at CA-SBA-1213, Level 3 Long Haul Fiber Optic Project, California Loop Segments WS04, WS05, WS06: Sacramento to San Bernardino, San Jose to Burbank. Responsibilities included performing long-term daily monitoring of heavy equipment and construction crews in a variety of rigorous environments, note keeping and report writing, as well as archaeological site testing using a variety of excavation techniques, screening, note keeping, and artifact collection.
- June 1999 – December 1999: Chambers Group, Inc.- Archaeological Field Assistant. Pacific Highlands Ranch Project, Del Mar, CA. Testing and Data Recovery at CA-SDI-6912B, CA-SDI-6912E, CA-SDI-13,096, CA-SDI-14,003, CA-SDI-6697/H, CA-SDI-14,001H, CA-SDI-7202, CA-SDI-7204, CA-SDI-13,095. Responsibilities included archaeological site investigation using a variety of excavation techniques, screening, note keeping, and artifact collection.
- January 1999 - June 1999: San Diego City College – 18 weeks- Archaeology field class at CA-SDI-5220/H, Penasquitos Canyon, San Diego, CA.

ADDITIONAL EXPERIENCE

- Ethno-archaeology workshops in the Pai Pai village of Santa Catarina, Baja California. Instructed by tribal elders Josephina Ochurte and Margarita Castro, with insight from other tribal members. Workshops included experience in pottery making, tool assemblages, linguistics, ethno-botany, local history, and enlightenment into cultural practices and protocols.

Appendix C: Resource Compliance Documents

STATE OF CALIFORNIA Arnold Schwarzenegger Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

March 9, 2005

Michael Dice
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Sent by Fax: 714-508-4173
Number of Pages: 4

Re: Proposed Strom-Western 44-Acre Development Project, Calimesa, Riverside County

Dear Mr. Dice:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-6251.

Sincerely,

for: Carol Gaubatz
Program Analyst

Heritage Oaks

NATIVE AMERICAN CONTACTS
Riverside County
March 11, 2004

32

35

35 letters sent

Ajolla Band of Mission Indians
Wendy Schlater, Chairperson
22000 Highway 76 Luiseno
Pauma Valley , CA 92061
(760) 742-3771/72
(760) 742-1701 Fax

Pala Band of Mission Indians
Robert Smith, Chairperson
P.O. Box 50 Luiseno
Pala , CA 92059 Cupeno
(760) 742-3784
(760) 742-1411 Fax

Cabazon Band of Mission Indians
John A. James, Chairperson
84-245 Indio Springs Parkway Cahuilla
Indio , CA 92203-3499
(760) 342-2593
(760) 347-7880 Fax

Pauma & Yuima
Christobal C. Devers, Chairperson
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
(760) 742-1289
(760) 742-3422 Fax

Cahuilla Band of Indians
Eugenia Nogales, Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
(909) 763-5549
(909) 763-2808 Fax

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula , CA 92593
(909) 676-2768
(909) 695-1778 Fax

Morongo Band of Mission Indians
Maurice Lyons, Chairperson
11581 Potrero Rd. Cahuilla
Banning , CA 92220
(909) 849-4697/98
(909) 849-4425 Fax

Ramona Band of Mission Indians
Joseph Hamilton, Representitive
P.O. Box 391670 Cahuilla
Anza , CA 92539
(909) 763-4105
(909) 763-4325 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, tion 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed Cerry Valley Egg Ranch Specific Plan, County of Riverside.

NATIVE AMERICAN CONTACTS
Riverside County
March 11, 2004

...con Band of Mission Indians
Culture Committee
P.O. Box 648 Luiseno
Valley Center , CA 92082
(760) 749-1051
(760) 749-8901 Fax

Twenty-Nine Palms Band of Mission Indians
Dean Mike, Chairperson
46-200 Harrison Place Luiseno
Coachilla , CA 92236 Chemehuevi
(760) 775-5566
(760) 775-4639 Fax

San Manuel Band of Mission Indians
Deron Marquez, Chairperson
PO Box 266 Serrano
Patton , CA 92369
dmarquez@sanmanuel-nsn.gov
(909) 864-8933 EXT-3070
(909) 864-3370 Fax

Samuel H. Dunlap
P.O. Box 1391 Gabrielino
Temecula , CA 92593 Cahuilla
Luiseno
(909) 262-9351 (Cell)
(909) 693-9196 FAX

Soboba Band of Mission Indians
Robert J. Salgado, Sr., Chairperson
P.O. Box 487 Luiseno
San Jacinto , CA 92581
(909) 654-2765
FAX (909) 654-4198

Alvino Siva
2034 W. Westward Cahuilla
Banning 92220
, CA
(909) 849-3450

Torres-Martinez Desert Cahuilla Indians
Ray Torres Sr., Chairperson
PO Box 1160 Cahuilla
Thermal , CA 92274
raymondt@torresmartinez.org
(760) 397-0300
(760) 397-8146 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandeño
Newhall , CA 91322 Tataviam
tsen2u2@msn.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-2103 Home

This list is current only as of the date of this document.

...ibution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, ...ion 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed Cerry Valley Egg Ranch Specific Plan, County of Riverside.

