

MINERAL RESOURCE TECHNICAL REPORT,
MEADOWOOD PROPERTY, FALLBROOK AREA
OF SAN DIEGO COUNTY, CALIFORNIA
(ENVIRONMENTAL LOG NO. MEADOWOOD; GPA04-02, SP04-01,
R04-04, TM5354, S04-005, S04-007; ER04-02-004)

Prepared for:

**COUNTY OF SAN DIEGO,
DEPARTMENT OF LAND USE**

c/o RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, California 92101

Project No. 042291-001

April 30, 2008
(Revised January 6, 2009)
(Revised July 1, 2009)



Leighton and Associates, Inc.

A LEIGHTON GROUP COMPANY



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To: County of San Diego Department of Land Use
c/o RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, California 92101

Attention: Mr. Lee Sherwood

Subject: Mineral Resource Technical Report, Meadowood Property, Pala Area of San Diego County, California (Environmental Log No. Meadowood; GPA04-02, SP04-01, R04-04, TM5354, S04-005, S04-007; ER04-02-004)

In accordance with your request, we have performed a review and prepared this Mineral Resource Technical Report for the Meadowood property located in San Diego County, California. This report has been prepared for the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements.

If you have any questions regarding our report, please contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

Michael R. Stewart, CEG 1349
Principal Geologist, Vice President



Distribution: (1) PDF

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1.0 EXECUTIVE SUMMARY

In accordance with your request and authorization, this report presents the results of our review and assessment of the mineral resources for the approximately 389.5-acre Meadowood property in the Pala area of northern San Diego County, Site Location Map Figure 1. This report has been prepared for the County of San Diego, per the County of San Diego Land Use and Environment Group's Guidelines for Mineral Resource Technical Report Format and Content requirements. The scope of services included review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975.

The project site is underlain by approximately 39 acres of young alluvial deposits (mapped as Qa) which are considered MRZ-2 quality. Approximately 5.8 acres of these deposits are mapped as MRZ-2 with the remainder mapped as MRZ-3. The rest of the site is underlain by weathered gabbroic rock and older alluvial deposits, and is not considered likely as a high quality (PCC grade) aggregate source. Offsite San Luis Rey River floodplain deposits (mapped as Qa) directly to the south of the site are mapped as MRZ-2, and are also considered to be significant mineral resource deposits.

Successful sand and gravel mining operations are well documented along the San Luis Rey River drainage, and at least 5 sites have historically been mined within a few miles of the Meadowood property. All but one (the Pankey Ranch/Rosemary Mountain site) has been terminated when they were not successful in obtaining new or extended permits primarily due to environmental considerations. This adjacent Pankey Ranch/Rosemary Mountain site is currently under consideration for the extraction of aggregate materials, and a Major Use Permit, (S-82), has been granted.

The County Guidelines for Determining Significance – Mineral Resources (County Guidelines) state that a general noise setback of approximately 1,300 feet from existing sensitive land uses (i.e., a single-family residence) is usually an adequate distance for most potential mining sites to avoid noise impacts. Setback distance will potentially vary, depending on the noise levels produced by a mining operation, proposed blasting, production methods, extent of crushing and screening activities, topographic and site conditions, etc. Based on the results of our analyses, the entire 39 acres of on-site and additional offsite young alluvial deposits are located on or within 1,300 feet of existing residential properties on the Meadowood site, and as a result is already lost to future mining. Therefore, implementation of the project and its intended land uses would not result in any additional impacts to these resources, since they are already lost. The project is also anticipated to impact approximately 13 acres of offsite MRZ-2 designated land on Rosemary's Mountain. However, the proposed quarry on Rosemary's Mountain would conduct all mining activities on the east facing slope of the mountain, which shields it from the Meadowood site. Therefore, the project's implementation is not anticipated to impact the permitted mining activities on Rosemary's Mountain. Impacts to mineral resources are concluded to be less than significant as a result of the project.



2.0 INTRODUCTION

2.1 Purpose and Scope

This report presents the results of our review and assessment of the mineral resources for the approximately 389.5-acre Meadowood property in the Pala area of northern San Diego County. The scope of services included:

- A review of in-house geotechnical reports and aerial photographs pertinent to the area (Section 5.0).
- Review of site geotechnical reports.
- A reconnaissance of the site.
- Review of the site location relative to the current Mineral Resource Zonation (MRZ) and designations per the California Surface Mining and Reclamation Act (SMARA) of 1975 (Figure 2).
- Preparation of this report summarizing the results of our technical study, including:
 - A discussion of the MRZ's located on, adjacent, and within the vicinity of the project site.
 - A discussion of all mine; quarries, and gemstone deposits (both historic and existing) within the vicinity of the project.
 - A discussion of the regional and local geologic setting as it pertains to any mineral resources identified.
 - Analysis of on site and off site impacts to the mineral resource, including indication of whether any mineral resources on the project would be minable, processable, and marketable in the near future or if offsite resources may become inaccessible as a result of site development
 - A discussion of the economic value and significance of any impacts (if present) considering land use compatibility with the proposed project.
 - A discussion of any appropriate mitigation measures and project design considerations.



2.2 Project Location and Description

The property is located northeast of the interchange of the Pala Road (SR-76) and the Interstate 15 (Figure 1) in the Fallbrook area of San Diego County.

The Meadowood Project includes the following discretionary applications: a General Plan Amendment, a Specific Plan Amendment, a Rezone, a Vesting Tentative Map, a Major Use Permit for the on-site wastewater treatment facility, and 3 Site Plans. The site is 389.5 gross acres and located just north of SR-76, approximately ¼ miles east of I-15 in the Fallbrook Community Planning Area. The main access will be taken via Horse Ranch Creek Road, which will extend north from SR-76 and connect to Pankey Road, which then connects to Stewart Canyon Road. The community will consist of a mix of single-family and multi-family home products totaling 844 units. Nearly half of the project will consist of natural and agricultural open space and parks. The plan preserves sensitive biological habitat and provides 5.9 miles of multi-use trails (hiking and horseback riding). In addition, land has been set aside for an elementary school. A paved secondary access road, extending northeasterly from Street E to Rice Canyon Road, will provide alternative access for emergency vehicles. The project, including grading, may be phased by recording several different final maps.

