

**APPENDIX J**  
**MINERAL RESOURCES TECHNICAL REPORT**

**MINERAL RESOURCES REPORT**  
*for the*  
**SDSU 2007 CAMPUS MASTER PLAN REVISION**  
**SAN DIEGO, CALIFORNIA**

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**MAY 2007**

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## SUMMARY OF FINDINGS

The 2007 Campus Master Plan Revision (proposed project) is intended to improve, enhance, rehabilitate, and provide new facilities. This project will enable San Diego State University (SDSU) to meet the projected increases in student demand for higher education. To accommodate the projected student increase, the proposed project involves the development of classroom, housing, and student support facilities on the SDSU campus and immediately adjacent to it. A majority of the proposed project consists of redeveloping existing urban and/or campus uses to provide additional housing, classroom/office, and accessory activity spaces. Due to the existing developed nature of these areas, as well as sensitive adjacent land uses, including single-family residential neighborhoods, development of future mineral resource extraction activity is highly unlikely.

One project component, the Adobe Falls Faculty/Staff Housing component, would impact previously undisturbed land north of Interstate 8 (I-8). This area is mapped as Mineral Resource Zone (MRZ)-3, which is defined as “areas containing mineral deposits, the significance of which cannot be evaluated from available data.” The underlying formations of this area consist of Santiago Peak volcanics, Friars Formation, and alluvium and slopewash. These formations are often known as source formations for mineral resource deposits. However, due to the logistical, mineral yield, environmental, and regulatory challenges associated with the site, the Adobe Falls Faculty/Staff Housing site is not a suitable or realistic location for mineral operations. Considering the current land use at the project site and the land use of the surrounding areas, development of this project area as a commercial source of sand, commercial aggregates, gravel, or decomposed granitics is highly unlikely. For these reasons, loss of availability of a known mineral resource to the local/regional economy would not occur as a result of the project. In addition, due to the Adobe Falls site’s location adjacent to single-family residences, the suitability of this parcel to house a mining operation is extremely low. Therefore, the project will not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, and the impact will be less than significant.

# Mineral Resources Report for the 2007 SDSU Campus Master Plan Revision

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## 1.0 INTRODUCTION

This report describes existing mineral resources in the proposed project area and analyzes the potential for the proposed project to 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, or 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.

No comments related to mineral resources were received in response to the notices of preparation (NOPs) circulated for the project (February 2, 2007, and April 17, 2007) or at the public scoping meeting held on February 21, 2007.