NATIVE AMERICAN CONTACTS
Riverside County
March 11, 2004

Torres-Martinez Desert Cahuilla Indians
Ernest Morreo
PO Box 1160 Cahuilla
Thermal , CA 92274
(760) 397-0300
(760) 397-8146 Fax

San Luis Rey Band of Mission Indians
Russell Romo, Captain
2302 Carriage Circle Luiseno
Oceanside , CA 92056 Cupeno
(760) 724-8505
(760) 757-6749 - Fax

Anthony J. Andreas, Jr.
3022 W. Nicolet Street Cahuilla
Banning , CA 92220
(909) 849-3844

Augustine Band of Mission Indians
Maryann Martin, Chairperson
P.O. Box 846 Cahuilla
Coachella , CA 92236
(760) 398-4722

Santa Rosa Band of Mission Indians
Christina Arzate, Spokesperson
P.O. Box 390611 Cahuilla
Anza , CA 92539
(909) 763-5140
(909) 763-9781 Fax

Augustine Band of Mission Indians
Karin Kupcha, Tribal Administrator
P.O. Box 1291 Cahuilla
Yucca Valley , CA 92286
(760) 365-1373
(760) 365-2664 Fax

San Luis Rey Band of Mission Indians
Henry Contreras, Cultural Resources Representative
1763 Chapulin Lane Luiseno
Fallbrook , CA 92028 Cupeno
(760) 728-6722 - Home
760) 207-3618 - Cell

Morongo Band of Mission Indians
Britt W. Wilson, Cultural Resource Coordinator
245 N. Murray Street, Suite C Cahuilla
Banning , CA 92220
Bwilson@morongoplanning.com
(909) 849-8807
(909) 922-8146 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed Cherry Valley Egg Ranch Specific Plan, County of Riverside.

NATIVE AMERICAN CONTACTS
Riverside County
March 11, 2004

Torres-Martinez Desert Cahuilla Indians
Laura Hopkins, Tribal Administrator
P.O. Box 1160 Cahuilla
Thermal , CA 92274
760) 397-0300
(760) 397-8146 Fax

San Manuel Band of Mission Indians
Bernadette Brierty, Cultural Resources Coordinator
PO Box 266 Serrano
Patton , CA 92369
bbrierty@sanmanuel-nsn.gov
(909) 864-8933 EXT-2203
(909) 864-3370 Fax

Morongo Band of Mission Indians
Allen J. Parker, Tribal Administrator
245 N. Murray St., Suite C Cahuilla
Banning , CA 92220
(909) 849-8807
(808) 849-8146 FAX

San Manuel Band of Mission Indians
Ali Kashani, Environmental Coordinator
PO Box 266 Serrano
Patton , CA 92369
akashani@sanmanuel-nsn.gov
(909) 864-8933 EXT-2200
(909) 864-3370 Fax

Cahuilla Band of Mission Indians
Anthony Madrigal, Jr., Environmental Coordinator
P.O. Box 391760 Cahuilla
Anza , CA 92539
(909) 763-5549
fax: (909) 763-2808

Torres-Martinez Desert Cahuilla Indians
Gary Resvaloso, Cultural Resources Coordinator
P.O. Box 1160 Cahuilla
Thermal , CA 92274
garyr@torresmartinez.org
760) 397-0300
(760) 397-8146 Fax

San Manuel Band of Mission Indians
Geri Farr, Tribal Administrator
PO Box 266 Serrano
Patton , CA 92369
gfarr@sanmanuel-nsn.gov
(909) 864-8933 EXT-3210
(909) 864-3370 Fax

Torres-Martinez Desert Cahuilla Indians
Alberto Ramierz, Environmental Coordinator
P.O. Box 1160 Cahuilla
Thermal , CA 92274
albertor@torresmartinez.org
760) 397-0300
(760) 397-8146 Fax

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This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed Cerry Valley Egg Ranch Specific Plan, County of Riverside.

NATIVE AMERICAN CONTACTS
Riverside County
March 11, 2004

Pauma & Yuima
Valerie Linton, Tribal Administrator
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
(760) 742-1289
(760) 742-3422 Fax

Pauma & Yuima
Bennae Calac, Cultural Resource Coordinator
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
(760) 742-1289
(760) 742-3422 Fax

Pauma & Yuima
Juanita Dixon, Environmental Coordinator
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
(760) 742-1289
(760) 742-3422 Fax

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This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed Cerry Valley Egg Ranch Specific Plan, County of Riverside.

Example

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Anthony J. Andreas Jr.
3022 W. Nicolet Street
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Anthony J. Andreas Jr.:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

We have not yet received a NAHC letter indicating whether there are sacred sites n the property. It is entirely possible that there are sacred sites within this project footprint. We would like to request that if you know of the existence of sacred sites in this area, please call or write expressing your concerns.

The Project

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and CEQA require the City to consider the effect this project may have on historic properties. The definition of "historic properties" includes, in some cases, properties of traditional religious and cultural significance to an Indian tribe. To determine whether any historic properties may be affected by the project, MBA has reviewed background information and consulting with entities such as the NAHC. We understand that you may have knowledge about the area in which the project is located. Because public involvement is a key ingredient in successful Section 106 consultation, we are soliciting your input as part of this process.

Please review this letter and indicate whether you have any information concerning any historic properties that may be affected by the project, as indicated below:

____ No, I am not aware of any Native American resources or sacred sites located at or near the project area.

____ Yes, I am aware of Native American resources or sacred sites located at or near the project.

Describe: (Use additional sheets of paper, if necessary.)

Our Report

Please indicate whether you would like a copy of the Final Cultural Resource Report(s) sent to you for your review:

____ No, I do not need to have a copy of the report shipped to me for review

____ Yes, I am in need of a copy of the report shipped to me for review.

We are contacting you to determine if you have any concerns regarding this project. Your response would be greatly appreciated. If we do not receive a response from you within 15 calendar days, we will assume this site is not located within any Native American religious or sensitive sites. Please feel free to contact Michael Dice at 714.508.4100 ext 111 if you have any questions or information.