**TABLE 1-1
LAND USE SUMMARY**

Planning Area	Use	Proposed Zoning	Gross Acreage	Proposed Dwelling Units	Actual Density*
1	Multi-family Detached	RV10	26.1	164	6.3
2	Elementary School	RV10	12.7	42 †	3.3
3	Neighborhood Park	S80	10.1	---	---
4	Multi-family Attached	RU20	24.0	325	13.5
5	Single-family Detached	RS3	132.5	355	2.7
6	Agricultural Open Space	S80	47.6	---	---
7	Natural Open Space	S80	128.5	---	---
	Roads, etc.	---	8.0	---	---
			389.5	886	2.3

*Density = dwelling units per acre.



The actual proposed dwelling unit number is $886 - 42 = 844$, because the elementary school is the included use for Planning Area 2. The 42 units are intended to designate a land use for the parcel if the school district decides not to use the land.

Single Family= 355 units

MF with school =489/Multi Family w/out school = 531 units

Permanent on-site impacts total 220.5 Ac.

Total preserved area on-site is $389.5 - 220.5 = 169.0$ Ac. This consists of undisturbed natural, previously disturbed or developed and agricultural open space

Conserved Agriculture is 44.5 Ac and the balance of preserved area is 124.5

It is anticipated the development of the site will be accomplished with cuts in the higher elevations and fill areas anticipated in lower site areas. Preliminary grading plans propose an estimated 2,400,000 cubic yards of cut and fill, resulting in a balanced earthwork project. Figure 3 illustrates approximate parcel boundaries, over an aerial photographic base. Figure 4 is a composite land plan showing proposed land usage in the area including the adjacent Campus Park and Palomar Community College District properties.



3.0 EXISTING CONDITIONS

3.1 Topographic Setting

The site is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province, near the western edge of the southern California batholith. The topography at the edge of the batholith changes from the rugged landforms developed on the batholith to the more subdued landforms, which typify the softer sedimentary formations of the coastal plain. Primarily, the site is underlain by the Cretaceous-aged gabbroic rock of the southern California batholith with minor amounts of older and young alluvial deposits draped along the western margin. Erosion and regional tectonic uplift created the valleys and ridges of the area.

Topographically, the site generally consists of a hillside terrain on the western flank of the Monserate Mountain, sloping westward towards the Interstate 15 corridor to the west. Elevations range from a high of approximately $818 \pm$ feet mean sea level (msl) along the eastern side of the site to a low of $265 \pm$ feet (msl) along the southerly site boundary. Gabbroic rock outcrops dominate the elevated areas at the site, while sedimentary deposits comprise the lower-lying areas of the site.

Generally, natural drainage is presently accomplished through a pair of broad canyons that drain in a west to south westward direction towards the west. Vegetation on the site is generally chaparral and sage scrub in the upper elevations, with citrus and avocado orchards in the central and lower lying southwest portions. Much of the upper slopes areas are currently sparsely vegetated because wildfires have burned through the area in the past year.

3.2 Land Use

The proposed land use will consist of a residential community with a mix of single-family and multi-family, an elementary school, parks, trails, supporting infrastructure and open space. Adjacent developments will likely include the proposed Palomar College and Campus Park Developments. The extent of these adjacent developments are shown on the attached Figure 4. These adjacent developments also include the proposed Horse Ranch Creek Road which diagonally crosses the Meadowood Property and the Pala Mesa Drive and unnamed connector road to Horse Ranch Creek Road. All of these roads are part of the regional traffic plan and the Pala Mesa Drive provides access across the existing bridge over I-15 to the fire station just west of the freeway. It is also our understanding that Palomar College which is close to receiving its final approvals will construct a portion of Horse Ranch Creek Road along its length through the Meadowood property to SR-76. SR-76 itself will also be relocated by others to the south as part of improvements related to the Rosemary's Mountain Quarry. We also note that the proposed locations of



both SR-76 and Horse Ranch Creek Road are in part controlled by adjacent habitat issues and archeological sites.

3.3 Geology

Based on our site visit and review of our referenced geologic maps as listed in the references section of the text, the primary bedrock unit onsite is Cretaceous-aged Gabbroic rocks. Alluvial (floodplain) and colluvial (slopewash) deposits are mapped in the flatter lower lying slopes through the central and south-western portion of the site. The generalized geologic map units are illustrated as shown on Figure 5, based on mapping published by the California Geologic Survey (CGS, 2000a and 2000b). The following is a discussion of the generalized geologic units underlying and adjacent to the site.

3.3.1 Active (younger) Alluvium (Map Symbol-Qa)

Holocene-aged (younger than 10,000 years old), alluvial flood plain deposits are mapped on approximately 39 acres of low-lying drainages of the property, generally in the southwestern portion. These unconsolidated (loose) sands and gravels have accumulated in the lower-most drainages, generally below elevations of approximately 300 feet. A 5.8-acre portion of the project adjacent to and south of the existing SR-76 has been mapped as MRZ-2 with most of the 39 acres of floodplain deposits on-site are to the north of existing SR-76 mapped by the State as MRZ-3. Geologically, all of this unit may be similar to the younger alluvial deposits mapped as MRZ-2 along the length of the San Luis Rey drainage to the south of the Meadowood property. Therefore, all areas of the site within this geologic unit, regardless of their MRZ-designation, are considered to be significant mineral resource deposits (MRZ-2 quality) for purposes of this study.

3.3.2 Older Alluvium (Map Symbol-Qoa)

Older alluvium (younger than 500,000 years old) underlie the northwest flank of the site, generally along the middle elevations of 300 to 450 feet. These sediments are differentiated from the younger deposits due to a greater degree of consolidation. For example, these deposits tend to be weakly cemented and poorly sorted, commonly containing interfingered silts, clays, and fine sands that have been consolidated with age. Such deposits are also mapped to the southwest of the site, comprising the Pala Mesa. These deposits commonly support such developments, as they traditionally form relatively flat terraces of gently topographic relief elevated above the alluvial valley bottoms.



Based on review of the “Update Geotechnical Investigation” (Geocon, 2006), the Terrace Deposits as described by Geocon consist of “over 60 feet of medium-dense to dense reddish brown silty to clayey fine to coarse sand.” Based on data presented in the geotechnical investigation, the weathered profile of fine-grained material is on the order of 20 to 30 feet in thickness. Similar to other sites in the area, this unit is typically not mined due to the thick weathered profile, fine-grained nature, and lack of siliceous materials.