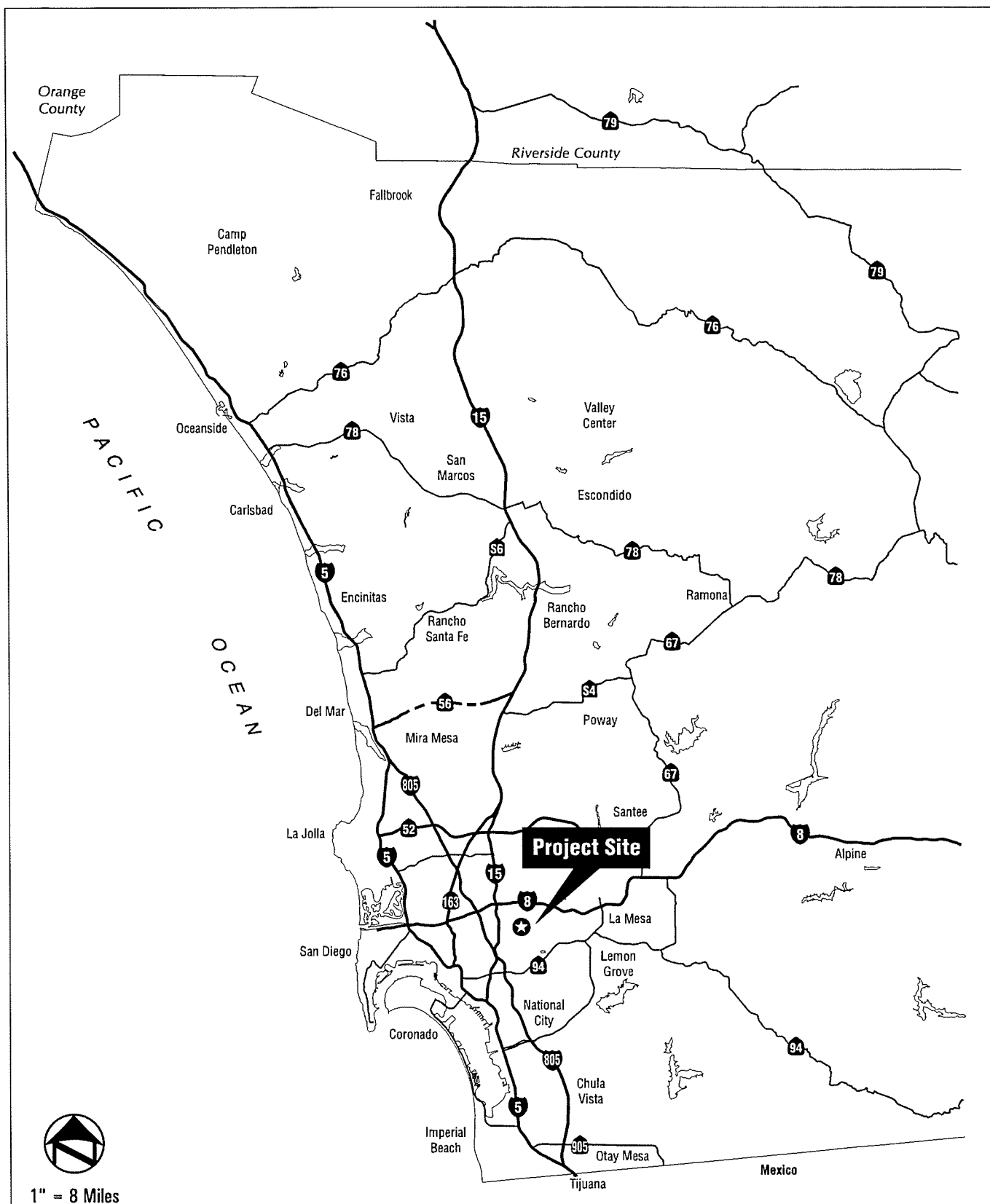
## 1.1 Local and Regional Setting

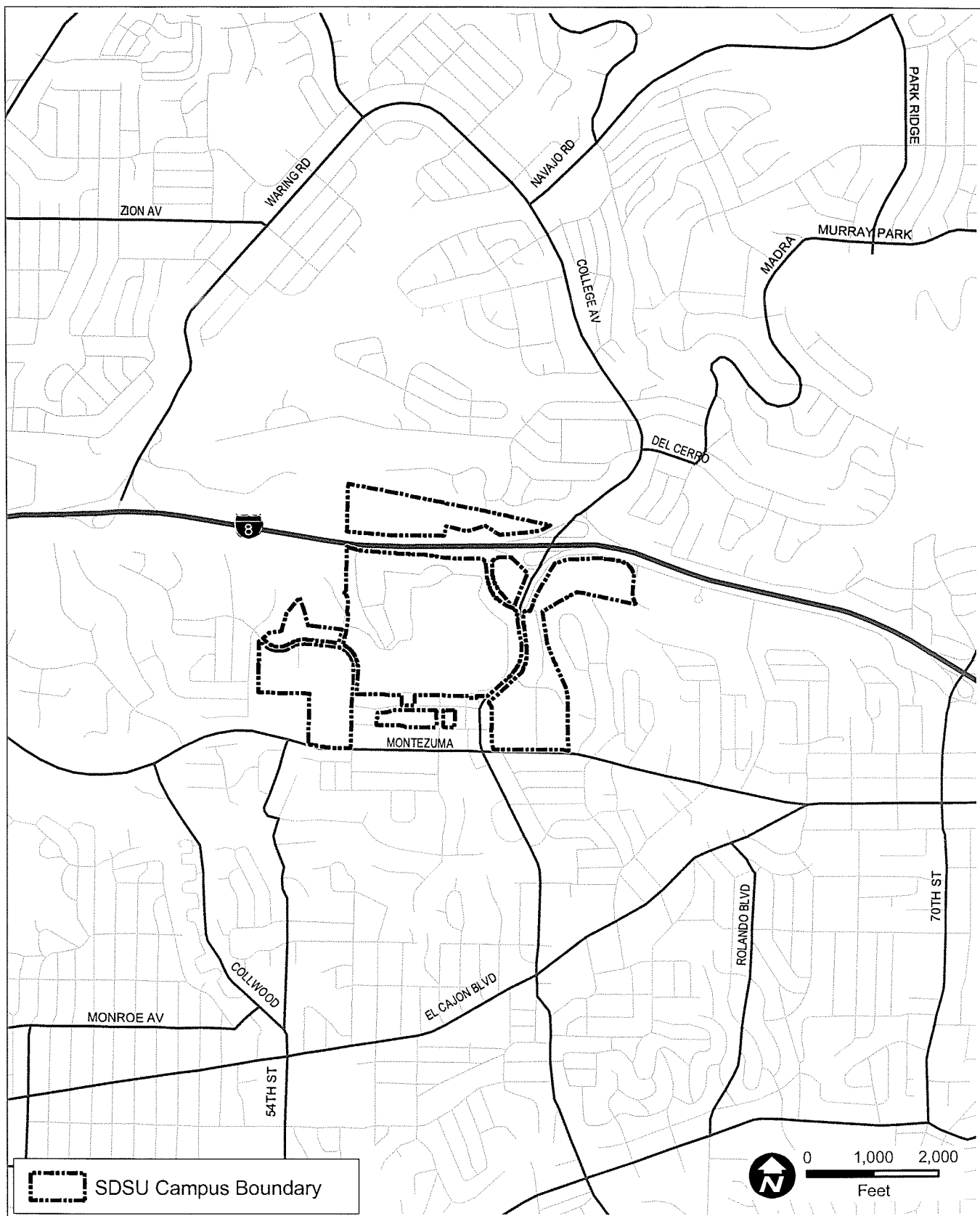
The proposed project would involve improvements to the SDSU campus and land immediately adjacent, which is located within both the College and Navajo Area communities in the City of San Diego (see *Figure 1, Regional Map*). As shown on *Figure 2, Vicinity Map*, the general boundaries of the site are Adobe Falls Drive to the north and Montezuma Road to the south. The west and east boundaries are located near 55th Street and approximately 1,000 feet east of Alvarado Court, respectively. The project site is located approximately 10.3 miles from downtown San Diego.

## 1.2 Project Description

The 2007 Campus Master Plan Revision (proposed project) is intended to improve, enhance, rehabilitate, and provide new facilities. This project will enable SDSU to meet the projected increases in student demand for higher education. To accommodate the projected student increase, the proposed project involves the development of classroom, housing, and student support facilities on the SDSU campus and immediately adjacent to it.

*Figure 3, Existing Land Use*, is an aerial photograph documenting existing land uses on campus. *Figure 4, Existing Campus Master Plan*, shows SDSU's existing Campus Master Plan. *Figure 5, Proposed Campus Master Plan*, shows the proposed Campus Master Plan Revision, including proposed project components.









# SAN DIEGO STATE UNIVERSITY

## CAMPUS MASTER PLAN

MASTER PLAN APPROVED BY THE BOARD OF TRUSTEES: MAY 1963  
MASTER PLAN REVISION APPROVED BY THE BOARD OF TRUSTEES: JULY 2005