Sincerely,

Michael Dice, M.A., Senior Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

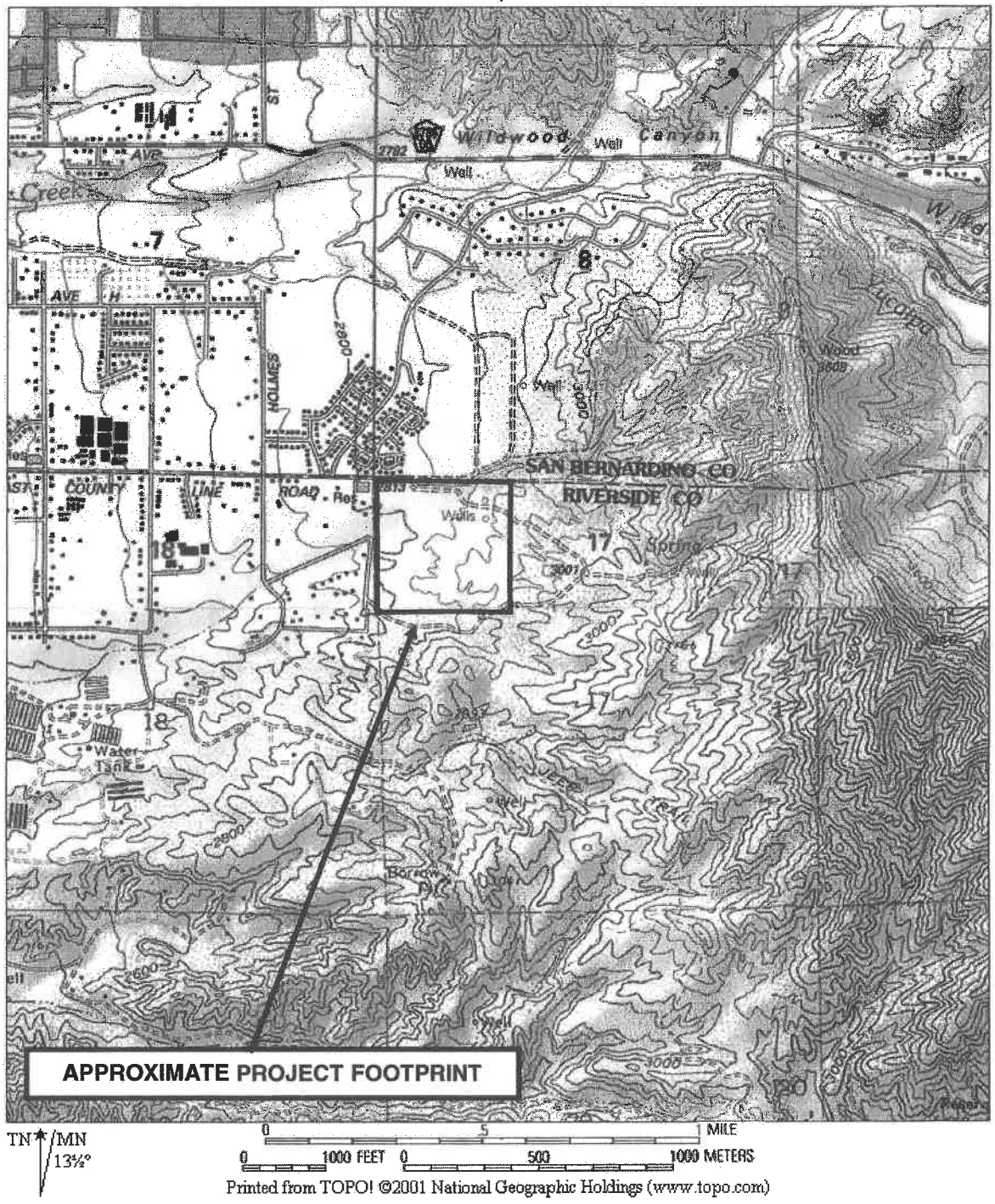
Attachment: Topographic Map

MD:ji
H:\Client (PN-JN)\2604\26040001\26040001_NA Tribal Letter.doc

Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

26040001 ES703F: Yucaipa and El Casco, CA. 7.5'



Source: Topo! ©National Geographic Holdings.

Michael Brandman Associates

Exhibit 1
Project Footprint Map

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Culture Committee
Rincon Band of Mission Indians
P.O. Box 68
Valley Center, CA 92082

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Sir or Madam,

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

We have not yet received a NAHC letter indicating whether there are sacred sites n the property. It is entirely possible that there are sacred sites within this project footprint. We would like to request that if you know of the existence of sacred sites in this area, please call or write expressing your concerns.

The Project

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and CEQA require the City to consider the effect this project may have on historic properties. The definition of "historic properties" includes, in some cases, properties of traditional religious and cultural significance to an Indian tribe. To determine whether any historic properties may be affected by the project, MBA has reviewed background information and consulting with entities such as the NAHC. We understand that you may have knowledge about the area in which the project is located. Because public involvement is a key ingredient in successful Section 106 consultation, we are soliciting your input as part of this process.

Please review this letter and indicate whether you have any information concerning any historic properties that may be affected by the project, as indicated below:

____ No, I am not aware of any Native American resources or sacred sites located at or near the project area.

____ Yes, I am aware of Native American resources or sacred sites located at or near the project.

Describe: (Use additional sheets of paper, if necessary.)