3.3.3 Gabbro Rock (Map Symbol-Kgb)

Monserate Mountain, and the eastern portion of the Meadowood property is underlain by a coarse-grained, dark gray igneous rock, or gabbro, based on the regional geologic map (Figure 5). Through much of the map area, surficial deposits of colluvium, alluvium, and slopewash are generally minor and not considered thick enough to be significant at the map scale presented.

The gabbroic unit (Kgb) comprises Monserate Mountain as well as much of the San Marcos Mountains, to the south. No significant aggregate extraction operations are known to have operated in this unit in the Monserate Mountain area. Portions of the gabbroic rock of the San Marcos Mountains 8 to 10 miles southwest of the site have been utilized for “Black Granite” dimension stone (Wood, 1974). No current or historic uses for the Monserate Mountain gabbro have been identified, based on review of available literature (Weber, 1958, CGS, 1997-1998). Based on visual observation, the gabbro is moderately to deeply weathered and decomposed, as the terrain is generally subdued and larger boulder sized outcrops are relatively rare. Geotechnical reports for the site (Geocon, 2006) also indicate that this material is weathered to depths of 20 to 30 feet in areas.

3.3.4 Indian Mountain Granodiorite (Map Symbol Ki)

The offsite Rosemary’s Mountain, as well as the Lancaster Mountain to the south of the site is comprised of granodiorite, a fine grained, light colored granitic rock. It is leucocratic in composition, due to a relatively low percentage of dark colored (mafic) minerals. The geologic unit has distinctive field exposures, with abundant, very large boulder outcrops on relatively steep, resistant terrain.

Granodiorite such as that comprising the Rosemary’s and Lancaster Mountains are relatively common across the granitic terrains of eastern San Diego, as well as parts of adjacent Riverside Counties. Relatively high percentages of quartz and feldspar (light colored) minerals make the rock very resistant to weathering. This durability is a favorable characteristic for use as construction aggregate when crushed. Both the Rosemary’s Mountain aggregate quarry, as well as the Liberty



Quarry in Southern Riverside County, contains granodiorite proposed for blasting and crushing in order to generate construction-grade aggregate materials. The offsite portion of Rosemary's Mountain currently proposed as a quarry has been also mapped as MRZ-2.

3.4 Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975, the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source area, e.g., products used in the production of cement. The classification system emphasizes Portland Cement Concrete (PCC) aggregate, which is subject to a series of specifications to ensure the manufacture of strong durable concrete. The following guidelines are presented in the mineral land classification for the region (CGS, 1982 and 1996b).

- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- MRZ-3 - Areas containing mineral deposits, the significance of which cannot be evaluated from available data. According to explanations presented by the California Division Mines and Geology (CGS, 1982) geologic formations or deposits that do not or have not been utilized for aggregate commonly do not have test data and studies are not available. In contrast to MRZ-2 areas where it has been judged that there is a high likelihood of minable, marketable mineral deposits (notably Portland cement and asphaltic concrete aggregate), MRZ-3 areas are areas where the data is not sufficient to evaluate the significance of any potential aggregate deposit. Such areas mapped as MRZ-3 include a wide variety of geologic units across much of the western portion of San Diego County.
- MRZ-4 - Areas where available information is inadequate for assignment to any other MRZ zone.

3.4.1 MRZ-2 Mapped Areas

The extent of zones classified as MRZ-2 in the vicinity of the Meadowood site are identified on Figure 2. It generally corresponds with the east-west trending San Luis Rey River drainage area, which includes a relatively thick accumulation of alluvial deposits, with an irregular, organic boundary defined by the low-lying topographic drainage margin. This includes 5.8 acres of the southernmost portion of the site. Geologically, this area is generally characterized by the presence of younger (Quaternary-aged) river channel, floodplain, and terrace deposits that have been eroded from the older (Tertiary to Cretaceous-aged) bedrock units,



transported, and re-deposited. They consist of naturally loose mixtures of sands and rounded gravels.

The greater San Luis Rey River Valley has been identified as a valuable resource area and contains an estimated 1.6 billion tons of sand and 1.2 billion tons of coarse aggregate through the 14,607 acre drainage basin (CGS, 1982). The Meadowood site is located north of what are identified as Sectors C and D of the San Luis Rey Resource area (Figure 6). Sector C comprises the middle reaches of the San Luis Rey River Channel which includes Bonsall eastward to less than 1 mile east of the Interstate 15, covering about 2,160-acres. Sector D is a 3,740 acre area mapped between the Pauma Valley on the upstream end, to the Interstate 15/Highway 395 corridor on the downstream end. The DMG has estimated 990 million tons of quality (PCC Grade) aggregate resources in Sectors C and D, including 660 million tons of sand and 330 million tons of gravel (CGS, 1982).

Documented historical aggregate extraction operations are identified on Figure 6 and all but one (the Pankey Ranch/Rosemary Mountain site) has been terminated as described below:

- Fenton Sand Mine

A short distance east of the Meadowood site is the Fenton Sand Mine which originated as a 27 acre sand mine initially permitted in 1969 (Chester, 2000). In 1975 a 30-year Major Use Permit (74-088) was granted to allow extraction from an expanded 211-acre area. It was operated by the H.G. Fenton Company (CGS, 1983) through November of 1998, when Hanson Aggregates assumed responsibility of the operation. They continued to mine and process sand and gravel from the 10331 Pala Road address through 2000. The discovery of endangered species in areas bordering the operation, including the Arroyo Toad, the Least Bell's Vireo, and the Southwestern Willow flycatcher, evidently limited Hanson's ability to expand the mine (Chester, 2000). Hanson closed the sand and gravel processing plant as of September 15, 2005 (CRWCCB, 2006). Although the plans for long-term usage of the site have been debated, the site does include a 207-acre conservation easement established by Hanson in accordance with their Clean Water Act Section 404 permit. The site has therefore been adopted back into the San Luis Rey fluvial ecosystem as overseen by the U.S. Fish and Wildlife Service, the Army Corps of Engineers, and the California Department of Fish and Game.



- Pankey Pits

The closest known historical aggregate extraction operation is located to the southeast of the site, closer to the San Luis Rey River. This property was originally known as the Pankey Pits, where the Marron Brothers extracted sand and gravel from the San Luis Rey river drainage (CGS, 1983). Like many in-stream operations, permitting processes and regulations became increasingly difficult, and the site was entirely inactive by the early 1990's (CGS, 1996). However, an adjacent parcel known as the Pankey Ranch was acquired by Palomar Aggregates in 1997.