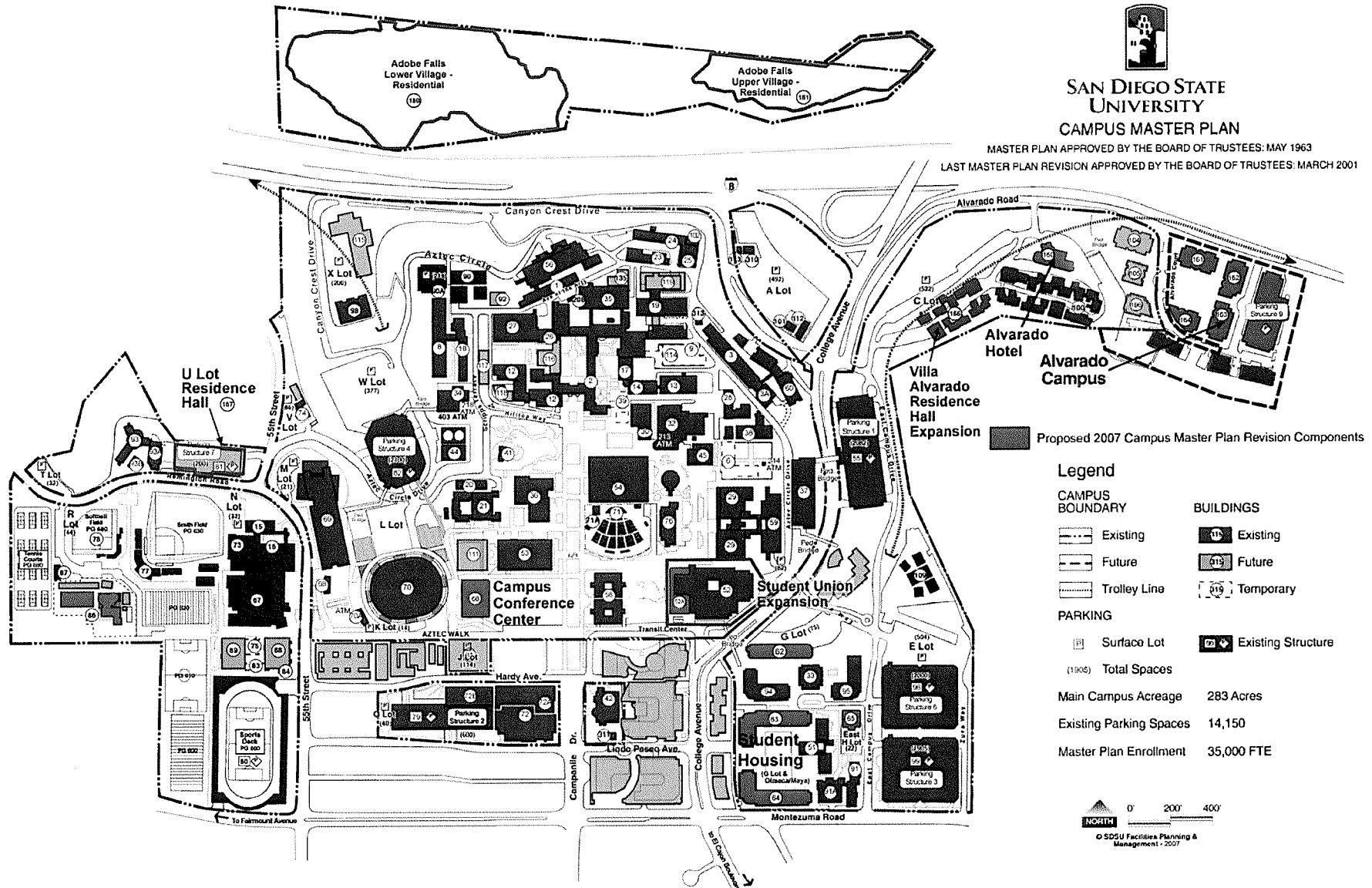




# SAN DIEGO STATE UNIVERSITY CAMPUS MASTER PLAN

MASTER PLAN APPROVED BY THE BOARD OF TRUSTEES: MAY 1963

LAST MASTER PLAN REVISION APPROVED BY THE BOARD OF TRUSTEES: MARCH 2001



2007 Campus Master Plan Revision  
Mineral Resources Technical Report



Figure 5  
Proposed Campus Master Plan

## Mineral Resources Report for the 2007 SDSU Campus Master Plan Revision

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- **ADOBE FALLS FACULTY/STAFF HOUSING.** The Adobe Falls Faculty/Staff Housing component is proposed for SDSU's 33-acre undeveloped land located north of I-8. The site is bordered by Adobe Falls Drive/Del Cerro Boulevard to the north, I-8 to the south, and residential communities to the west.

The Adobe Falls site is proposed as a new residential community to provide faculty and staff housing. Due to topographical features created by the meandering nature of Alvarado Creek, the development would consist of two general areas. The western "Lower Village" would include townhomes and condominiums, while the eastern "Upper Village" portion would include primarily townhomes. Both segments would contain ancillary facilities, including vehicle parking, a community center, and a bicycle/pedestrian path.

- **ALVARADO CAMPUS.** The Alvarado Campus component of the proposed project is located in the northeast portion of the SDSU campus, extending eastward onto property presently owned by the SDSU Research Foundation. The site is bordered by Alvarado Road to the north and an undeveloped slope and Alvarado Creek to the south. The northward-trending bend in Alvarado Creek forms the western boundary, and the edge of the existing medical office facility property serves as the eastern boundary. The Alvarado Campus project component consists of two distinct areas: D Lot, which is an existing SDSU parking lot with 432 spaces, and the existing Alvarado Medical Center, a complex of medical offices and research facilities located east of D Lot, and owned by the SDSU Research Foundation. Under the proposed project, the two areas that make up the Alvarado Campus component would function as one contiguous campus region.

The Alvarado Campus component ultimately will include a total of approximately 612,000 square feet of academic/research/medical space. A 1,840-car, multi-story parking structure is also planned for this project component. Access between the Alvarado Campus and central campus would occur through expansion of the Red and Black Shuttle Service. The proposed project also would entail the reconfiguration of Alvarado Court to allow for the development of a more unified campus node.

## Mineral Resources Report for the 2007 SDSU Campus Master Plan Revision

The following six project components are proposed (see *Table 1, Proposed Project Components*). A majority of the six components are being analyzed at a project level, while the remaining portions are being analyzed at a program level.

**TABLE 1**  
**Proposed Project Components**

Component Name	Existing Land Use	Existing Campus Master Plan Use	Level of Analysis
Adobe Falls Faculty/Staff Housing	Upper Village Undeveloped land	Not designated	Project
	Lower Village Undeveloped land	Not designated	Program
Alvarado Campus	D Parking Lot (SDSU-owned land)	East Campus Development Area	Project
	Alvarado Core Site - Medical office park (SDSU Foundation-owned land)	None	Program
Alvarado Hotel	C Lot	C Lot	Project
Campus Conference Center	Undeveloped Land	Undeveloped Land	Program
Student Housing	G Lot Residence Hall and Student and Residential Life Administration Building - G Parking Lot	G Lot	Project
	Olmecca/Maya Reconstruction – Student housing	Student Housing	Project
	U Lot Residence Hall - U Parking Lot	Parking Structure 7	Program
	Villa Alvarado Residence Hall Expansion - C Lot	C Lot	Program
Student Union Addition	Aztec Center	Aztec Center	Project

*Note:* The eastern portion of the Alvarado Campus is situated on property owned by the SDSU Foundation. The Alvarado Campus land is designated "Redevelopment Project Area" on the College Area Community Plan Planned Land Use Map (City of San Diego 1989a).

- **ALVARADO HOTEL.** This project component is proposed to be located on approximately 2.0 acres of existing Lot C, immediately north of Villa Alvarado Residence Hall, a coeducational apartment-style residence hall, and south of Alvarado Road. The site abuts Alvarado Creek to the north and east, and campus parking lots to the west.

The Alvarado Hotel would consist of an approximately 60,000-gross-square-foot six-story building, with up to 120 rooms and studio suites. The facilities will contain a small meeting room, exercise room, board room, business center, on-site restaurant, and hospitality suite. The hotel would be developed by Aztec Shops and operated in

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cooperation with the SDSU School of Hospitality and Tourism Management. Site parking will be provided for 130 to 140 cars, either on grade or in a subterranean garage. Trash enclosures, storage, and an entry canopy will be provided.

- **CAMPUS CONFERENCE CENTER.** This project component would consist of the development of a new 70,000-gross-square-foot three-story building on approximately 0.5 acre located east of Cox Arena for meeting/conference space. The new building would provide meeting/conference space, office space, food services, and retail services. This facility would be utilized by student, faculty, and staff organizations, as well as off-campus groups. This facility would be located on the old tennis court site.
- **STUDENT HOUSING.** This project component, which would be developed in multiple phases, includes the demolition of two existing student housing structures and the construction of five new housing structures, ultimately resulting in a net increase of 2,976 student housing beds on campus. This component would occur in four distinct phases, impacting four areas of campus: G Lot, Olmeca/Maya Residence Halls/HARE, U Lot, and C Lot.
  - The G Lot project component would include construction of a 10-story 350,000-gross-square-foot Type 1 (reinforced concrete) structure to house 800 student beds and the reconfiguration of existing G Lot, which would result in a 90% reduction in available surface parking spaces. G Lot is bordered on the northwest by College Avenue, the northeast by Zura Way (an internal campus street), and the south by the East Residence Hall complex, which includes Tepeyac, Cuicacalli, and Tacuba Halls.
  - The Olmeca/Maya/Office of Housing Administration and Residential Education (HARE) component would consist of demolition of the existing Olmeca and Maya Residence Halls and HARE buildings. A new two-story, 15,000-gross-square-foot HARE building would be constructed immediately north of H Lot. Two new 10-story 350,000-square-foot residence halls would be constructed on the site formerly supporting Olmeca and Maya Residence Halls. Each of these Type 1 structures would support 800 beds.
  - The U Lot portion of this project component would consist of removing existing U Lot parking spaces and replacing them with a 10-story 350,000-gross-square-foot, Type 1 structure to house 800 student beds. This structure would be constructed over the previously master-planned but not yet built Parking Structure

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7. The parking structure would contain spaces for 750 vehicles, 250 more spaces than previously master-planned.
- The C Lot portion of this project component would result in the redevelopment of this existing parking lot into a 200-student-bed residence hall. This component would consist of 50 two-bedroom apartments, housing 200 student beds, in two and three story structures. These structures would mirror the existing Villa Alvarado Residence Hall located immediately east of this project component.
  - **STUDENT UNION EXPANSION AND RENOVATION.** The existing Student Union, referred to as “Aztec Center” is located immediately west of College Avenue, along the southern border of campus. This component would consist of renovations to the existing Aztec Center, including up to a 70,000 gross square foot expansion, to include social space, meeting space, recreation facilities, student organization offices, food services and retail services.