Our Report

Please indicate whether you would like a copy of the Final Cultural Resource Report(s) sent to you for your review:

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Sincerely,

Michael Dice, M.A., Senior Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Attachment: Topographic Map

MD:ji
H:\Client (PN-JN)\2604\26040001\26040001_NA Tribal Letter.doc

Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Anthony J. Andreas Jr.
3022 W. Nicolet Street
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Anthony J. Andreas Jr.:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

We have not yet received a NAHC letter indicating whether there are sacred sites n the property. It is entirely possible that there are sacred sites within this project footprint. We would like to request that if you know of the existence of sacred sites in this area, please call or write expressing your concerns.

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Sincerely,

Michael Dice, M.A., Senior Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Attachment: Topographic Map

MD:ji
H:\Client (PN-JN)\2604\26040001\26040001_NA Tribal Letter.doc

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Spokesperson Christina Arzate
Santa Rosa Band of Mission Indians
P.O. Box 390611
Anza, CA 92539

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Spokesperson Arzate:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Cultural Resource Coordinator Bernadette Brierty
San Manuel Band of Mission Indians
P.O. Box 266
Patton, CA 92369

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Cultural Resource Coordinator Brierty:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Cultural Resource Coordinator Bennae Calac
Pauma & Yuima
P.O. Box 369
Pauma Valley, CA 92061

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Cultural Resource Coordinator Calac:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Cultural Resources Rep. Henry Contreras
San Luis Rey Band of Mission Indians
1763 Chapulin Lane
Fallbrook, CA 92028

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Cultural Resources Rep. Contreras:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Christobal C. Devers
Pauma & Yuima
P.O. Box 369
Pauma Valley, CA 92061

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Devers:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Environmental Coordinator Juanita Dixon
Pauma & Yuima
P.O. Box 369
Pauma Valley, CA 92061

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Environmental Coordinator Dixon:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Samuel H. Dunlap
P.O. Box 1391
Temecula, CA 92593

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Samuel H. Dunlap:

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February 25, 2005

Tribal Administrator Geri Farr
San Manuel Band of Mission Indians
P.O. Box 266
Patton, CA 92369

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Farr:

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February 25, 2005

Representative Joseph Hamilton
Ramona Band of Mission Indians
P.O. Box 391670
Anza, CA 92539

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Representative Hamilton:

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Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Tribal Administrator Laura Hopkins
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Hopkins:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

We have not yet received a NAHC letter indicating whether there are sacred sites n the property. It is entirely possible that there are sacred sites within this project footprint. We would like to request that if you know of the existence of sacred sites in this area, please call or write expressing your concerns.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson John A. James
Cabazon Band of Mission Indians
84-245 Indio springs Parkway
Indio, CA 92203-3499

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson James:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Environmental Coordinator Ali Kashani
San Manuel Band of Mission Indians
P.O. Box 266
Patton, CA 92369

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Environmental Coordinator Kashani:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Tribal Administrator Karin Kupcha
Augustine Band of Mission Indians
P.O. Box 1291
Yucca Valley, CA 92286

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Kupcha:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Tribal Administrator Valerie Linton
Pauma & Yuima
P.O. Box 369
Pauma Valley, CA 92061

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Linton:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Maurice Lyons
Monongo Band of Mission Indians
11581 Potrero Road
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Lyons:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Mark Macarro
Pechanga Band of Mission Indians
P.O. Box 1477
Temecula, CA 92593

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Macarro:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Environmental Coordinator Anthony Madrigal, Jr.
Cahuilla Band of Mission Indians
P.O. Box 391760
Anza, CA 92539

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Environmental Coordinator Madrigal, Jr.:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Deron Marquez
San Manuel Band of Mission Indians
P.O. Box 266
Patton, CA 92369

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Marquez:

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February 25, 2005

Chairperson Maryann Martin
Augustine Band of Mission Indians
P.O. Box 846
Coachella, CA 92236

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Martin:

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Michael Dice, M.A., Senior Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Attachment: Topographic Map

MD:ji
H:\Client (PN-JN)\2604\26040001\26040001_NA Tribal Letter.doc

Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Dean Mike
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachilla, CA 92236

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Mike:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Ernest Morreo
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Ernest Morreo:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Spokesperson Eugenia Nogales
Cahuilla Band of Indians
P.O. Box 391760
Anza, CA 92539

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Spokesperson Nogales:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Tribal Administrator Allen J. Parker
Morongo Band of Mission Indians
245 N. Murray Street, Suite C
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Parker:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Environmental Coordinator Alberto Ramirez
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Environmental Coordinator Ramirez:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Tribal Administrator Mary Resvaloso
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Tribal Administrator Resvaloso:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Captain Russell Romo
San Luis Rey Band of MissionIndians
2302 Carriage Circle
Oceanside, CA 92056

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Captain Romo:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Robert J. Salgado Sr.
Soboba Band of Mission Indians
P.O. Box 487
San Jacinto, CA 92581

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Salgado Sr.:

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ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Wendy Schlater
La Jolla Band of Mission Indians
22000 Highway 76
Pauma Valley, CA 92061

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Schlater:

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February 25, 2005

Alvino Siva
2034 W. Westward
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Alvino Siva:

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____ Yes, I am in need of a copy of the report shipped to me for review.

We are contacting you to determine if you have any concerns regarding this project. Your response would be greatly appreciated. If we do not receive a response from you within 15 calendar days, we will assume this site is not located within any Native American religious or sensitive sites. Please feel free to contact Michael Dice at 714.508.4100 ext 111 if you have any questions or information.

Sincerely,

Michael Dice, M.A., Senior Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Attachment: Topographic Map

MD:ji
H:\Client (PN-JN)\2604\26040001\26040001_NA Tribal Letter.doc

Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Robert Smith
Pala Band of Mission Indians
P.O. Box 50
Pala, CA 92059

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Smith:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

We have not yet received a NAHC letter indicating whether there are sacred sites n the property. It is entirely possible that there are sacred sites within this project footprint. We would like to request that if you know of the existence of sacred sites in this area, please call or write expressing your concerns.