- Pankey Ranch/Rosemary's Mountain

In the late 1980's Palomar Grading and Paving acquired a lease on the Pankey Ranch, an elevated hillside immediately north of the Pankey Pits historically operated within the San Luis Rey River. The approximate 100 acre site is a small peak known as Rosemary's Mountain, ranging in elevation of approximately 300 to 990 feet (Figure 6). In 1989, Palomar submitted a petition to the State of California Division of Mines and Geology for a reclassification of the MRZ-3 zoned property to MRZ-2. Based on data provided by Palomar, and confirmed by the CDMG Staff, aggregate from the site met the published Caltrans Standards for Portland cement concrete, asphaltic concrete, base, and sub-base. The mixed aggregate resources demonstrated far exceeded the minimum threshold value of 9.2 million 1988 dollars established by the SMARA and the petition was granted by the State Division of Mines and Geology (CGS, 1989).

The Granite Construction Company has since partnered with Palomar on the project, and a Major Use permit has been obtained. Plans for the rock crushing, extraction of aggregate and operation of an asphalt plant on 38 acres of the 94-acre site are in progress. The operation also includes plans for the improvement/widening of the Pala Road (SR-76). The exact status of the operation is unknown at the time of the production of this report; however, the widening of the SR-76 is evidently underway (NC Times, 2007b).

3.4.2 MRZ-3 Mapped Areas

Approximately 101 acres of the western edge of the project site are mapped as MRZ-3 by the California Geological Survey (CGS, 1983 and 1996; Figure 2). Approximately 39 acres of on-site land mapped as younger alluvium



(approximately 33.2 acres is mapped as MRZ-3 and 5.8 acres as MRZ-2) can be considered to be correlative with the alluvium identified as MRZ-2 in Sectors C and D to the south within the San Luis Rey River drainage. Site-specific laboratory testing has not confirmed the physical and chemical characteristics of the on-site alluvial deposits. However, successful sand and gravel mining operations of PCC-grade aggregate, are well documented along the San Luis Rey River drainage in the designated MRZ-2 areas.

The rest of the western portion of Meadowood property mapped as MRZ-3, contains older alluvial terrace deposits which contain more fines and are less minable and marketable than adjacent known deposits. In addition, the weathered mafic gabbroic rocks of the Meadowood hillsides which are not designated as a mineral resource zone are differentiated from adjacent areas known to be MRZ-2, such as the San Luis Rey alluvium, as well as the leucocratic granodiorite comprising the adjacent Rosemary's Mountain.

In summary, with the exception of 39 acres of younger alluvial floodplain deposits in the southernmost portion of the site, the majority of the Meadowood property is not underlain by geologic units traditionally known as desirable, marketable sources units of sand or aggregate suitable for asphaltic concrete or Portland Cement Concrete.



4.0 MINERAL RESOURCE IMPACT ANALYSES

4.1 Methodology for Determination of Significance

This section provides the methodology for determination of significance of impacts to mineral resources utilizing the County Guidelines for Determining Significance – Mineral Resources (DPLU, 2008). The County Guidelines are based on the State CEQA Guidelines, and establish measurable standards for determining when an impact will be considered significant pursuant to CEQA

The following guideline guides the evaluation of whether a significant impact to mineral resources will occur as a result of project implementation:

The project is:

- On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or
- On land classified as MRZ-3; or
- Underlain by Quaternary alluvium; or
- On a known sand and gravel mine, quarry, or gemstone deposit;

AND

The project would result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;

AND

The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 2005 dollars):

- Construction materials _____ \$15 million
- Industrial and chemical mineral materials _____ \$3 million
- Metallic and rare minerals _____ \$1.5 million



4.1.2 Land Use Compatibility

The County Report Formats require three separate analyses of land use compatibility as follows: (1) onsite impacts to mineral resources from existing and proposed intended on-site land uses, (2) on-site impacts to mineral resources after taking into consideration existing offsite noise sensitive land uses, and (3) the proposed onsite land uses impacts to offsite MRZ-2 designated lands within 1,300 feet of the project site. The County Guidelines provide that 1,300 feet is generally considered the setback from residences necessary to achieve adequate separation from noise, dust and other characteristics generated by aggregate extraction and processing. A 1,300-foot setback from existing on site and existing off site residential development is shown in cross hatching on Figure 7. Areas within the setback (buffer zone) upon the Meadowood site or adjacent to the Meadowood site are considered incompatible to mining. Additionally, a 1,300 foot setback from the project boundary was also included to evaluate impacts from implementation of the project.

Onsite Impacts from Proposed Onsite Land Use

This analysis indicates the impact of the proposed project and its existing and intended land uses on onsite mineral resources. As was discussed in Sections 3.3 and 3.4, approximately 39 acres of younger alluvial floodplain deposits (mapped as Qa) in the southernmost portion of the site is the only geologic unit on-site traditionally known as containing desirable, marketable source units of sand or aggregate suitable for asphaltic concrete or Portland Cement Concrete.

As shown on Figure 7, the project site is developed with two single-family residences. The first, is located on a 25.8 acre parcel just north of State Route 76, and the second is on a 26.6 acre parcel further to the north. The entire 39 acres of on-site floodplain deposits are located on or within 1,300 feet of existing residential properties on the Meadowood site, and as a result is already lost to future mining. Therefore, onsite impacts from the proposed project and its intended land uses will not result in any additional impacts to mineral resources onsite since they are already lost from existing on-site residential properties. This includes approximately 5.8 acres of on-site land mapped as MRZ-2.

Onsite Impacts from Offsite Land Uses

Since all onsite resources are already lost to future mining from existing residences on the Meadowood property, this analysis was not conducted.

Offsite MRZ-2 Impacts from Proposed Onsite Land Uses

A single-family residence is located on-site on a 25.8 acre parcel just north of State Route 76. As shown on Figure 7, a 1,300 foot buffer from the property line of this residential parcel effectively precludes the ability to mine MRZ-2



designated lands up to 1,300 feet south of the project site. The project's implementation and its intended land uses will have the same 1,300 feet radius to the south and will not impact any additional mineral resources since they are already lost from existing on-site residential properties.