## 2.0 METHODOLOGY AND EXISTING CONDITIONS

### Methodology

The information of the Mineral Resources Technical Study was obtained through a review of pertinent, readily available literature, the geotechnical (soils/geologic) study prepared for the 2007 SDSU Campus Master Plan Revision by Southland Geotechnical, proposed site plans and local General Plans and ordinances.

For the purposes of this section, mineral resources are defined as naturally occurring solid crystalline substances that consist of chemical elements or compounds formed from inorganic processes and organic substances, which are considered to be an economically valuable commodity. The importance of mineral deposits and their utilization is dependent upon their relative abundance and importance in commerce and industry. The nonrenewable character of mineral deposits requires careful and efficient development to prevent unnecessary waste or exploitation of these resources.



## Mineral Resources Report for the 2007 SDSU Campus Master Plan Revision

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### Existing Conditions

In order to fully understand the mineral resource extraction context of the proposed project, several important geologic and mineral extraction terms warrant explanation:

- *Aggregate*—Construction-grade sand and gravel.
- *Mineral*—A resource found in the earth in quantities that would permit the economic recovery and refining of the resource.
- *Surface Mining and Reclamation Act of 1975 (California Public Resources Code, Section 2710 et seq.)*—This legislation requires all mining operators to have a City- or County-approved reclamation plan for any mine operated after January 1, 1976. The purpose of the act was to establish a process and standard for the reclamation of “mined” land in the State of California and to minimize environmental problems resulting from mining.
- *Reclamation Plan*—The Surface Mining and Reclamation Act of 1975 requires approval of reclamation plans and permits for all new and re-activated mining operations that must be approved by the local city or county government. Reclamation plans specifically provide for control of erosion and flooding, waste disposal, and protection of water quality.
- *Mineral Land Classification Survey*—The Surface Mining and Reclamation Act of 1975 requires the California Department of Conservation—Division of Mines and Geology to conduct Mineral Land Classification Surveys. The law requires the state geologist to classify land according to the presence, absence, or likely occurrence of significant mineral deposits in certain areas of the state subject to urban expansion or other irreversible land uses incompatible with mining. The objective of the survey is to ensure that the mineral potential of land is recognized and considered prior to making land use decisions that would preclude mining.
- *Mineral Resource Zones (MRZs)*—Categories set forth in the guidelines established by the State Mining and Geology Board that have been adapted to the California Mineral Land Classification Diagram.



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## 2.1 General Geologic Setting

The project area is located in the coastal section of the Peninsular Ranges geomorphic province (see *Figure 6, Generalized Geologic Map*). The northwesterly-trending mountain ranges of this province are generally underlain by basement rocks consisting of Jurassic metamorphic rocks intruded by Cretaceous igneous rocks of the Southern California batholith. During the past 54 million years, the western, costal flank of this mountainous area has experienced several episodes of marine inundation and subsequent regression. This resulted in deposition of a thick sequence of marine and nonmarine sediments (claystones, siltstones, sandstones, and conglomerates) on the basement rocks. Lower base levels, a result of post-Pleistocene sea-level lowering, allowed stream erosion to create the relatively steep, deeply-incised canyons present in the area. During formation of the canyons, streams deposited alluvial sediments in canyon bottoms and locally perched on slopes as stream terrace deposits. The following descriptions of underlying geologic conditions are based on the May 2007 Geotechnical Study prepared by Southland Geotechnical Consultants.

### 2.1.1 Existing Fill Soils

Development of the SDSU campus has included placement of fill in various locations and has included the infilling of previously existing canyons throughout the campus. Fill soils were also placed in various locations throughout campus during grading/construction of the I-8 freeway corridor and San Diego Trolley extension. Fill soils were reported to underlie the majority of the Alvarado Campus site.

Fill soils in the project component areas generally appear to be primarily comprised of locally-derived materials. The fill soils generally range in composition from sandy clays to silty and clayey sands, commonly supporting abundant gravel/cobbles. Some fill areas may include boulder-sized rock fragments, concrete/asphalt chunks, and debris.

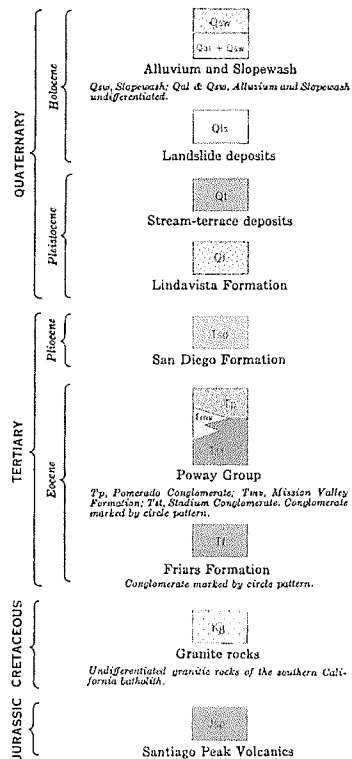
### 2.1.2 Natural Topsoil

Natural topsoil (not a mapped unit) is developed on and is typically gradational with the underlying geologic formations. Topsoil mantles natural ground surfaces and has been encountered underlying fill soils at various locations on the SDSU campus.

DOTTED LINES REPRESENT 10-FOOT CONTOURS  
DATUM IS MEAN SEA LEVEL

1975

# EXPLANATION



## SYMBOLS

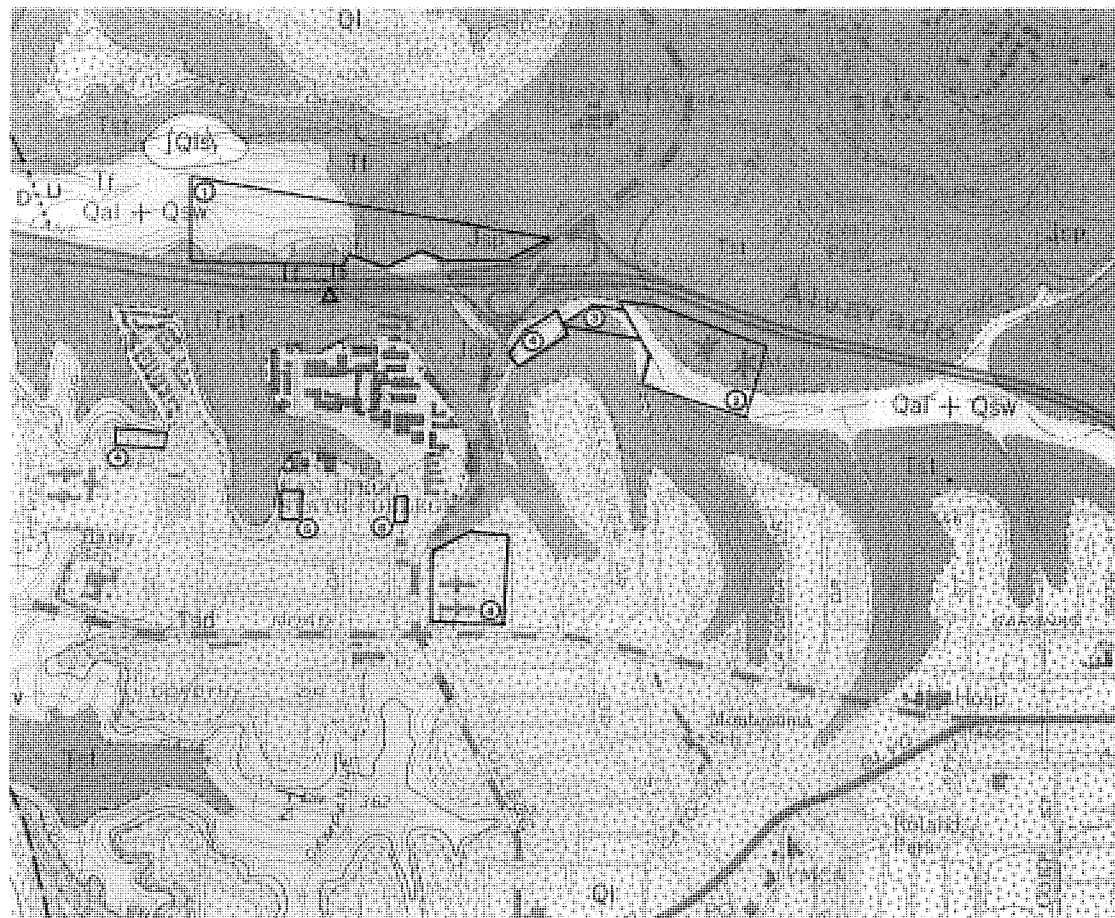
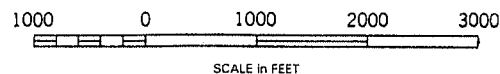
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Contact  
(dashed where approximately located;  
dotted where concealed)