The Project

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and CEQA require the City to consider the effect this project may have on historic properties. The definition of "historic properties" includes, in some cases, properties of traditional religious and cultural significance to an Indian tribe. To determine whether any historic properties may be affected by the project, MBA has reviewed background information and consulting with entities such as the NAHC. We understand that you may have knowledge about the area in which the project is located. Because public involvement is a key ingredient in successful Section 106 consultation, we are soliciting your input as part of this process.

Please review this letter and indicate whether you have any information concerning any historic properties that may be affected by the project, as indicated below:

____ No, I am not aware of any Native American resources or sacred sites located at or near the project area.

____ Yes, I am aware of Native American resources or sacred sites located at or near the project.

Describe: (Use additional sheets of paper, if necessary.)

Our Report

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Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Chairperson Ray Torres
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Chairperson Torres:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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Michael Brandman Associates
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Irvine, CA 92602

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Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

John Valenzuela
Ish Panesh United Band of Indians
P.O. Box 402597
Hesperia, CA 92340

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear John Valenzuela:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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Irvine, CA 92602
Fax: 714.508.4110

Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

February 25, 2005

Cultural Resource Coordinator Britt W. Wilson
Morongo Band of Mission Indians
245 N. Murray Street, Suite C
Banning, CA 92220

Subject: **Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.**

Dear Cultural Resource Coordinator Wilson:

Our client, Storm-Western Development an untaken an Archeological survey with MBA for the Heritage Oaks Specific Plan. The parcel set is located on County Line Road south of Mesa Grande Drive in the city of Calimesa, California within the County of Riverside. The project footprint is shown on the attached topographic map. Michael Brandman Associates (MBA) is requesting consultation with the NAHC and we ask for your comment on the planned project. The project consists of a limited-excavation development of large-lot residential homes. We understand that the oak trees in this area will not be touched as part of the project.

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Sincerely,

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Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

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Please address and mail or fax your response to:

Attn: Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602
Fax: 714.508.4110

RAMONA BAND OF CAHUILLA

56310 Highway 371, Suite B
Post Office Box 391670
Anza, California 92539

Tel: (951) 763-4105
Fax: (951) 763-4325
E-mail: admin@ramonatribe.com

"A SOVEREIGN NATION"

Michael Dice
Michael Brandman Associates
220 Commerce, Suite 220
Irvine, CA 92602

February 28, 2005

RE: Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA.

Dear Mr. Dice:

We are in receipt of your letter requesting cultural information regarding the project referred to above.

The Ramona Band of Cahuilla Indians is not aware of specific cultural resources that may be impacted by the project and does not have any archival information regarding the project site. This does not mean that there is an absence of cultural resources in the project area.

We are aware that the project is within the traditional use area of the Cahuilla people and we are extremely concerned about the Native American sites that are in or near the project site. We are also concerned that extensive excavation could uncover Native American artifacts that may have significant sacred, religious and cultural value. We feel that it is necessary to have a Native American Monitor, assigned by the Ramona Band included in any further field study and during the construction phase of this project. We are requesting copies of the archaeological survey report and the records search report.

We look forward to receiving the requested information and if additional clarification is required regarding this correspondence please contact me or Anthony Largo at (951) 763-4105.

Respectfully,

Joseph Hamilton, Vice Chairman

AUGUSTINE BAND OF CAHUILLA INDIANS

P.O. Box 846 • Coachella, CA 92236 • (760) 369-7171
Tribal Council Fax: (760) 369-7161 • Tribal Administration Fax: (760) 369-9061
Tribal Chairperson: MaryAnn Martin

March 2, 2005

c/o Michael Dice
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

Re: Native American Consultation Letter a Phase I Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA

Dear Mr. Dice:

Even though the proposed project is not located within the boundary of the Augustine Reservation, there is the potential that the development might impact properties of traditional religious and cultural significance to the Augustine Band.

The Augustine Band of Cahuilla Mission Indians is part of the Cahuilla Indians groups who live in south-central California. Historically the Cahuilla occupied most of the area, from the summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, a portion of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain to the west.

Although we might not be aware of any Native American resources or sacred sites located at or near the project at this moment, the Tribe recommends that other tribes in the vicinity be contacted and that there should be a Native American Monitor on site during the ground breaking activities. In addition, the Tribe reserves the right to be notified of any potential discovery and requests that the follow-up of any finding on the site be submitted to the Tribe for further actions.

Should you have any questions, please do not hesitate to contact us.

Sincerely,

Sirirat Chullakorn

Sirirat Chullakorn
Environmental Coordinator

San Manuel Band of Mission Indians
Environmental Department

March 10, 2005

Michael Dice
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602

RE: Native American Consultation Letter for a Phase 1 Cultural Resources Assessment: The Heritage Oaks Specific Plan, City of Calimesa, Riverside County, CA

Dear Mr. Dice,

I would like to take this opportunity to thank you for complying with the requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR part 800. The San Manuel Band of Serrano Mission Indians shares your concern over the treatment of Native American artifacts including funerary objects, ceremonial items, and items of cultural patrimony.

The proposed Heritage Oaks Specific Plan located in the City of Calimesa, Riverside County is in the area of known Serrano Cultural Resources. Hereby, we request that one of the San Manuel Band of Mission Indians (SMBMI) approved Native American Monitors be utilized throughout this project. A copy of the final reports upon completion would be greatly appreciated.

Attached is the SMBMI's approved list of Native American Monitors.

Should you have any questions, regarding this request, please do not hesitate to call me at (909) 864.8933, extension 2203.