Rosemary's Mountain quarry is located directly east of the project site and is mapped as MRZ-2. As shown on Figure 7, the existing on-site residential property and the project buffer zone directly west of Rosemary's Mountain emanates into MRZ-2 designated land on Rosemary's Mountain. The project is anticipated to impact approximately 13 acres of MRZ-2 land on Rosemary's Mountain. However, the proposed quarry on Rosemary's Mountain would conduct all mining activities on the east facing slope of the mountain, which shields it from the Meadowood site. Expansion of the Rosemary's Mountain quarry closer to the Meadowood site may be precluded by the County's noise setback requirements due to the presence of the existing residence within 1,300 feet of the quarry and by the conditions of approval imposed by the County on the operation of the quarry.

4.1.3 Marketability and Minimum Dollar Value

The onsite and offsite mineral resources within 1,300 feet of the project site mapped as Qa and/or MRZ-2 are considered minable, processable, and marketable since this resource is considered to be a high quality (PCC grade) aggregate source, which would be of value to the region. However, the land use compatibility analysis indicates that the entire 39 acres of the project site mapped as Qa and offsite MRZ-2 designated land is located on or within 1,300 feet of existing residential properties on the Meadowood site. Therefore, it is already lost to future mining. Implementation of the project and its intended land uses would not result in any additional impacts to these resources, since they are already lost. It can then be concluded that there is no economic impact to mineral resources as a result of the project.

4.2 Significance of Impacts Prior to Mitigation

The project site is underlain by approximately 39 acres of young alluvial deposits (mapped as Qa) which are considered MRZ-2 quality. Approximately 5.8 acres of these deposits are mapped as MRZ-2 with the remainder mapped as MRZ-3. The remainder of the site is underlain by weathered gabbroic rock and older alluvial deposits, and is not considered likely as a high quality (PCC grade) aggregate source. Off-site San Luis Rey River floodplain deposits (mapped as Qa) directly to the south of the site are mapped as MRZ-2, and are also considered to be significant mineral resource deposits. The entire 39 acres of on-site and additional offsite young alluvial deposits are located on or within

1,300 feet of existing residential properties on the Meadowood site, and as a result is already lost to future mining. Therefore, implementation of the project and its intended land uses would not result in any additional impacts to these resources, since they are already lost.

The project is also anticipated to impact approximately 13 acres of off-site MRZ-2 designated land on Rosemary's Mountain. However, the proposed quarry on Rosemary's Mountain would conduct all mining activities on the east facing slope of the mountain, which shields it from the Meadowood site. Therefore, the project's implementation is not anticipated to impact the permitted mining activities on Rosemary's Mountain.

4.3 Mitigation Measures and Project Design Considerations

Impacts to mineral resources as a result of the project are considered to be less than significant. Therefore, no mitigation measures or project design considerations are proposed.

4.4 Conclusions

The project will not result in the future inaccessibility for recovery (extraction) of on-site or off-site mineral resources above the California Geologic Survey State Geologist threshold values for mineral resources. Therefore, no potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state will occur as a result of this project. Moreover, if the resources are not considered significant mineral deposits, loss of these resources cannot contribute to a potentially significant cumulative impact.



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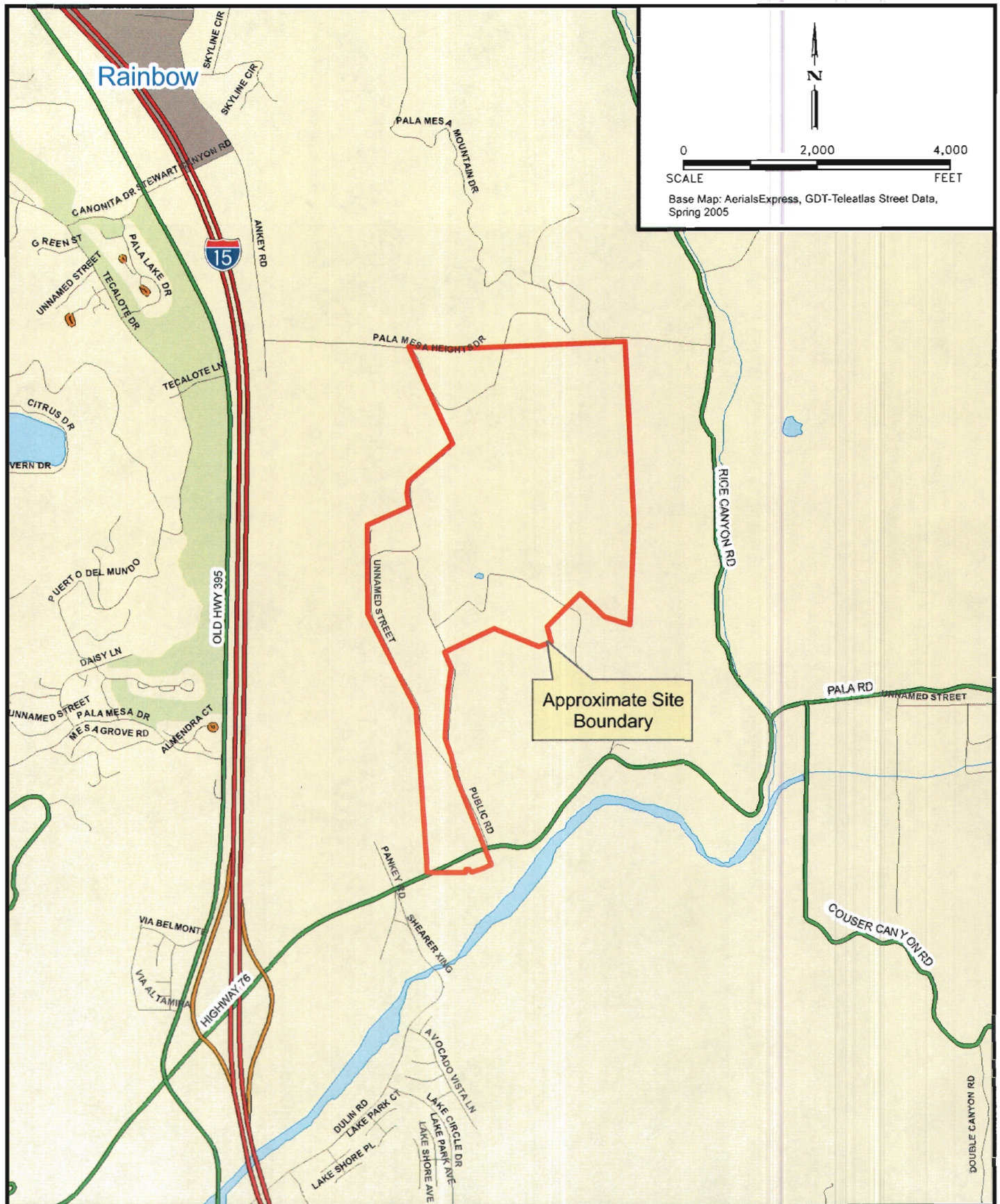
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**Meadowood Project
and Surrounding Area
Fallbrook Area, Unincorporated
San Diego County, California**