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Fault, showing dip  
(dashed where approximately located;  
dotted where concealed; D, downthrown  
side; U, upthrown side)

Approximated Locations  
of Project Components:

- ① Adobe Falls
- ② Alvarado Campus
- ③ Alvarado Hotel
- ④ Student Housing
- ⑤ Campus Conference Center
- ⑥ Aztec Center

This is excerpted from Kennedy and Peterson's map  
"Geology of the La Mesa Quadrangle, San Diego County, California"  
in CDMG Bulletin 200 (Reference 5)



SOURCE: SOUTHLAND GEOTECHNICAL CONSULTANTS, GEOTECHNICAL INPUT FOR EIR, MAY 22, 2007

## 2007 Campus Master Plan Revision Mineral Resources Technical Report



Figure 6  
Generalized Geologic Map

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### **2.1.3 Alluvium/Slopewash**

Alluvium is the accumulation of soils deposited chiefly by running water in the bottoms of canyons and their tributaries. Alluvium exists within the Alvarado Creek drainage course. Slopewash is a term applied to the accumulation of soil on the face and along the base of a slope. Slopewash is chiefly deposited by the action of gravity and surface water flow. The slopewash deposits are generally derived from the other geologic units on and near the site. For the purposes of this study, alluvium and slopewash deposits are not differentiated.

### **2.1.4 Ancient Landslide Deposits**

According to the American Geological Institute's *Glossary of Geology* (Jackson 1997), a "landslide" is defined as "a general term covering a wide variety of mass-movement landforms and processes involving the downslope transport, under gravitational influence, of soil and rock material en masse. Usually the displaced material moves over a relatively confined zone or surface of shear." As used locally, "landslide" typically implies deep-seated movement of a mass of soil/rock over a fairly discrete basal failure surface or surfaces.

An ancient landslide was identified off site and northwest of the Adobe Falls Faculty/Staff Housing project area. The landslide appears to have occurred along a weak clay layer or bedding-plant shear within the Friars Formation. In addition, a slope failure is known to have occurred several years ago between Genoa Drive and Adobe Falls Road. Reconnaissance-level geologic observations of the project sites do not indicate the on-site presence of ancient landslides or deep-seated slope instability.

### **2.1.5 Lindavista Formation**

The Pleistocene-aged Lindavista Formation underlies the majority of the mesa-top portions of the SDSU campus and the general vicinity. The Lindavista Formation is generally known to consist of orange-brown gravel/cobble conglomerate with a clayey to silty sandstone matrix. Well-cemented zones locally occur within the Lindavista Formation.

### **2.1.6 Mission Valley Formation**

In the project area west of College Avenue, the Eocene-aged Mission Valley Formation is mapped as underlying the Lindavista Formation. The Mission Valley Formation is generally known to consist of gray silty fine sandstone and conglomerate.

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### **2.1.7 Stadium Conglomerate**

The Eocene-aged Stadium Conglomerate is mapped as underlying the Mission Valley and Lindavista Formations west of College Avenue and underlying the Lindavista Formation east of College Avenue. The Stadium Conglomerate is generally known to consist of yellow-brown to orange-brown gravel/cobble conglomerate with a silty to clayey sandstone matrix. Occasional boulders may also exist within this geologic unit. Occasional sandstone interbeds occur within this geologic unit, and the Stadium Conglomerate is locally well cemented.

### **2.1.8 Friars Formation**

The Eocene-aged Friars Formation is mapped in the northern portion of the existing SDSU campus and in the area north of Interstate 8. The Friars Formation is generally known to consist of lagoonal and alluvial sediments that, more specifically, consist of claystone, thinly laminated siltstone/claystone, sandstone, and conglomerate. Landslides have been known to have occurred along weak clay layers and bedding-plane shears within the Friars Formation.

### **2.1.9 Santiago Peak Volcanics**

The Jurassic-aged Santiago Peak Volcanics are the hard “bedrock” unit underlying the sedimentary rocks in the northern portions of the SDSU campus and project area. The Santiago Peak Volcanics are generally known to be comprised of hard, mildly metamorphosed volcanic, volcanoclastic, and sedimentary rocks of variable composition and color.

## **2.2 Geologic/Soil Resource Evaluation**

### **2.2.1 U.S. Department of Agriculture Soil Survey**

As indicated in the May 2007 Geotechnical Input Report for the SDSU 2007 Master Plan Revision (Southland Geotechnical Consultants 2007), the U.S. Department of Agriculture (USDA) Soil Survey has mapped the SDSU Master Plan project areas as being underlain by the following soil types: Diablo-Urban land complex (DcF), Friant rocky fine sandy loam (FxE), Olivenhain cobbly loam (OhE), Olivenhain-Urban land complex (OkC), Olivenhain-Urban land complex (OkE), riverwash (Rm), and Tujunga sand (TuB). Table 2 further describes the characteristics as defined by the USDA.

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**TABLE 2**  
**USDA Soil Survey Relevant Soil Characteristics**

Soil Name (symbol)	Percent Slope	Potential for Erodibility	Shrink/Swell Potential	Suitability as a Source of...	Suitability for Road Fill
Diablo-Urban land complex (DcF)	15-50	---	High	Unsuitable	---
Friant rocky fine sandy loam (FxE)	9-30	Severe	Low	Unsuitable	Fair
Olivenhain cobbly loam (OhE)	9-30	Severe	Moderate	Gravel	Fair to Poor
Olivenhain-Urban land complex (OkC)	2-9	---	Moderate	Gravel	---
Olivenhain-Urban land complex (OkE)	9-30	---	Moderate	Gravel	---
Riverwash (Rm)	---	Severe	Low	Varying amounts of gravel and sand	---
Redding-Urban land complex (RhC)	2-9	---	High	Unsuitable	---
Tujunga sand (TuB)	0-5	Severe	Low	Sand	Good

Source: Southland Geotechnical Consultants, 2007.