Respectfully,

Ann Brierty

Ann Brierty
GIS Coordinator/Cultural Awareness Committee
San Manuel Band of Mission Indians

Attachment

26569 Community Center Drive • Highland, CA 92346 • Office: (909) 864-8933 • FAX: (909) 862-5152
P.O. Box 266 • Patton, CA 92369

SMBMI - Native American Monitors

1. Native Grounds Monitoring and Research, Inc. – Bennae Calac, President
   Phone # (760) 617.2872

2. Pechanga Cultural Resources – Paul Macarro, Coordinator
   Phone # (951) 308.9295

3. Faye Roman
   Phone # (909) 790.1390

4. Dr. Nickson, Agua Cliente Band of Mission Indians
   Phone # (760) 883.1313

UNIVERSITY OF CALIFORNIA, RIVERSIDE

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF HISTORY
RIVERSIDE, CALIFORNIA 92521-0204

OFFICE: (909) 787-5401
FAX: (909) 787-5259

June 17, 2002

To: Calimesa City Council

Fr: Clifford E. Trafzer, Citizen of Yucaipa and San Bernardino County, Professor of Native American History, Director of Public History, Commissioner of California State Native American Heritage Commission

Re: Tentative Tract 29964 and Mitigated Negative Declaration

Council Members, as a citizen and regional resident, I ask that you deny any developer a Mitigated Negative Declaration in consideration of the development of this property. As an historian, author of a forthcoming book about the Serrano people of San Manuel, and a Commissioner of the Native American Heritage Commission (NAHC) for the state, I ask you to move cautiously in your dealings with this property containing a large, old grove of Coastal Live Oaks. The site, located near the old Serrano village of Yucaipat, should be treated with great care and sensitivity. It is a cultural landscape, and it likely contains cultural resources.

This site would have been a perfect area for gathering acorns and hunting deer, rabbits, squirrels, and other game in the fall of the year. The oak grove has water and was likely a seasonal village site where people lived and died. It is quite possible that human remains are buried in the area, and I am concerned that we protect all cultural resources located at the site in accordance with California law. Please use every instrument available to you to protect and preserve the cultural resources on this site.

I have notified the Native American Heritage Commission of the possible development of this sensitive site. I understand that Cahuilla elder Alvino Siva has already addressed the Council, and his sister, Katherine Siva Saubel, the senior Commissioner of the NAHC, will be notified of the contemplated development. In addition, I have alerted elders and officials such as Eddie Philips (EPA) of the San Manuel Band of Mission Indians of the possible project and will forward a copy of this memorandum to the Morongo Band and other local tribes.

In sum, I ask you to be aware of the sensitive nature of this ancient site and the possible presence of cultural resources. The grove of old growth live oaks should be sufficient to cause you hesitation, but certainly the possibility of human remains should give you pause. Thank you sincerely for your consideration.

Cliff Trafzer
34815 Olive Tree Lane
Yucaipa, Ca. 92399

STATE OF CALIFORNIA

Clifford E. Trafzer
Commissioner
Native American Heritage Commission
34815 Olive Tree Lane
Yucaipa, CA 92399

(909) 797-1716
cetrafzer@aol.com

SEFF AND ASSOCIATES

ARCHEOLOGY, GEOLOGY, PALEONTOLOGY

13020 SOUTH LANE

REDLANDS,CA 92373

(909) 794-3629

November 7, 2000

Mr. Steve McCarty
THE MCCARTY COMPANY
1516 Ohio St.
Redlands, CA 92374

Dear Steve,

I have been commissioned to do a surface survey on the archeologic, geologic, and paleontologic potential of the following property. I have completed the surface survey on the property identified as follows "Government Lot 4 and the West 48200 feet of Government Lot 3 in fractional Section 17, Township 2 South, Range 1 West, San Bernardino Meridian, in the county of Riverside, State of California, according to the Official Plot thereof."

Method of Study

I hired three assistants to help walk out the property. We spread out about 20 feet and walked, as straight as possible from one end of the property to the other. Then moving over we repeated the procedure several times; this was followed by crisscrossing the area. In this manner any distribution of artifacts or fossils, would surely be observed. None were. We also walked out the surrounding lands to complete the survey.

Aug 05 04 10:31a Western Brass-Storm Ind. 310-534-8499 p.3

INTRODUCTION

A detailed geologic survey of the surface of the property and the adjacent lands was necessary in order to adequately explain why archeologic and paleontologic material are completely absent on the property. The geomorphic (landform) structures on this land required a detailed survey of the surrounding areas to explain what is present on the properties.

GEOLOGY

This entire area is a tectonic (earth movement) zone due to its proximity to the San Andreas Fault System. Fortunately for my client the property under consideration now appears to be stable since there are no surface indications of movement within the recent geologic time.

The property parallels the County Line Road which runs approximately east/west. Starting with my description, it will be on the eastern end of the terrain and well off the concerned property. The area here is very active tectonically as illustrated by fresh cliff surfaces which have undoubtedly collapsed due to recent earthquakes.

Eastward the sedimentary structures consist of alluvial fans that drained westward. There were several cycles of fan activity in past geologic times. The present fan deposits are in a stage of erosion, having been cut off from the mountainous source to the east and they are highly dissected by the forces of recent erosion.

The climate that existed at this early period (probably late Ice Age Pleistocene) was far more humid than at present. This is indicated by the distance the fan materials were carried westward, which clearly reflects a higher degree of rainfall. With the passage of time near continuous uplift in the source area of the sediments (mountains) caused an abundance of fan material that was continuously rejuvenating the processes of erosion and deposition until the relatively recent time, perhaps less than a thousand years of geologic time. The fan movement has completely halted because

uplift to the east separated the fans from the mountains. They then went into an erosional state; this is the main activity at present and the fans are being highly dissected.