SITE LOCATION MAP

Project No.
042291-001

Date
February 2008



Figure 1

STATE MAPPED MINERAL RESOURCE ZONES
MEADOWOOD/CAMPUS PARK/CAMPUS PARK WEST
SAN DIEGO, CALIFORNIA



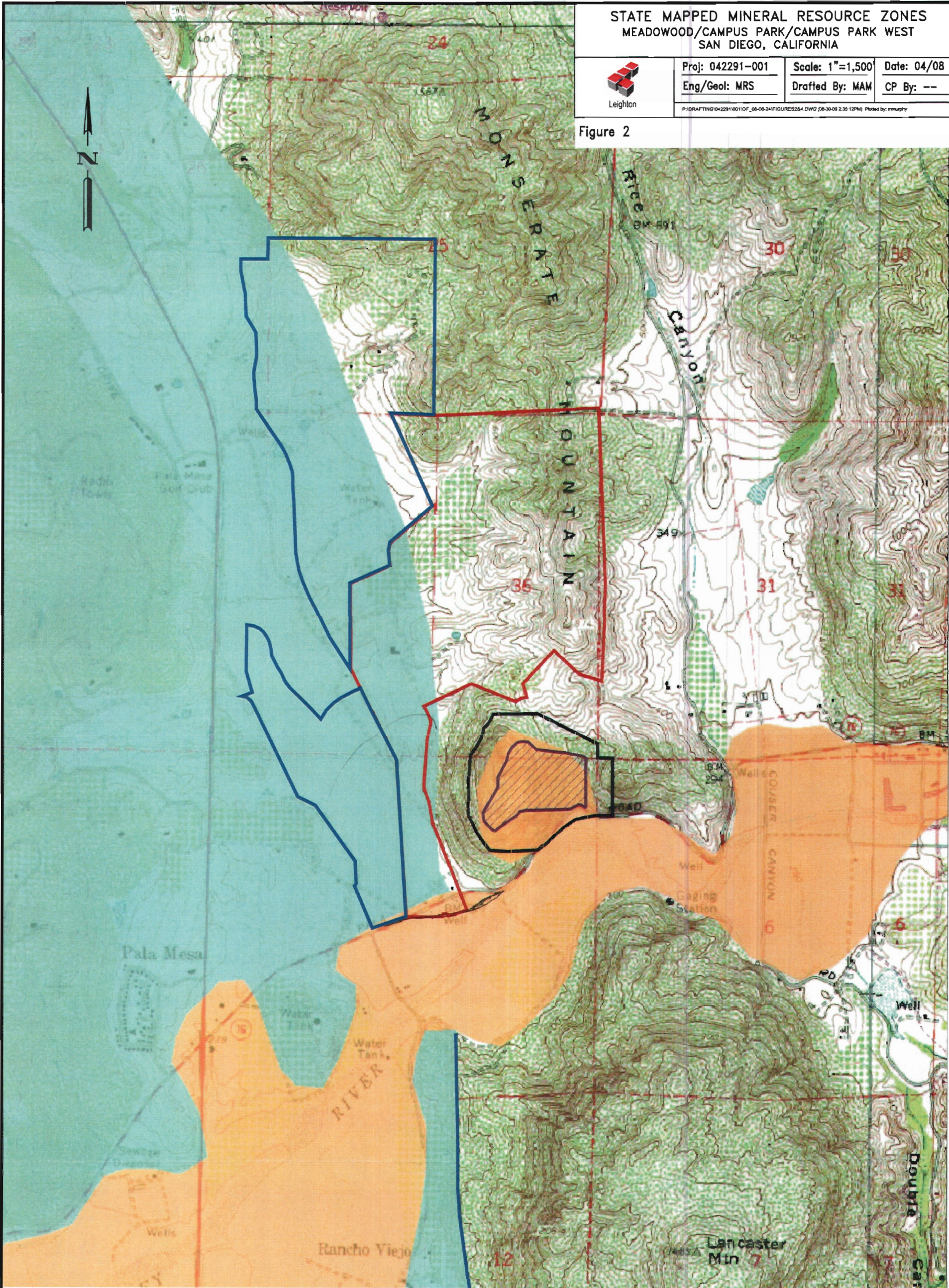
Proj: 042291-001
Eng/Geol: MRS

Scale: 1"=1,500'
Drafted By: MAM

Date: 04/08
CP By: --

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Figure 2



Proposed Project Boundary

Limits of Mining Boundary

Rosemary Mountain Quarry Property Boundary

Mineral Resource Zones

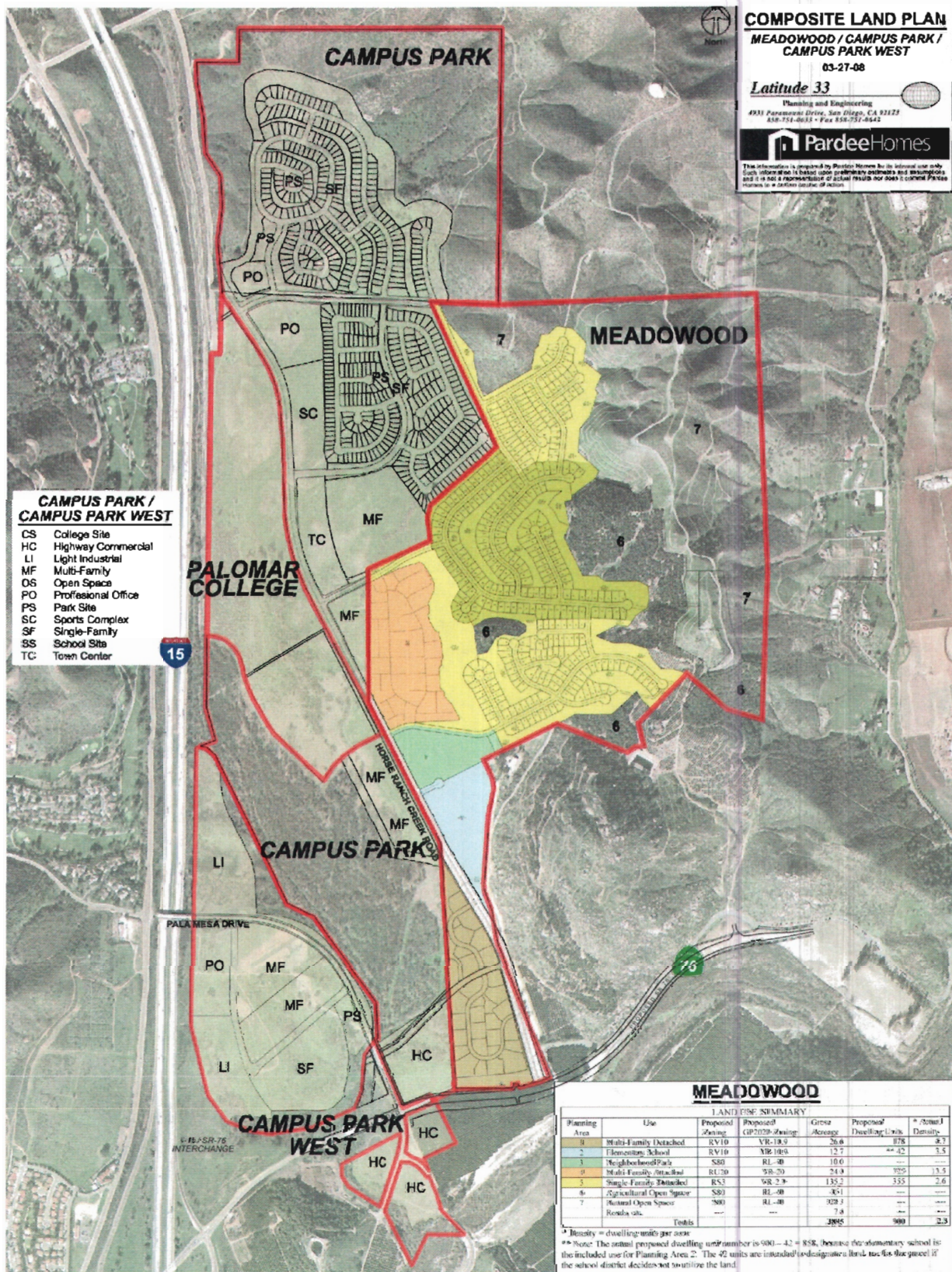
"Regionally Significant" MRZ-2 Aggregate Resource Areas

MRZ-3 Mineral Resources Potentially Present

RECON







0 1,500 3,000
 SCALE FEET

Figure 4

COMPOSITE LAND MAP
 MEADOWOOD/CAMPUS PARK/
 CAMPUS PARK WEST
 SAN DIEGO, CALIFORNIA

Proj: 042343-001

Date: 06/2008

Eng/Geol: MRS

Scale: 1"=1,500'



LEGEND

Surficial Units

Qa

Active alluvial flood plain deposits (late Holocene) - Unconsolidated to locally poorly consolidated sand and gravel deposits in active alluvial flood plains.

Qoa

Older alluvial flood plain deposits (Pleistocene, younger than 500,000 years) - Mostly moderately well consolidated, poorly sorted, permeable flood plain deposits.

Bedrock Units

Ki

Granodiorite of Indian Mountain (Cretaceous) - Biotite leucocratic granodiorite; white, fine to medium grained and massive.

Kt

Tonalite undivided (Cretaceous) - Mostly hornblende-biotite tonalite; coarse grained, light gray.

Kgb

Gabbro undivided (Cretaceous) - Mostly biotite-hornblende-hypersthene gabbro; coarse grained, dark gray massive.

Kjm

Metavolcanic and metasedimentary rocks undivided (Cretaceous and Jurassic) - Low grade (greenschist facies) rocks that are in part coeval with and in part older than the Cretaceous plutonic rocks they lie in contact with.

Pegmatite dike



Base Map: CGS Preliminary Map Series; Geologic Map of the
Bonsall and Pala Quadrangles (Kennedy 2000a and 2000b)