## 2.2.2 Aggregate/Mineral Resources

The California Division of Mines and Geology's Special Report 153 classifies land in western San Diego County according to the presence or absence of construction-grade aggregate resources. Subsequently the Open File Report 96-04 – Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region 1996, was published. The purpose of Special Report 153 and OFR 96-04 (California Division of Mines and Geology 1983, 1996) was to transmit data on the type, quantity, location, and distribution of aggregate resources as well as projections of future regional need to the State Mining and Geology Board, in compliance with the Surface Mining and Reclamation Act of 1975 (California Public Resources Code, Section 2710 et seq.). The project sites include a number of soil types as further described in Table 2, which classifies each of the soil types' characteristics, including suitability as a source of sand, gravel, or decomposed granitics. According to the USDA, the Olivenhain cobbly loam and Olivenhain-Urban land complex would be suitable sources of gravel, and the riverwash and Tujunga sand components would potentially be a suitable source of sand and/or gravel.

The SDSU project areas are mapped with zones MRZ-2 and MRZ-3 with respect to construction aggregate resources. Areas mapped as MRZ-2 are "areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is high likelihood for

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their presence.” Areas mapped as MRZ-3 are “areas containing mineral deposits, the significance of which cannot be evaluated from available data.” As indicated in *Figure 7, Mineral Resource Zone Designations*, each project component falls within the following MRZ zones: Adobe Falls Faculty/Staff Housing (MRZ-3), Alvarado Campus (MRZ-2), Student Union Expansion (MRZ-2), Student Housing – G Lot and Olmeca/Maya (MRZ-2 and MRZ-3), Student Housing – U Lot (MRZ-3), Student Housing – Villa Alvarado Residence Hall Expansion (MRZ-2) and Campus Conference Center (MRZ-2).

## **2.3 Regulatory Framework**

### **2.3.1 Federal**

There are no federal regulations, authorities, or administering agencies that regulate the proposed project pertaining to mineral resources.

### **2.3.2 State**

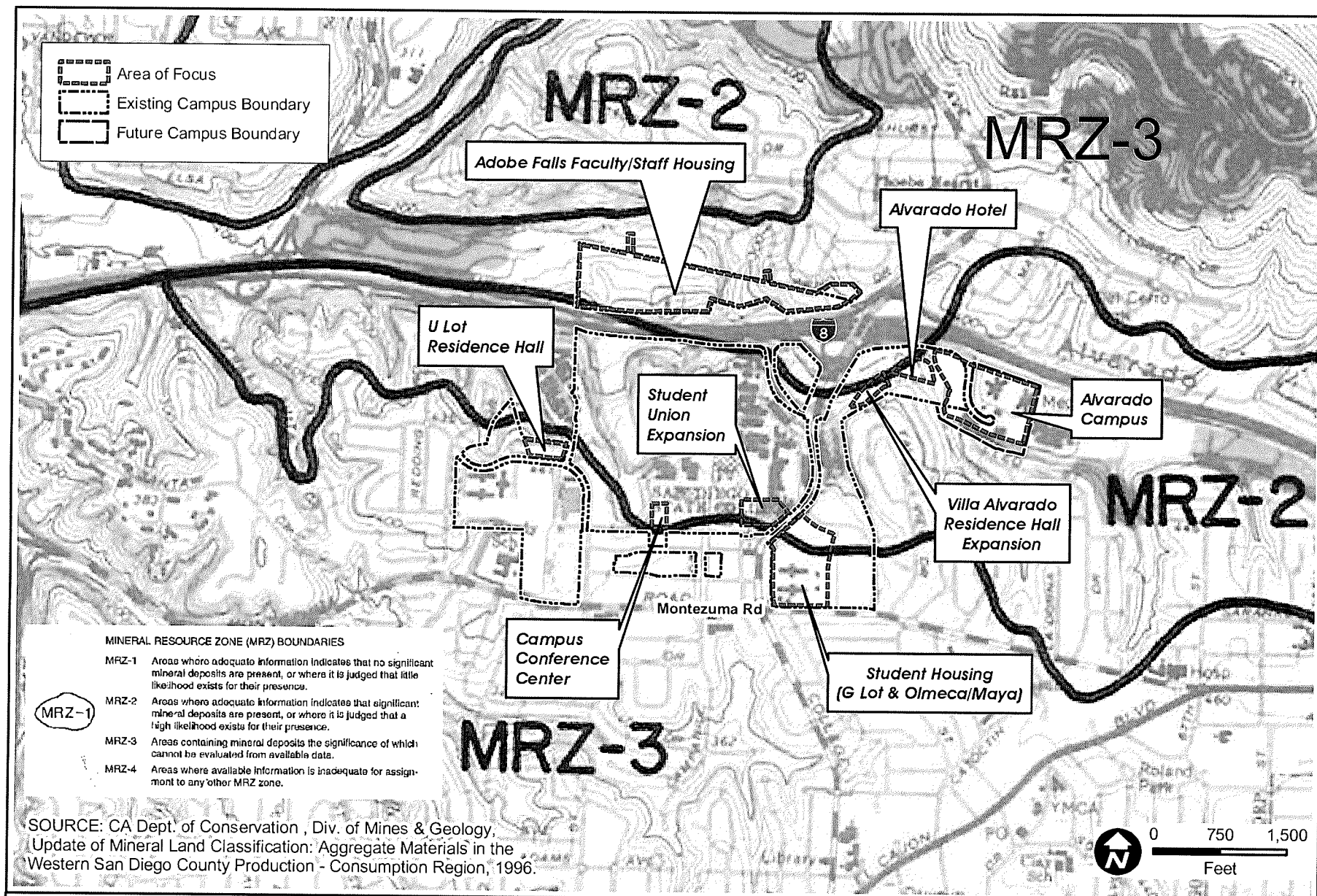
The California Geological Survey (formerly known as the California Division of Mines and Geology), is the state agency responsible for inventorying and mapping mineral resources in California. Regulations pursuant to the California Geological Survey mineral resource determinations are generally linked with County Land Use Elements and other types of local/regional development directives or regulations. Because there are no existing mining operations within the project study area, the Surface Mining and Reclamation Act of 1975 would not apply.

### **2.3.3 Local**

#### **City of San Diego Progress Guide and General Plan – Conservation Element**

The *City of San Diego Progress Guide and General Plan* (City of San Diego 1989b) Conservation Element includes the following goal: “Balance mineral production and conservation with habitat and topography protection.” Additionally, this Element identifies existing extraction operations within the City, specifically within Mission Valley, Carroll Canyon, and Mission Gorge. The City has determined that the use of locally mined materials for San Diego’s development is desirable as it reduces the need for trucking materials over long distances. The Conservation Element policies established to protect such mining with relevance to the SDSU campus/proposed project are as follows (City of San Diego 1989b, p. 192):

Protect major mineral deposits against encroachment by land use which would make their extraction undesirable or impossible.



## **Mineral Resources Report for the 2007 SDSU Campus Master Plan Revision**

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Produce sand and gravel with minimal harm and disturbance to adjacent persons and properties.

The Conservation Element of the existing *City of San Diego Progress Guide and General Plan* includes an unnumbered figure titled “Sand and Gravel Resources, San Diego Metropolitan Area.” This figure includes four categories of sand and gravel resources: alluvium, metavolcanic, Poway Conglomerate, and San Diego Formation. The Adobe Falls Faculty/Staff Housing parcel is located within an area that is delineated as metavolcanic or Poway Conglomerate. This indicates that the Adobe Falls Faculty/Staff Housing parcel may be located on a parcel that could support sand and gravel deposits of significance to the local/regional economy.