The area to the south is still actively tectonic and more recent alluvial fans are noted lying to the south of the property. Present drainage appears to be mainly to the southwest, and probably changes somewhat with the passage of time and distant tectonic movements. The northern fans stand higher in elevation than the older alluvial fan sediments lying to the southwest that are now stable tectonically.

Subsurface ground water direction is marked by stands of trees. There is a major (now extinct) stream channel on the property well over 100 feet wide which, when active, drained to the west and southwest depending on its meandering directions. This stream was beheaded not too long ago in the geologic past; this caused it to stop its drainage course and become a new stream channel that probably lies to the south and drains in a westerly direction south of the Whisper Ranch property.

South of Holmes Way one can see that the area changes from alluvial fan deposits to even-bedded floodplain sediments.

New drainage tributaries are prominently cutting new channels in the older alluvial fans. Some of the present drainage has been altered by recent building and grading processes taking place to the northeast and west. This has caused some undercutting ofthe terraces just east of the McCarty property and threatens to eventually cause the road to collapse. The builders of this should take note.

ARCHEOLOGY

Native American artifacts have been reported in the Yucaipa area, but absolutely none have been observed or reported in this immediate vicinity. Considering that early Americans selected flat, lush, level ground near water, this area of alluvial fan activity must have presented a surface too rocky

and uneven to become an Indian midden.

This does not suggest that Native Americans never crossed over the area during hunting or migrating, butthe complete lack of chert flakes, pottery shards or remnants of a campfire substantiates that they never set up housekeeping on any portion of the property, at least on the surface outcrops. This will undoubtedly hold true for the subsurface as the extensive alluvial fans of ancient to recent time seems to be a prominent sedimentary feature for thousands of years of geologic time.

PALEONTOLOGY

When an animal dies on open ground it is immediately attacked by scavengers, and what is left is worked on by the sun. In a relatively short time it turns to dust. When considering this, one must recognize that fossils are actually quite rare. In order for any part of the carcass to be preserved as a fossil, it must undergo quick, natural burial such as in quicksand, volcanic ash, etc. Most fossils are preserved because they were quickly buried in sandbars of fast moving streams.

A relatively fast moving stream did occur on this property in the past, but the exposed surface is in a straight direction and does not indicate the presence of buried sandbars. The preserved embankments would clearly show ancient meanderings that would cause deposition of sandbars. The embankments on this property indicate an even, fast flowing stream. If any meandering did take place, and it probably did, then it happened beyond this property to the west and southwest. This is an interpretation based on the obvious surface data.

CONCLUSIONS

1. No geologic hazards appear anywhere on the surface of this immediate property.

2. No surface potential archeologic sites exist on this property.

3. No potential paleontologic sites were noted on the surface of the

property.

I certify that the above conclusions are true to the best of my ability and knowledge.

Yours very sincerely,

Philip Seff, Ph.D

Registered Geologist No 2305

ACCREDITED by the AMERICAN ASSOCIATION OF MUSEUMS

SAN BERNARDINO COUNTY MUSEUM

2024 Orange Tree Lane • Redlands, California USA 92374-4560
(909) 307-2669 • Fax (909) 307-0539 • www.sbcountymuseum.org

COUNTY OF SAN BERNARDINO
ECONOMIC DEVELOPMENT
AND PUBLIC SERVICES GROUP

ROBERT L. McKERNAN
Director

23 February 2005

Michael Brandman Associates
attn: Michael Dice
220 Commerce, Suite #200
Irvine, CA 92602

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, HERITAGE OAKS SPECIFIC PLAN, YUCAIPA REGION, RIVERSIDE COUNTY, CALIFORNIA**

Dear Mr. Dice,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named ~55-acre development. The Heritage Oaks Specific Plan property is located in the northwestern quadrant of section 17, Township 2 South, Range 1 West, San Bernardino Base and Meridian, as seen on the Yucaipa, California 7.5' United States Geological Survey topographic quadrangle map (1967 edition, photorevised 1973).

Previous geologic mapping (Matti and others, 2003) indicates that the Heritage Oaks Specific Plan property is situated primarily upon surface exposures of older fan deposits of middle to later Pleistocene age (= unit $\mathbf{Qof_1}$) and late Holocene valley alluvium (= **Qvya**) overlying mylonitic and cataclastic rock of Mesozoic age (= $\mathbf{M_zmg}$). The Holocene sediments and the Mesozoic bedrock have low potential to contain fossil resources, and so are assigned low paleontologic sensitivity. In contrast, the Pleistocene older alluvium has high potential to contain fossil resources throughout its extent, depending upon its lithology. Older Pleistocene alluvial sediments elsewhere throughout the Inland Empire have been reported to yield significant fossils of extinct animals from the Ice Age (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999), as well as fossil plants (Reynolds and Reynolds, 1991; Anderson and others, 2002). Fossils vertebrates recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999). These sediments are therefore assigned high paleontologic sensitivity, depending upon their lithology.

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this records search indicated that no previously-known paleontologic resource localities are recorded by the SBCM from the Heritage Oaks study area, nor from within at least one mile in any direction.