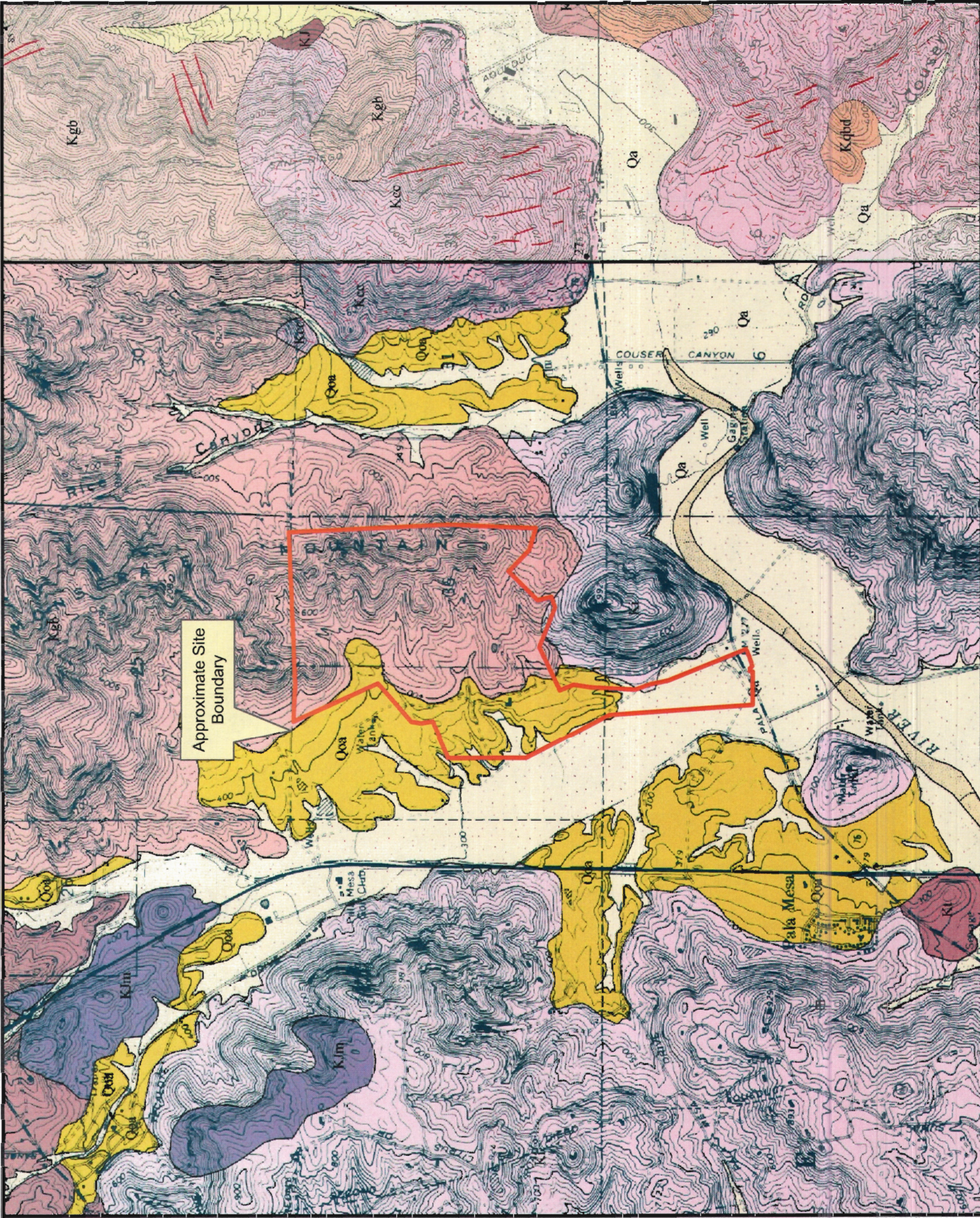


Figure 5

Regional Geology Map
Meadowood Project and Surrounding Area
Fallbrook Area, Unincorporated San Diego County, California



Proj: 042291-001

Scale: 1"=2,000'

Plot Date: 4/08

Eng/Geol: MRS

Created By: PDB

Updated: 4/08

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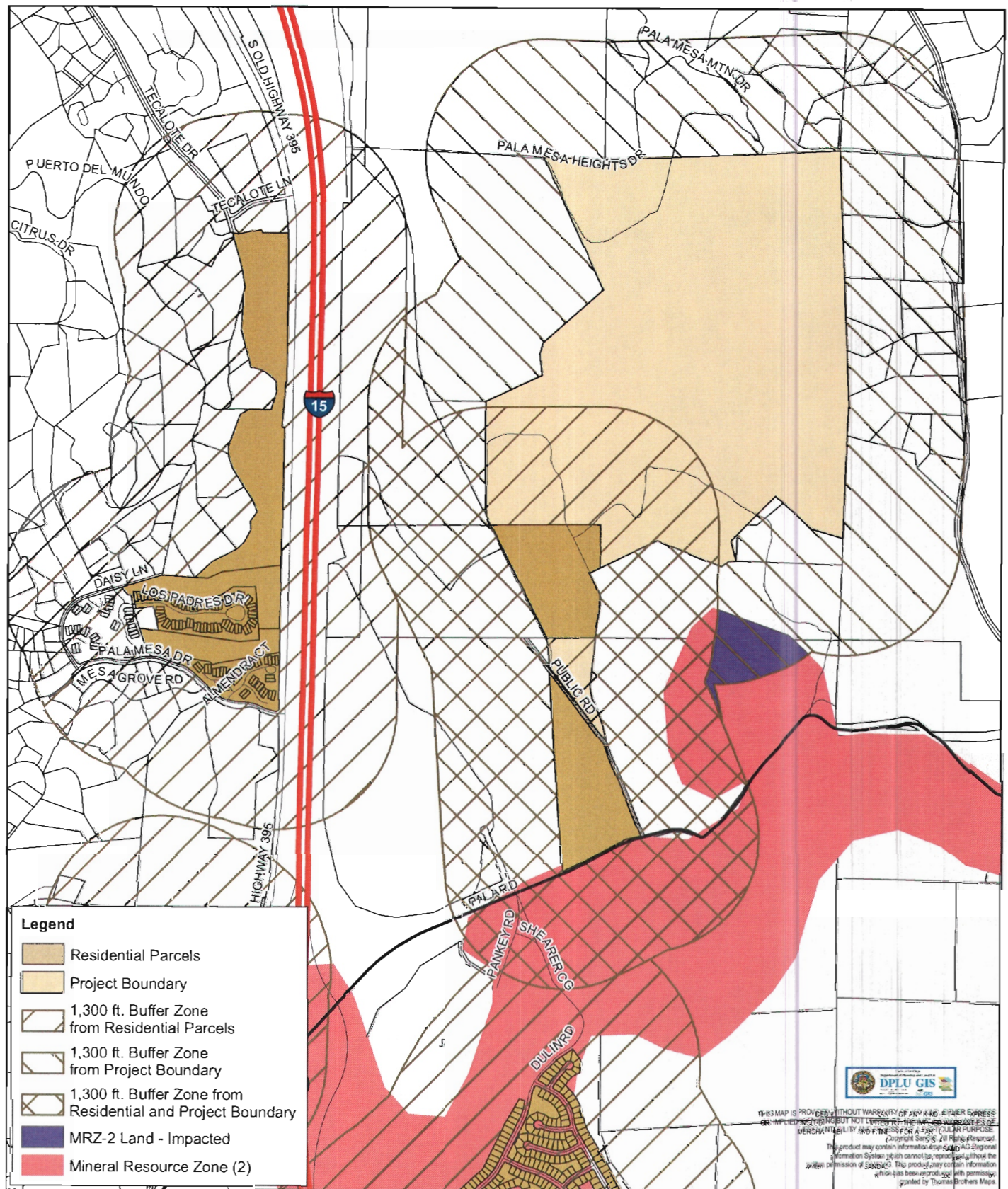


Figure 7
Land Use Compatibility Analysis
Meadowood Project