The *City of San Diego Progress Guide and General Plan* is currently being updated. The final draft document, dated October 2006, is available for public review via the City of San Diego Planning Department’s website. The revised General Plan is generally referred to as the “General Plan 2020” due to its planning horizon year of 2020. The Conservation Element describes existing mineral extraction operations, general localities, and overall relationship to State of California Division of Mines and Geology Mineral Resource Zones. This revised element does not include a map indicating mineral extraction zones. The October 2006 draft of the Conservation Element is similar to the existing 1989 Conservation Element.

### **County of San Diego General Plan – Conservation Element**

The County of San Diego General Plan Conservation Element (County of San Diego 2002) has established policies to conserve and protect mining operations throughout the County. These policies include:

Policy 1. The County will, to the extent practicable and appropriate, conserve construction aggregate resources in the entire County to ensure a minimum of fifty years supply.

Policy 3. The extractive overlay designation, as defined in Policy 2.6 of the Land Use Element, will be applied to appropriate areas throughout the County.

The Conservation Element of the General Plan does not include a map of mineral extraction zones.



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## 3.0 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), the proposed project would have a significant impact on mineral resources if it results in any of the following:

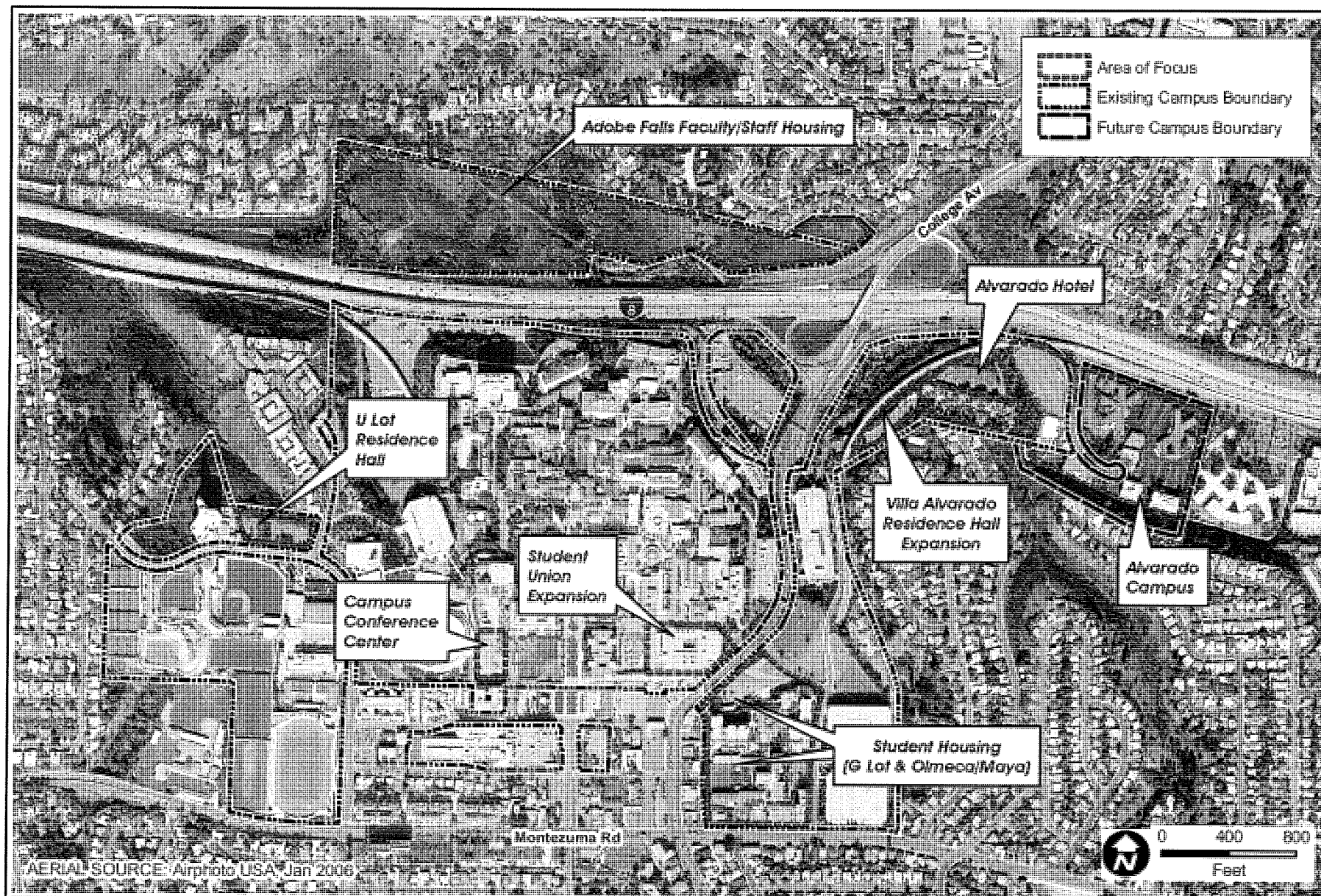
- Loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- Loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

## 4.0 PROJECT IMPACTS

### Impacts to Existing Mineral Resources

The proposed project areas are mapped as MRZ-2 and MRZ-3 with respect to construction grade aggregate materials. All components of the project, except for the Adobe Falls Faculty/Staff Housing project component, are located within existing developed areas (see *Figure 8, Areas of Focus*). Because of the existing urban/developed nature of these areas coupled by the surrounding urban nature of the area, even though known (MRZ-2) or potential (MRZ-3) mineral resources may exist beneath these sites, extraction of potential resources is not feasible. Further, the City of San Diego's Progress Guide and General Plan, Redevelopment Agency's College Area Redevelopment Plan and SDSU's Master Plan envision increased densification within the SDSU area. The probability that additional urban development would occur in this area further eliminates the potential for mineral extraction operation on or nearby these project component areas. Therefore, impacts to potential mineral resources as a result of all project components, less the Adobe Falls Faculty/Staff Housing component, would be less than significant.

The only undeveloped and undisturbed area proposed for development as a component of the 2007 SDSU Campus Master Plan Revision is within the Adobe Falls area, therefore this impact analysis focuses on this project component. This area is mapped as MRZ-3, which is defined as "areas containing mineral deposits, the significance of which cannot be evaluated from available data." The underlying formations of this area consist of Santiago Peak Volcanics, Friars Formation, and alluvium and slopewash. These formations may be source formations for valuable mineral resource deposits.