MARK H. UFFER
County Administrative Officer
NORMAN A. KANOLD
Assistant County Administrator
Economic Development and
Public Services Group

Board of Supervisors
BILL POSTMUS ..... First District
PAUL BIANE ..... Second District
DENNIS HANSBERGER ..... Third District
GARY C. OVITT ..... Fourth District
JOSIE GONZALES ..... Fifth District

Recommendations

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in conjunction with development may have high potential to adversely impact significant nonrenewable paleontologic resources present within the boundaries of the proposed Heritage Oaks property, depending upon the lithology of the Pleistocene older alluvial sediments present therein. A pre-development field assessment of these sediments is recommended. Should the Pleistocene sediments mapped as present (Matti and others, 2003) exhibit a lithology conducive to the preservation of fossil resources, these sediments would have high paleontologic sensitivity. In this case, a qualified vertebrate paleontologist would be required to develop a program to mitigate impacts to nonrenewable paleontologic resources. This mitigation program should be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of Riverside and the proposed guidelines of the Society of Vertebrate Paleontology. This program should include, but not be limited to:

1. Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Areas requiring monitoring include all previously-undisturbed Pleistocene older alluvium present within the boundaries of the property, where such sediments are determined by the field assessment to have high paleontologic sensitivity. If the assessment determines that no such sediments are present, or that such sediments are present but have low potential to contain fossil resources, no further mitigation will be required unless and until sediments conducive to the preservation of significant nonrenewable paleontologic resources are encountered.

   If mitigation is required based upon the results of the pre-development field assessment, paleontologic monitors should be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Subsequent to full implementation of the mitigation program, if the fossiliferous units described herein are determined upon further exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources, monitoring of excavation may be reduced or eliminated.

2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).

3. Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage (e.g., SBCM). These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository

agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established museum repository has been fully completed and documented.

4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, would signify completion of the program to mitigate impacts to paleontologic resources.

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Please do not hesitate to contact us with any further questions you may have.

Sincerely,

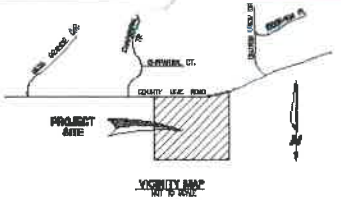
Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

Appendix G: Tentative Tract Map No. 17351 City of Calimesa

TENTATIVE TRACT MAP NO. 17351

CITY OF CALIMESA

HERITAGE OAKS EQUESTRIAN COMMUNITY



VICINITY MAP
NOT TO SCALE

LEGAL DESCRIPTION:

GOVERNMENT LOT 4 AND THE WEST 466.00 FEET OF GOVERNMENT LOT 3 IN FRACTIONAL SECTION 17, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CALIMESA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPT ONE-HALF OF ALL OIL AND MINERAL RIGHTS AS RESERVED TO CLAUD E. HASKELL AND JOSEPH-PIE WILSON, IN DEED RECORDED MARCH 2, 1948 IN BOOK 685, PAGE 285, OFFICIAL RECORDS.

ASSESSORS PARCEL NO:

402-030-002-6, 003-8

ZONING:

EXISTING ZONING = RESIDENTIAL ESTATE (RE)
PROPOSED ZONING = ESTATE RESIDENTIAL (ER) & COUNTRY RESIDENTIAL (CR)
SOUTH OF SITE IS RE (APPROX)
EAST OF SITE IS RE (APPROX)
WEST OF SITE IS PR (PUBLIC FACILITY)
NORTH OF SITE IS CITY OF YUCAIPA (SINGLE FAMILY)

PROJECT AREA:

94.1 GROSS ACRES
87.0 NET ACRES

DENSITY:

1 D.U. / GROSS AC.

NOTES:

WATER:
YUCAIPA VALLEY WATER DISTRICT
12770 SECOND STREET
YUCAIPA, CA. 92399
(909) 797-5117

SEWER:
YUCAIPA VALLEY WATER DISTRICT
12770 SECOND STREET
YUCAIPA, CA. 92399
(909) 797-5117

GAS:
SOUTHERN CALIFORNIA GAS COMPANY
1981 W. LUGONIA AVENUE
REDLANDS, CA. 92373
(909) 798-8058

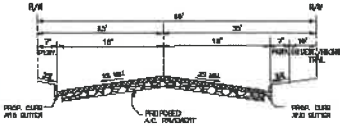
TELEPHONE:
VERIZON
1520 CENTER AVENUE, BLDG. 123
MONTCLAIR, CA. 91763
(909) 784-4527

ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
257 REDONDO STREET
REDLANDS, CA. 92373
(909) 793-3061

LOT AREAS:

LOT NO.	AREA (SF)
1	19,838
2	20,174
3	20,718
4	21,196
5	20,367
6	20,000
7	20,020
8	20,020
9	21,988
10	21,988
11	20,170
12	20,171
13	21,300
14	20,000
15	20,000
16	20,000
17	20,000
18	20,000
19	20,000
20	20,731
21	20,748
22	20,126
23	24,280
24	20,345
25	20,765
26	20,888
27	20,791
28	20,000
29	20,151
30	20,088
31	21,743
32	20,000

LOT NO.	AREA (SF)
33	19,838
34	19,880
35	20,070
36	20,731
37	19,736
38	20,142
39	21,138
40	21,023
41	19,525
42	20,000
43	19,963
44	19,987
45	19,939
46	19,149
47	19,925
48	19,902
49	19,973
50	19,939
51	19,139
52	19,939
53	20,743
54	19,782
55	114,739
A	90,067
B	21,901
C	28,813
D	139,804
E	174,364
F	35,035
STREETS	381,360



TYPICAL STREET SECTION
NTS

PREPARED FOR:

STORM WESTERN DEVELOPMENT, INC.
24200 HERNANDEZ AVE.
TORRANCE, CA. 90505-6203
CONTACT: KENT PHILLIPS

PREPARED BY:

FUSCOE ENGINEERING
full circle think

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

TOPO SURVEY BY
LSA SURVEYING