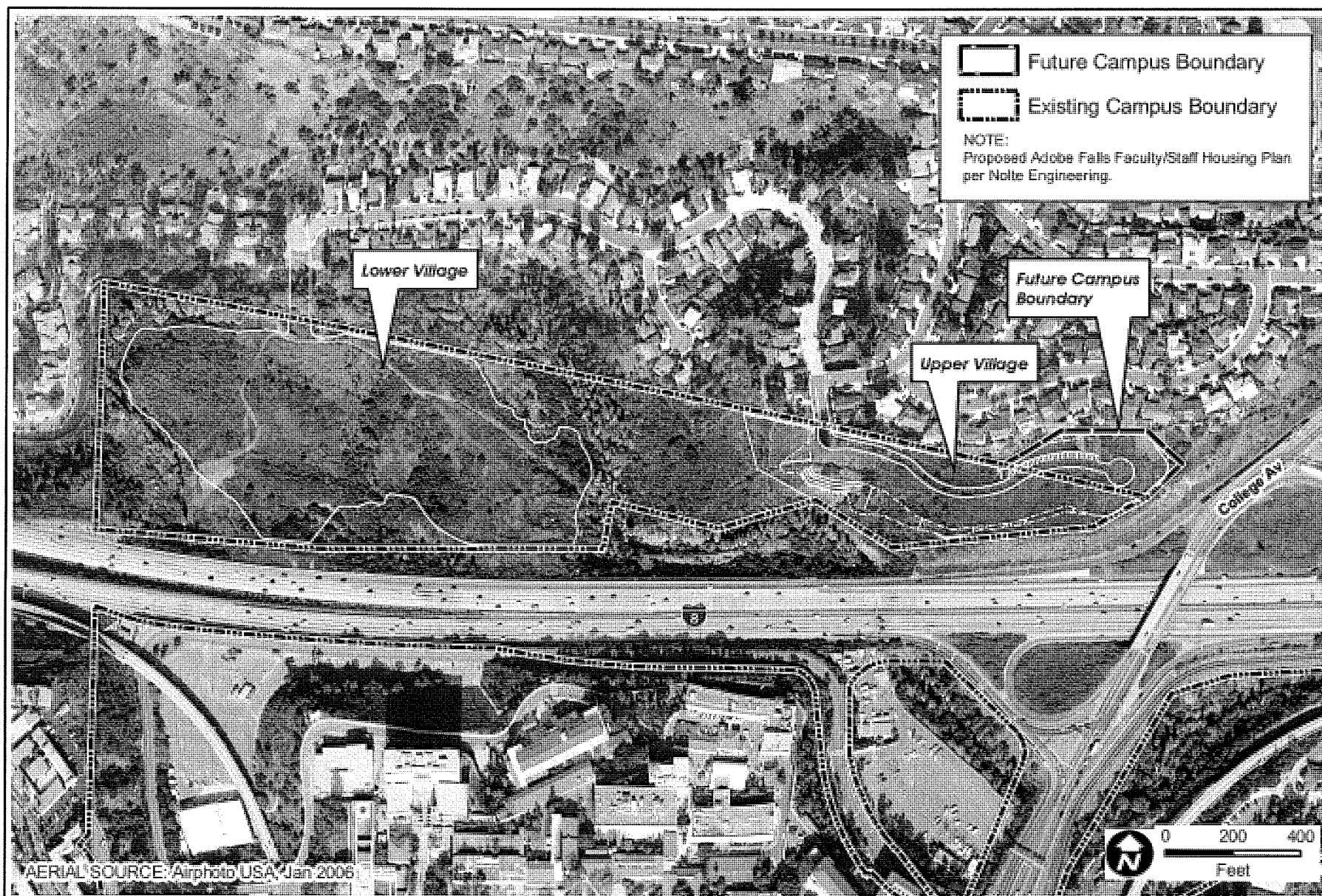
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While the project's underlying features may lend themselves to mining activities, there are several reasons that the site is not a suitable or realistic location for a mining operation:

- **Site Logistics Concerns.** Because of the number of facilities and equipment required to support a mining operation, the area of the Adobe Falls Faculty/Staff Housing parcel that is safely minable is limited by its narrow, elongated shape, as compared to a square site. In addition to the mine pit, room for material stockpiles, stockpile overburden, aggregate processing and washing equipment, maintenance shops, parking for trucks, equipment, and possibly space for a small on-site office/shack must be provided, which would be a logistics challenge. Due to the lack of a rail spur on the property, trucks would be utilized as the main export vehicle; truck traffic would then flow through the existing residential neighborhood. Furthermore, mining often occurs during evening and nighttime hours, which would be of concern to nearby residents. Mining hours would be very limited given the proximity of nearby homes (see *Figure 9, Proposed Adobe Falls Faculty/Staff Housing Plan*).
- **Mineral Yield Concerns.** The Santiago Peak Volcanics outcrop at the eastern edge of the Upper Village would need to be chemically tested for reactive characteristics (a condition that is often found in this formation, which can be problematic when used for certain building functions). Furthermore, the alluvium covering the Lower Village is likely a derivative of the Santiago Peak volcanics, so chemical concerns may be applicable to sand/gravel resources near the base of the Alvarado Creek parcel.
- **Environmental Concerns.** It is likely that the site has high groundwater (due to the presence of Alvarado Creek). The presence of groundwater would limit or, at the very least, complicate pit mine design and the potential depth that can be reached. This limits the volume that can be extracted from the mine. Due to the dust created by mining operations, an on-site water source would need to be maintained. Depending on the depth of a mining operation, blasting may be required, which would be of concern to nearby residents.
- **Regulatory Concerns.** It is likely that the complex regulatory environment that must be navigated to permit new mining operations would result in a lengthy approval process.

Furthermore, considering the current land use at the project site and the land use of the surrounding areas, development of this project area as a commercial source of sand, commercial aggregates, gravel, or decomposed granitics is highly unlikely.





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### Relationship to Regulations

Although California State University-owned land is not subject to the planning/development restrictions enforced by the City of San Diego, the City's Conservation Element (City of San Diego 1989b) notes the Adobe Falls Faculty/Staff Housing parcel's location within the MRZ-3 zone. As indicated above, the MRZ-3 zone is defined as "areas containing mineral deposits, the significance of which cannot be evaluated from available data."

The *County of San Diego General Plan Conservation Element* provides several policies and action programs for the conservation of construction aggregate resources, however, the land use designations as defined by the *Land Use Element* of the County of San Diego General Plan are located in the County's jurisdiction and do not apply to these areas. Therefore, the project does not result in non-compliance with Policies 1 and 3 of the plan.

Furthermore, the *City of San Diego Progress Guide and General Plan* (City of San Diego 1989b) Conservation Element includes goals to balance the need for mineral resource extraction and environmental conservation. Specifically, the City should work to facilitate sand and gravel extract with minimal harm and disturbance to adjacent persons and properties and regulate adjacent land uses so they do not spill over into mineral extraction areas resulting in potential land use conflicts. Due to the Adobe Falls site's location adjacent to single-family residences, the suitability of this parcel to house a mining operation is low. Therefore, the project will not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, and the impact will be less than significant.

### Cumulative Impacts

As described above, the project will not have a direct significant impact to mineral resources in that the adjacent residential properties would likely preclude the development of a mining operation on the site. Similarly, the cumulative development surrounding the SDSU campus as well as the specific Adobe Falls site, would additionally preclude any mineral extraction work. The development of the project components would not result in placement of a sensitive land use within an area rich in mineral resources so as to preclude future mining activity on account of sensitive receptor presence. For the above reasons, a less than significant cumulative impact to mineral resources would occur.

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## 5.0 MITIGATION MEASURES

The project will not have a significant impact on mineral resources; therefore, no mitigation measures are required.

## 6.0 SIGNIFICANCE OF IMPACT AFTER MITIGATION

There are no impacts to mineral resources nor mitigation measures; therefore, impacts would not occur.

## 7.0 ACKNOWLEDGEMENTS

This report was prepared by the following Dudek staff members:

Sarah Lozano, Project Manager  
Carey Fernandes, Environmental Planner  
Steve Dickey, Hydrogeologist, PG, CEG, CHG  
Lesley Terry, Graphics and GIS support

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